

# Public Document Pack



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## **CABINET**

**Tuesday, 13th September, 2016**

## **SUPPLEMENTARY PACK**

1.1. **Background Papers to LDP Report Further Focussed Changes**

**(Pages 3 - 542)**

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**Powys Local Development Plan  
Affordable Housing Topic Paper**

**Update**

**September 2016**

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## EXECUTIVE SUMMARY

This paper provides an update to the Council's approach towards the delivery of affordable housing by the Powys Local Development Plan, and involves review of the policy approach towards affordable housing provision and the proposed LDP affordable housing target. This follows the updating and review of the viability evidence previously submitted for examination as part of the evidence base for the Local Development Plan.

The residential element of the Local Development Plan and Community Infrastructure Levy Viability Assessment (2014) has been updated and reviewed by the District Valuer Service (August 2016) the results of which have been used to inform its case in relation to the viability of development expected to be delivered by the Plan and also its case in respect of the delivery of affordable housing by the Plan.

The South West sub-market area has been amended slightly to include only the area to the south of the National Park – the communities of Ystradgynlais and Tawe-Uchaf. Parts to the north of the National Park previously within the South West have been incorporated into the Central sub-market area. The sub-market area names taken forward are 'Central', 'Severn Valley', 'North' and 'South West' and are illustrated on a map in Appendix 5.

The update has involved a review of the scale, location, existing uses, mix, and density of site typologies modelled for use in the development appraisals in order to ensure that they are reflective of the development planned by the LDP and informed by past delivery.

Changes made to the assumptions relating specifically to the affordable housing testing are explained and reasoned within Appendix 1 of this paper. The updated viability results and results of the affordable housing testing are reflective of changes in house price values, construction costs, land values and other values, at the time of the update in August 2016, and also of other changes made to assumptions to reflect the characteristics of development expected in Powys.

The assumed open market and affordable housing mixes applied to the site typologies reflects the need identified in the Local Housing Market Assessment as it accounts for a proportion of 1 and 2 bed dwellings. The assumed affordable housing tenure split of 75% social rented housing and 25% intermediate rented housing is in line with the need identified within the Local Housing Market Assessment which identified a greater need in Powys for social rented housing within the affordable housing mix.

In terms of the general outcomes of the updated Viability Assessment (2016) for viability, the results indicate that the proposed affordable housing contributions in Central (30%), Severn Valley (20%) and North (10% sub-market areas can be supported on the basis of the findings of the review of the Viability Assessment. However, the main concern is in the South West sub-market area where it does not appear to be viable to require affordable housing contributions, and it is advised that any affordable housing target in this area would be aspirational.

The Council has therefore reviewed its case for seeking an affordable housing contribution in the South West and has considered potential options including 1) retaining the target as proposed in the Composite LDP (January 2016) at 10% as an aspirational target; 2) setting

an aspirational site specific target of 5%, 3) combining the lower target of 5% with a higher threshold of 10 or 20 units above which contributions would be required, and 4) setting a 0% target.

Evidence of affordable housing recently delivered on the ground in this area comprises solely of Housing Associations schemes, and although a percentage of affordable housing has been secured on private developments through planning permissions subject to section 106 agreements, these schemes have not yet been delivered.

If a target of 10% was maintained in the South West, this would potentially capture 46.6 affordable housing units on allocated sites, and at a target of 5%, this would be reduced to 23.3 units. By not requiring a contribution to be made in the South West, this would result in a loss of 8% of potential affordable housing units on allocated sites. These numbers would indicate that it may not be worthwhile to seek affordable housing contributions in this area.

Based on the viability evidence, development viability in the South West is likely to be particularly sensitive to the additional costs or impact on values as a result of policy requirements, such as affordable housing, and priority should be given to essential infrastructure to ensure that development can come forward.

In terms of the potential to capture affordable housing within pockets of viability in this less viable area, this opportunity is likely to be limited and higher expectations associated with such pockets are unlikely to generally feature on proposed allocations or development expected in this area.

Due to current uncertainties in the market, it would not be appropriate to set an aspirational target at this stage to seek to reflect the potential future affordable housing, however future changes in the market will be monitored and the requirements of the affordable housing contributions reviewed if any significant changes are identified.

The viability evidence, together with the results of the testing of notional contributions that could be sought by applying lower thresholds, indicates that it is appropriate to retain the site capacity threshold for requiring affordable housing contributions at 5 units or more.

In view of the above, and taking into account the discount applied to the housing commitments and overprovision allowance, the Affordable Housing Target for the Plan has been reduced from 1257 units (83 units per annum) to 949 units (63 units per annum). This continues to be below the need identified in the LHMA of 153 per annum, however other forms of affordable housing delivery and financial support, will help to maximise opportunities for delivery of affordable housing in Powys.

The amount of affordable housing secured and delivered through planning permissions will be monitored through the Annual Monitoring Report, as will applications submitted to negotiate/re negotiate affordable housing obligations. Type, mix and tenure of affordable housing, along with affordability and need identified by the Local Housing Market Assessment, will also be monitored in order to inform any future review.

## 1. INTRODUCTION

1.1 The aim of this topic paper is to clarify and review the Council's proposed policy approach towards the delivery of affordable housing by the Powys Local Development Plan, in light of the findings and conclusions of the updated and reviewed Viability Assessment (2016). The updated and reviewed Viability Assessment was carried out in response to the Inspector's concerns about the deliverability of the housing proposed by the Local Development Plan and also in response to concerns regarding the deliverability of affordable housing in the North and South West sub-market areas.

1.2 This paper provides an update to Affordable Housing Topic Paper Update January 2016 (EB21), and focuses on updating the Council's position on the viability of delivering affordable housing through the planning system, the approach towards affordable housing provision, and the proposed LDP affordable housing target.

### *Background*

1.3 In 2014, a Local Development Plan and Community Infrastructure Levy Viability Assessment was carried out by HDH Planning and Development Ltd (EB13), the results of which informed the policy approach towards affordable housing adopted in the submitted Powys Local Development Plan – Composite version (LDP34). This Viability Assessment (2014) concluded that development within the Central and Severn Valley sub-market areas could meet a 20% affordable housing target, and development in the North and South West could meet a 10% affordable housing target. With the exception of the affordable housing target in Central, which was subsequently increased to 30%, these targets were taken forward into the submitted Plan. The results of the Viability Assessment (2014) indicated that development in the Central sub-market area could support a 30% affordable housing target, however the Council had initially decided to take a cautious approach by setting the target in this area at 20%.

1.4 Following submission of the Powys Local Development Plan for examination in February 2016, and subsequent letter from the LDP Inspector dated 5<sup>th</sup> of April 2016, the decision was made to update the residential element of the Viability Assessment (2014). This was intended to reflect changes in construction costs and house prices in Powys since the original study (which was based on data from March 2014), but more importantly to address the questions raised by the Inspector about the deliverability of the quantum of housing development envisaged in the LDP. The Inspector had also raised concerns that the evidence did not support the proposed 10% affordable housing contribution in the South West and North, and also about the implications of unviability in these areas for the delivery of the affordable housing target.

1.5 Further discussions took place at the subsequent Exploratory Meeting held by the Inspector on the 10<sup>th</sup> of May 2016, where the Council explained that the findings of the updated viability evidence would be considered and the percentage requirements may be adjusted. The Council also explained that there was existing evidence that housing delivery is happening on the ground in these areas.

1.6 The Council commissioned an update to the HDH Viability Assessment and the Council also arranged for the District Valuer Service (DVS) to review the updated Viability

Assessment carried out by HDH. This involved the review of the values and costs used by HDH and also other key viability assumptions. This review has led to the production of a further Viability Assessment with a different set of viability results, including further testing of the affordable housing contributions. The reviewed Viability Assessment carried out by the DVS (August 2016) is considered to improve the robustness of the evidence-base for the Plan and the Council has decided to take the results and conclusions of this review forward to inform the Authority's case in relation to the viability of the Plan, and also its case in respect of the delivery of affordable housing by the Plan.

### *Content of this paper*

1.7 This paper, firstly, summarises and analyses the main changes to the viability evidence. It then goes on to discuss the main findings of the DVS reviewed Viability Assessment (2016) in relating to the impact on the delivery of affordable housing through the Local Development Plan. This involves a review of the proposed approach towards seeking affordable housing contributions, including the review of site specific targets and site capacity threshold, in light of the updated viability results. The affordable housing target for the Plan has also been reviewed in light of the proposed policy changes. Any proposed changes to the affordable housing policies and consequential changes to the affordable housing target are identified in Appendix 4 and included in the further Focussed Changes to the LDP.

1.8 The paper concludes by considering the implications of the proposed policy changes for the delivery of affordable housing through the Plan and also for the overall strategy of the Plan. The implications of the viability assessment for the overall housing delivery of the Plan are discussed in the separate *Viability Topic Paper (September 2016)*.

## **2. EXPLANATION OF CHANGES TO THE AFFORDABLE HOUSING VIABILITY EVIDENCE BASE**

### *Housing sub-market areas*

2.1 The HDH Viability Assessment (2014) identified four county price zones (otherwise known as sub-market areas) within Powys – 'Central Powys', 'Severn Valley', 'Rural North' and 'Southwest Powys'. Varying residential market values based on house price values per square metre were applied to the appraisals of sites within these areas. These areas were illustrated on a map in figure 4.6 of the Viability Assessment (2014).

2.2 It is important to note that a slight amendment has been made to these areas in the updated viability work. The area to the north of the Brecon Beacons National Park which was previously included within the Southwest Powys sub-market area, has now been included in the Central sub-market area. It should be noted that no allocations are proposed by the Plan within the area affected by this change, which includes parts of the communities of Trallong, Maescar and Llywel that lie outside the Brecon Beacons National Park. The South West sub-market area now only includes the communities of Ystradgynlais and Tawe-Uchaf to the south of the Brecon Beacons National Park.



2.3 The Housing sub-market areas, as amended, are as illustrated on the map in Appendix 5.

2.4 It is also noted that some of the names by which the sub-market areas are referred have been amended between the 2014 and 2016 Viability Assessments. The name for 'Severn Valley' remains the same, 'Central Powys' becomes 'Central', the 'Rural North' is now named 'North', and 'Southwest Powys' is now referred to as 'South West'. For clarity, therefore, the names of the sub-market areas going forward are 'Central', 'Severn Valley', 'North' and 'South West'.

#### *Review of typologies*

2.5 As part of the update, the site typologies tested in the original study were reviewed in order to ensure that they continued to be reflective of the development planned, particularly as the allocations that had been subject to changes, with new sites added, sites removed and sites amended, since the first version of the Deposit Plan in 2014 at the time that the original study was conducted. General changes to typologies are detailed within the *Viability Topic Paper (September 2016)*.

2.6 The assumed open market and affordable housing mixes applied to the site typologies have been reviewed against past evidence of mix of house types being delivered on the ground, also taking into account the needs identified in the Local Housing Market Assessment. The affordable housing mix applied to the site typologies as part of the affordable housing testing, reflects the need identified in the Local Housing Market Assessment as it accounts for a proportion of 1 and 2 bed dwellings.

2.7 The assumed densities applied to the site typologies have also been reviewed to reflect evidence of densities being achieved on the ground on recent developments. The density guidelines set out in policy H3 and the capacity of allocations in terms of the number of units and affordable units indicated in Appendix 1 have been amended accordingly.

#### *Review of affordable housing assumptions*

2.8 In updating the Viability Assessment to take into account changes in the house prices values and costs since the original study in March 2014, this also provided an opportunity to review the viability assumptions used in the HDH Viability Assessment (2014) to test their accuracy and relevance to the particular characteristics, location and scale of development in Powys. This also involved reviewing the assumptions made in respect of the values, tenure and mix of affordable housing within the modelled sites.

2.9 The review of viability assumptions by the DVS has led, in some instances, to the use of different assumptions, which are a result of changes in values, use of different sources, and also changes in the approach used to identify these values. The local experience of the DVS in site specific viability assessments in Powys and Wales has informed this review. Changes to the key general viability assumptions are discussed in the *Viability Topic Paper (September 2016)*. Changes to the key assumptions relating to the affordable housing testing are summarised in Appendix 1, which also provides commentary on the reasons for the changes.

2.10 Consideration has been given to the likely impact of the changes made to the assumptions on the results of the affordable housing testing.

2.11 In terms of any changes made to reflect the timing of the studies, whilst it is difficult to compare the price values used in both studies, due to the different methods used, the values used by DVS are based on current market evidence as of August 2016 and therefore they will reflect any increases in house price values that have occurred since March 2014. The DVS has assumed higher affordable housing values for social rented and intermediate rented, and given that intermediate housing for sale is based on 80% open market value, this will have increased in line with general house prices, which should improve the viability of affordable housing.

2.12 The higher house price values applied in the North sub-market area, as noted in the *Viability Topic Paper (September 2016)* (para. 2.17), should improve the case for seeking affordable housing contributions in this sub-market area.

2.13 With regards to changes to the costs associated with affordable housing, build costs are treated on parity with open market build costs, and therefore these costs will also have generally increased, albeit that other costs, including the allowance made for external costs for larger developments and single plots, have been reduced.

2.14 By accounting for mainly social rented housing in the affordable housing tenure split assumed in the DVS study (2016), which is the lowest price type of affordable housing tenure, this is likely to have a negative impact on viability compared to the results with the tenure mix applied previously in 2014. However, the tenure mix applied by the DVS is in line with the need identified within the Local Housing Market Assessment which identified a greater need in Powys for social rented housing within the affordable housing mix.

2.15 By reducing the assumed developer profit that a developer is expecting from affordable housing compared to open market dwellings, this should also improve viability as the allowance made for this element of the cost to the developer is reduced.

2.16 The increase in the viability threshold, as explained in the *Viability Topic Paper* (reference) (para. 2.21) places a higher expectation on residual values in order for sites to become viable, which could impact on the scope for securing affordable housing contributions.

2.17 In conclusion, therefore, some of the changes made to the affordable housing assumptions, along with changes to the general viability assumptions, should have a positive impact on the results of the affordable housing testing. However, any apparent scope for further affordable housing contributions created by these changes is likely to be tempered to some degree by other changes in terms of build costs, tenure mix and to the viability threshold.

### 3. SUMMARY OF RESULTS OF UPDATED AND REVIEWED VIABILITY ASSESSMENT

3.1 This section summarises and analyses the results of the reviewed Viability Assessment (2016) carried out by the DVS in terms of their relevance to the viability of affordable housing.

3.2 To clarify, the Council is basing the following comparison on the results presented in tables 9-12 of the DVS study and the results of the affordable housing testing in table of the DVS study (2016) and table 12.1 of the HDH study (2014). In terms of presentation of the results, the previous study presented the results on a £ per ha basis, whereas the DVS results are shown on a £ per hectare and a £ per site basis in the DVS work. Whilst the previous presentation of the results was useful in terms of drawing comparisons between different typologies, by presenting results on a £ per site basis, this reflects the residual value according to the site area of the particular site typology. For this reason, the results discussed in this paper are those presented on a £ per site basis.

3.3 It is difficult to directly compare the results gained by the DVS in 2016 and HDH in 2014 as not only are the results based on different data sources obtained at different times, but also some of the viability and development assumptions applied are different, and the development appraisals undertaken have been produced using different models – the DVS has used the ‘Argus’ model, whereas HDH has used a bespoke model developed by HDH. However, the following comparisons can be made in terms of general outcomes for the viability of affordable housing in Powys:

- Both HDH (2014) and DVS (2016) found that different sub-market areas could support different levels of affordable housing contribution.
- Both HDH (2014) and DVS (2016) found that, in general, development in the Central sub-market area could support an affordable housing contribution of 30%, and that development in the Severn Valley sub-market area could support a contribution of 20%.
- HDH (2014) recognised that development viability was challenging in the North and South West sub-market areas, however it was considered to be appropriate to set an affordable housing target of 10% in these areas. It was noted that there was a need for affordable housing in these areas and that it was being delivered on the ground.
- The DVS considers that the proposed affordable housing contributions in Central, Severn Valley and North sub-market areas can be supported on the basis of the findings of the review of the Viability Assessment.
- The DVS considers the South West to be the main area of concern in terms of viability and advises that any affordable housing target in this area would be aspirational. It is advised that some schemes may be able to provide some units as costs decrease or values increase, however such would be on a case by case basis.
- The results of both studies indicate that it would not be realistic to seek affordable housing contributions on sites of less than 3 units or less as these small sites are

either not found to be viable or are marginally viable at 0% affordable housing contribution.

3.3 In view of the general outcomes of the updated Viability Assessment (2016) for the viability of affordable housing, it is clear that the ability of developments to support affordable housing contributions continues to vary between sub-market areas, with the most viable areas able to support the highest percentage of affordable housing, and the least viable area unable to support any percentage.

3.4 Importantly, the results of the affordable housing testing carried out in the DVS Review (2016) show that development in the sub-market area of the North is capable of supporting a contribution towards affordable housing, albeit at a lower level than can be sought in Central and Severn Valley. Therefore, whilst the previous viability results in 2014 did not support the proposed 10% affordable housing target in the North, this level of affordable housing is considered to be realistic based on the viability evidence provided by the DVS.

3.5 The meaning of the results of the DVS Review (2016) in terms of the site specific affordable housing targets and sites capacity thresholds to be applied in the different sub-market areas is discussed further in the following sections.

#### **4. SITE SPECIFIC AFFORDABLE HOUSING TARGETS**

4.1 The appropriateness of the proposed site specific affordable housing targets for each sub-market area has been reviewed in light of the updated viability evidence summarised above. The results of the DVS Review (2016) suggest that developments of 5 or more in the Central, Severn Valley and North can support the site specific targets of 30%, 20% and 10% respectively. However, the results continue to suggest that development in the South West sub-market area would not be capable of supporting a contribution towards affordable housing.

4.2 Due to the results in respect of the viability of development in the South West sub-market area, the Council has reviewed its case for seeking an affordable housing contribution in this area. In reviewing its case, the Council has considered several potential options as to the way forward in terms of its approach towards affordable housing delivery in the South West, as follows:

1. Setting an aspirational affordable housing target of 10%, as proposed by the submitted Plan – Composite version (LDP34).
2. Setting an aspirational affordable housing target of 5%.
3. Setting an aspirational affordable housing target of 5%, but combined with a higher site capacity threshold of 10 or 20 units above which affordable housing contributions would be sought.
4. Setting the affordable housing target at 0%, in accordance with the viability evidence of the DVS.

The Council has taken into account various factors in deciding on the way forward, as discussed in detail below.

#### *Evidence of affordable housing delivery in the South West*

4.3 A review has been carried out of the evidence of affordable housing being delivered in the South West, as evidence of past delivery provides an indication as to whether affordable housing can be delivered in this area.

4.4 In terms of evidence of affordable housing schemes that either have been delivered or are being delivered in this area, the following schemes for 100% affordable housing are noted:

- A scheme for 6 affordable dwellings in Abercrave had been completed in 2013 as an affordable housing scheme by a housing association (P/2011/0266).
- A scheme for 45 affordable units by a Housing Association is currently under construction at Gurnos School, Lower Cwm Twrch.
- A 7 flat scheme proposed by a Housing Association had been granted planning permission in 2011 on land adjacent to the Gurnos Youth and Community Centre and is currently under construction.

4.5 According to the Council's Section 106 register, 4 schemes are recorded in the South West where affordable housing has been secured on private developments through section 106 agreements:

- Brynygroes, Ystradgynlais for 138 dwellings, where 31 affordable units have been secured, equating to a contribution of 23%. The contribution secured was less than the current UDP policy requirement for 30%-35%, however this development was subject to a site specific viability assessment which determined that a contribution of 23% could be achieved with the development remaining viable. This site is allocated in the proposed Plan and the owner is actively pursuing the development of the site.
- Land to rear of Jeffrey's Arms, Brecon Road, Ystradgynlais for 18 dwellings, including 6 affordable dwellings. A technical start has been made on this development, however works have not commenced on the approved dwellings. This site has been included as a commitment in the proposed Plan.
- A scheme of 8 units at Lower Cwmtwrch, 3 of which are to be affordable, which was granted outline planning permission earlier this year, and has not started.
- A scheme for 15 houses, including 5 affordable housing, at Ystradgynlais with extant planning permission, but has not started.

4.6 The total number of units granted permission on the above 4 number of sites is 179 and a total of 45 affordable housing units have been secured. Therefore, an average affordable housing contribution of 25% has been secured on these sites. However, these schemes have not yet been delivered on the ground and section 106 agreements may be renegotiated.

4.7 The above indicates that there is limited evidence of affordable housing being delivered on the ground, apart from development by Registered Social Landlords. Although a percentage of affordable housing has been secured on private developments through planning permissions subject to section 106 agreements, these schemes have not yet been delivered. Whilst the viability of affordable housing at the Brynygroes scheme had been tested and it was found to be viable to secure affordable housing at a reduced level, this testing was carried out at a site specific level and therefore would be reflective of the site specific circumstances of this particular case that may not be replicated in other schemes.

*Potential contributions from development in the South West*

4.8 Consideration has been given to the merit of seeking affordable housing in terms of the notional affordable housing contribution that could potentially be captured if a contribution was sought in the South West, and likewise to the notional contribution that could potentially be lost if no contribution was sought. The potential contribution by combining a lower target with a higher site capacity threshold has also been tested. The results of this testing are set out within Appendix 2.

4.9 In summary, this testing shows the impact on the notional number of affordable housing units that could be secured if contributions were to be sought in the South-West. This testing demonstrates that if a 10% affordable housing contribution was sought at a 5 units and above threshold, as was proposed in the submitted LDP – Composite version (LDP34), the equivalent of approximately 46.6 affordable housing units could be secured in the South West (45.8 of these units could be secured on-site and 0.8 units as a commuted sum). If a lower affordable housing contribution of 5% was sought, again at a 5 unit threshold, the equivalent of 23.3 units could be secured (21.7 units on-site and 1.6 units as commuted sums). This would equate to between two to four affordable housing units on average each year for the remainder of the Plan period.

4.10 In the context of the overall number of affordable housing units proposed by the Plan, the notional contribution of affordable housing that could be secured on proposed allocations in the South West compared to other sub-market areas (based on the proposed targets as per the submitted Composite Plan - LDP34) would be as follows in figure 1:

**Figure 1 Proportion and number of affordable housing units allocations for each sub-market area as per the affordable housing targets set out in the submitted Plan**

<b>Sub-market area</b>	<b>Affordable Housing %</b>	<b>Affordable housing units</b>	<b>% of total affordable housing numbers</b>
<i>Central</i>	30%	289.2	51%
<i>Severn Valley</i>	20%	151	27%
<i>North</i>	10%	80.2	14%
<i>South West</i>	10%	46.6	8%
	<b>Total</b>	<b>567</b>	<b>100%</b>

4.11 If no affordable housing target was applied in the South West, the number of affordable housing units that could be secured on allocations within the whole of the Plan area would fall from 567 units to 520.4 units. This would result in a loss of 8% of potential affordable housing units on allocated sites. However, it is also noted that the total number of allocated units in the South West are only expected to account for 16% of the total allocated units of the Plan, which is markedly lower than the proportion of units allocated in other sub-market areas, ranging between 25% and 32%. This is largely a reflection of the comparatively small size of the South West area and limited number of settlements found in this area, with proposed allocations focused mainly within the town of Ystradgynlais.

4.12 Consideration has also been given to the notional contribution that could be secured on large windfall sites, on sites of 5 or more, based on evidence of past completions and planning permissions on this type of site in the South West. This testing, which is also detailed in Appendix 2, indicates that the equivalent of 4.6 affordable housing units could have been secured on windfall sites with planning permission, based on a 10% target at a 5 unit threshold. At a 5% target above the 5 unit threshold, 2.4 units could have been secured, which would be reduced to 1.65 units if a 10 unit threshold was applied.

4.13 Whilst the Council is mindful of the need to maximise the affordable housing delivery, the relatively minor affordable housing contribution that notionally could be captured in the South West over the remainder of the Plan period, would indicate that it may not be worthwhile in terms of the numbers that could be gained to seek affordable housing contributions in this area.

#### *The impact of affordable housing requirements on overall housing delivery in the South West*

4.14 In considering whether it is worthwhile to require relatively minimal affordable housing contributions from private developments in the South West by applying an aspirational target, the potential benefits need to be balanced against potential consequences, and in particular the risk that affordable housing could have a negative impact on overall housing delivery in this area. The generally negative residual values found by both the DVS and the HDH studies in the South West indicate that development viability in this area is likely to be particularly sensitive to the additional costs or impact on values as a result of policy requirements, such as affordable housing. The Council also seeks to prioritise the provision of essential infrastructure, before other policy requirements, in order to ensure that development can be brought forward.

4.15 The Council is confident that its allocations in this area can be delivered, as is demonstrated through site specific evidence provided within the *Housing Allocations Position Statement (September 2016)*. However, based on the viability evidence, it is doubtful whether these sites could also sustain a proportion of affordable housing whilst maintaining their viability.

#### *Potential pockets of viability*

4.16 Consideration has been given to the scope for applying an aspirational affordable housing target in order to capture affordable housing within any pockets of viability that may be found within the area. The DVS has identified some of the features that may characterise pockets of viability, including high quality developments in terms of their style, edge of

settlement locations, attractive views and good transport links. Whilst some of these characteristics may be found on or within individual sites in the South West, it would not be appropriate to generally assume that the majority of sites planned for or anticipated within this area would meet these higher expectations. The general expectations of the area will already be largely reflected in the house price values experienced in this area, which have already been accounted for within the DVS review (2016).

4.17 It is difficult to capture potential pockets within a high level viability study, as is highlighted by the DVS. The DVS has advised that affordable housing may be found to be viable on certain schemes in the South-West, however this would be based on a case by case assessment. It would not be reasonable or practicable to set a policy requiring site specific viability assessments to be carried out in connection with planning applications for housing in this area in order to seek to capture any instances where affordable housing may be viable, which based on the viability evidence, are also likely to be limited instances.

#### *Potential improvement in viability*

4.18 The viability assessments carried out are largely based on the evidence at the time that the study was carried out, in this instance August 2016, whereas the Plan proposes housing for the remainder of the Plan period, in this case, up until 2026. By taking a longer term perspective, and assuming that the housing market improves, an aspirational target could be justified. However, due to current uncertainties in the market, which makes it difficult to predict how values and costs will react to changes in the market, it is unclear as to when development may become sufficiently viable in order to support an affordable housing contribution in the South West.

4.19 The DVS has explained that as costs decrease and values increase, some schemes may be able to provide some affordable units, however this would be on a case by case assessment. As explained above, it would be unrealistic to require a site specific viability assessment to be carried out in respect of each planning application for housing in the South West in order to test the scope for affordable housing contributions.

4.20 In view of the above, it would not be appropriate to set an aspirational target, and instead, future changes in the market should be monitored and the affordable housing targets set should be reviewed if any significant changes are identified. Monitoring in connection with affordable housing is considered under section 7 below.

#### *The need for affordable housing in the South West*

4.21 The Local Housing Market Assessment (updated in 2014) (EB08) identifies that there is a need for affordable housing in the South West, and that the need identified in the Ystradgynlais area (LHMA area 8) is mainly for intermediate rented housing, which is a higher value form of affordable housing, than social rented housing. Whilst it would potentially be more viable for a private developer to provide intermediate forms of housing, this would not necessarily mean that development would become viable according to the high level testing. The lack of evidence of delivery of private developments where a proportion of affordable housing has been secured is also noted.



4.22 Unlike most other areas in Powys, and generally across Powys, where the need identified by the LHMA is mainly for social rented housing, the LHMA acknowledges that there is currently an over-supply of social rented housing in the South West. Between 2012 and 2014, 47 committed social rented units were to be delivered through Social Housing Grant. In terms of future schemes that are programmed to receive Social Housing Grant in this area, phases 1 and 2 of the Gwalia Housing Association scheme at land at the Gurnos Youth Centre, School Playing Fields are proposed to receive Social Housing Grant assistance.

*Conclusions on the evidence to support an affordable housing contribution in the South West*

4.23 In view of the above considerations, it is considered that there is insufficient evidence to support the target currently proposed in the submitted LDP Composite Plan (LDP34), or in fact, for any affordable housing contribution to be sought in the South West. Whilst there is an identified need affordable housing in this area, this need must be balanced against the viability evidence which suggests that it would not be realistic to deliver affordable housing through planning permissions for private housing developments in this area. The lack of evidence of past delivery of affordable housing on private developments, together with questions over the merit of seeking relatively minor affordable housing contributions against the potential risks to overall housing delivery, are also important factors to consider in deciding on the most appropriate approach towards affordable housing delivery in this area.

4.24 In terms of the potential options set out under 4.2 above, therefore, the aspirational targets within options 1-3 would not be informed by the viability evidence or any other available evidence. By following option 4, and therefore deciding not to require affordable housing contributions in the South West at the present time, this decision would be informed by the evidence.

*Additional contributions in other sub-market areas*

4.25 The scope for seeking additional contributions in the more viable sub-market areas has been considered, in order to seek to maximise affordable housing delivered through the Plan.

4.26 It was noted that the results of the testing in the Central area at a 30% target appeared to provide additional headroom above the viability threshold compared to the headroom available in the Severn Valley and the North sub-market areas, and therefore the scope for seeking a higher affordable housing target of 35% in connection with larger (100 unit), large (50 unit) and medium (25 unit) greenfield and brownfield developments was tested in this area. However, as explained by the DVS, residual values at a 35% target are brought closer to the margins of viability. Whilst applying a higher target in Central could potentially provide an additional 48.2 additional affordable housing units on sites allocated by the Plan, based on the advice of the DVS, it would not be desirable to plan at the margins of viability.

*Exemptions from the requirement for affordable housing contributions*

4.27 Consideration has been given to the case for requiring affordable housing from all types of housing development, and in particular to whether there would be any reasons to exempt certain types of development from this requirement.

4.28 Developments involving barn and flat conversions have not been specifically tested within the DVS review (2016). Such schemes are noted to involve higher house prices but also higher costs and these values can be highly variable between schemes, hence the difficulty in testing their viability at a high level. The DVS has therefore suggested that they should be considered on a case by case basis, and possibly exempted from the policy requirement for affordable housing contributions. The Council recognises that the economics of conversion schemes differ from new build housing. However, given the scope within the proposed policy for site specific negotiations to take place, and also in the knowledge that a proportion of affordable housing has been secured within conversion schemes in the past, it is considered that conversions should not be exempt from the affordable housing requirements.

4.29 Rural enterprise dwellings have not been tested for their viability by the DVS. Planning applications for rural enterprise dwellings are assessed based on the functional needs of the enterprise, and it must be demonstrated that the enterprise can support the construction of the dwelling as part of the financial test set out in Technical Advice Note 6. The viability of such schemes will therefore depend on the individual circumstances of the enterprise in question and will not be driven by market demand. Rural enterprise dwelling proposals should therefore be exempt from the affordable housing policy requirements.

4.31 Rural exception sites for affordable housing and schemes for 100% affordable housing, will by their very nature, already contribute towards affordable housing, and therefore will not be subject to the proposed affordable housing policy requirements.

4.32 The HDH study (2014) indicated that development on brownfield sites was not viable at 0% affordable housing, however the DVS study (2016) shows that these types of sites are viable at the level of affordable housing contributions proposed in each area, except for the South West. Direct costs and costs associated with brownfield sites will be site specific and will be reflective of the risks involved in that particular site, and therefore have not been accounted for within the DVS study (2016). Where abnormal costs are involved, the level of affordable housing can be negotiated on a site by site basis. Therefore, development on brownfield sites should not be excluded from the requirement for affordable housing.

## **5. SITE CAPACITY THRESHOLD FOR REQUIRING AFFORDABLE HOUSING**

5.1 The viability results have also been considered in terms of their testing of the appropriateness of the proposed threshold of 5 units, above which the contributions set out above would be sought.

5.2 The previous HDH study (2014) tested affordable housing contributions at a threshold of 5 units or more, and therefore did not specifically test the viability of differing thresholds. However, the results for the smaller sites indicated that the modelled schemes of 3 units or less would be unviable and would not be able to support any affordable housing contributions.

5.3 The results of the DVS study (2016) indicate that the modelled schemes for single units or for 3 units or less are either marginally viable or unviable at 0% in the Central, Severn

Valley and North sub-market areas, leaving no scope within their residual values for contributions towards affordable housing. The results show that the modelled schemes of 5 units or more in these areas would be capable of supporting the proposed affordable housing contributions.

5.4 Taking into account the proportion of small sites anticipated by the Plan, JHLAS indicates that 357 units have been completed on small sites of less than 5 since the start of the Plan period in 2011. Small sites are expected to contribute 883 units towards the overall housing provision figure for the Plan of 5985 units, approximately 15%. A lower unit threshold could be justified if the majority of completions were expected on small sites, in order to capture affordable housing, however this is not expected to be the case in Powys, as the majority of units are expected to come forward on large allocated sites.

5.5 The results of the testing of notional affordable housing contributions that could be achieved by requiring contributions from small sites of less than 5 units are set out in Appendix 2. This testing reveals that 176 additional affordable housing units could theoretically be secured on small sites if a threshold of 1 unit was to be adopted, however the viability evidence does not support this approach. The evidence also does not support any requirement for affordable housing contributions in the South West, and therefore this figure could be closer to 150 additional affordable housing units. Furthermore, in most instances, it would not be practicable for these units to be provided on-site on small sites, apart from on sites of 3 or more in Central, and instead contributions would be sought through commuted sums which would equate to part units.

5.6 Consideration has been given to the scope for applying a lower threshold of 4 units or more. Although the viability of schemes for 4 units have not been specifically modelled or tested for the viability of affordable housing contributions, taking into account the headroom in the affordable housing testing for 5 unit schemes, and in comparison with the residual values for 3 units, it may be that a 4 unit scheme would be able to support affordable housing contributions.

5.7 In terms of the potential additional affordable housing contributions that could be captured if a 4 unit threshold was applied, this has been tested as set out in Appendix 4. This testing identifies that a maximum of 37.5 additional affordable units is likely to be captured at a threshold of 4 units, however this would be likely to be less given the limited proportion of sites expected to come forward for 4 dwellings (the majority of small site completions have been on single dwelling sites). Furthermore, most of these would be unlikely to be provided on-site as it would not be practicable, except in Central where the contribution would allow for on-site provision.

5.8 The viability evidence, together with the results of the testing of notional contributions, indicates that it is appropriate to retain the site capacity threshold for requiring affordable housing contributions at 5 units or more.

## 6. AFFORDABLE HOUSING TARGET

6.1 Due to the proposed policy changes set out above, it has been necessary to review the proposed Authority wide affordable housing target and the LDP's housing provision to ensure that it remains realistic. The affordable housing target previously identified in the Affordable Housing Topic Paper Update in January 2016 (EB21) was set at 1257 affordable housing units. This target took into account affordable housing units expected on allocations, commitments and future windfall sites, and also units already delivered during the Plan period on commitments and windfall completions.

6.2 Table 1 included in Appendix shows how the number of units expected from each source of affordable housing as a result of the review compares to the figures provided in the January 2016 update.

6.3 The difference in the figures for allocations will be mainly as a result of the loss of affordable housing numbers in the South West sub-market area, where the target is proposed to be reduced from 10% to 0%. This would have resulted in 46.6 fewer affordable housing units on allocations, however changes to the indicative housing numbers as a result of increases to the density assumptions applied in the Viability Assessment, will have captured some additional affordable housing numbers. In order to take into account the over provision allowance of 24% above the housing dwelling requirement, the same reduction has been applied to the affordable housing expected on allocations.

6.4 With regards to changes to the affordable housing figures on commitments, this reflects the affordable housing secured on additional commitments as part of the proposed Further Focussed Changes to the Plan. Additional housing land bank sites have also been identified and therefore the affordable housing numbers secured on these sites are also accounted for. A discount of 40% has been applied to the committed and housing land bank affordable housing units that have not started to reflect the discount applied to the overall housing provision number on these sites.

6.5 Windfall projections have been informed by the rate of past affordable housing completions on windfall sites since the beginning of the Plan period. The windfall completion figure has increased to 41 units in line with the findings of Appendix 2 of the *Explanation and Review of the Windfall Allowance (September 2016)*. Using this figure to project forward therefore, the projected windfall figure would be increased to 112 units. By not requiring contributions towards affordable housing in the South West, the projected number of units expected as windfall may be impacted upon. However, based on the limited number of large windfall completions in the past and also the limited number of settlements where windfall could happen in this area, this is unlikely to have a significant impact on the number of affordable housing units that could be secured on windfall sites over the Plan area. Taking into account the amount of affordable housing that could have been sought on 4 large windfall completions that were granted planning permission in the South West (Appendix 2), which at 10% target would have amounted to 4.8 units, a windfall projection of 107 units would be appropriate.

6.6 The reduction in the affordable housing target to 949 units or 63 units per annum continues to be below the need identified in the LHMA of 153 per annum. However, the proposed target is considered to be realistic and other measures including the rural

exceptions policy and the likely contribution of exception schemes for 100% affordable housing and supported by Social Housing Grant assistance (as is detailed in the Topic Paper update January 2016), will help to maximise opportunities for delivery of affordable housing.

## **7. MONITORING AND REVIEW**

7.1 For the purposes of monitoring viability on an annual basis and throughout the remainder of the Plan period, it will be important for key viability assumptions to be monitored. The monitoring of general viability and development assumptions is discussed under section 7 of the *Viability Topic Paper (September 2016)*. The following monitoring is proposed in order to keep affordable housing delivery and requirements under review.

7.2 The amount of affordable housing secured and delivered through planning permissions and within the different sub-market areas is proposed to be monitored through the Annual Monitoring Report. This will also involve monitoring the amount of dwellings secured and delivered on affordable housing exception sites. It is also proposed to monitor applications submitted where an applicant is seeking to negotiate/re-negotiate a lower contribution of affordable housing than the target (either as part of planning application being processed, or by an application under section 106A for discharge/modification or by deed of variation). A high number of successful applications whereby reduced affordable housing contributions are negotiated or re-negotiated, may trigger the need to review the affordable housing targets. The need for a review would depend on whether fundamental issues are raised that may be relevant to other sites and to the key types of development proposals in Powys.

7.3 The proposed form of affordable housing, in terms of the proportion of contributions secured and delivered on-site and commuted sums, will also be monitored. It will also be necessary to monitor the type, mix and tenure of affordable housing being approved and delivered on the ground in order to inform any future review. Monitoring will also be carried out in conjunction with the Local Housing Market Assessment in order to identify any changes in affordability and need that may be relevant to the affordable housing policy requirements and target.

## **8. CONCLUSION**

8.1 The review undertaken of the proposed policy requirements, as informed by the updated and reviewed DVS Viability Assessment (2016) has concluded that it would not be viable, realistic or worthwhile to seek affordable housing contributions in the South West. The change in the Council's approach towards affordable housing requirements in the South West, by applying a site specific target of 0% for affordable housing in this area, will impact on affordable housing delivery in this sub-market area. However, this impact will be relatively localised and is not expected to have a significant impact on the overall delivery of affordable housing through the Plan or on the overall strategy of the Plan.

8.2 The Council considers that by placing higher expectations on large developments that are expected to be delivered in the most viable areas of the Plan area - in the Central, Severn Valley and North sub-market areas – this will maximise affordable housing delivery in those areas, whilst recognising that the delivery of affordable housing does not appear to be realistic in the less viable sub-market area of the South West. Where commuted sums are gained for part units on schemes in more viable areas, these can be used to support the delivery of affordable housing schemes in the County.

8.3 The viability evidence supports the Council's case for continuing to set the site capacity threshold at 5 units or more, as it would not be generally viable to seek contributions on sites below this threshold. Whilst it may be viable to seek affordable housing on sites of 4 units or more, the potential number of additional affordable units likely to be captured would not be worthwhile, particularly due to the limited proportion of sites expected to come forward for 4 dwellings.

8.4 The proposed changes to the policy requirements in respect of affordable housing on proposed allocations and windfalls, along with the application of a non-delivery allowance to committed sites, results in a reduced affordable housing target of 949 units and 63 units per annum. This equates to 21% of the LDP dwelling requirement of 4,500 dwellings and 17% of the total housing provision number of 5,596. This target continues to fall below the need identified in the Local Housing Market Assessment of 153 per annum, however the Council acknowledges the need to ensure that the affordable housing target is realistic and deliverable. Other likely sources of affordable housing provision not accounted for within the target will also help to meet affordable housing needs in Powys.

8.5 The conclusions of this assessment are reflected in the affordable housing target, affordable housing contributions and proposed annual monitoring framework specified in the further Focussed Changes to the Plan (September 2016) and the relevant changes are detailed in Appendix 4.

## **9. APPENDICES**

- Appendix 1 Table comparing key assumptions relating to affordable housing testing
- Appendix 2 Results of notional affordable housing testing
- Appendix 3 Tables showing components and calculation of Affordable Housing Target
- Appendix 4 Revised affordable housing policies for further focussed changes September 2016
- Appendix 5 Map of proposed sub-market areas

**APPENDIX 1 Table comparing key assumptions relating to affordable housing testing**

The following table set out the changes to the affordable housing viability assumptions applied in the DVS Viability Study in August 2016 compared to the original HDH Local Development Plan Viability Assessment (2014), along with reasons for changes in approaches and values applied.

<b>ASSUMPTION</b>	<b>OCTOBER 2014 REPORT (HDH)</b>	<b>AUGUST 2016 REPORT (DVS)</b>	<b>REASONS</b>
<b>Affordable Housing values</b>	Social rented - £770 per square metre  Based on StatsWales figures for average weekly rents in self-contained stock at social rent by accommodation type, number of bedrooms and provider type in March 2014	Social rented - £800 per square metre  Based on StatsWales figures less assumed voids and management costs, and capitalised at a 5.5% yield and averaged out against unit size in August 2016.	It is considered appropriate to apply the updated value assumptions of the DVS.
	Intermediate rented:  £875 per sqm  Based on 80% of open market rental values and current Local Housing Allowance caps	Intermediate rented:  £905 psm in the North and Severn Valley  £975 psm in Central  £935 psm in the South West  Set at a level considered	



		affordable by the Council	
	Intermediate affordable housing for sale:  70% of open market value	Intermediate affordable housing for sale:  70% of open market value	Both studies apply a lower market value to intermediate affordable housing for sale to reflect the reduction in value expected for this type of affordable housing. This level of reduction is generally reflective of the discount the Council expects on the open market value of a dwelling for it to be considered as intermediate affordable housing for sale.
<b>Affordable Housing build costs</b>	Parity with the costs of open market build costs, as set out in Appendix 1 of the <i>Viability Topic Paper (September 2016)</i> and copied below:  Ranging from £849 per square metre to £1,225 per sqm varied by size and whether greenfield/brownfield  £900 per sqm for a larger 100 unit scheme  £1,225 for a single unit site  Based on BCIS costs re-based to Powys (March 2014).	Parity with costs of open market build costs, as set out in Appendix 1 of the <i>Viability Topic Paper (September 2016)</i> and copied below:  £969 per square metre for houses  £1,128 per square metre for flats  On sites of 3 and fewer units:  £1,616 per square metres for detached dwellings  £1,150 per square metre for semi-detached and terraced housing  Based on BCIS median estate housing general costs	Both studies have treated the build costs of affordable housing on a par with the build costs of open market dwellings. The reasons given for this are similar in that this is due to the increasing requirements and standards required by RSL's and Welsh Government, such as those relating to Development Quality Schemes and Lifetime Homes. This means that the costs associated with building affordable housing are expected to be similar to the costs of open market build costs.  It is understood that construction costs have generally increased and therefore it is considered appropriate to apply costs in line with updated data.  It is also considered appropriate to apply a higher cost assumption to flats and small sites of 3 and fewer units in line with the BCIS cost data.

		and costs for 3 and fewer units re-based to Powys as at 23 <sup>rd</sup> of July 2016.	
<b>Affordable Housing Tenure split</b>	75% Intermediate Rent 25% shared ownership housing	75% Social Rented 25% Intermediate Rented  Based on the identified need for affordable housing in the Powys Local Housing Market Assessment.	The Council considers that the tenure mix adopted by the DVS is appropriate as it reflects the need identified for affordable housing tenures in the Local Housing Market Assessment.
<b>Developer profit for affordable housing</b>	20% of Gross Development Costs.	6% developer profit	HDH applied the same level of profit expected from open market housing to affordable housing.  DVS has assumed the developer will construct the affordable housing for the RSL and charge 6% 'project management fee' for doing so. Therefore, the reduced profit expected of affordable housing is a reflection of the reduced risk as the affordable housing units are effectively pre-sold.

## APPENDIX 2 Results of the testing of notional contributions

### *Contributions in the South-West*

Turning, firstly, to the impact on the number of affordable housing units that notionally could be secured or lost on proposed allocations in the South West, the following table sets out the difference in the number of affordable housing that could be secured on proposed allocations in the South West at different site capacity thresholds and at 5% and 10% affordable housing contributions:

**Figure 2**

<b>Threshold</b>	<b>5%</b>	<b>10%</b>
<b>5+</b>	23.3	46.6
<b>10+</b>	22.9	45.8
<b>20+</b>	21.7	43.4

On this basis, the proposed allocations in the South West could contribute a total of 46.6 affordable units if a contribution of 10% was sought on developments of over 5 units, as is proposed in the Composite Plan. If a lower target of 5% was applied in the South West, proposed allocations could potentially contribute 23.3 affordable units. At 5%, the difference in number of units captured between the highest and lowest threshold would be 1.6 units, and at 10% the difference would be 3.2 units.

This illustrates that by purely applying a higher threshold in the South West, this would only have a marginal impact on the number of affordable housing that could be captured at 5% and 10% contributions on allocations. Changing the level of affordable housing contributions expected has a more noticeable impact on the number of affordable housing that could notionally be secured.

### *Commuted sums in the South-West*

The above notional number of potential affordable housing units in the South West would not necessarily result in this number of units being provided on site, as this would equate to less than a single unit on sites of less than 20 units at 5% affordable housing contribution, and on sites of less than 10 units at 10% affordable housing contribution. In terms of allocations in the South West, three allocated sites have an indicative capacity of below 20 units, one of which has an indicative capacity of below 10 units. At 5%, the contribution on these sites would not be on site and would instead involve commuted sums. At 10%, the site of less than 10 units, would involve a commuted sum. The following table sets out the number of affordable housing units that could be captured at differing site capacity thresholds and differing affordable housing targets on proposed allocations in the South West:

**Figure 3**

Thresholds for on-site provision	No. of total units	Total affordable housing no. at 5%	Total affordable housing no. at 10%	No. of on-site affordable units at 5%	No. of on-site affordable units at 10%	Commuted sums at 5%	Commuted sums at 10%
<b>20+ units</b>	434	23.3	46.6	23.3	46.6	None	None
<b>10+ units</b>	458	23.3	46.6	22.9	46.6	1.2	None
<b>5+ units</b>	466	23.3	46.6	21.7	45.8	1.6	0.8

Therefore, the majority of contributions on allocations could still be secured in the form of on-site units in the South West at differing thresholds and affordable housing contributions.

*Contribution from anticipated windfall sites in the South West*

In terms of the notional contribution that could be secured on anticipated windfall sites in the South West, reference has been made to the evidence of development that has either been delivered or is being delivered on windfall sites (since the beginning of the Plan period). 1 scheme for 5 units has been delivered on a large windfall site, the other developments of 5 or more that have been completed or partially completed developments are all on allocated sites. A notional contribution of the equivalent of 0.5 units could have been secured.

Given the limited evidence of large windfall completions in the South West, reference has also been made to planning permissions granted for private developments on large windfall sites in the South West (since March 2010), in order to test the notional contribution that could be gained or lost. Based on these planning permissions, an analysis has been undertaken of the notional contribution from large windfall sites of 5 or more units at varying thresholds and targets:

**Figure 4**

Threshold	No. of sites	No. of units	at 5%	at 10%
5+	4	48	2.4	4.8
10+	3	33	1.65	3.3
20+	1	0	0	0

Windfall completions on sites of less than 5 units would fall below the threshold of 5 units and above, and therefore affordable housing would not be captured on windfall sites of this size.

*Notional contributions by lowering the site capacity threshold*

In terms of any notional contributions that could potentially be secured if affordable housing was to be secured on all sites of under 5 units, at an average target of 20% affordable housing across the County, and based on the projected number of units on small windfall sites over the 11 remaining years of the Plan of 883, this could theoretically contribute 176 additional affordable units. This figure would be reduced if it is to be accepted that no contributions towards affordable housing could be sought in the South West, which would reduce the figure by up to 44 units, if a quarter of small sites were expected in the South-

West, however given that proportionally less development is expected in the South West than in other areas, the theoretical contribution is likely to be in the region of 150 units. Furthermore, most of these would be unlikely to be provided on-site as it would not be practicable on such small sites. On-site provision on sites of less than 5 units would only be practicable on sites of 3 or more in Central, and in other sub-market areas, contributions on sites of less than 5 would be in the form of commuted sums relating to part units.

*Notional contribution by applying a threshold of 4 units or more*

By setting the threshold at 4 units or more, instead of 5 units or more, this would only capture additional affordable dwellings on windfall sites as allocations have only been made for sites of 5 or more units or site areas of 0.25 hectares or more.

The total number of windfalls projected on small sites for the remainder of the Plan is 883 units. Taking the estimated figure of 150 affordable dwellings that could be gained on sites of less than 5 to gauge the likely contribution from sites of 4, if it was assumed that a quarter of these units would be delivered on sites of 4, this would amount to 37.5 units. This would be the maximum as the majority of houses delivered on small sites have generally been on single dwelling sites. Furthermore, the majority of units gained would not be practical to be provided on-site, as the contribution would not equate to a single unit, unless in Central where on-site units could be achieved on sites of 3 or more.

**APPENDIX 3 Tables showing components and calculation of Affordable Housing Target**

**Table 1 Components and figures for overall housing provision and affordable housing provision**

	<b>Components of Housing Provision</b>	<b>Totals</b>	<b>Totals of Affordable Housing Provision</b>	<b>Components of Affordable Housing Provision Reference to sources in table 2</b>
<b>A</b>	Total Completions 01/04/2011 – 31/03/2015 – Small and Large Sites	622	186	(L) Commitments completed 01/04/2011 to 31/03/2015 (P) Housing Land Bank sites completed (T) Windfall completions
<b>B</b>	Housing Commitment Large Sites - Units Under Construction	162	64	(M) Commitments under construction in JHLAS 2015 (Q) Housing Land Banks under construction
<b>C</b>	Housing Commitment Large Sites – Units Not Started	1,017	282	(N) Commitments not started (R) Housing Land Bank Sites not started
<b>D</b>	Housing Commitment Large Sites – Units Not Started assessed against risk of non-delivery	610	175.2	Row C minus non-delivery allowance of 40% and same as (S)
<b>E</b>	New Housing Allocations	2,992	419.6	(J) Allocations with discount to account for overprovision allowance of 24%
<b>F</b>	Projected units on Large Windfall Sites (11 years remaining)	327	107	(U) Windfall projections
<b>G</b>	Projected units on Small Windfall Sites (11 years remaining)	883	-	Inc. in Row F as windfall completions for affordable housing (L) includes large and small site windfalls, and therefore small and large windfall projected together
<b>H</b>	<b>Total Housing Provision</b>	<b>5,596</b>	<b>949.1</b>	<b>Rows A, B D, E, F</b>
	<b>% Distribution of Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Table 2 Breakdown of sources and figures for affordable housing provision**

	<b>Source of affordable housing</b>	<b>Affordable Housing Units (January 2016)</b>	<b>Affordable Housing Units (August 2016)</b>
<b>I</b>	Allocations	535.2	520.4
<b>J</b>	Allocations with discount to account for overprovision allowance of 24%	Not previously applied	419.6
<b>K</b>	Total commitments	435.8	457
<b>L</b>	Commitments completed 01/04/2011 to 31/03/2015	133	136
<b>M</b>	Commitments under construction in JHLAS 2015	302.8  Noted: Previously joint figure given for commitments under construction and not completed.	64
<b>N</b>	Commitments not started	Previously included within figure of 302.8 in M above	257
<b>O</b>	Total Housing Land Bank sites	Not previously included	44
<b>P</b>	Housing Land Bank sites completed	Not previously included	9
<b>Q</b>	Housing land Bank sites under construction	Not previously included	0
<b>R</b>	Housing Land Bank sites not started	Not previous included	35
<b>S</b>	40% discount applied to Commitments and Housing Land Bank sites not started	Not previously applied	175.2  $(N + R) * 0.6 = S$
<b>T</b>	Windfall completions	36	41
<b>U</b>	Windfall projections	99	107
<b>V</b>	<b>Total affordable housing provision</b>	<b>1257</b>	<b>949.1</b>
<b>X</b>	<b>Per annum</b>	<b>83.3</b>	<b>63.2</b>

## **APPENDIX 4 Revised affordable housing policies for further focussed changes September 2016**

### **Affordable Housing Needs**

- **LDP Affordable Housing target = 949 affordable dwellings** [® 34.15](#)

3.3.17 An affordable housing target of 949 dwellings is set for the LDP<sup>1</sup>. This is 21% of the LDP dwelling requirement and has had regard to the findings of the Local Housing Market Assessment<sup>2</sup>. The updated and reviewed Viability Assessment of the LDP (August 2016) took into consideration the prevailing economic climate, land values and house prices in Powys, a range of development costs, and all requirements of local and national planning policies. The conclusions of this assessment are reflected in the affordable housing contributions policy H4 and the affordable housing target. Economic factors affecting construction and development viability have also been taken into account in setting the target, but will continue to affect the delivery of housing. The target will therefore be monitored.

3.3.18 It is estimated that this target will be met in the following ways:

1. 186 affordable homes completed from 1/4/2011 to 31/3/2015;
2. 656 affordable homes from allocated sites as set out in Appendix 1 and other sites in accordance with policy H4;
3. 107 affordable homes on windfall sites (non-allocated sites), based on an assessment of completions over the period 1/4/2011 to 31/3/2015 and projecting forward for the remainder of the Plan period.

### **Strategic Policy SP3 – Affordable Housing Target**

**Over the Plan period 2011-2026, the LDP will seek to provide 949 affordable dwellings.**

**Affordable dwellings will be required in accordance with policy H4 or permitted in accordance with policies H5 and H7.**

**Affordable dwellings will be controlled to ensure that they remain affordable in perpetuity.**

### **Policy H4 - Affordable Housing Contributions** [® 34.52](#)

**Housing development proposals will be required to make contributions towards affordable housing in accordance with the following criteria:**

1. **A contribution will be required from open market housing development proposals of 5 or more dwelling units or on sites of 0.25 ha and above.**
2. **The target contributions required for each sub-market area are as follows:**
  - i. **Central – 30% contribution.**
  - ii. **Severn Valley – 20% contribution.**
  - iii. **North - 10% contribution.**
  - iv. **South West Powys – 0% contribution.**

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<sup>1</sup> Further information is provided in the LDP Affordable Housing Topic Paper

<sup>2</sup> An update to the LHMA was undertaken in 2014 and published in 2015.



- 3. Contributions shall be made in the form of on-site affordable housing provision. Alternative forms of contributions, including off-site provision or financial contributions in lieu of on-site provision, shall only be considered in circumstances where it is clear that on-site provision would not be practical.**
- 4. Where contributions would equate to less than 1 unit, commuted sums of the equivalent amount to the part contribution will be required.**
- 5. The affordable housing provided must reflect the need identified locally in terms of its size, type and tenure.**

**Where the proposer submits detailed site specific evidence demonstrating that the required contributions set out above would make the development unviable, the Council will consider reduction or, if necessary, removal of the requirement for affordable housing contributions.**

4.6.13 Contributions towards, and the provision of affordable housing is key to the delivery of the LDP strategy and meeting the plan's affordable housing target Policy H4 responds to the requirement for the delivery of a contribution towards affordable housing through the planning system. Criterion 2 of Policy H4 sets out the target contributions for four sub-market areas which are based on distinct areas of similar house prices as defined in the LDP's Viability Assessment, as updated and reviewed in August 2016 and illustrated on the map (Appendix 4A). The percentage contributions set out in criterion 2 will be reviewed periodically to reflect changes in land values, house prices, policy requirements and development costs.

4.6.14 'Affordable Housing' and 'Local Need' for affordable housing are defined in-Policy H8 below<sup>3</sup>. The term 'contribution' is defined as either on-site provision, off-site provision or a financial contribution ('commuted sum'). The presumption will be that the contribution will be made on-site, as this form of affordable housing ensures that the housing is provided in the location where it is needed. Consideration will only be given to alternative forms of contribution where on-site provision would not be practical, commuted sums being particularly appropriate where contributions would amount to less than a whole unit. The range of unit types and sizes must reflect local housing needs. The Council will generally expect the tenure mix to incorporate mainly social rented housing, 75% and 25% intermediate housing (rent or sale) as this reflects the tenure mix identified in the LHMA for Powys, unless local evidence suggests the need for alternative tenure mixes. Detailed evidence of local housing needs is provided in the Local Housing Market Assessment.

4.6.15 Policy H4 applies to all housing development above the threshold of 5 or more dwelling units or 0.25 ha of land. The policy thresholds and target contributions are informed by the findings of the updated Viability Assessment and review carried out by the District Valuer Service (August 2016), and taking into account evidence of development being delivered on the ground. The thresholds and percentage target contributions vary according to each sub-market area as identified by the above-mentioned updated viability work. The success rate and achievability in practice of the percentage target contributions will be monitored and reviewed periodically.

4.6.16 Where affordable housing provision is made on-site, and the tenure need is for social rented, the developer must partner with a Registered Social Landlord (RSL), or an

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<sup>3</sup> Following adoption of the LDP, Supplementary Planning Guidance on Affordable Housing will be prepared.

equivalent organisation or the Strategic Housing Authority (SHA) to ensure that the delivery of the housing will remain affordable in perpetuity. Policy H4 supports financial contributions in lieu of on-site affordable housing where there is a lack of commitment from RSLs to partner with a developer. Dependent on the need identified locally – if the need identifies intermediate housing, private developers can provide this form of accommodation.

4.6.17 Developers seeking to negotiate a reduction in affordable housing provision or the removal of the affordable housing requirement on viability grounds will need to submit a detailed viability appraisal demonstrating that the required contribution would make the development unviable. The evidence should test the impact of varying levels of affordable housing contributions on development viability and should identify the level at which affordable housing can be provided whilst maintaining development viability. Further detail on the Council's approach towards negotiating and securing on-site provision and financial contributions will be provided in the Affordable Housing SPG.

**Appendix 5 A map of the sub-market areas, as amended, in September 2016**

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**DRAFT**

**Powys Local Development Plan**

**Explanation of the Determination of  
Employment Land Site Allocations**

**Position Statement**

**September 2016**

## **Executive Summary**

Representations received during public consultations raised concerns that employment land allocations for the Powys Local Development Plan had not been assessed against the TAN23 sequential test, and that the scale of provision was significantly in excess of take-up during the previous years.

This Position Statement describes the process under which employment land sites were identified and allocated and demonstrates the relationships of site distribution against Council corporate strategies to promote longer term sustainable growth and business development.

The alignment of allocations and strategies against the LDP objectives and long term vision to enable growth in sustainable locations and thus ensure the wellbeing of “strong communities in the green heart of Wales” has informed the allocation of employment land.

## 1. Introduction

1.0.1 In response to representations received during public consultations, this position statement provides the explanation of the methodology and decisions taken to identify and allocate the employment land sites across Powys (excluding the Brecon Beacons National Park) for the Powys Local Development Plan (LDP) 2011-2026.

1.0.2 A defined process has been followed to identify sites for consideration as employment land allocations. Potential employment land sites were identified through two sources; through assessment of sites submitted for consideration during the LDP candidate site process and those previously identified as allocated employment sites in the adopted Powys Unitary Development Plan (UDP).

1.0.3 This document complements and links to other published documents within the theme of Employment and Economic Development as submitted to the Planning Inspectorate for examination:

Subject	Ref No	Document	Section	Date
Economic Vision	LDP06	LDP Deposit Plan	3.2	June 2015
Candidate Site Assessments	LDP04	Candidate Site Status Report	-	2015 Erratum Feb 2016
Employment Land Growth Options	LDP01	LDP Preferred Strategy	5.2	March 2012
Existing Employment Site Assessments	EB12	Powys Employment Needs Assessment: Property Market Overview & Supply Analysis - Appendices	-	October 2012
Future Employment Needs	EB11	PENA Core Report		October 2012
Larger Than Local Approach	EB12	Powys Employment Needs Assessment: Position Statement	2	January 2016
Preferred Strategy	LDP01	LDP Preferred Strategy	7	March 2012
Spatial Development Options	LDP01	LDP Preferred Strategy	6.2	March 2012
Stakeholder Engagement	EB24	Economy – Employment and Economic Development	12.0	June 2015
Recent Activity in Powys Economy	EB12	Powys Employment Needs Assessment: Position Statement	3	January 2016
Newtown non-allocated sites assessment	EB12	Powys Employment Needs Assessment: Position Statement	5	January 2016
Welsh Language Impact	EB12	Powys Employment Needs Assessment: Position Statement	6	January 2016
Transport Access	POW01	Mid Wales Joint Local Transport Plan	4.2	January 2015

## **2. Informing the Strategy of the Local Development Plan**

2.0.1 Analysis of labour market data for the County in preparation for the Preferred Strategy [LDP01] showed relatively high employment rates coupled with lower levels of unemployment and inactivity (than elsewhere in Wales and GB). These rates are fuelled by very high levels of self-employment and part-time employment, which reflects the relative lack of employment opportunities in rural areas and the sectoral mix of employment.

2.0.2 Business data for the County also highlights the dominance of micro and small businesses and the high levels of new business start-ups in the County. The Powys Joint Needs Assessment 2010-11 prepared to inform the County's *One Powys Plan* [POW04] encapsulated this position as follows:

*“With its sparsely populated upland landscape, poor connectivity with the cities of England and Wales, Powys has no large employers outside of the public sector. The majority of businesses are small and there are many one person enterprises”.*

### **2.1 The Growth Options for Economic Development**

2.1.1 The Preferred Strategy [LDP01] for the Local Development Plan was published in March 2012 and considered growth options for the important themes of housing, employment and retail. The LDP Preferred Strategy recognised the need for the LDP to plan for growth and set out three growth options in respect of employment land.

2.1.2 At the time the LDP Preferred Strategy was being prepared and published, the Powys Employment Needs Assessment (PENA – [EB11] and [EB12]) study, commissioned from Hyder, was ongoing. This study was to provide the evidence on the likely future needs of Powys in respect of economic development and employment land requirements during the LDP Plan period and the pre-publication findings from this study were used to inform the options in the LDP Preferred Strategy.

2.1.3 The previous study was undertaken in 2001 (Mid Wales Employment Land Strategy) to inform the preparation of the Powys UDP, therefore the PENA would provide the updated evidence of the employment land requirements during the LDP Plan period.

2.1.4 The Economy – Employment & Economic Development Topic Paper [EB 24] discussed the stakeholder engagement undertaken to inform the PENA. It was recognised that since 2008 the UK economy as a whole had been in economic recession and in Powys had limited the availability of finance for development. During the period of the UDP to 2012, there had been a take up rate of employment land averaging c.1ha per annum, possibly a suppressed total reflecting the harsh economic climate.

2.1.5 The three Growth Options for employment Land considered for inclusion the LDP in as determined from the Preferred Strategy 2012 were the:

1. Continuation of UDP requirement (based on 2001 study)
2. Continuation of build out rates during the recent past (including during economic recession)
3. Emerging Powys Economic Needs Assessment

These options identified the following employment land requirements:



**Table 1: Employment Land Growth Options**

	<b>Option 1</b> Continuation of UDP Requirement (Strategic Sites)	<b>Option 2</b> Continuation of Past Take Up Rates	<b>Option 3</b> Emerging Economic Needs Study (Core Requirement)
Total (15 year) Land Requirement	54.9ha.	15ha.	42ha.
Annual Supply Requirement	3.66ha.	1ha.	2.8ha.

From LDP Preferred Strategy [LDP01] 2012

2.1.6 Informed by the PENA, the breakdown of the employment land requirement under Preferred Option 3 identified that the primary driver for new employment site allocations during the LDP Plan period was likely to be the need for established businesses to replace and upgrade the existing supply of premises, rather than the provision of land to accommodate the expansion of the economy.

2.1.7 Of the three options identified, Option 1 the continuation of the UDP employment land allocation requirement was based on out of date information contained within the 2001 Mid Wales Employment Land Strategy. Option 2, continuation of past take up rates, was a rather simplistic assessment of how much employment land should be allocated within the LDP. Option 3 provided for a more robust, credible and up-to-date assessment of the economic land use requirements during the LDP Plan period and had been informed following stakeholder engagement conducted during its preparation process. Option 3 also provided for a level of growth that, whilst not at the level of Option 1, should not restrict economic growth (as Option 2 had the potential to do) and would provide a choice of sites, an important factor for established businesses within Powys looking to expand or develop new premises.

2.1.8 The Preferred Strategy also recognised the composition of the employment sector within the County. The high level of business start-ups, self-employment and micro and small businesses emphasised that employment growth within the County could not be accommodated solely on allocated employment sites as such provision caters primarily for larger scale employment development. Therefore, alongside the allocation of employment land to meet employment growth, the LDP also needed a policy approach that facilitated home working and small scale employment development to support new and existing businesses.

**2.2 The Spatial Options for Economic Development**

2.2.1 Powys’ extensive geographical size and its highly dispersed population and settlement pattern, meant that the spatial options were inherently ‘strategic’ or broad brush at Preferred Strategy stage.

2.2.2 During autumn/winter 2011, a series of stakeholder events were undertaken to inform the development of the spatial strategy for the LDP and six options emerged from these for consideration [LDP01], the preferred option being:

*“A settlement hierarchy based on levels of service provision and size of settlement (population) subject to environmental and infrastructure capacity. Higher levels of growth should be directed to those settlements along a central growth corridor in accordance with the Settlement Hierarchy”.*

2.2.3 The result was a settlement hierarchy taken forward into the LDP. Development on sustainable principles would be targeted at the highest two tiers of the hierarchy reflecting access to services and existing population distributions, therefore:

- **Towns**: Towns are seen as the principal location for accommodating housing (open market and affordable), *employment land allocations*, any retail growth and services. Towns are also the most accessible settlements, most being located on Trunk Roads, with all having public transport services.
- **Large Villages**: Large villages should accommodate housing growth (open market and affordable) in proportion to their size and facilities. Local service provision will be supported through policy. *Economic development will be supported by policy and employment land may be allocated in some.*

2.2.4 Economic development in settlements lower in the hierarchy and in the open countryside would be supported when fully justified by the nature of the development proposal through LDP and national policies without the requirement to allocate land.

2.2.5 The preferred strategy for the LDP was therefore defined as the combination of the preferred growth options (employment, retail and housing) and the preferred spatial option. The “Central Growth Corridor” concept, which had a housing provision focus, was removed from the Plan after consultation as its necessity, deliverability and its applicability with respect to the hub and cluster approach proposed by the Wales Spatial Plan [Consultation Report 2014] was questioned.

2.2.6 This is further reinforced by PENA [EB11] which identified that employment land requirements and uptake was largely clustered into four spatial areas across the County which reflected the location of existing commercial enterprises, and all subsequent analysis recognised the general distribution of existing UDP allocations as well as the economic connections and relationships that different areas have with their neighbours.

### **2.3 The Importance of “Churn and Replace”**

2.3.1 The Powys Employment Needs Assessment [EB11] and Addendum [EB12] recognised that within Powys, with its high proportion of micro and small enterprises, the economic emphasis was less on speculative regeneration of employment land or attracting new businesses into the County, which may only require **3-5ha** of land, but rather on the enabling of existing businesses to grow and expand and so meet customer demand.

2.3.2 The importance of a having a range of modern, fit-for-purpose commercial premises was, and remains, vital for the economic well-being of the County and lack of premises was identified as a possible threat:

*“The greatest threats that we would see for the County are the potential lack of suitable grow-on space for small business looking to expand from some of Powys Councils smaller units, the often somewhat isolated locations of the units and the difficult routes to market and finally the ageing nature of the stock originally developed by DBRW and the WDA.”*

2.3.2 PENA identified that “churn and replace” to deliver the type and quality of premises for modern business occupiers accounted for **21-29ha** of the total employment land requirement identified during the Plan period of **30-42ha**, or approximately 70-75% of the total actual land requirement.

## **2.4 Overall Identified Employment Land Requirement**

2.4.1 An additional allowance of 6-8 hectares was identified in PENA to ensure choice and range across types, settings and locations of provision to reflect the County's dispersed settlement pattern and high level of self-containment [EB24 – Update]. Plus a flexibility allowance equivalent to five years supply was added to ensure a ready supply of land at the end of the LDP period and to cater for any peaks or unexpected demands. With this incorporated the total estimated employment land requirement for the Plan period increased to 40 – 56 hectares.

2.4.2 As a result of the dominant need for churn and replace by existing indigenous businesses across Powys, PENA therefore did not identify a strong relationship between population growth and the employment land requirement. It was therefore recognised that sites for the employment growth identified in the Growth strategy should be directed towards existing centres with established businesses and allocations would be best addressed through the hierarchy established in the Spatial Strategy.

2.4.3 Economic development in lower tier settlements would be supported through appropriate national and LDP policies, which should be sufficiently flexible to enable the expansion of existing businesses or re-location to modern, energy efficient premise.

### **3. Determination of Employment Land Allocations**

3.0.1 To identify sites for development within the LDP, the Planning Authority invited submissions of Candidate Sites [LDP02]. Applicants were required to provide basic information regarding the site accompanied by a map showing the site area.

3.0.2 Candidate Sites submissions were received from landowners, prospective developers, members of the public and public authorities including Welsh Government. The Authority also submitted some Candidate Sites into its own process, for evaluation alongside and on the same basis as the sites put forward by others. The quantity of Candidate Sites received by the Authority was far in excess of the land required for the development needs of Powys during the Plan period.

3.0.3 As well as those sites submitted for employment use for consideration to the Authority under the Candidate Site process, all previous Unitary Development Plan employment site allocations were considered against constraints criteria equivalent to those applied to the Candidate Sites.

#### **3.1 Candidate Sites Assessment**

3.1.1 During the call in 2011 for candidate sites for consideration in the Local Development Plan process, 68 sites were proposed as solely employment sites, as employment/residential or as mixed use sites with an employment use component [LDP02]. In addition, a further eight candidate sites were proposed which had previously been employment land allocations in the Unitary Development Plan but were now being proposed for non-employment use (Table 2), but as existing employment sites were included in the employment site assessment (see Section 3.2).

**Table 2: UDP Employment Land Allocations Proposed as Candidate Sites for Alternative Use**

<b>Candidate Site No</b>	<b>Site Name</b>	<b>UDP Employment Allocation No.</b>	<b>Site Proposer's Proposed Use in LDP</b>
75	Newbridge-on-Wye	R77 EA1	Residential
208/701	Penrhos	B32 EA1	Education
663	Llangurig	M160 EA1	Residential
698	Penybontfawr	M184 EA1	Residential / Open Space
776	Sarn	M189 EA1	Residential
958	Land adj. Village Workshops Llanerfyl	M153 EA1	Residential
1048	Knucklas	R61 EA1	Residential
1184	Llanwrtyd	B23 EA1	Residential

3.1.2 Of the total 76 candidate sites considered (Annex 1), 26 (including the eight in Table 2 above) were existing employment land allocations which were also included in the Powys Employment Needs Assessment (see Section 3.2).

3.1.3 All submitted Candidate Sites were given a unique site reference number. The process of assessment of Candidate Sites was then undertaken to identify those sites which could be delivered with the least constraints and thus were suitable for further consideration and potential allocation in the LDP.

3.1.4 Each candidate site was assessed for constraints (e.g. highways access, flood risk etc.) and the results published in the Candidate Sites Site Survey Status Report [LDP04]. The outcomes from this constraints study were then included in the sequential testing of employment sites.

### **3.2 Powys Employment Needs Assessment (2012)**

3.2.1 The Powys Employment Needs Assessment [EB11] and the associated Technical Report 2 [EB12] identified 59 existing employment sites allocated in the adopted Unitary Development Plan. The companion Property Market & Supply Analysis Appendix of employment site assessment proformas [EB12] assessed 60 sites for land availability and potential constraints (Annex 2). The extra site within the Appendix is the site at Three Cocks, which had an extant employment planning permission at the time of the PENA analysis and was considered. This site also came forward as a candidate site.

3.2.2 Thirty-five of the existing UDP employment land sites had not been submitted as candidate sites for potential employment land allocation in the LDP process (Table 3). However, they were included for further assessment against the TAN23 sequential test as they had existing and ongoing employment activities on them.

**Table 3: UDP Employment Sites not submitted as Candidate Sites**

Site Name	Original Area (ha)	Remaining Site Area (ha)	UDP Usage Category
Cae'r-bont Enterprise Park, Ystradgynlais	1.5	Limited	Local
Ynyscedwyn, Ystradgynlais		0.7	Local
Ystradgynlais Workshops	0.7	0	Local
Three Cocks Industrial Estate	2.9	0	
Javel Industrial Estate, Three Cocks		0.6	Local
Irfon Enterprise Park, Builth Wells	0.5	0.1	Local
Ddole Road, Llandrindod Wells		4	High Quality
Llandrindod Wells	0.57	0	Local
Llandrindod Wells	1.12	1.12	Local
Old Town Hall Workshops, Llandrindod Wells	0	0	Local
Presteigne Industrial Estate	4.6	0.28	
East Street Enterprise Park, Rhayader	1.6	0	Local
Knighton	0.9	0.9	Local
Knighton Enterprise Park	1.1	0.44	Local
Parc Hafren Extension, Llanidloes	3	3	Local
Station Workshops, Llanidloes	0.17	0	
Maesllan Enterprise Park, Llanidloes	0.85	0	
Caersws Village Workshops	0.2	0	
Dyffryn Enterprise Park, Newtown	9.3	0	
Mochdre Enterprise Park, Newtown	38.5	2	High Quality
Vastre Enterprise Park, Newtown	11.2	1.8	Local
St Giles Technology Park, Newtown		0	
Montgomery *	1.6	1.6	Alternative Use
Welshpool Business Centre		0	

Severn Farm Business Park, Welshpool	11.7	0	
Henfaes Lane, Welshpool	21.8	0	
Four Crosses	3	0.75	Local
Meat Processing Plant, Llandrinio	19	19	Specific
Wynnstay Stores, Llansanffraid-ym-Mechain	1.6	1.6	Local
Llanfyllin Enterprise Park		0.28	Local
Llanfyllin Industrial Estate	1.6	0	
Pontrobert	0.12	0.12	Neighbourhood
Texplan, Carno	3.22	0.35	
Treowain Enterprise Park, Machynlleth		1.35	High Quality
Dyfi Ecopark, Machynlleth	1.8	0	

◆ Site fully developed and/or no land available

\* Development proposals for alternative use

3.2.3 Of the sites not submitted as candidate sites, 15 sites (highlighted in Table 3) had been fully developed during the UDP Plan period and one site (Montgomery) had subsequently been proposed for alternative uses and were the subject of a non-employment use development proposals.

### **3.3 Combined Site Assessment**

3.3.1 The outcomes from the candidate sites assessment together with the existing employment sites identified in the Powys Employment Needs Assessment were combined to enable the assessment of all sites with the potential to become employment land allocations in the Local Development Plan. In total, including all sites in Table 3 above, 110 sites were assessed for potential employment land use.

***Sites for Consideration***

***TOTAL 110***

3.3.2 The combined employment sites assessment was a three phased assessment which considered each site against the following criteria:

- 1) Availability of land within the proposed site;
- 2) The sequential test of sites identified in TAN23;
- 3) Identified site constraints;
- 4) The sustainable settlement hierarchy as identified in the Growth Strategy of the Powys LDP.

Criteria 2 -4 inclusive were considered in combination using the sequential test approach as described in Section 4.0.1.

### **3.4 Availability of Land for Allocation**

3.4.1 Of the 110 potential employment land allocation sites, 18 sites were discounted for the reasons described in Table 4:

**Table 4: Sites Identified as Having no Employment Land Availability**

Reason for Exclusion	Sites	Number of Sites
1. No land remaining for development	<ul style="list-style-type: none"> <li>• Three Cocks Industrial Estate</li> <li>• Llandrindod Wells</li> <li>• East Street Enterprise Park</li> <li>• Maesllan Enterprise Park</li> <li>• Dyffryn Enterprise Park</li> <li>• St Giles Technology Park</li> <li>• Severn Farm Enterprise Park</li> <li>• Henfaes Lane</li> <li>• Llanfyllin Industrial Estate</li> <li>• Dyfi Ecopark</li> </ul>	10
2. Site / building fully developed with small workshops / units and no land available	<ul style="list-style-type: none"> <li>• Ystradgynlais Workshops</li> <li>• Old Town Hall Workshops</li> <li>• Station Workshops Llanidloes</li> <li>• Caersws Village Workshops</li> <li>• Welshpool Business Centre</li> </ul>	5
3. Site has planning permission / application for alternative use	<ul style="list-style-type: none"> <li>• Penrhos (CS 208/701)</li> <li>• Knucklas (CS1048)</li> <li>• Montgomery</li> </ul>	3

3.4.2 This initial analysis reduced the total site number for consideration as Employment Land allocations to 92 sites with a land area totalling 103.7 hectares.

***Sites Remaining for Consideration***

***TOTAL 92***

**4. Sequential Test Approach**

4.0.1 The 92 sites where land was available for employment development were assessed against a three stage process and colour coded accordingly (Table 5):

1. the sequential test as described in TAN 23 paragraph 1.2.7.;
2. Possible constraints and sustainable use of land test of the nature of site to seek to develop brownfield sites in preference to green field sites;
3. against the hierarchical sustainable settlement strategy of the deposit draft LDP where allocations would be targeted towards the larger settlements in Powys.

**Table 5: Tripartite Colour Coding Scheme used for Sequential Testing of Employment Sites (Annex 3)**

TAN 23 Sequential Test		Constraint / sustainable use of land		LDP Sustainable Settlement Hierarchy	
Within boundary	1	Brownfield Site	1	Town	1
Adjoining boundary	2	Other Constraint	2	Large Village	2
Open Countryside	3	Greenfield Site	3	Small Village	3

4.0.2 Other constraints were those considered in Appendix A of the Powys Employment Needs Assessment Property Market Overview & Supply Analysis [EB12] and those identified in the Candidate Site Status Report [LDP04] and included:

- Environmental issues
- Flood risk
- ICT infrastructure
- Highways and Access
- Submission as a Candidate Site

The sequential testing matrix is presented in Annex 3 of this Position Statement.

**4.1 Outcomes of Sequential Testing**

4.1.1 Once the sequential test of employment sites against national and LDP policies was completed as presented in Annex 3, 44 sites were identified as having failed the test (Table 6) and were not considered appropriate for employment land use consideration. All but five of the sites were candidate sites. Of note amongst the non-compliant sites was the large Llandrinio Meat Processing Plant site which was allocated in the UDP in response to a specific investment proposal which did not subsequently materialise.

4.1.2 The 44 sites failed the sequential test due to their being in unsustainable locations away from the higher tier settlements in the LDP settlement hierarchy, the site constraints or a combination of these factors as shown in Annex 3.



**Table 6: Sites Failing the Sequential Test**

Site Name	Candidate Site No.
<b>Ystradgynlais</b>	
Blaen y gors	CS 67
Cae'r-bont	-
Cynlais CP School	CS 720
Corner land Neath Road/ Varteg	CS 830
Land north of Bryn y groes Farm	CS 852
Ystrad Fawr tip	CS 1157
Land at Ty'n Pant, Caehopkin	CS 1157
<b>Central Powys</b>	
Glebeland	CS 63
Penypentre Meadow	CS 68
Newbridge-on-Wye	CS 75
Crossgates	CS 1045
Ddole Road	-
Knighton	-
Sheep Sale Field, Ludlow Road	CS 778
Fields adj. River Teme	CS 1228
<b>Severn Valley &amp; North</b>	
Parc Hafren Extension	-
Chapel Farm, Gorn Road	CS 1096
Rock Farm	CS 135
Land north of Bryneira	CS 249
Land adj Castell y Dail	CS 586
Land adj Mochdre Industrial Estate	CS 1133
Sarn	CS 776
Fraithwen	CS 784
Land adj. Market	CS 343
Land at Buttington wharf	CS 344
Land adj. the Smithy, Buttington	CS 795
Cefn Field	CS 282
Land adj. Trem Hirnant	CS 341
Land adj. Trewern Sewage Works	CS 366
Land adj. Canal Cottage	CS 947
Meat Processing Plant, Llandrinio	-
Land at the Meadows	CS 322
Varchoel Hall	CS 541
Land East of Llansanffraid	CS 840
Land adj. Dykelands	CS 1122
Land near Station House	CS 844
Ysgol Llanbrynmair	CS 896
Ysgol Efyrynwy	CS 964
Land at Maes Morgan	CS 961
Llanerfyl Village Workshops	CS 958
Brynant	CS 1080
Land at Llangynog	CS 1227
<b>Machynlleth</b>	

Land at Llynloed south of Treowain	CS 835
Land at Llynloed	CS 836

**Sites Remaining for Consideration**

**TOTAL 48**

4.1.3 An additional five sites, either wholly or partially, were identified for alternative use, being sustainably more suited within the Plan as housing allocations, these being:

**Table 7: Potential Employment Candidate Sites allocated for Alternative Uses**

Site Name	Candidate Site No.
Land adj. Broadaxe and bypass	CS 782
Land adj. Bronllys CP School	CS 1106
Llangurig	CS 663
Chapel Farm, Gorn Road	CS 1096
Penybontfawr	CS 698

4.1.4 The sites at Penybontfawr and Llangurig were previously employment land allocations within the Powys UDP.

**Sites Remaining for Consideration**

**TOTAL 43**

**4.2 Exceptions within the TAN23 sequential test**

4.2.1 The methodology as described above identified three sites which despite falling within the Open Countryside category as defined by TAN23, were judged to be worthy of further consideration, these sites being:

- Parc Hafren, Llanidloes (CS 100);
- Offa’s Dyke Business Park, Welshpool (CS 103).
- Buttington Quarry (CS 682)

Although these three sites were beyond proposed LDP settlement development boundaries they were all proposed as candidate sites and had significant advantages for the following reasons:

1. access and services have received consent and have been implemented;
2. employment premises are already constructed on parts of these sites;
3. Offa’s Dyke Business Park was proposed by Welsh Government for inclusion as a prestige employment site with a long term and high quality capacity beyond the Plan period [EB11, EB24].

4.2.2 As a consequence, whilst in the Category 3 location in terms of the TAN23 sequential test approach, the presence of extant services and longer term intentions for these sites as expressed by the owners were considered to be an advantage and thus a “green” consideration, resulting in the analysis raising the overall position of these sites in the sequential test hierarchy from “red” to “amber” and the ongoing consideration of these sites for allocation.

4.2.3 One site which was supported by the sequential test was not allocated for employment use, this being:

- Maesyrrhandir CP School (CS 903)

Although this proposed employment site was a brownfield site within a sustainable settlements and within the settlement boundary, it remains open in as a school and uncertainty about its availability within the Plan period resulted in it not being allocated.

**Sites Remaining for Consideration**

**TOTAL 42**

**4.3 Sites Supported by LDP Policies**

4.3.1 The sequential test matrix identified 23 sites which were supported by proposed LDP policies, these being either small sites of 0.5 hectares or less within or adjacent to settlement development boundaries (Section 4.4) or larger sites with existing employment uses within settlement boundaries as presented on the LDP inset maps (Section 4.5).

**4.4 Small Sites**

4.4.1 Eleven sites were small sites of which six were existing UDP employment use allocations (Table 8). Whilst the limited extent available for development was identified as a possible constraint on those sites of less than 0.5ha, they remain available for employment land use subject to proposed Policy E2 of the Deposit Draft LDP [LDP06] and appropriate site assessment through the development management process.

**Table 8: Small Sites Potentially Available for Employment Land Use Through Proposed LDP Policies**

Site Name	Employment Needs Sub-market Area	Site Area (ha)	Candidate Site No.	UDP Allocation	Usage Category
Land adjoining LBS *	Ystradgynlais	0.14	CS 824		Regenerate
Gurnos Industrial Estate	Ystradgynlais	0.5	CS979		Local
White House Farm	Central Powys	0.5	CS 389		
Irfon Enterprise Land *	Central Powys	0.1	-		Local
Presteigne Industrial Estate *	Central Powys	0.4	-		
Knighton Enterprise Park	Central Powys	0.44	-	R59 EA1	Local
Llanwrtyd Wells	Central Powys	0.38	CS1184	B23 EA1	Neighbourhood
Chapel Farm, Gorn Road	Severn Valley & North	0.49	CS 633	M163 EA1	Local
Land adj. Village Workshops	Severn Valley & North	0.2	CS 957	M133 EA1	
Llanfyllin Enterprise Park	Severn Valley & North	0.28	-	M157 EA1	Local
Pontrobert *	Severn Valley & North	0.12	-	M186 EA1	Neighbourhood

\* Very limited land available

\*\* multiple small sites

4.4.2 Although these sites are potentially in sustainable locations, as a consequence of this proposed enabling policy approach it was not judged necessary for these sites to be allocated within the LDP for them to be available for employment uses. The acceptability for development of these sites would be determined through the planning application process judging the proposal against the policy/criteria in the adopted development plan. In total, these sites have the potential to supply an additional 3.55ha of employment land across the County to support local enterprises.

**Sites Remaining for Consideration**

**TOTAL 31**

#### **4.5 Larger Sites within Development Boundaries**

4.5.1 The sequential test approach identified 12 sites that were within settlement boundaries and exceeded 0.5ha in area (Table 9). Some sites (e.g. Ynyscedwyn, Ystradgynlais; Vastre Industrial Estate, Newtown) were long-standing employment sites which over time had had fluctuating levels of interest but had not attracted recent development interest. Inclusion of these sites within the settlement development boundary ensures their continuing availability for employment land uses but they were not considered they could be relied upon to come forward for development during the lifetime of the LDP and thus were not allocated. Due to existing commercial premises on site, with the exception of Welshpool High School these sites are not considered suitable for alternative uses such as residential allocations.

**Table 9: Larger Sites Potentially Available for Employment Land Use Through Proposed LDP Policies**

Site Name	Employment Needs Sub-market Area	Site Area (ha)	Candidate Site No.	UDP Allocation	Usage Category
Ynyscedwyn	Ystradgynlais	0.7	-	B34 EA2	Local
Javel Industrial Estate	Central Powys	0.6	-	B26 EA1	Regenerate
Cae Bach, Ddole Road	Central Powys	0.98	CS 933		
Llandrindod Wells	Central Powys	1.12	-	R66 EA4	Local
Land Adj. Glandulas Drive	Severn Valley & North	3.35	CS589		
Mochdre Enterprise Park **	Severn Valley & North	2	-		High Quality
Vastre Enterprise Park	Severn Valley & North	1.8	-		Regenerate
Canalside opposite Morrison's	Severn Valley & North	1.03	CS 530		
Welshpool High School	Severn Valley & North	8.97	CS 929		
Wynnstay Stores	Severn Valley & North	1.6	-	M165 EA1	
Station Yard, Forden	Severn Valley & North	1.03	CS 842		Regenerate
Texplan	Severn Valley & North	3.22	-		Regenerate

4.5.2 Although not considered appropriate for allocation, these sites have the potential to contribute an additional 26.4ha of local employment use or regeneration land across the County to support local or regional enterprises. The acceptability for development of these sites would be determined through the planning application process judging the proposal against the policy/criteria in the adopted development plan.

**Sites Remaining for Consideration**

**TOTAL 19**

#### **4.6 Withdrawal of Sites**

4.6.1 One site in Newtown, St Giles Golf Course (CS 483) was de-allocated for non-delivery reasons, and this site was removed from the LDP employment land allocation at the Schedule of Focussed Changes stage.

*Sites Remaining for Consideration*

**TOTAL 18**

#### **4.7 Results of Sequential Testing of Employment Sites**

4.7.1 From the results of the sequential testing of potential sites for employment allocations, 18 sites were considered appropriate for employment land allocation, two of which were mixed use sites. Two candidate sites at Brynberth Enterprise Park in Rhayader (CS 102 & CS 443) were merged to aid delivery of the site and so form a single allocation resulting in 17 allocated sites for employment use. The total area of these sites is 45.09 hectares. This is in alignment with the Growth Strategy of the Local Development Plan which anticipated a requirement for 42ha of land during the Plan period as identified in the Powys Employment Needs Assessment [EB11] [EB12]. The sites identified in Table 10 have therefore been proposed for inclusion in the Local Development Plan as employment land allocations.

**Table 10: Sites Proposed for Employment Land Allocation in the Powys Local Development Plan**

<b>Site Name</b>	<b>Settlement Location</b>	<b>Employment Needs Sub-market Area</b>	<b>Tier in Settlement Hierarchy</b>	<b>Site Area (ha)</b>
Woodlands Business Park	Ystradgynlais	Ystradgynlais	Town	2.31
Wyeside Enterprise Park	Builth Wells	Central Powys	Town	1.2
Gypsy Castle Lane	Hay-on-Wye	Central Powys	Town	2.4
Heart of Wales Business Park	Llandrindod Wells	Central Powys	Town	3.9
Broadaxe Business Park	Presteigne	Central Powys	Town	2.4
Brynberth Enterprise Park	Rhayader	Central Powys	Town	3.7
Land adj. Gwernyfed Avenue	Three Cocks	Central Powys	Large Village	3.4
Parc Busnes Derwen Fawr / Great Oaks Business Park	Llanidloes	Severn Valley & North	Town	1.2
Parc Hafren	Llanidloes	Severn Valley & North	Town	1.7
Llanidloes Road	Newtown	Severn Valley & North	Town	2
Abermule Business Park	Abermule	Severn Valley & North	Large Village	2.6
Churchstoke	Churchstoke	Severn Valley & North	Large Village	1.28
Buttington Cross Enterprise Park	Welshpool	Severn Valley & North	Town	1.5
Buttington Quarry	Welshpool	Severn Valley & North	Town	6
Offa's Dyke Business Park	Welshpool	Severn Valley & North	Town	7.3
Four Crosses	Four Crosses	Severn Valley & North	Large Village	0.5
Treowain Enterprise Park	Machynlleth	Machynlleth	Town	1.7

## **5. Alternative Use**

5.0.1 The sites assessed through the sequential test approach were also considered as to whether or not they would be suitable for alternative uses. Five greenfield candidate sites, at Presteigne (CS 782), Bronllys (CS 1106), Llangurig (CS663), Llanidloes (CS 1031), and Penybontfawr (CS698) were identified as having potential alternative uses and these sites have been allocated for housing within the Local Development Plan.

5.0.2 Two UDP employment land sites in Montgomery and Knucklas were already the subject of residential planning applications and were considered not to have any employment land available, whilst a third at Penrhos was being re-developed for education use (Table 2).

5.0.3 Of the 17 sites which passed the sequential test and were proposed for allocation (Table 10), two sites (Gypsy Castle Lane, Hay-on-Wye and Land adjoining Gwernylfed Avenue, Three Cocks) were already proposed as Mixed Use allocations by the site promoters and having passed the sequential tests this categorisation was considered appropriate for these sites for inclusion in the Plan.

5.0.4 None of the other 15 sites which passed the sequential test were considered to be appropriate for alternative use as they were either:

- 1) Sites with existing employment use premises in B Class use and alternative usage would give rise to incompatible development;
- 2) Sites not be in the most sustainable locations for alternative usage and therefore would be contrary to the strategy of the LDP.

5.0.5 It was therefore recognised that for all the sites proposed for inclusion in the Plan, their employment use allocation designation was the most appropriate to reflect either existing use and/or site location and that alternative uses such as residential allocation would not provide a sustainable use of the land.

## 6. Delivery of Sites

6.0.1 Throughout the process of LDP preparation, all the evidence on employment land provision [EB11, EB12, EB24, POW05] has recognised that due to the size of the County, sufficient land should be made available in a number of locations to ensure choice, range and flexibility to not only attract new business to Powys, but most importantly enable established businesses to grow and expand into modern, fit-for-purpose premises.

6.0.2 It has been acknowledged that since the onset of the recession in 2008 and into the first five years of the Plan period, take-up rates of employment land have been low, but as recognised by the Local Development Plan Preferred Strategy [LDPO1], to plan for the future based on past uptake of employment land had the potential to stifle economic growth as the economy of Powys, and Wales as a whole, emerged from the recession.

6.0.3 Of the 17 sites allocated for employment land use, 15 are wholly, or partially, serviced with access and utilities infrastructure and in most instances already partially developed accommodating existing employment uses. Only the sites at Llanidloes Road Newtown (CS 592) and Gypsy Castle Lane, Hay-on-Wye (CS 1100) are greenfield sites, although both are within their respective settlement boundaries.

6.0.4 The Community Infrastructure Levy Viability Study 2014 assessed the viability of non-residential development ([EB13] - Chapter 11). This report stated that whilst retail development such as supermarkets, retail distribution and hotels were viable across the County, more traditional “B” class usages of office space and industrial development were not viable in the current (2014) market.

6.0.5 Since the publication of this report, there is strong evidence (see Section 7) of the increase in interest from businesses in looking to expand and develop sites for new premises. This evidence suggests that the projects coming forward are through existing end users rather than through speculative property developers. This evidence supports the earlier studies [EB11], [EB12, [EB24] that indicate that “churn and replace” is a dominant consideration in Powys when developing and supporting economic strategies. Furthermore, this interest is currently directed towards existing serviced sites and reinforces the probability that these sites can be delivered during the Plan period.

6.0.6 Of the two greenfield sites, Llanidloes Road, Newtown has been identified in two successive development plans. In the past deliverability issues have been focussed on flooding constraints and access with traffic to and from the site having to traverse the congested town centre of Newtown. The withdrawal of the St Giles Golf Course site (CS 483) from the Plan by that site’s owners has enhanced the significance of the Llanidloes Road site within Newtown and will encourage its development. To address potential flooding constraints the site is currently the subject of a Flood Consequences Assessment being undertaken on behalf of the site owner and with the construction of the Newtown bypass scheduled for completion in 2018, the site promoters are of the opinion that *“as this major road comes on line, the site.....will become viable and developable”*<sup>1</sup>. This additional work gives the Council confidence as to the deliverability of this site within the Plan period and thus its ongoing allocation.

6.0.7 The site at Gypsy Castle Lane, Hay-on-Wye is adjacent to an existing high quality employment site within the Brecon Beacons National Park. Designation of the site as a Mixed Use allocation provides a mechanism to enable the phased delivery of both housing units and employment premises during the Plan period.

6.0.8 To ensure employment opportunities and access to workforce, all of the identified allocated sites are accessible utilising sustainable transport options; sites are primarily located within, or adjacent to settlement development boundaries and/or are located on public transport routes [POW01], [EB38].

<sup>1</sup> Land Allocation P48 EA1 – Response to Request for Additional Information November 2015

## 7. Ongoing Evidence of Activity

7.0.1 As demonstrated in the Powys Employment Needs Assessment Position Statement ([EB24] – Addendum Arcadis, January 2016) there is evidence of interest in employment sites from businesses seeking to develop new premises which is being translated into planning applications. Table 11 below indicates the current sites subject to planning applications by individual commercial businesses or are being developed as a response to strong expressions of interest:

**Table 11: Employment Land Sites and Site Areas within Powys LDP currently under interest (Jan 2016)**

Site Name	Site Area under consideration (ha)	Nature of Site
Offa's Dyke Business Park (SV&N) *	4.65	Prestige - Serviced
Buttington Cross Enterprise Park (SV&N) *	1.5	Prestige - Serviced
Broadaxe Business Park (Central)	2.4	Local – Serviced **
Land adj Gwernyfed, Three Cocks (Central)	3.4	Local / Mixed Use ***
Parc Hafren (SV&N) *	0.5	Local - Serviced
Abermule Business Park (SV&N) *	2.6	High Quality / Local - Serviced
Churchstoke (SV&N)	1.5	Local - Serviced
<b>TOTAL SITE AREA UNDER INTEREST</b>	<b>16.55</b>	

\* Severn Valley Local Growth Zone

\*\* Broadaxe Extension currently subject of Planning Application to install services

\*\*\* Three Cocks currently has employment activities on site through extant permissions. Mixed Use will enable modern business premises to be constructed to meet existing requirements and additional commercial interest

7.0.2 Table 11 highlights that over a third (36.7%) of the total area allocated for employment land use in the Powys LDP has, since 2011, been subject to development interest, with 10.75ha (almost two thirds of site interest by area) being within the Severn Valley & North sub-market area alone.

7.0.3 At present interest is directed towards both local requirements and to prestige sites and primarily in the Severn Valley & North market area. This reflects existing Powys based businesses looking to expand and at the lower end of the scale, the possibility that regeneration strategies are beginning to encourage the expansion of micro businesses into SME's, which the LDP policies and growth strategy seeks to support.

7.0.4 In addition, commercially sensitive data from the Council's Regeneration team indicate that for the period November 2015 – June 2016, 18 businesses across Powys (and not included in Table 10 above) were looking for either new enlarged business premises or to adapt / extend existing building stock in the shorter term to improve efficiency or increase storage or manufacturing capacity. Five of these businesses were looking for large premises with over 10,000 sq. metres of floorspace.

7.0.5 Should this level of interest be maintained throughout the remainder of the Plan period, and translate into the delivery of employment premises, then the scale and type of provision across the County as a whole and the uplift to the anticipated requirement as identified in the Powys Employment Needs Assessment and subsequent updates and reflected in the allocation of employment land in the LDP is entirely appropriate and can be delivered.



## **8. Potential Impacts of Regeneration Strategies**

8.0.1 Powys has a County-wide approach to economic development which has been further reinforced by the publication in February 2016 of the “Economic Development Strategy for Powys County Council” through the Stronger Communities Programme. This recognised that more traditional approaches to regeneration, which are perhaps more suited to urban renewal, have not secured sufficient economic growth, and therefore strategies should focus upon greater support for the local economy to enable it to develop.

8.0.2 The Economic Development Strategy recognises there are a high proportion of micro-businesses in Powys (89%), allied to high rates of self-employment, but there are relatively fewer small or medium businesses in comparison to other counties, suggesting that businesses are not expanding, or are currently experiencing difficulty in expanding from micro to small.

8.0.3 To encourage skills and population retention and economic growth, the Economic Development Strategy for the next 5-10 years envisages a more responsive organisation better able to support economic development by encouraging the development of infrastructure and enabling the development of a greater proportion of SME’s against a backdrop of scenery and rural and leisure activities.

### **8.1 Powys Local Growth Zones**

8.1.1 In Powys, Local Growth Zones have been established as an alternative approach to Enterprise Zones, as it has been recognised that the Enterprise Zone model does not fit all areas. The model for the Powys LGZ concept has been to focus on smaller business and specific issues relating to the retail sector.

8.1.2 The outcome from a Welsh Government supported study in July 2012 (Powys Local Growth Zones Task and Finish Group Report) recommended that Powys’s LGZs be established in the following locations:

- The Severn Valley (Welshpool / Newtown / Llanidloes)
- Rhayader / Llandrindod Wells / Builth Wells
- Brecon / Bronllys / Talgarth
- Ystradgynlais

8.1.3 The Local Growth Zone approach has been taken forward in three of the above areas, these being the Severn Valley, Llandrindod Wells/Builth Wells and Brecon/Bronllys/Talgarth, the latter partly lying within the Brecon Beacons National Park and thus partially outside the scope of the Powys Local Development Plan; the LGZ concept has not progressed in Rhayader and Ystradgynlais. Ystradgynlais is within the “Communities First” initiative. In alignment with the strategy of the LDP, LGZs in the current three supported areas will engender economic development and growth in a sustainable manner, and ensure benefit to the wider rural hinterlands that surround them.

8.1.4 The largest Powys Local Growth Zone, that of the Severn Valley, encompasses three of the largest settlements in the County and is also recognised as one of the areas within the county with the highest levels of self-containment with regards employment. Reflecting this, ensuring that sufficient employment sites were available in this area was identified as being important.

### **8.2 Growing Mid Wales Partnership**

8.2.1 The Mid-Wales region, which in part is made up of the administrative boundaries of Ceredigion and Powys County Councils, has a number of unique features that make growing its local economy a challenge including rurality and peripherality, but with many micro and small opportunities, provides

opportunities for future expansion, an entrepreneurial and self-reliant culture, space to expand, opportunities for infrastructure enhancements and support for growth.

8.2.2 “*Growing Mid Wales*” is a regional partnership and engagement arrangement between the private and public sectors, and with Welsh Government. The initiative seeks to represent the region’s interests and priorities for improvements to our local economy.

The aims of the partnership include to:

- encourage interaction with businesses, higher and further education, and with public and private sector stakeholders;
- identify key themes and sectors, and priorities for investment;
- support business led innovation, enterprise and investment in Mid Wales;
- support the delivery of Powys Local Growth Zones.

### **8.3 Regeneration Strategies and Employment Site Allocations**

8.3.1 To support the regeneration strategies and initiatives, as well as recognise previous patterns of growth, it was considered appropriate to plan for employment land opportunities across the county as a whole to reflect the need for choice and flexibility as described in Section 2.3 above. However, a greater focus in the areas of the Powys Local Growth Zones for the provision of employment land would enhance support for wider Council strategies if sites could be delivered in sustainable locations in accordance with the strategy of the Local Development Plan.

8.3.2 The distribution of allocated employment sites has reflected the presence of Local Growth Zones with 33.2ha (73.6% of the total) allocated either within, or adjacent to and thus supporting the designated Zones, the following Zone areas:

- Severn Valley - 7 sites (22.3 ha)
- Brecon/Talgarth/Bronllys – 2 sites (5.8ha)
- Llandrindod Wells - 2 sites (5.1ha)

Of the above, 12.7ha (28%) of allocated land is provided on three prestige, strategic employment sites; Heart of Wales at Llandrindod Wells, Buttington Cross and Offa’s Dyke in Welshpool. These have been developed and promoted by Welsh Government to provide long term capacity of the highest quality beyond the current Plan period. (Powys Employment Needs Assessment Core Report [EB11]). As the location and intended usage of these sites also align with regeneration strategies it is appropriate to include these sites in the LDP to provide the highest quality end member of employment sites in the hierarchy.

### **8.4 Outcomes**

8.4.1 The LDP allocates a total of 45ha of employment land for the period 2011-20126, and as evidenced in Section 7, business-led interest and activity in sites (by area) is already in excess of half this figure and to ensure that sufficient land remains available during the Plan period, the provision of range and flexibility uplift previously identified in PENA is considered essential to provide sufficient land and importantly of appropriate type to plan for anticipated growth as the economy continues to recover from the recession during the remainder of the Plan period.

8.4.2 The recognition of this growth pattern indicates that whilst it is necessary to provide a range across the County as a whole, it is appropriate to provide enhanced provision of employment land in the Severn Valley and north market area.

8.4.3 As a result, the remaining six allocated employment land sites (11.89ha) outside the Local Growth Zone areas are distributed across the County in Machynlleth, Presteigne, Ystradgynlais, Rhayader, Churchstoke and Four Crosses to support range and flexibility across the County and in response to expressions of interest by local businesses and newly constructed units on parts of sites being actively marketed.

8.4.4 There also remains the unallocated land which is supported by policies in the LDP which remains available for employment land use and which are listed in Table 7 and Table 8. These sites have the potential to contribute an additional 29.95ha of employment land of which 23.85ha (c.80%) is within Local Growth Zone areas.

8.4.5 In July 2016, the Council submitted to Welsh Government a draft Position Statement on the Powys Local Growth Zones for consideration by the Minister. This Position Statement described the recommendations and highlighted the actions achieved which support business growth and development, including marketing the County for new and indigenous business growth, the installation of superfast broadband connections for businesses, the delivery of business support through Business Wales and Growing Mid Wales and support for new business facilities in Welshpool.

## 9. Alignment and Implications for LDP Strategy

9.0.1 The location and planned distribution of employment land allocations proposed in the Powys LDP aligns with the Vision for Powys 2026, as set out in the LDP in that the County:

“will be a place of vibrant and resilient communities providing ***sustainable development and economic opportunities*** set in a healthy, safe environment, whilst celebrating, protecting, enhancing and sustainably managing its natural resources, native wildlife and habitats, heritage, outstanding landscapes and distinctive characteristics.

Powys’ ***towns and larger villages*** will be vibrant and accessible service centres. They will be the focus for ***integrating housing, economic and service development*** to meet their own needs and those of their surrounding communities.

Powys’ rural areas will be a working countryside of sustainable communities supported by a thriving and diverse rural economy of small businesses.”

(N.B: author’s italics)

9.0.2 The Powys Local Development Plan identifies that a range of employment sites and supportive policies are needed to meet the employment needs and demands of businesses, and ensure that employment opportunities are integrated with other sectors of society, as reflected in other Council policies such as ***One Powys*** [POW04] and the ***Economic Development Strategy for Powys County Council*** (February 2016) particularly given Powys’ size and dispersed settlement pattern.

9.0.3 In accordance with the LDP Strategy, allocated employment land is directed to the larger higher tier settlements in the County’s settlement hierarchy and has been informed by the principle of sustainable development in support of LDP Objective 2.

### 9.1 LDP Growth Strategy

9.1.1 *The LDP Growth Strategy* recognises there is a need to make provision for employment and business growth, even though many of Powys’s enterprises are micro in scale. Allied to regeneration strategies such as Powys Local Growth Zones and wider regional and national initiatives (e.g. Growing Mid Wales Partnership, Communities First) seeking to encourage businesses to grow, the provision of three hectares per annum within the LDP to enable business growth across a range of low, high quality and prestige sites is suitably aspirational for the lifetime of the Plan and as described in Section 8 above, the majority of allocated sites are existing serviced sites targeted into those areas where regeneration strategies are active. The manufacturing sector is economically important in certain parts of the county such as the Severn Valley and Ystradgynlais areas, reflecting the proximity to motorway networks, proximity to external markets, workforce skills and availability, and the history of public sector investment in these areas, and the LDP allocations and policies continue to support these areas in alignment with LDP Objective 7.

9.1.2 To assist in some sites coming forward, some sites have been allocated as Mixed Use sites whereby residential development can support the provision of high quality, fit for purpose employment premises in sustainable location in alignment with LDP Objectives 6, 7 and 8.

## **9.2 LDP Spatial Strategy**

9.2.1 *The LDP Spatial Strategy* identifies a sustainable settlement hierarchy and all allocated employment sites are directed to either the highest tier of the hierarchy (Towns – 14 sites) or the second tier sites (Large Villages – 3 sites), making provision across the county to ensure opportunities for new development are available.

9.2.2 As such, the allocated employment sites are located in, or adjacent to, Powys's largest settlements and thus are in accordance with the LDP strategy for *Growth in Sustainable Places*, thus meeting Objectives 1 and 2 of the LDP. Fifteen of the 17 the sites are existing, serviced sites and / or already have employment provision within them thus making the most sustainable use of existing land in accordance national policy and with Objective 3 of the LDP.

9.2.3 Non-allocated sites which are supported by LDP policies enable existing employment sites and sites within, or small sites adjacent to, the settlement boundaries of Towns and Large Villages to come forward for development or be regenerated in alignment with LDP Objective 8.

## **10. Conclusions**

10.0.1 This Position Statement confirms the methods and sequential tests in accordance with national policy used to identify employment land allocations for the Powys Local Development Plan.

10.0.2 Sites submitted through the call for Candidate Sites at the onset of the Local Development Plan process in 2011 as well as existing employment land sites in the current adopted Plan, whether or not they were submitted as Candidate Sites were all considered during the assessment of potential employment land allocations in the LDP.

10.0.3 The testing identified 17 sites which were suitable for allocation for employment land or mixed use with an employment component totalling 45.09 hectares. A further 29.95 hectares of employment land is potentially available through supportive policies within the LDP but is not allocated.

10.0.4 The Position Statement further demonstrates how the employment land allocations and policies in the Plan support county-wide and regional regeneration strategies and Council objectives to promote sustainable growth in appropriate locations across Powys. The policies are sufficiently flexible and allocations of employment land appropriate to thus be in full alignment with the Growth Strategy and Spatial Strategy of the Powys Local Development Plan 2011-2026.

**Annexes**

## Annex 1: Candidate Sites Submitted for Employment Use Consideration (2011)

Candidate Site Number	Site Name / address	UDP Allocation No.	Proposed LDP Use
63	Glebeland at Llanfihangel Talyllyn, Brecon		Employment (Commercial)
67	Land at Neath Road, Blaen Y Gors, Ystradgynlais		Mixed Use / Employment / Residential
68	Penypentre Meadow, Llanfihangel Talyllyn, Brecon		Mixed Use / Employment / Residential / Holiday Lets
75	Newbridge-on-Wye	R77 EA1	Residential
97	Land at Broadaxe Business Park, Presteigne	R84 EA1	General employment
100	Land at Parc Hafren, Llanidloes	M163 EA3	Employment
102	Land at Brynberth Enterprise Park, Rhayader	R85 EA1	General Employment
103	Land at Offa's Dyke Business Park	M199 EA1	Employment
104	Land at Parc Busnes Derwen Fawr, Llanidloes	M163 EA1	Employment
105	Land at Buttington Cross Enterprise Park	M199 EA2	Employment / Retail / Mixed Use
106	Abermule Business Park	M101 EA1	Employment
108	Land at Heart of Wales Business Park	R66 EA1	General Employment
109	Land at Woodlands Business Park, Ystradgynlais	B34 EA1	General employment
110	Land at Wyese Enterprise Park, Llanelwedd	R69 EA1	General employment
135	Rock Farm, Llanllwchaiarn, Newtown		Residential / Employment / Recreational
208/701	Penrhos	B32 EA1	Education
249	Land North of Bryneira, Newtown		Residential / Employment
282	Cefn Field, North of Cefn Farm, Trewern, Welshpool		Residential / Employment
322	Land at The Meadows, Llandrinio		Employment / Residential
341	Land adjacent to Trem Hirnant, Manafon		Residential / Employment
343	Land adjacent to The Market, Welshpool		Employment
344	Land at Buttington Wharf, Welshpool		Employment / Retail / Mixed Use
366	Land adj to Trewern Sewage Station, Trewern	M195 EA1	Residential / Employment
389	White House Farm, Builth Wells		Residential / Employment / Retail
443	Agricultural Accomm land adj		Employment / Industrial



	Brynberth Ind Est		
483	Land at St Giles Golf Club, Newtown	M181 EA1	Residential / Retail / Employment / Mixed Use
530	Canal side opposite Morrison's, Welshpool		Residential / Mixed Use / Commercial
541	Varchoel Hall, Guilsfield		Residential / Employment / Mixed Use (Live Work Units)
586	Adj. Castell Y Dail, Heol Mochdre, Newtown		Mixed Use (Residential, Employment, Recreation & Leisure)
589	Adj. Glandulas Drive, Newtown		Residential / Employment
592	Adj. Coleg Powys, Llanidloes Road, Newtown	M182 EA2	Employment / Mixed Use
633	Chapel Farm, Gorn Road, Llanidloes	M163 EA1	Employment / Housing
663	Llangurig	M160 EA1	Residential
682	Buttington Brickworks & Quarry, Buttington, Welshpool	New Site	Residential / Employment / Recreation / Waste / Mixed Use
698	Penybontfawr	M184 EA1	Residential / Open Space
720	Cynlais CP School, Ystradgynlais		Undecided / Residential / Employment / Mixed Use
776	Sarn	M189 EA1	Residential
778	Sheep Sale Field, Ludlow Road, Knighton		Residential / Employment / Amenity Area
782	Land adjoining Broadaxe and Presteigne By Pass		Residential / Employment
784	Fraithwen, Adfa		Residential / Employment / Retail / Community Facility / Recreation & Leisure
795	Land adj. to 'The Smithy', Buttington		Employment / Unknown
824	Land adjoining LBS, Gurnos Cross, Ystradgynlais		Employment
830	Corner land at Neath Road / Varteg, Ystradgynlais		Residential / Employment
835	Land at Llynllloed, Machynlleth (South of Treowain)		Residential / Employment
836	Land at Llynllloedd, Machynlleth		Residential / Employment
840	Land to east of Llansanffraid		Industrial / Commercial
842	Station Yard, Forden	Extant Emp. Use	Industrial / Commercial / Mixed Use
844	Land near to station house, Y Fan		Residential / Employment (Possibly)
852	Land north of Bryn y Groes Farm, Ystradgynlais		Mixed use – Residential, Employment (inc. live / work units), Open Space
896	Ysgol Llanbrynmair, Llanbrynmair		Residential / Employment
903	Maesyrrhandir CP School, Newtown		Residential / Employment / Mixed Use
929	Welshpool High School		Residential / Employment
933	Cae Bach, Ddole Road,		Residential / Employment / Retail /

	Llandrindod Wells		Waste / Recycling
947	Land adj. Canal Cottage, Four Crosses		Residential / Employment
957	Land adjoining Village workshops, Four Crosses	M133 EA1	Employment
958	Land adj. Village Workshops Llanerfyl	M153 EA1	Residential
961	Land at Maes Morgan, Llanrhaeadr ym Mochnant		Employment
964	Ysgol Efyrynwy, Llanwddyn, Llanfyllin		Residential / Employment / Recreation & Leisure
979	Gurnos Ind. Estate Ystradgynlais		Employment
1031	Chapel Farm, Gorn Road, Llanidloes		Employment / Residential
1045	Crossgates	R46 EA1	Mixed Use / Residential
1048	Knucklas	R61 EA1	Residential
1080	Brynant, Meifod		Residential / Employment / Retail / Recreation & Leisure / Waste / Recycling / Mixed
1096	Chapel Farm, Gorn Road, Llanidloes		Employment / Residential
1100	Land adj Brecon Pharmaceuticals, Hay-on-Wye		Mixed Use / Residential / Employment / Community Facility / Recreation
1105	Land adj. Gwernyfed Avenue, Three Cocks	Extant Emp. Permissions	Mixed use / Residential / Employment / Retail / Recreation & Leisure
1106	Land adj. Bronllys CP School, Neuadd Terrace		Mixed use / Residential / Employment / Retail / Community Facility / Recreation & Leisure
1122	Land adj. Dykelands, Forden, Welshpool		Employment / Residential
1123	Pt. Enclo. 7065 and 7962, Churchstoke	M117 EA1	Employment / Industrial / Commercial
1133	Land adjoining Mochdre Industrial Estate, Newtown		Employment
1157	Ystrad Fawr Tip, Ystradgynlais		Agricultural / Residential / Employment / Community facility / Recreation & Leisure / Open space
1175	Land at Ty'n Pant, Caehopkin		Residential / Employment
1184	Llanwrtyd Wells	B23 EA1	Residential
1227	Land in Llangynog		Residential / Employment / Recycling Community Facility / Recreation & Leisure / Waste / Open Space
1228	Fields adjacent to River Teme		Employment
P42 EA1	Land at Treowain	M172 EA1	Employment

- ◆ Existing employment site
- ◆ Existing employment site proposed for alternative use

## Annex 2: Sites Assessed in the Powys Employments Needs Assessment (2012)

Candidate Site Number	Site Name / address	UDP Allocation No.	UDP Use Classification
109	Land at Woodlands Business Park, Ystradgynlais	B34 EA1	General employment
	Caer' bont Enterprise Park, Ystradgynlais	B32 EA2	Local Employment
	Penrhos Business Park, Ystradgynlais	B32 EA1	Education
	Ynyscedwyn, Ystradgynlais	B34 EA2	Local Employment
	Ystradgynlais Workshops	-	Local Employment
979	Gurnos Industrial Estate, Ystradgynlais	-	-
	Three Cocks Industrial Estate	-	-
	Javel Industrial Estate, Three Cocks	B26 EA1	Local Employment
110	Wyeside Enterprise Park, Llanellwedd	R69 EA1	General Employment
	Irfon Enterprise Park	-	Local Employment
75	Newbridge-on-Wye	R77 EA1	Local Employment
1045	Crossgates	R46 EA1	Local Employment
108	Land at Heart of Wales Business Park	R66 EA1	Regional Employment
	Ddole Road, Llandrindod Wells	R66 EA2	High Quality / General Employment
	Llandrindod Wells	R66 EA3	Local Employment
	Llandrindod Wells	R66 EA4	Local Employment
	Old Town Workshops, Llandrindod Wells	-	-
97	Land at Broadaxe Business Park, Presteigne	R84 EA1	General employment
	Presteigne Industrial Estate	-	
102	Land at Brynberth Enterprise Park, Rhayader	R85 EA1	General Employment
	East Street Enterprise Park, Rhayader	-	-
	Knighton	R59 EA1	Local Employment
	Knighton Enterprise Park	R59 EA2	Local Employment
1048	Knucklas	R61 EA1	Local Employment
1184	Llanwrtyd Wells	B23 EA1	Local Employment
1105	Land between/adj Gwernyfed Avenue, Three Cocks	Extant Emp. Permissions	-
663	Llangurig	M160 EA1	Local Employment
104	Parc Busnes Derwen Fawr / Great Oaks Business Park Llanidloes	M163 EA1	Local Employment
100	Parc Hafren, Llanidloes	M163 EA3	General Employment
	Parc Hafren Extension	M163 EA2	General Employment
	Station Workshops, Llanidloes	-	-
	Maesllan Enterprise Park, Llanidloes	-	-
	Caersws Village Workshops	-	-
592	Adj. Coleg Powys, Llanidloes Road, Newtown	M182 EA2	Regional Employment
	Dyffryn Enterprise Park	-	-
	Mochdre Enterprise Park	-	-

	Vastre Enterprise Park	-	-
483	Land at St Giles Golf Club, Newtown	M181 EA1	Premium Employment
	St Giles Technology Park	-	-
776	Sarn	M189 EA1	Local Employment
106	Abermule Business Park	M101 EA1	General Employment
1123	Pt. Enclo. 7065 and 7962, Churchstoke	M117 EA1	Local Employment
	Montgomery	M176 EA1	Local Employment
	Welshpool Business Centre	-	-
105	Land at Buttington Cross Enterprise Park	M199 EA2	General Employment
	Severn Farm Enterprise Park, Welshpool	-	-
	Henfaes Lane, Welshpool	-	-
366	Land adj to Trewern Sewage Station, Trewern	M195 EA1	Local Employment
103	Land at Offa's Dyke Business Park	M199 EA1	Regional Employment
957	Four Crosses	M133 EA1	Local Employment
	Meat Processing Plant, Llandrinio	-	-
	Wynnstay Stores, Llansanffraid-ym-Mechain	M165 EA1	Local Employment
	Llanfyllin Enterprise Park	M157 EA1	Local Employment
	Llanfyllin Industrial Estate	-	-
	Pontrobert	M186 EA1	Local Employment
958	Land adj. Village Workshops Llanerfyl	M153 EA1	Local Employment
698	Penybontfawr	M184 EA1	Local Employment
	Texplan, Carno	-	-
P42 EA1	Land at Treowain	M172 EA1	Special Employment
	Dyfi Ecopark, Machynlleth	-	-

### Annex 3: Sequential Testing to Identify Employment Land Sites for Allocation

Site Name (LDP Candidate Site No)	Location (UDP Allocation)	Size of Development Area (ha)	Proposed Category	Recommendation	TAN23 Sequential Test	Constraints	LDP Settlement Hierarchy	Outcome	LDP Site Decision
Ystradgynlais									
Land at Neath Road, Blaen y gors (CS 67)	Ystradgynlais	6.41	Mixed Use	Employment Led / Mixed Use	3 Open Countryside	Greenfield Ecological	Town	Site not supported by sequential test	NOT ALLOCATED
Woodlands Business Park (CS 109)	Ystradgynlais (B34 EA1)	1.06	High Quality	High quality, promote & expand	1 within settlement boundary serviced	None	Town	Site supported by sequential test and LDP strategy	Taken Forward P58 EA1
Cae'r-bont	Ystradgynlais (B32 EA2)	1.5	Local	Regenerate	2 edge of settlement outside boundary	Not a candidate site	Town	Site not supported by sequential test	NOT ALLOCATED
Penrhos (CS 208 / 701)	Ystradgynlais (B32 EA1)	1	Local		1 within settlement boundary	Site being redeveloped for primary school	Town		NOT ALLOCATED
Ynyscedwyn	Ystradgynlais (B34 EA2)	0.7	Local	Employment led/mixed use	1 within settlement boundary serviced	Partly in C2 flood zone. Not a candidate site	Town	Site supported by LDP policies	White land
Cynlais CP School (CS 720)	Ystradgynlais	0.74			1 within settlement boundary	Brownfield In C2 flood zone.	Town	Site not supported by sequential test	NOT ALLOCATED
Land Adjoining LBS, Gurnos Cross (CS 824)	Ystradgynlais	0.14		Regenerate	1 within settlement boundary	Ecological Site Area	Town	Site supported by LDP policies	White land
Corner Land Neath Road / Varteg (CS 830)	Ystradgynlais	0.18	Mixed Use	Employment led/mixed use	3 Open Countryside	Greenfield Highways	Town	Site not supported by sequential test	NOT ALLOCATED
Land north of Bryn y Groes Farm (CS 852)	Ystradgynlais	7.32	Mixed Use	Employment led/mixed use	2 edge of settlement outside boundary	Greenfield Highways	Town	Site not supported by sequential test	NOT ALLOCATED
Ystradgynlais Workshops	Ystradgynlais	0.7	Local		1 within settlement boundary serviced	Site fully developed	Town		NOT ALLOCATED
Gurnos Industrial Estate (CS 979 part)	Ystradgynlais	0.5	Local	Regenerate	1 within settlement boundary serviced	0.5ha	Town	Site supported by LDP policies	Policy E2 White Land
Ystrad Fawr Tip (CS 1157)	Ystradgynlais	9.69	Mixed Use	Employment led/mixed use	2 edge of settlement outside boundary	Brownfield Ecology Contamination	Town	Site not supported by sequential test	NOT ALLOCATED
Land at Ty'n Pant, Caehopkin (CS 1175)	Caehopkin	5.29	Mixed Use	Employment led/mixed use	3 Open Countryside	Greenfield Highways	Small Village	Site not supported by sequential test	NOT ALLOCATED
Central Powys									
Three Cocks Industrial Estate	Three Cocks	2.9			1 within settlement boundary serviced	Site fully developed	Large Village		NOT ALLOCATED
Javel Industrial Estate	Three Cocks (B26 EA1)	0.6	Local	Regenerate	1 within settlement boundary serviced	Partly in C2 flood zone	Large Village	Site supported by LDP policies	White land
Glebeland (CS 63)	Llanvihangel Talylyn	0.95			3 Open Countryside	Greenfield Highways Access	Small Village	Site not supported by sequential test	NOT ALLOCATED
Penypentre Meadow (CS 68)	Llanvihangel Talylyn	0.8		Employment led/mixed use	3 Open Countryside	Greenfield Highways Sewerage	Small Village	Site not supported by sequential test	NOT ALLOCATED
Wyeside Enterprise Park (CS 110)	Builth Wells (R69 EA1)	2.16	High Quality	High quality, promote & expand	1 within settlement boundary serviced	Brownfield Ecological	Town	Site supported by sequential test and LDP strategy	Taken Forward P08 EA1/EC1
White House Farm (CS 389)	Builth Wells	0.5		Employment led/mixed use	1 within settlement boundary serviced	Brownfield Within C2 flood zone Highways	Town	Site supported by LDP policies	White land
Irfon Enterprise Park	Builth Wells	0.1	Local	Employment led/mixed use	1 within settlement boundary serviced	Insufficient land available. Not a candidate site	Town	Site supported by LDP policies	Policy E2 White Land
Newbridge-on-Wye (CS 75-R)	Newbridge-on-Wye (R77 EA1)	0.5	Neighbourhood	Employment led/mixed use	2 edge of settlement outside boundary	Alternative proposal for residential use. Access off A470	Large Village	Site not supported by sequential test	NOT ALLOCATED
Crossgates (CS 1045 part-R)	Crossgates (R46 EA1)	0.6	Local	Employment led/mixed use	2 edge of settlement outside boundary	Highways Contamination	Large Village	Site not supported by sequential test	NOT ALLOCATED
Heart of Wales Business Park (CS 108)	Llandrindod Wells (R66 EA1)	4.57	Prestige	High quality, promote & expand	1 within settlement boundary serviced	Ecological constraints around pond	Town	Site supported by sequential test and LDP strategy	Taken Forward P28 EA1
Ddole Road	Llandrindod Wells (R66 EA2)	4	High Quality	Regenerate	2 edge of settlement outside boundary	Partly in C2 flood zone. Not a candidate site	Town	Site not supported by sequential test	NOT ALLOCATED
Cae Bach, Ddole Road (CS 933)	Llandrindod Wells	0.98			1 within settlement boundary	Ecology Built heritage C2 flood zone	Town	Site supported by LDP policies	White land
Llandrindod Wells	Llandrindod Wells (R66 EA3)	0.57	Local		1 within settlement boundary serviced	Site fully developed	Town		NOT ALLOCATED
Llandrindod Wells	Llandrindod Wells (R66 EA4)	1.12	Local	High quality, promote & expand	1 within settlement boundary serviced	Existing building partially in use Not a candidate site	Town	Site supported by LDP policies	White land
Old Town Hall Workshops	Llandrindod Wells	0			1 within settlement boundary serviced	Site fully developed	Town		NOT ALLOCATED
Broadaxe Business Park (CS 97)	Presteigne (R84 EA1)	3.18	Local	Employment led/mixed use	1 within settlement boundary	Small area in C2 flood zone	Town	Site supported by sequential test and LDP strategy	Taken Forward P51 EA1
Presteigne Industrial Estate	Presteigne	0.4			1 within settlement boundary serviced	<0.5ha. Green space. Not a candidate site	Town	Site supported by LDP policies	Policy E2 White Land
Land adj, Broadaxe	Presteigne	9.62		Employment	2 partially outside	Greenfield	Town	Alternative Use	Site partially

and Bypass (CS 782)				led/mixed use	settlement boundary	Highways		within settlement boundary	allocated for housing
Brynberth Enterprise Park (CS 102)	Rhayader (R85 EA1)	2.11	Local	Regenerate	1 within settlement boundary serviced	Small area in C2 flood zone	Town	Site supported by sequential test and LDP strategy	Sites CS 102 & CS 443 merged Taken Forward P52 EA1 (3.8 ha)
Adjoining Brynberth Enterprise Park (CS 443)	Rhayader	1.59 3.8	Local	Regenerate	1 within settlement boundary serviced	Highways access through CS 102 Greenfield	Town	Site supported by sequential test and LDP strategy	
East Street Enterprise Park	Rhayader	1.6	Local		1 within settlement boundary serviced	Site fully developed	Town		NOT ALLOCATED
Knighton	Knighton (R59 EA1)	0.9	Local	Employment led/mixed use	3 Open Countryside	Greenfield	Town	Site not supported by sequential test	NOT ALLOCATED
Knighton Enterprise Park	Knighton (R59 EA2)	0.44	Local	Employment led/mixed use	1 within settlement boundary serviced	< 0.5ha. Not a candidate site	Town	Site supported by LDP policies	Policy E2 White Land
Sheep Sale Field, Ludlow Road (CS 778)	Knighton	6.09		Employment led / mixed use	2 edge of settlement outside boundary	Greenfield 94% in C2 Flood zone	Town	Site not supported by sequential test	NOT ALLOCATED
Fields adj, River Teme (CS 1228)	Knighton	9.78		Employment	2 edge of settlement outside boundary	Greenfield 95% in C2 Flood zone	Town	Site not supported by sequential test	NOT ALLOCATED
Knucklas (CS 1048-R)	Knucklas (R61 EA1)	0.5	Neighbourhood	Residential led mixed use	1 within settlement boundary	Site subject to housing application	Large Village		NOT ALLOCATED
Llanwrtyd Wells (CS 1184-R)	Llanwrtyd Wells (B23 EA1)	0.38	Neighbourhood	Employment led/mixed use	1 within settlement boundary serviced	< 0.5ha	Town	Site supported by LDP policies	Policy E2 White land
Gypsy Castle Lane (CS 1100)	Hay-on-Wye	2.4	Mixed Use	Employment led/mixed use	1 within settlement boundary	Greenfield New site	Town	Site supported by sequential test and LDP strategy	Taken Forward P21 MUA1
Three Cocks – Land adj Gwernyfed (CS 1105)	Three Cocks	2.3	High Quality	High quality, promote & expand	1 within settlement boundary (serviced)	Brownfield Extant implemented employment PP	Large Village	Site supported by sequential test and LDP strategy	Taken Forward P53 MUA1
Land adj Bronllys CP School (CS 1106)	Bronllys	5	Mixed Use	Mixed Use	2 partially outside settlement boundary	Greenfield Heritage Highways	Large Village	Alternative Use within settlement boundary	HOUSING ALLOCATION
Severn Valley & North									
Llangurig (CS 663 part-R)	Llangurig (M160 EA1)	0.4	Neighbourhood	Employment led/mixed use	1 within settlement boundary	Site allocated for housing	Large Village	Alternative Use	HOUSING ALLOCATION
Parc Busnes Derwen Fawr / Great Oaks Business Park (CS 104)	Llanidloes (M163 EA1)	0.3	High Quality	High quality, promote & expand	1 within settlement boundary serviced	None	Town	Site supported by sequential test and LDP strategy	Taken Forward P35 EA1
Parc Hafren (CS 100)	Llanidloes (M163 EA3)	1.47	Local	High quality, promote & expand	3 open countryside serviced site partially occupied	None – existing site partially occupied	Town	Site supported by LDP strategy and sequential test.	Taken Forward P35 EA2/EC1
Parc Hafren Extension	Llanidloes (M163 EA2)	3	Local	Employment led/mixed use	3 open countryside	Greenfield	Town	Site does not support sequential test	NOT ALLOCATED
Chapel Farm, Gorn Road (CS 633)	Llanidloes (M163 EA1)	0.49	Local		2 edge of settlement outside boundary	Greenfield Highways	Town	Site supported by LDP policies	Policy E2
Chapel Farm, Gorn Road (CS 1031)	Llanidloes	6.3			2 edge of settlement partially within boundary	Greenfield	Town	Alternative Use within settlement boundary	HOUSING ALLOCATION
Chapel Farm, Gorn Road (CS 1096)	Llanidloes	0.84			3 open countryside	Greenfield Highways	Town	Site does not support sequential test	NOT ALLOCATED
Station Workshops Llanidloes	Llanidloes	0			1 within settlement boundary serviced	No land available	Town		NOT ALLOCATED
Maesllan Enterprise Park	Llanidloes	0			1 within settlement boundary serviced	No land available	Town		NOT ALLOCATED
Caersws Village Workshops	Caersws	0			1 within settlement boundary serviced	No land available for expansion	Large Village		NOT ALLOCATED
Rock Farm, Llanllwchaiarn (CS 135)	Newtown	4.14			2 edge of settlement partially within boundary	Greenfield	Town	Site does not support sequential test	NOT ALLOCATED
Land north of Bryneira (CS 249)	Newtown	5.36			3 open countryside	Greenfield Highways	Town	Site does not support sequential test	NOT ALLOCATED
Adj. Castell y Dail, Heol Mochdre (CS 586)	Newtown	23.01			3 open countryside	Greenfield Highways	Town	Site does not support sequential test	NOT ALLOCATED
Adj. Glandulas Drive (CS 589)	Newtown	3.35			2 edge of settlement partially within boundary	Greenfield Partly in C2 zone Highways	Town	Site supported by LDP policies	Policy E2 White land
Llanidloes Road (CS 592)	Newtown (M182 EA2)	4.2	High Quality	High quality, promote & expand	1 within settlement boundary	Partly in C2 flood zone Highways	Town	Site supported by sequential test and LDP strategy	Taken Forward P48 EA1
Dyffryn Enterprise Park	Newtown	0			1 within settlement boundary serviced	No land available	Town		NOT ALLOCATED
Maesyrrhandir CP School (CS 903)	Newtown	2.72			1 within settlement boundary	Brownfield Site Availability	Town	Site supported by sequential test and LDP strategy	NOT ALLOCATED (due to availability)
Land adj. Mochdre Industrial Estate (CS 1133)	Newtown	0.83			2 edge of settlement outside boundary	Greenfield Highways	Town	Site does not support sequential test	NOT ALLOCATED
Mochdre Enterprise Park	Newtown	2	High Quality	Regenerate	1 within settlement boundary serviced	3 sites < 0.5 ha each Infill space	Town	Site supported by LDP policies	Policy E2 White land
Vastre Enterprise Park	Newtown	1.8	Local	Regenerate	1 within settlement boundary serviced	Partly in C2 flood zone. Not a candidate site	Town	Site supported by LDP policies	White land
St Giles Golf Course	Newtown					Withdrawn from	Town		DE

(CS 483)	(M181 EA1)					LDP			ALLOCATED
St Giles Technology Park	Newtown	0			1 within settlement boundary serviced	No land available	Town		NOT ALLOCATED
Sam (CS 776 part-R)	Newtown (M189 EA1)	0.46	Local	Employment led/mixed use	3 open countryside	Greenfield	Small Village	Site does not support LDP strategy or sequential test	NOT ALLOCATED
Fraithwen (CS 784)	Adfa	2.89			3 open countryside	Greenfield Highways	Rural Settlement	Site does not support LDP strategy or sequential test	NOT ALLOCATED
Abermule Business Park (CS 106)	Abermule (M101 EA1)	2.6	High Quality	High quality, promote & expand	1 within settlement boundary	Wholly within C2 flood zone	Large Village	Site supported by sequential test and LDP strategy	Taken Forward P02 EA1
Churchstoke (CS 1123 part)	Churchstoke (M117 EA1)	1.54	Local	Employment led/mixed use	1 within settlement boundary partially serviced	None	Large Village	Site supported by sequential test and LDP strategy	Taken Forward P12 EA1
Montgomery	Montgomery (M176 EA1)	0			2 edge of settlement outside boundary	Site subject to residential home application	Town	Alternative Use	NOT ALLOCATED
Welshpool Business Centre	Welshpool	0			1 within settlement boundary serviced	No land available	Town		NOT ALLOCATED
Buttington Cross Enterprise Park (CS 105)	Welshpool (M199 EA2)	1.5	Prestige	High quality, promote & expand	1 within settlement boundary serviced	None – existing site	Town	Site supported by sequential test and LDP strategy	Taken Forward P57 EC1
Severn Farm Enterprise Park	Welshpool	0			1 within settlement boundary serviced	No land available	Town		NOT ALLOCATED
Henfaes Lane	Welshpool	0			1 within settlement boundary serviced	No land available	Town		NOT ALLOCATED
Land adj. Market (CS 343)	Welshpool	0.64			2 edge of settlement outside boundary	Greenfield	Town	Site does not support sequential test	NOT ALLOCATED
Land at Buttington Wharf (CS 344)	Welshpool	1.31			3 open countryside beyond settlement boundary	Greenfield	Town	Site does not support sequential test	NOT ALLOCATED
Canalside opposite Morrison's (CS 530)	Welshpool	1.03	Regenerate	Employment led / Mixed Use	1 within settlement boundary serviced	Brownfield	Town	Site supported by LDP policies	White land
Buttington Quarry (CS 682)	Welshpool	6	Local		3 open countryside serviced site partially occupied	Brownfield New site Partial existing employment use	Town	Site supported by sequential test and LDP strategy	Taken Forward P59 EA1
Land adj. The Smithy Buttington (CS 795)	Welshpool	5.7			3 open countryside	Greenfield	Rural Settlement	Site does not support sequential test	NOT ALLOCATED
Welshpool High School (CS 929)	Welshpool	8.97			1 within settlement boundary	Brownfield Site Availability	Town	Site supported by LDP policies	White land
Cefn Field, North of Cefn Farm (CS 282)	Cefn	1.52			3 open countryside	Greenfield	Rural Settlement	Site does not support sequential test	NOT ALLOCATED
Land adj. Trem Hirnant (CS 341)	Manafon	0.77			3 open countryside	Greenfield	Rural Settlement	Site does not support sequential test	NOT ALLOCATED
Land adj. Trevern Sewage Works (CS 366)	Trevern (M195 EA1)	1.43	Local	Employment led/mixed use	3 open countryside beyond settlement boundary	Greenfield	Large Village	Site does not support sequential test	NOT ALLOCATED
Offa's Dyke Business Park (CS 103)	Welshpool (M199 EA1)	7.8	Prestige	High quality, promote & expand	3 open countryside serviced site partially occupied	None – existing site partially occupied	Town	Site supported by LDP strategy and sequential test	Taken Forward P60 EC1
Four Crosses	Four Crosses (M133 EA1)	0.75	Local	Regenerate	1 within settlement boundary serviced	Existing popular site	Large Village	Site supported by sequential test and LDP strategy	Taken Forward P18 EC1
Land adj. Canal Cottage (CS 947)	Four Crosses	1.14			2 partially outside settlement boundary	Greenfield Ecology Highways Heritage	Large Village	Site does not support sequential test	NOT ALLOCATED
Land Adjoining Village workshops (CS 957)	Four Crosses (M133 EA1)	0.2			1 within settlement boundary serviced	Brownfield <0.5ha	Large Village	Site supported by LDP policies	White land
Meat Processing Plant	Llandrinio	19			3 open countryside	Greenfield Specific site proposer not come forward	Large Village	Site does not support sequential test	NOT ALLOCATED
Land at the Meadows (CS 322)	Llandrinio	0.88			3 open countryside	Greenfield In C2 zone	Large Village	Site does not support sequential test	NOT ALLOCATED
Varchoel Hall (CS 541)	Guilfield	2.63			3 open countryside	Brownfield Highways	Large Village	Site does not support sequential test	NOT ALLOCATED
Wynnstay Stores	Llansanffraid ym Mechain (M165 EA1)	1.6	Local	Employment led/mixed use	1 within settlement boundary serviced	Brownfield Existing site in employment use Not a candidate site	Large Village	Site supported by LDP policies	White land for Wynnstay's use
Land to East of Llansanffraid (CS 840)	Llansanffraid ym Mechain	7.83			2 edge of settlement outside boundary	Greenfield Highways	Large Village	Site does not support sequential test	NOT ALLOCATED
Station Yard (CS 842)	Forden	1.03		Regenerate	3 open countryside	Brownfield Extant existing B2 Use	Large Village	Site supported by LDP policies	Policy E2
Land adj. Dykelands (CS 1122)	Forden	2.23			3 open countryside	Greenfield Heritage	Large Village	Site does not support sequential test	NOT ALLOCATED
Land near Station House (CS 844)	Y Fan	0.92			3 open countryside	Greenfield 42% in C2 zone	Small Village	Site does not support sequential test	NOT ALLOCATED

Llanfyllin Enterprise Park	Llanfyllin (M157 EA1)	0.28	Local	Regenerate	2 edge of settlement outside boundary	Brownfield < 0.5ha. Not a candidate site.	Town	Site supported by LDP policies	Policy E2
Llanfyllin Industrial Estate	Llanfyllin	0			1 within settlement boundary serviced	No land available	Town		<b>NOT ALLOCATED</b>
Ysgol Llanbrynmair (CS 896)	Llanbrynmair	2.57			2 edge of settlement outside boundary	89% in C2 Zone Site availability	Large Village	Site does not support sequential test	NOT ALLOCATED
Ysgol Efyrynwy, Llanwddyn (CS 964)	Abertridwr	0.52			3 open countryside	Brownfield Heritage Covenant	Small Village	Site does not support sequential test	NOT ALLOCATED
Land at Maes Morgan (CS 961)	Llanraeadr ym Mochnant	0.73			2 edge of settlement outside boundary	Greenfield In C2 zone Highways	Large Village	Site does not support sequential test	NOT ALLOCATED
Pontrobert	Pontrobert (M186 EA1)	0.12	Neighbourhood	Employment led/mixed use	1 within settlement boundary serviced	Brownfield < 0.5ha. Not a candidate site	Large Village	Site supported by LDP policies	Policy E2 White land
Llanerfyl Village Workshops (CS 958-R)	Llanerfyl (M153 EA1)	0.15	Neighbourhood	Employment led/mixed use	3 open countryside	Greenfield <0.5ha	Small Village	Site not supported by LDP strategy or sequential test	NOT ALLOCATED
Penybontfawr (CS 698-R)	Penybontfawr (M184 EA1)	0.5	Neighbourhood	Employment led/mixed use	1 within settlement boundary	Site allocated for housing	Large Village	Alternative Use	HOUSING ALLOCATION
Brynant (CS 1080)	Meifod	2.37	Local		3 open countryside	Greenfield	Open Countryside	Site does not support sequential test	NOT ALLOCATED
Land at Llangynog (CS 1227)	Llangynog	0.92			2 edge of settlement outside boundary	Greenfield In C2 Zone	Large Village	Site does not support sequential test	NOT ALLOCATED
Texplan	Carno	3.22			1 within settlement boundary serviced	Brownfield Site buildings in occupation	Large Village	Site supported by LDP policies	White land
Machynlleth									
Treowain Enterprise Park	Machynlleth (M172 EA1)	1.3	High Quality	High quality, promote & expand	1 within settlement boundary serviced	Unsuitable for alternative uses. Not a candidate site	Town	Site supported by sequential test and LDP strategy	<b>Taken Forward P42 EA1</b>
Land at Llynloed south of Treowain (CS 835)	Machynlleth	4.82		Employment led/mixed use	2 edge of settlement outside boundary	Historic Landscape	Town	Site not supported by LDP strategy or sequential test	NOT ALLOCATED
Land at Llynloed (CS 836)	Machynlleth	4.61		Employment led/mixed use	3 open countryside	Highways Built heritage	Town	Site not supported by LDP strategy or sequential test	NOT ALLOCATED
Dyfi Ecopark	Machynlleth	0			1 within settlement boundary serviced	No land available	Town		<b>NOT ALLOCATED</b>

Site Assessed in PENA Property Market Overview & supply Analysis

\* New allocated employment site identified via Candidate site submission



**DRAFT**

**Powys Local Development Plan**

**Explanation of the Housing Allocations**

**Position Statement**

**September 2016**

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## **Executive Summary**

The Planning Inspector appointed to test the soundness of the Powys Local Development Plan has raised concerns that some housing land allocations in the Powys Local Development Plan may not be deliverable in some areas of the County due to lack of viability, and that this may compromise the ability of the Plan to deliver the identified Dwelling Requirement during the Plan period.

This Position Statement describes the process under which housing allocation sites were identified and allocated and demonstrates the relationships of site distribution against Council corporate strategies to promote longer term sustainable growth in the most appropriate locations.

Housing allocation sites are considered in terms of a review of viability in 2016. The review, which is a high level County-wide study using a series of standardised assumptions, identified some allocation in the south-west of Powys as unviable. Local evidence from this area indicates that individual sites can be demonstrated to be viable and with realistic developer intention dwelling units will be deliverable within the Plan period.

The alignment of allocations and strategies against the LDP objectives and long term vision to enable growth in sustainable locations and thus ensure the wellbeing of “strong communities in the green heart of Wales” has informed the allocation of housing land.

## **1. Introduction**

1.0.1 This Position Statement is part of the evidence supporting the preparation of the Powys Local Development Plan 2011- 2026. It is one of four additional papers published in September 2016 to inform “Deliverability” of housing sites.

1.0.2 The purpose of this Position Statement is to respond to concerns raised by the independent Planning Inspector testing the soundness of the Powys Local Development Plan and demonstrate that as of 1 April 2015 the Allocations component of the Council’s housing land supply as set out in the Strategy can be delivered by the Plan. These allocations have been reassessed in terms of their site typologies and are further supported by more recent evidence of improved viability. This document also provides a more detailed review of selected sites identified by the Planning Inspector considered suitable for housing, with appropriate site densities, in order to ensure that expectations of delivery are realistic within the context of the area.

1.0.3 This Position Statement assesses new housing allocations (HA) as shown on the LDP Inset maps and in Appendix 1 and Policy H1A of the Written Statement. The other papers in this series consider sites with extant planning permissions known as housing commitments (HC); windfall sites, those sites which have been granted permission but which were not previously allocated; and an overall housing provision paper, which confirms the total provision for housing units in the LDP.

1.0.4 The delivery of housing developments within sustainable settlements lies at the heart of the strategy of the LDP, and the housing allocations within the Plan are focussed on achieving a balanced distribution through those settlements, which are the highest two tiers in the settlement hierarchy; these tiers being defined as “Towns” and “Large Villages”.

1.0.5 This paper provides the sound evidence base from the viability review to support delivery of site allocations and thus assist the Council in making decisions on development proposals that will support the delivery of the LDP over the Plan period. It also provides clarity for site promoters that sites can come forward for development and provides confidence that any identified issues can be resolved.

1.0.6 Whilst the focus of development is in sustainable settlements, to ensure community well-being in more rural areas of the County, non-allocated housing sites which are supported by LDP and national policies enable appropriate housing developments to come forward beyond the settlement boundaries of Towns and Large Villages and these are considered in the [Explanation and Review of the Windfall Allowance paper \(Ref\)](#).

## **2. Housing Allocations (HA)**

2.0.1 The Council's LDP has identified a dwelling requirement of 4,500 dwellings (**Explanation of the Dwelling Requirement Figure Paper - REF**). As part of the suite of policies which make up the LDP, the Housing Allocations are part of the delivery mechanism for meeting this housing requirement. Housing Allocations are those sites which were identified as being capable of accommodating five or more housing units and will be included in the annual Joint Housing Land Supply (JHLAS) returns when the LDP is adopted.

2.0.2 Small sites and individual property sites were not allocated and were assessed under the windfall provision paper. The allocated sites are listed in Policy H1A of the Plan as proposed within the LDP's Further Focussed Changes, and further site details are provided in Appendix 1 of the Plan (**REF**).

### **2.1 Distribution of Housing Allocations**

2.1.1 The LDP Strategy [EB 30] defined the settlement hierarchy for the County and identified that development should be directed towards the most sustainable settlements, these being the centres with the greatest range of services and facilities. A four tier hierarchy was defined and the allocation of housing units were to be all directed to the highest two tiers of settlements (designated "Towns" and "Large Villages") in the hierarchy. There were to be no housing allocations in the lowest tier settlements.

2.1.2 Based on the LDP's spatial strategy [EB30] with development allocated to settlements commensurate with their size (number of households) an initial apportionment was made to each identified Town and Large Village. This apportionment was based on a starting point of 4000 dwellings being required to meet the principal projection of population growth during the Plan period and also took account of existing housing commitments within each settlement. For each Town and Large Village, the total apportionment, minus the existing housing commitments indicated the number of housing units which needed to be allocated to that settlement but did not specify the sites where these allocations needed to be made.

### **2.2 Identification of Housing Allocation Sites**

2.2.1 Housing allocation sites in the Powys LDP were identified through the Candidate Site process undertaken by the Council in 2011 [LDP02]. Unlike previous development plans, sites were submitted to the Council for assessment through the active input of landowners or the site promoters. Each candidate site was assessed for physical constraints and the results published in the Candidate Site Status Report [LDP04]. The sites were also subjected to sustainability appraisal.

2.2.2 Those candidate sites proposed in Towns and Large Villages which were identified as subject to the least physical constraints and which provided the necessary number of housing units commensurate with the growth strategy for the size of that settlement, were selected as housing allocations within the LDP.

### **2.3 Outcome of Housing Allocation Site Selection**

2.3.1 None of the sites which became housing allocations in the Plan are considered to have abnormal technical or physical constraints which could prevent their deliverability although individual sites may be

subject to site specific issues which have been highlighted in Appendix 1 of the Plan [LDP06]. As these sites were put forward by promoters with an intention to develop within the Plan period, the Council has confidence that all the sites identified as Housing Allocations are deliverable during the Plan period with appropriate design which can be addressed through the development management process and in accordance with the Plan's policies.

## **2.4 Housing Allocation Sites**

2.4.1 The LDP delivers Housing Allocation in Towns and Large Villages. In Towns, the highest tier in the Powys settlement hierarchy, the LDP seeks to deliver housing across 38 allocated sites in 14 of the 15 designated Towns. The exception is Llanwrtyd Wells, this town having exceeded its pro-rata apportionment as identified in the LDP Strategy through existing Housing Commitments.

2.4.2 In Large Villages, the second tier settlements, housing will be distributed across 45 sites in 35 settlements. A further eight Large Villages had no housing allocations due to existing Housing Commitments (e.g. Bettws Cedewain) or as a result of a combination of committed sites and a lack of submitted unconstrained deliverable sites which could be allocated (e.g. Llansilin).

## **2.5 Focus of Housing Land Allocations**

2.5.1 The aim of the Plan to focus development into the most sustainable locations is reflected in the allocations of land for housing development. In total, 83 sites have been allocated, with 96.45 hectares of land allocated in Towns and 45.24 hectares in Large Villages. Site size varies, but the mean size by area of an allocated site in Towns is 2.54 hectares and in Large Villages it is 1.03 hectares.

**3. Allocation Density Determination**

3.0.1 For each housing allocation, the appropriate number of housing units which the Plan envisaged should be developed on the site had to be calculated. This was determined by identifying the most appropriate density of housing multiplied by the site area.

**3.1. Determination of Housing Numbers on Allocated Sites in 2015.**

3.1.1 The Community Infrastructure Levy Viability Assessment (CIL) report [EB13] 2014 identified that to make the most efficient use of land, density of any proposed housing development in highest tier settlements should be 25 units per hectare or greater.

**Table 1: Original site density determination as used in LDP06 (2015)**

LDP Settlement Hierarchy	Housing Unit densities as determined in [EB13] 2014
Towns and Large Villages *	25+
Small Villages	20 - 25
Rural settlements / single dwellings	10 - 25

\* Appendix 1 Allocated Sites

3.1.2 The Plan, as originally prepared [LDP06] therefore envisaged a total of 2773 housing units being delivered for the period 2011-26 based on an assumed density across all allocated sites of 5+ housing units in Towns and Large Villages of 25 units per hectare, each site’s requirement being shown in Appendix 1 in the revised Deposit Draft LDP [LDP06].

**3.2 Revised Determination of Housing Numbers on Allocated Sites in 2016**

3.2.1 Since the publication of the original CIL 2014 study [EB13], it was evident that greater densities of housing were being achieved “on the ground”. From this evidence of development the viability assessment update (*Viability Review Study 2016*) incorporated revised site densities to reflect more realistic scenarios at a County-wide level, these being defined in the *HDH Planning Viability Technical Report (August 2016)*. These revised density values reflected the nature and location / scale of settlement of the site.

3.2.2 Powys is a large and diverse County and it is clear that there are areas which are more high value and therefore viable than others. To ensure the most efficient use of land, and that development proposals on unconstrained sites remain viable, a typical density value determined from the mean achievable housing densities on sites was applied to each allocated site as appropriate, these values being:

- Greenfield (larger sites 10+ units)                      27 units per hectare
- Greenfield (smaller sites (5 - 10 units)                28 units per hectare
- Brownfield    34 units per hectare

Application of the revised site densities to the 83 allocated housing sites within the LDP would result in the allocation of 3875 dwelling units assuming no departure from the assumed viability densities.

### **3.3 Departures from Applied Standard Densities**

3.3.1 Of the 83 allocated sites, 40 sites (18 in Towns, 22 in Large Villages) were allocated with housing densities differing from the viability density values as described above. The departures from anticipated densities were the consequence of three identifiable factors:

- 1) Site specific issues within the sites (e.g. slopes / water courses / utility corridors) which do not affect deliverability but may impact upon site design and can only be assessed when a development proposal is made;
- 2) Individual site planning histories / planning applications awaiting signing of Section 106 agreements;
- 3) Large sites where a proportion of the housing units will be phased to be developed beyond the LDP plan period due to infrastructure requirements and a realistic assessment of the level of development likely to be constructed in the Plan period.

3.3.2 Thirty-three sites had deviations from the anticipated density due to site specific issues (Factor 1 -18 sites) and because of planning history on the site or planning applications awaiting signing of Section 106 agreements (Factor 2 - 15 sites). None of the internal site specific issues were considered to be abnormal constraints and all could be addressed by appropriate internal design which would occur at development proposal stage.

**Table 2: Variations from viability densities under Factors 1 and 2**

<b>Site (Site area)</b>	<b>Units Anticipated from Viability</b>	<b>Units in Plan</b>	<b>Reason for density divergence</b>
<b>Towns</b>			
P24 HA1 (0.96 ha) Knighton	26	24	Planning application
P24 HA3 (3.5 ha) Knighton	95	70	Site specific - access/slope
P28 HA1 (2.2 ha) Llandrindod Wells	59	50	Planning application
P30 HA1 (2.4 ha) Llanfair Caereinion	65	40	Site specific - access/slope
P30 HA2 (1.1 ha) Llanfair Caereinion	30	20	Planning application
P32 HA2 (2.3 ha) Llanfyllin	62	55	Site specific - access/design
P32 HA2 (3.8 ha) Llanfyllin	103	90	Site specific - access/design
P42 HA1 (1.4 ha) Machynlleth	38	29	Planning application
P42 HA4 (0.3 ha) Machynlleth	8	5	Site Specific - GTAA requirements
P48 HA4 (6.8 ha) Newtown	184	136	Planning history
P51 MUA1 (2 ha) Presteigne	68	60	Site specific - design
P52 HA1 (3.5 ha)	95	70	Planning History



Rhayader			
P57 HA1 (1.5 ha) Welshpool	41	30	Site specific - canal buffer
P58 HA9 (3 ha) Ystradgynlais	81	76	Site specific - open space
P58 HA10 (4.5 ha) Ystradgynlais	122	136	Planning application
P58 HA12 (0.64 ha) Ystradgynlais	17	10	Planning application
<b>Large Villages</b>			
P2 HA1 (0.4 ha) Abermule	11	5	Site specific - utility corridor
P4 HA1 (0.7 ha) Berriew	19	12	Site specific - canal buffer
P6 HA2 (0.8 ha) Boughrood/Llyswen	22	15	Pending Planning Application
P7 HA2 (0.6 ha) Bronllys	16	10	Planning Application
P7 HA3 (0.3 ha) Bronllys	8	6	Lapsed Planning Permission
P15 HA1 (1.5 ha) Crewgreen	41	23	Site specific - ecological buffer/pond
P17 HA1 (0.8 ha) Forden/Kingswood	22	15	Site specific- SAM / heritage buffer
P17 HA2 (0.5 ha) Forden/Kingswood	14	10	Site specific - SAM / heritage buffer, access
P19 HA1 (0.3 ha) Glasbury	8	5	Site specific - access
P20 HA1 (0.9 ha) Guilsfield	24	20	Site specific - ecological buffer / access
P22 HA2 (0.8 ha) Howey	22	12	Lapsed Planning Permission
P25 HA1 (0.4 ha) Knucklas	11	17	Planning Application
P31 HA1 (1 ha) Llanfechain	27	25	Site specific - groundwater drainage
P37 HA2 (0.6 ha) Llansantffraid-ym- Mechain	16	13	Site specific - open space requirement
P43 HA1 (1.9 ha) Meifod	51	45	Site specific – waterway buffer
P50 HA1 (0.5 ha) Pontrobert	14	6	Lapsed Planning Permission
P53 MUA1 (0.6 ha) Three Cocks	16	32	Pending Planning Application

3.3.3 Seven large sites have been identified under Factor 3 where significant infrastructure requirements are needed and phasing of the site would be appropriate (Table 3), with development of these large sites continuing beyond the Plan period. The units phased within Plan are indicative and would be informed through a Development Brief and detailed development proposal. These large sites with

phasing beyond the Plan period are indicated in Policy H1A of the Plan as proposed in Further Focused Changes 2016.

**Table 3: Variations from Viability Densities under Factor 3**

Site (Site area)	Units Anticipated from Viability	Units phased in Plan	Infrastructure Requirement
P28 HA4 (7.6 ha) * Llandrindod Wells	205	100	Internal site access design Off site sewers
P45 HA1 (10.8 ha) * Montgomery	292	54	New link road across site with closure of existing Class II road junctions
P2 HA2 (3.3 ha) Abermule	89	30	Access and utilities corridor as site in 3 parts
P3 HA1 (1.7 ha) Arddleen	46	17	Community Car Park
P18 HA1 (3.4 ha) Four Crosses	92	32	Land for School use and enhanced community facilities
P40 HA2 (1.6 ha) Llanymynech	43	20	Design to take account of possible Montgomery Canal restoration
P56 HA1 (4.1 ha) Trewern	111	27	Joint access and car parking facilities. Highways improvements

\* Site located in Town

3.3.4 As a result of the variations in density on the 40 sites and the resultant differences in dwelling units anticipated, the revised total figure of houses which the Plan anticipates can be delivered on allocated sites during the Plan period is **2992 units**.

3.3.5 The majority of this housing development is directed towards the County's Towns, with 2091 units (70%) across the 38 allocated sites in these settlements; allocations in the Large Villages account for 901 units (30%) over 45 allocated sites.

## 4. Deliverability of Allocated Sites

4.0.1 The Community Infrastructure Levy (CIL) 2014 report on viability [EB13] identified four sub-market areas across Powys, these being the South-west (Ystradgynlais), Central Powys, the Severn Valley and the Rural North.

4.0.2 Across the four sub-market areas, slightly refined in the DV Viability Update Report 2016, the number of housing units in each sub-market area (based on the revised 2016 density determination) are identified in the Plan and are distributed as shown in Table 4.

**Table 4: Allocated Housing Units in Viability Update Report Sub-market Areas (August 2016)**

Sub Market Area	Housing Units	% of Total
South-west	466	16
Central	964 *	32
Severn Valley	755	25
North	802	27
Total	<b>2987 *</b>	

\* Excludes the 5 units of site P42 HA4 (Machynlleth) for gypsy and traveller accommodation not assessed for viability.

4.0.3 The 2014 Viability Study [EB13] indicated that whilst the Central and Severn Valley sub-market area typologies were all largely viable, viability became more challenging in the North with some sites only marginally viable and others unviable. In the South-west, no sites were considered viable on the basis of this standardised high-level study. As a consequence of the challenging viability in only two of the four sub-market areas in the County, the Planning Inspector raised concerns about the deliverability of housing allocation sites and that additional work was required, updated to reflect current market conditions.

4.0.4 An updated analysis of all the allocations was undertaken in the [Viability Review Study August 2016 and Viability Topic paper September 2016](#). These indicated that in terms of viability (N.B assuming 0% affordable housing), there was an improvement indicating housing can be delivered viably on all sites in the Plan although conditions remain challenging in the South-west sub-market area.

### **4.1. Improvements in Viability**

4.1.1 Compared to the original 2014 viability study, which highlighted some sites as unviable or marginally viable, the [Viability Review Study August 2016](#) identified an improvement in viability across the County. This was particularly apparent in the North sub-market area, where three allocations totalling 106 housing units for delivery in the Plan period were originally identified as unviable (P42 HA3, Machynlleth; P51 MUA1, Presteigne; P18 HA1, Four Crosses). In the 2016 Review study, these sites have been identified as viable will be deliverable within the latter part of the Plan period as infrastructure improvements come on stream. This improvement may be a reflection of an improving economy, more realistic landowner expectations, or the site as a whole becoming more viable with increased density of housing units on the site. This latter factor is possibly reflected in site P51 MUA1 in Presteigne, where an increased density due to its town centre, brownfield location making more efficient use of land has had a positive impact upon the site viability. Details of these sites are provided in Annex 1.

## **4.2 Justification of Housing Allocations in South-west Powys**

4.2.1 Seven sites in Ystradgynlais plus one in Abercrave were identified in the 2014 Viability Study [EB13] as unviable. Under the revised densities ([Viability Review Study 2016](#)) these sites now total 466 units. However, County-wide studies with a set of standardised assumptions do not fully capture local market variations or the mechanisms used by site promoters and developers to bring a site forward, and so in these terms, each site is unique and only site specific viability reports can truly reflect the situation “on the ground”.

4.2.3 There are a number of factors why any site in Powys deemed as unviable can be delivered and thus be considered a “pocket of viability” within a sub-market area including, for example:

- where an executive style development is undertaken in an area with good access to major transport links and excellent views;
- ongoing interest in the development of a site which instils confidence in the marketplace;
- lower land owner and/or developer expectations (e.g. profit margins, land sale values);
- economies of scale;
- finance and phasing agreements;
- Grant funding.

These, and other factors which may contribute to enabling the deliverability of housing allocations are discussed in more detail in the [Viability Review Study August 2016 \[REF\]](#) and the [Viability Topic Paper \[REF\]](#).

4.2.4 Three of the sites in the South-west submarket area (P58 HA9, P58 HA10 and P58 HA11) are sites larger than average for Towns and in combination account for 334 of the units, increasing to 375 units (c.80% of the total for the sub-market area) if P58 HA3 is considered in conjunction with P58 HA11. One of these large sites (Brynygroes P58 HA10 – 136 units) has been able to demonstrate that it is viable under current market conditions, the site specific viability results also enabling affordable housing provision. Outline planning consent for this site was granted in April 2016 and work to bring forward and deliver the site is ongoing (see Annex 1).

4.2.5 As the promoters of the other large sites at Penrhos Farm (P58 HA9) and Penrhos School and Extension (P58 HA3 +P58 HA11) are working to bring forward their sites (see Annex1) it is probable that with the advantages of economies of scale and expressed developer intentions housing will be delivered on these sites in the Plan period.

4.2.6 On smaller infill sites, the [Viability Review Study 2016 \[REF\]](#) has indicated that these sites are viable in the South-west sub-market area. Thus, the Glanrhyd Farm allocation (P58 HA5) is indicated as being viable in Annex 1.

## **4.3 Deliverability Outcomes**

4.3.1 Whilst the South-west sub-market area at the County-wide level is acknowledged to be challenging, it is evident that development proposals are coming forward and developer intentions indicate a confidence in the market. Allocation P58 HA10 has a recent (April 2016) planning consent and the application for site P58 HA12 is awaiting determination. Of the remaining six sites, the promoters are actively marketing their sites or awaiting the adoption of the LDP before submitting development

proposals to the Local Planning Authority. Small infill sites are considered to be viable and this has the potential to further boost confidence in delivery.

4.3.2 In the other sub-market areas, all allocated sites, with a total of 2521 (excluding P42 HA4) are indicated as being viable in the 2016 viability update report.

## 5. Alignment and Implications for LDP Strategy

5.0.1 The location and planned distribution of housing land allocations proposed in the Powys LDP aligns with the Vision for Powys 2026, as set out in the LDP in that the County:

“will be a place of vibrant and resilient communities providing **sustainable development and economic opportunities** set in a healthy, safe environment, whilst celebrating, protecting, enhancing and sustainably managing its natural resources, native wildlife and habitats, heritage, outstanding landscapes and distinctive characteristics.

Powys’ **towns and larger villages** will be vibrant and accessible service centres. They will be the focus for **integrating housing, economic and service development** to meet their own needs and those of their surrounding communities.

Powys’ rural areas will be a working countryside of **sustainable communities** supported by a thriving and diverse rural economy of small businesses.”

(N.B: author’s italics)

5.0.2 The Powys Local Development Plan identifies that allocated housing sites are required to contribute towards the dwelling requirement figure of 4,500 new housing units to meet future needs and ensure the population of Powys from going into decline through natural change (DRF Ref). The allocation of new housing land contributes to the development of stronger communities in accordance with other Council policies including **One Powys** [POW04] particularly important given Powys’ size and dispersed settlement pattern.

5.0.3 In accordance with the LDP Strategy, allocated housing land is directed to the larger higher tier settlements in the County’s settlement hierarchy and has been informed by the principle of sustainable development in support of LDP Objective 2.

### 5.1 LDP Growth Strategy

5.1.1 *The LDP Growth Strategy* recognises there is a need to make provision for population and household growth, and the provision of 2992 housing units across 83 allocated housing sites contributes to this sustainable growth.

5.1.2 Although the south-west of the county is challenging in terms of viability, the allocation of housing sites in this sub-market area is appropriate as development has been shown to occur and can be demonstrated to be viable and the provision of good quality, modern residential development in sustainable locations in Ystradgynlais is in alignment with LDP Objectives 6, 7 and 8.

### 5.2 LDP Spatial Strategy

5.2.1 *The LDP Spatial Strategy* identifies a sustainable settlement hierarchy and all allocated housing land sites are directed to either the highest tier of the hierarchy (Towns – 2091 housing units) or the second tier sites (Large Villages – 901 housing units), making provision across the county to ensure opportunities for new development are available, and so support community well-being and cohesiveness (Objective 16) and the Powys economy in alignment with Objective 6 of the LDP.

5.2.2 As such, the allocated housing sites are located in, or adjacent to, Powys's largest settlements and thus are in accordance with the LDP strategy for *Growth in Sustainable Places*, thus meeting Objectives 1 and 2 of the LDP to meet future need. Some of the sites have been identified as previously developed land and the redevelopment of these sites would make the most sustainable and efficient use of existing land in accordance national policy and with Objective 3 and Objective 8 of the LDP.

5.2.3 Allocations are made in settlements which have a strong Welsh cultural identity. In accordance with national guidelines and LDP Objective 8, Objective 15 and Objective 16, these allocations will contribute towards the long terms sustainability of communities in Powys's Welsh language strongholds. As described in the Welsh language & Culture Topic Paper and Addendum (2014, 2016 – [EB41]), mitigation measures in alignment with national policy will be monitored to support these areas, although these measures should not place additional burdens on developers. This is an important consideration in areas where deliverability may have greater viability challenges such as Ystradgynlais, and where a strong sense of community and Welsh identity could be compromised by the lack of new housing development.

## **6. Conclusions**

6.0.1 Sites which were taken forward as housing allocations were submitted by site proposers through the Candidate Site process and assessed to identify those sites with the fewest constraints located in the most sustainable settlements across the County.

6.0.2 The number and size of housing allocations and the number of housing units within them indicate a clear focus for the Powys Local Development Plan in that new allocations for housing development of more than five units is directed towards designated Towns in the first instance (70%) followed by Large Villages (30%), these being the most sustainable settlements with the greatest range of infrastructure and services.

6.0.3 The updated viability report (2016) indicates that 84% of the housing units across three of the four sub-market areas within the Plan are viable and delivery can be achieved within the Plan period.

6.0.4 Continued confidence in the site allocations in the South-west coming forward is indicated by the activities of the sites owners / site promoters as detailed in Annex 1 to enable the developments of their respective sites and this activity and evidence of past delivery justifies the continued allocation of these sites in the Local Development Plan in support of wider LDP and Council objectives.



# Annex 1: Assessment of Selected Allocated Sites

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Machynlleth	Mid Wales Storage Depot (P42 HA3)	0.4 ha	14	14
Site Nature	Sub-market Area	Indicative Viability 2016		
Brownfield	North	Small BF 10		
<b>Planning History:</b>				
<p>The site is regarded as a brownfield site, the site borders but is outside a conservation area. The site was granted full planning permission (M/2006/0616) for erection of 10 semi-detached houses in five blocks, decision date: 03/02/2009. The S106 agreement for this application was signed. M/2006/0381 was also granted full planning permission for the erection of 5 terrace houses, decision date: 03/02/2009. The S106 for this application was also signed. Within the S106 agreement for both applications a combined target of 5 affordable dwellings was agreed. The planning permission for both planning applications has lapsed and no further applications have been submitted. August 2016 - The site owner recognises there are no abnormal costs associated with the site and is open to any offers to develop the site.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Transport Assessment required			Minimal	Developer
Ecology Survey required			Minimal	Developer
Contaminated land investigation			Not significant - TBC	Developer
Flood Consequence Survey required – the boundary of the site abuts the flood zone.			Not significant - TBC	Developer
Sloping site with retaining walls			-	Developer

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Ystradgynlais	Land off Brecon Road (P58 HA1)	2.2ha	59	59
Site Nature	Sub-market Area	Indicative Viability 2016		
Greenfield	South West	Large GF 50		
<p><b>Planning History:</b></p> <p>B/05/0221: 15 dwellings granted PP after an Appeal. PCC had raised concerns about substandard access arrangements but Appeal dismissed the refusal, B/07/0347: Granted Outline PP for alteration of access arrangements, P/2009/0540: Granted full PP for the Variation of B/05/0221, to extend the time limit for the submission of reserved matters until 26th July 2012. P/2012/0801: Conditional Consent granted for variation of Condition from B/05/0221 to extend the time limit for a further three years (until 20th Sept 2015), (still for 15 dwellings). P/2015/0750: S73 Variation of 2012/0801 to extend time limit for a further 5 years until 30th Sept 2020 (still for 15 dwellings). (PP applies to only part of the Allocation, the size of which could accommodate a total of 56). Owner in discussions with developers.</p> <p>July 2016 - Owner has carried out evaluation for developing the site, has acquired two frontage properties to enable access to the allocated site and will apply for Planning Permission for entire site once LDP adopted. Funding available but cited current Affordable Housing requirement as a barrier to development.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Affordable Housing – Owner has stated that the Affordable Housing requirement is a barrier to development. Without it he would be able to develop/sell immediately. Once LDP adopted the AH% will almost certainly be reduced from current level so owner states site viability will improve considerably				Developer
Ecology Survey required at Application stage. Site adjacent to nature reserve			Minimal	Developer
Highways Access: Concerns alleviated by site Owner purchasing properties on the frontage, to enable better visibility splays.			N/A	Developer

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Ystradgynlais	Penrhos School (P58 HA3)	1.5ha	41	41
Site Nature	Sub-market Area	Indicative Viability 2016		
Brownfield	South West	Large BF 50		
<p><b>Planning History:</b></p> <p>School closed in August 2012. Site acquired subsequently. Owner also working to support allocated site to the rear (P58 HA11). Indicative site layout prepared, and has taken into consideration Highways comments about the need to make sure that the entrance to HA3 is of sufficient standard to accommodate the extra traffic arising from allocation A11. Old school building has been demolished and site cleared in preparation for redevelopment. August 2016 - No Planning Applications submitted.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Contaminated Land: survey required as close to a disused landfill			Not considered prohibitive - TBC	Developer
Ecology: Survey required at application stage			Not significant - TBC	Developer
Water Supply: Due to the amount and close proximity of sites, it will be necessary for developers to fund a hydraulic modelling assessment of the water supply network to establish any improvements required to serve the sites with an adequate water supply.			TBC	Developer
Waste Water: Ystradgynlais Wastewater Treatment Works has limited capacity and dependant on the pace and build rate of development there will ultimately be a time when increased capacity is required. Should developers wish to proceed in advance of any regulatory improvements then financial contributions from developers are required to fund the necessary improvements.			TBC	Developer
Highways Access: Access arrangements considered adequate for this site, however if P58 HA11 were to proceed then it would have to use HA3's highway access point which would therefore need to be upgraded to accommodate the extra traffic emanating from HA11. Developer aware of this and happy to proceed on that basis and if necessary prior to bringing HA11 forward.			N/A	Developer

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Ystradgynlais	Glanrhyd Farm (P58 HA5)	0.3ha	8	8
Site Nature	Sub-market Area	Indicative Viability 2016		
Greenfield (& partly Brownfield)	South West	Small GF 7 infill		
<p><b>Planning History:</b></p> <p>2009/0719 Outline PP granted on 23rd Sept 2009. This expired in 2014. Site has previously been in Flood Zone C2, however latest maps have removed it from this zone except for an area along its South Eastern boundary which has been removed from the Allocation.</p> <p>Waiting for LDP adoption before submitting any new development proposal.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Contaminated Land: survey required.			Not considered prohibitive - TBC	Developer
Ecology: Survey required at application stage.			Not significant - TBC	Developer
Water Supply: Due to the amount and close proximity of sites, it will be necessary for developers to fund a hydraulic modelling assessment of the water supply network to establish any improvements required to serve the sites with an adequate water supply.			TBC	Developer
Waste Water: The site is crossed by a sewer and protection measures in the form of easement widths or a diversion of pipe would be required, which may impact upon the density achievable on site. Ystradgynlais Wastewater Treatment Works has limited capacity and dependant on the pace and build rate of development there will ultimately be a time when increased capacity is required. Should developers wish to proceed in advance of any regulatory improvements then financial contributions from developers are required to fund the necessary improvements.			TBC	DCWW AMP / Developer if sooner

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Ystradgynlais	Penrhos Farm (P58 HA9)	3ha	81	76
Site Nature	Sub-market Area	Indicative Viability 2016		
Greenfield	South West	Larger GF 100		
<p><b>Planning History:</b></p> <p>B/01/0157 landscaping, footpaths new access and new buildings for mountain bike centre, B/02/0098 Refused permission, retrospectively, for displaying of roadside advertisement. B/02/0244 application to remove Condition 4 of B/01/0157 – Refused. B/04/0426 reserved Matters Application to amend B/01/0157 road exit detail. B/06/0291 Application to renew B/01/0157. No new applications since 2006.</p> <p>July 2016: Discussions with a number of developers are ongoing to bring site forward for housing – alternative finance models being considered to enable site to be developed. Owner has stated that 0.52ha of the site would be available for accommodating the access, landscaping and open space. Woodland part of the site to remain undeveloped.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Contaminated Land survey required.			Not considered prohibitive - TBC	Developer
Ecology Survey required at application stage.			TBC	Developer
Water Supply: Due to the amount and close proximity of sites, it will be necessary for developers to fund a hydraulic modelling assessment of the water supply network to establish any improvements required to serve the sites with an adequate water supply.			TBC	Developer
Waste Water: Ystradgynlais Wastewater Treatment Works has limited capacity and dependant on the pace and build rate of development there will ultimately be a time when increased capacity is required. Should developers wish to proceed in advance of any regulatory improvements then financial contributions from developers are required to fund the necessary improvements.			TBC	Developer
Highways Access. Comments on previous applications have stated requirement for significant improvements to be made to the highway to allow for a right turn filter lane.			Possibly Significant - TBC	Developer

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Ystradgynlais	Brynygroes (P58 HA10)	4.5ha	122	136
Site Nature	Sub-market Area	Indicative Viability 2016		
Greenfield	South West	Larger GF 100		
<p><b>Planning History:</b></p> <p>P/2012/0346 Application to demolish existing buildings to allow for 155 dwellings. Was refused on in June 2014. Grounds for refusal stated to be unacceptable landscape and visual impact and contrary to several UDP policies.</p> <p>P/2014/1133: Outline application to demolish existing buildings and build up to 138 new dwellings, was given Conditional Consent on 29th April 2016.</p> <p>Site specific viability assessment indicated site was viable with 23% affordable housing provision. Owner actively pursuing development, but water supply issue could impact upon phasing of delivery of site.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Contaminated Land survey required.			Not considered prohibitive - TBC	Developer
Ecology Survey required at application stage.			Not significant - TBC	Developer
Water Supply: Due to the location of the site, it will be necessary for developers to fund a hydraulic modelling assessment of the water supply network to establish any improvements required to serve the sites with an adequate water supply. DCWW state that servicing up to 50 units will be possible immediately, however any more than that and significant expense would be incurred in order to increase the capacity of the mains between the site and the town centre.			TBC	Developer
Waste Water: Ystradgynlais Wastewater Treatment Works has limited capacity and dependant on the pace and build rate of development there will ultimately be a time when increased capacity is required. Should developers wish to proceed in advance of any regulatory improvements then financial contributions from developers are required to fund the necessary improvements.			TBC	Developer

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Ystradgynlais	Penrhos School Extension (P58 HA11)	4.5ha	122	122
Site Nature	Sub-market Area	Indicative Viability 2016		
Greenfield	South West	Larger GF 100		
<b>Planning History:</b>				
Site being promoted along with adjacent allocation (P58 HA3), and has taken into consideration Highways comments about the need to make sure that the entrance to HA3 is also big enough to accommodate the extra traffic arising from HA11. No Planning Apps made by August 2016.				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Contaminated Land survey required.			Not considered prohibitive - TBC	Developer
Ecology Survey required at application stage.			Not significant - TBC	Developer
Water Supply: Due to the amount of proposed development and the close proximity of sites, it may be necessary for developers to fund a hydraulic modelling assessment of the water supply network to establish any improvements required to serve the sites with an adequate water supply. Developers would also need to be aware that a sewer crosses the site which would need to be protected via easement widths or a diversion of the pipe, which may impact upon the density achievable on the site.			TBC	Developer
Waste Water: Ystradgynlais Wastewater Treatment Works has limited capacity and dependant on the pace and build rate of development there will ultimately be a time when increased capacity is required. Should developers wish to proceed in advance of any regulatory improvements then financial contributions from developers are required to fund the necessary improvements.			TBC	Developer



Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Ystradgynlais	Cynlais Playing Fields (P58 HA12)	0.64ha	17	10
Site Nature	Sub-market Area	Indicative Viability 2016		
Greenfield	South West	Small GF 10 edge		
<p><b>Planning History:</b></p> <p>The developer of the site submitted a planning application (P/2016/0047) for Outline Permission for a residential development of 10 units, access road and associated works. The decision on the planning application is still to be determined. A further planning application (16/13248/FUL) has also been submitted to the Brecon Beacons National Park Authority, as part of access to the site lies within the National Park boundary.</p> <p>It is the intention of the applicant to develop the site within the plan period, and it is considered that there is a strong market for new dwellings locally, particularly in view of recent improvements in demand and the lack of available new housing sites in the area.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Highways work – Requires remodelling of lay-by exit to form satisfactory access to site.			TBC	Developer
Contaminated Land Assessment required			Minimal	Developer
Ecology Survey required			Minimal	Developer
Flood Consequence Assessment required			Minimal	Developer

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Presteigne	Former Kaye Foundry Site (P51 MUA1)	2ha	68	60
Site Nature	Sub-market Area	Indicative Viability 2016		
Brownfield /Mixed Use	Central Powys	Large BF 50		
<p><b>Planning History:</b></p> <p>Former Kaye Foundry is a large industrial site in the centre of the town, DEM/2012/0001 was approved to fully demolish all the buildings and clear the site. The buildings on site have been demolished and the site has been cleared ready for redevelopment. The site is allocated as a mixed use site, (0.4ha) of the site is for retail development. The Strategic Flood Consequences Assessment has identified 6% of the site is in flood zone C2, this area will only be suitable for open space/landscaping.</p> <p>Site being promoted and increased housing density improves site viability.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
6% of the site is in flood zone C2			-	-
Ecological survey required to inform enhancement			Minimal	Developer
Wastewater Treatment Works has limited capacity.			TBC	
Contamination Investigation required			£10-20k	Developer
Public right of way crosses site			Minimal	
The site is also crossed by a sewer and protection measures in the form of easement widths or a diversion of the pipe would be required, which may have an impact upon the density achievable on site.			TBC	

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Abercrave	Land to East of Maescyribarth (P01 HA1)	0.5ha	14	14
Site Nature	Sub-market Area	Indicative Viability 2016		
Greenfield	South West	Small GF 10 Infill		
<p><b>Planning History:</b></p> <p>No planning applications have been made by August 2016. The site is regarded as a greenfield site and located adjacent an existing settlement and the development boundary. The site is adjoined by residential development to the south and west and a graveyard to the east. The site is a logical extension of the new housing development and cul-de-sac Maes-Y-Cribarth.</p> <p>Site promoter has finance available and a history of delivery of adjacent site within the UDP with the expectation to continue development. Site is being actively marketed, although no application submitted to August 2016.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Highways work – agreeing access to whole of site			Minimal	Developer
Land Ownership: Two separate landowners working in partnership			-	Developer
Drainage improvements required			TBC	Developer
Ecology Survey required			Not significant - TBC	Developer
Wastewater Treatment Works has limited capacity. Improvements scheduled 2015-20.			TBC	Developer

Settlement	Site Name	Site Area	Indicative Units	Indicative phasing of units in LDP
Four Crosses	Land at Oldfield (P18 HA1)	3.4ha	92	32
Site Nature	Sub-market Area	Indicative Viability 2016		
Greenfield / Brownfield	North	Medium BF 25		
<b>Planning History:</b>				
<p>Part of the site is allocated for housing in the Unitary Development Plan (ref: M133 HA1). Owners have history of enabling housing development and UDP allocation M133 HA1 has been partly developed, but the area to the rear of the school remains undeveloped (and is greenfield land). It is the wish of the Community Council that this land is reserved to preserve scope for future community use/expansion. This part site is now amalgamated into LDP housing land allocation P18 HA1 so that the new housing scheme under the LDP can be designed to facilitate the future release of land to rear of the school for this purpose. The site is regarded as part greenfield/part brownfield because the farm has been granted a change of use for a caravan business (M1998/0651). May 2016 – owner seeking to develop site as soon as possible post 2020.</p>				
Potential Viability / Deliverability Issues			Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
Highways work: Traffic calming / resurfacing			TBC	Developer
Development Brief for site phasing within Plan period			TBC	Developer
Inclusion of Open Space element for Community Benefit			TBC	S106
Ecology & Heritage Surveys Required.			Minimal	Developer
Effectively due to the approved use for the caravan business any new use is now considered to be on a brownfield site but the costs of remediating the land are likely to be more akin to greenfield costs and are not considered to represent a risk to delivery of the site for housing in the LDP period.			Minimal	Developer
Site phased for full delivery beyond the Plan period.			-	10-15 years

**DRAFT**

**Powys Local Development Plan**

**Overview of the Housing Provision**

**Position Statement**

**September 2016**

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## **Executive Summary**

The Planning Inspector appointed to test the soundness of the Powys Local Development Plan has raised concerns the evidence supporting housing provision in the Powys Local Development Plan and that this may not have sufficient focus in accordance with the strategy of the Plan.

This Position Statement draws together the updated evidence presented in four papers published in September 2016 which reassess the dwelling requirement figure, the housing provision on committed sites with extant planning permissions, and the contribution of new housing allocations and non-allocated windfall sites across Powys. The paper considers this evidence against LDP and Council corporate strategies to promote longer term sustainable growth in the most appropriate locations.

To meet the dwelling requirement of 4,500 new houses, provision is made for 5,596 houses including an overprovision of a 24% contingency. Although units completed and under construction and existing commitments have been set and cannot be influenced, 84% of housing provision is directed towards the most sustainable settlements of Towns and Large Villages in accordance with the spatial strategy of the LDP. As in the adopted Unitary Development Plan, national and Plan policies will still enable some appropriate development in rural areas in support of affordable housing needs and to assist rural enterprises.

The alignment of land provision for new housing development against the LDP strategy and objectives is well-defined and focussed to enable growth in the most sustainable locations, but acknowledges policies will also support rural communities and thus ensure the wellbeing of “strong communities in the green heart of Wales”.

## **1. Introduction**

1.0.1 This Position Statement has been published to summarise, support and provide clarity with regards to the Powys housing provision and the focus of housing development in the Powys Local Development Plan (LDP). It responds to issues raised by the Planning Inspector in relation to the soundness of the Powys LDP and summarises new sources of information and updated evidence published since the submission of the Local Development Plan in January 2016.

1.0.2 This Position Statement should be read in conjunction with the following papers published in September 2016:

- Explanation of the Dwelling Requirement Figure Paper;
- Explanation of the Housing Commitments paper;
- Explanation of Housing Allocations Position Statement;
- Explanation and Review of the Windfall Allowance paper.

These papers in combination provide the evidence that sufficient land is available to meet the dwelling requirements identified within the previously published Population and Housing Addendum ([EB35] - January 2016).

1.0.3 New housing will be directed to the most sustainable settlements in Powys where the greatest range of facilities and services are available to the population and where appropriate development will strengthen those communities in accordance with wider Council objectives and the Strategy of the local Development Plan. However, some dwellings will be possible in rural areas when it can be demonstrated that there is a requirement for affordable housing or to meet the needs of agriculture or rural enterprises.

1.0.4 In making provision for housing land it is good practice for local authorities to allocate more land than the housing land requirement to allow for choice and flexibility. The amount of over provision is not prescribed in national planning guidance.



## **2. Housing Provision to Meet the Dwelling Requirement**

2.0.1 As identified within the [Explanation of the Dwelling Requirement Figure Paper \(September 2016 REF\)](#), the preferred population and household growth scenario would require land to meet a housing requirement of 4,500 dwellings or 300 units per annum.

2.0.2 The housing provision calculation has been updated to take into account new evidence of delivery since the previous papers were prepared and through a review of the four components of housing provision, these being:

- 1) Dwelling Completions
- 2) Land which already has planning permission (housing commitments – HC / HLB)
- 3) New large housing sites (housing allocations – HA)
- 4) Windfalls

2.0.3 Dwelling units are delivered on both large and small sites. Large sites in Powys are those identified as having five or more dwellings and are, or will be following adoption of the LDP, recorded individually in the Joint Housing Land Supply (JHLAS) study which is published annually. Small sites are developments of less than five dwellings including self-build, net gains from conversions of a single dwelling into two or more units and conversions of non-residential buildings such as shops and barns into residences. Small site completions are recorded in JHLAS but the Council undertakes its own monitoring to record small sites in greater detail and these contribute to housing provision as windfalls as these sites have not been individually allocated in previous adopted plans.

### **2.1 Dwelling Completions**

2.1.1 This is the number of dwelling units completed on large and small sites since the 2011 base date of the Plan as identified in the annual JHLAS report on the base date of the Plan. (JHLAS 2015 [EB05]).

### **2.2 Housing Commitments (HC / HLB)**

2.2.1 These are large sites which already have planning permission arising from housing allocations in previous adopted plans. Commitments are identified in the annual JHLAS report, which are agreed between the Council, the Welsh Government and house builders. Commitments which support the policies of the LDP are shown as HC sites in the Plan inset maps, Appendix 1 and Policy H1A of the proposed LDP Further Focussed Changes. Those sites which have a valid consent, but which are unlikely to be permitted once the LDP is adopted have been identified as Housing Landbank (HLB) sites as proposed in the LDP's Further Focussed Changes. Further information on these sources are contained in the annual JHLAS study reports.

2.2.2 Some of the dwelling units on housing commitment sites will be under construction as identified in JHLAS, whilst other units will not have been started. The housing provision calculation anticipates a non-delivery discount to account for a proportion of those committed dwelling units which will not be constructed within the Plan period. The calculation of this discount is described in the [Explanation of the Housing Commitments Paper September 2016 \(REF\)](#) and is applied to the total of committed dwelling units as 1 April 2015 which is the base date used for all housing provision

## **2.3 Housing Allocations (HA)**

2.3.1 These are the new Local Development Plan allocations arising from the Candidate Site process undertaken in 2011 and are sites which have the capacity for five dwelling units or greater and are shown as HA on the Plan inset maps, in Appendix 1 and in Policy H1A of the proposed LDP Further Focused Changes. Some of these sites may be recorded in JHLAS as they may be partially undeveloped sites carried forward from the previous adopted plan or sites which have gained consent subsequent to the base date of the Plan. Explanation of the distribution of housing allocations and determination of the anticipated dwelling units on these sites is in the [Explanation of Housing Allocations Position Statement \(September 2016 – Ref\)](#).

## **2.4 Windfall Sites**

2.4.1 “Windfall sites” are defined as sites that have been developed but were not allocated for housing at the time the application was submitted in any previous Powys adopted plan. They may be large sites of five dwellings or more or small sites, and can be distributed in settlements with defined development boundaries or small rural settlements and open countryside.

2.4.2 Windfalls include new build developments, conversions or redevelopment opportunities, which can make a significant contribution to the overall amount of housing provision. By their definition, they are impossible to provide a precise indication of the number and location of homes on windfall sites that are likely to be developed. Therefore the windfall projection in the housing provision total is a best estimate of their number that will be provided based upon previous completions. Further details of the location and nature of windfalls and windfall sites is provided in the [Explanation and Review of the Windfall Allowance paper \(September 2016 \(Ref\)\)](#).

## **2.5 Data sources**

2.5.1 The data sources and previously published information which inform the total housing provision figure for the LDP are summarised in Table 1.

**Table 1: Data Sources Informing Housing Provision**

<b>Source</b>	<b>Data Source</b>	<b>Examination Document Reference</b>
Population and Household Growth	Population & Housing Addendum (Jan 2016) <a href="#">Exp. Of the Dwelling Requirement Figure Paper (Sept 2016)</a>	EB35 REF
Dwelling Requirement Figure	Population & Housing Addendum (Jan 2016) <a href="#">Exp. Of the Dwelling Requirement Figure Paper (Sept 2016)</a>	EB35 REF
Housing Completions	Annual JHLAS study Report (2015)	EB05
Housing Commitments	Annual JHLAS study Report (2015) <a href="#">Explanation of the Housing Commitments Paper (Sept 2016)</a>	EB05 REF
Housing Allocations	Candidate Site Survey Status Report (2015) <a href="#">Exp. of Housing Allocations Position Statement (Sept 2016)</a> <a href="#">Viability Review Study (August 2016)</a>	LDP04 REF REF

	Viability Topic Paper (Sept 2016)	REF
Windfalls	PCC Housing Land Supply Annual Monitoring Exp. & Review of the Windfall Allowance Paper (Sept 2016)	REF REF

2.5.2 The combined contribution of these sources as calculated on the base date of the Plan of 1 April 2015 is summarised in Table 2.

**Table 2: The Combined contribution of Housing to the Powys Local Development Plan**

		Towns	Large Village	Small Village	Rural / Other	Totals
<b>A</b>	Total Completions 01/04/2011 – 31/03/2015 – Small and Large Sites	233	154	43	192	622
<b>B</b>	Housing Commitment Large Sites - Units Under Construction	119	37	5	1	162
<b>C</b>	Housing Commitment Large Sites – Units Not Started	564	327	103	23	1,017
<b>D</b>	Housing Commitment Large Sites – Units Not Started assessed against risk of non-delivery (row C minus non-delivery allowance)	338	196	62	14	610
<b>E</b>	New Housing Allocations	2,091	901	N/A	N/A	2,992
<b>F</b>	Projected units on Large Windfall Sites (11 years remaining)	145	123	19	40	327
<b>G</b>	Projected units on Small Windfall Sites (11 years remaining)	207	163	69	444	883
<b>H</b>	<b>Total Housing Provision (Rows A, B, D, E, F and G)</b>	<b>3,133</b>	<b>1,574</b>	<b>198</b>	<b>691</b>	<b>5,596</b>

**A large site is defined as five residential units or more**

A) Completions – dwellings built since the start of the Plan Period (1/4/11 to 31/03/15)

B) Commitments (residential units) under construction (as at 31/03/15). Note that Row B does not include under construction units on small sites as these are picked up in the windfall projection for small site completions in Row G.

C) Commitments (residential units) having valid planning permission but not started (as at 31/03/15). (Row C does not include small sites not started because their contribution is included within the projected windfall completions in Row G).

D) Row C minus a 40% global discount based on historic non-delivery within the UDP era.

E) New Allocations from housing site allocations (HA sites) in Towns and Large Villages. This excludes sites with planning permission (HC sites) i.e. commitments (as at 31/03/15).

*F and G) Windfall projections for 11 remaining years of the plan period, based on an assessment of completions on non-allocated UDP sites over the 9 year period 1/4/2006 – 31/03/15.*

2.5.3 The results from the updated housing provision analysis as presented in Table 2 have been incorporated into the Plan as proposed within the LDP's Further Focussed Changes.

## **2.6 Flexibility Allowance within the LDP**

2.6.1 In planning to deliver the dwelling requirement, the LDP includes a flexibility allowance for sites that may not be developed in the Plan period. An additional contingency has therefore been added. As shown in Table 2, the plan makes provision for **5,596 dwellings** in order to meet the dwelling requirement of **4,500 dwellings (300 p.a.)**. This is a contingency allowance of an additional 1096 dwellings or **24%** above the dwelling requirement figure.

2.6.2 The Focussed Changes to the Plan previously identified a housing provision figure of 6,129 (January 2016), an over provision of 36%. The Welsh Government, in response to the focussed changes consultation raised concerns regarding this level of over provision, which assumed in the Plan the delivery of all the housing commitments. As described in the [Explanation of the Housing Commitments Paper September 2016 \(REF\)](#), this assumption has been reassessed based on evidence of delivery during the UDP period and an appropriate discount for non-delivery calculated. This discount together with revised housing allocation density figures ([Explanation of Housing Allocations Position Statement; Viability Topic Paper – September 2016 – REFS](#)), in combination with a realistic consideration of the ability of the housing industry in Powys to deliver housing units, has resulted in the revised total housing provision figure (Table 2 – Line H) to meet the Dwelling Requirement Figure in the LDP.

2.6.3 The Powys housing market has no major volume housebuilder operating in the County and as a result housing delivery is largely reliant upon small and individual developers. As a result, in Powys housing sites tend to be small and allocations are owned by owners with many different interests, expectations etc., and it is considered expedient to over provide to ensure delivery of the dwelling requirement.

2.6.4 The appropriateness of the revised over provision presented in Para. 2.6.1 can be demonstrated by analysis of the annual JHLAS report published in August 2016. From JHLAS 2016, the delivery of housing during the lifetime of Powys Unitary Development Plan can be analysed against that Plan's dwelling requirement. The total housing requirement during the UDP Plan period was 6135 units of which 4323 have been delivered, or 70% of the total. This indicates that there was 30% over provision within that Plan. However, the LDP candidate site process means that there is greater confidence in the sites in the LDP being delivered by their promoters within the Plan period and therefore a 24% over provision is considered appropriate.

2.6.5 Monitoring of the delivery of housing and the over provision will be monitored following adoption of the Local Development Plan.

### 3. Focus of Housing Provision

3.0.1 The LDP Strategy directs development to the most sustainable locations, which were identified as the highest tier settlements in the settlement hierarchy of the Spatial Strategy [LDP01, EB30]. As shown in Table 2 above, all new housing provision, that of the 2,992 units on allocated sites in the Plan, is directed solely to the designated Towns and Large Villages and represents 54% of the total.

3.0.2 The Plan does recognise that dwelling units will continue to be built in areas of the County outside the development boundaries of the most sustainable settlements. Over 58% of projected total windfalls on small sites (513 units) will be located in rural areas of Powys in the lowest tier settlements of the sustainable settlement hierarchy. These developments in rural areas, also termed “*rural exception sites*” were recognised in the [Explanation and Review of the Windfall Allowance paper \(September 2016 \(Ref\)\)](#) and reflect the potential contribution of windfall sites in providing affordable housing for local needs. They are allowed in circumstances where open market housing would not be permitted in small villages, rural settlements and the open countryside. In the Windfall Allowance study it is assumed that the number of permissions granted for “rural exception sites” will be maintained over the Plan period through the implementation of the LDP Policies related to exception sites. It is also possible, however, that such applications, particularly those for affordable housing, will rise to reflect increases in house prices and improved evidence on local housing needs.

3.0.3 *Rural Enterprise / Agricultural Worker dwellings* are another type of development that are an exception to the normal constraint against housing in the countryside. Applications for rural enterprise / agricultural worker dwellings must meet stringent tests as defined in national policy (TAN6) including the need to ensure that there is an existing functional need for a dwelling on the rural enterprise (including farms) and that the business is financially secure in the long term. It is assumed that the number of rural enterprise dwellings will remain constant based on average completions of such dwellings as identified in the [Explanation and Review of the Windfall Allowance paper \(September 2016 \(Ref\)\)](#).

3.0.4 In terms of provision, the 24% over provision identified (Section 2.6) to deliver the dwelling requirement figure to the most sustainable locations in accordance with the LDP strategy can only really be influenced by the housing allocations in the LDP. Units completed, under construction and location of anticipated commitments (Table 2) are already set and cannot be altered through the LDP, whilst windfalls, including those in rural areas have been projected forward based on previous completions.

3.0.5 Therefore, those components which can be influenced by the Strategy of the LDP, i.e. the housing allocations, are entirely focussed into the most sustainable locations, with 100% of allocations directed to the highest two tiers of settlements in the hierarchy.

3.0.6 When assessing the overall housing provision of the LDP, including units completed and under construction, the existing commitments, projected windfalls on large and small sites, the distribution of new housing across the LDP settlement hierarchy is as shown in Table 3.

**Table 3: Distribution of Housing in the Local Development Plan by Settlement**

Settlement Type	Towns	Large Villages	Small Village	Rural / Other	Totals
% Distribution of Total Housing	56%	28%	4%	12%	100%

3.0.5 Notwithstanding the housing components already set, Table 3 demonstrates that 84% of all housing provision is directed to the designated Towns and Large Villages in the Local Development Plan in accordance with the Plan’s strategy of development in the most sustainable locations.

## **4. Alignment and Implications for LDP Strategy**

4.0.1 The location and planned distribution of housing land in the Powys LDP aligns with the Vision for Powys 2026, as set out in the LDP in that the County:

“will be a place of vibrant and resilient communities providing ***sustainable development and economic opportunities*** set in a healthy, safe environment, whilst celebrating, protecting, enhancing and sustainably managing its natural resources, native wildlife and habitats, heritage, outstanding landscapes and distinctive characteristics.

Powys’ ***towns and larger villages*** will be vibrant and accessible service centres. They will be the focus for ***integrating housing, economic and service development*** to meet their own needs and those of their surrounding communities.

Powys’ rural areas will be a working countryside of ***sustainable communities*** supported by a thriving and diverse rural economy of small businesses.”

(N.B: author’s italics)

4.0.2 The allocation of new housing land contributes to the development of stronger communities in accordance with other Council policies including ***One Powys*** [POW04] particularly important given Powys’ size and dispersed settlement pattern.

4.0.3 In accordance with the LDP Strategy, 84% of housing land is directed to the larger higher tier settlements in the County’s settlement hierarchy and has been informed by the principle of sustainable development in support of LDP Objective 2.

### **4.1 LDP Growth Strategy**

4.1.1 ***The LDP Growth Strategy*** recognises there is a need to make provision for population and household growth, and the provision for 5,596 dwelling units to meet the dwelling requirement figure of 4,500 across the County contributes to this sustainable growth.

### **4.2 LDP Spatial Strategy**

4.2.1 ***The LDP Spatial Strategy*** identifies a sustainable settlement hierarchy and the majority of housing, including all allocated housing land sites is within or directed to either the highest tier of the hierarchy (Towns – 56%) or the second tier sites (Large Villages – 28%), thus meeting Objectives 1 and 2 of the LDP to meet future need. Rural exception sites supported through LDP and national policies enhance community well-being and cohesiveness (Objective 16) and the Powys economy in alignment with Objective 6 of the LDP.

## 5. Conclusions

5.0.1 The Powys Local Development Plan identifies that to meet the dwelling requirement figure of 4,500 within the Plan period, the Plan needs to make provision for 5,596 dwellings which will be distributed across a combination of completed dwelling units, committed sites, allocated sites and windfall sites.

5.0.2 The Plan identifies the housing units which have been built or are anticipated to be delivered for the Plan period up to 2026 together with the number of dwelling units for which provision is made on new allocated sites. This total provision recognises the need for a 24% flexibility allowance as a contingency should not all anticipated deliverable sites come forward within the Plan period to enable the dwelling requirement figure to be met.

5.0.3 LDP and National policies will enable some rural exception sites which contribute to the rural economy and these have been included in the projection of windfall provision beyond the base date of the Plan.

5.0.4 There is a clear focus of housing provision directed to the largest settlements in the settlement hierarchy in accordance with the principles of sustainable development and the spatial strategy of the Local Development Plan.





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**Powys Local Development Plan  
Topic Paper  
Renewable & Low Carbon Energy**

**September 2016**



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**Appendix 1: Map of the Powys Renewable Energy Search Areas**

**Appendix 2: Resource summary table for renewable electricity in 2026,  
taken from Powys REA (2016)**

**Appendix 3: Resource summary table for renewable heat in 2026, taken  
from Powys REA (2016)**



## Executive Summary

The purpose of this topic paper is to aid the examination of the Powys Local Development Plan (LDP) on the topic of 'Renewable & Low Carbon Energy'. Guidance on LDPs: Preparing for Submission published by the Planning Inspectorate (2015 p.7) explains:

*'...topic papers can provide helpful context on key issues. They should elaborate on the LDP's supporting text to explain, as succinctly as possible, **how the evidence has informed the policy and why the proposed approach is sound.**'*

The Topic Paper therefore provides a context within which the LDP Policies relating to renewable and low carbon energy are set. This context is in the form of a summary of the key European, national (UK and Welsh) and local policies all of which have had some bearing on the development of the LDP policies.

It then presents the recommendations, along with their justification, for the detail of Policy RE1 as well as the other considerations that need to be borne in mind when considering the Policy itself.

Chief amongst the Recommendations are that Policy RE1 will be supporting the expectation that Strategic Scale proposals are to be confined to the Strategic Search Areas of which there are two wholly within the County. In addition it will also support an expectation that wind proposals between 5 and 25MW and solar proposals 0.5MW and upwards will be confined to Local Search Areas.

Secondly it presents the renewable energy contributions that the Policy will be supporting and presents the calculations, by way of a justification, that were used to determine those contributions.

The final recommendation is to again support the expectation that local policy on renewable energy to meet these LDP contributions is set in a way that does not duplicate or overlap National Policy.





## Introduction

The purpose of this topic paper is to aid the examination of the Powys Local Development Plan (LDP) on the topic of 'Renewable & Low Carbon Energy'. It provides an overview of the current European, national and local renewable and low & zero carbon energy policy landscape within which the LDP policies on RE and Low and Zero Carbon (LZC) Technologies sit. It also importantly provides the context and the evidence behind the LDP policy itself.

Throughout this topic paper, please note the following definitions and acronyms:

e - electricity

t – thermal or heat

h - hours

Installed capacity (size of generator)	Capacity factor (efficiency)	Output (hours) (24hrsx365days = 8760)
1kW e/t	100%	8760 kWh or 8.7 MWh
1MW e/t	100%	8760 MWh or 8.7 GWh
1GW e/t	100%	8760GWh

## The Policy Context – EU, National, and Regional

### EU and UK Climate Change Commitment (2008)

In 2008, the European Union (EU) agreed to reduce CO<sub>2</sub> emissions by 20% of 1990 levels by 2020. In doing so the EU also committed itself to reducing predicted energy consumption by 20% and increasing the use of renewable fuels by 20% by the same time.

The UK in response agreed to achieve 15% of all energy needs through renewable sources by 2020. This means that by that time at least 30% of the UK's electricity, 12% of our heat and 10% of our transport energy would be derived from renewable fuels.

### UK Climate Change Act (2008)

In the same year this Act became the first with legally binding targets that UK governments have to meet. It established five-yearly carbon budgets to ensure that these targets were met. They included a 34% reduction in greenhouse gas emissions by 2020 and at least an 80% reduction in greenhouse house gas emissions by 2050.

**The Low Carbon Transition Plan and Renewable Energy Strategy (2009)** In 2009 these two documents sought to lay out how the targets will be met. The Transition Plan outlines how the UK will meet the 34% reduction in emissions by 2020. The Strategy commits the UK to meeting the EU's Renewable Energy Directive (2009) as well as a legally binding target of 15% of energy from

renewable sources by 2020 through the increased use of renewable electricity, heat and transport.

### **UK Renewable Energy Road Map (2011)**

This document outlines a plan to accelerate the use of renewable energy and a commitment to drive down the costs of that energy through the use of financial support mechanisms. Importantly all four of the UK administrations, including Wales, signed up to it in July 2011. It also includes an annual report on progress which has revealed that the UK is on course to meet the target of sourcing 15% of all energy from renewable sources by 2017.

### **Renewables Obligation (RO)**

This is the main financial device that supports large scale UK renewable energy generation. The RO places an obligation upon suppliers of electricity to secure a proportion of their electricity from renewable sources. To prove this they are required to buy RO Certificates from the providers of the renewable energy and present them to Ofgem, the independent regulatory authority for the Gas and Electricity Markets in the UK. RO Certificates are issued to renewable energy generators according to the type and cost of technology they employ to generate the electricity. They can be issued to generators using wind energy, hydroelectric schemes, photovoltaics, tidal and wave energy, geothermal and a wide variety of biomass schemes.

### **The Planning and Energy Act (2008)**

The Act complements Planning Policy Wales (PPW see below) and enables LDPs to set reasonable contributions for the generation of energy from local renewable resources and low carbon energy and for energy efficiency. The Act is complemented by the policies contained in Planning Policy Wales (PPW) that cover such issues and provides a legal basis for the implementation of LDP policies against the national framework.

### **Climate Change Strategy for Wales (2010)**

This strategy stresses the need for the wider public sector in Wales to lead by example in considering climate change in all decision-making; delivering increased energy efficiency, and importantly making sure that land use planning promotes and delivers sustainable development and increasing resilience by moving Wales towards a low carbon economy. It includes targets to achieve an annual 3% emission reduction. It also identified a number of key areas which were important to achieving these targets, including maximising energy generation, reducing energy consumption, improving energy efficiency, buildings, and innovation & skills.

### **Energy Wales: A Low Carbon Transmission (2012)**

This document details the importance of making a transition to a low carbon economy for Wales. To achieve this it outlines three key objectives: providing leadership on energy in Wales (including improving the planning and consenting regime to create a 21<sup>st</sup> Century energy infrastructure), maximising the benefit that

energy can deliver (including for communities), and the need to act now for the long term future.

**The Wales Spatial Plan Update: People, Places, Futures (2008)**

This document places emphasis on the importance of reducing negative environmental impacts, whilst identifying the significant opportunities that exist within Wales for both wind and tidal sources of energy. In recognising this opportunity it also identified where this generation should occur which in turn informed the Technical Advice Note 8 (see below)

**Planning Policy Wales (PPW) Edition 8 (2016)**

PPW commits the planning system to optimising renewable and low carbon energy generation, including combined heat and power schemes. It places a responsibility for local planning authorities to be generally supportive of renewable energy projects providing that environmental impacts are minimised or avoided and protected areas are not compromised.

**Technical Advice Note (TAN) 8: Renewable Energy (2005)**

This created a new planning context for wind energy generation in Wales and saw the creation of seven Strategic Search Areas (SSAs) across Wales where large scale wind farms of over 25Mw in capacity could be accommodated.

It also stresses the need to make sure that all forms of renewable energy and energy efficiency are supported by local planning authorities. However it also recognises that, in doing the above, inappropriate development that would create detrimental impacts upon designated and protected sites that are subject to statutory obligations, the historic environment and local communities should be either avoided or mitigated against.

**Ministerial Letter (2011)**

John Griffiths AM (Minister for Environment & Sustainable Development) wrote to all LPAs to state the maximum capacities of Welsh renewable energy schemes to be:

1700MW from onshore wind schemes within the SSAs, and  
300MW from schemes that are under 25MW, on brownfield, community and locally based schemes.

The letter also spelt out the expected maximum capacities for the SSAs. Two of them (B: 430MW & C:98MW) are wholly within the County of Powys whilst a further one (SSA D:212MW) straddles the border with Ceredigion.

SSA	Maximum Capacity
B: Carno North	430MW
C: Newtown South	98MW
D: Nant-Y-Moch (part of)	212MW (part of)

### **Technical Advice Note (TAN) 12: Design (2014)**

TAN 12 provides advice relating to the need to consider good design at an early stage of a planning application which should always incorporate consideration of how any development can optimise its energy conservation and efficiency.

### **WG Practice Guidance:**

**Planning for Renewable and Low Carbon Energy – a Toolkit for Planners (2015); &**

**Planning Implications of Renewable and Low Carbon Energy (2011).**

The WG is committed to making sure that Wales meets the challenge of climate change and these two documents are aimed at enabling LPA's to play their part. The 'Toolkit' describes how LDPs can incorporate and be underpinned by 'robust, spatially based policies'. It enables a match between the desired policy objective and the most suitable evidence base required to support that objective.

The 'Planning Implications' document 'is a tool to support LPA's in dealing with applications for renewable and low carbon developments.' Together, these documents provide advice on how LPA's can carry out their duty to 'facilitate' all forms of renewable energy, energy efficiency and conservation measures.

Both the documents cover a wide range of renewable energy technologies, with the 2015 version of the Toolkit including a section on the assessment of solar PV potential.

Importantly the guidance also clarifies the issue of community involvement and benefits. Community benefit is defined as a "...'goodwill' contribution voluntarily donated by a developer for the benefit of communities affected by development where this will have a long term impact on the environment." Whilst these benefits would normally be via voluntary contributions to community funds or trusts, there is also scope for other, particularly non-financial, benefits that can be secured via the planning process through such mechanisms as Section 106 or the Community Infrastructure Levy.

### **Ministerial Letter, December 2015**

Following on from the publication of the revised Renewable Energy Toolkit (see above), the Minister responsible for Renewable Energy wrote to LPA's requesting that they consider the need for local policies (including spatial representations) in support of local authority scale (Between 5MW and 25MW for onshore wind and between 5MW and 50MW for all other technologies) renewable energy applications. The letter went on to explain the expectation to include within the Powys Renewable Energy Assessment an assessment of the potential for solar developments in the county.

### **Wind Farm Design Guidance: Designing Wind Farms in Wales (2012)**

The document is primarily concerned with Nationally Significant Infrastructure Projects (NSIPs), as well as Planning Appeals and Called-In Planning Applications projects (both >50MW). However the guidance also outlines the

design issues that are considered in a wind farm development planning application.

### **Building Regulations and Zero Carbon**

**3.1.45** Changes to the Building Regulations in 2013 and 2016 brought in challenging dwelling [CO<sub>2</sub>] emissions rate targets for residential development and for commercial development by 2019. By 2016, new homes will need to achieve a 70% reduction in CO<sub>2</sub> emissions on or near site from energy efficiency and the use of Low and Zero Carbon [LZC] energy options. For large sites, district heating [DH] from a low carbon source is likely to be one of the most cost-effective ways of achieving this.

**3.1.46** Developers will then have to deal with their residual carbon emissions through the use of Allowable Solutions [AS]. One AS proposed would allow credit for carbon emissions where heat is exported from the site to nearby existing buildings via a District Heat Network. The power to make Building Regulations for buildings in Wales was transferred to the Welsh Ministers on 31st December, 2011.

### **Wales Planning Act 2015**

The act aimed to address 5 main objectives:

1. A modernised framework for the delivery of planning services, which includes the ability to make certain planning applications direct to the Welsh Ministers. This will include a new category of application: Developments of National Significance (DNS)(similar to the Nationally Significant Infrastructure Projects). The criteria for DNS are referred to below.
2. Strengthening the Plan-led approach via the introduction of a National Development Framework for land use (to replace the Wales Spatial Plan) and Strategic Development Plans.
3. Improved resilience via powers to enable LPA's to work more closely together or even merge.
4. Improvements to the Development Management process including the introduction of a statutory pre-application procedure for certain applications.
5. Changes to the enforcement and appeals systems.

### **The Developments of National Significance (DNS) (Specified Criteria and Prescribed Secondary Consents) (Amendment) (Wales) Regulations 2016**

This provides the criteria for DNS mentioned above, and amends them to remove confusion arising from recent changes in English regulations (see below). The criteria specifies that in Wales all renewable energy applications between 10MW and 50MW are considered to be DNS which will therefore be determined by the Assembly Minister.

However the Onshore Wind Generating Stations (Exemption) (England and Wales) Order 2016 and the Infrastructure Planning (Onshore Wind Generating

Stations) Order 2016 came into force in March 2016. This specifies that all applications for onshore wind generation up to the size of 350MW should be determined locally by LPA.

The criteria for DNS was therefore amended to ensure that all wind turbine applications with a generating capacity of more than 50MW will be considered to be DNS and therefore determined by the Minister.

All renewable energy applications below 10MW will continue to be determined locally.

### **Well-being of Future Generations Act 2015**

The Well-being of Future Generations (Wales) Act aims to improve the social, economic, environmental and cultural well-being of Wales by making the public bodies listed in the Act think more about the long-term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach.

The Act puts in place seven Well-being Goals:

- A globally responsible Wales
- A prosperous Wales
- A resilient Wales
- A healthier Wales
- A more equal Wales
- A Wales of cohesive communities
- A Wales of vibrant culture and thriving Welsh language

The Act places a well-being duty that public bodies in Wales will be expected, by law, to carry out. The well-being duty states: Each public body must carry out sustainable development. The action a public body takes in carrying out sustainable development must include: a. setting and publishing “well-being objectives” that are designed to maximise its contribution to achieving each of the well-being goals, and b. taking all reasonable steps (in exercising its functions) to meet those objectives.

## **The Local Policy Context**

### **The Unitary Development Plan (2010)**

The key policies within the UDP that relates to Renewable Energy and Energy Efficiency are found within the Strategic Part One section. ‘UDP SP12 Energy Conservation and Generation’ and Part Two (Policies E1 to E7).

SP12 is concerned with supporting both issues:

A. ALL DEVELOPMENTS SHALL DEMONSTRATE THAT ENERGY CONSERVATION AND EFFICIENCY MEASURES HAVE BEEN CONSIDERED AND, WHERE PRACTICABLE, INCORPORATED.

B. PROPOSALS FOR ENERGY GENERATION FROM RENEWABLE SOURCES WILL BE APPROVED PROVIDING THAT THEY MEET THE LANDSCAPE, ENVIRONMENTAL, AMENITY AND OTHER REQUIREMENTS SET OUT IN THIS PLAN.

Both parts A & B take a positive position towards encouraging energy efficiency and all sources of renewable generation and places a presumption in favour of approval for generation schemes of energy providing they meet the requirements concerning Landscape, Environment and Amenity (eg ENV1 – ENV19), as well as other considerations wherever necessary, that are detailed elsewhere in the plan.

In addition to SP12 support for energy conservation measures is detailed in Designing Energy Efficient Development (DEED) IDCG (2008) which accompanied the UDP.

In Part Two of the UDP Section 12 deals with energy and contains policies E1 to E7. Policies E1 and E2 anticipate a potential increase in the use of Thermal Power and from combustion sources. E1 deals with larger scale units (over 5MW) burning either fossil or renewable fuels (probably wood). Policy E2 focusses on smaller scale (below 5MW) thermal combustion sources of energy, such as that found in Combined Heat and Power (CHP) schemes as well as landfill gas, anaerobic digestion and pyrolysis of waste etc.

Policies E3, E4 and E5 are concerned with Windpower and details the criteria that will be considered before approval would be granted, the removal of decommissioned wind turbines and the planning obligations related to Off-site works associated with wind turbines.

Policies E6 and E7 relate to Hydro and Solar sources of energy production respectively and again detail the criteria against which applications would be assessed before approval was given.

Finally the issue of Energy transmission is dealt with at the end of this section and within UDP Policy DC12. This includes power lines, heat mains and hydro related pipework such as penstocks etc.

### **Powys County Council Renewable Energy Assessment (2012) and Update (2016)**

In 2012 the Council commissioned a 'Renewable Energy Assessment' (REA) to inform the LDP and identify the potential for renewable energy in the county. This in turn then informed the selection of the policy objectives which were carried through to the LDP. See 'Key Issues' section below for more information.

The REA followed the advice that was initially set out in the 'Planning for Renewable and Low Carbon Energy - a Toolkit for Planners'. It identified the potential for energy generation from wind, hydro, waste, biomass and Building Integrated Renewables (BIR). It also included an analysis of opportunities for Combined Heat and Power (CHP) within the county in the form of an Energy Opportunity Assessment.

In summary the 2012 REA established the existing energy capacity (in 2012), the predicted energy consumption (by 2026), and the potential capacity (in 2026). How this information has informed the development of the LDP Renewable Energy Policy is treated below (see Key Issues section).

Since the update of the Welsh Government's 'Toolkit for Planners' in 2015 the 2012 REA has been updated. The 2016 update reviewed the original figures and also included the spatial identification of Local Search Areas for Wind Schemes between 0 and 25MW capacity, and all Solar Photovoltaics over 0.5MW capacity.

The table below summarises the main findings of the REA Update 2016:

**Table 1: Summary of the 2016 REA Update**

		Electricity		Thermal	Total
		Small Scale	Large Scale		
A	By 2012	1.8MW	212.3MW	1.8MW*	A
B	2012 Combined	214.1MW		1.8MW*	215.9MW*
C	By 2016 (Existing)	10.1MW	326.6MW	74.5MW	C
D	By 2016 Combined (Existing)	336.7MW		74.5MW	411.2MW
E	2012 to 2016 (C minus A)	8.3MW	114.3MW	72.7MW	E
F	2012 to 2016 Combined (D minus B)	122.6MW		72.7MW	195.3MW
G	Predicted Consumption by 2026	606GWh**		1,463GWh**	
H	Maximum Potential Capacity	2,441MW		247MW	2,688MW
I	Additional Contribution between 2016 and 2026	599MW		29.5MW	628.5MW
J	Existing and Additional Contribution, (for Plan Period 2011 to 2026) (F + I)	721MW		102.2MW	823.8MW



K	Total by end of Plan Period (B+F+I)	936MW	104MW	1040MW
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\* This figure likely to be an under-representation

\*\* Note the different unit of measurement

### **The Powys Conjoined Windfarm Public Inquiry (2013 to 2015)**

As a result of the Council considering and objecting to 6 separate planning applications (5 for large scale windfarms associated within or adjoining the SSA's, plus a 6th application for improvements to transmission infrastructure) public inquiries were triggered. DECC decided that the best way to consider all six schemes was to hold a Conjoined Public Inquiry (CPI).

#### Powys' Initial Position

Powys County Council initially opposed the 6 applications and for the following primary reasons: Landscape and visual impacts (Llanbadarn Ffynydd, Llaithddu, Llandinam (Repowering), Carnedd Wen), failure to adequately mitigate against the harm, particularly in respect of Highways (Llanbrynmair), and poor route selection (Llandinam to Welshpool Overhead Line). Whilst the Council's initial position at this Inquiry was to oppose the proposals this situation was later nuanced during the course of the CPI and the further evolution of the proposals. For a full account of the Council's position and the considerations behind it please refer to Annex 9 (page 854 to 870) of the Inspectors Report which can be found at:

<https://itportal.decc.gov.uk/EIP/pages/projects/InspectorsReportEnglish.pdf> .

The Council's position at the Inquiry will not prejudice any future applications which will be dealt with on their merits according to the criteria laid out in adopted Policy.

#### The Inquiry and its Outcomes

The Inquiry opened in June 2013 and concluded in May 2014 with the Inspector submitting their Report to the Secretary of State in December 2014. The six schemes considered were:

**Table 2: Summary of CPI Wind Farm Proposals with Provisional Outcomes**

<b>Scheme</b>	<b>SSA</b>	<b>Approximate Capacity (MW)</b>	<b>No.s of Turbines</b>	<b>Outcome of Inquiry (as at March 2016)</b>
Llanbadarn Fynydd Wind Farm	C	59.5	17	Refused
Llanbrynmair Wind Farm	B	90	30	Refused but decision since quashed
Fferm Y Wynt Llaithddu Wind Farm	C	62.1	27	Refused

Llandinam (Repower) Wind Farm	C	102	34	Consented
Carnedd Wen Wind Farm	B	130 - 150	50	Refused but decision since quashed
Llandinam to Welshpool 132kV Overhead Line	N/A	N/A	N/A	Refused

#### Llanbadarn Fynydd Wind Farm - Refused

The Inspector recommended refusal and the Secretary of State accepted the Inspector's view that the scale of the visual effect impacts, the impacts on the residential amenity and the detraction from the historic character of the landscape in which the project would sit mean that granting consent would conflict the relevant provisions of Energy National Policy Statements EN-1 and EN-3. The Inspector also felt, and the Secretary of State agreed, that the proposal would not be consistent with Planning Policy Wales (Edition 7), TAN 8 or Powys County Council's UDP.

#### Llanbrynmair Wind Farm – Refused (but Decision since quashed)

The Inspector recommended that, subject to relevant conditions being applied, planning permission should, in part, be granted. However the Secretary of State did not agree with the Inspector's recommendation and decided to refuse consent on the following grounds:

The Secretary of State disagreed with the Inspector's conclusion that the adverse visual and landscape effects would be outweighed by the benefits of the development, particularly in respect of a number of nearby residential properties and the views from the south eastern section of the Snowdonia National Park. The Secretary of State was also not persuaded that adequate mitigation measures existed. As far as transport was concerned, the Inspector also recommended consent on the understanding that shared access be made available via the Carnedd Wen proposal. However as the Secretary of State is also refusing this application (see below) then the Llanbrynmair proposal should also be refused.

Since this announcement was made however the decision has since been quashed (see below).

#### Fferm Y Wynt Llaithddu Wind Farm – Refused

The Secretary of State noted the Inspector's view that all the impacts on hydrology, hydrogeology, biodiversity, cultural heritage and the transport network would be acceptable, subject to the imposition of relevant conditions. The Secretary of State also agreed with the Inspector's reasoning and conclusions on the cumulative impacts of all the different applications and potential scenarios of consent. However the Inspector's report recommended refusal of this application and the Secretary of State accepted the Inspector's view that the Southern group

of turbines (involving 15 turbines with a hub height of 64M) in this application would have a harmful impact on landscape features and visual amenity, and as such was in conflict with National Policy Statements EN-1 and EN-3 which set out requirements to minimise or mitigate harm on the landscape and visual amenity.

#### Llandinam (Repower) Wind Farm - Consented

This application sought permission to decommission the existing wind farm at Penrhyddlan & Llidiartywaun, nr Llandinam and construct and operate a new wind farm in its place. This new wind farm would consist of 34 turbines (down from 42) that would generate a maximum of 102MW. Whilst it is located outside the approximate boundaries of SSA C both the Inspector and the Secretary of State agreed that it should be treated as being within the SSA on account of its proximity to it.

The Inspector recommended that Section 36 consent for planning permission be granted and the Secretary of State accepted the full content of the Inspector's Report including its recommendation and the reasons for it. These reasons included an improvement in the visual impact of the existing Wind Farm and other impacts that could be mitigated against.

#### Carnedd Wen Wind Farm – Refused (but Decision since quashed)

This application related to a Wind Farm of 50 turbines with a generating capacity of between 130 and 150MW. The Inspector recommended that consent be given, in part, subject to conditions. However the Secretary of State disagreed with this recommendation and hence refused consent.

In spite of the benefits that the Secretary of State recognised, the reasons for refusal included the likely harm to the landscape and visual qualities of the Nant yr Eira Valley and the substantial visual impact affecting a number of residential properties in the Valley as well as upon views from the south eastern edge of the Snowdonia National Park, and that these impacts outweighed any potential benefits the development might bring.

Since this announcement was made however the decision has since been quashed (see below).

#### Llandinam 132kV Electricity Line – Refused

This application related to the installation of 35Km of new Overhead Line to take power generated by the repowered Llandinam Wind Farm (see above) to the Welshpool Substation.

The Inspector recommended that if the Llandinam Repowering proposal was to be granted consent then a section 37 consent and deemed planning permission for the overhead line should be granted. However if consents were granted that would not take the installed capacity for SSA C beyond 160MW the Inspector recommended that further Strategic Environmental Impacts should be sought in

order to decide whether consent should be conditional upon the line being upgraded to a higher capacity.

The Secretary of State however did not agree with the Inspector's recommendations partly because they had not been convinced that the route chosen was the only or best way to meet the need identified as the Inspector had considered other routes in the Report. The Secretary of State also agreed with the Inspector that there was a clear conflict between the proposed development and existing UK and Welsh Government, and local UDP planning policy. The Secretary of State also accepts that the conditions proposed by the Inspector would mitigate many of the potential impacts if it were consented. However where visual and landscape impacts, and the potential harm to Scheduled Ancient Monuments were concerned the Secretary of State took a different view to that of the Inspector and refused to consent the application.

#### Position as at September 2016

Following an appeal from the two applicants the High Court has ruled that the Secretary of State's decision to refuse consent for the Llanbrynmair and Carnedd Wen applications should be quashed. This means that the Secretary of State will need to look again at the decision to go against the Inspector's recommendations for these two applications. Whilst the re-determination process has commenced, by September 2016 no decision has, as yet, been reached.

## **The Key Issues**

Within the LDP (Section 2.4) are listed a number of county-wide Key Issues that relate to renewable energy and low carbon development. Key Issue 4 related to the need to support moves towards cheaper and more resilient and sustainable forms of energy. Key Issue 11 touches on the importance of the county's resource for renewable energy generation. Key Issue 13 stresses the need to protect the county's important landscapes from visual impact. Key Issue 28 stresses the importance of energy efficiency for tackling fuel-poverty and Key Issue 43 & 44 highlight the need to reduce the energy requirements for development and the importance of supporting the utilisation of the county's renewable energy resource wherever the cumulative effects are acceptable. Both Key Issue 11 and 44 are underlined by the findings of the Powys Renewable Energy Assessment (2012) (see above).

As a result, the key LDP (2015) objectives for renewable and low carbon energy are:

*LDP Objective 4 – Climate Change and Flooding: 'to support the transition to a low carbon...Powys...'*

*LDP Objective 5 – Energy and Water: ‘to support the conservation of energy and water and to generate energy from appropriately located renewable resources where acceptable...[in order to]... deliver the county’s contribution to the national targets.*

*LDP Objective 6 – Vibrant economy: ‘to support a diverse, robust and vibrant economy for Powys...’*

*LDP Objective 10 – Important Assets: ‘to support the operation and development of regionally and nationally important assets.’*

*LDP Objective 11 – Natural Heritage: ‘to conserve and protect Powys’ land, air and water resources...’*

*LDP Objective 13 – The Landscape and the Historic Environment: ... to protect, preserve and/ or enhance the distinctive landscapes of Powys and adjoining areas...’ And ‘... the distinctive historic environment, heritage and cultural assets of Powys.. [where they are] ..not statutorily protected... and ... ensure that development respects local distinctiveness.*

*LDP Objective 16 – Community well-being: ‘to promote development that supports community wellbeing and cohesion...’*

## **Review of the UDP Policies**

Para 5.2.2.2 of the Local Development Plan Manual (2016) states that “Existing planning policies should also be reviewed...” The Planning Policy that is currently in force in Powys is the UDP which includes policies relating to renewable energy and energy efficiency (see Local Policy context above).

A review of these policies quickly reveals that the policy landscape, language and aspirations surrounding the subject have changed considerably since the UDP was adopted. Policy SP12 includes ‘energy efficiency’ which, as a phrase has largely been superseded by more ambitious expectations and terminology that is reflected in the policy landscape. Terms such as low and zero carbon (LZC) relate to energy efficiency as well as other concepts such as passive building design, etc.

Additionally the Policies E1 to E7 are also in need of updating to reflect this continually developing policy situation and realities of the renewable energy sector as a whole. For instance the anticipated increase in the use of thermal power has not, so far, materialised. Whereas interest in wind has continued to dominate the proposals submitted over the last few years. It may also be the case that interest in Solar PV may well increase over the lifetime of the LDP, as experience elsewhere in the UK recently demonstrates.

For these reasons the UDP policies all need revising to ensure that the policies appearing in the LDP reflect the expectations of this more nuanced policy landscape and the current capabilities of the sector.

Allied to this consideration is the fact that in any technological arena new developments will always continue to increase and improve capabilities and performance, and may even introduce hitherto unknown technologies during the lifetime of the Plan.

Consequently, in replacing the UDP policies, it is important to make sure that the new LDP policies are not only up to date but continue to be positively worded and supportive of the need for renewable and low carbon solutions, but also, as far as can be achieved, versatile enough to be future-proof and 'fit-for-purpose' in the face of new technological developments that may appear as the efforts to tackle the causes of climate change continue to gather pace.

## **Recommendations**

This topic paper presents three recommendations in respect of the LDP Policy on renewable and low carbon energy:

- A. To make use of Local Search Areas (LSA) for the siting of wind energy generation schemes up to 25MW and solar electricity generation over 0.5MW and the Strategic Search Areas (SSA) in Technical Advice Note 8: Renewable Energy (TAN8) for the siting of all onshore wind schemes over 25MW.
- B. To identify the contribution that the County can make to meeting the national targets for the generation of renewable energy and heat as stated in the Low Carbon Transition Plan and Renewable Energy Strategy of 2009.
- C. To set local policy on renewable energy to deliver the County's contribution without duplicating or overlapping with National Policy.

**A. To make use of Local Search Areas (LSA) for the siting of wind energy generation schemes up to 25MW and solar electricity generation over 0.5MW and the Strategic Search Areas (SSA) in Technical Advice Note 8: Renewable Energy (TAN8) for the siting of all onshore wind schemes over 25MW.**

The Renewable Energy Toolkit (2015) emphasises the need for LPAs to make sure their LDPs include spatially based policies. It also included a new section

explaining how LPAs can assess the potential for solar farm developments in their areas. The Ministerial Letter of December 2015 underlined both these points by drawing the attention of LPAs to the need to allocate local areas of search for local-authority scale renewable energy schemes, as well as the need for this work to include solar development potential.

As a consequence the updating of the REA (2016) also included the identification of Local Search Areas (LSA) for both wind and solar electricity generation schemes.

The LSAs for wind are intended to accommodate any wind energy generation scheme up to 25MW in size. Schemes that are over that capacity are expected to be accommodated within the Strategic Search Areas (see below).

The LSAs for Solar are intended to accommodate any solar photovoltaic generation scheme over the threshold of 0.5MW.

The methodology for identifying both kinds of LSA is detailed in the REA (2016). Neither the wind or solar LSAs provide any guarantee that applications for schemes will be approved within them, nor do they preclude applications from elsewhere in the county from being considered. Neither kind of LSA are safeguarded (see discussion below). As such they represent the optimum areas of the county where it is thought such schemes would be most viable (in terms of the stated environmental constraints and availability of resource, etc.)

The LSAs are included in detail within the REA (2016) as well as, in less detail, on the LDP's Proposals Maps and in the Appendices of this Topic Paper. For reference they are labelled as follows:

Wind LSA	Solar LSA
W1 East of Lake Vyrnwy	S1 Carno
W2 South West of SSA C	S2 South of Llanidloes
W3 Radnor Forest West	S3 Llanbister
W4 West of Hundred House	S4 Nantmel
W5 North of Beulah	S5 East of Builth
W6 East of Aberedw	S6 North of Brecon
W7 South of Builth Wells	S7 Ystradgynlais

Welsh Government's (WG) Planning Policy Wales (PPW) (2016 p181) explains that the most appropriate scale at which to identify areas for large scale onshore wind energy development is at an all-Wales level through the identification of SSA.

To support this TAN8 explains:

*'The SSAs for onshore wind as identified on Maps 1-8 [of the TAN]...must be referred to in local development plans and, if refined, incorporated into local development plan proposals maps...'*

With regard to refinement of the SSA in Powys, in 2006 and 2008 PCC commissioned two refinement exercises regarding the TAN8 SSA B & C. Neither resulted in formal refinement of the SSA, although each resulted in consultation being undertaken on a draft Interim Development Control Guidance Note (IDCG). The 2008 IDCG was agreed for development control use concurrent with the consultation (PCC, 2008, p6). The results of the consultation were never formally considered by the County Council and the IDCG was not confirmed as Supplementary Planning Guidance (SPG) on adoption of the Unitary Development Plan in 2010 (PCC, 2010, pp5-6). Furthermore, given the more detailed assessments before the Mid Wales conjoined wind farms public inquiry, Counsel for PCC (2014, p40) concluded that the work (i.e. the refinement exercises) must be 'approached with caution' to the extent that 'it should be given very little weight'.

Subsequently the Mid Wales conjoined wind farms public inquiry has provided a further opportunity to consider a comprehensive assessment of the combined landscape and visual effects of wind turbine proposals and also of the strategic and detailed cumulative assessment of large scale indirect impacts on the setting and significance of heritage assets in and around the SSA.

WG TAN8 (2005 p7) explains that local planning authorities may wish to establish suitable criteria for separation distances between schemes and from the perimeter of existing wind power schemes or the SSAs. The LDP is not, however, prescriptive on separation distances, leaving them to be determined on a case by case basis.

There is opportunity to prepare SPG on renewable energy once the LDP has been adopted.

**B. To identify the contribution that the County can make to meeting the national targets for the generation of renewable energy and heat as stated in the UK Low Carbon Transition Plan and Renewable Energy Strategy of 2009**

LDP Objective 5 cites the need for the county to make a contribution to the national renewable energy generation targets and the REA Update (2016) identifies that this contribution could come from an additional 973GWh of electricity generation plus a further 75GWh from renewable heat.

PCC's Regeneration Strategy (2011, pp51-56) includes regeneration priority 5 – harnessing Powys' natural assets, which suggests Powys could become the



'home' of renewables technology, innovation and development in Wales. This is a positive message backing the WG's proactive message.

The requirement to identify the renewable energy contribution comes from PPW (2016, para 12.8.9, p180) which explains that:

*'[Local Planning Authorities should consider] the contribution that their area can make towards developing and facilitating renewable and low carbon energy and ensuring that development plan policies enable this contribution to be delivered.'*

The UK Renewable Energy Roadmap Update 2013 shows the UK is making "very good progress" against the overall target of 15% renewable energy consumption by 2020. It also explains that renewable electricity generation in Wales increased from 2.3 to 2.4TWh in the year to June 2013, an increase of 1%.

The UK HM Government (2009, p8) lead scenario to meet the overall renewable energy consumption target of 15% by 2020 is to generate 30% of electricity from renewables, to generate 12% of heat from renewables and 10% of transport energy from renewables.

The contributions that Powys can make towards the national targets in the LDP are derived from the evidence in PCC's Powys Renewable and Low Carbon Energy Assessment (REA). The need to undertake this study comes from WG PPW (2016, pp182-183):

*12.8.18 Local planning authorities should facilitate local authority-wide scale renewable energy in development plans by undertaking an assessment of the opportunities and potential for renewable energy in the area.*

*12.9.2 Local planning authorities should guide appropriate renewable and low carbon energy development by undertaking an assessment of the potential of all renewable energy resources and renewable and low carbon energy opportunities within their area and include appropriate policies in development plans.*

*12.9.5 Policies for strategic renewable energy development in areas outside SSAs, if appropriate, should be included in development plans informed by local authority renewable energy assessments.*

Table 8 in PCC's REA (2016, p15) predicts the total energy consumption for the Local Planning Authority (LPA) area in 2026 (the end of the plan period) as 606GWh of electricity and 1,463GWh of heat.

Tables 9 and 10 in PCC's REA (2016, p17) show the existing capacity for generating renewable electricity is 524GWh. This equates to approx. 86% of the total predicted consumption in 2020, in excess of the UK HM Government (2009, p8) lead scenario of 30% to meet the 2020 target.

Tables 9 and 10 in PCC's REA (2016, p17) show the existing capacity for generating renewable heat is 28GWh. This equates to less than 2% of the total predicted consumption in 2020, well below of UK HM Government (2009, p8) lead scenario of 12% to meet the 2020 target.

### **The Local Contribution**

It is clear that the LPA area is contributing significantly towards the generation of renewable electricity, far less so towards the generation of renewable heat. Nevertheless PPW (2016, p183) explains that LPA should plan positively for all forms of renewable and low energy development using up to date and appropriate evidence. It is in this context that the REA from 2012 was updated in order to ensure that the LDP RE policy was based on up to date evidence.

The REA (2016, p4) calculated that the total existing renewable energy capacity in Powys amounted to 336.7MW of electrical power, and 74.5MW of thermal power

The predicted energy consumption for the end of the plan period in 2026 was calculated to be 606GWh of electricity, and 1,463GWh of heat (REA 2016, p3).

The REA (2016, p4) undertook an area wide resource assessment to provide an indication of the total potential installed capacity for different technologies that could be supported by the available resource. The maximum potential (ie the absolute maximum that the County could generate if there were no constraints and without any cumulative concerns etc.) renewable electrical and thermal installed capacity across Powys in 2026 was calculated as circa 2,441MW for electricity, and circa 247MW for thermal energy.

How these figures translate themselves into the contribution is outlined below.

### **The Renewable Electricity Contribution**

Table 29 of the REA (2016 p40), which is reproduced in Appendix 2, details how the different renewable electricity technologies could contribute towards the maximum potential installed capacity. For each technology an appropriate percentage of the total potential was selected. These percentages were based on a variety of factors depending upon the technology. These included previous roll out rates, presence or absence of incentives, ease of deployment, costs, etc.

as well as the likely scale of impact on their surroundings. As such the percentages represent what is thought to be appropriate maximum contributions from each technology. Based on these percentages Table 29 calculates what each technology could contribute in terms of GWh.

Whilst Table 29 of the REA presents some example percentages, it is felt that the percentage for Solar PV in particular is too high in this table. In light of the difficulties currently being experienced across the county with respect to the grid capacity it is proposed that a 25% contribution, instead of the suggested 50%, for solar is considered to be more achievable. This would reduce the contribution made by solar from 540GWh listed in Table 29 down to 270GWh.

The table below translates these (modified) amounts of GWh into an indicative amount of MW that would be needed on the ground, across the county, in order to meet that percentage and make the required contribution.

**Table 3: Renewable Electricity Technologies. MW Required to Deliver Contribution.**

Technology	GWh	a GWhx1000= MWh	b 24hrsx 365days =	c a divided by b =	d Capacity Factor	c divided by d = MW
Biomass	18	18,000	8760	2.05	0.9	<b>2.3</b>
Energy from Waste	3	3,000	8760	0.34	0.9	<b>0.4</b>
Hydropower	14	14,000	8760	1.60	0.37	<b>4.3</b>
Landfill Gas	0	-	8760	-	0.6	-
Wind Power	665	665,000	8760	75.91	0.27	<b>281.2</b>
Solar PV	270	270,000	8760	30.82	0.1	<b>308.2</b>
Other	0	-	8760	-	0.45	-
BIR	3	3,000	8760	0.34	0.1	<b>3.4</b>
Total	973GWh	973,000MWh				<b>599MW</b>

From this it can be seen that in order to deliver 973GWh of renewable electrical energy by 2026 an additional, and indicative, 599MW will need to be installed across the county. It will be seen from above that the bulk of this is anticipated to come from Solar PV installations, with wind contributing less than the amount that is currently installed.

Table 29 in the REA (2016) also presents this figure as a percentage of the projected total electrical energy demand for the county by 2026. However with the reduced percentage for the solar contribution taken into account the indicative 599MW of renewable electrical energy generation would, if deployed

by the end of the Plan period, mean the county would be contributing 106% of the 606GWh demand that is projected. This would see the county becoming a net exporter of renewable electricity.

### ***The Renewable Heat Contribution***

Table 30 of the REA (2016 p41), which is reproduced here in Appendix 3, details how the different renewable electricity technologies could contribute towards the maximum potential installed capacity. For each technology a likely percentage of the total potential was selected. These percentages were based on a variety of factors depending upon the technology. These included previous roll out rates, presence or absence of incentives, ease of deployment, costs, etc. as well as the likely scale of impact on their surroundings. As such the percentages represent what is thought to be appropriate maximum contributions from each technology

Based on these percentages Table 30 calculated what each technology could contribute in terms of GWh. The tables below translate these amounts of GWh into an indicative amount of MW that would be needed on the ground across the county in order to meet that percentage and make the required contribution.

**Table 4: Renewable Thermal Technologies. MW Required to Deliver Contribution.**

		a	b	c	d	
Technology	GWh	GWhx1000 = MWh	24hrs x 365 days =	a divided by b =	Capacity Factor	c divided by d = MW
Biomass	34	34,000	8760	3.88	0.5	<b>7.8</b>
Energy from Waste	5	5,000	8760	0.57	0.5	<b>1.1</b>
BIR	36	36,000	8760	4.10	0.2	<b>20.5</b>
Total	75GWh	75,000MWh				<b>29.5MW</b>

From this it can be seen that in order to deliver 75GWh of renewable thermal energy by 2026 an additional, and indicative, 29.5MW will need to be installed across the county. It will be seen from above that over two thirds of this is anticipated to come from Building Integrated Renewables (BIR).

Table 30 in the REA (2016) also presents this figure as a percentage of the projected total thermal energy demand for the county by 2026. If an indicative 29.5MW of renewable thermal energy generation is deployed by then, the county would be contributing just 5% of the 1,463GWh demand that is projected.

It is important that the LDP balances a positive approach towards renewable energy required by WG PPW (2016, p180) with minimising landscape and visual

impact from renewable energy developments elsewhere in the LPA area. This is a key component of LDP Policy RE1.

**C. To set local policy on renewable energy to deliver the County’s contribution without duplicating or overlapping with National Policy**

WG PPW (2016, p20) explains that national planning policies should not be repeated in LDPs. Instead, LDPs should explain how national planning policies apply to the local area. Guidance on LDPs: Preparing for Submission published by the Planning Inspectorate (2015 p.3) explains the LDP should be a concise, focussed document which conveys essential messages in a clear and engaging way. It should not tell the story of how the plan was prepared, nor include a lengthy recitation of the legislative background. These principles underpin the policy approach in the LDP.

WG PPW (2016, p182) describes the four scales of renewable and low carbon energy development. These are repeated in the table below as they underpin the scope of the planning policy approach to renewable energy development in Wales.

Table 2. PPW scales of renewable energy development.

<b>Scale of development</b>	<b>Threshold (electricity and heat)</b>
Strategic	Over 25MW for onshore wind and over 50MW for all other technologies
Local Authority-wide	Between 5MW and 25MW for onshore wind and between 5MW and 50MW for all other technologies
Sub Local Authority	Between 50kW and 5MW
Micro	Below 50kW

WG PPW (2016, p184) explains that development plans should encourage Sub Local Authority scale schemes and clearly set out the local criteria against which such proposals will be evaluated.

Alongside the expectation to include Local Search Areas within the LDP that emerged in the Renewable Energy Toolkit (2016), the ‘Developments of National Significance (DNS)’ regulations (2016) provided the criteria mentioned in the Wales Planning Act (2015) against which DNS proposals would be determined.

Taken together all of these policy developments have clearly changed the ‘policy landscape’ within which the LDP operates. The tables below summarise, for both

wind and solar developments, how the scales mentioned above relate to the new location designations and who they will be determined by, in light of these changes.

**Table 5: Summary of Wind Development Scales, Locations & Determination**

Wind	0	50KW	5MW	10MW	25MW+
<b>Scale:</b>					
Micro					
Sub Local Authority					
Local Authority Wide					
Strategic					...
<b>Location:</b>					
Applications considered across County					
Applications considered in LSAs					
Applications considered in SSAs					...
<b>Determined by:</b>					
LDP Policy					
Welsh Government					...

**Table 6: Summary of Solar Development Scales, Locations & Determination**

Solar	0	50KW	0.5MW	5MW	10MW	25MW
<b>Scale:</b>						
Micro						
Sub Local Authority						
Local Authority Wide						
Strategic						...
<b>Location:</b>						
Applications considered across County						
Applications considered in LSAs						...
Applications considered in SSAs*						...
<b>Determined by:</b>						

LDP Policy						
Welsh Government						...

## Strategic and Local Authority Wide Scales

### *The Treatment of the Search Areas – to Safeguard or Not?*

#### Strategic Search Areas

With regard to the Strategic Search Areas, TAN8 (para 2.10) states that LPAs 'should take an active approach to developing local policy for SSAs in order to secure the best outcomes'. It goes on to say that some of the local issues that could be addressed in this way include 'safeguarding wind farm sites', and that 'LPAs should be aware that other developments could sterilise land for wind power proposals' (p7). There seems to be some ambiguity within this wording, as it uses the word 'sites' as opposed to (search) 'areas'. 'Sites' could mean locations with extant Planning Permission for wind farm developments, as well as existing and operating installations, however this latter interpretation would provide its own safeguarding as a form of existing development. There is also the question surrounding the 'other developments'. Given that the SSAs are in open countryside, away from existing development, and where new development is strictly limited already it is felt that the most likely form of development that could 'sterilise' the SSA would be proposals for other renewable energy technologies or for wind schemes that possess a smaller capacity than the 25MW threshold.

Given that Powys has a large amount of its land area contained within three SSAs (B (Carno North), C (Newtown South) and a part of D (Nant-y-Moch)) it is unrealistic to provide safeguarding through a blanket ban on all development within those areas. A more pragmatic approach would be to place a presumption against any development that would constrain the primary purpose of the SSAs, which is to accommodate Strategic scale wind farm schemes of 25MW and over. This is explained in more detail within the Renewable Energy SPG.

It is noted also that the presence of SSA's does not preclude the consideration of applications for proposals of 25MW or above from elsewhere in the county, beyond the boundaries of the SSAs, and nor do they guarantee the permitting of applications within them.

#### Local Search Areas

The need to identify local areas of search is detailed in the Renewable Energy Toolkit (2015) and reiterated in the Ministerial Letter of December 2015. The process of identifying them is similar to that of the SSAs and is detailed in the Renewable Energy Toolkit (2015).

The process of identifying LSAs resulted in a comparatively smaller area of land being designated for wind than for solar. Secondly, given the Capacity Factors stated in the Renewable Energy Toolkit, a MW of wind energy is likely to be more

efficient than a MW of solar energy. As a result the REA (2016) recommended that the Wind LSAs should be safeguarded over those for solar. However further consideration suggested treating both the wind and solar LSAs on an equal footing.

Chief amongst these considerations lies the fact that, for the LSAs (as with the SSA's) not all the land within them is suitable for renewable energy deployment. This creates a problem if wind were to be given primacy over solar wherever the two LSAs overlap. For example, if wind were to be given primacy over solar, a refusal for a wind development application would effectively render that land redundant for anything else and in so doing limit the likelihood of achieving the contribution from solar PV.

Yet arguments for some form of safeguarding remain persuasive. For instance, the SSAs contain land that is particularly suitable for large, Strategic scale, proposals, and safeguarding would ensure that this land is not lost to smaller scale proposals. Also, with a smaller area of land suitable for wind proposals up to 25MW, which are more efficient than solar technology, there is a need to provide some sort of priority for this technology, over and above the more widely available land for solar proposals which are ultimately less obtrusive in the landscape, and therefore may well be easier to provide consent for.

### **An Alternative to Safeguarding - the use of an Energy Hierarchy?**

Another approach, and of perhaps more use than safeguarding, is the idea of prioritising within the Search Areas. In this instance some form of energy hierarchy could perform the same role as safeguarding, but without the risk of leaving suitable land redundant.

For example, in the instances where land is covered by only one kind of search area, the technology associated with that search area would have a presumption in favour of development over and above the technologies associated with other search areas. So within a solar LSA any application for other technologies, of any size, would have a presumption against permission if it constrained the primary role of the solar LSA. Vice versa would apply for either of the wind search areas, to avoid a solar proposal acting to 'sterilise' that land for future wind development.

In the instances where wind and solar LSAs overlap with each other then there would be a presumption in favour of permitting wind proposals at the expense of solar. This is justified by the greater efficiency of wind and the wider availability of land for solar developments.

Finally, in the instances where Solar LSAs overlap with an SSA, then again the presumption would always be in favour of wind.



Further details of this approach will be contained within the Renewable Energy SPG.

### **Opportunities for Co-location**

The use of a hierarchy in this way also presents the opportunity for co-location in certain instances. For example, where land, in either a wind SSA or LSA (or indeed anywhere else), has already been consented for a wind development, the land beneath it may also be suitable to accommodate solar development, provided of course that it did not constrain the already consented wind development's operation. This would present a number of advantages, chief amongst which would be the most efficient use of land, but there would also be benefits, in many instances, in terms of being able to double up with the infrastructure (buildings, access tracks and transmission, etc.) that has been provided for the existing wind development.

Further details of this approach will be contained within the Renewable Energy SPG.

### **Sub Local Authority and Micro Scale**

WG TAN6: Planning for Sustainable Rural Communities (2010) explains that planning authorities should seek to strengthen rural communities by helping to ensure that existing residents can obtain a higher proportion of their energy needs from local renewable sources (2010, p8).

WG TAN8 (2005, pp7-8) accepts that outside SSA 'there is a balance to be struck between the desirability of renewable energy and landscape protection.'

The approach taken by Policy RE1 and DM15 (see below) towards developments of a Micro or Sub Local Authority Scale is generally supportive whilst seeking to minimise individual and cumulative adverse effects on landscape and visual amenity.

### **The Policies**

The objective of Welsh national planning policy on renewable and low carbon energy is positive whilst accepting the need to minimise adverse impacts on the environment, health and communities.

'to promote the generation and use of energy from renewable and low carbon energy sources at all scales and promote energy efficiency,

especially as a means to secure zero or low carbon developments and to tackle the causes of climate change. (PPW, 2016, p173).

The PCC LDP (2016, as amended by Further Focussed Changes, September 2016) contains the following general policy which supports both the WG PPW and Powys LDP objectives highlighted above.

### **Policy DM15 – Design and Resources**

**Development proposals must be able to demonstrate a good quality design and shall have regard to the qualities and amenity of the surrounding area, local infrastructure and resources.**

**Proposals will only be permitted where all of the following criteria, where relevant, are satisfied: ....**

- 13. It demonstrates a sustainable and efficient use of resources by including measures to achieve:**
  - i. Energy conservation and efficiency.**
  - ii. The supply of electricity and heat from renewable sources.**
  - iii. Water conservation and efficiency.**
  - iv. Waste reduction.**
  
- 14. Investigations have been undertaken into the technical feasibility and financial viability of community and/or district heating networks wherever the development proposal's Heat Demand Density exceeds 3MW/Km<sup>2</sup>. The list below represents the main options to be considered in descending order of preference:**
  - i. Connection to existing Combined Heat and Power (CHP) / Combined Cooling Heat and Power (CCHP) distribution networks.**
  - ii. Site wide renewable (and part renewable) CHP/CCHP and biomass (locally sourced) solutions.**
  - iii. Site wide gas-fired CHP/CCHP.**
  - iv. Site wide renewable (and part renewable) community heating / cooling and biomass (locally sourced) solutions.**
  - v. Site wide gas-fired community heating / cooling.**
  - vi. Individual building integrated renewable energy heating technology (non-domestic buildings only).**

This policy requires all development to include measures to achieve supply of electricity and heat from renewable sources. Criterion 13.ii) in particular, is important in helping to meet the contributions outlined in the previous section.

Criterion 14 is also important as a means through which developers will be encouraged to consider the potential deployment of a range of options that would deliver renewable or low carbon thermal energy.

Only those developments that exceed a Heat Density Demand of 3MW/Km<sup>2</sup> would be required to make this consideration. A simple calculation involving the numbers of units involved in a development, the floor space, and the use of a benchmark figure will determine whether a development crosses this threshold. The methodology for carrying out this calculation will be detailed within the forthcoming SPG on Renewable Energy.

It is anticipated that, assuming a development exceeds this threshold and undertakes the investigation into the technical feasibility and financial viability of deploying the options, the preferred option would only be implemented if it were demonstrated to be technically feasible and financially viable. Using this approach ensures that these options recommend themselves, rather than being made a requirement which all development would have to investigate as this would adversely affect the viability of proposed development.

### **Policy RE1– Renewable Energy**

Impacts of renewable energy development arise from both the primary infrastructure and the associated development such as means and method of transmission, security and highway improvements and construction. Development may also lead to the change of land use.

The LDP and complementary legislation provide for the avoidance or appropriate mitigation of negative impacts. There are many environmental, social and economic considerations including:

**Environmental:** Disturbance and damage to fauna (e.g. bird strike), flora, soils, water quality and flow, habitat connectivity, landscape features, the night time environment, built heritage and archaeological assets, tranquillity and stillness, landscape character and views.

**Social:** Safety and human health from topple, disturbance and distraction (e.g. noise, glare and flashing) and highways works. Loss of agricultural, amenity, and recreation land, and of Rights of Way. Military training aviation.

**Economic:** Productivity / viability of project, interference with neighbouring land uses (e.g. strategic energy developments), industry based on landscape quality (in Powys Tourism) and secondary impacts on associated economic opportunities. Highways congestion and minerals safeguarding.

Decision making requires a balance between public benefit and harm. The policy does not include provision for environmental compensation. If appropriate

mitigation is not achievable and compensatory measures are required it is a good sign that the development would be unacceptable.

The first and second parts of the policy relate to wind farm developments at Strategic (over 25MW) and Local Authority wide (5 to 25MW) Scales, using the SSA and LSA approach. The third part relates to smaller scale (Micro and Sub Local Authority) Scale proposals whether they be from private or community-based sources. The fourth part is concerned with solar applications at all scales. Finally the fifth part provides the criteria that every proposal, irrespective of scale or technology, will be considered against. These include the landscape and visual impacts (See below). The supporting text for the policy is provided in the PCC LDP (2015 as amended by Focussed Changes Jan 2016).

The wording of the LDP RE1 policy is as follows:

### **Policy RE1 – Renewable Energy**

**Proposals for renewable and low carbon energy development, either on their own or in combination with existing or approved development, will be permitted subject to the following criteria:**

- 1. Large scale wind farm developments (greater than 25MW) will be expected to be located within the boundaries of the Strategic Search Areas (SSAs).**
- 2. Proposals for wind developments (0 – 25MW) will be considered within the boundaries of Local Search Areas (Wind) subject to there being no unacceptable impact on visual amenity or landscape character in accordance with Policy DM3 - Landscape, through the number, scale, size, design and siting of turbines and associated infrastructure, and where they demonstrate an acceptable level of cumulative impact.**
- 3. Small scale and/or community-based wind turbine proposals (less than 5MW) will be considered in appropriate locations but will be required to demonstrate that impacts are confined to the local scale and with acceptable cumulative impact.**
- 4. Applications for Solar PV Farms (greater than 0.5MW) are encouraged in Local Search Areas (Solar). Applications for small scale stand-alone Solar PV developments (less than 0.5MW) are encouraged in appropriate locations but will be required to demonstrate that impacts are confined to the local scale and with acceptable cumulative impact and are not incompatible with other forms of development.**

**5. All renewable energy or low carbon energy development proposals will be required to demonstrate that:**

- a) Measures have been taken to minimise impacts on visual amenity, biodiversity, and the natural and historic environment;**
- b) There will be no unacceptable impacts on residential amenity;**
- c) The development will not compromise highway safety;**
- d) The development would not interfere with radar, air traffic control systems, telecommunications links, television reception, radio communication and emergency services communications; and**
- e) There are satisfactory proposals in place for site restoration as appropriate.**

Supplementary Planning Guidance (SPG) will be produced to support the Renewable Energy policy.

**Summary:**

This Topic Paper provides a context within which the LDP Policies relating to renewable and low carbon energy are set. This context is in the form of a summary of the key European, national (UK and Welsh) and local policies all of which have had some bearing on the development of the LDP policies.

It then presents the recommendations, along with their justification, for the detail of Policy RE1 as well as the other considerations that need to be borne in mind when considering the Policy itself.

Chief amongst the Recommendations are that Policy RE1 will be supporting the expectation that Strategic Scale proposals are to be confined to the Strategic Search Areas of which there are two wholly within the County. In addition it will also support an expectation that wind proposals between 5 and 25MW and solar proposals 0.5MW and upwards will be confined to Local Search Areas.

Secondly it presents the renewable energy contributions that the Policy will be supporting and presents the calculations, by way of a justification, that were used to determine those contributions.

The final recommendation is to again support the expectation that local policy on renewable energy to meet these LDP contributions is set in a way that does not duplicate or overlap National Policy.

**Appendix 1: Map of the Powys Renewable Energy Search Areas**



**APPENDIX 2**

**Table 29 of the Powys REA (2016): Resource summary table for renewable electricity in 2026**

Energy Technology	Existing Installed Capacity [MW]	Potential Installed Capacity [MW]	Capacity Factor	Existing Energy Generated [MWh]	Additional Potential for Energy Generated [MWh]	Percentage delivered by 2026	Total Additional Potential for Renewable Energy Delivered by 2026 [GWh]
Biomass [CHP]	2.5	46	0.90	19,710	362,664	5%	18
Energy from Waste	0.0	7	0.90	0	55,188	5%	3
Hydropower	8.8	15	0.37	28,523	48,618	30%	14
Landfill Gas	2.1	0	0.60	11,038	0	100%	0
Wind Power	312.7	1,124	0.27	739,598	2,658,485	25%	665
Solar PV Farms	-	1,234	0.10	-	1,080,984	50%	540
Other	0.5	0	0.45	1,971	0	100%	0
BIR	10.1	15	0.10	8,848	13,140	25%	3
<b>Total</b>	<b>336.7</b>	<b>2,441</b>	<b>-</b>	<b>809,688</b>	<b>4,219,079</b>	<b>-</b>	<b>1,243</b>
<b>Projected electrical energy demand [2026]</b>							<b>606</b>
<b>Percentage electricity demand in 2026 potentially met by renewable energy resource</b>							<b>205%</b>

### Appendix 3

Table 30 of the Powys REA (2016): Resource summary table for renewable heat in 2026

Energy Technology	Existing Installed Capacity [MW]	Potential Installed Capacity [MW]	Capacity Factor	Existing Energy Generated [MWh]	Additional Potential for Energy Generated [MWh]	Percentage delivered by 2026	Total Additional Potential for Renewable Energy Delivered by 2026 [GWh]
Biomass [CHP]	5.7	154	0.5	24,966	674,520	5%	34
Energy from Waste	0.0	11	0.5	0	48,180	10%	5
BIR	60.4	83	0.2	120,538	145,416	25%	36
<b>Total</b>	<b>66.1</b>	<b>248</b>	<b>-</b>	<b>145,504</b>	<b>868,116</b>	<b>-</b>	<b>75</b>
<b>Projected thermal energy demand [2026]</b>							<b>1,463</b>
<b>Percentage thermal demand in 2026 potentially met by renewable energy resource</b>							<b>5%</b>





**Powys County Council**

**Explanation of the Powys Local Development Plan  
Dwelling Requirement**

**September 2016**

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## **Executive summary**

- This paper provides further clarification on the Council's position in relation to the dwelling requirement figure of 4500 dwellings included in the Focussed Changes (FC) to the 2nd Deposit Draft Local Development Plan (LDP).

### **Reasons for the changing LDP dwelling requirement figure**

- The LDP dwelling requirement figure (DRF) has changed several times during the last 4 years in the course of the LDPs preparation. The reasons for the figure changing are: i) the Welsh Government 2008 population and household projections were replaced after the Pre-Deposit Stage with the 2011 projections (which are currently being used) which contained significantly lower predictions; ii) the requirements of Planning Policy Wales (PPW) and guidance in TAN1 - Joint Housing Land Availability Studies (2015) for local planning authorities to demonstrate a 5-year land supply when LDPs are adopted. Having undertaken further work on the deliverability of the dwelling requirement figure included in the 2nd Draft Deposit, it was reduced in the Focussed Changes to what is considered to be a more deliverable one based on completions rates in recent years and considering the ability of the market to deliver
- When deriving the LDP dwelling requirement figure of 4500, the Council considered a number of factors including: population change and the number of households predicted up to 2026 using the Welsh Government 2011 population and household projections; the aims and objectives of the Council, including building more houses Powys; and also the realistic prospects for the delivery of the dwelling requirement;

### **Household projections and Mid- Year Estimates (MYE)**

- The Welsh Government 2008 household projections were used at the Pre – Deposit Stage of the LDP which estimated a significantly larger number of households at 2011 than, according to the 2011 Census they actually were. Consequently, the dwelling requirement figure that would have been derived from the 2008 Principal projection would have been at a level never before experienced in Powys. The 2008 projections were replaced by the 2011 projections which were subsequently used to derive the DRF at the 1<sup>st</sup> Deposit Draft LDP.
- The Council recognises that the 2011 Principal projection is based upon a 5-year period that was severely affected by an economic downturn and therefore as would be expected its predictions for net migration and the number of households forming up to 2026 are low compared to the levels of those years leading up to the start of the recession. The Welsh Government recognised this and issued a letter to all planning authorities in Wales (letter 10 April 2014) (see Appendix 1) advising them to be cautious about the use of the Principal projection. The Welsh Government also released an alternative projection variant the 10-year migration variant, which it considered by using a longer trend period of 10 years as opposed to 5 years provided a more balanced basis on which to plan for the future in LDPs.
- The Council has concluded that although that the Principal projection is based on a period of economic downturn it is the more realistic of the two on which to begin deriving the dwelling requirement figure. This conclusion is supported by recent evidence on population

change. When comparing the mid-year estimates (MYE) for migration in Powys against those in the projections, the current figures are below those predicted in the 2011-based principal projection and hence even further below the 10-year migration projection. Whilst it is considered feasible that, with an improving economy, net migration may return to the level predicted in the Principal projection, there is no indication that it would reach the levels predicted in the 10- year migration variant.

- Furthermore, if the 10-year migration variant from the latest household projections were to be used, the starting point for new dwellings required in Powys would be 5863 homes. This translates to a build rate of 391 dwellings per annum over the 15-year period. This is considered an overly ambitious figure when compared to annual completion levels since the Plan's start date (around 200/annum) and taking into account the "catch-up" requirements that fall on the remaining years of the Plan. It is of note that the draft figure of 315 completions in Powys over the 2015-16 year is a marked improvement on recent years and indicates signs of housing market recovery.
- The number of dwellings of 5863 (391 dwelling per annum) which has been converted from the number of households predicted by the 10-year migration variant is considered an ambitious figure when compared to annual completion levels in recent years (around 200) with the exception of the most recent figure of 315 completions in 2015/2016.

#### **Economic Needs Assessment (2013) and Addendum (2015)**

- Findings from the economic forecasting undertaken as part of the original Assessment, together with the revised labour force analysis and population projection data produced as part of the Addendum suggest that employment requirements and aspirations within Powys are not driving the housing market in the County. There is no identifiable relationship between the requirement for employment land in the County during the plan period and dwelling requirement figure. The need for additional employment land to be allocated has been identified in the Economic Needs Assessment, primarily for existing businesses seeking to expand and needing larger premises. The need is not the result of newly forming businesses nor businesses re-locating in the County that would result in a significant number of people moving into Powys for employment which would then translate into increased an increased housing demand and requirement.

#### **Council's Corporate Strategies**

- The Council's Corporate Strategies including the Joint Commissioning Strategy for Older People in Powys Addendum (2016) that identify the need for affordable homes and specifically designed accommodation for the ageing population of Powys. This strategy is expected to result in the need for between 290 and 310 new dwellings in Powys up to 2026.

#### **Delivery of the dwelling requirement figure**

- The dwelling requirement figure of 4500 dwellings deviates above the 4087 dwellings predicted over the plan period in the 2011 Welsh Government Household projections. The reason for this deviation is to ensure that by having an increased number of dwellings the plan is suitably aspirational and helps achieve the Council's corporate strategies including

the provision of affordable homes. The deviation is also considered justified based on recent MYEs showing a continuing upward trend in net migration with 2014 at 174 and 2015 at 297.

- In order to deliver 4,500 new homes across Powys, the LDP requires an annual build rate of 300/annum. Despite the under achievement of this build rate in the early years of the LDP period, there is evidence that there has been a 'pick up' in the housing market since 2014, which is giving confidence that the 4500 dwellings are deliverable. There has been an upturn in the number of: pre- planning application enquiries; planning applications submitted for new dwellings and planning permissions granted for sites with 5 plus dwellings. The number of dwelling completions for April 2015 to April 2016 at 315 (to be confirmed in 2016 JHLAS) are also significantly higher than previous years.
- The 315 completions in 2015/16 are above the annual dwelling requirement of 300 deduced from the overall number of 4500 dwellings. However, between March 2011 and March 2015, the number of dwellings completed each year was in the region of 200. Looking ahead over the remaining years of the LDP the rate of completions will need to continue at around 348/annum so as to take into account the-residual number of dwellings carried forward from the underperforming years and in order to deliver the LDP requirement of 4500 dwellings. This target build rate is realistic for the county as in the pre-recession years (e.g. 2004, 2005, 2006), Powys regularly experienced build rates of at least 400/annum and recent building rates are starting to approach this (315 units in 2015/16).
- An adopted LDP, containing new housing allocations should provide further confidence to a housing market that has recently been showing signs of an improvement that will help ensure that the dwelling requirement of 4500 is delivered.

## **1. Introduction**

- 1.1. This paper provides further clarification on the Council's position in relation to the dwelling requirement figure of 4500 dwellings included in the Focussed Changes (FC) to the 2nd Deposit Draft Local Development Plan (LDP) that went out to consultation in January 2016.
- 1.2. The Council has produced this paper in order to explain a number of issues including:
  - How the dwelling requirement figure was derived;
  - The reason for the dwelling requirement figure having changed over the course of the LDP process from that contained in the Pre-Deposit (Preferred Strategy) stage to the Focussed Changes;
  - The reason for the figure deviating above the 2011 Principal projection figure of 4087 dwellings.
- 1.3. This paper should be read in conjunction with the Population and Housing Topic Paper to the 2nd Deposit Draft LDP (May 2015) and the Addendum document to it (January 2016) (Examination document ref. no. EB35). Specific references to relevant sections within these documents are given on page 12 of this paper
- 1.4. There is also an Affordable Housing Background Paper (June 2015) and Update document (June 2016) (Examination document ref. no. EB21).

## 2. National Policy Context

- 2.1. The Population and Housing Topic Paper (May 2015) (Ref: EB 35) contains a section on pages 2 to 9 in which national legislation, policy and guidance is discussed including the National Housing Strategy and the Wales Spatial Plan. However, the latest policy guidance is discussed below.

### **Planning Policy Wales (PPW)**

- 2.2. Planning guidance provided to local planning authorities by the Welsh Government in relation to producing LDPs is contained in Planning Policy Wales (PPW), Edition 8 (January 2016).
- 2.3. However, it should be borne in mind that Edition 7 of PPW (July 2014) was the relevant edition when the dwelling requirement in the Focussed Changes documents was being derived. This is stated in paragraph 9.2.2 that:

‘The latest Welsh Government local authority level Household Projections for Wales should form the starting point for **assessing housing requirements**’.

*‘Household projections provide estimates of the future numbers of households and are based on population projections and assumptions about household composition and characteristics. Local planning authorities should consider the appropriateness of the projections for their area, based upon all sources of local evidence, including the need for affordable housing identified by their Local Housing Market Assessment. **Where local planning authorities seek to deviate from the Welsh Government projections, they must justify their own preferred policy based projections**’.*

- 2.4. The recently issued Edition 8 of PPW (January 2016) provides the following guidance on how the dwelling requirements should be derived in revised paragraph 9.2.2 which states that:

*‘.. Household Projections for Wales alongside the latest Local Housing Market Assessment, will form part of the plan’s evidence base together with other key issues such as what the plan is seeking to achieve, links between homes and jobs, the need for affordable housing, Welsh language considerations, the provisions of corporate strategies and the deliverability of the plan.’*

and that:

*‘...Local planning authorities will need to assess whether the various elements of the projections are appropriate for their area and if not, undertake modelling, based on robust evidence, which can be clearly articulated and evidenced, to identify alternative options.’*

## **Technical Advice Note 1 (TAN1) – Joint Housing Land Availability Studies (January 2015)**

- 2.5. The Welsh Government issued Technical Advice Note 1 (TAN1) – Joint Housing Land Availability Studies in January 2015. The requirements of TAN 1 follow on to those included in Planning Policy Wales (PPW) by requiring that local planning authorities, on the adoption of their LDP, need to demonstrate a 5- year land supply that is readily and genuinely available. Consequently, the housing requirement in the Powys LDP needs to be set at a figure that can be realistically delivered by the house building industry because if it is not, the implications are that the Council will not be able to demonstrate a 5-year land supply.
- 2.6. The methodology applied for calculating the land supply trajectory for the LDP period follows the residual calculation identified within TAN 1. This involves comparing the amount of land that is considered to be genuinely available for any given 5-year period with that amount of land that is needed for that period of time for the remaining housing requirement identified within the LDP.
- 2.7. The implications of not having a 5-year land supply is that it signals that a local planning authority does not have a sufficient supply of land readily available for development. The main consequence of this happening is that developers can then apply for planning permission for housing on a site not allocated in the LDP and use the argument that there is not a 5-year land supply to justify the need for their site to be developed. This is undesirable as it leads to a situation of uncertainty and furthermore presents a risk to the strategic direction of the statutory development plan.



### 3. Background information about Population trends in Powys

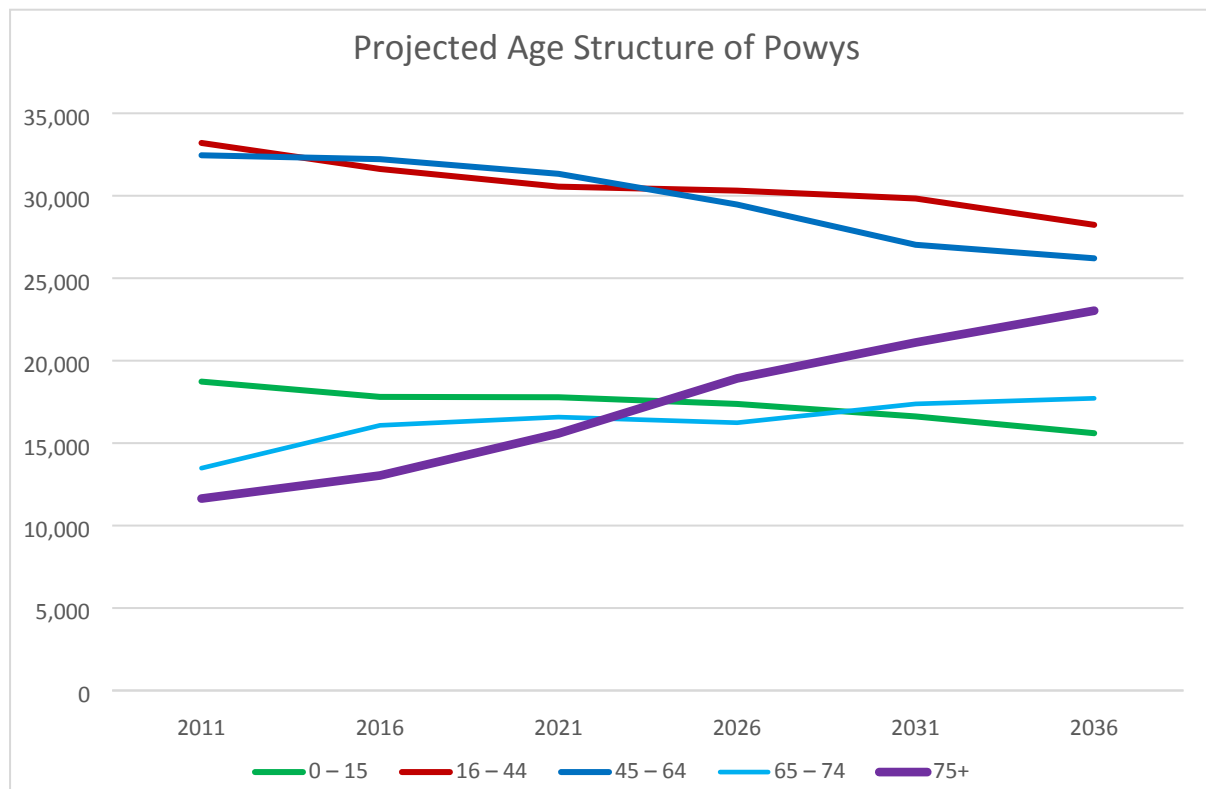
3.1. The Population and Housing Topic Paper (May 2015) (EB 35) provides demographical information in Section 3, pages 10 to 14. Natural change (death and birth rates) discussed on page 12 and paragraph 3.5 of the 2015 Topic Paper and Table 2 clearly shows that the number of deaths since 2002 in Powys have consistently out-numbered births. In contrast, migration has been far more volatile over recent years and discussed further below.

#### Age Structure of Powys

3.2. The graph below in Fig. 1 shows that the population of Powys is projected to increase in average age, with an increasing number of elderly over 65 and a decreasing number of people across all the age groups up to 65.

3.3. Within the 16 to 44-year-old age bracket there has been net out migration, highlighting the key issue faced by the County of an ageing population. Powys has the second highest average age in the whole of Wales and the largest population cohorts in Powys are the 60-64 and 65-69 year olds. For Wales and the UK on the other hand, the largest cohorts are 40-44 olds and 45-49 year olds.

**Fig. 1 Projected Age Structure of Powys, 2011-2036 (2011 Principal projection)**



Source: 2013 ONS Population Estimates Unit

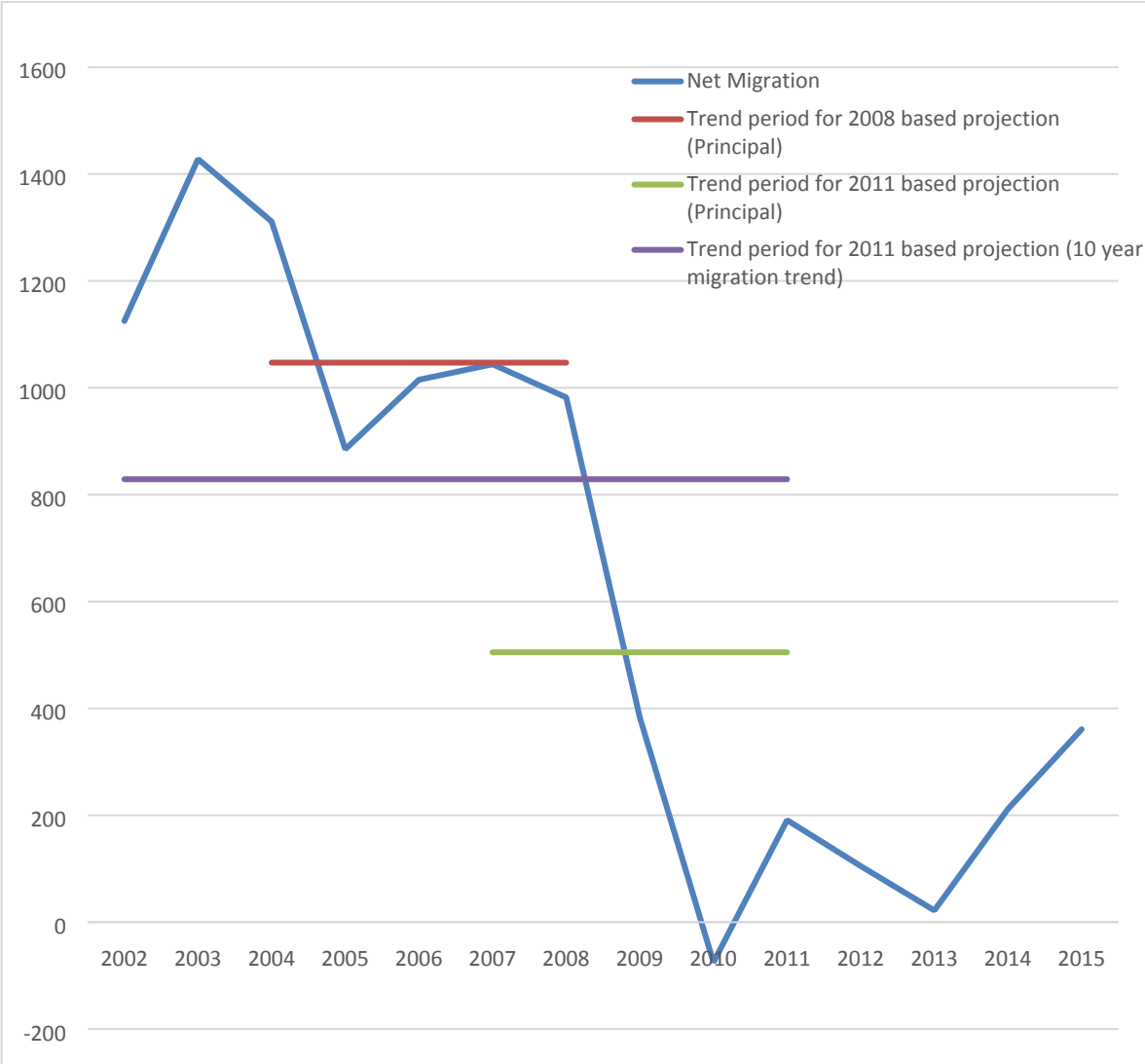
3.4. The critical issues for Powys are therefore:

- The increasing number of retirement age residents significantly increasing the proportion of economically inactive people in the County and the ratio between the workforce and economically inactive people.
- The trough in the population aged between 15 and 64, as these people offer a significant level of socio economic contribution to a local economy and having left the County to attend further education establishments in many cases they do not return until their late thirties at the earliest

#### **Migration and Mid-Year Estimates (MYEs)**

- 3.5. The most significant factor responsible for changing the population in Powys since 2002 has been migration. The number of births and deaths remains relatively stable year-on year. Net population increase comes from migration, which can fluctuate significantly over a relatively short period, for example, Table 2 shows a difference of 1263 between 2003 and 2010. It is clear, however, that overall growth in population comes from a net increase of people moving into the area – whether new migrants or returning former residents for example students. The years 2013 and 2014 experienced migration gain in all 5-year age groups up to and including the 65-69 age group with the exception of the 15-19 age group and the 25-29 age group which saw young adults leaving the area.
- 3.6. Population change in Powys has been influenced by internal migration of people from within the UK and by international migration from the A8 countries that entered the EU in 2004. Fig. 2 is a graph that shows net migration for Powys between 2001 and 2013 (blue line) and clearly shows that migration peaked in 2003 at over 1175 when the UK economy was in a period of growth. This resulted in net migration annually being over 800 between 2001 and 2008. The impact of the recession became apparent in 2009 as the graph in Fig.1 and Table 2 both clearly show when net migration levels fell in Powys. Net migration dropped to 315 in 2009, before Powys experienced its first net outward migration in 2010 (-88). The figures have since returned to net inward migration and the figure for 2014 is 174 and for 2015 it is 297 (23 June 2016).

**Fig. 2 - Annual net migration for Powys (excluding BBNPA area), showing trend periods used in Welsh Government population projections**



Source: mid-year population estimates, ONS; WG 2008 and 2011 based household projections

3.7. The graph in Fig. 3 (Page 14) shows how the population of Powys (bold black line) has changed since 2001 and includes the latest population figures from the most recent mid- year estimates (MYE). The most recent MYEs (including for 2015 with a net migration at 297) do not indicate that annual net migration will rise to the level predicted in the 10-year migration variant of 681 per annum up to 2026.

**Table 2: Components of Migration in Powys County (excluding BBNPA plan area)**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Internal in	4751	4885	4944	4564	4568	4851	4497	4072	4105	4134	4508	4201	4369	4542
Internal out	3886	3734	3867	3820	3913	4152	3846	3791	3966	3947	4325	4250	4224	4226
International in	222	199	152	186	317	341	422	291	207	190	230	234	280	303
International out	161	174	151	202	137	180	265	257	409	220	327	166	250	323
<b>Total</b>	926	1175	1079	728	835	859	808	315	-88	157	86	18	174	297

Source: 2001 to 2014 Office for National Statistics- Mid-Year Population Estimates

- 3.8. The graphs in Fig. 2 (and Fig. 7 on page 27) clearly show how volatile migration can be as a factor of population change over a period of 15 years and how it can fluctuate significantly largely due to external factors. Table 2 above also shows how migration can fluctuate significantly over a 15 year period with net migration in 2003 reaching 1175 during the more buoyant years and falling into negative numbers in 2010 at -88 during the economic downturn.
- 3.9. Table 2 presents the most recent MYE for 2015, which shows net migration at 297. This is considered to be an indication of an upward trend in net migration levels that should continue to increase and reach the net migration annual figure of 405 predicted in the Principal projection.
- 3.10. It is considered that migration into Powys is driven by a number of reasons, including an improving economy attracting people seeking a work life/ balance and increasing numbers of early retirees coming to live in the County which is possibly due to earlier access to pension pots.
- 3.11. One of the main factors that saw net migration at the high level of 800+ people per year between 2001 and 2004 prior to the A8 countries entering the EU was that people took advantage of the lower property prices in Powys. House prices in Powys compared to other areas such as Shropshire and the Midlands, are significantly lower and people have been attracted into the County by relocating to buy larger properties and live in a more rural setting.
- 3.12. House prices in many parts of England and Wales are again increasing but prices remain relatively static in Powys, which may result in the same situation being replicated but not necessarily at the same level.

### Average Household Size

3.13. The average household size is projected to reduce over the plan period from 2.14 to 2.13 as shown in Table 3 below. The 2011 Principal projection predicts a larger household size at 2026 when compared to the household size predicted in the 2008 projections. The difference between the 2008 and 2011 projections, therefore, has implications for the anticipated level of households projected by the end of the LDP period and indicates a reduced requirement for new housing by 2026.

**Table 3: 2008 and 2011 Household Projections - Predicted Household size 2011 to 2026**

	2011 (Household size)	2016 (Household size)	2021 (Household size)	2026 (Household size)
2008 Based Projections	2.23	2.16	2.11	2.07
2011 Based Projections	2.24	2.20	2.16	2.13

Source: Welsh Government 2008 based and 2011 based Household Projections

3.14. The 2011 Census found that the number of households between 2001 and 2011 had not grown as fast as previously predicted in the 2008 household projections as shown in Table 3 above. There have been lower numbers of young people leaving home and starting their own households, lower numbers of young people living alone/in small households, more adult children remaining or returning to the parental home, more households formed from unrelated adults and lower numbers of elderly females living alone as men are living longer. All these factors help explain the changes and improvements to data relating to household membership rates.

## 4. Background to the changing LDP dwelling requirement figure

- 4.1. There have been four different figures presented as the proposed dwelling requirement at different stages of the LDP. This section of the paper explains the reasons for the figure having changed at different stages of the LDP as shown in the Table 4 below:

**Table 4: The Changing Proposed Dwelling Requirement Figure (DRF)**

Stage of the LDP	Proposed DRF	Summary of reason(s) for changing the DRF
Pre- Deposit (Preferred Strategy)(2012)	7700	Use of WG 2008 projection aligned to the lower variant resulted in a DRF that was considered a more deliverable than that derived from the Principal projection. The WG commented the use of the lower variant and not the Principal was not sufficiently justified by the Council
1 <sup>st</sup> Deposit Draft LDP(2014)	4500	The DRF was reassessed following the issue of the WG 2011 projections which replaced the 2008 projections and the Principal projection was used that predicted a figure which was considered by the Council to be achievable and deliverable
2 <sup>nd</sup> Deposit Draft LDP (2015)	5519	The Council took into consideration the advice of Welsh Government to use the 2011 10-year migration variant instead of 2011 Principal (5-year trend period) because the Principal was based on a period of recession. DRF was derived between the two projections due to recent net-migration levels significantly below the 10- year migration level and the Council wanting the LDP to be aspirational and deliver its objectives included in its local strategies (e.g. provision of affordable housing and regeneration targets) requiring a balanced figure.
Focussed Changes to 2 <sup>nd</sup> Deposit Draft LDP (2016)	4500	The DRF was reassessed to take account the deliverability of houses in Powys based on recent build rates and market testing in order to satisfy the requirements of TAN 1 and the need to demonstrate a 5-year supply on adoption of the LDP.

### **Pre- Deposit (Preferred Strategy) (2012)**

- 4.2. The Welsh Government 2008 Population and Household Projections were used to derive the dwelling requirement figure at this stage of the LDP. The Council decided upon using the lower variant as a starting point rather than the Principal projection. The number of dwellings derived from the lower variant was 7700, equating to an annual dwelling requirement of 513.

By contrast if the principal projection had been used, a figure of 9,796 dwellings would have been derived with an annual figure of 653 dwellings. The Council considered this figure to be unrealistically high based on there being no records of past build rates being at that level, even during the years between 2001 to 2008, when the economy was in a buoyant period. The Welsh Government commented that use of the lower variant as opposed to the preferred Principal projection had not been sufficiently justified by the Council. The Preferred Strategy dwelling requirement figure was not carried over into the 1st Deposit Draft of the LDP due to DRF being reassessed following the release of the 2011 Welsh Government population and household projections which replaced the 2008 projections. As the latest projections, they needed to be used instead of the 2008 projections going forward to the next stage of the LDP.

#### **1<sup>ST</sup> Deposit Draft LDP (July 2014)**

- 4.3. The Principal projection of the 2011 population and household projections was used to derive the dwelling requirement figure of 4500. However, representations were received from the Welsh Government that stated that there was insufficient evidence and explanation accompanying the Draft Deposit LDP in respect to this figure for it to be progressed to the next stage of the LDP process. Subsequently, the Council although considering that the DRF of 4500 units was deliverable considered that there was a high risk of the LDP being found unsound and decided to prepare further evidence and a 2nd Deposit Draft LDP.

#### **2<sup>ND</sup> Deposit Draft LDP (June 2015)**

- 4.4. The 2nd Deposit Draft LDP was accompanied by a number of background papers including a Population and Housing Topic Paper (June 2015) which explained the dwelling requirement figure for the LDP.
- 4.5. The 2011 Welsh Government Population and Household Principal predicted dwelling number of 4087 was used as the starting point to derive the dwelling requirement figure of 4500. However, caution about the use of the Principal projection was advised by the Minister for Housing and Regeneration, Carl Sergeant in his letter to all local planning authorities in Wales (April 2014) (see Appendix 1). This set of projections being based on a 5-year trend period that included a number of years that were affected by the economic downturn resulted in the level of net migration predicted by the Principal projection was considered to be a too pessimistic a basis on which to plan for the future. In order to take account of the economic downturn, the Welsh Government issued the 10-year migration variant, which covered a 10-year period (as opposed to 5 years) and consequently spanned a period that had a high level of economic growth with significantly higher net migration levels. By using a longer trend period, the 10-year migration variant was considered by Welsh Government to provide a more balanced projection for use by local planning authorities in deriving their dwelling requirements.
- 4.6. The dwelling figure derived from the 2011 Principal projection is 4087 (which equates to 272 dwellings per year) whereas from the 10- year migration variant, the dwelling figure is 5863 dwellings (which equates to 391 dwellings per year).
- 4.7. The annual net migration predicted in the Principal is considered to be at a relatively low figure of 405 people per year compared to what the net migration levels were in the more buoyant years in relation to the economy (2001 to 2007) when they surpassed 800 for several

years and peaked at 1175 in 2003. In line with Welsh Government advice, the Council considered the 10- year migration variant with its predicted annual net migration figure of 681. However, due to the most recent Mid-Year Estimates (MYE) at that time showing net migration at 174 in 2012 and 18 in 2013 it was considered that with the post-recession economy in Powys was recovering at a slow pace and that net migration was not realistically going to reach the level predicted in the 10-year migration variant.

- 4.8. The Council, therefore, sought a balanced dwelling requirement figure lying above the Principal dwelling figure of 4087 but below the 10-year migration variant projection figure of 5863 dwellings. This resulted in the figure of 5519 dwellings being derived, which took into account the various factors such as the considerable number of dwellings that were available in the existing land bank (sites already benefiting from planning permission) which would carry forward into the LDP period and the aspirations of the Council which were identified as:
- i. The need to increase levels of net migration;
  - ii. The retention of young out-migrants;
  - iii. The need to deliver the Council's policy aspirations including affordable housing and regeneration; and
  - iv. The availability of suitable sites.
- 4.9. A degree of sensitivity testing was employed and the figure was also balanced against an assessment of delivery based on past build rates (i.e. aspirations had to be realistically achievable).

#### **Focussed Changes (FC) to the 2<sup>nd</sup> Draft Deposit LDP (January 2016)**

- 4.10. The reasons behind the dwelling requirement figure contained in the Focussed Changes of 4500 dwellings were explained in the Addendum to the Population and Housing Background Paper (January 2016). The Addendum explained that the reason for the change from 5519 to 4500 dwellings was due to the Council considering that the market conditions and the building industry at that time were not at a level that could ensure the delivery of that number of houses during the plan period. The figure of 4500 was based, therefore on the 4,087 dwellings arising from the 2011-based Principal Household Projection revised upwards to take account of identified local factors, which are discussed in the next section.

#### **Conclusion**

- 4.11. The Council has sought to derive a DRF that is realistically deliverable, hence the use of the 2008 lower variant figure as opposed to the preferred but considered unrealistically high figure in the Principal projection at the Pre- deposit (Preferred Strategy) stage of the LDP. The Council accepts that the DRF of 5519 at the 2<sup>nd</sup> Deposit Draft stage following an assessment of the building market to deliver that amount of housing was too aspirational and not likely to be achieved even though the Council was advised by the Minister for Housing and Regeneration to consider the 10 year migration projection rather than the principal projection. Despite the changing LDP dwelling requirement figure, the settlement strategy of the LDP has fundamentally remained the same since the Pre-Deposit (Preferred Strategy) with the focus of new development being on the towns and larger villages. The development management



policies contained in the LDP will seek to ensure only limited growth in the smaller villages and the rural areas be permitted in order to retain a settlement hierarchy strategy.

## 5. How the LDP dwelling requirement of 4500 was derived in the Focussed Changes

- 5.1. Welsh Government guidance for local planning authorities to derive their LDP dwelling requirement figures is found in Paragraph 9.2.2 of PPW (Edition 8, 2016) which states that:

*'the latest Welsh Government local authority Household Projections for Wales alongside the latest Local Housing Market Assessment, will form part of the plan's evidence base together with other key issues such as what the plan is seeking to achieve, links between homes and jobs, the need for affordable housing, Welsh language considerations, the provisions of corporate strategies and the deliverability of the plan.'*

- 5.2. The following factors were considered in deriving the LDP dwelling requirement figure:
- i. Welsh Government Population and Household Projections as a starting point;
  - ii. Other local factors including local demographic factors, evidence base studies and corporate strategies; and
  - iii. The deliverability of the dwelling requirement in light of the requirement of TAN 1 for the Council to demonstrate a 5-year supply of land on adoption of the LDP.

### **The 2008 and 2011 Welsh Government Population and Household Projections**

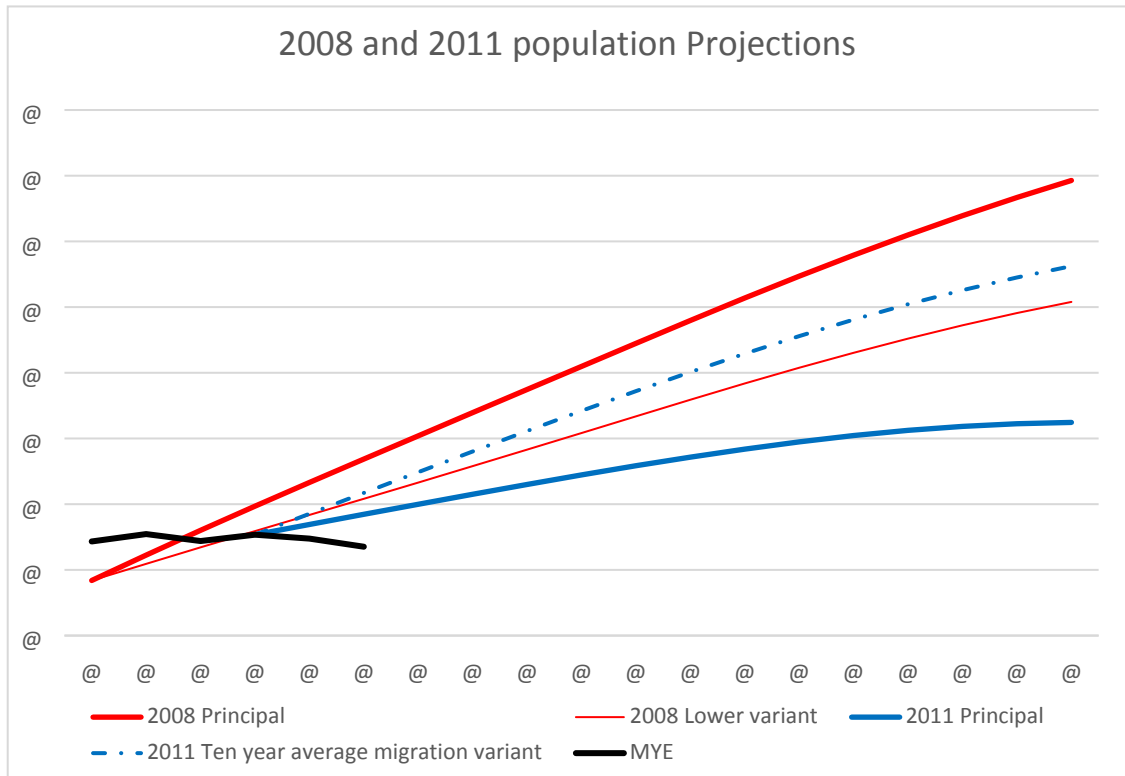
- 5.3. The Population and Housing Topic Paper (May 2015) and update to it (January 2016) (Examination document - EB35) provides further detailed information on the following:
- The use of the Welsh Government Population and Household projections on page 18, paragraphs 4.10 to 4.12;
  - The 2011 Population and Household projection on pages 18-20, paragraphs 4.13 to 4.22 and the predicted change in number of households and average household size in Table 9;
  - Implications of predicted changing household formation and size on pages 20 to 22, paragraphs 4.23 - 4.30
  - Projected age structure of the Powys population on pages 22 to 23, paragraphs 4.31 to 4.34
  - The variants of the 2011 Population and household projections including the 10-year migration variant on pages 23 -24, paragraphs 4.35- 4.36.
  - Comparison between the 2008 and the 2011 Population Projections – pages 25 to 31
  - Using the 2008 and 2011 Population and Household Projections – pages 32 to 43

### **Comparison between the 2008 and 2011 Population Projections**

- 5.4. The graph below (Fig. 3) show the 2008 (red line) and 2011 (blue line) principal population projections as well as the different variant projections. The mid-year estimates from 2008 to 2015 are also shown (black line) which is showing signs of the population growing at rate approaching that predicted in the 2011 principal projection but significantly below that

predicted in the 2008 principal projection due to the latter being based a 5-year period of buoyant economic growth.

**Fig. 3 - Comparison of the 2008 and 2011 Population Projections showing MYE**



Sources: 2008/2011 Welsh Government Population Projections © Crown Copyright  
 2012/2013 Office for National Statistics Mid Year Population Estimates © Crown Copyright

**WG 2008 & 2011 Household Projections and 2011 Census**

- 5.5. The 2008-based household projections estimated the number of households in Powys (including BBNPA area) at 2011 to be 61,398, increasing to 71,712 households by 2026, equating to an increase of 9,070 new households (excluding BBNPA area) being forecast. The household growth of 9,070 households predicted under the 2008 projections is significantly higher than the requirement of 3,784 additional households by 2026 under the 2011-based projections.
- 5.6. The 2008-based projections estimated the number of households at 2011 to be 61,398 whereas the actual number of households at the time of the 2011 Census was 58429. The projections therefore estimated a significantly larger number of households at 2011 than there actually were and continue to predict large increases in the number of households for the whole period. This may be due to several factors, such as the projections being based on a period of high in-migration and a large reduction in average household size which has not reduced at the rate anticipated.

- 5.7. The large variation between the predicted households at 2011 under the 2008-based projections compared to actual households under the 2011 Census supports the Council's view that the 2008-based projections were too high and would have required an annual rate of house building never before experienced in Powys.

### **The 2011 Principal Projection (5-year trend) and 10-year migration variant**

- 5.8. The Population and Housing Background Paper (May 2015) discusses in detail on pages 36 to 44 the characteristics of both the Principal projection and the 10-year migration variant. However, in order to provide clarity and context to this Paper the differences between the two projections are summarised below and also an explanation is provided for the decision to use the Principal projection as a starting point to derive the dwelling requirement figure.

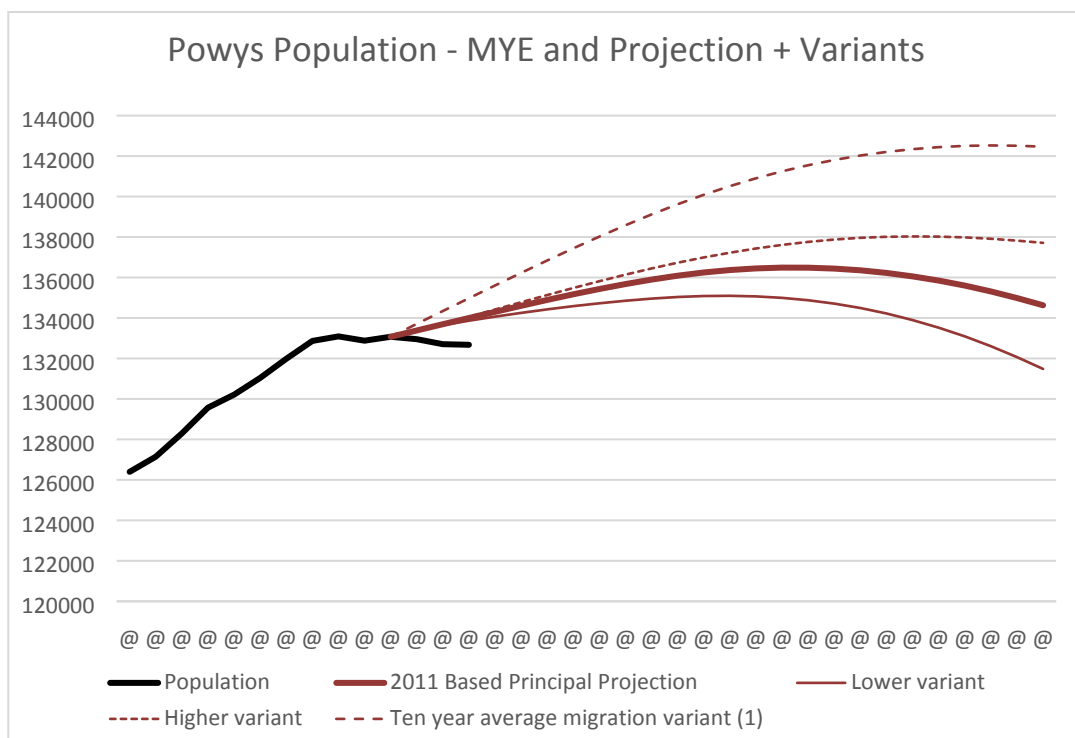
### **The Principal Projection**

- 5.9. The 2011 Principal projection assumes a continuation of the natural change and migration rates experienced in the five years preceding 2011. This projects a population increase for the County (excluding BBNPA plan area) of 2813 people by 2026, which equates to 187 new residents per annum over the plan period. Deaths exceed births in 2011 and over the plan period, this gap is predicted to increase (from 181 in the first year to 453 in 2026). This excess of deaths over births means by the end of the plan period, the population of Powys is, expected to peak and fall after 2026 as the graph in Fig.2 shows. It is, considered that the natural change components of the Principal projection are feasible given the long- term trends and known demographic changes taking place. Net migration is expected to be positive over the Principal projection period (a net figure of 381 UK migrants moving in and 24 overseas migrants in migrating per annum) resulting in a net gain of 405 people per annum, 6075 over the plan period.
- 5.10. The number of households in Powys projected by 2026 is 62,964 (2011 Principal projection) which equates to a growth of 4,535 households between 2011 and 2026 which when revised to the Powys LDP area (minus 17.74% for the BBNPA) is 3,784 households. When the household number of 3784 is converted to number of dwellings (plus 8%, as explained in section 6 paragraph 6.9), 4087 dwellings would be required over the LDP period, which equates to 272 dwellings per year.
- 5.11. The Principal Projection predicts that by 2026 there will be less males and females of working age for all age groups up to the age of 65. The decline in working age population over the projection period and increase in the number of elderly people, who will not be working, is again likely to have implications for the economic prosperity of the County. There will be not only be potentially fewer workers in the age group to occupy jobs but also fewer people of the age (40-55 age) with the greater experience and more skills. The graph in Fig.3 shows a downward sloping line predicted by the Principal projection for the population of Powys after 20206 which the Council aims in the LDP to prevent. Corporately the Council is developing a strategic approach that understands and addresses the impacts and implications of this key issue to plan for the future well-being of Powys.

**The 10-year migration variant**

5.12. The 10-year migration variant was released by the Welsh Government, which by taking a longer trend period was considered to provide a more balanced forecast and not so heavily influenced by years affected by the economic downturn. Consequently, the average annual migration deduced from the 10-year migration variant is 681 compared to 405 derived from the Principal projection (5-year trend period). For this reason, the Ministerial letter from Carl Sergeant (10 April 2014) (see Appendix 1) sent to all local planning authorities in Wales, advised the consideration of the 10-year migration variant instead of the Principal projection when deriving their housing requirement figures for their LDPs. The number of households predicted by the 10- year migration variant when converted to dwellings (1:1.08) gives a figure of 5863 dwelling up to 2026, which equates to an annual amount of 391 dwellings.

**Fig.4 Graph showing Population of Powys, 2011 population projections and variants**



Source: Mid-year source: Office for National Statistics © Crown Copyright. Projections - 2011-based Welsh Government local authority population projections for Wales, 2011 to 2036 © Crown Copyright

**Conclusion on the use of the 2011 Principal Projection**

5.13. The Council recognises that the Principal projection is based on a 5-year trend period that was affected by a severe economic downturn. Consequently, its forecasts for net-migration and dwelling numbers are at a level that were considered by the Welsh Government to be too pessimistic a basis on which to plan up to 2026. Conversely, due to the relatively slow recovery of the Powys economy out of the recession, the net migration figure of 681 predicted in the 10- year migration variant is not, considered feasible by the Council when compared to recent net migration figures in recent MYEs at only 18 in 2013 and 174 in 2014.

- 5.14. In contrast to the Welsh Government's viewpoint regarding the pessimistic nature of the Principal Projection figures, the Council is confident in using the Principal Projection as a starting point and considers this the most robust and prudent approach. Current evidence points to the fact that the underlying assumptions of the 2011-based Principal Projection are more accurate than those assumptions which underpin the alternative variant projections. Whilst there is a recognised pick-up in the market conditions since 2014, signified by a number of indicators including a marked increase in net migration in 2014/2015 to 174 compared to 2013/14 when it was only 18 this is still some way short of the 405 annual net migration figure included in the 2011 based Principal Projection, although a return to these levels is conceivable. A clear trend cannot be identified from the most recent MYE and therefore the next MYE due to be released in June 2016 should provide a better indication on the direction and the scale of net migration in Powys. Meanwhile, the Council do not consider it sound to plan for new housing on the basis of the 10-year net migration variant of the latest household projections as this must be viewed as too optimistic a scenario. The available evidence does not support the likelihood of a return to migration figures of this level within the lifespan of the Local Development Plan, compounded by the fact that population is expected to peak at the end of the Plan period (2026) and decline thereafter.
- 5.15. The Council, however, is confident in using the Principal projection as a starting point due to a recognised pick up in the market conditions since 2014, signified by a number of indicators including a marked increase in net migration in 2014/2015 to 174 compared to 2013/14 when it was only 18. A clear trend cannot be identified from the most recent MYE and therefore the next MYE due to be released in June 2016 should provide a better indication on the direction and also the scale of net migration in Powys.
- 5.16. The other indications are discussed in more detail in Section 3 of this paper and relate to the delivery of the dwelling requirement figure. Section 3 discusses the up-turn in dwelling completions in 2015/2016 being at 315 (to be confirmed by the JHLAS 2016) compared to previous years and also signs of increased developer activity since 2014 with there being evidence of an increase in pre-planning application enquiries and planning applications submitted and consented.

#### **Other factors considered for deriving the dwelling requirement figure**

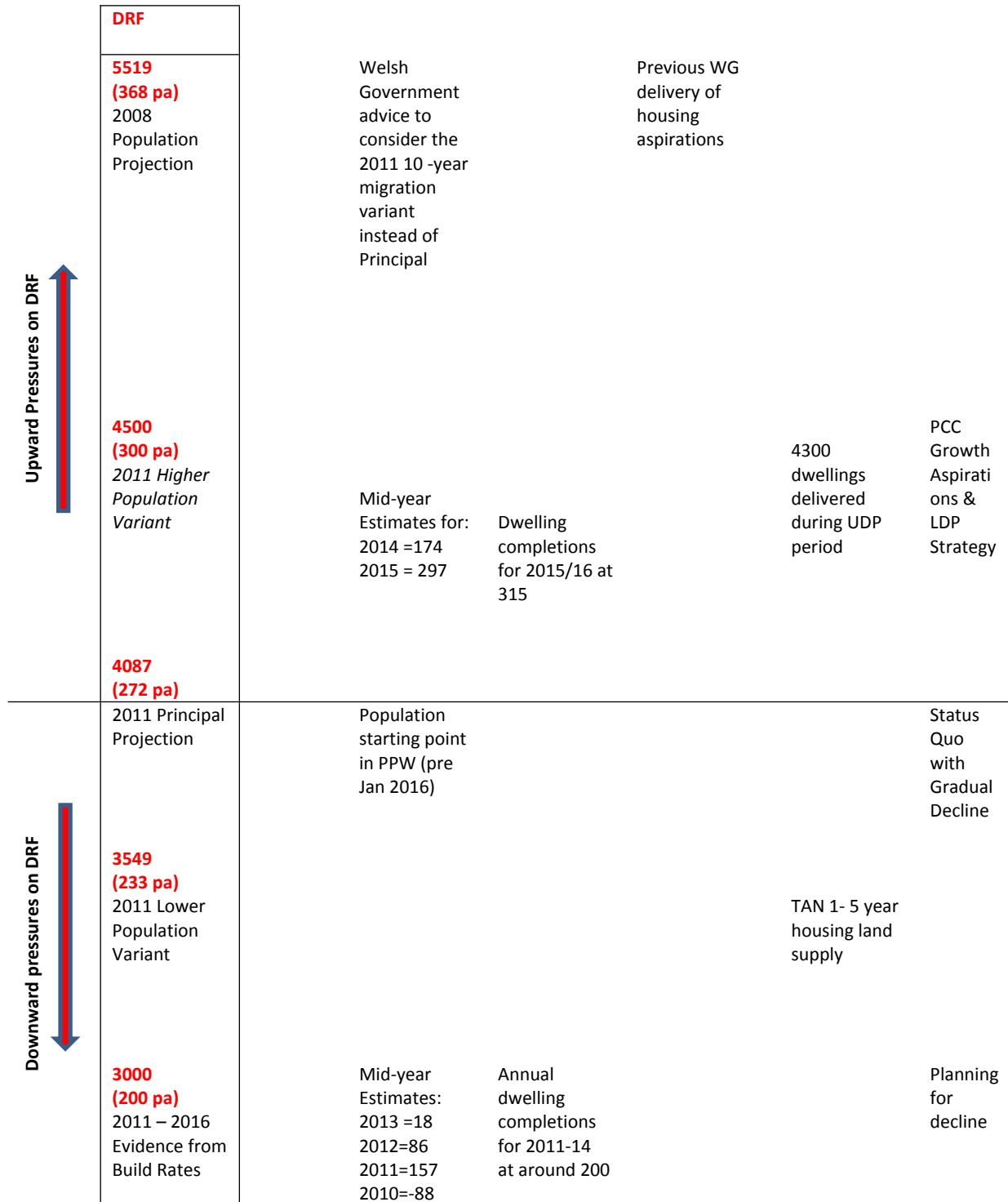
- 5.17. Having accepted the 2011 Principal projection as a starting point, this section outlines the other material factors that the Council has considered in deriving the dwelling requirement figure for the LDP.
- 5.18. PPW at paragraph 9.2.1 (2016) states that in planning the provision for new housing, local planning authorities take into account the following factors:
- People, Places, Futures – The Wales Spatial Plan;
  - Statutory Code of Practice on Racial Equality in Housing – Wales;
  - the Welsh Government's latest household projections;
  - local housing strategies;
  - community strategies;
  - local housing requirements (needs and demands);

- the needs of the local and national economy;
- social considerations (including unmet need);
- the capacity of an area in terms of social, environmental and cultural factors (including consideration of the Welsh language) to accommodate more housing;
- the environmental implications, energy consumption, greenhouse gas emissions and flood risk;
- the capacity of the existing or planned infrastructure; and
- the need to tackle the causes and consequences of climate change.

5.19. Drawing from the list of factors contained within paragraph 9.2.1 Fig. 4 illustrates how these have been considered alongside the 2011-based projections that influence the setting of the dwelling requirement figure. The diagram shows graphically how the various factors would influence the housing requirement either deviating above or below the dwelling number of 4087 dwellings.

5.20. The bullet points that follow the diagram list the various factors that have an influence on the setting of the dwelling requirement figure.

**Fig. 5 – Diagram showing the various pressures influencing the Dwelling Requirement Figure (DRF) either being above or below the dwelling figure derived from the 2011 Principal projection of 4087**





### **Upward factors influencing the dwelling requirement figure**

- Ministerial letter (April 2014) sent by Carl Sergeant all to local planning authorities recommending caution in using the 2011 Principal projection because it was based on a period that was affected by recession and to instead consider using the 10-year migration variant projection trend which has longer trend period resulting in a more balanced projection.
- The latest Mid- Year Estimates (dated June 2015) for the year 2014 showed an upturn in the net migration of 174 contrasts to 18 for 2013. This increase in net migration is one of the indications that the economy is starting to recover and suggests that it is on course to reach annual net migration level of 405 predicted in the Principal projection.
- To meet the objectives and aspirations of the Council contained in its various strategies including the Single Integrated Plan – ‘The One Powys Plan’ and the Local Housing Strategy in relation to the many benefits that new housing developments bring to settlements and their communities including importantly affordable homes.
- The upturn which has been apparent in the Powys economy particularly since 2014 has seen an increase in the number of pre-application enquires and planning applications being submitted across Powys. Increased activity by developers has translated into a significant increase in the number of completions in 2015/16 with a preliminary figure of 315 dwellings that needs to be confirmed in the JHLAS (2016).
- Past completion rates which over the last 11 years have included three years of 400+ dwellings per annum and the most recent completion figure for 2015/2016 of 315 dwellings. This suggests that the requirement figure of 4500 dwellings (300 dwellings per annum) can be delivered by the construction industry with improving market conditions which would help the Council demonstrate a 5-year land supply in accordance with TAN 1.
- The Council’s objective to build more affordable homes (see paragraph 5.21 in this paper in relation to the Draft Local Housing Strategy). This will contribute to the delivery of houses and therefore justifies a more optimistic.
- Registered Social Landlords (RSLs) planning to intensify their build programmes in Powys by means of building low priced market houses in order to use the profits from the sales to build more affordable homes.
- Local evidence including the Local Housing Market Assessment from which a target has been set in the LDP for 1257 affordable dwellings. The greater number of market houses that are planned for increases the prospects of gaining new affordable housing through planning obligations.
- Because of the economic downturn and a period whereby the recovery from it has been slow, there is what is considered a ‘pent up’ demand for new houses. As market conditions steadily improve it provides the necessary the confidence to first time buyers seeking to buy their own homes and also for others to rent property. The issue of suppressed household growth is important as the 2011-based projections provide forecasts for future housing based on these past trends which would not make any provision for the backlog of household formation (‘pent up demand’) during the downturn years.
- 4300 dwellings were delivered during the 15 year period of the UDP

### **Downward factors influencing the dwelling requirement figure**

- Mid-year estimates from recent years have shown that the annual net migration number although increasing in 2014 to 174 from 18 in 2013 is below the number of 405 predicted in the Principal projection and far below the number predicted in the 10-year migration of 681 per annum.
- Annual completions in the last 3 years up to the latest figure for 2015/16 have been around 200 units per annum that, which is well below the 300 figure required to meet the dwelling requirement of 4500. If 200 dwellings per year were to be used for the LDP dwelling requirement it would only equate to 3000 dwellings.
- The requirement of TAN1 (January 2015) for LPAs to be able to demonstrate a 5 year supply and deliverability with the residual methodology is a significant factor in deriving the figure. If an annual target figure is not being delivered this will result in any residual amount that is not built being added to the following year's annual target which will have the knock- on effect of preventing the Council demonstrating a 5-year land supply. The annual dwelling requirement inclusive of the residual figures is currently at 348

### **Evidence base studies informing the LDP**

5.21. The following evidence base studies were considered by the Council to derive the dwelling requirement figure:

#### ***Local Housing Market Assessment (LHMA) (2016)***

5.22. PPW (Paragraph 9.2.2) (2016) identifies the need for regard to be had to other sources of local evidence, including the need for affordable housing as identified by the Local Housing Market Assessment (LHMA.) The LHMA as updated in 2014 has been produced to assess housing needs over a 5- year period (2011-2016). The Assessment identified a need for affordable dwellings of 765 dwellings over the first 5 years of the LDP period, which equates to 153 per annum and 2,295 in total over the 15-year plan period. It is considered unrealistic for the planning system to meet this level of affordable housing and thus the importance of other delivery mechanisms to release affordable homes is paramount. Nevertheless, the planning system has a fundamental role to play and the LDP, through its combination of affordable housing policies, can certainly contribute to the overall supply of affordable homes in the county.

5.23. The affordable housing target of 1257 dwellings is set for the LDP. This is 28% of the LDP dwelling requirement and has had regard to the findings of the LHMA.

#### ***Economic Needs Assessment (2013) and Addendum (2015)***

5.24. Findings from the economic forecasting undertaken as part of the original Assessment, together with the revised labour force analysis and population projection data produced as part of the Addendum suggest that employment requirements and aspirations within Powys are not driving the housing market in the County.

## The Council's Corporate Strategies

5.25. The Council's corporate objectives and aspirations are contained within a number of strategy documents including:

- **One Powys Plan 2014-15** –this is an overarching Council document that sets the strategic direction for service delivery in Powys. It sets out the vision of the Council and key partner organisations. The plan includes a general action plan to 'align' the LDP to ensure it provides sustainable infrastructure.
- **Draft Local Housing Strategy (LHS) (2016)** – the Councils' vision expressed in this document is 'Ensuring a secure future in suitable housing for everyone in Powys' and includes an objective for the Council itself to build more affordable homes. The Strategy recognises that affordable homes can be provided by the planning system through policies in the LDP, which set target contributions for affordable homes as part of new open market housing developments. Alongside the planning system there will be development programmes delivered by housing associations to deliver affordable housing and the exit from the Housing Revenue Account Subsidy regime means that the Council is once again able to develop to meet housing needs. Although, not quantified in the LHS it is estimated that this new source can contribute up to **720** new Council homes in Powys (including the BBNPA area) over the next 30- years which the Council considers is approximately 150 to 200 new dwellings up to 2026.
- **A Regeneration Strategy for Powys: A New Approach (May 2011)** - The intention of the strategy was to put regeneration at the forefront of the Council's functions and to outline how the Council would deliver the identified priorities in partnership with other agencies across the County. One of the objectives of the strategy is housing improvement as a regeneration strategy.
- **Economic Development Strategy for Powys County Council (January 2016)** – this strategy document recognises the economic challenges facing the County and contains initiatives to help retain younger people and attract people of working age into the County. The four objectives of the strategy are:
  - i. Grow Powys' existing businesses
  - ii. Bring new businesses to Powys
  - iii. Increase visitor numbers to Powys
  - iv. Increase Powys' population of working age people
- **Powys Local Growth Zones Initiative** - Local Growth Zones operate in the three main towns of the County of Newtown, Llandrindod Wells and Brecon. The aim of the local growth zones is to help develop new and existing businesses within the towns by providing business support facilities such as conference centres etc.
- **The Joint Commissioning Strategy for Older People in Powys – Accommodation Commissioning Intentions 2016-2021.** Within this strategy the Council is looking to reconfigure and modernise long term residential care provision through the development of Extra Care Housing, including looking for new ways of making better use of existing older people's accommodation and allowing people to stay in their own home as long as possible using home based services. It is expected, that enabling more older people to stay in their own homes longer will result in less properties coming onto the housing market as before the Council policy and therefore the demand for new

housing will increase during the plan period. Due to the uncertainty about how this policy will operate no estimated requirement amount resulting from it has been derived.

**Summary**

- 5.26. Having accepted the 2011 Principal Population and Household Projections as the starting point for consideration against all the factors outlined above it is, considered that a deviation from the dwelling requirement figure is justified.
- 5.27. This deviation is required due to the recognition of the predictions from the Principal projection being based on a recession and the most recent MYEs for 2014 and 2015 showing a continuing upward trend at a relatively significant rate (the MYE for 2015 showing net-migration at 297 from 174 in 2014. Also the Council’s objectives and initiatives aimed at increasing the number of houses built in Powys are outlined in the above strategies and on this basis the Council has decided to deviate above the 2011 Population & household Principal Projection predicted dwelling number resulting in a DRF of 4500, a 10% increase in units.
- 5.28. A summary of the key considerations from which the dwelling requirement figure has been derived is provided in Table 6 below.

**Table 6 - Summary of Key Considerations for the LDP Dwelling Requirement Figure**

<b>Factors influencing the Requirement</b>	<b>Dwelling number</b>
2011 Population & household Principal Projection	4087
<ul style="list-style-type: none"> <li>• Recognition that the 2011 Principal projection is based on period severely affected by recession</li> <li>• The Council’s corporate strategies that include planning for ageing population; helping to reverse the decline in population predicted in Principal projection by attracting young people; and provide more affordable homes.</li> <li>• Past-completion rates including the most recent for 2015/16 of 315 dwellings signify that 4500 dwellings can be delivered during the plan period.</li> </ul>	4500 in order for the Council to achieve its strategic aims & objectives
<b>Dwelling Requirement Figure</b>	<b>4500</b>

**The Delivery of the LDP Dwelling Requirement of 4500**

- 5.29. Technical Advice Note 1 (TAN1) – Joint Housing Land Studies (JHLAS) with its requirement for local planning authorities to demonstrate a five-year land supply when the LDP is adopted means that the dwelling requirement needs to be set at a realistic figure that can be delivered by the house building industry.
- 5.30. The dwelling requirement figure of 4500 equates to 300 dwellings over the entire plan period 2011-2026. It is, recognised, however, that the first few years of the plan period have had annual completions rates below 300 at about 200 dwellings per annum. Consequently the these underperforming years that have not delivered the annual dwelling requirement of 300, and therefore the residual amount needs to be added which results in 348 dwellings per annum needing to be delivered up to 2026.

- 5.31. There are, however, some indications that the housing market in Powys has started to improve since 2014. Most significantly there has been a clear upturn in the number of completions with 315 dwellings recorded for 2015/2016. This is a marked increase from previous years but not unexpected considering the upturn experienced by the Council's Development Management section in the number of pre-application enquiries and planning applications submitted since 2014 resulting in an increased number of new dwellings being granted planning permission. With an adopted LDP containing new housing allocations it is expected that confidence levels amongst landowners and developers will be boosted and market conditions should improve further which will ensure that the dwelling requirement of 4500 is delivered.
- 5.32. The indicators showing that market conditions have improved since 2014 include the following:
- A significant upturn in the number of pre-application enquiries
  - An increase in the number of planning application granted consent for new and replacement residential developments.
  - A significant increase in the number of dwelling completions for 2015/2016 at 315 dwellings compared to previous years (at around 200 dwellings).

#### **Pre-Planning Application Advice Enquiries**

- 5.33. Although records chargeable pre- application advice enquiries (PPAE) for new residential development (including replacement dwellings) only began in July 2014, Table 7 below shows there has been an increase in the number of PPAEs in 2015 compared to 2014.

**Table 7: Numbers of Pre-planning application enquiries between July 2014 – December 2015**

	Date received		
	July - December 2014(6months)	January – June 2015 (6 months)	July - December 2015 (6 months)
Total number of queries Received	110	300	
Number of queries relating to Residential Development *	53	70	70
Average per month	9	12	12

\*Residential development - 1 dwelling + (includes queries re: replacement dwellings).

#### **Increasing number of permissions granted for dwellings between 2011 -2015**

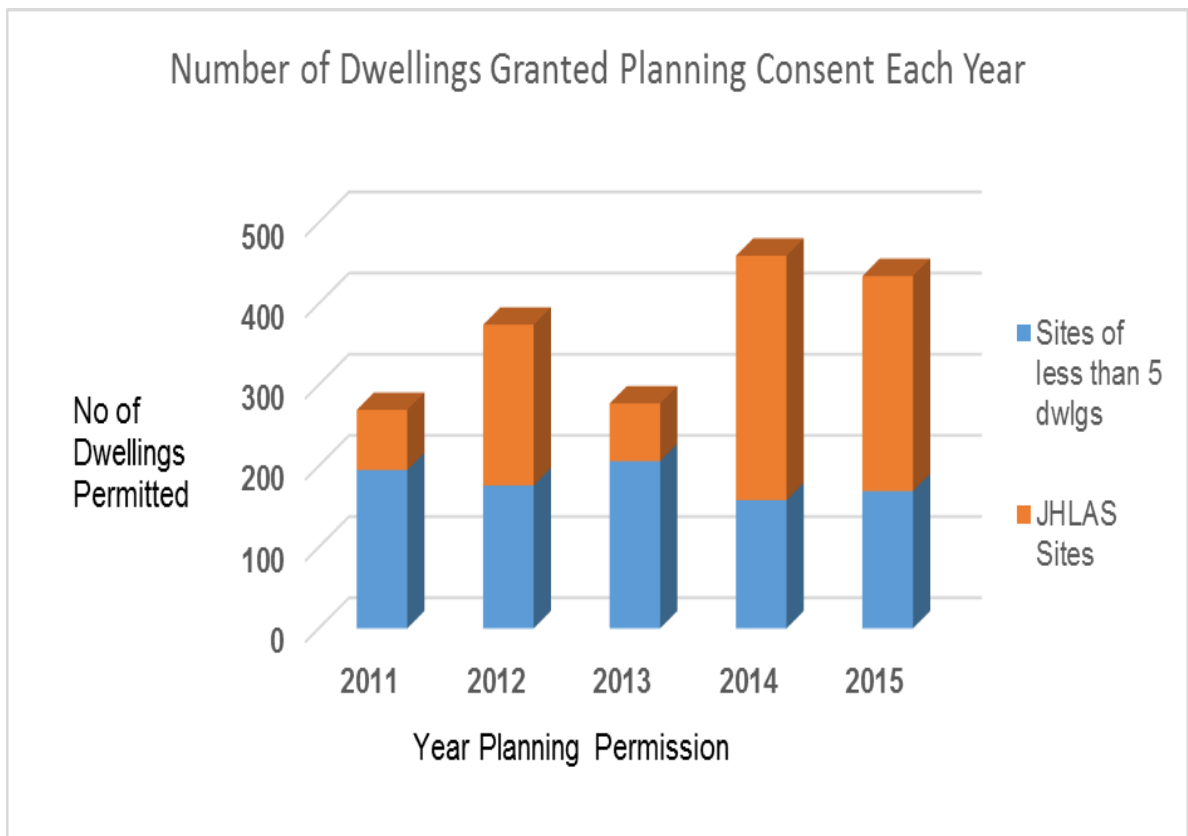
- 5.34. Data was used from two different sources, including the JHLAS (Joint Housing Land Availability studies) used for the larger sites (5 units or more). Whilst for small sites (5 units or less) data was, taken from a small sites monitoring system (this records all planning consents resulting in four or less dwellings).
- 5.35. For both data sources there were a number of instances where more than one application for a dwelling unit was encountered. This may have been outline and reserved matter

applications, or a Section 73 application to vary the time limits conditioned in the original consent.

5.36. The data has been recorded on a yearly basis, however, the small sites monitoring system changed from monitoring 1st January - 31st December to 1st April – 31st March in 2015 (see table 8 below) in order to make it consistent with the JHLAS studies.

**Table 8: Numbers of dwellings granted consent between January 2011 and April 2015 – Sites of less than 5 dwellings and JHLAS sites with 5 and more dwellings**

Year of Permission	Dwellings Permitted		
	Sites of less than 5 dwlgs	JHLAS Sites	Total
2011 (01/01 - 31/12)	195	74	<b>269</b>
2012 (01/01 - 31/12)	176	198	<b>374</b>
2013 (01/01 - 31/12)	206	71	<b>277</b>
2014 (01/01 - 31/12)	158	301	<b>459</b>
2015 (01/04 - 31/03)	169	265	<b>434</b>
<b>Totals:</b>	<b>904</b>	<b>909</b>	<b>1813</b>
2015 (Jan - Apr)	36		



**Fig. 6 Number of dwellings consented between 2011-2015 on sites with less than 5 dwellings and JHLAS sites with (5 and more dwellings)**

- 5.37. The chart (Fig. 6) above shows the number of dwellings given consent each year for five years. The data is divided between those dwelling units recorded through the JHLAS studies and those recorded through the small sites monitoring system.
- 5.38. It can be seen that in the first three years of the LDP period the dwellings being permitted on small sites made up a large proportion of the total number of dwellings permitted. However, 2014 and 2015 have seen an increase in the number of units being granted permission on JHLAS sites. The increase in the proportion of dwelling units on larger sites being permitted correlates as would be expected to an overall increase in the total number of units being permitted each year.

### **Increasing numbers of dwelling completions**

- 5.39. The increased activity in the housing market which has been evident since 2014 has resulted in a pick-up in the number of dwelling completions in the last 12 months with a preliminary figure of 315 completions in 2015/2016 (to be confirmed by the 2015/16 JHLAS). This number of completions indicates that the house building industry has the capacity to deliver the annual dwelling requirement of 348 which includes the additional residual amount of 48 dwelling per year resulting from the underperformance of the first 4 years of the plan period (2011 to 2014/15), when annual completions were around 200.
- 5.40. Although completion rates for new build dwellings are affected by land supply and may have been constrained by housing allocation constraints in the existing UDP, it is worthwhile looking at past annual build rates to be able to gauge the capability of the construction industry to deliver the houses that will meet the annual housing requirement figure.
- 5.41. Table 9 below shows annual completions for the Powys LDP area according to records from JHLAS studies from April 2004 to April 2014. The annual housing completion rates for the last 11 years in Powys shown in the table clearly illustrates the impact that the recession had on the numbers of dwellings being completed after 2008. Completions fell from a peak in the years 2005/06 and 2006/07 of 425 to a low of 98 in 2011/12 with annual completions in the last 4 years being at about 200 dwellings.

**Table 9: Past Completions 1 April 2004 to 1 April 2014 (source: JHLAS)**

Year	Small Site Completions (Sites of 1-4 Dwellings)	Large Site Completions (Sites of 5+ Dwellings)	Total Completions
2004/05	126	294	420
2005/06	131	294	425
2006/07	131	294	425
2007/08	126	240	366
2008/09	57	102	159
2009/10	121	132	253
2010/11	83	156	239

2011/12	83	15	98
2012/13	76	147	223
2013/14	61	123	184
2014/15	54	147	201
*2015/16			*315
Total	995	1797	2993
Average Annual Completions (11 years)	99	180	272

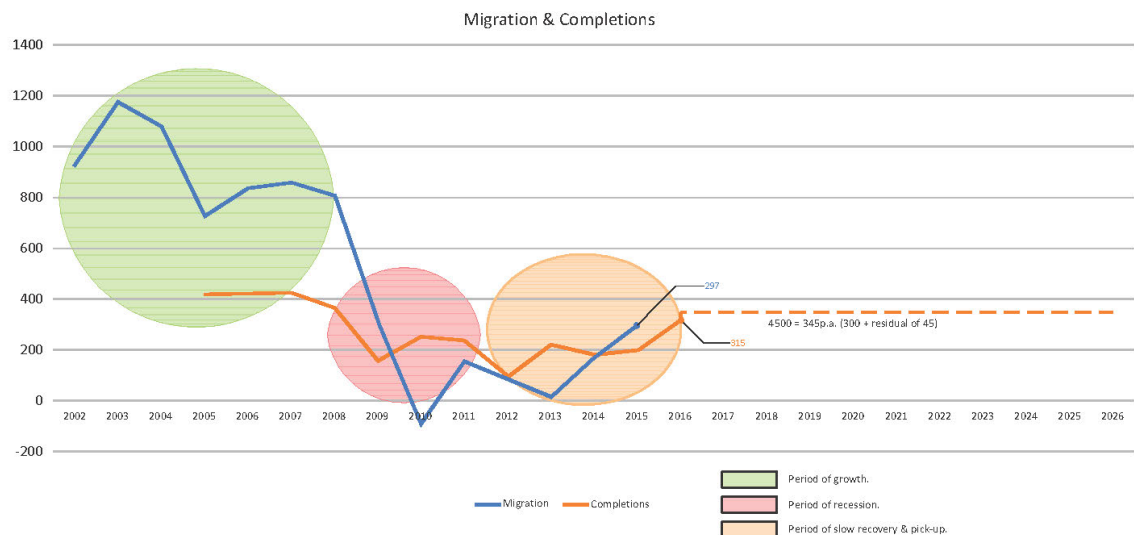
\*315 completions to be confirmed in the Joint Housing Land Availability Study (JHLAS) for 2015/16

**Table 10: Average Annual completion rates using JHLAS information – longer term trends**

2004/05-2009/10 (5 years)	2010/11-2014 /15(5 years)	2005 to 2015 Average (11 years)
325	189	272

5.42. The Council recognises that the number of completions in the most recent years of the 11 years have been relatively low with average rate of 189 for the last 5 years (NB This figure does not include the latest preliminary completion figure 2015/2016 which is yet to be conformed in JHLAS). This contrasts to the completion rates in the years that led up to the recession when dwelling numbers were over 400. The average annual build rate for the 11-year period was 272 dwellings. Although the preliminary figure for dwelling completions in 2015/2016 is 315, it is considered that completion rates are unlikely to reach 400+ during the plan period as the economy is not forecast to return to what it was in the years leading up to the start of the recession in 2008.

**Fig 7 – Periods of Migration and Completions**



5.43. There are a number of factors that should see numbers of annual completions continue to rise over the LDP period including the following:



- The economy steadily improving with there being definite signs of a 'pick-up' in Powys since 2014.
- An adopted LDP including fresh housing allocations should help boost confidence amongst landowners and developers and see more sites coming forward.
- House prices increasing in other parts of the UK including neighbouring Shropshire, the west Midlands and Swansea but prices in Powys itself having remained largely static which may result in more people moving to the County including early retirees who now have the ability to access their pensions pots earlier.
- Due partly to the economic downturn and lack of borrowing/credit available there has been a delay of young people either buying or renting their own house resulting in a pent up demand. However, this 'pent-up' demand is beginning to be released with improving credit conditions and government initiatives to help people purchase their own home including Help to Buy ISA schemes to help people save for the deposit; shared equity schemes and parents better able to help their children buy their own home due to reasons such as it being made easier for people to access their pension pots earlier.
- Registered Social Landlords (RSLs) are becoming more active in building low cost market houses.
- The Council's programme to build more affordable houses with funding from such sources as Social Housing Grant

## 6. Conclusion

- 6.1. The starting year of the Powys LDP period of 2011 and the years up to 2014 has coincided with a period when the economy has been in slow recovery from a deep economic downturn. In this period the levels of net migration and dwelling completions were low when compared to the years preceding the recession that experienced high levels of growth, a level unlikely to be reached again during the plan period.
- 6.2. The graph in Fig. 7 shows the three periods with contrasting economic conditions that have been identified since 2002 including a period of high growth and a deep recession. Although the immediate aftermath of the recession has seen only a slow rate of growth. However, there have been recent signs of confidence returning to the housing market in Powys. The Council considers that the 'pick-up' in the market since 2014 confirms that the deviation above the Principal projection (4087) of the dwelling requirement figure to 4500 is a reasonable one to take forward in the LDP. This is having taken into account all the factors discussed in this paper including the Council's objectives in its various corporate strategies as well as the need trends in the delivery of the dwellings.
- 6.3. It is considered that the dwelling requirement figure of 4500 will allow the aims and objectives contained within the Council's various corporate strategies to be achieved, as well as the Council's socio-economic aspirations set out under the Plan's Strategy, LDP Objective 1 and Strategic Policies SP1 (Housing Growth, FFCs), H1 (Housing Provision), H4 (Affordable Housing Provision) and E1 (Employment Requirements).

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## Penderfyniad ar yr Apêl

Gwrandawriad a gynhaliwyd ar 07/06/16

Ymweliad â safle a wnaed ar 07/06/16

**gan Vicki Hirst BA(Hons) PG Dip TP  
MA MRTPI**

**Arolygydd a benodir gan Weinidogion Cymru**

**Dyddiad: 30/06/16**

## Appeal Decision

Hearing held on 07/06/16

Site visit made on 07/06/16

**by Vicki Hirst BA(Hons) PG Dip TP MA  
MRTPI**

**an Inspector appointed by the Welsh Ministers**

**Date: 30/06/16**

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**Appeal Ref: APP/T6850/A/15/3141599**

**Site address: Land west of Cwmanod Cottage, Llanddew, Brecon, LD3 9SU**

**The Welsh Ministers have transferred the authority to decide this appeal to me as the appointed Inspector.**

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
  - The appeal is made by Mr & Mrs M and D Lewis against the decision of Powys County Council.
  - The application Ref P/2014/0920, dated 31 August 2014, was refused by notice dated 27 July 2015.
  - The development proposed is the change of use of land for gypsy – traveller site for single family, with associated development (hard standing and utility block).
- 

## Decision

1. The appeal is allowed and planning permission is granted for the change of use of land to a gypsy traveller site for a single family to include the siting of two caravans/mobile homes and utility block and all associated works at land west of Cwmanod Cottage, Llanddew, Brecon, LD3 9SU in accordance with the terms of the application, Ref P/2014/0920, dated 31 August 2014, and the plans submitted with it, subject to the conditions in the attached schedule.

## Procedural Matters

2. The description of development in the heading above has been taken from the application form. An amended description was agreed between the main parties prior to the application being determined to more accurately describe the development being sought. It is on the basis of the revised description as set out in my formal decision above that I have determined the appeal. It was also confirmed at the hearing that the proposal did not relate to any commercial use of the site and that either a permanent or temporary permission was being sought.
3. The submitted application documents included a supporting statement which contains personal information. Powys County Council (the Council) did not publish the document on its website due to its content but retained it on the working file. The Planning Inspectorate has not published it on the Planning Portal as it contains personal and potentially defamatory content. It was agreed at the hearing that as interested persons may not have been aware of the statement that it would be

prejudicial and unfair to interested persons to take it into account. It was agreed that no prejudice would arise to the appellants if it was not taken into account as the relevant information within it had been provided in other documents as part of the appeal submissions. As such all parties agreed that the document should be disregarded and I have therefore not taken it into account in reaching my decision.

### **Main Issues**

4. The main issues in this case are:

- whether the proposal would provide an appropriate site for a gypsy and traveller site, in particular having regard to its effect on the character and appearance of the area and its sustainability credentials; and
- whether there are other material considerations that would justify granting permission in particular having regard to the general need and supply of gypsy and traveller sites in the area and the personal circumstances of the appellants.

### *Appropriateness of Site – Policy Considerations*

5. Policy HP20 of the Powys County Council Unitary Development Plan (UDP) relates to gypsy caravan sites. It supports their provision subject to a number of criteria, including meeting the needs of gypsies who have regularly resided in or resorted to the area and there are no other sites available, the development to not be visually intrusive in the landscape and incorporate screening provisions and the proposal being well related to existing community, social and educational facilities. The supporting text states that proposals for development of isolated small sites will not be permitted.
6. Welsh Assembly Government Circular 30/2007: "Planning for Gypsy and Traveller Caravan Sites" (Circular 30/2007) supports the principle of gypsy and traveller sites being located in rural settings, where not subject to specific planning or other constraints. The Circular advocates that sites should be sustainably located. In assessing the suitability of sites, the Circular advises local authorities to consider a range of sustainability criteria and to be realistic about the availability of alternatives to the car to access local services. It states that over rigid application of policies that seek a reduction in car borne travel would not be appropriate.
7. Powys County Council (the Council) does not dispute the gypsy status of the appellants or their family. There is no evidence before me to suggest that the appellants or their family are not gypsies and from the evidence given at the hearing I am satisfied that the appellants and their family are gypsies for the purposes of the definition at paragraph 3 of Circular 30/2007.
8. Local and national policies support the provision of gypsy and traveller sites in principle. Therefore, the main considerations are whether the proposal would be visually intrusive in the landscape and harmful to the character and appearance of the area, whether it would be sustainably located and whether there is an overriding need for the development.

### *Character and Appearance*

9. The site is located within the countryside and comprises a small area of cleared woodland accessed via a single carriageway rural lane through an existing gateway on its southern boundary. The site is bordered by mature woodland to the west, the lane to the south, a further area of woodland and the River Honddu to the north and an area of cleared land to the east situated on a lower level, part of which is within the

appellants' ownership and part of which it is understood is in the ownership of Powys County Council. The property, Cwmanod Cottage lies to the east on the opposite side of the road bridge crossing the river. Two public footpaths are located to the east and south east, with a further footpath to the north. The site rises steeply from east to west. At the time of my visit the site was vacant. There was evidence of a stoned area in the western portion of the site.

10. The site is not the subject of any statutory or local landscape designations. The boundary of the Brecon Beacons National Park (BBNP) lies to the immediate south and to the east. The National Park designation affords the area the highest status of protection in landscape terms and I have had regard to the statutory purpose of National Parks to conserve and enhance the natural beauty, wildlife and cultural heritage of the area<sup>1</sup> in reaching my decision.
11. The LANDMAP assessment for the overall area describes it as a settled pastoral upland valley with well treed slopes with a scattering of farmsteads and rural dwellings on the valley sides. Settlements tend to be vernacular in style and complement the character of the landscape with views possible to the surrounding area but mostly channelled down the valley. The assessment gives the visual and sensory aspect of the landscape a high value.
12. The overall character of the area is of countryside and the proposed development comprising two caravans, a utility block and associated access, parking and hardstanding would be in direct contrast with the existing character of the area. I acknowledge the appellants' reference to the presence of caravans on farmyards and in gardens. Nonetheless these are viewed in association with other buildings and as ancillary elements to larger farms or dwellings. From my observations on site I do not find that individual caravans or caravan sites are a particular feature of the area.
13. The proposal would alter the tranquil, undeveloped nature of the site. Despite the presence of some vegetation there would be clear views of the development from the adjacent highway and from the bridge to the east. Whilst the mobile home would be set back from the highway and viewed against the backdrop of the woodland to the west, the elevated nature of the site would emphasise the development. The touring caravan would be positioned to the front of the site adjacent to the entrance and would be highly visible from the lane.
14. The proposal would also be visible from a short stretch of the public rights of way to the south east and north, the former being within the BBNP. However these views would be partially filtered by the presence of vegetation and in the case of the path to the north through the topography and distance. Whilst there would be some impacts to these paths, in the overall context of the enjoyment of these routes, I find that any harm would be limited to very short stretches.
15. I observed on my site visit that longer distance views would be limited due to topography, vegetation and the relatively small size of the proposal. As such I find that the impacts would be very localised and limited to the short stretch of highway to the south and east and limited portions of the public rights of way to the north and south east.
16. The appellants explained at the hearing that electricity provision to the site would require an additional length of overhead line and supporting poles taken from the

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<sup>1</sup> Section 61, Environment Act, 1995

existing line to the north. In the context of the wooded area I do not find that this would cause a significant increase in any visual harm.

17. Nonetheless from local viewpoints the proposal would be an alien feature in this attractive pastoral landscape. It would be visually intrusive in the local landscape and harmful to the character and appearance of the area and would not conserve the natural beauty of the National Park. In this respect the proposal would fail to accord with policies HP20 and ENV2 of the UDP.

### *Sustainability*

18. The site lies within approximately 600 metres of the village of Llanddew. It was confirmed at the hearing that Llanddew is defined as a small village in the UDP with a specified settlement boundary. It contains limited services. The larger settlement of Brecon lies approximately 2km distant and offers a range of services including health centres, shops and schools.
19. Whilst policy HP20 of the UDP requires sites to be well related to existing community, social, educational and other facilities no further clarity is provided. The appellants do not intend to rely on public transport for accessing services and would utilise a private car and Circular 30/2007 requires decisions to be made without over rigid application of policies that seek a reduction in car borne travel. I acknowledge the Council's view that the site is isolated and it is evident that Llanddew cannot offer day to day services. However in my assessment 2km is not an unreasonable distance for travelling to access local services in a rural area. I note, and whilst acknowledge that the site lies within the settlement boundary, that the Council has recently granted planning permission for housing and affordable housing in Llanddew which will similarly rely on services in Brecon.
20. Circular 30/2007 advises that issues of site sustainability are important not only for environmental issues, but also for the health and well-being of gypsies and travellers for matters relating to maintenance and support of family members and social networks. The appellants explained at the hearing that they have strong and long standing family and friend connections with the Brecon area and that the children, aged 6 and 8, attend the local schools. The location of the site close to Brecon and the publicly provided gypsy and traveller site at Kings Meadow where members of the family reside would enable family and social connections to be maintained and for the children to continue to attend the local schools, both now and in the future.
21. The site is also serviced by mains water and as stated above electricity could be gained from the supply that lies to the north. It was stated at the hearing that no phone line would be required as mobile phones would be used for both telephone and internet connection. A package sewage treatment unit would be provided for foul sewage.
22. I conclude that the site would provide an appropriate site for a gypsy and traveller site with regard to its sustainability credentials.

### *Other Material Considerations*

#### *Need and Supply of Gypsy and Traveller Sites*

23. At the time of the hearing the appellants were residing at Kings Meadow which provides gypsy and traveller accommodation in the Brecon area. It was confirmed at

the hearing that there is currently no other available gypsy and traveller site in the Brecon area.

24. The Council has a duty under the Housing Act 2004 and Circular 30/2007 to assess the need for gypsy and traveller accommodation. Where an assessment of unmet need is evident, there is a requirement to ensure that sufficient sites are allocated through the Local Development Plan (LDP) process. These duties reflect wider duties to promote equal opportunities and to prevent unlawful discrimination on the grounds of race.
25. The Council is currently preparing its LDP and which has reached deposit draft stage. It was confirmed at the hearing that the Council commissioned consultants to undertake a Gypsy and Traveller Accommodation Assessment (GTAA) and the assessment has been submitted to the Welsh Government. The GTAA is not in the public domain at present, but the Council stated at the hearing that it identifies a need for 3 additional pitches and the Council will be seeking grant aid to provide 4 serviced pitches at the Kings Meadow site. The appellants contended at the hearing that there is a need for some 7 pitches due to the doubling up on pitches at the Kings Meadow site and that no consideration has been given to the need for private pitches with no approach being made to the appellants to discuss their needs.
26. The Council stated at the hearing that the Welsh Government has queried why the GTAA has not been informed by a discussion with the appellants regarding their need for a pitch due to their long standing personal circumstances which I refer to below. Furthermore, it would appear that the GTAA does not consider the need for private pitches, which the Council contends would be assessed on a case by case basis against a criteria based policy in a similar manner to the UDP policy HP20.
27. Given the stage of preparation of the GTAA and the LDP I give them little weight. Nonetheless, even though there was not consensus between the main parties at the hearing on the number of pitches needed, there was agreement that there is a need for some additional pitches within the Brecon area. It is the Council's position that these can be provided at the Kings Meadow site.
28. Whilst policy HP20 of the UDP allows for the provision of sites subject to compliance with detailed criteria this is on the basis that there are no other sites available locally. This does not appear to address Circular 30/2007's recognition that some gypsies and travellers wish to find and buy their own private sites to develop and manage. On the evidence before me no actual provision has been made for private sites within the UDP and given the current status of the LDP and the current shortcomings of the GTAA there is no identifiable time frame for this to be addressed in the forthcoming development plan.
29. Circular 30/2007 also notes that an increase in the number of approved private sites may also release pitches on local authority sites for gypsies and travellers most in need of public provision. In this case, given there is a need in the area, the lack of identified other sites within the current development plan that could accommodate the appellants, and taking account that the provision of a private site would release a pitch at Kings Meadow that would go towards an identified need I afford these matters considerable weight.

#### *Personal Circumstances*

30. On the evidence before me it is well documented that the appellants experience difficulties living at the Kings Meadow site due to inter family conflicts. This has led to

Mr Lewis experiencing health problems which are substantiated by medical reports. It was explained at the hearing that Mr Lewis has to regularly sleep in a car due to the difficulties on the site and the conflicts have been taking place since 2000. The site is not managed by an on site warden and the difficulties on the site have implications for others residing there. The appellants consider that the situation does not provide a stable environment for the children who need to be accommodated in the area to enable them to continue their education in local schools.

31. It is evident that the appellants have attempted to find alternative accommodation and have resided in both unauthorised locations and have been provided a council house in Talybont and Brecon. However, they experienced harassment and found it difficult to adjust to living in bricks and mortar accommodation. The Council's Service Manager Housing Solutions stated in 2015 that the appellants are unable to reside on the same site as other family members with a mediator advising that it was unlikely that the parties could reside on the same site. The Council's Service Manager considered that in the interests of managing the Kings Meadow site it was recommended that the appellants find an alternative pitch/site in the Brecon area. The vacancy that this would create would assist in meeting a need on the site. The Council stated at the hearing that this was not the Council's agreed position and was the view of only one officer.
32. Nonetheless, the evidence before me demonstrates the difficulties on the site between the appellants and other family members, the lack of available alternative accommodation within the Brecon area, the attempts that the appellants have made to find other places to reside, and the need for the appellants' children to have a stable and safe home environment close to their education. I find these to be compelling reasons for the appellants to be able to secure suitable other accommodation in the Brecon area.

#### *Other Matters*

33. The site is not situated within a flood zone as defined by the Development Advice Map (DAM) referred to in Technical Advice Note 15: "Development and Flood Risk" (TAN 15) with the boundary of the flood zone being located to the north of the site.
34. The site is situated adjacent to a Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). On the evidence before me, including a bat and otter survey, road verge nature reserve re-instatement scheme and SSSI impact report, the proposal could be adequately conditioned to ensure that there would be no likely significant effects or harm arising to these statutory designations and I have no reason to disagree.
35. Concerns have been raised regarding highway safety. The appellants provided a transport assessment with their application and the Council's Highways Officer raised no objection subject to conditions. Whilst I note concerns at the width of the lane serving the site and the adequacy of nearby junctions within the village and wider surrounds, I am satisfied on the basis of the evidence before me and from my own observations on site that the additional traffic generated from one family would not cause any harm subject to conditions including one to control the size of vehicles on the site.
36. The property Cwmanod Cottage lies to the east on lower ground. Its western boundary comprises a mature hedgerow which the owner explained had been left to grow to provide screening should the appeal be allowed. Whilst this is acknowledged,



even at a maintained height the hedge would restrict views of the site and given the distance of the property from the site at a significantly lower level I do not find that the proposal would give rise to any loss of privacy or harm to residents' living conditions.

37. I note concerns relating to personal security and have had regard to the case law cited by the objectors' representative<sup>2</sup>. I have also taken into account that the perceived fears of the public are a material consideration in my determination<sup>3</sup>. Whilst I acknowledge that there has been police involvement on occasions and Mr Lewis has a historic conviction I have no substantiated evidence before me that allowing the appeal would lead to any increased risk to local residents' future security.
38. I also note that Cwmanod Cottage is of a traditional cottage design and the objectors' contention that the proposal would detract from its setting. The building is not listed and there is little inter visibility between the site and the cottage. Given the distance and topography between the two sites I do not consider that the proposal would be harmful to its setting.
39. I acknowledge concerns regarding the potential precedent that would be set by allowing this development. I have no directly comparable sites to which this might apply before me. Each application and appeal must be determined on its individual merits, and a generalised concern of this nature does not justify withholding permission in this case.
40. Matters relating to tree felling and work on the site previously are not pertinent to my consideration of the particular proposal before me.

### **Overall Balancing**

41. I have found that the proposed development would be visually intrusive in the local landscape. It would result in harm to the character and appearance of the area and would not conserve the natural beauty of the BBNP contrary to policies HP20 and ENV2. It is therefore necessary to consider whether other considerations outweigh this harm. In assessing this balance I have taken into account the special protection given to National Park landscapes.
42. The harm that I have identified is very localised in nature. The impact on the BBNP is restricted to a short section of the public footpath that lies to the south east and the impact to the wider countryside is in the main related to the short section of highway that passes the site and from views to the north which are to a certain extent filtered by vegetation. Additional planting to the east and along the highway edge would help to soften the impact of the proposal to the wider surrounds and could be required through a landscaping condition. I find that in this context the resulting harm is limited.
43. I have found that the site is sustainably located and that there is a need for additional gypsy and traveller pitches within the Brecon area. The Council maintains that this need can be met at the existing Kings Meadow site; however this does not take into account that some gypsies and travellers may wish to find and buy their own sites to develop and manage and the appellants' particular personal circumstances that make residing at Kings Meadow very difficult. The provision of the appeal site, which is

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<sup>2</sup> Asbri Written Statement of Evidence, March 2016

<sup>3</sup> Paragraph 3.1.8, Planning Policy Wales, Edition 8

owned by the appellants, would release a pitch at Kings Meadow to meet the wider need. The site is not constrained by any other planning considerations that cannot be addressed through planning conditions and in such cases national policy supports the provision of rural sites in principle. I give these matters considerable weight.

44. The appellants' personal circumstances are also material to the balancing exercise. The inter family conflicts at the Kings Meadow site are having a direct effect on Mr Lewis's health and feuding and conflict is not in the children's best interests. A refusal of permission is likely to lead to the appellants moving out onto an unauthorised site or to a site away from their family and friends. Even should they stay the situation between family members is untenable and is having an effect on their health and the children's welfare. A refusal would interfere with the right to respect for family and private life as enshrined in Article 8 of Protocol 1 of the European Convention on Human Rights.
45. I have noted the Council's reference to case law in this respect<sup>4</sup> and the need for a proportionate and balanced approach. These are qualified rights which have to be balanced against the public interest in protecting the countryside and National Parks. In this case having taken into account all other considerations including the family's personal circumstances, the sustainable credentials of the site and the lack of other provision in the area, I conclude that the limited harm to the character and appearance of the area and the natural beauty of the BBNP is clearly outweighed by these factors. In the circumstances of the case I find a permanent permission to be justified and there is no need to consider the merits of a temporary permission.

### **Conditions**

46. I have considered the conditions discussed at the hearing in light of the advice in Circular 016/2014. In addition to conditions relating to the time for implementation, and compliance with plans, given the justification for the development a condition restricting occupancy to gypsies and travellers and restricting the number of caravans are necessary. Conditions relating to the ecological and biodiversity interests of the site are necessary given the proximity to the SSSI and SAC and landscaping and boundary treatment details are required to integrate the site with the surroundings. Conditions relating to highway matters are necessary in the interests of highway safety. I note the appellants' concerns in relation to a bound surface and its impact on the visual appearance of the site and have included a requirement within the landscaping scheme to agree the surface to be used. I consider that a condition relating to the gradient of the access is required to ensure that caravans can reasonably enter the site. A condition restricting the number and weight limit of commercial vehicles on the site is necessary due to the rural nature of the road network and restrictions on storage are also necessary in the interests of the visual amenities of the area.
47. I have not imposed the suggested condition requiring the sewage treatment plant to comply with the manufacturer's installation requirements as both main parties agreed at the hearing that this would be unnecessary given the controls under other legislation. Whilst I note the Council's request for a condition relating to the materials for the development I find that this would be unreasonable given that caravans are generally of a consistent finish and the finishes for the utility block are specified on the relevant approved plan.

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<sup>4</sup> Council's Officer Report and documents provided at the hearing

**Conclusion**

48. I have taken into account all other matters raised, but find none that outweigh my conclusions that subject to the imposition of conditions the proposal would be acceptable. For the reasons above I allow the appeal.

*Vicki Hirst*

INSPECTOR

## **APPEARANCES**

### **FOR THE APPELLANT:**

Mrs A Heine	Appellants' agent
Mr M Lewis	Appellant
Mrs D Lewis	Appellant

### **FOR THE LOCAL PLANNING AUTHORITY:**

Miss G Bufton	Principal Planning Officer
Miss H Hobbs	Principal Planning Officer
Mr C Edwards	Council's Solicitor

### **INTERESTED PERSONS:**

Mr K Warren (on behalf of Mr & Mrs Martin)	Asbri Planning
Mr R Martin	Local Resident
Mrs M Martin	Local Resident
Mr JP Davies	Local Resident

### **DOCUMENTS SUBMITTED AT THE HEARING**

1. Council's notification letter of appeal arrangements, 23 May 2016
2. Map of Public Rights of Way submitted by the Council
3. Case Law relating to Human Rights submitted by the Council
4. Extracts from LANDMAP requested at the hearing and received via email on 9 June 2016
5. Correspondence from Kirsty Williams AM requested at the hearing and received via email on 9 June 2016

**SCHEDULE OF CONDITIONS – APP/T6850/A/15/3141599 – LAND WEST OF CWMANOD COTTAGE, LLANDDEW, BRECON, LD3 9SU**

- 1) The development shall begin not later than five years from the date of this decision.
- 2) The development shall be carried out in accordance with the following approved plans: 4157 (BP) 01, 4157 03, and Proposed Site Layout except insofar as may be required by other conditions of this planning permission.
- 3) The occupation of the site shall only be by Gypsies and Travellers as defined by paragraph 3 of Circular 30/2007 and their resident dependents.
- 4) There shall be no more than one pitch on the site hereby approved with no more than two caravans being stationed at any time, of which only one shall be a static caravan.
- 5) No commercial activities shall take place on the land.
- 6) Any storage including the storage of materials, shall only take place within areas agreed in writing with the local planning authority prior to the storage taking place.
- 7) No more than one commercial vehicle shall be kept on the land and it shall not exceed 3.5 tonnes in weight.
- 8) No development shall commence (including ground works and vegetation clearance), until a Construction Environmental Method Statement (CEMP) has been submitted to, and approved in writing by, the local planning authority. The approved statement shall be adhered to throughout the construction period. The statement shall provide for:
  - i) risk assessment of potentially damaging construction activities;
  - ii) identification of biodiversity protection zones;
  - iii) practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction;
  - iv) the location and timing of sensitive works to avoid harm to biodiversity features;
  - v) the times during construction when specialist ecologists need to be present to oversee works;
  - vi) responsible persons and lines of communication;
  - vii) the role and responsibilities on site of an ecological clerk of works or other competent person; and
  - viii) use of protective fences, exclusion barriers and warning signs.
- 9) No development shall commence until a fence to protect the Afon Honddu SSSI and SAC shall be erected along the top of the river bank in accordance with the specifications within Section 9.9 of "A Survey for Bat and Otter Presence" and Section 7.6 of "An Assessment to Consider the Potential Impacts on the Site of Special Scientific Interest" both by Just Mammals Consultancy LLP dated December 2013 and Section 10.5 of "An Extended Phase 1 Habitat and Species Survey" dated October 2013. The fence shall be retained thereafter.

- 10) No development shall commence until compensatory above ground otter resting site opportunities have been provided in accordance with the recommendations identified in Section 9.3 of "A Survey for Bat and Otter Presence" by Just Mammals Consultancy LLP dated December 2013". They shall be retained thereafter.
- 11) No development shall commence until a Biodiversity Enhancement Plan has been submitted to and approved in writing by the Local Planning Authority. The Plan shall thereafter be implemented and retained in accordance with the approved details.
- 12) Prior to occupation a lighting design strategy for biodiversity shall be submitted to and approved in writing by the Local Planning Authority. The strategy shall:
  - a) identify those areas/features on site that are particularly sensitive for bats and otters and that are likely to cause disturbance in or around their breeding sites and resting places or along important routes used to access key areas of their territory for example for foraging; and
  - b) show how and where external lighting will be installed (through the provision of appropriate lighting contour plans and technical specifications) so that it can be clearly demonstrated that areas to be lit will not disturb or prevent the above species using their territory or having access to their breeding sites and resting places.

All external lighting shall be installed and retained in accordance with the strategy and no other external lighting shall be installed without the prior written approval of the local planning authority.

- 13) No development shall take place until details of both hard and soft landscape works have been submitted to and approved in writing by the local planning authority. These details shall include:
  - i) a statement setting out the design objectives and how these will be delivered;
  - ii) earthworks showing existing and proposed finished levels or contours;
  - iii) means of enclosure;
  - iv) other vehicle and pedestrian access and circulation areas;
  - v) hard surfacing materials;
  - vi) a native planting scheme including details and schedules of trees, hedgerows and wildflower meadows and the re-instatement of the road verge nature reserve in accordance with the methodology set out in "A Road Verge Nature Reserve Re-Instatement Scheme" by Just Mammals Consultancy LLP dated December 2013;
  - vii) a tree and hedgerow protection plan; and
  - viii) an implementation plan.

The landscaping works shall be carried out and retained thereafter in accordance with the approved details.

- 14) Any entrance gates shall be set back at least 5.5 metres distant from the edge of the adjoining carriageway and shall be constructed to open inwards away from the highway.

- 15) The gradient of the access shall not exceed 1 in 15 for the first 5.5 metres measured from the edge of the adjoining carriageway along the centre line of the access.
- 16) Within 5 days of the commencement of development, the access shall be constructed so that there is clear visibility from a point 1.05 metres above ground level at the centre of the access and 2.4 metres distant from the edge of the adjoining carriageway to points 0.26 metres above ground level at the edge of the adjoining carriageway and 45.0 metres distant in each direction measured from the centre of the access along the edge of the adjoining carriageway. Nothing shall be planted, erected or allowed to grow on the areas of land so formed that would obstruct visibility and the splays shall be maintained free from obstruction thereafter.
- 17) Within 5 days of the commencement of development, provision shall be made within the curtilage of the site for the parking of construction vehicles together with a vehicle turning area. This parking and turning area shall be constructed to a depth of 0.3 metres in crusher run or sub-base and maintained free from obstruction at all times such that all vehicles serving the site park within the site and enter and leave in forward gear.
- 18) Prior to the occupation of the caravans, provision shall be made within the site for the parking of not less than 2 cars excluding any garage space together with a turning space such that all vehicles serving the site may enter and leave in forward gear. The parking and turning areas shall thereafter be retained and be kept free of obstruction.
- 19) No storm water drainage from the site shall be allowed to discharge onto the county highway.

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# **Powys Local Development Plan**

## **Position Statement - Gypsy and Traveller Accommodation**

### **Incorporating an action statement and implications for the LDP**

**September 2016**

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## **Summary**

The draft Gypsy and Traveller Accommodation Assessment 2016 undertaken by the Council has identified housing needs in Machynlleth, Brecon and Welshpool. This paper explains the evidence of need, the action being taken by the Council to address this need and the implications for the LDP particularly in relation to the LDP's policy H13, the allocation of a permanent site in Machynlleth and the commitment to provide additional pitches in Welshpool. Brecon is situated in the planning authority area of the Brecon Beacons National Park and not within the Powys LDP area.

## **1.0 Introduction**

1.1 This paper sets out:

- The need identified for gypsy and traveller accommodation in Powys as a result of recent assessments of need including the findings of the Gypsy and Traveller Accommodation Assessment 2016.
- The actions the Council has taken previously and is currently taking corporately to meet the identified need.
- The implications for the Powys LDP in terms of policy and land allocations.

## **2.0 Evidence of Need for Gypsy and Traveller Accommodation in Powys and the Actions taken by the County Council**

2.1 The future accommodation needs of gypsies and travellers within Powys has been assessed on three occasions since 2008:

- i. Gypsy & Traveller Accommodation Needs Assessment (2008) (EB02).
- ii. Gypsy & Traveller Accommodation Needs Assessment (Update, 2014) (EB03).
- iii. Gypsy and Traveller Accommodation Assessment (GTAA) 2016 (ED013) – this was submitted to Welsh Government for approval in February 2016, and in response to queries by Welsh Government was revised in June 2016. Approval by Welsh Government is anticipated by the end of September 2016. It

2.2 The assessments have identified need in three places: Machynlleth, Welshpool and Brecon. It should be noted that Brecon is situated within the Brecon Beacons National Park and lies outside the Powys LDP area, although nearby.

2.3 The need identified by the successive assessments is set out for each of the three places in tabular form in the following sections. Each table identifies the type of need (Permanent or transit), when the need is due to arise, how many pitches the need relates to, and a summary of the action or response the Council has taken corporately to address the identified need.

2.4 The implications for the LDP are set out beneath each table.

2.5 Welsh Government guidance on Undertaking Gypsy and Traveller Accommodation Assessments (May 2015) states in Chapter 3 – Assessing Accommodation needs:

“142. From the results of the Gypsy and Traveller accommodation assessment (GTAA) it should be possible to identify the number of Gypsy and Traveller households which require additional pitches immediately, within 5 years, and over the Development Plan period.”

2.5 The guidance also states in Chapter 5:

“231. Once the Gypsy and Traveller accommodation assessment has been approved by Welsh Ministers, Local Authorities will be subject to a legal duty to exercise their functions to provide mobile home pitches to meet the identified needs. Section 56 of the Mobile Homes (Wales) Act 2013 provides the power for Local Authorities to do this. However, Local Authorities should recognise there are a range of tools at their disposal to support them to achieve this aim.”

2.6 The Council has been advised that Welsh Government expects Local Authorities to address the need identified in the GTAA from the time that the GTAA was submitted. This means that immediate need will need to be addressed by Feb 2021 and the longer term need met by 2026, which will coincide with the end of the LDP plan period. The tables below explain the need identified by the GTAA up to 2026.

### **3.0 Gypsy and Traveller Need in Machynlleth**

**Table 1: Machynlleth**

Study date	Type of need (Permanent / Transit)	When needed (period)	Number of Pitches	Summary of Council's Response / Action
2008 GTANA (EB02)	None	-	None	No need identified
2014 GTANA (EB03)	Transit	See note	2	Study concluded, “The Council will investigate feasibility options for providing a transient site to meet the need identified of 2 households. In seeking to identify a suitable site, the Council will liaise with the adjoining authorities of Ceredigion and Gwynedd. (Please note para 24.2 below following consultation). Para 24.2 says “Following the consultation response from the Housing Management and Options Officer interview the Council will investigate further while it undertakes a new GTAA in accordance with the provisions of the Housing (Wales) Act 2014 whether a permanent or transient site is required in Machynlleth.”
April 2015 – LDP topic paper – Gypsy and traveller Needs in Machynlleth (EB28)	Permanent	See 2016 GTAA	To be determined by GTAA but considering land used 3 pitches.	Having spoken to the families and their representatives, the Unity Project, the Council recognised that there would be a need for a permanent site, but the actual number of pitches was to be determined by the GTAA 2016. For the purposes of identifying land for inclusion in the LDP, a 3 pitch site was sought. An identification and assessment process of potential sites in Machynlleth was undertaken, and a site allocation (P42 HA4) was proposed in the Deposit Draft LDP, June 2015. The Council

				does not own any suitable land and land will need to be acquired.
2016 GTAA (Draft, awaiting WG approval) (ED013)	Permanent	Feb 2021	5	<p>The draft GTAA acknowledged that LDP Policy H13 included the allocation of land for a permanent site. Need identified from interviews on tolerated unauthorised site for 3 pitches and 2 pitches identified need from Bricks and Mortar interviews.</p> <p>The Council has accepted that some of the families in Machynlleth are homeless and provision of accommodation will be prioritised by the Council.</p> <p>In response, the Council appointed a Gypsy and Traveller Project Officer – Housing in January 2016.</p> <p>The Council has allocated £200k to assist in identifying land for a new site in the 2016/17 financial year. A further £2.28m has been made available to assist with meeting needs arising from the GTAA for subsequent years.</p> <p>The Council has established a multi departmental Gypsy and Traveller Project Board to consider and develop proposals for Machynlleth and address the needs identified in the GTAA. Inaugural meeting held on 31<sup>st</sup> March 2016 and the Board meets monthly.</p> <p>The Council has advertised and actively pursued land options in the Machynlleth area with a view to securing planning permission for the identified need. It has commissioned relevant surveys on pieces of land to identify suitability in preparation for submitting a planning application.</p> <p>The Council anticipates applying for Welsh Government grant to develop a new site in 2017.</p> <p>The Council plans to provide a new site by March 2018.</p> <p><b>Note: No further need for the longer term period 2021 to 2026 was identified by the GTAA.</b></p>

### 3.1 Implications for the LDP - Machynlleth

3.2 The Council, through its Gypsy and Traveller Project Board, is actively pursuing the development of a permanent site for 5 gypsy and traveller households in Machynlleth based on the findings of the Draft GTAA 2016. This need must be met by 2021. No further need has been identified for the period 2021 to 2026.

3.3 Site options are being investigated including detailed site survey work on several sites prior to a planning application(s) being submitted on a preferred site(s), and in advance of any land acquisition if required. The site proposed as an allocation in the deposit draft LDP, June 2015 at Newtown Road, Machynlleth (P42 HA4) is one of the sites under detailed investigation. This work is in progress and has yet to complete. At this stage it is considered that the following Further Focussed Changes should be made to the LDP:

**1. Policy H13 – Gypsy and Traveller Sites and Caravans, and paragraphs 4.6.39 – 4.6.41.**

It is proposed that the policy is amended to make reference to P42 HA4, as requested by the Planning Inspector (letter to the Council dated 6<sup>th</sup> May 2016).

It is further proposed that an additional paragraph be added to explain the findings of the draft GTAA 2016 as submitted to WG, and explain how the LDP is addressing the identified need.

**2. Appendix 1 – Settlement Allocations, P42 HA4.**

It is proposed that the number of units be amended to 5 to reflect the findings of the draft GTAA 2016, as submitted to WG.

**3. Inset Map P42 – allocation P42 HA4.**

No amendment feasible at this stage given on-going action.

3.4 Given the on-going action being taken by the Council, the position will have moved on by the time of the hearing sessions on the LDP in 2017, and the Council will provide further clarification and evidence to the Examination at that point. It is considered that any changes that are necessary to the LDP in relation to the provision of a permanent gypsy and traveller site in Machynlleth are addressed at that point via Matters Arising Changes.

**4.0 Gypsy and Traveller Need in Brecon**

**Table 2: Brecon**

Study date	Type of need (Permanent / Transit)	When needed (period)	Number of Pitches	Summary of Council's Response / Action
2008 GTANA (EB02)	14 stopping places 5 transit	2007-2017	14 stopping places 5 transit	Provision was for one extended family who were accommodated temporarily at Cefn Cantref temporary site (near Brecon in BBNP). Needs rationalised during period and in accordance with emerging Welsh Government guidance relating to Gypsy and Travellers. Council applied for 2 other planning applications for alternative sites which were refused consent.

				New site of 10 pitches delivered in 2014 at King's Meadow, Brecon (in BBNP).
2014 GTANA (EB03)	0		0	The assessment concluded "No future need has been identified in Brecon, however, the 4 additional un-serviced pitches provided on 'King's Meadow' will be used to accommodate future growth as it arises. There is also one family in Brecon who are currently tenants of the Kings Meadow site, but who want to develop their own site and who are being advised about the planning process."
2016 GTAA (Draft, awaiting WG approval) (ED013)	Permanent	Sept 2021	3	<p>The GTAA survey identified a need for 3 additional pitches due to family growth. The Council in April 2016 submitted a grant application to Welsh Government to provide permanent facilities to all 4 of the un-serviced pitches. Welsh Government awarded a grant of £303k in July 2016.</p> <p>The Council is tendering the works with a view to completing the plots by March 2017.</p> <p>One of the households has obtained planning permission via a planning appeal at Cwmanod, Llanddew (in the Powys LDP area) for a private site. This household has 5 years to comply with the conditions of the planning permission. When they move off site it will create a vacancy on the site.</p> <p>Given the action undertaken by the Council since the survey and the draft GTAA was submitted in Feb 2016, the revised GTAA, June 2016 no longer identifies an outstanding need in relation to Brecon.</p>

#### 4.1 Implications for the LDP - Brecon

4.2 The housing need identified by the draft GTAA submitted in February is being met through the development of the remaining four un-serviced plots at King's Meadow, Brecon which is located in the area of the Brecon Beacons National Park and outside the Powys LDP area. Given the award of grant funding by Welsh Government in July 2016, the four serviced plots are expected to be completed by the end of March 2017. As such, the meeting of this need and the delivery of the site has no implications for the Powys LDP.

4.3 In addition to the need identified in the GTAA 2016, planning permission was granted at appeal on the 30/6/16 for a gypsy traveller site for a single family on land to the west of Cwmanod Cottage, Llanddew which is situated in the Powys LDP area. A copy of the appeal decision (reference APP/T6850/A/15/3141599) is attached as appendix 1.



4.4 It is considered that the following Further Focussed Changes should be made to the LDP:

**1. Policy H13 – Gypsy and Traveller Sites and Caravans, and paragraphs 4.6.39 – 4.6.41.**

It is proposed that an additional paragraph be added to explain the findings of the draft GTAA 2016 as submitted to WG, and to explain how the identified need is being met in Brecon, albeit outside the Powys LDP area.

**2. Appendix 1 – Settlement Allocations.**

No allocation necessary.

**3. Proposals and Inset Maps**

No amendments are necessary. The site at King’s Meadow is located outside the Powys LDP area.

The site at Cwmanod, Llanddew is located in open countryside and has the benefit of planning permission and it is therefore not considered necessary to identify this site on the LDP proposals map, as is the case for all dwelling commitments below 5 units.

**5.0 Gypsy and Traveller Need in Welshpool**

**Table 3: Welshpool**

Study date	Type of need (Permanent / Transit)	When needed (period)	Number of Pitches	Summary of Council’s Response / Action
2008 GTANA (EB02)	N/A	N/A	0	None identified, site refurbished in March 2012. Study said p29, “Withybeds is fully occupied, but there is no evidence of need in the north of the area beyond the families currently resident.” The site was comprised of 12 pitches, and transit pitches which were rarely used.”  The refurbished site provided 10 pitches which were dedicated to Irish Travellers. The Romany households who had previously occupied part of the site were re-housed to Council housing.
2014 GTANA (EB03)	Permanent	First 5 years	2	The 2 households identified from family growth moved off site and entered into relationships with occupants of sites in England. The provision was therefore no longer required.
2016 GTAA (Draft, awaiting	Permanent	Feb 2026	2	Para 6.38 of the GTAA, June 2016 states, “This leaves a residual need for the Council to

<p>WG approval) (ED013)</p>			<p>address through new household formation on the public site in Welshpool, which when viewed in isolation shows a need to provide two additional pitches when the supply through dissolution of pitches is taken into consideration”.</p> <p>Investigations are being undertaken by the Council to determine whether it is possible to meet the need on the existing site at Leighton Arches, Welshpool. Alternative sites are also being investigated should it prove not possible to accommodate the identified need on the existing site.</p>
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### 5.1 Implications for the LDP - Welshpool

5.2 The Council, through its Gypsy and Traveller Project Board, is actively investigating the provision of 2 permanent pitches in the Welshpool area based on the findings of the Draft GTAA 2016. This need must be met by 2026.

5.3 Site options are being investigated including detailed site survey work on several sites prior to a planning application(s) being submitted on a preferred site(s), and in advance of any land acquisition if required. This work is in progress and has yet to complete. At this stage it is considered that the following Further Focussed Changes should be made to the LDP:

#### 1. Policy H13 – Gypsy and Traveller Sites and Caravans, and paragraphs 4.6.39 – 4.6.41.

It is proposed that the policy is amended to make reference to the need to provide two additional permanent pitches in Welshpool by 2026. A specific site cannot be named or identified at this juncture given the on-going site selection and development process.

It is further proposed that an additional paragraph be added to explain the findings of the draft GTAA 2016 as submitted to WG, and explain how the LDP is addressing the identified need and the Council’s commitment to meeting the need.

#### 2. Appendix 1 – Settlement Allocations

No allocation feasible at this stage as the process of selecting a suitable site is being conducted.

#### 3. Proposals and Insets Maps

No allocation feasible at this stage as the process of selecting a suitable site is being conducted.

5.4 Given the on-going action being taken by the Council, the position may have moved on by the time of the hearing sessions on the LDP in 2017, and the Council will provide further clarification and evidence to the Examination at that point if appropriate. Should any changes to the LDP be necessary or possible at that point, it is recommended that these are addressed via Matters Arising Changes.

## **6.0 Conclusion**

6.1 At the time of writing this position statement (Aug 2016), the GTAA 2016 is awaiting approval by Welsh Government. The Council is however taking action on the basis of the draft findings to address the identified need. For the Powys LDP, this on-going work has implications for Machynlleth and Welshpool where the Council is taking steps to make additional provision as soon as practicably feasible. By the time of the Examination hearing sessions it will be possible to provide further information and for further amendments to the LDP to be addressed via Matters Arising Changes if necessary.

**Appendix 1 - Appeal Decision, Cwmanod, Llanddew, Brecon, 30/6/16**

**Separate attachment**

# Powys

## Gypsy and Traveller Accommodation Assessment



Final Report  
June 2016



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# 1. Executive Summary

## Introduction and Methodology

- 1.1 The primary objective of the 2015 Gypsy and Traveller Accommodation Assessment (GTAA) is to provide a robust assessment of current and future need for Gypsy and Traveller accommodation in Powys. The GTAA provides a robust and credible evidence base which can be used to aid in the understanding of, and the provision of Traveller pitches and plots for the Local Plan period to 2026, and any subsequent review after the plan period, and a review of the Brecon Beacons National Park LDP following the end of the plan period in 2022.
- 1.2 The GTAA has sought to understand the accommodation needs of the Gypsy and Traveller population in Powys through a combination of desk-based research, stakeholder engagement and engagement with members of the Travelling Community. In addition a range of local stakeholders were invited to sit on a Project Steering Group. A total of 25 interviews were completed with Gypsies and Travellers living on authorised and unauthorised sites in Powys, representing a response rate of 100% of occupied households. In addition a total of 2 interviews were completed with Travellers living in bricks and mortar. No Travelling Showpeople yards were identified in Powys.
- 1.3 The baseline date for the study is **November 2015**.

## Key Demographic Findings

- 1.4 Ethnicity data was captured from all of the households that were interviewed on the Gypsy and Traveller sites. The sites in Powys are occupied by a mixture of Romany Gypsies, Irish Travellers and Welsh Gypsies.
- 1.5 In total the site interviews covered 62 residents living on Gypsy and Traveller sites and in bricks and mortar. This was made up of 41 adults and 21 children and teenagers aged under 18. This equates to 66% adults and 34% children and teenagers. Demographic information showed a mixed range of ages across the sites, though a higher proportion of the site population were younger when compared to the overall population (the settled community and the Gypsy or Irish Traveller community) of Powys (2011 Census).

## Additional Pitch Needs – Gypsies and Travellers

- 1.6 The Welsh Government Guidance requires 2 assessments of need – for the first 5 years of the GTAA period, and for the full Local Plan period (to 2026 in Powys). Based upon the evidence presented in this study the estimated additional pitch provision needed for Gypsies and Travellers in Powys for the first 5 years of the Local Plan period is for **5 additional pitches**, and for the remainder of the Local Plan period is for a **further 2 additional pitches**. This gives a total need for the whole Local Plan period of **7 additional pitches**. These figures should be seen as the projected amount of provision which is necessary to meet the statutory obligations towards identifiable needs of the population arising in the area as set out in the Welsh

Government GTAA Guidance. These figures include movement from conventional housing, and new household formation – less identified supply for the first year.

- 1.7 However from a practical point of view it is important that the figures set out above are viewed in the context of previous assessments of need that have been completed in Powys and subsequent actions that have been taken to address need that has been identified.
- 1.8 The 2014 Powys GTAA Update recommended that the Council should investigate the feasibility of providing additional pitches to meet need that was identified in Machynlleth. This is reflected in the 2015 Deposit Draft LDP Policy H13 which includes the allocation of land for a permanent site in the Machynlleth area to meet the identified need. It has been confirmed by the Council that this is the same need that has been identified in this GTAA and that Welsh Government funding will be sought for to provide a permanent site with 5 pitches in the Machynlleth area.
- 1.9 The Brecon Beacons National Park LDP which was adopted in 2013 included provision for a new site in Brecon to meet need that had been identified in South Powys. Planning permission was granted for a new 14 pitch site in March 2012 on land adjacent to Brecon Enterprise Park and the Kings Meadow Site was developed and opened in 2014. A total of 14 pitches were granted planning permission and this included 4 pitches to meet the future need of households living on the site due to family growth and household formation – 1 of which was let early in 2016.
- 1.10 Also it is impractical to meet short-term need identified in Machynlleth through the available supply of unimplemented pitches in Brecon that were put in place to meet the medium to long-term needs of households living on that site.
- 1.11 It could therefore be said that provision to meet the majority of need identified in this GTAA has already been made through the development of the new site in Brecon and proposals for 5 new pitches in the Machynlleth area.
- 1.12 This leaves a residual need for the Council to address through new household formation on the public site in Welshpool, which when viewed in isolation shows a need to provide 2 additional pitches when the supply through dissolution of pitches is taken into consideration.
- 1.13 Therefore it could be said that the actual need identified in Powys, once the need that has already been accounted for in Brecon and Machynlleth has been taken into consideration, **is for 2 additional pitches** to meet the net need through new household formation on the site in Welshpool.
- 1.14 A detailed breakdown which sets out the components that make up this additional need, together with any other issues that have been taken into consideration are included in **Chapter 6** of this report.

## Transit Sites

- 1.15 The granting of planning permission for a temporary transit site to address historic numbers of unauthorised caravans at the Royal Welsh Show has had a significant impact of the number of unauthorised caravans recorded in Powys – falling from a peak of 79 in July 2008 to just 5 in July 2015 (when 3 non-Traveller caravans have been discounted).
- 1.16 The 2014 Powys GTAA recognised that there are occasional instances of unauthorised encampments in the Brecon area, but that these are normally Irish Travellers passing through for work purposes. There are

other localised instances of Travellers temporarily visiting Powys to attend weddings or other events, but no further evidence of any long-term or permanent accommodation needs.

- 1.17 Whilst the outcomes from the household interviews showed that three quarters felt that there was a need for more transit provision in Wales, there were no specific references for the need for specific provision in Powys, with households seeking provision all over Wales.
- 1.18 As such it is recommended that **there is not a need for the Council to provide a transit site** in Powys due to the low numbers of unauthorised encampments. However the Council should continue to monitor the number of unauthorised encampments and consider the use of short-term toleration, negotiated stopping arrangements or temporary stopping places to deal with short-term transient stops. This management based approach should also include consideration about whether to provide toilets, water and refuse facilities.

## Travelling Showpeople

- 1.19 Given that there have been no Travelling Showpeople identified as living in Powys, no assessment of need has been undertaken. The Council should however monitor any future approaches for planning permission from Travelling Showpeople and have in place appropriate criteria-based development plan policies to deal with any future applications.

## 2. Background and Policy Context

### The Study

- 2.1 Opinion Research Services (ORS) were appointed by Powys County Council (the Council) in July 2015 to complete an assessment of accommodation for Gypsies and Travellers residing and resorting in Powys for the Local Plan period to 2026.
- 2.2 The study provides an evidence base to enable the Council to comply with their requirements towards Gypsies and Travellers under Section 3 of the Housing (Wales) Act 2014.
- 2.3 The GTAA is a robust and credible evidence base which can be used to aid in the understanding of, and the provision of Traveller pitches and plots for the Local Plan period to 2026, and any subsequent review after the plan period, and a review of the Brecon Beacons National Park LDP following the end of the plan period in 2022.
- 2.4 We would note at the outset that the study covers the needs of Gypsies (including English, Scottish, Welsh and Romany Gypsies), Irish Travellers, New (Age) Travellers, and Travelling Showpeople, but for ease of reference we have referred to the study as a Gypsy and Traveller Accommodation Assessment (GTAA).
- 2.5 The baseline date for the study is **November 2015**.

### Legislation and Guidance

#### Housing (Wales) Act 2014

- 2.6 Part 3 of the Housing (Wales) Act 2014 (the Act) requires that a local housing authority should carry out a new assessment of the accommodation needs of Gypsies and Travellers residing in or resorting to its area between February 2015 and February 2016.
- 2.7 Section 102 of the Act requires that local authorities must prepare a report which they must submit to Welsh Ministers for approval that:
  - » details how the assessment was carried out;
  - » contains a summary of:
    - the consultation it carried out in connection with the assessment, and
    - the responses (if any) it received to that consultation;
  - » details the accommodation needs identified by the assessment.
- 2.8 Once approved the local housing authority must publish the assessment.

- 2.9 If need is identified in the GTAA report, Section 103 of the Act requires that a local authority must exercise its powers in Section 56 of the Mobile Homes (Wales) Act 2013 so far as may be necessary to meet those needs.
- 2.10 Section 106 of the Act sets out that local authorities should have regard to any guidance given by Welsh Ministers. Guidance on Undertaking Gypsy and Traveller Accommodation Assessments was published in May 2015.
- 2.11 This guidance covers the following issues:
- » Why a specific GTAA is required?
  - » What should be produced?
  - » Who needs to be consulted?
  - » What data sources need to be reviewed?
  - » Understanding the culture of Gypsy and Traveller communities.
  - » How to identify and communicate with Gypsies and Travellers?
  - » How to design, manage and undertake a GTAA?
  - » Support with partnership working and working regionally.
  - » Exploring specialist surveys, techniques and questions to be used.
  - » How accommodation 'need' is assessed?
  - » Submitting reports to Welsh Ministers.
  - » How to make provision for identified need?
- 2.12 Section 108 of the Act sets out that:
- » **Accommodation needs** - includes, but is not limited to, needs with respect to the provision of sites on which mobile homes may be stationed;
  - » **Gypsies and Travellers** – means persons of a nomadic habit of life, whatever their race or origin, including persons who, on grounds only of their own or their family's or dependant's educational or health needs or old age, have ceased to travel temporarily or permanently, and members of an organised group of travelling show people or circus people (whether or not travelling together as such), and all other persons with a cultural tradition of nomadism or of living in a mobile home;
  - » **Mobile home** - has the meaning given by section 60 of the Mobile Homes (Wales) Act 2013.

## Mobile Homes (Wales) Act 2013

- 2.13 The GTAA Guidance sets out the requirement that local authorities have to meet a legal duty to exercise their functions to provide mobile home pitches to meet any identified needs. These are set out in Section 56 of the Mobile Homes (Wales) Act 2013.
- 2.14 In this Act "*mobile home*" means:

- » *Any structure designed or adapted for human habitation which is capable of being moved from one place to another (whether by being towed, or by being transported on a motor vehicle or trailer) and any motor vehicle designed or adapted for human habitation, but does not include any railway rolling stock which is for the time being on rails forming part of a railway system, or any tent.*
- » *A structure designed or adapted for human habitation which is composed of not more than 2 sections separately constructed and designed to be assembled on a site by means of bolts, clamps or other devices, and is, when assembled, physically capable of being moved by road from one place to another (whether by being towed, or by being transported on a motor vehicle or trailer).*

## Planning Circulars 30/2007 and 78/91

- <sup>2.15</sup> In December 2007 Welsh Assembly Government guidance on Planning for Gypsy and Traveller Caravan Sites was published in the form Circular 30/2007. This document formed the previous framework around which a GTAA study was to be based, and provided updated guidance on the planning aspects of finding sustainable sites for Gypsies and Travellers and how local authorities and Gypsies and Travellers can work together to achieve this aim.
- <sup>2.16</sup> Planning advice relating to Travelling Showpeople was provided in Welsh Office Circular 78/91 and this was not revoked by Circular 30/2007. This recognises the more specific needs of Travelling Showpeople, and in particular the requirement to provide for storage and maintenance need, as well as residential need – often on a seasonal basis. It also sets out that local authorities should be willing to discuss the needs of Travelling Showpeople at an early stage of the development plan process and to seek to *help the Showpeople to help themselves*.

## Welsh Government Designing Gypsy and Traveller Sites Guidance

- <sup>2.17</sup> In order to assist local authorities in meeting need for Gypsies and Travellers the Welsh Government published this guidance in May 2015. This is intended as a guide to assist Local Authorities in providing appropriate services at reasonable cost to the public purse for Gypsies and Travellers living on residential sites in Wales. It contains practical guidance to assist local authorities to ensure sites are fit-for-purpose. This guidance is not statutory. However, it is hoped that following this guidance will help local authorities and others in the development and improvement of Gypsy and Traveller sites in their area, and will form part of the consideration of the Welsh Government in assessing applications for Sites Capital Grant funding in relation to Gypsy and Traveller sites.

## Local Plan Policies

### Unitary Development Plan 2001-2016

- <sup>2.18</sup> The Unitary Development Plan (UDP) for Powys was adopted in March 2010. This included a specific criteria based policy HP20 in relation to Gypsy and Traveller Sites.

## 5.26 Gypsy Caravan Sites

**5.26.1** The Criminal Justice and Public Order Act 1994, no longer places a statutory duty on Local Authorities to provide sites for Gypsies residing in or resorting to their area, but there are discretionary powers contained in the Caravan Sites Control of Development Act 1960 to provide such sites. The Council has a permanent site in Welshpool, which it considers to be more than adequate at the present time.

**5.26.2** Applications for new Gypsy caravan sites must demonstrate the need for the accommodation, the type of site required, the historical connection with the area and the type of work to be undertaken. Additionally, applications should be accompanied by details of proposals for the storage of plant and equipment associated with the business activities of those living on the site. Proposals for the development of isolated small sites will not be permitted. Any permission given will be subject to detailed conditions or to the completion of a Section 106 Agreement to control the use of the site.

### Policy HP20 - Gypsy Caravan Sites

Proposals for Gypsy sites or extensions to existing sites will only be permitted providing the following criteria are satisfied:

1. The proposal would meet the needs of persons meeting the definition of Gypsies set out in the Criminal Justice and Public Order Act 1994 who have regularly resided in or resorted to the area and there are no other sites available locally.
2. The proposal would not be visually intrusive in the landscape and incorporates screening provisions to enhance the landscaping of the site.
3. The proposal is well related to existing community, social, educational and other facilities.
4. Adequate provision is made for vehicular access, manoeuvring and parking and the proposal will not create or intensify a traffic hazard.
5. The proposal is in all other respects environmentally acceptable and would not adversely affect the amenities of neighbouring properties.
6. The proposed development should ensure that there are adequate storage facilities or space within the site for plant and equipment associated with any business activities.
7. Where new buildings are proposed, these will be permitted where they are required for essential purposes which cannot reasonably be accommodated through the re-use of other buildings within the vicinity.
8. Adequate services would be available and the development would not give rise to pollution.

## Local Development Plan 2011-2026

<sup>2.19</sup> The Local Development Plan (LDP) for Powys is currently at the Deposit Draft 2015: Deposit Draft stage. This includes a specific criteria based policy H13 in relation to Gypsy and Traveller Sites.



**Policy H13 - Gypsy and Traveller Sites and Caravans**

1. To meet a proven, unmet local need, proposals for permanent or temporary (transient or transit) Gypsy and Travellers sites and caravans will be permitted where:

- i. Located in a sustainable location with access to educational, community, social, health and other services and facilities.
- ii. Ancillary buildings must be for essential purposes which cannot reasonably be accommodated through the re-use of other existing buildings in the vicinity.

2. A permanent site is allocated in Machynlleth to meet an identified need.

**4.6.39** Proposals for gypsy and traveller sites or accommodation will be supported where they meet the needs of persons defined as Gypsy and Travellers by the Housing (Wales) Act 2014.

**4.6.40** Sites should be constructed in accordance with the standards set out for Gypsy and Traveller sites and should also satisfy the criteria of the Development Management Policies to ensure acceptable design, security, landscaping, and screening to limit any adverse visual impact.

**4.6.41** The Gypsy and Traveller Accommodation Needs Assessment 2007 identified a need for 14 pitches in South Powys. A permanent site on the edge of Brecon, within the BBNP, was compulsorily purchased by the County Council and construction completed in 2014 to meet this need. There is also an existing permanent site in Welshpool. The 2007 Assessment was updated in 2015 and further assessments will be prepared in accordance with the requirements of the Housing (Wales) Act 2014. The updated Assessment 2015 led to the need being identified for a permanent site in Machynlleth and a site has been allocated as allocation P42 HA4 on the inset map to meet this need in accordance with statutory requirements.

**Brecon Beacons National Park LDP (2007-22), Adopted 2013**

<sup>2.20</sup> In addition to the development plans that are in place, or are being prepared for Powys, there are also areas for which the Brecon Beacons National Park Authority has planning responsibility for. As such there are also specific Gypsy and Traveller policies in their LDP which was adopted in 2013.

**6.4 Sites for Gypsy and Travellers**

**6.4.1** There are currently no permanent Gypsy and Traveller sites within the National Park. A need has been identified in South Powys for a permanent Gypsy and Traveller Site. The NPA has been working with Powys County Council under the auspices of the Gypsy and Traveller Working Group to identify a suitable site. A site has been identified adjacent to Brecon Enterprise Park and on 27th March 2012 planning permission was granted for the provision of 14 units and associated infrastructure. This site is allocated for a permanent Gypsy and Traveller Site under Policy 30. The extent of the site is shown on the Brecon Inset Map. Proposals for the site will be determined against Policy 31.

**6.4.2** Policy 31 sets out the criteria against which Gypsy and Traveller caravan sites will be considered. This will apply to the allocated site, but also to future sites that may be proposed to meet a further need that arises over the LDP period.

**6.4.3** It is the responsibility of the constituent Unitary Authorities to monitor provision of Gypsy and Traveller Sites and if a need arises for additional sites, or extensions to existing ones, the constituent Unitary Authority and the National Park Authority will work with the relevant bodies and organisations to provide suitable additional land and/or accommodation.

**6.4.4** The NPA will use the Gypsy Traveller 'Draft Site Design Guidance', Welsh Assembly Government, May 2008 to help guide the application of the criteria set out in the Policy 31.

**6.4.5** The potential for negative effects on Natura 2000 sites is unlikely but remains dependant on the scale and location of the site.

**6.4.6** The NPA will support proposals which are located within or, as an exception to normal planning policies, adjacent to a defined settlement.

### **Policy 30 - Gypsy and Traveller Site**

Land is allocated adjacent to Brecon Enterprise Park for the provision of a permanent Gypsy and Traveller Site. The allocation is shown on the Brecon Inset Map. Proposals for the site will be considered under Policy 31

### **Policy 31 - Sites for Gypsies and Travellers**

Gypsy and Travellers' caravan sites will be permitted where:

- a) The proposed site will not adversely affect wildlife, habitats, landforms, archaeological and cultural features;
- b) The proposed development will not adversely affect the character, amenity and natural beauty of the National Park and shall be adequately screened. Any buildings required to facilitate the use (such as amenity buildings and site offices) shall be designed in appropriate local materials;
- c) The proposed site will be provided with a satisfactory level of services; and
- d) The proposed site will have an adequate means of access, and traffic to or from the site will not adversely affect highway safety.

## **Rural Exception Policies**

<sup>2.21</sup> Local authorities can also authorise private sites in rural areas under a rural exceptions policy. Planning for Gypsy and Traveller Caravan Sites notes that:

*'If the Accommodation Needs Assessment shows that new sites are needed, in rural areas your council should think about having a 'Gypsy and Traveller caravan rural exception site' policy in the Local Development Plan. This type of policy allows new sites to be developed on land which is next to a village or town, but where new housing would not normally be allowed. Councils can use rural exceptions policies for affordable housing for people who already live in the area, or for people who have links with local families or jobs.'*

<sup>2.22</sup> There are no specific rural exception policies in the adopted Powys UDP and *Policy HP6 - Dwellings in the Open Countryside* states that unless the proposal is for a development in compliance with the affordable housing policies of this plan, proposals for dwellings in the open countryside will only be permitted for agricultural or forestry uses (as defined in section 336 of the town and country planning act 1990) or in association with a suitable rural enterprise.

<sup>2.23</sup> In addition *Policy H5 - Affordable Housing Exception Sites* in the Deposit Draft LDP states that to meet a proven, unmet local need for affordable housing, the development of affordable housing only will be permitted as an exception in: 1. Towns and Large Villages – on sites which form a logical extension, and adjoin or are in close proximity to the development boundary. 2. Small Villages – on sites integrated within or forming a logical extension.

## Definition of Key Terms

<sup>2.24</sup> The 2015 GTAA Guidance contains common definitions that have been used in the Guidance and that will also be used in the GTAA Report. These are set out in the table below:

<b>Gypsies and Travellers</b>	<p>(a) Persons of a nomadic habit of life, whatever their race or origin, including:</p> <p>(1) Persons who, on grounds only of their own or their family's or dependant's educational or health needs or old age, have ceased to travel temporarily or permanently, and</p> <p>(2) Members of an organized group of travelling show people or circus people (whether or not travelling together as such); and</p> <p>(b) All other persons with a cultural tradition of nomadism or of living in a mobile home.</p> <p>Source: Section 108, Housing (Wales) Act 2014</p>
<b>Residential site</b>	<p>A permanent residential site can be privately owned or owned by the Local Authority. This site will be designated for use as a Gypsy and Traveller site indefinitely. Residents on these sites can expect to occupy their pitches for as long as they abide by the terms of their pitch agreements, under the Mobile Homes (Wales) Act 2013.</p> <p>Working space may also be provided on, or near, sites for activities carried out by community members.</p>
<b>Temporary residential site</b>	<p>These sites are residential sites which only have planning permission or a site licence for a limited period. Residents on these sites can expect to occupy their pitches for the duration of the planning permission or site licence (or as long as they abide by the terms of their pitch</p>

	agreements, under the Mobile Homes (Wales) Act 2013 – whichever is sooner).
<b>Transit site</b>	<p>Transit sites are permanent facilities designed for temporary use by occupiers. These sites must be designated as such and provide a route for Gypsies and Travellers to maintain a nomadic way of life. Individual occupiers are permitted to reside on the site for a maximum of 3 months at a time.</p> <p>Specific terms under the Mobile Homes (Wales) Act 2013 apply on these sites. Working space may also be provided on, or near, sites for activities carried out by community members</p>
<b>Temporary Stopping Place</b>	<p>Also known as a 'stopping place', 'Atchin Tan', or 'green lane', amongst other names. These are intended to be short-term in nature to assist Local Authorities where a need for pitches is accepted, however, none are currently available. Pro-actively identified temporary stopping places can be used to relocate inappropriately located encampments, whilst alternative sites are progressed.</p> <p>Temporary stopping places must make provision for waste disposal, water supply and sanitation at a minimum.</p>
<b>Residential pitch</b>	Land on a mobile home site where occupiers are entitled to station their mobile homes indefinitely (unless stated in their pitch agreement). Typically includes an amenity block, space for a static caravan and touring caravan and parking.
<b>Transit pitch</b>	<p>Land on a mobile home site where occupiers are entitled to station their mobile homes for a maximum of 3 months.</p> <p>Transit pitches can exist on permanent residential sites, however, this is not recommended.</p>

<b>Unauthorised encampment</b>	Land occupied without the permission of the owner or without the correct land use planning permission. Encampments may be tolerated by the Local Authority, whilst alternative sites are developed.
<b>Unauthorised development</b>	Land occupied by the owner without the necessary land use planning permission.
<b>Current residential supply</b>	The number of authorised pitches which are available and occupied within the Local Authority or partnership area. This includes pitches on Local Authority or private sites.
<b>Current residential demand</b>	<p>Those with a need for authorised pitches for a range of reasons, including:</p> <p>An inability to secure an authorised pitch leading to occupation of unauthorised encampments;</p> <p>An inability to secure correct planning permission for an unauthorised development;</p> <p>Households living in overcrowded conditions and want a pitch;</p> <p>Households in conventional housing demonstrating cultural aversion;</p> <p>New households expected to arrive from elsewhere.</p>
<b>Future residential demand</b>	The expected level of new household formation which will generate additional demand within the 5 year period of the accommodation assessment and longer LDP period.
<b>Overall residential pitch need</b>	The ultimate calculation of unmet accommodation need, which must be identified through the Gypsy and Traveller accommodation assessment process. This figure can be found by adding the immediate residential need to the future residential demand. The overall residential need will capture the needs across the 5 year period within which the accommodation assessment is considered to be

	robust.
<b>Planned residential pitch supply</b>	The number of authorised pitches which are vacant and available to rent on Local Authority or private sites. It also includes pitches which will be vacated in the near future by households moving to conventional housing or in other circumstances. Additional pitches which are due to open on private sites likely to achieve planning permission shortly should be included as planned residential supply.
<b>Household</b>	In this guidance this refers to individuals from the same family who live together on a single pitch / house / encampment.
<b>Concealed or 'doubled-up' household</b>	<p>This refers to households which are unable to achieve their own authorised accommodation and are instead living within authorised accommodation (houses or pitches) assigned to another household.</p> <p>This may include adult children who have been unable to move home or different households occupying a single pitch.</p>
<b>Household growth</b>	In this guidance household growth is defined by the number of new households arising from households which are already accommodated in the area.

## 3. Analysis of Existing Data

- 3.1 The purpose of this section of the GTAA is to set out current information relating to the Gypsy and Traveller population in Powys including previous assessments of need, socio-demographic data, caravan count data and the current provision of accommodation.

### Current and Previous GTAAs

#### Powys GTAA Update 2014

- 3.2 The Council publicised a new GTAA in 2015 to update a previous assessment that was undertaken jointly between Shropshire, Herefordshire, Telford & Wrekin and Powys that was published in 2008.
- 3.3 The Council considered that this update was timely because it felt that the recommendations of the 2008 GTAA had been met. It was also considered necessary to reassess Gypsy and Traveller accommodation needs as part of the Councils Local Housing Market Assessment in order to provide an accurate and full picture of Gypsy and Traveller accommodation needs in Powys.
- 3.4 This study initially identified a need to provide 6 additional pitches to meet the needs of Gypsies and Travellers for the period 2011 – 2016. However the study also identified that the provision for 3 of these pitches was already being addressed so the net need was for 3 additional pitches.

#### Recommendation - Solution for Need Identified

The Council will prepare a strategy for the identified need to ensure the deliverability of sites. The Housing Act 2004 and new Housing Bill coming forward place a duty on local authorities to provide sites for Gypsies and Travellers where a clear need has been identified. Sites will still need planning permission in the normal way.

**Welshpool** - Need has been identified to accommodate 3 additional pitches. However, recently, two of the newly forming households have got engaged and left the site. It is considered that given the age profile of residents, through natural wastage and plot turnover rates that this need may be satisfied by the current provision. The Council will investigate the possibility of re-configuring the Welshpool site to accommodate 1 additional plot for the newly forming household when the need arises.

**Newtown** - The housed Gypsy family have moved to bricks & mortar accommodation in England at their own request. Therefore a need no longer exists.

**Machynlleth** - The Council will investigate feasibility options for providing a transient site to meet the need identified of 2 households. In seeking to identify a suitable site, the Council will liaise with the adjoining authorities of Ceredigion and Gwynedd.

**Brecon** - No future need has been identified in Brecon, however, the 4 additional un-serviced pitches provided on 'King's Meadow' will be used to accommodate future growth as it arises. There is also one family in Brecon who are currently tenants of the Kings Meadow site, but who want to develop their own site and who are being advised about the planning process.

## Population Data – 2011 Census

- 3.5 Analysis of 2011 Census data relating to the Gypsy and Traveller population identified a total of 52 households and 128 individuals who identified themselves as Gypsies or Irish Travellers living in Powys – representing less than 0.1% of the population as a whole. It is likely that this could be an under-estimate given the accepted lower than average levels of response to the Census from the members of the Gypsy and Traveller community.
- 3.6 Evidence to support this under-estimate can be found in an ONS Report that was published in January 2014 entitled *What does the 2011 Census tell us about the Characteristics of Gypsy or Irish Travellers in England and Wales?* This states that:

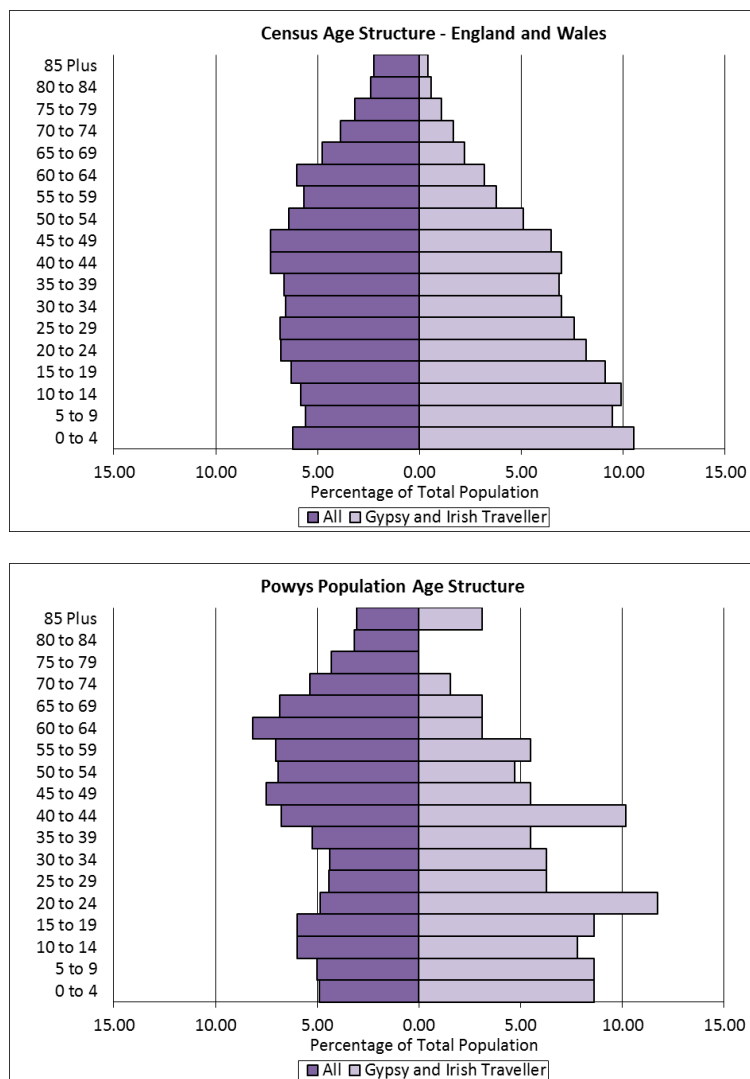
*In the 2011 Census for England and Wales, 58,000 people chose to identify themselves as Gypsy or Irish Traveller. Estimates for the UK from other sources vary between 82,000 to 300,000. Variations in the definitions used for this ethnic group has made comparisons between estimates difficult. For example, some previous estimates for Gypsy or Irish Travellers have included Roma or have been derived from counts of caravans rather than people's own self-identity. Historical difficulties in collecting robust data, for example the group's concerns about official data collections/fear of discrimination have inhibited a true picture of Gypsy or Irish Travellers in England and Wales being gathered.*

- 3.7 However, despite the suggested under-estimate of the population of Gypsies and Irish Travellers, data from the 2011 Census does identify some significant demographic differences when compared to the population as a whole. These are important in terms of explaining the higher rate of new household formation for Gypsy and Traveller households compared with the settled population. In summary the Census shows that nationally for England and Wales:
- » Just under half of Gypsy or Irish Traveller households had dependent children (45%), compared to 29% for England and Wales as a whole.
  - » The median age of Gypsies or Irish Travellers was 26 years compared to the national median of 39 years.
  - » Just 6% of the Gypsy or Irish Traveller population were aged 65 years and over compared to a national figure of 16%.
  - » Gypsies or Irish Travellers below 20 years of age accounted for 39% of the population compared to a national figure of 24%.
  - » Gypsies or Irish Travellers below 10 years of age accounted for 20% of the population compared to a national figure of 12%.
  - » Gypsies or Irish Travellers had the lowest proportion of people rating their health as good or very good at 70% compared to a national figure of 81%.



3.8 The charts below show the age structure for the whole population (All) and the Gypsy or Irish Traveller population in England and Wales, and in Powys. This shows that there is a higher proportion of Gypsy or Irish Traveller children and younger adults, and significantly lower proportions of those aged 50 and over. This is due to higher birth rates and lower life expectancy for the Gypsy and Traveller population.

Figure 1 - Comparison of Census Age Structure (2011 Census)



3.9 When household composition data from the 2011 Census is compared between the overall population for Powys and those who identified themselves as Gypsies or Irish Travellers there are further differences. Again this shows that there are significantly fewer Gypsy and Traveller households of those aged 65 and over, as well as showing a higher proportion of lone parent households.

Figure 2 - Comparison of Housing Composition in Powys (2011 Census)

Household Composition	All Households	Gypsy or Irish Traveller
<b>One person household</b>	<b>31.5</b>	<b>44.2</b>
Aged 65 and over	15.8	9.6
<b>One family only</b>	<b>63.3</b>	<b>42.3</b>
Ages 65 and over	11.0	1.9

Married or civil partnership	33.9	21.2
Cohabiting couple	9.4	5.8
Lone parent	9.0	13.5
<b>Other household types</b>	<b>5.2</b>	<b>13.5</b>

- 3.10 When accommodation type data from the 2011 Census is compared between the overall population for Powys and those who identified themselves as Gypsies or Irish Travellers there are also further differences. This shows a significantly lower proportion of Gypsies or Irish Travellers living in detached properties and a much higher proportion living in flats, maisonettes or apartments, or mobile/temporary accommodation (or on Traveller sites).

Figure 3 - Comparison of Accommodation Type in Powys (2011 Census)

Accommodation Type	All Households	Gypsy or Irish Traveller
Whole house or bungalow: Total	93.9	61.6
Whole house or bungalow: Detached	50.4	20.0
Whole house or bungalow: Semi-detached	25.7	21.6
Whole house or bungalow: Terraced (including end-terrace)	17.8	20.0
Flat, maisonette or apartment, or mobile/temporary accommodation	6.1	38.4

- 3.11 When tenure type data from the 2011 Census is compared between the overall population for Powys and those who identified themselves as Gypsies or Irish Travellers there are again differences. This shows a lower proportion of Gypsy or Irish Traveller households that are owned outright, or owned with a mortgage or through shared ownership – and a higher proportion of households that are socially rented, or privately rented.

Figure 4 - Comparison of Tenure Type in Powys (2011 Census)

Tenure	All Households	Gypsy or Irish Traveller
Owned or shared ownership: Total	69.0	59.6
Owned outright	43.9	36.5
Owned with a mortgage or loan or shared ownership	25.1	23.1
Social rented: Total	14.0	19.2
Rented from council (Local Authority)	9.2	9.6
Other social rented	4.8	9.6
Private rented or living rent free: Total	17.0	21.2
Private landlord or letting agency	12.9	19.2
Other private rented or living rent free	4.1	1.9

- 3.12 When economic activity status data from the 2011 Census is compared between the overall population for Powys and those who identified themselves as Gypsies or Irish Travellers there are further differences. This shows that a far lower proportion of Gypsy or Irish Traveller households that are economically active and in employment; that a higher proportion are economically inactive due to looking after home or family, long-term sickness; and a lower proportion are economically inactive due to retirement. Interestingly in Powys a lower proportion of Gypsies and Travellers are self-employed, but this could be explained by the rural nature of the Powys economy and prevalence of farming.

**Figure 5 - Comparison of Economic Activity Status in Powys (2011 Census)**

Economic Activity	All Households	Gypsy or Irish Traveller
Economically active: Total	61.6	44.1
In employment: Total	58.7	37.6
Employee: Total	41.3	25.8
Self-employed: Total	15.8	11.8
Unemployed: Total	2.9	6.5
Economically inactive: Total	38.4	55.9
Looking after home or family	2.8	18.3
Long-term sick or disabled	3.8	11.8
Retired	27.0	10.8

## Caravan Count Data

- <sup>3.13</sup> Another source of published information on the Gypsy and Traveller population is the bi-annual Gypsy and Traveller Caravan Count which is conducted by each Local Authority in Wales on a specific date in January and July of each year, and reported to Welsh Government. This is a physical count of the number of *caravans* on both authorised and unauthorised sites across Wales.
- <sup>3.14</sup> As this count is of *caravans and not households*, it makes it very difficult to interpret and use for a study such as this because it does not count pitches, resident households or household demographics. The count is merely a ‘snapshot in time’ conducted by the Local Authority on a specific day, and therefore any unauthorised sites or encampments which occur on other dates are not recorded. Likewise any caravans that are away from sites on the day of the count will not be included. The count also does not seek to determine the ethnic status of the occupiers of caravans.
- <sup>3.15</sup> However the data captured in the Caravan Count does give an indication of the number of sites, and authorised and unauthorised caravans in each local authority, and can be useful in supporting the determination of any transit needs, and identifying year on year trends to support an assessment of need.
- <sup>3.16</sup> Figure 6 shows data for the number of authorised and unauthorised caravans that have been recorded in Powys for the 9 year period since 2006. This shows a gradual increase in the number of authorised caravans, and a gradual decrease in the number of unauthorised caravans. Peaks in the number of unauthorised caravans recorded in July 2008, 2009 and 2012 are as a result of large number of caravans at the Royal Welsh Show in Builth Wells. A temporary 2 week transit permission for 100 pitches was subsequently granted and this explains the peak in the number of authorised caravans recorded in July 2014 and July 2015, although it is evident from the data that this site has yet to reach its seasonal capacity with just 28 caravans in July 2014 and 37 in July 2015.
- <sup>3.17</sup> Figure 7 shows a breakdown of authorised caravans between public and private sites. This shows a gradual increase in the number of caravans on public sites – mainly due site expansions, the development of a new site in Brecon, and the temporary transit provision at the Royal Welsh Show. It also shows a small increase in the number of caravans on private sites between July 2010 and July 2011 due to a temporary planning permission being granted but this has now expired.

Figure 6 - Comparison of the Number of Caravans in Powys

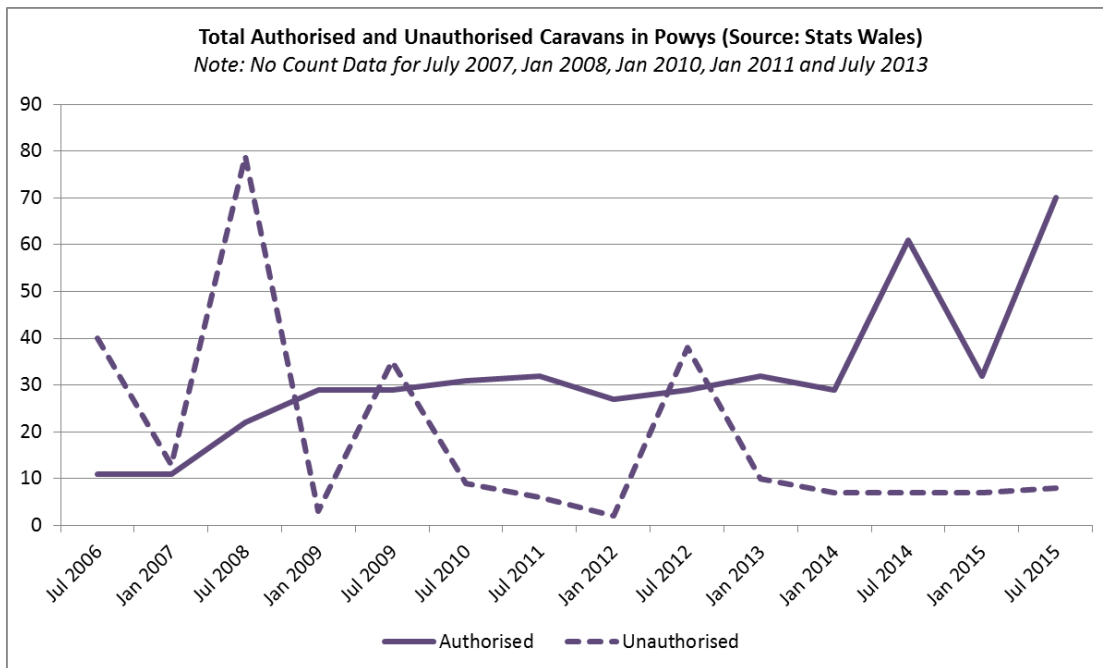
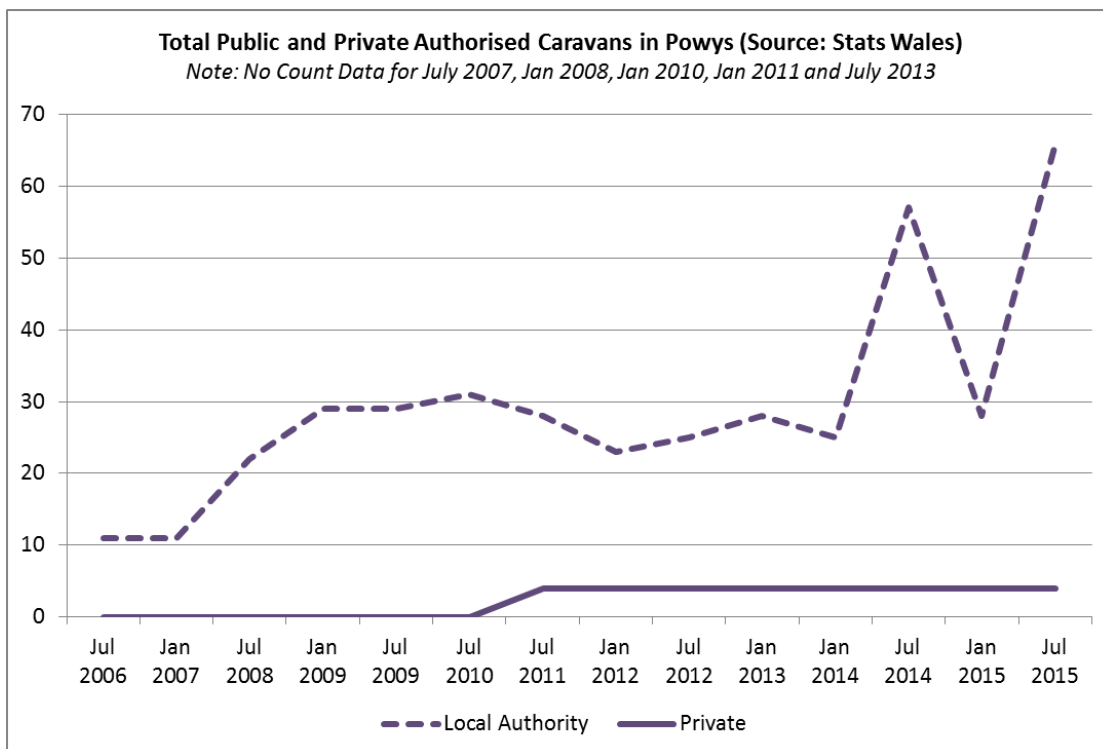


Figure 7 - Comparison of the Number of Authorised Caravans in Powys



### Current Accommodation Provision

3.18 One of the main considerations of this study is provide evidence to support the provision of pitches and plots to meet the current and future accommodation needs of Gypsies and Travellers in Powys. A pitch is an area which is large enough for one household to occupy and typically contains enough space for one or two caravans, but can vary in size. A site is a collection of pitches which form a development exclusively for

Gypsies and Travellers. For Travelling Showpeople, the most common descriptions used are a plot for the space occupied by one household and a yard for a collection of plots which are typically exclusively occupied by Travelling Showpeople.

- 3.19 The public and private provision of mainstream housing is also largely mirrored when considering Gypsy and Traveller accommodation. One common form of a Gypsy and Traveller site is a publicly-provided residential site, which is provided by a Local Authority or by a Housing Association. Pitches on public sites can usually be obtained through signing up to a waiting list, and the costs of running the sites are met from the rent paid by the tenants (similar to social housing).
- 3.20 The alternatives to public residential sites are private residential sites and yards for Gypsies and Travellers. These result from individuals or families buying areas of land and then obtaining planning permission to live on them. Households can also rent pitches on some private sites that are run on a commercial basis. Therefore, these two forms of accommodation are the equivalent to private ownership and renting for those who live in bricks and mortar housing. Generally the majority of Travelling Showpeople yards are privately owned and managed.
- 3.21 The Gypsy and Traveller population also has other forms of sites due to its mobile nature. Transit sites tend to contain many of the same facilities as a residential site, except that there is a restricted period of residence which can vary from a period of weeks to a period of months. An alternative to a transit site is an emergency stopping place. This type of site also has restrictions on the length of time someone can stay on it, but has much more limited facilities. Another alternative is a Negotiated Stopping Agreement that allows Gypsy and Traveller families to set up short-term camps as long as they agree to certain conditions. These are designed to accommodate, for a temporary period, Gypsies and Travellers whilst they travel. A number of authorities also operate an accepted encampments policy where short-term stopovers are tolerated without enforcement action.
- 3.22 Further considerations for the Gypsy and Traveller population are unauthorised developments and encampments. Unauthorised developments occur on land which is owned by the Gypsies and Travellers or with the approval of the land owner, but for which they do not have planning permission to use for residential purposes. Unauthorised encampments occur on land which is not owned by the Gypsies and Travellers – for example layby's or car parks.

## Sites and Yards in Powys

- 3.23 In Powys there are 2 public sites which whilst having planning permission for 24 pitches, only have a total of 20 operational pitches at the time of this study. The reason for this is that the new public site that was opened in Brecon in 2014 has 4 unimplemented pitches to meet the identified household growth needs of the residents living on the site, 1 of these pitches has recently been let but is not fully implemented. There is also a temporary public transit site for land close to the Royal Welsh Show in Builth Wells. This provides a total of 100 short-term pitches for a 2 week period in July up until 2018 and was put in place to address annual instances of unauthorised encampments by Gypsies and Travellers and the Royal Welsh Show – as can be seen in the Caravan Count data.
- 3.24 Whilst the Caravan Count data indicated that there were 2 private sites in Powys, analysis of planning records identified that one of these sites had been granted a 5 year temporary planning permission for the change of use of land to siting of a mobile home which had expired in 2014 – there was no reference on the Decision Notice to it being a Gypsy site, nor any conditions restricting occupation to Gypsies or Travellers.

Whilst a planning application was submitted for the other site it was then withdrawn. It was discussed with the Council whether these sites could be included as long-term tolerated or unauthorised sites, but following the site interviews it was identified that both sites were in fact not occupied by Gypsies or Travellers and are simply unauthorised caravans. As such they have not been included in the GTAA. Apart from the seasonal transit provision at Builth Wells there are no other pitches with planning permission in Powys.

- 3.25 There are also 3 pitches on 2 unauthorised sites. Whilst the Caravan Count also included a tolerated site on Hay Common, there is no evidence that it has ever been occupied by Gypsies or Travellers on a regular basis as it is a seasonal 'camping' site. As such it has not been included in the GTAA. In Addition the Caravan Count included an addition unauthorised pitch that was not tolerated for planning purposes. The household interview identified that it is not occupied by Travellers so it has also not been included in the GTAA.
- 3.26 Despite efforts to identify them, no Travelling Showpeople yards were found in Powys. This is consistent with findings from both the 2008 and 2014 GTAA's for Powys. There is no public or private transit provision. Further details can be found in Chapter 5 and **Appendix A**.

**Figure 8 - Total amount of provision in Powys (November 2015)**

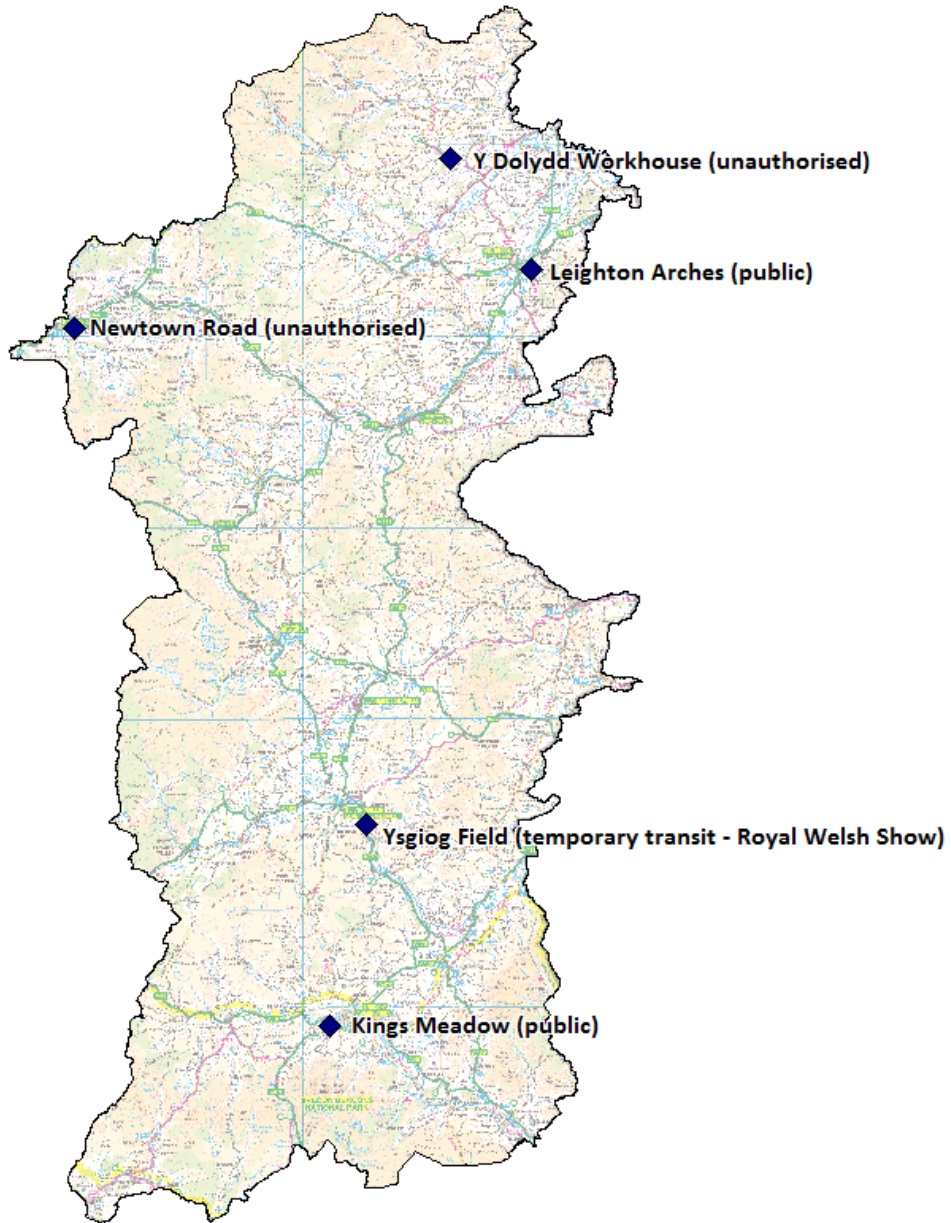
Category	Sites/Yards	Pitches/Plots
Private with permanent planning permission	0	0
Private sites with temporary planning permission	0	0
Public sites	2	24 <sup>1</sup>
Public transit provision	0	0
Private transit provision	0	0
Tolerated sites	0	0
Unauthorised sites	2	3
Authorised Travelling Showpeople yards	0	0
Tolerated Travelling Showpeople yards	0	0
Unauthorised Travelling Showpeople yards	0	0

**Figure 9 - Sites and Yards in Powys (November 2015)**

Site Name	Pitches/Plots	Status
Leighton Arches, Welshpool	10	Public
Kings Meadow, Brecon	14 <sup>1</sup>	Public
Newtown Road, Machynlleth	2	Unauthorised
Y Dolydd Workhouse, Llanfyllin	1	Unauthorised

<sup>1</sup> 4 pitches at Kings Meadow are currently unimplemented although 1 has been let

Map 1 - Indicative Location of Sites in Powys (November 2015)



## 4. Methodology

4.1 This section sets out the methodology that has been followed to deliver the outputs for this study. The Guidance issued under Section 106 of the Act sets out the requirements for the GTAA and the methodology and calculation of need that has been followed has sought to address these and allow for a full and robust GTAA to be completed. The study has been undertaken by Opinion Research Service and the approach taken covers the following core areas of work:

- » Setting up a Project Steering Group.
- » Identify and analyse existing data sources.
- » Publicise the accommodation assessment.
- » Conduct the accommodation assessment surveys.
- » Calculate the accommodation needs of Gypsies and Travellers.

4.2 The stages below provide a summary of the methodology that was used to complete this study.

### Project Steering Group

4.3 The Welsh Government GTAA Guidance requires that a Project Steering Group be established to ensure that the study is informed by all available local knowledge and expertise. ORS worked closely with the Council to identify the most appropriate individuals and organisations to make up the Steering Group.

4.4 The individuals who attended meetings of the Steering Group in Powys were:

**Figure 10 – Powys GTAA Steering Group Membership**

Name	Organisation	Role
Mark Davies	Powys Council	Affordable Housing Officer
Peter Morris	Powys Council	Planning Policy Officer
Claire Evans	Powys Council	Housing Officer – Leighton Arches
Liz Davies	Powys Council	Housing Officer – Kings Meadow
Imtiaz Bhatti	Powys Council	Education Officer
Bryn Hall	Unity Project	
Mr Price and Family	Traveller Representative	
Mel Jones	The Gwalia	Engagement Strategy Officer
Michael Smith	Carmarthenshire Council	Community Cohesion Coordinator
Rachel Davies	Carmarthenshire Council	Quality Homes Officer
Darren White	Powys Council	Housing Officer - Machynlleth
Steve Jarman	Opinion Research Services	

4.5 As set out in the GTAA Guidance the key responsibilities of the Steering Group were to agree on the aims and objectives of the study; promote the benefits of the study to members of the Travelling Community; help identify households living in bricks and mortar and on unauthorised sites and encampments; provide



expert stakeholder input into the identification of local need; provide feedback on the emerging outputs from the study; and to share and promote the final outcomes to members of the Travelling Community. Due to geographic difficulties it was only possible to hold one Steering Group meetings in 2015.

- 4.6 The first meeting at the start of the study was held in Powys County Hall in Llandrindod Wells on Monday 19th October. At this meeting the aims and objectives of the study were agreed; the methodology was discussed; the approach to publicity was agreed; and key issues relating to a number of Gypsy and Traveller sites were discussed.
- 4.7 In addition to the Steering Group meetings conversations were held with a number of Steering Group members, and other Council Officers to gain views and information to support the wider assessment of need. These included Planning Officers, Site Managers, Education Officers, Enforcement Officers and Housing Officers. Contact was also made with representatives from the Showman's Guild and the Association of Independent Showpeople.
- 4.8 A request to complete a short questionnaire was also sent to 73 County Councillors in Powys, and a total of 20 valid responses were received.
- 4.9 As well as obtaining information from the neighbouring authorities of Carmarthenshire through representation on the Steering Group, engagement was also successful with Pembrokeshire (through the Unity Project) and Ceredigion through the Carmarthenshire Steering Group. Information was also obtained from Conwy, Denbighshire, Bridgend and the Vale of Glamorgan in relation to travelling patterns and movement of unauthorised encampments. Additional information was gathered through discussions with Gypsies and Travellers Wales.

## Identify and Analyse Existing Data

- 4.10 A desk-based review was undertaken to collate and analyse a range of secondary data and other local intelligence that has been used to identify and support the assessment of current and future accommodation need including:
- » Planning records.
  - » Census data.
  - » Site records and waiting lists.
  - » Caravan counts.
  - » Records of unauthorised sites/encampments.
  - » Information on planning applications/appeals.
  - » Information on enforcement actions.
  - » Existing GTAA's and other relevant local studies.
  - » Existing national and local policy, guidance and best practice.

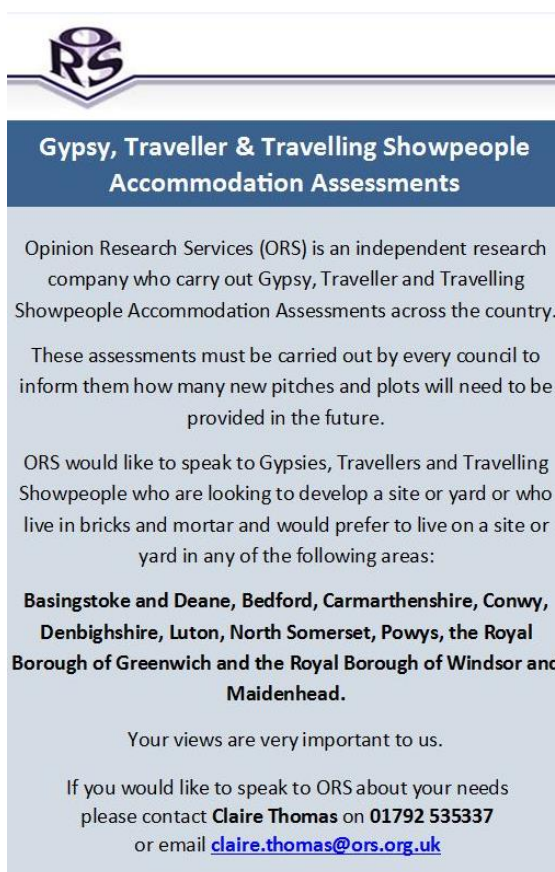
## Publicise the Accommodation Assessment

- 4.11 In order to get buy-in from members of the Travelling Community to ensure that they were able and willing to participate in the site and household interviews and provide accurate information, it was important that

effective publicity and pre-notification was put in place. This was also very important in terms of identifying households living in bricks and mortar accommodation to interview as part of the study.

- 4.12 The approach to publicity was discussed with members of the Steering Group prior to the fieldwork commencing. Due to the geographic nature of Powys a number of approaches were discussed. Firstly it was agreed that site managers would communicate the study to households on the 2 public sites. It was also agreed that word-of-mouth communication between members of the Steering Group and colleagues would be an appropriate means of communication to seek to identify households living in bricks and mortar who are receiving services or support from the Council.
- 4.13 In addition to an advert that was placed in the Travellers Times and in World's Fair by Welsh Government, an additional advert was placed on the Travellers Times website by ORS (see below).

Figure 11 – ORS Travellers Times Advert



The advertisement features the ORS logo at the top, which consists of the letters 'ORS' in a stylized font with a blue and white color scheme. Below the logo is a dark blue header with the text 'Gypsy, Traveller & Travelling Showpeople Accommodation Assessments' in white. The main body of the ad is light blue and contains the following text:

Opinion Research Services (ORS) is an independent research company who carry out Gypsy, Traveller and Travelling Showpeople Accommodation Assessments across the country.

These assessments must be carried out by every council to inform them how many new pitches and plots will need to be provided in the future.

ORS would like to speak to Gypsies, Travellers and Travelling Showpeople who are looking to develop a site or yard or who live in bricks and mortar and would prefer to live on a site or yard in any of the following areas:

**Basingstoke and Deane, Bedford, Carmarthenshire, Conwy, Denbighshire, Luton, North Somerset, Powys, the Royal Borough of Greenwich and the Royal Borough of Windsor and Maidenhead.**

Your views are very important to us.

If you would like to speak to ORS about your needs please contact **Claire Thomas** on **01792 535337** or email [claire.thomas@ors.org.uk](mailto:claire.thomas@ors.org.uk)

## Conducting the Accommodation Assessment Surveys

### Site Interviews

- 4.14 Through the desk-based research and information from the Steering Group, ORS sought to identify all authorised and unauthorised sites, yards and encampments in Powys, and sought to undertake a full demographic study of the residents on all pitches and plots – as required by the Welsh Government Guidance.

- 4.15 Following agreed publicity and pre-notification activities, all pitches and plots were visited by ORS researchers (who were carrying a letter of authorisation from the Council). They conducted interviews with residents using the questions set out in the GTAA Guidance.
- 4.16 As required by the GTAA Guidance where it was not possible to undertake an interview, the interviewers recorded this on the questionnaire and returned on up to 2 further occasions.

## Bricks and Mortar Interviews

- 4.17 ORS worked closely with the Council to ensure that all opportunities were utilised to identify households living in bricks and mortar to participate in the GTAA as this is a common issue raised at Local Plan examinations and planning appeals. Contacts were identified through sources including speaking with members of the Steering Group, speaking with people on existing sites, adverts on social media and in local and national print media including World's Fair and Travellers Times. This included discussions with Housing and Education Officers from the Council and scrutiny of their service user records. Interviews were attempted with all contacts that are identified using the questions in the GTAA Guidance – either face-to-face or by telephone.

## Calculate the Accommodation Needs of Gypsies, Travellers and Travelling Showpeople

- 4.18 The Welsh Government GTAA Guidance requires an assessment for current and future pitch requirements and sets out a detailed methodology for completing this. This differs from the approach usually followed by ORS but has been followed for the purpose of this GTAA. As with any housing assessment, the underlying calculation is comprised of a relatively small number of factors. In this case, the key issue for residential pitches is to compare the supply of pitches available for occupation with the current and future demand of the population. This information to feed into the assessment of need has been obtained from a combination of the desk-based research and the outcomes of the site and household interviews, together with additional information from members of the Steering Group and other local stakeholders. The key factors in each of these elements are set out below.

### Current Residential Supply

- » Occupied local authority pitches.
- » Occupied authorised private pitches.
- » Vacant local authority pitches and available private pitches.
- » Pitches expected to be vacated in the near future.
- » New local authority pitches private pitches with planning permission.

### Current Residential Demand

- 4.19 Total current residential demand is made up of the following components. It was important to make full use of the desk-based research and intelligence from members of the Steering Group to address issues of double counting (for example bricks and mortar households who are also the waiting list for pitches):

- » Households on unauthorised encampments.
- » Households on unauthorised developments.
- » Concealed /over-crowded/doubled-up households<sup>2</sup>.
- » Conventional housing – movement from bricks and mortar<sup>3</sup>.
- » New households to arrive from waiting lists/in-migration.

## Future Demand

- 4.20 Total future demand is a result of the formation of new households during the study period. ORS has undertaken extensive research into the population and household growth of the Gypsy and Traveller community in England and Wales. This was used to inform this element of the Welsh Government GTAA Guidance (see Paragraphs 203-209). Our research advocated a net compound household formation rate based on local evidence, as opposed to the 'accepted' growth rate of 3.00%.
- 4.21 In addition information from the site interviews provides details of the gross number of new households expected to form within the first 5 years of the study (although it is important to net this off against supply that has been identified during the first 5 years of the study).
- 4.22 The net compound household formation rate that is used for years 6-10 of the study has been based on demographic evidence from the site interviews. The base for this calculation will be the figure arrived at for the first 5 years of the study which includes all current authorised households, all households identified as current demand, including those on waiting lists not currently living on a pitch or plot, and new household formation identified from the site interviews. The research that ORS have conducted provides evidence to support the use of a formation rate as low as 1.50% for GTAA studies. Evidence to support the selected formation rate will be included in Chapter 6.

## Final Outcomes

- 4.23 All of the components of supply and demand are presented in an easy to understand table as set out in the GTAA Guidance in Table 3. A separate table will be prepared for the current and future needs of Gypsies and Travellers, and Travelling Showpeople as their needs should be considered independently as their circumstances are different from that of the wider travelling community.

## Transit Provision

- 4.24 The GTAA also includes an assessment of the need for any transit sites or emergency stopping places to meet the needs of members of the Travelling Community who either travel permanently or for part of the year. In order to investigate the potential need for transit provision when undertaking the GTAA, ORS have undertaken analysis of records of unauthorised sites and encampments that were identified during the desk-based research, and sought to conduct interviews with Gypsies and Travellers on any sites that are present during the course of the study to identify whether their needs are for transit accommodation or

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<sup>2</sup> Following the guidance set out in Paragraphs 195-201 of the GTAA Guidance

<sup>3</sup> Following the guidance set out in Paragraphs 172-183 of the GTAA Guidance

the desire to settle down more permanently in any given locality. Data from the Traveller Caravan Count has also been considered as supporting evidence.

## Compliance with Engagement Checklist

<sup>4.25</sup> The table below shows that this GTAA has been compliant with all of points set out in the Engagement Checklist in the Welsh Government GTAA Guidance.

Figure 12 – Engagement Checklist

	Task	Completed
1	<p>Visit every Gypsy, Traveller and Travelling Showperson household identified through the data analysis process up to 3 times, if necessary.</p> <p><i>It was possible to interview all households residents at the first visit.</i></p>	✓
2	<p>Publish details of the GTAA process, including contact details to allow community members to request an interview, on the local authority website, Travellers Times website and the World's Fair publication. In addition adverts were placed by Welsh Government.</p> <p><i>Whilst details of the GTAA were published in Travellers Times and World's Fair members of the Steering Group felt that face-to-face and word of mouth publicity would be more appropriate for the Travelling Community in Powys than using the Council's website.</i></p>	✓
3	<p>Consult relevant community support organisations, such as those in Annex 1.</p> <p><i>Staff from Unity were members of the Steering Group and discussions were also held with staff from Gypsies and Travellers Wales, the Showman's Guild and the Association of Independent Showpeople.</i></p>	✓
4	<p>Develop a Local Authority waiting list for both pitches and housing, which is accessible and communicated to community members.</p> <p><i>There has always been a waiting list for Kings Meadow and there is now also a waiting list for Leighton Arches. Housing Officers at the Council have contacted all existing residents at both sites, and other households on the waiting list for Kings Meadow to inform them that there is now an active waiting list for both public sites.</i></p>	✓
5	<p>Endeavour to include Gypsies and Travellers on the GTAA Project Steering Group.</p> <p><i>A total of 3 members from the Travelling Community attended meetings of the Steering Group.</i></p>	✓
6	<p>Ensure contact details provided to the local authority by community members through the survey process are followed up and needs assessed.</p> <p><i>All contacts provided to and by the local authority were followed up with a combination of interviews and face-to-face meetings with members of the Travelling</i></p>	✓

	<i>Community.</i>	
<b>7</b>	<p>Consider holding on-site (or nearby) GTAA information events to explain why community members should participate and encourage site residents to bring others who may not be known to the local authority.</p> <p><i>The Council's Site Manager sought to engage on a one-to-one basis with all households living on public sites to explain the purpose of the GTAA and to encourage them to participate and also to pass on information to friends and family. More general information sessions were not held due to geographical difficulties.</i></p>	✓

## 5. Survey Findings

### Background

- 5.1 The desk-based research, additional information from members of the Steering Group, and initial site interviews identified a total of 4 Gypsy and Traveller sites and no Travelling Showpeople yards in Powys.

Figure 13 - Sites in Powys (November 2015)

Site Name	Pitches	Status
Leighton Arches, Welshpool	10	Public
Kings Meadow, Brecon	14	Public
Newtown Road, Machynlleth	2	Unauthorised
Y Dolydd Workhouse, Llanfyllin	1	Unauthorised

- 5.2 Interviews were attempted on the sites and yards during October 2015 and a total of 25 successful interviews were completed across all 4 of the sites. This represented an overall response rate of 100% of occupied pitches (there were 3 unimplemented pitches at Kings Meadow). In addition a total of 2 face-to-face interviews were conducted with households living in bricks and mortar during October 2015. No other contacts in bricks and mortar were identified despite the efforts from members of the steering group and the publicity.

Figure 14 – Interviews completed in Powys (November 2015)

Site/Yard Name	Pitches	Interviews	Refusals
Leighton Arches, Welshpool	10	10	0
Kings Meadow, Brecon	14	12 <sup>4</sup>	0
Newtown Road, Machynlleth	2	2	0
Y Dolydd Workhouse, Llanfyllin	1	1	0
Bricks and Mortar – Travellers	-	2	-

### Interview Log

- 5.3 A copy of the Interview Log can be found in **Appendix B**.

### Overview and Demographics of Residents

- 5.4 Information collected on the type of accommodation lived in by those who were interviewed shows that the vast majority of Gypsies and Travellers who were interviewed in Powys live on public sites, with the remainder living on small unauthorised sites or in bricks and mortar.

<sup>4</sup> 2 interviews were completed on one of the pitches due to 2 unrelated single occupants

**Figure 15 – Accommodation Type as % of Total Household Interviews Completed (November 2015)**

Accommodation Type – G&T	Number	%
Local authority site	23	82.2
Private site	0	0.0
Tolerated site	3	10.7
Bricks and mortar - owner occupied	0	0.0
Bricks and mortar - private rented	0	0.0
Bricks and mortar - socially rented	2	7.1
Unauthorised site	0	0.0
<b>Total</b>	<b>28</b>	<b>100.0</b>

- 5.5 Ethnicity data was captured from all of the households that were interviewed on the Gypsy and Traveller sites and for those living in bricks and mortar. The sites in Powys are occupied by a mixture of Irish Travellers, Romany Gypsies and Welsh Gypsies. Romany Gypsies made up the highest number and proportion of those interviewed living on sites in Powys.

**Figure 16– Ethnicity of Household Members as % of Total Residents Interviewed (November 2015)**

Ethnicity - Sites	Number	%
Irish Traveller	21	33.9
Welsh Gypsy	5	8.1
Romany Gypsy	36	58.0
Refused	0	0.0
<b>Total</b>	<b>62</b>	<b>100.0</b>

- 5.6 In total the site interviews covered 62 residents living on Gypsy and Traveller sites and living in bricks and mortar. This was made up of 41 adults and 21 children and teenagers aged under 18. This equates to 66% adults and 34% children and teenagers. Although not a direct comparison, data from the Census for Powys as a whole (the settled community and the Gypsy or Irish Traveller community) and for Gypsies or Irish Travellers has been compared to the site population. This shows a higher proportion of those aged under 18 in the Gypsy and Traveller population when compared to that of the Powys population as a whole. This is important when determining the new household growth rate that will be applied to the population when longer-term need is determined.

**Figure 17 – Age and Gender of Household Members as % of Total Residents Interviewed (November 2015)**

Age and Gender - Sites	Number	%
Male	36	58.1
Female	26	41.9
Under 18	21	33.9
18 and Over	41	66.1



## Interview Summary

### Public Sites

#### Leighton Arches, Welshpool

- 5.7 Staff from ORS visited the public site at Leighton Arches in October 2015. The site has planning consent for 10 pitches and all were occupied at the time of the study. Interviews were completed with residents on all 10 pitches. The site was occupied by Irish Travellers and the residents comprised 16 adults and 5 children or teenagers (aged under 18). There were no concealed or doubled-up households identified and all but 1 of the households stated that they have enough sleeping areas on their pitches. Only one of the households identified anyone currently living on their pitch who is likely to want to move to their own home in the next 5 years, with 1 household member in need in 1-2 years and another in 2-5 years. These family members have asked to be added to the waiting list for the site.
- 5.8 All of the residents are satisfied with the site and all live there as a result of local connections through family or work. None gave any reasons why they cannot continue to live on the site. Most have lived on the site for over 5 years and none intend to move from the site. There were a small number of improvements that were suggested including a reduction to the speed limit for the road outside the site and action to deal with rats on the site.
- 5.9 None of the households have camped by the roadside, on an unauthorised encampment or on a transit site in the past year, but the majority did feel that there is a need for additional transit provision across Wales in general.

#### Kings Meadow, Brecon

- 5.10 Staff from ORS visited the public site at Kings Meadow in October 2015. Whilst the site has planning consent for 14 pitches, only 10 are currently fully operational, with 1 let on the basis of there being no dayroom and the remaining 3 to be made operational to meet the short to medium-terms needs of the households living on the site. A total of 11 pitches were occupied at the time of the study. Interviews were completed with residents on all occupied pitches, with 2 interviews completed on 1 of the pitches that is occupied by 2 unrelated adults. The site was occupied by Romany Gypsies and occupants comprised 15 adults and 9 children or teenagers (aged under 18). There was 1 concealed or doubled-up household identified and the majority of the households stated that they have enough sleeping areas on their pitches. The households that did not have enough sleeping areas have requested that family members be added to the waiting list for the site. Only 1 of the households identified anyone currently living on their pitch who is likely to want to move to their own home in the next 5 years, and that this should be on the existing site.
- 5.11 The majority of residents are not satisfied with the site and gave a number of similar reasons for their dissatisfaction:
- » The site is not yet finished.
  - » Problems with the drains.
  - » Some pitches do not have day rooms, and others are not finished.

» No play facilities for the children.

- 5.12 All of the households live on the site as a result of local connections through family or work, and none gave any reasons why they cannot continue to live on the site. The majority have lived on the site for between 1-2 years (since it was opened). 2 households had moved on to the site within the past 6 months with 1 moving from an unauthorised site in Powys and the other from a site in England. None of the households intend to move away from the site.
- 5.13 Four of the households said that they have camped by the roadside, on an unauthorised encampment or on a transit site in the past year, and those who provided further information had travelled elsewhere in Powys or across Wales for between 1-3 months. All of the households felt that there is a need for additional transit provision across Wales in general.
- 5.14 Information from the Council also showed that 1 household living on the site had applied for planning permission for a single pitch private site due to difficulties on the site between the household and other residents. The application was refused in July 2015 and was the subject of a planning appeal at the time of the GTAA.

## Tolerated Sites

### Newtown Road, Machynlleth

- 5.15 Staff from ORS visited the tolerated site at Newtown Road in October 2015. The site has no planning permission but the family have lived there for over 10 years and the site is immune from planning enforcement and is therefore included in the GTAA as current residential supply. Provision for a new site to meet the needs of the residents on this site has been included in the Draft LDP (see Page 12).
- 5.16 The site was occupied at the time of the study and interview was completed with both families living there. The occupants comprised 4 adults and 2 children. There were no concealed or doubled-up households identified and 1 household member was in need of a pitch of their own in the next five years.
- 5.17 The occupants are not satisfied with the site as it has no facilities, including no toilet or mains electricity supply. They would like to move to a new permanent site in the local area.
- 5.18 Some family members have camped on unauthorised encampments in the past 12 months for periods of 1-2 weeks at a time, but none felt that there was a need for more transit sites in Wales.

### Y Dolydd Workhouse, Llanfyllin

- 5.19 Staff from ORS visited the tolerated site at Y Dolydd Workhouse in October 2015. The site does not have planning permission but it has however been confirmed that the site is immune from planning enforcement owing to the time the caravan has been on the site. This site is also included in the GTAA as current residential supply. An interview was completed with the 1 household living on the site. They are satisfied with the site and do not plan to move, and do not have any future accommodation needs.

## Bricks and Mortar Interviews

- 5.20 Interviewers were able to complete a total of 2 interviews with households living in bricks and mortar in Machynlleth. They are related to the families living on the tolerated site at Newtown Road. They would like to move onto a permanent site to be with family members.

Figure 18 – Household Interview Summary for Powys

Site	Permitted Operational Pitches	Tolerated Pitches	Unauthorised Pitches	Interviews Completed	Adults	Children (Under 18)	Concealed Households
<b>Public Sites</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>31</b>	<b>14</b>	<b>0</b>
Leighton Arches	10	0	0	10	16	5	0
Kings Meadow	10	0	0	12	15	9	
<b>Private Sites with Permanent Permission</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
None							
<b>Private Sites with Temporary Permission</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
None							
<b>Tolerated Sites</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>0</b>
Newtown Road	0	2	0	2	4	2	0
Y Dolydd Workhouse	0	1	0	1	2	3	0
<b>Unauthorised Developments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>0</b>
None							
<b>Bricks and Mortar</b>							
2 Households	n/a	n/a	n/a	2	4	2	0
<b>TOTAL</b>	<b>20</b>	<b>3</b>	<b>0</b>	<b>27</b>	<b>41</b>	<b>21</b>	<b>0</b>

## Councillor and Parish Council Responses

- 5.21 To complement the household Interviews a link to a short online questionnaire was sent to 73 County Councillors. A total of 20 valid responses were received.
- 5.22 The questionnaire included questions on the following broad subject areas:
- » Dealings or relationships with Gypsies and Travellers
  - » Awareness of any particular issues in relation to Gypsies and Travellers
  - » Awareness of any Gypsy and Traveller sites
  - » Any trends with regard to Gypsies and Travellers
  - » What attracts Gypsies and Travellers to the area
  - » Any kinds of seasonal fluctuations
  - » Awareness of temporary stopping by travellers
  - » Relationship between the settled and travelling community
  - » Aware of any Travellers residing in bricks and mortar
  - » Any other comments.

## Dealings with Gypsies & Travellers

- » 18 out of 20 respondents had none or very little dealings with Gypsies and Travellers in their wards.
- » One respondent stated RWAS (Royal Welsh Agriculture Show).
- » The second respondent who had dealings said that they had met with Gypsies and Travellers and Powys County Council Housing Officers on more than one occasion.

## Awareness of any particular issues in relation to Gypsies and Travellers

- » 16 out of 20 respondents had no issues in relation to Gypsies and Travellers
- » Issues mentioned were to do with setting up a temporary site during the RWAS, and identifying a suitable site for Gypsies and Travellers.

## Awareness of any Gypsy and Traveller sites

- » 16 out of 19 respondents were not aware of any Gypsy and Traveller sites.
- » One respondent specified that there was a pitch in Machynlleth. The other two respondents who were aware of any mentioned the RWAS.

## Any trends with regard to Gypsies and Travellers

- » All 20 respondents stated that they were not aware of any trends.

## What attracts Gypsies and Travellers to the area

- » 12 out of 19 respondents stated none/nothing/not applicable.
- » Other respondents mentioned that traditional travelling routes and main roads may attract them to the area. Work such as selling of goods and tarmac work as well as the RWAS and a festival at the Workhouse is also mentioned as attracting them to the area.
- » One respondent stated that it is due to Gypsies and Travellers ability to go unchallenged by the County Council.

## Any kinds of seasonal fluctuations

- » 18 out of 20 respondents stated that there were no/very little seasonal fluctuations or that it was not applicable.
- » The remaining two respondents stated that they arrive in the summer and for RWAS.

## Awareness of temporary stopping by Travellers

- » 17 out of 20 respondents were not aware of or had very little awareness of temporary stopping by Travellers in their own ward.

- » Again the RWAS and festivals were mentioned by two respondents. One respondent says about stopping in Heol Maengwyn Street car park and Plas car park.
- » Two respondents were aware of temporary stopping by Travellers in other wards such as Knighton car park and Rhayader Town Car Park.

### Relationship between the settled and travelling community

- » 11 out of 18 respondents answered not applicable/there are no travelling community in their ward.
- » Other answers vary from very good, fleeting, the settled community objecting to Gypsies and annoyance with car parking issues between the settled and travelling community.

### Aware of any Travellers residing in bricks and mortar

- » 19 out of 20 respondents were not aware of any Travellers residing in bricks and mortar.

### Any other comments

- » Some respondents state that problems with Gypsies and Travellers have lessened over the years.
- » One respondent totally objects to any money being spent on Gypsies and Travellers.
- » One respondent says that the proximity to Neath and Swansea can attract Gypsies and Travellers due to more job opportunities.

## 6. Assessing Accommodation Needs

- 6.1 This section focuses on the additional pitch provision which is needed by Powys Council for a short-term period of 5 years and the full GTAA plan period of 15 years. This includes both current unmet need and need which is likely to arise in the future. This time period allows for robust forecasts for future provision, based upon the evidence contained within this study and also from secondary data sources.
- 6.2 This section is based upon a combination of information from the on-site surveys, planning records, Steering Group members, and from other stakeholders. In many cases, the survey data is not used in isolation, but instead is used to validate information from planning records or other sources.
- 6.3 This section concentrates not only upon the total additional provision which is needed in the area, but also whether there is a need for any transit sites and/or emergency stopping place provision.
- 6.4 Welsh Government Guidance requires an assessment of current and future pitch needs, and provides a prescribed framework for undertaking this calculation. This framework has been followed for the purpose of this GTAA.
- 6.5 As with any assessment of housing need the underlying calculation can be broken down into a relatively small number of factors. In this case, the key issue for residential pitches is to compare the supply that is available for occupation with the current and future needs of the households. The key factors in each of these elements are set out in the sections below.

### Need for Gypsies and Travellers

#### Current Residential Supply

- » Occupied local authority pitches.
- » Occupied authorised private pitches.
- » Vacant local authority pitches and available private pitches.
- » Pitches expected to be vacated in the near future.
- » New local authority pitches private pitches with planning permission.

#### Current Residential Demand

- » Households on unauthorised encampments.
- » Households on unauthorised developments.
- » Concealed /over-crowded/doubled-up households<sup>5</sup>.

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<sup>5</sup> Following the guidance set out in Paragraphs 195-201 of the GTAA Guidance

- » Conventional housing – movement from bricks and mortar<sup>6</sup>.
- » New households to arrive from waiting lists/in-migration.

## Future Demand

6.6 Total future demand is a result of the formation of new households during the study period. Information from the site interviews provides details of the gross number of new households expected to form within the first 5 years of the study (although it is important to *net* this off against supply that has been identified during the first 5 years of the study). The *net* compound household formation rate that has used for years 6-15 of the study has been based on demographic evidence from the site interviews.

## Current Authorised Residential Supply

6.7 To assess the current Gypsy and Traveller provision it is important to understand the total number of existing pitches and their planning status. There are 2 authorised public sites in Powys. There are no private sites and there is no public or private transit provision.

Figure 19 - Total number of authorised sites in Powys as at November 2015

Category	Sites	Pitches	Occupied
Private sites with permanent planning permission	0	0	0
Private sites with temporary planning permission	0	0	0
Public sites (Council and Registered Providers)	2	24	21 <sup>7</sup>
Public transit provision	0	0	0
Private transit provision	0	0	0

6.8 The next stage of the process is to assess how much space is, or will become, available on existing sites in order to determine the supply of available pitches. The main ways of finding this is through:

- » **Current vacant pitches** – There are no vacant pitches on the public sites in Powys.
- » **Pitches expected to become vacant** – Analysis of pitch turnover at the public sites indicates that on average 1 pitch becomes available on each site each year. In addition no households on the public sites indicated that they wished to move away or to bricks and mortar.
- » **Pitches currently with planning permission** – There are 3 pitches on the public site at Kings Meadow in Brecon that have not yet been fully implemented. These were granted planning permission to meet the short to medium-term needs of the households living on the site and this is reflected the Brecon Beacons National Park LDP which was adopted in 2013 which included provision for a new site in Brecon to meet need that had been identified in South Powys.

6.9 This gives a figure for **overall supply of 3 pitches**.

<sup>6</sup> Following the guidance set out in Paragraphs 172-183 of the GTAA Guidance

<sup>7</sup> There are 4 unimplemented pitches at Kings Meadow but 1 is occupied

**Figure 20 - Summary of Pitch Supply in Powys as at November 2015**

Category	Pitches
Current vacant pitches	0
Pitches expected to become vacant	0
Movement to bricks and mortar	0
Out-migration	0
Unimplemented pitches with planning consent	3
<b>TOTAL SUPPLY</b>	<b>3</b>

## Current Residential Demand

6.10 The next stage of the process is to assess current need and determine how many households are currently seeking pitches in the area.

## Current Unauthorised and Tolerated Sites

6.11 The study has identified 2 long-term unauthorised sites in Powys comprising 3 pitches. These will be included as current residential demand. The need from the 2 unauthorised pitches in Machynlleth was identified by the Council in the 2014 GTAA Update and provision to meet this need has been reflected in the 2015 Deposit Draft LDP Policy H13. The Council are also working to regularise the unauthorised pitch at Y Dolydd Workhouse.

6.12 As such there are **3 unauthorised pitches** in Powys.

6.13 There are also currently no sites in Powys with temporary planning permission and no tolerated sites.

**Figure 21 - Summary of Unauthorised and Tolerated Pitches in Powys at November 2015**

Site	Pitches
Unauthorised pitches	3
Tolerated pitches	0
<b>TOTAL</b>	<b>3</b>

## Concealed Households and Over-Crowded Pitches

6.14 The site interviews sought to identify concealed or doubled-up households on authorised sites that require a pitch immediately. Welsh Government Guidance defines concealed households as those which are unable to achieve their own authorised accommodation and are instead living within authorised accommodation (houses or pitches) assigned to another household. This may include adult children who have been unable to move home or different households occupying a single pitch. The site interviews identified the following:

- » 2 unrelated adults sharing a pitch at Kings Meadow, one of whom is on the waiting list for a pitch of their own that will be included as a concealed household.
- » Households with 4 young adult children who would want to move to their own home in the next 5 years – these will be included as a component of need as Future Households for years 1-5 of the GTAA.



- » A household living at Leighton Arches that stated that there were not enough sleeping spaces, but this was due to their caravan being too cold and not as a result of concealed households or over-crowding.
- » 2 households living at Kings Meadow that stated that they did not have enough sleeping spaces but this was due to the number of children living on the pitches and not as a result of concealed or over-crowded adults.

6.15 Therefore there is 1 concealed or doubled household that will be included in the GTAA.

## Conventional Housing

6.16 Identifying households in bricks and mortar has been frequently highlighted as an issue with Gypsy and Traveller Accommodation Assessments. The 2011 UK Census of Population identified a total of just 37 Gypsy or Irish Traveller households in Powys living in bricks and mortar.

6.17 As noted earlier, ORS went to all possible lengths to identify Gypsies and Travellers living in bricks and mortar and worked with stakeholders, Council officers, and on-site interviewees to identify households to interview. This process resulted in just 2 households to interview – both of who stated that they had a need to move to a site to be close to family members. This need from bricks and mortar in Machynlleth was identified by the Council in the 2014 GTAA Update and provision to meet this need has been reflected in the 2015 Deposit Draft LDP Policy H13.

Figure 22 - Summary of Bricks and Mortar Need in Powys at November 2015

Site	Pitches
Existing households	2
<b>TOTAL</b>	<b>2</b>

## New Households to Arrive

6.18 At the time of the GTAA vacant pitches for the public site at Leighton Arches were allocated through community members hearing of a forthcoming vacancy and contacting the Council. Turnover rates are very low with a maximum of 1 pitch becoming vacant each year. Following the GTAA a formal waiting list was established for Leighton Arches.

6.19 There is a waiting list for Kings Meadow but the only household on the list has just been given a tenancy for one of the 4 unimplemented pitches on the site, leaving 3 unimplemented pitches.

6.20 Therefore there are **no additional households** in need of a pitch in Powys from the waiting list.

6.21 Assessments also need to consider in-migration (households requiring accommodation who move into the study area from outside) and out-migration (households moving away from the study area). Site surveys typically identify only small numbers of in-migrant and out-migrant households and the data is not normally robust enough to extrapolate long-term trends. At the national level, there is zero net migration of Gypsies and Travellers across the UK, but this assessment has taken into account local migration effects on the basis of the best local evidence available.

6.22 Evidence drawn from household interviews in Powys has been carefully considered and has not identified any specific sources of movement due to in-migration or out-migration, other than natural pitch turnover. Beyond this, rather than assess in-migrant households seeking to develop new sites in the area, it is recommended that each case is assessed as a desire to live in the area and that site criteria rules are followed for each new site. It is therefore important for the Council to continue to follow its existing criteria-based planning policies for any new potential sites which do arise.

### Additional Pitch Provision: Future Need

6.23 The next stage of the process is to assess future need and determine how many households are likely to be seeking pitches in the area in the future during the first 5 years of the assessment and for the longer 15 year plan period. There are two key components of future need.

- » Population and household growth.
- » Movement to and from sites and migration.

### Population and Household Growth

6.24 Nationally, a household formation and growth rate of 3.00% net per annum has been commonly assumed and widely used in local Gypsy and Traveller Accommodation Assessments, even though there is no statistical evidence of households growing so quickly. The result has been to inflate both national and local requirements for additional pitches unrealistically. In this context, ORS has prepared a *Technical Note on Household Formation and Growth Rates*. The main conclusions are set out here and the full Technical Note can be found in **Appendix C**.

6.25 Those seeking to provide evidence of high annual net household growth rates for Gypsies and Travellers have sometimes sought to rely on increases in the number of caravans, as reflected in the Caravan Counts. However, Caravan Count data is unreliable and erratic – so the only proper way to project future population and household growth is through detailed demographic analysis.

6.26 The research undertaken by ORS has identified that in fact, the growth in the national Gypsy and Traveller population may be as low as 1.50% per annum – much less than the 3.00% per annum often assumed, but still greater than in the settled community. Even using extreme and unrealistic assumptions, it is hard to find evidence that net Gypsy and Traveller population and household growth rates are above 2.00% per annum nationally.

6.27 The often assumed 3.00% per annum net household growth rate is unrealistic and would require clear statistical evidence before being used for planning purposes. In practice, the best available evidence supports a national net household growth rate of 1.50% per annum for Gypsies and Travellers.

6.28 There are 2 measures of household growth that are used for the assessment of need in this study. Evidence of *gross* household formation (family growth) from Section D of the Household Survey, *netted off* against evidence of 1 year pitch turnover and pitches expected to become vacant, has been used for the first 5 year period. A compound *net* household formation rate has been used for years 6-15 based on demographic evidence from the site surveys.

- 6.29 The site and bricks and mortar interviews identified **a total of 4 new households** as a result of family growth over the first 5 years of the assessment, and **a 1 year pitch turnover of 1** on each of the public sites.
- 6.30 The rate for years 6-10 has been calculated based on the overall demographic of the population. The Technical Note supports a national net growth rate for the Gypsy and Traveller population of 1.50% using a population base from the 2011 Census where, nationally, approximately 36% of the Gypsy and Traveller population were aged under 18. The site and household survey for Gypsies and Travellers in Powys indicates that approximately **34%** of the on-site and bricks and mortar population are children and teenagers aged under 18. Given that this very similar to the rate used to calculate the national net growth rate ORS consider that it is appropriate to allow for longer-term projected household growth for the Gypsy and Traveller population in Powys to occur at an annual **net growth rate of 1.50%**, using the total number of households at year 5 as the population base.

## Overall Need for Powys

- 6.31 The Welsh Government Guidance requires 2 assessments of need – for the first 5 years of the plan period and for the full Local Plan period to 2026. Following this approach the estimated provision that is needed in Powys for the first 5 years is for **5 additional pitches**. The estimated provision that is needed for the remainder of the GTAA plan period (years 6-10) is for **2 additional pitches**. This equates to **a total of 7 additional pitches** for the Local Plan period. This will address the needs of all identifiable Gypsy and Traveller households, and includes movement from conventional housing and the expected growth in household numbers due to new household formation – plus identified supply for the first 1 year period.

Figure 23 – Additional Pitches Needed in Powys from 2016-2026

Current Residential Supply	Number of Pitches
A. Occupied Local Authority Pitches	21
B. Occupied authorised private pitches/tolerated pitches	0
<b>Total</b>	<b>21</b>

Planned Residential Supply	Number of Pitches
C. Vacant Local Authority pitches and available vacant pitches	0
D. Pitches expected to become vacant in near future	2
E. New Local Authority and private pitches with planning permission	3
<b>Total</b>	<b>5</b>

Current Residential Demand	Pitch Demand
F. Unauthorised encampments	0
G. Unauthorised development	3
H. Overcrowded pitches/Unsuitable accommodation	1
I. Conventional housing	2
J. New households to arrive	0
<b>Total</b>	<b>6</b>

Current Households	Future Households (at year 5)	Future Households (years 6 to 10)
K. 25	29	31
L. Additional household pitch need	4	2

Unmet Need	Need Arising	Need Accommodated
M. Current residential demand	6	
N. Future residential demand (year 5)	4	
O. Future residential demand (years 6 to 15)	2	
P. Planned residential supply		5
Q. Unmet need (5 year)	5	
R. Unmet need (Local Plan period)	7	

- 6.33 However from a practical point of view it is important that the figures set out above are viewed in the context of previous assessments of need that have been completed in Powys and subsequent actions that have been taken to address need that has been identified.
- 6.34 The 2014 Powys GTAA Update recommended that the Council should investigate the feasibility of providing additional pitches to meet need that was identified in Machynlleth. This is reflected in the 2015 Deposit Draft LDP Policy H13 which includes the allocation of land for a permanent site in the Machynlleth area to meet the identified need. It has been confirmed by the Council that this is the same need that has been identified in this GTAA and that Welsh Government funding will be sought for to provide a permanent site with 5 pitches in the Machynlleth area.
- 6.35 The Brecon Beacons National Park LDP which was adopted in 2013 included provision for a new site in Brecon to meet need that had been identified in South Powys. Planning permission was granted for a new 14 pitch site in March 2012 on land adjacent to Brecon Enterprise Park and the Kings Meadow Site was developed and opened in 2014. A total of 14 pitches were granted planning permission and this included 4 pitches to meet the future need of households living on the site due to family growth and household formation – 1 of which was let early in 2016.
- 6.36 Also it is impractical to meet short-term need identified in Machynlleth through the available supply of unimplemented pitches in Brecon that were put in place to meet the medium to long-term needs of households living on that site.
- 6.37 It could therefore be said that provision to meet the majority of need identified in this GTAA has already been made through the development of the new site in Brecon and proposals for 5 new pitches in the Machynlleth area.
- 6.38 This leaves a residual need for the Council to address through new household formation on the public site in Welshpool, which when viewed in isolation shows a need to provide 2 additional pitches when the supply through dissolution of pitches is taken into consideration.
- 6.39 Therefore it could be said that the actual need identified in Powys, once the need that has already been accounted for in Brecon and Machynlleth has been taken into consideration, **is for 2 additional pitches** to meet the net need through new household formation on the site in Welshpool.

## Transit/Emergency Stopping Site Provision

- 6.39 Transit sites serve a specific function of meeting the needs of Gypsy and Traveller households who are visiting an area or who are passing through. A transit site typically has a restriction on the length of stay of around 13 weeks and has a range of facilities such as water supply, electricity and amenity blocks. An alternative to a transit site is a temporary stopping place.
- 6.40 Temporary stopping places are short-term unsustainable facilities which can be utilised to re-locate an encampment which occurs in an inappropriate location. This type of site also has restrictions on the length of time for which a Traveller can stay on it, but has much more limited facilities with typically only a source of water and chemical toilets provided.
- 6.41 Some authorities also operate a tolerated or negotiated stopping approach where households are provided with access to lighting, drinking water, refuse collection and hiring of portable toilets at a cost to the Travellers.
- 6.42 The Criminal Justice and Public Order Act 1994 is particularly important with regard to the issue of Gypsy and Traveller transit site provision. Section 62A of the Act allows the Police to direct trespassers to remove themselves, their vehicles and their property from any land where a suitable pitch on a relevant caravan site is available within the same Local Authority area (or within the county in two-tier Local Authority areas). A suitable pitch on a relevant caravan site is one which is situated in the same Local Authority area as the land on which the trespass has occurred, and which is managed by a Local Authority, a Registered Provider or other person or body as specified by order by the Secretary of State. Case law has confirmed that a suitable pitch must be somewhere where the household can occupy their caravan. Bricks and mortar housing is not a suitable alternative to a pitch.
- 6.43 Therefore, a transit site both provides a place for households in transit to an area and also a mechanism for greater enforcement action against inappropriate unauthorised encampments.
- 6.44 In order to identify whether there is a need for the Council to provide transit accommodation analysis has been undertaken of the Caravan Count data, the assessment for transit provision that was undertaken as part of the 2014 Powys GTAA, and the outcomes from the household interviews.
- 6.45 Analysis of the number of authorised and unauthorised caravans that have been recorded in Powys for the 9 year period since 2006 show peaks in numbers of unauthorised caravans during July 2008 and July 2009 that have been attributed to caravans visiting the Royal Welsh Show in Builth Wells. Whilst Caravan Count Data was not recorded for 2010-2013 it was recognised that this was a problem that needed to be addressed. As such planning permission was granted in December 2013 for a temporary transit site for 100 caravans at Builth Wells for the 2 week period in July when the Royal Welsh Show is held. As a result of this the Caravan Count data for July 2014 and July 2015 shows a peak in numbers of authorised caravans using the new transit facility, and a significant decrease in the number of unauthorised caravans. In July 2015 there were just 8 unauthorised caravans counted – 3 of which have now been identified as not being occupied by Travellers, with the remaining 5 on long-term unauthorised sites.
- 6.46 The 2014 Powys GTAA recognised that there are occasional instances of unauthorised encampments in the Brecon area, but that these are normally Irish Travellers passing through for work purposes. There are

other localised instances of Travellers temporarily visiting Powys to attend weddings or other events, but no further evidence of any long-term or permanent accommodation needs.

- 6.47 Whilst the outcomes from the household interviews showed that three quarters felt that there was a need for more transit provision in Wales, there were no specific references for the need for specific provision in Powys, with households seeking provision all over Wales.
- 6.48 As such it is recommended that there is **not a need for the Council to provide a transit site** in Powys due to the low numbers of unauthorised encampments. However the Council should continue to monitor the number of unauthorised encampments and consider the use of short-term toleration, negotiated stopping arrangements or temporary stopping places to deal with short-term transient stops. This management based approach should also include consideration about whether to provide toilets, water and refuse facilities.

### Need for Travelling Showpeople Plots

- 6.49 Given that there have been no Travelling Showpeople identified as living in Powys, no assessment of need has been undertaken. The Council should however monitor any future approaches for planning permission from Travelling Showpeople and have in place appropriate criteria-based development plan policies to deal with any future applications.

# 7. Conclusions

## Gypsy and Traveller Future Pitch Provision

- 7.1 Based upon the evidence presented in this study the estimated additional pitch provision needed for Gypsies and Travellers in Powys for the first 5 years of the GTAA plan period is for **1 additional pitch**, and for the remainder of the GTAA plan period is for a further **4 additional pitches**. This gives a total need for the whole GTAA plan period of 5 additional pitches. These figures should be seen as the projected amount of provision which is necessary to meet the statutory obligations towards identifiable needs of the population arising in the area. These figures include movement from conventional housing, and new household formation – less identified supply for the first year.
- 7.2 However from a practical point of view it is important that the figures set out in the paragraph above are viewed in the context of previous assessments of need that have been completed in Powys and subsequent actions that have been taken to address need that has been identified. This has resulted in the development of a new site in Brecon with planning consent for 14 pitches (11 of which have been implemented to date), and through the allocation of land for 5 new pitches in the Machynlleth area in the Deposit Draft Local Development Plan.
- 7.3 The 2014 Powys GTAA Update recommended that the Council should investigate the feasibility of providing additional pitches to meet need that was identified in Machynlleth. This is reflected in the 2015 Deposit Draft LDP Policy H13 which includes the allocation of land for a permanent site in the Machynlleth area to meet the identified need. It has been confirmed by the Council that this is the same need that has been identified in this GTAA and that Welsh Government funding will be sought for to provide a permanent site with 5 pitches in the Machynlleth area.
- 7.4 The Brecon Beacons National Park LDP which was adopted in 2013 included provision for a new site in Brecon to meet need that had been identified in South Powys. Planning permission was granted for a new 14 pitch site in March 2012 on land adjacent to Brecon Enterprise Park and the Kings Meadow Site was developed and opened in 2014. A total of 14 pitches were granted planning permission and this included 4 pitches to meet the future need of households living on the site due to family growth and household formation – 1 of which was made operational early in 2016.
- 7.5 Also it is impractical to meet short-term need identified in Machynlleth through the available supply of unimplemented pitches in Brecon that were put in place to meet the medium to long-term needs of households living on that site.
- 7.6 It could therefore be said that provision to meet the majority of need identified in this GTAA has already been made through the development of the new site in Brecon and proposals for 5 new pitches in the Machynlleth area.

- 7.7 This leaves a residual need for the Council to address through new household formation on the public site in Welshpool, which when viewed in isolation shows a need to provide 2 additional pitches when the supply through dissolution of pitches is taken into consideration.
- 7.8 Therefore it could be said that the actual need identified in Powys, once the need that has already been accounted for in Brecon and Machynlleth has been taken into consideration, **is for 2 additional pitches** to meet the net need through new household formation on the site in Welshpool.

## Transit Sites

- 7.9 The granting of planning permission for a temporary transit site to address historic numbers of unauthorised caravans at the Royal Welsh Show has had a significant impact of the number of unauthorised caravans recorded in Powys – falling from a peak of 79 in July 2008 to just 5 in July 2015 (when 3 non-Traveller caravans have been discounted).
- 7.10 The 2014 Powys GTAA recognises that occasional instances of unauthorised encampments are normally Irish Travellers passing through for work purposes, or short-term visits to attend weddings or other events.
- 7.11 Whilst the outcomes from the household interviews showed that three quarters felt that there was a need for more transit provision in Wales, there were no specific references for the need for specific provision in Powys, with households seeking provision all over Wales.
- 7.12 As such it is recommended that there is **not a need for the Council to provide a transit site** in Powys. However the Council should continue to monitor the number of unauthorised encampments and consider the use of short-term toleration or Negotiated Stopping Arrangements to deal with short-term transient stops.

## Travelling Showpeople

- 7.13 Given that there have been no Travelling Showpeople identified as living in Powys, no assessment of need has been undertaken. The Council should however monitor any future approaches for planning permission from Travelling Showpeople and have in place appropriate criteria-based development plan policies to deal with any future applications.



## Appendix A: Sites and Yards in Powys (November 2015)

Site/Yard	Operational Pitches/Plots	Unauthorised Pitches/Plots
<b>Public Sites</b>		
Leighton Arches, Welshpool	10	-
Kings Meadow, Brecon	14	-
<b>Private Sites with Permanent Permission</b>		
None	-	-
<b>Private Sites with Temporary Permission</b>		
None	-	-
<b>Tolerated Sites – Long-term without Planning Permission</b>		
Newton Road, Machynlleth	-	2
Y Dolydd Workhouse, Llanfyllin	-	1
<b>Unauthorised Sites</b>		
None	-	-
<b>TOTAL PITCHES</b>	<b>24</b>	<b>3</b>
<b>Public Transit Sites</b>		
None	-	-
<b>Private Transit Sites</b>		
None	-	-
<b>Private Travelling Showpeople Yards</b>		
None	-	-
<b>Tolerated Travelling Showpeople Yards</b>		
None	-	-
<b>Unauthorised Travelling Showpeople Yards</b>		
None	-	-

## Appendix B: Interview Log

Address	Type of tenure	Interview attempts	Engagement techniques used	Completed or refusal?	Reasons for refusal?	
Leighton Arches, Welshpool - Pitch 1	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 2	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 3	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 4	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 5	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 6	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 7	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 8	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 9	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Leighton Arches, Welshpool - Pitch 10	Local Authority site	21/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 1	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 2	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 3	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 4	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 5	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 6	Local Authority site			Face-to-face pre-notification	Refusal	Unimplemented pitch
Kings Meadow, Brecon - Pitch 7	Local Authority site			Face-to-face pre-notification	Refusal	Unimplemented pitch
Kings Meadow, Brecon - Pitch 8	Local Authority site			Face-to-face pre-notification	Refusal	Unimplemented pitch
Kings Meadow, Brecon - Pitch 9	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 10	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 11	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 12	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 13	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Kings Meadow, Brecon - Pitch 14	Local Authority site	26/10/15		Face-to-face pre-notification	Completed	
Newtown Road, Machynlleth - Pitch 1	Unauthorised development	21/10/15		Steering Group	Completed	
Newtown Road, Machynlleth - Pitch 2	Unauthorised development	21/10/15		Steering Group	Completed	
Y Dolydd Workhouse, Llanfyllin - Pitch 1	Unauthorised development	21/10/15		Site Visit	Completed	
Machynlleth	Bricks and mortar	21/10/15		Steering Group	Completed	
Machynlleth	Bricks and mortar	21/10/15		Steering Group	Completed	

# Appendix C: Technical Note on Household Formation and Growth Rates



## **Technical Note**

# **Gypsy and Traveller Household Formation and Growth Rates**

**August 26<sup>th</sup> 2015**

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# Household Growth Rates

## Abstract and conclusions

1. National and local household formation and growth rates are important components of Gypsy and Traveller accommodation assessments, but little detailed work has been done to assess their likely scale. Nonetheless, nationally, a net growth rate of 3% per annum has been commonly assumed and widely used in local assessments – even though there is actually no statistical evidence of households growing so quickly. The result has been to inflate both national and local requirements for additional pitches unrealistically.
2. Those seeking to provide evidence of high annual net household growth rates for Gypsies and Travellers have sometimes sought to rely on increases in the number of caravans, as reflected in caravan counts. However, caravan count data are unreliable and erratic – so the only proper way to project future population and household growth is through demographic analysis (which, of course, is used to assess housing needs in the settled community).
3. The growth in the Gypsy and Traveller population may be as low as 1.25% per annum – a rate which is much less than the 3% per annum often assumed, but still at least four times greater than in the general population. Even using extreme and unrealistic assumptions, it is hard to find evidence that net Gypsy and Traveller population and household growth rates are above 2% per annum nationally.
4. The often assumed 3% per annum net household growth rate is unrealistic and would require clear statistical evidence before being used for planning purposes. In practice, the best available evidence supports a national net household growth rate of 1.5% per annum for Gypsies and Travellers.
5. Some local authorities might perhaps allow for a household growth rate of up to 2.5% per annum, to provide a ‘margin’ if their populations are relatively youthful; but in areas where on-site surveys indicate that there are fewer children in the Gypsy and Traveller communities, the lower estimate of 1.5% per annum should be used for planning purposes.

## Introduction

6. The rate of household growth is a key element in all housing assessments, including Gypsy and Traveller accommodation assessments. Compared with the general population, the relative youthfulness of many Gypsy and Traveller populations means that their birth rates are likely to generate higher-than-average population growth, and proportionately higher *gross* household formation rates. However, while their *gross* rate of household growth might be high, Gypsy and Traveller communities’ future accommodation needs are, in practice, affected by any reduction in the number of households due to dissolution and/or by movements in/out of the area and/or by transfers into other forms of housing. Therefore, the *net* rate of household growth is the *gross* rate of formation *minus* any reductions in households due to such factors. Of course, it is the *net* rate that is important in determining future accommodation needs for Gypsies and Travellers.

7. In this context, it is a matter of concern that many Gypsy and Traveller accommodation needs assessments have not distinguished *gross* and *net* growth rates nor provided evidence for their assumed rates of household increase. These deficiencies are particularly important because when assumed growth rates are unrealistically high, and then compounded over a number of planning years, they can yield exaggerated projections of accommodation needs and misdirect public policy. Nonetheless, assessments and guidance documents have assumed 'standard' *net* growth rates of about 3% without sufficiently recognising either the range of factors impacting on the *gross* household growth rates or the implications of unrealistic assumptions when projected forward on a compound basis year by year.
8. For example, in a study for the Office of the Deputy Prime Minister ('Local Authority Gypsy and Traveller Sites in England', 2003), Pat Niner concluded that *net* growth rates as high as 2%-3% per annum should be assumed. Similarly, the Regional Spatial Strategies (RSS) (which continued to be quoted after their abolition was announced in 2010) used *net* growth rates of 3% per annum without providing any evidence to justify the figure (For example, 'Accommodation for Gypsies and Travellers and Travelling Showpeople in the East of England: A Revision to the Regional Spatial Strategy for the East of England July 2009').
9. However, the guidance of the Department of Communities and Local Government ('Gypsy and Traveller Accommodation Needs Assessments: Guidance', 2007) was much clearer in saying that:

*The 3% family formation growth rate is used here as an example only. The appropriate rate for individual assessments will depend on the details identified in the local survey, information from agencies working directly with local Gypsy and Traveller communities, and trends identified from figures previously given for the caravan count. [In footnote 6, page 25]*
10. The guidance emphasises that local information and trends should always be taken into account – because the *gross* rate of household growth is moderated by reductions in households through dissolution and/or by households moving into bricks and mortar housing or moving to other areas. In other words, even if 3% is plausible as a *gross* growth rate, it is subject to moderation through such reductions in households through dissolution or moves. It is the resulting *net* household growth rate that matters for planning purposes in assessing future accommodation needs.
11. The current guidance also recognises that assessments should use local evidence for *net* future household growth rates. A letter from the Minister for Communities and Local Government (Brandon Lewis MP), to Andrew Selous MP (placed in the House of Commons library on March 26th 2014) said:

*I can confirm that the annual growth rate figure of 3% does not represent national planning policy.*

*The previous Administration's guidance for local authorities on carrying out Gypsy and Traveller Accommodation Assessments under the Housing Act 2004 is unhelpful in that it uses an illustrative example of calculating future accommodation need based on the 3% growth rate figure. The guidance notes that the appropriate rate for individual assessments will depend on the details identified in the local authority's own assessment of need. As such the Government is not endorsing or supporting the 3% growth rate figure.'*



12. Therefore, while there are many assessments where a national Gypsy and Traveller household growth rate of 3% per annum has been assumed (on the basis of 'standard' precedent and/or guidance), there is little to justify this position and it conflicts with current planning guidance. In this context, this document seeks to integrate available evidence about *net* household growth rates in order to provide a more robust basis for future assessments.

## Compound growth

13. The assumed rate of household growth is crucially important for Gypsy and Traveller studies because for future planning purposes it is projected over time on a compound basis – so errors are progressively enlarged. For example, if an assumed 3% *net* growth rate is compounded each year then the implication is that the number of households will double in only 23.5 years; whereas if a *net* compound rate of 1.5% is used then the doubling of household numbers would take 46.5 years. The table below shows the impact of a range of compound growth rates.

**Table 1**  
**Compound Growth Rates and Time Taken for Number of Households to Double**

Household Growth Rate per Annum	Time Taken for Household to Double
3.00%	23.5 years
2.75%	25.5 years
2.50%	28 years
2.25%	31 years
2.00%	35 years
1.75%	40 years
1.50%	46.5 years

14. The above analysis is vivid enough, but another illustration of how different rates of household growth impact on total numbers over time is shown in the table below – which uses a baseline of 100 households while applying different compound growth rates over time. After 5 years, the difference between a 1.5% growth rate and a 3% growth rate is only 8 households (116 minus 108); but with a 20-year projection the difference is 46 households (181 minus 135).

**Table 2**  
**Growth in Households Over time from a Baseline of 100 Households**

Household Growth Rate per Annum	5 years	10 years	15 years	20 years	50 years	100 years
3.00%	116	134	156	181	438	1,922
2.75%	115	131	150	172	388	1,507
2.50%	113	128	145	164	344	1,181
2.25%	112	125	140	156	304	925
2.00%	110	122	135	149	269	724
1.75%	109	119	130	141	238	567
1.50%	108	116	125	135	211	443

15. In summary, the assumed rate of household growth is crucially important because any exaggerations are magnified when the rate is projected over time on a compound basis. As we have shown, when compounded and projected over the years, a 3% annual rate of household growth implies much larger future Gypsy and Traveller accommodation requirements than a 1.5% per annum rate.

## Caravan counts

16. Those seeking to demonstrate national Gypsy and Traveller household growth rates of 3% or more per annum have, in some cases, relied on increases in the number of caravans (as reflected in caravan counts) as their evidence. For example, some planning agents have suggested using 5-year trends in the national caravan count as an indication of the general rate of Gypsy and Traveller household growth. For example, the count from July 2008 to July 2013 shows a growth of 19% in the number of caravans on-site – which is equivalent to an average annual compound growth rate of 3.5%. So, *if plausible*, this approach could justify using a 3% or higher annual household growth rate in projections of future needs.
17. However, caravan count data are unreliable and erratic. For example, the July 2013 caravan count was distorted by the inclusion of 1,000 caravans (5% of the total in England) recorded at a Christian event near Weston-Super-Mare in North Somerset. Not only was this only an estimated number, but there were no checks carried out to establish how many caravans were occupied by Gypsies and Travellers. Therefore, the resulting count overstates the Gypsy and Traveller population and also the rate of household growth.
18. ORS has applied the caravan-counting methodology hypothetically to calculate the implied national household growth rates for Gypsies and Travellers over the last 15 years, and the outcomes are shown in the table below. The January 2013 count suggests an average annual growth rate of 1.6% over five years, while the July 2013 count gives an average 5-year rate of 3.5%; likewise a study benchmarked at January 2004 would yield a growth rate of 1%, while one benchmarked at January 2008 would imply a 5% rate of growth. Clearly any model as erratic as this is not appropriate for future planning.

**Table 3**  
**National CLG Caravan Count July 1998 to July 2014 with Growth Rates (Source: CLG)**

Date	Number of caravans	5 year growth in caravans	Percentage growth over 5 years	Annual over last 5 years.
Jan 2015	20,123	1,735	9.54%	1.84%
July 2014	20,035	2,598	14.90%	2.81%
Jan 2014	19,503	1,638	9.17%	1.77%
July 2013	20,911	3,339	19.00%	3.54%
Jan 2013	19,359	1,515	8.49%	1.64%
Jul 2012	19,261	2,112	12.32%	2.35%
Jan 2012	18,746	2,135	12.85%	2.45%
Jul 2011	18,571	2,258	13.84%	2.63%
Jan 2011	18,383	2,637	16.75%	3.15%
Jul 2010	18,134	2,271	14.32%	2.71%
Jan 2010	18,370	3,001	19.53%	3.63%
Jul 2009	17,437	2,318	15.33%	2.89%
Jan 2009	17,865	3,503	24.39%	4.46%
Jul 2008	17,572	2,872	19.54%	3.63%
Jan 2008	17,844	3,895	27.92%	5.05%

<b>Jul 2007</b>	17,149	2,948	20.76%	3.84%
<b>Jan 2007</b>	16,611	2,893	21.09%	3.90%
<b>Jul 2006</b>	16,313	2,511	18.19%	3.40%
<b>Jan 2006</b>	15,746	2,352	17.56%	3.29%
<b>Jul 2005</b>	15,863	2,098	15.24%	2.88%
<b>Jan 2005</b>	15,369	1,970	14.70%	2.78%
<b>Jul 2004</b>	15,119	2,110	16.22%	3.05%
<b>Jan 2004</b>	14,362	817	6.03%	1.18%
<b>Jul 2003</b>	14,700			
<b>Jan 2003</b>	13,949			
<b>Jul 2002</b>	14,201			
<b>Jan 2002</b>	13,718			
<b>Jul 2001</b>	13,802			
<b>Jan 2001</b>	13,394			
<b>Jul 2000</b>	13,765			
<b>Jan 2000</b>	13,399			
<b>Jan 1999</b>	13,009			
<b>Jul 1998</b>	13,545			

19. The annual rate of growth in the number of caravans varies from slightly over 1% to just over 5% per annum. We would note that if longer time periods are used the figures do become more stable. Over the 36 year period 1979 (the start of the caravan counts) to 2015 the compound growth rate in caravan numbers has been 2.5% per annum.
20. However, there is no reason to assume that these widely varying rates correspond with similar rates of increase in the household population. In fact, the highest rates of caravan growth occurred between 2006 and 2009, when the first wave of Gypsy and Traveller accommodation needs assessments were being undertaken – so it seems plausible that the assessments prompted the inclusion of additional sites and caravans (which may have been there, but not counted previously). Counting caravan numbers is very poor proxy for Gypsy and Traveller household growth. Caravans counted are not always occupied by Gypsy and Traveller families and numbers of caravans held by families may increase generally as affluence and economic conditions improve, (but without a growth in households)
21. There is no reason to believe that the varying rates of increase in the number of caravans are matched by similar growth rates in the household population. The caravan count is not an appropriate planning guide and the only proper way to project future population and household growth is through demographic analysis – which should consider both population and household growth rates. This approach is not appropriate to needs studies for the following reasons:

## Modelling population growth

### Introduction

22. The basic equation for calculating the rate of Gypsy and Traveller population growth seems simple: start with the base population and then calculate the average increase/decrease by allowing for births, deaths and in-/out-migration. Nevertheless, deriving satisfactory estimates is difficult because the evidence is often tenuous – so, in this context, ORS has modelled the growth of the national Gypsy and Traveller population based on the most likely birth and death rates, and by using PopGroup (the leading software for

population and household forecasting). To do so, we have supplemented the available national statistical sources with data derived locally (from our own surveys) and in some cases from international research. None of the supplementary data are beyond question, and none will stand alone; but, when taken together they have cumulative force. In any case the approach we adopt is more critically self-aware than simply adopting 'standard' rates on the basis of precedent.

#### Migration effects

23. Population growth is affected by national net migration and local migration (as Gypsies and Travellers move from one area to another). In terms of national migration, the population of Gypsies and Travellers is relatively fixed, with little international migration. It is in principle possible for Irish Travellers (based in Ireland) to move to the UK, but there is no evidence of this happening to a significant extent and the vast majority of Irish Travellers were born in the UK or are long-term residents. In relation to local migration effects, Gypsies and Travellers can and do move between local authorities – but in each case the in-migration to one area is matched by an out-migration from another area. Since it is difficult to estimate the net effect of such movements over local plan periods, ORS normally assumes that there will be nil net migration to/from an area. Nonetheless, where it is possible to estimate specific in-/out- migration effects, we take account of them, while distinguishing between migration and household formation effects.

#### Population profile

24. The main source for the rate of Gypsy and Traveller population growth is the UK 2011 Census. In some cases the data can be supplemented by ORS's own household survey data which is derived from more than 2,000 face-to-face interviews with Gypsies and Travellers since 2012. The ethnicity question in the 2011 census included for the first time 'Gypsy and Irish Traveller' as a specific category. While non-response bias probably means that the size of the population was underestimated, the age profile the census provides is not necessarily distorted and matches the profile derived from ORS's extensive household surveys.
25. The age profile is important, as the table below (derived from census data) shows. Even assuming zero deaths in the population, achieving an annual population growth of 3% (that is, doubling in size every 23.5 years) would require half of the "year one" population to be aged under 23.5 years. When deaths are accounted for (at a rate of 0.5% per annum), to achieve the same rate of growth, a population of Gypsies and Travellers would need about half its members to be aged under 16 years. In fact, though, the 2011 census shows that the midway age point for the national Gypsy and Traveller population is 26 years – so the population could not possibly double in 23.5 years.

**Table 4**

**Age Profile for the Gypsy and Traveller Community in England (Source: UK Census of Population 2011)**

Age Group	Number of People	Cumulative Percentage
Age 0 to 4	5,725	10.4
Age 5 to 7	3,219	16.3
Age 8 to 9	2,006	19.9
Age 10 to 14	5,431	29.8
Age 15	1,089	31.8
Age 16 to 17	2,145	35.7
Age 18 to 19	1,750	38.9

Age 20 to 24	4,464	47.1
Age 25 to 29	4,189	54.7
Age 30 to 34	3,833	61.7
Age 35 to 39	3,779	68.5
Age 40 to 44	3,828	75.5
Age 45 to 49	3,547	82.0
Age 50 to 54	2,811	87.1
Age 55 to 59	2,074	90.9
Age 60 to 64	1,758	94.1
Age 65 to 69	1,215	96.3
Age 70 to 74	905	97.9
Age 75 to 79	594	99.0
Age 80 to 84	303	99.6
Age 85 and over	230	100.0

### Birth and fertility rates

26. The table above provides a way of understanding the rate of population growth through births. The table shows that surviving children aged 0-4 years comprise 10.4% of the Gypsy and Traveller population – which means that, on average, 2.1% of the total population was born each year (over the last 5 years). The same estimate is confirmed if we consider that those aged 0-14 comprise 29.8% of the Gypsy and Traveller population – which also means that almost exactly 2% of the population was born each year. (Deaths during infancy will have minimal impact within the early age groups, so the data provides the best basis for estimating of the birth rate for the Gypsy and Traveller population.)
27. The total fertility rate (TFR) for the whole UK population is just below 2 – which means that on average each woman can be expected to have just less than two children who reach adulthood. We know of only one estimate of the fertility rates of the UK Gypsy and Traveller community. This is contained in the book, ‘Ethnic identity and inequalities in Britain: The dynamics of diversity’ by Dr Stephen Jivraj and Professor Ludi Simpson published in May 2015. This draws on the 2011 Census data and provides an estimated total fertility rate of 2.75 for the Gypsy and traveller community
28. ORS’s have been able to examine our own survey data to investigate the fertility rate of Gypsy and Traveller women. The ORS data shows that, on average, Gypsy and Traveller women aged 32 years have 2.5 children (but, because the children of mothers above this age point tend to leave home progressively, full TFRs were not completed). On this basis it is reasonable to assume an average of three children per woman during her lifetime which would be consistent with the evidence from the 2011 Census of a figure of around 2.75 children per woman. In any case, the TFR for women aged 24 years is 1.5 children, which is significantly short of the number needed to double the population in 23.5 years – and therefore certainly implies a net growth rate of less than 3% per annum.

### Death rates

29. Although the above data imply an annual growth rate through births of about 2%, the death rate has also to be taken into account – which means that the *net* population growth cannot conceivably achieve 2% per

annum. In England and Wales there are nearly half-a-million deaths each year – about 0.85% of the total population of 56.1 million in 2011. If this death rate is applied to the Gypsy and Traveller community then the resulting projected growth rate is in the region of 1.15%-1.25% per annum.

30. However, the Gypsy and Traveller population is significantly younger than average and may be expected to have a lower percentage death rate overall (even though a smaller than average proportion of the population lives beyond 68 to 70 years). While there can be no certainty, an assumed death rate of around 0.5% to 0.6% per annum would imply a net population growth rate of around 1.5% per annum.
31. Even though the population is younger and has a lower death rate than average, Gypsies and Travellers are less likely than average to live beyond 68 to 70 years. Whereas the average life expectancy across the whole population of the UK is currently just over 80 years, a Sheffield University study found that Gypsy and Traveller life expectancy is about 10-12 years less than average (Parry et al (2004) 'The Health Status of Gypsies and Travellers: Report of Department of Health Inequalities in Health Research Initiative', University of Sheffield). Therefore, in our population growth modelling we have used a conservative estimate of average life expectancy as 72 years – which is entirely consistent with the lower-than-average number of Gypsies and Travellers aged over 70 years in the 2011 census (and also in ORS's own survey data). On the basis of the Sheffield study, we could have supposed a life expectancy of only 68, but we have been cautious in our approach.

#### Modelling outputs

32. If we assume a TFR of 3 and an average life expectancy of 72 years for Gypsies and Travellers, then the modelling projects the population to increase by 66% over the next 40 years – implying a population compound growth rate of 1.25% per annum (well below the 3% per annum often assumed). If we assume that Gypsy and Traveller life expectancy increases to 77 years by 2050, then the projected population growth rate rises to nearly 1.5% per annum. To generate an 'upper range' rate of population growth, we have assumed a TFR of 4 and an average life expectancy rising to 77 over the next 40 years – which then yields an 'upper range' growth rate of 1.9% per annum. We should note, though, that national TFR rates of 4 are currently found only in sub-Saharan Africa and Afghanistan, so it is an implausible assumption.
33. There are indications that these modelling outputs are well founded. For example, in the ONS's 2012-based Sub-National Population Projections the projected population growth rate for England to 2037 is 0.6% per annum, of which 60% is due to natural change and 40% due to migration. Therefore, the natural population growth rate for England is almost exactly 0.35% per annum – meaning that our estimate of the Gypsy and Traveller population growth rate is four times greater than that of the general population of England.
34. The ORS Gypsy and Traveller findings are also supported by data for comparable populations around the world. As noted, on the basis of sophisticated analysis, Hungary is planning for its Roma population to grow at around 2.0% per annum, but the underlying demographic growth is typically closer to 1.5% per annum. The World Bank estimates that the populations of Bolivia, Cambodia, Egypt, Malaysia, Pakistan, Paraguay, Philippines and Venezuela (countries with high birth rates and improving life expectancy) all show population growth rates of around 1.7% per annum. Therefore, in the context of national data, ORS's modelling and plausible international comparisons, it is implausible to assume a net 3% annual growth rate for the Gypsy and Traveller population.

## Household growth

35. In addition to population growth influencing the number of households, the size of households also affects the number. Hence, population and household growth rates do not necessarily match directly, mainly due to the current tendency for people to live in smaller (childless or single person) households (including, of course, older people (following divorce or as surviving partners)). Based on such factors, the CLG 2012-based projections convert current population data to a projected household growth rate of 0.85% per annum (compared with a population growth rate of 0.6% per annum).
36. Because the Gypsy and Traveller population is relatively young and has many single parent households, a 1.5% annual population growth could yield higher-than-average household growth rates, particularly if average household sizes fall or if younger-than-average households form. However, while there is evidence that Gypsy and Traveller households already form at an earlier age than in the general population, the scope for a more rapid rate of growth, through even earlier household formation, is limited.
37. Based on the 2011 census, the table below compares the age of household representatives in English households with those in Gypsy and Traveller households – showing that the latter has many more household representatives aged under-25 years. In the general English population 3.6% of household representatives are aged 16-24, compared with 8.7% in the Gypsy and Traveller population. Because the census includes both housed and on-site Gypsies and Travellers without differentiation, it is not possible to know if there are different formation rates on sites and in housing. However, ORS's survey data (for sites in areas such as Central Bedfordshire, Cheshire, Essex, Gloucestershire and a number of authorities in Hertfordshire) shows that about 10% of Gypsy and Traveller households have household representatives aged under-25 years.

**Table 5**  
**Age of Head of Household (Source: UK Census of Population 2011)**

Age of household representative	All households in England		Gypsy and Traveller households in England	
	Number of households	Percentage of households	Number of households	Percentage of households
Age 24 and under	790,974	3.6%	1,698	8.7%
Age 25 to 34	3,158,258	14.3%	4,232	21.7%
Age 35 to 49	6,563,651	29.7%	6,899	35.5%
Age 50 to 64	5,828,761	26.4%	4,310	22.2%
Age 65 to 74	2,764,474	12.5%	1,473	7.6%
Age 75 to 84	2,097,807	9.5%	682	3.5%
Age 85 and over	859,443	3.9%	164	0.8%
Total	22,063,368	100%	19,458	100%

38. The following table shows that the proportion of single person Gypsy and Traveller households is not dissimilar to the wider population of England; but there are more lone parents, fewer couples without children, and fewer households with non-dependent children amongst Gypsies and Travellers. This data suggest that Gypsy and Traveller households form at an earlier age than the general population.

**Table 6**  
**Household Type (Source: UK Census of Population 2011)**

Household Type	All households in England		Gypsy and Traveller households in England	
	Number of households	Percentage of households	Number of households	Percentage of households
Single person	6,666,493	30.3%	5,741	29.5%
Couple with no children	5,681,847	25.7%	2345	12.1%
Couple with dependent children	4,266,670	19.3%	3683	18.9%
Couple with non-dependent children	1,342,841	6.1%	822	4.2%
Lone parent: Dependent children	1,573,255	7.1%	3,949	20.3%
Lone parent: All children non-dependent	766,569	3.5%	795	4.1%
Other households	1,765,693	8.0%	2,123	10.9%
Total	22,063,368	100%	19,458	100%

39. ORS's own site survey data is broadly compatible with the data above. We have found that: around 50% of pitches have dependent children compared with 45% in the census; there is a high proportion of lone parents; and about a fifth of Gypsy and Traveller households appear to be single person households. One possible explanation for the census finding a higher proportion of single person households than the ORS surveys is that many older households are living in bricks and mortar housing (perhaps for health-related reasons).
40. ORS's on-site surveys have also found more female than male residents. It is possible that some single person households were men linked to lone parent females and unwilling to take part in the surveys. A further possible factor is that at any time about 10% of the male Gypsy and Traveller population is in prison – an inference drawn from the fact that about 5% of the male prison population identify themselves as Gypsies and Travellers ('People in Prison: Gypsies, Romany and Travellers', Her Majesty's Inspectorate of Prisons, February 2004) – which implies that around 4,000 Gypsies and Travellers are in prison. Given that almost all of the 4,000 people are male and that there are around 200,000 Gypsies and Travellers in total, this equates to about 4% of the total male population, but closer to 10% of the adult male population.
41. The key point, though, is that since 20% of Gypsy and Traveller households are lone parents, and up to 30% are single persons, there is limited potential for further reductions in average household size to increase current household formation rates significantly – and there is no reason to think that earlier household formations or increasing divorce rates will in the medium term affect household formation rates. While there are differences with the general population, a 1.5% per annum Gypsy and Traveller population



growth rate is likely to lead to a household growth rate of 1.5% per annum – more than the 0.85% for the English population as a whole, but much less than the often assumed 3% rate for Gypsies and Travellers.

## Household dissolution rates

42. Finally, consideration of household dissolution rates also suggests that the net household growth rate for Gypsies and Travellers is very unlikely to reach 3% per annum (as often assumed). The table below, derived from ORS's mainstream strategic housing market assessments, shows that generally household dissolution rates are between 1.0% and 1.7% per annum. London is different because people tend to move out upon retirement, rather than remaining in London until death. To adopt a 1.0% dissolution rate as a standard guide nationally would be too low, because it means that average households will live for 70 years after formation. A 1.5% dissolution rate would be a more plausible as a national guide, implying that average households live for 47 years after formation.

**Table 7**  
**Annual Dissolution Rates (Source: SHMAs undertaken by ORS)**

Area	Annual projected household dissolution	Number of households	Percentage
Greater London	25,000	3,266,173	0.77%
Blaenau Gwent	468.2	30,416	1.54%
Bradford	3,355	199,296	1.68%
Ceredigion	348	31,562	1.10%
Exeter, East Devon, Mid Devon, Teignbridge and Torbay	4,318	254,084	1.70%
Neath Port Talbot	1,352	57,609	2.34%
Norwich, South Norfolk and Broadland	1,626	166,464	0.98%
Suffolk Coastal	633	53,558	1.18%
Monmouthshire Newport Torfaen	1,420	137,929	1.03%

43. The 1.5% dissolution rate is important because the death rate is a key factor in moderating the *gross* household growth rate. Significantly, applying a 1.5% dissolution rate to a 3% *gross* household growth formation rate yields a *net* rate of 1.5% per annum – which ORS considers is a realistic figure for the Gypsy and Traveller population and which is in line with other demographic information. After all, based on the dissolution rate, a *net* household formation rate of 3% per annum would require a 4.5% per annum *gross* formation rate (which in turn would require extremely unrealistic assumptions about birth rates).

## Summary conclusions

44. Future Gypsy and Traveller accommodation needs have typically been over-estimated because population and household growth rates have been projected on the basis of assumed 3% per annum net growth rates.
45. Unreliable caravan counts have been used to support the supposed growth rate, but there is no reason to suppose that the rate of increase in caravans corresponds to the annual growth of the Gypsy and Traveller population or households.

46. The growth of the national Gypsy and Traveller population may be as low as 1.25% per annum – which is still four times greater than in the settled community. Even using extreme and unrealistic assumptions, it is hard to find evidence that the net national Gypsy and Traveller population and household growth is above 2% per annum nationally. The often assumed 3% net household growth rate per annum for Gypsies and Travellers is unrealistic.
47. The best available evidence suggests that the net annual Gypsy and Traveller household growth rate is 1.5% per annum. The often assumed 3% per annum net rate is unrealistic. Some local authorities might allow for a household growth rate of up to 2.5% per annum, to provide a 'margin' if their populations are relatively youthful; but in areas where on-site surveys indicate that there are fewer children in the Gypsy and Traveller population, the lower estimate of 1.5% per annum should be used.



# **Powys Local Development Plan**

## **Explanation of the Housing Commitments**

**Powys County Council**

**September 2016**

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## 1 Introduction

- 1.1 The Council's LDP overall housing supply for the LDP consists of a number of different sources including new housing allocations (HA), windfall sites and also sites with extant planning permissions known as housing commitments (HC). This topic paper explains the numbers of housing units that could be delivered realistically from HC sites in the plan period. In response to a request from the Inspector appointed to hold the Powys LDP EiP this paper also provides clarification about the deliverability of ten sites included as HC sites in the LDP housing supply with constraints that may compromise their development.

## 2 Housing Commitments (HC)

- 2.1 A breakdown is provided in Table 1 below of HC sites that have been completed since 01/04/2011 to 31/03/2015, are currently under construction and have planning permission but not started and is explained further below:
- **Row A** shows completions totalling 622 on both small sites (less than 5 units) and large sites (5 or more units) from the start of the LDP period (01/04/2011) to 31/03/2015.
  - **Row B** includes the total number of units (large sites) at 162 that have planning permission and were under construction, as of the 31/03/2015.
  - **Row C** shows the total number of units of 1017 on large sites with extant planning permission, as of the 31/03/2015.
  - **Row D** shows the total number of units on sites with extant planning permission (row c) minus 40% discounted which is 610 units (1017 minus 407). The discount is explained in Section 4 of this paper.

**Table 1: Breakdown of Powys LDP Housing Commitment (HC) sites**

		Towns	Large Village	Small Village	Rural / Other	Totals	
<b>A</b>	<b>Total Completions 01/04/2011 – 31/03/2015 – Small and Large Sites</b>	<b>233</b>	<b>154</b>	<b>43</b>	<b>192</b>	<b>622</b>	
<b>B</b>	<b>Appendix 1 Housing Commitment Sites - Units Under Construction</b>	<b>119</b>	<b>37</b>	<b>5</b>	<b>1</b>	<b>162</b>	
<b>C</b>	<b>Housing Commitment Sites – Units Not Started</b>	<b>564</b>	<b>327</b>	<b>103</b>	<b>23</b>	<b>1017</b>	<b>Assumes 100% delivery of HC units</b>
<b>D</b>	<b>Housing Commitment Sites (minus delivery allowance)</b>	<b>338</b>	<b>196</b>	<b>62</b>	<b>14</b>	<b>610</b>	<b>40% discount applied</b>

Source: Powys County Council UDP and development management monitoring and JHLAS (2015)

### **3 Delivery of housing from sites with planning permissions in Powys**

- 3.1 As a result of the monitoring of the UDP and planning applications and permissions the Council recognises that not all the sites identified as allocations and committed sites will realistically be developed within the plan period.
- 3.2 In relation specifically to housing allocations included in the LDP, account is being taken of the likelihood of a proportion of allocated sites not being developed within the plan period. The LDP dwelling provision is therefore being set at a figure 24% higher than the dwelling requirement figure of 4500 in order to provide a greater range and choice of sites across the County in order to help ensure housing delivery. A separate Topic Paper provides further explanation on Housing Allocations.
- 3.4 In relation to the Housing Commitment (HC) sites the Council recognises that not all sites with planning permission will be developed within the plan period. The Council undertakes monitoring of planning applications and permissions relating to residential development in order to inform the JHLAS process. A total of some 4300 new houses were added to the total housing stock in Powys in the UDP period (15 years), however, 38% of the total residential units contained within the UDP allocations that have or had planning permission, have not been developed.

3.5 There are various reasons why sites with planning permission are not developed including:

- Land ownership and commercial issues.
- The changing circumstances around viability of developing sites.
- Local market conditions e.g. sites located in villages where there is limited demand.
- Economic conditions e.g. the recession 2008 -2012 affected the building industry and demand for houses.

3.6 An analysis of planning permissions over the last 15 years shows that sites are developed incrementally i.e. even those sites with a relatively small number of units are often built over several years and some sites are only partly developed. A high percentage of sites where development has been delayed for various reasons have had time extensions to their planning permissions. There are also sites that have not yet been developed that are approaching their 5 year expiry date that would not comply with policies contained in the LDP and it is therefore unlikely they would have their permission periods extended, if and when applied for.

#### **4. Non-delivery allowance of HC sites**

4.1 Having had regard to previous development, the Council is consequently applying a 40% non-delivery allowance to the housing commitments that have planning permission but have not started. The non- delivery allowance has been derived by rounding up the percentage of units in UDP allocations (38%) that have not been developed. The discount is in order to take account of sites with planning permission that the monitoring is showing will not be developed within the LDP period. The total number of housing commitment sites that have planning permission that have not started is 1017 units. With a 40% discount applied the realistic number of units expected to be delivered within the LDP period is 610 units (see Row D in Table 1).

#### **5 Clarification of the sites identified by the Inspector**

5.1 The Inspector appointed for the Powys LDP EIP has sought clarification (letters dated 5<sup>th</sup> April 2016 and 25<sup>th</sup> May 2016) from the Council on ten (HC) sites included in the LDP housing supply. The sites are included in the JHLAS (2015) which identifies the constraints associated with them that could possibly compromise their delivery within the plan period.

5.2 The tables contained in Appendix 1 to this paper provides details of the constraints associated with each of the ten sites including water supply/sewage and land ownership. The table shows that two of the ten sites have already been completed in accordance with the planning permissions and the other eight sites, in the main appear to be progressing with the typical reasons for delay being identified for each of them including variations to their conditions approved and the finalisation of s.106 agreements and payments. One of the ten sites appears to have been delayed due primarily to market conditions in recent years not being conducive to development happening and the landowner failing to find a developer but in the last 18 months the market appears to have picked up and the landowner is positive of the site being developed within the plan period.

- 5.3 The tables also include the forecasted time period for completing each site taken from the emerging JHLAS 2016.

## **6 Conclusion**

- 6.1 The reasons that have been identified for development being delayed on several sites in the ten identified by the Inspector appear to be typical of those that result in delays on other sites with planning permission for residential development in Powys and elsewhere in Wales. The Council therefore acknowledges that there will be sites with extant planning permission (including possibly some of the ten sites identified by the Inspector) that will not be developed within the plan period. Consequently, the Council is applying a 40% non-delivery allowance to the total number of HC sites that have yet to be commenced, resulting in 610 units that will contribute to the overall housing supply of the LDP.



## **Appendix 1: Assessment of Selected Committed Sites**

Settlement	Site Name	No. of Dwelling Units	Indicative phasing 2016 JHLAS
Builth Wells	Hay Road Garage P08 HC2	11	Autumn/Winter 2018/2019
<p><b>Planning History:</b></p> <p>B/07/0053 (Consented on 15/02/2008) Application to demolish garage and build 11 dwellings (8 flats on bigger site, and 2 flats and bungalow on smaller part).</p> <p>P/2012/0681: (Conditional Consent 20/11/2012) Variation of Condition: Conditions 2 and 3 of B/07/0053 (alteration to plans) - (to raise roof height and add windows in the roof to create second floor, to change external materials, reduce car parking spaces on small site from 6 to 5) and remove requirement for local needs housing.</p> <p>VAR/2012/0016: Application approved to discharge S106 to remove the requirements for housing to meet local need and revert to floor plans of B/07/0053.</p> <p>Site owned by individual Directors, not a company since liquidated. Condition 23 of the B/07/0053 Permission has been renegotiated for the work on the highway surface to be done after construction work complete (as yet only verbal agreement). Other Pre-commencement Conditions also now satisfied (Contaminated Land, Knotweed), awaiting Powys signs to be relocated. Application to Discharge Conditions will then be made. Directors haven't been able to find a buyer so are now keen to develop it themselves.</p> <p>Site taken off the market. James Dean (Builth) engaged to market the finished units.</p>			
<b>JHLAS Constraint (2015)</b>		<b>Indicative Costs (£)</b>	<b>Delivery Mechanism / Funding Source / Time Frame</b>
<p><b>S106: Affordable Housing</b> (discharged under VAR/2012/0016) and <b>Pre-commencement requirement to resurface road</b> (negotiated and agreed (verbally) to waive this requirement until after Construction completed) and awaiting a forthcoming Discharge of Condition Application.</p>		Negligible	Developer Signed 29/01/2008
<p><b>Land Contamination:</b> cited as a condition to B/07/0053. This has been carried out and PCC satisfied as such. Agent has email from PCC Land Contamination confirming this. Will be the subject of a forthcoming Application to Discharge Condition.</p>		None	Application to Discharge Condition required before development can commence
<p><b>Japanese Knotweed:</b> cited as a condition to B/07/0053. This remediation has been carried out. Will be the subject of a forthcoming Application to Discharge Condition.</p>		None	See above
<p><b>COMMENTS:</b> The principle of developing the site has been established by the implementation of the planning permission and</p>			

<p>demolition of all existing buildings on the site. Foundations constructed on part of site, which demonstrates that the above mentioned constraints are capable of being resolved.</p> <p>The infrastructure and other requirements and costs involved in developing the site are considered to be normal costs associated with this type and location of development.</p>		
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<b>Settlement</b>	<b>Site Name</b>	<b>No. of Dwelling Units</b>	<b>Indicative phasing 2016 JHLAS</b>
Builth Wells	The Old Cottage Hospital, Hospital Road P08 HC3	17	Site Completed
<b>Planning History:</b>			
P/2013/1190. Conditional Consent given (on 10/09/2014) to Wales & West Housing Association for Full Application to demolish Hospital and replace with 17 Affordable Dwellings.			
<b>JHLAS Constraint (2015)</b>		<b>Indicative Costs (£)</b>	<b>Delivery Mechanism / Funding Source / Time Frame</b>
COMMENTS: All units completed		N/A	N/A

Settlement	Site Name	No. of Dwelling Units	Indicative phasing 2016 JHLAS
Knighton	Former Clothing Factory, West Street P24 HC1	21	2021/22
<p><b>Planning History:</b></p> <p>PR73301 - Residential development (outline) comprising 14 market dwelling and 7 affordable dwellings including demolition of existing redundant factory building. Outline planning was granted on 9<sup>th</sup> August 2007.</p> <p>P/2010/0798 – Variation of Condition -Decision 06/06/2012 extension granted for planning consent for an extra 5 years. The site was also cleared in 2010.</p> <p>P/2015/0419 – Variation of condition 2 of P/2010/0798 to extend time limit, decision: Consent 18/06/2015.</p>			
<p><b>Section 106</b></p> <p>The first S106 agreement was signed in 2007 but ran out at the same time as the planning permission for the following application PR73301.</p> <p>The second S106 agreement was signed on 30/05/2012, the agreement involved paying the Council £6,850 before any dwelling is erected. The S106 agreement also included ensuring the seven affordable housing dwellings are occupied by persons who satisfy the criteria for occupants of affordable housing.</p>			
JHLAS Constraint (2015)		Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
<b>Ownership:</b> Willowridge International Ltd.		-	TBC
<p><b>Section 106:</b> The first S106 agreement was signed in 2007 but ran out at the same time as the planning permission for the following application PR73301.</p> <p>The second S106 agreement was signed on 30/05/2012, the agreement involved paying the Council £6,850 before any dwelling is erected. The S106 agreement also included ensuring the seven affordable housing dwellings are occupied by persons who satisfy the criteria for occupants of affordable housing.</p>		£6,850	Developer
<p><b>Contamination:</b> The potential issues identified at the site are:</p> <ul style="list-style-type: none"> <li>• Oils and tars</li> <li>• Chemical substances</li> <li>• Asbestos materials;</li> </ul>		£5k-80k	Developer

<ul style="list-style-type: none"> <li>Unknown tipped materials.</li> </ul> <p>A site investigation (SI) will be required and risk assessment undertaken, after which the appropriate level of remediation can be determined</p>		
<p><b>Heritage:</b> Offa's Dyke Scheduled Ancient Monument - The site overlies the Offa's Dyke monument therefore further consents and archaeological intervention may be required.</p>	1k-20k	Developer
<p>COMMENTS:</p> <p>The principle of developing the site has been established by the implemented planning permission and demolition of all existing buildings on the site, which demonstrates that the above mentioned constraints are capable of being resolved.</p> <p>The infrastructure and other requirements and costs involved in developing the site are considered to be normal costs associated with this type and location of development.</p>		

Settlement	Site Name	No. of Dwelling Units	Indicative phasing 2016 JHLAS
Llandrindod Wells	Land adjacent Autopalace P28 HC3	22	Between 2021-2024, at a rate of 6-8 units per year.
<p><b>Planning History:</b>  This site has been subject of a series of historic planning applications and permissions, the most recent of which are as follows:</p> <p>Full planning permission PR11621 (RAD/2006/0024) for permission for erection of 10 town houses, a block of 12 apartments, associated parking and new vehicular access was granted conditional consent on 10/03/06.</p> <p>Associated listed building consent PR11622 also granted conditional consent on 14/03/16.</p> <p>A technical start has been made on the development approved under PR114621 as demolition works comprised in the approved development have taken place.</p> <p>It is understood that the developer is planning a revised proposal for this site, and therefore the development of this site may not proceed as approved. However, it is understood that the developer is actively seeking to take forward an alternative scheme.</p>			
JHLAS Constraint (2015)		Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
<b>Developer Intention:</b> The developer feels the current planning is not suitable for the site, going to go back to planning to change development type to sheltered housing.		N/A	N/A
<p><b>Highways:</b></p> <ul style="list-style-type: none"> <li>• Construction of an internal road to adoptable standard.</li> <li>• Construction of access onto the A483.</li> <li>• Provision of parking and turning areas within the site.</li> <li>• Provision for surface water drainage.</li> </ul>		TBC	Infrastructure to be provided by the developer.
<p><b>Built Heritage Conservation:</b></p> <ul style="list-style-type: none"> <li>• Adjacent to Grade II* Listed Building.</li> <li>• Within the Conservation Area.</li> <li>• Adjacent to Grade II* Historic Park and Garden.</li> </ul> <p>Conditions attached to the implemented planning permission specify the use of natural roofing slate and details of other features are also controlled. An appropriate landscaping scheme would also be required.</p>		TBC	An appropriate design solution to be provided by the developer.
<b>Contamination:</b> Potential for contamination as a result of the		Unknown	Work associated

<p>former use of the site as garage and workshops.</p> <p>NOTE: no contaminated land requirements as part of the implemented planning permission.</p>	<p>as dependent on the level of risk.</p>	<p>with contamination to be carried out by the developer.</p>
<p>COMMENTS:</p> <p>The principle of developing the site has been established by the implemented planning permission, which demonstrates that the above mentioned constraints are capable of being resolved. The exact requirements that would apply to an alternative scheme will depend on the nature and scale of the scheme put forward. However, any alternative scheme put forward would be considered in light of the fallback position provided by the implemented planning permission.</p> <p>The infrastructure and other requirements and costs involved in meeting these requirements are considered to be normal costs associated with this type and location of development.</p>		



Settlement	Site Name	No. of Dwelling Units	Indicative phasing 2016 JHLAS
Llanidloes	Land at Hafren Furnishers P35 HC2	23	2018/19
<p><b>Planning History:</b></p> <p>M/2004/0483: Residential development (outline) including demolition of existing buildings. Refused 18/08/2004 – insufficient information to assess the application in respect of flood risk, effect on highway safety and how the proposals would provide affordable housing to meet local housing needs.</p> <p>P/2008/0406 Outline planning permission granted for the erection of 23 dwellings and associated works 11/02/2013. The outline is live until 10/02/2018 for reserved matters to be submitted.</p>			
JHLAS Constraint (2015)		Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
<p><b>Contamination:</b> The main issues identified at the site are:</p> <ul style="list-style-type: none"> <li>• Below and above ground fuel storage tanks;</li> <li>• Metal working and welding processes;</li> <li>• Former paint shed;</li> <li>• Historical fuel distribution point;</li> <li>• Made ground;</li> <li>• Asbestos materials;</li> <li>• Unknown tipped materials.</li> </ul> <p>If the site were to be developed for any use then a site investigation (SI) will be required. To facilitate the SI, demolition of existing buildings will be required.</p> <p>Without the site undergoing investigation and risk assessment it is not possible to determine appropriate levels of remediation. I would estimate ball park figures of between £10k and £80k for site investigations. After the first phase of SI it will be easier to estimate future SI costs.</p>		10k-80k	Developer
<p><b>Heritage:</b> Site within historic centre of town and may require archaeological intervention.</p>		TBC	TBC
<p><b>COMMENTS:</b></p> <p>This site is a brownfield site within the town development limits. Delivery of site is awaiting submission of reserved matters application with assessment of flood risk. The indicative phasing is timed to allow for reserved matters to be submitted.</p> <p>NB. This site was placed in Cat.3 in error in the 2015 Study which went un-noticed until the 2016 survey was carried out. It went in the Study for the first time in 2013 in Cat. 2 and</p>			

<p>again in 2014. It has been placed back in Cat. 2 for 2016 in expectation of reserved matters being submitted and the site remediation issues being resolved.</p> <p>Discussions ongoing between site owner and developer regarding responsibilities for costs for site remediation and Flood Consequences Assessment.</p>		
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Settlement	Site Name	No. of Dwelling Units	Indicative phasing 2016 JHLAS
Llanwrtyd Wells	Meadow View, off Station Road P39 HC3	19	2020 - 2021
<p><b>Planning History:</b></p> <p>B/88/4810, B/91/6027, B/96/0132: Outline PP granted for 16 dwellings.</p> <p>B/05/0014: Outline PP granted in Aug 06 for 20 dwellings.</p> <p>P/2009/0296: Full PP granted in June 2010 for 17 dwellings including 6 Affordable units.</p> <p>P/2015/0289: Full PP granted for variation of Condition 1 to allow a further 5 years for development to take place, and amending dwelling number from 17 to 19 (no date on the letter but public website states 02/07/2015). 2015 Application seems to have no renegotiated S106 attached to it referring to any Affordable Housing number so assume the 6 still remain (as found in 2015 plans (J08/71 P02 B).</p> <p>Latest communication with Agent (21/07/2016); Site has been marketed for development for 4 or 5 years with only occasional interest. A developer who the owner is already working with on another site currently being developed in Ceredigion is looking to develop this site under similar agreement. Developer is currently looking at working up plans to 'tweak' existing layout prior to submitting a planning application.</p>			
<b>JHLAS Constraint (2015)</b>		<b>Indicative Costs (£)</b>	<b>Delivery Mechanism / Funding Source / Time Frame</b>
<b>S106:</b> Affordable Housing (6 units: 4 dwellings + 2 flats)		N/A	Signed 02/06/2010
<p><b>COMMENTS:</b></p> <p>The principle of developing the site has been established by the extant planning permission, which demonstrates that the above mentioned constraints are capable of being resolved. The exact requirements that would apply to an alternative scheme will depend on the nature and scale of the scheme put forward.</p>			

Settlement	Site Name	No. of Dwellings	Indicative phasing 2016 JHLAS
Montgomery	Land at New Road P45 HC1	Site has 45 in total – 32 completed pre-LDP, 13 completed since 1/04/11	Site Completed
<p><b>Planning History:</b></p> <p>Various Planning Consents – outline, reserved matters and full. Been developed in phases/partly piecemeal. Shown in Powys Unitary Development Plan as site M176 HA2.</p> <p>Site has been signed off as complete in the 2016 JHLAS Study. The site has 45 completions in total not the 50 anticipated by the UDP. The developer has indicated that he does not expect any further dwellings on this site. 13 dwellings have been completed since 1/04/11, the start of the LDP plan period. The last consent was for full p.p. granted in 2010 for 4 dwellings (described as plots 21-24 so effectively a design resubmission/substitution of house types) which have been recorded as complete.</p>			
<b>JHLAS Constraint (2015)</b>		<b>Indicative Costs (£)</b>	<b>Delivery Mechanism / Funding Source / Time Frame</b>
<p><b>COMMENTS:</b></p> <p>With regard to the 31 dwellings shown as not started and in category 3 of the 2015 JHLAS, this was an administrative error due to the changeover of recording systems between planning policy and building control. Error was carried forward in the published trajectory paper.</p> <p>JHLAS 2016 (site record number: 24) has now been amended to correct the error.</p> <p>The site has never had planning permission for 76 dwellings.</p>			

Settlement	Site Name	No. of Dwelling Units	Indicative phasing 2016 JHLAS
Newtown	Land at Severn Heights (Brimmon Close) P48 HC4	23	Between 2018 - 2020 at a rate of 11-12 units per year.
<p><b>Planning History:</b></p> <p>This site has been subject of a series of historic planning applications and permissions, the most recent of which are as follows:</p> <p>M2003/0511 Residential development and formation of vehicular access (outline) – Conditional Consent subject to section 106 agreement 20/06/06.</p> <p>M/2007/0029 Reserved matters application for siting, design, external appearance, access and landscaping, in connection with the erection of 41 no. dwellings (phase 1) – Approved 14/08/07.</p> <p>P2008/1620 Reserved matters application for siting, appearance, design, access and landscaping in connection with planning application M2003 0511 – Approved 09/01/2009 (phase 2).</p> <p>Phase 1 of the development has been completed and a technical start has been made on the planning permission for phase 2. The foundations for one unit have been laid with the walls partly built on phase 1.</p>			
<b>JHLAS Constraint (2015)</b>		<b>Indicative Costs (£)</b>	<b>Delivery Mechanism / Funding Source / Time Frame</b>
<p><b>Developer intentions:</b> Developer is thinking of commencing next year and is waiting to see what impact the Newtown bypass will have on the site.</p>		N/A	N/A
<p><b>Highways work:</b></p> <ul style="list-style-type: none"> <li>• Construction of internal estate road.</li> <li>• Implement a 20 mph speed limit.</li> <li>• Traffic calming measures.</li> <li>• Surface water drainage.</li> </ul>		N/A	The requirements of planning conditions and section 106 requirements relating to off-site highway works have already been carried out in connection with phase 1 of this development. On-site highways and drainage works associated with phase 2 of the development to be carried out by the developer.

<p><b>Open Space:</b></p> <ul style="list-style-type: none"> <li>• Provision of open space amenity land</li> <li>• A contribution towards maintenance of the open space if the land is transferred to the Town Council.</li> <li>• A management scheme for the open space if land is not transferred to Town Council.</li> <li>• Contribution towards enhancing open/amenity space and/or play facilities within the Treowen area.</li> </ul> <p>It is understood that the Town Council declined the offer to take on management responsibility, and therefore a management plan was submitted, approved and implemented.</p>	<p>£20,000 total for maintenance.</p> <p>£1,000 per dwelling.</p>	<p>The requirements within the Section 106 agreement were required to be met prior to occupancy of any dwellings on the land. The first phase of this scheme is occupied.</p>
<p><b>Affordable Housing:</b> On-site provision of 7 affordable dwellings equating to 10% affordable housing.</p>	<p>N/A</p>	<p>7 affordable dwellings have already been completed on phase 1.</p>
<p><b>COMMENTS:</b></p> <p>Any outstanding requirements associated with this development are not considered to be major and are not expected to prevent development coming forward on the second phase of this development.</p>		

Settlement	Site Name	No. of Dwelling Units	Indicative phasing 2016 JHLAS
Ystradgynlais	Land to the Rear of Jeffrey's Arms P58 HC1	18	2018 - 2021
<p><b>Planning History:</b></p> <p>Site's previous owner (Admiralty Taverns) gained PP (2011/1166) (on 20/09/2012) for 18 dwellings, 6 of which are to be Affordable, behind the pub which is to be demolished. This Permission is current until 20/09/2017.</p> <p>In Autumn 2015 site changed hands. New owner plans to retain pub and is renovating it, and wants to lower the density of the site to approximately 8 self-builds to the rear. He has interest, with four plots currently being negotiated with at least two of them hoping to put a deposit down as soon as Planning Permission is granted for the lower density. Agents will shortly be putting in a Pre-Application Enquiry to this end. Site is being cleared for development.</p>			
JHLAS Constraint (2015)		Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
<b>S106:</b> Open Space contribution (payment not received to date)		£18,000	Signed 14/09/2012
<p>COMMENTS:</p> <p>The principle of developing the site has been established by the current planning permission, which demonstrates that the above mentioned constraints are capable of being resolved.</p> <p>The exact requirements that would apply to an alternative scheme will depend on the nature and scale of the scheme put forward.</p> <p>Access requirements on a lower density site being considered.</p>			

Settlement	Site Name	No. of Dwelling Units	Indicative phasing 2016 JHLAS
Trefeglwys	Land west of Llwyncelyn (Phase 2) P54 HC1	17	2016-2018
<p><b>Planning History:</b></p> <p>M/2007/0561: Full consent for 17 dwellings to include 6 affordable units. S.106 signed 19/08/2011.</p> <p>Technical start made (JHLAS 2013).</p> <p>P/2014/0669: Full: Engineering operations to form an earth embankment to safeguard existing extant planning permission from flooding. Flood Defence Embankment constructed.</p>			
JHLAS Constraint (2015)		Indicative Costs (£)	Delivery Mechanism / Funding Source / Time Frame
<b>Affordable housing:</b> On-site provision of 6 affordable dwellings equating to 35% affordable housing.		N/A	S.106 signed
<b>Flood Risk</b> Addressed through 2014 planning consent		N/A	Developer
<p>COMMENTS:</p> <p>17 plot site. 1 plot is under construction. Services are provided to the site. Morris Marshall &amp; Poole have been appointed as the selling agents for the site.</p> <p>Remaining site will commence development in September 2016.</p>			





**Powys Local Development Plan**

**Explanation and Review of the Windfall  
Allowance**

**September 2016**

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**Appendix 1** - All Residential Completions 01/04/2006 – 31/03/2015

**Appendix 2** - Residential Completions on Windfall Sites, 01/04/2011 – 31/03/2015 by Windfall Category

**Appendix 3** - Matrix Demonstrating How the Different Categories of Development Are Permitted Under UDP Policies and LDP Policies

## Executive Summary

This paper provides further clarification on the Council's position in relation to the calculation of the windfall allowance. This is in response to a discussion with the Inspector at the Exploratory Meeting on 10<sup>th</sup> May 2016.

There is no formal definition of what a windfall site is but generally it is taken to be a site which is not formally included or allocated in a development plan but which subsequently comes forward for development.

Previously, to derive the windfall allowance, data from a four year trend period was used. As part of this paper the trend period, has been extended a further five years period looking at residential windfall completions between 01/04/2006 and 01/04/2015.

Data has been used for small sites (those accommodating 4 or less units) and large sites (those accommodating 5 or more units). The data shows that in the nine year period (01/04/2006 – 31/03/2015) there were 2038 completions (on allocated sites and windfalls) in Powys of which 828 were on small sites (four or less units) and 1210 on large sites (five or more units). Of these 2038 completions 1114 residential units were completed on windfall sites representing 55% of the overall total. Of the total windfall completions 74% (828 units) were on small sites and 26% (286) on large sites.

Extending the trend period resulted in the annual windfall allowance increasing from 87 to 124 residential units. This raised the question of whether a windfall allowance of 124 is realistic and achievable and whether the historic windfall pattern is likely to continue. To respond to this an analysis of the differences in policies between the current Unitary Development Plan (2001 to 2016) and the Local Development Plan (2011 to 2026), together with how these differences are likely to influence the number of units being completed on windfall sites was carried out.

The policy analysis on the differences between the two plans found that windfall completions are not expected to continue at the same rate. Where the policy approach differed, an estimate was made on the number of units that would not be built under the LDP policy. This resulted in a discount of 14 units (to the 124) giving a final annual windfall allowance of 110 residential units.

A windfall provision of 110 units per annum is considered to be a more representative provision reflecting both the longer time frame utilised and realistic future assumptions. This revised figure has some impact upon housing provision over the LDP period and consideration of realistic build rates but it is not considered to impact significantly on the LDP Strategy.

# Explanation of the Windfall Allowance for the Powys Local Development Plan (LDP) – June 2016

## 1.0 Introduction

1.1 This paper provides further clarification on the Council's position in relation to the windfall allowance as outlined in the Focussed Changes (FC) to the second Deposit Draft Local Development Plan (LDP) (examination document LDP18). Following submission of the Plan the Inspector requested further explanation regarding the calculation of the windfall allowance. At the Exploratory Meeting on 10<sup>th</sup> May 2016, following discussion between the Inspector and the Council, it was agreed that in reviewing the windfall allowance the evidence base for the windfall allowance should investigate an alternative longer time frame than the four years used in the Focussed Changes Schedule.

### What is a windfall?

1.2 Windfall sites are sites which are not included as allocations as part of the housing land supply, but which subsequently become available for housing development. They are sites that were not formally included in the development plan. Whilst therefore, windfalls are not planned, they are an expected type of development and, as such, contribute towards housing provision in Powys.

1.3 Windfall sites can come forward on both small (four or less units) and large (five or more units) sites. Examples of such development include conversions to dwelling units of redundant farm buildings or a hotel or nursing home to flats or apartments. It includes infill sites within a village or town within the settlement development limits (not on allocated sites) and also individual, sometimes isolated dwelling units that have been given planning permission to meet a specific local need such as agriculture or to meet an affordable housing requirement.

1.4 For the purposes of projecting future windfall sites that may be expected to come forward in the remaining period of the LDP, 01/04/2015 – 31/03/2026, an analysis of data has been undertaken looking at the number of housing units developed that were not allocated for housing at the time the planning application was submitted in either the Powys Unitary Development Plan or the preceding Montgomeryshire, Radnorshire and Brecknockshire Local Plans. This analysis was carried out for the period 01/04/2006 to 31/03/2015, a period of nine years.

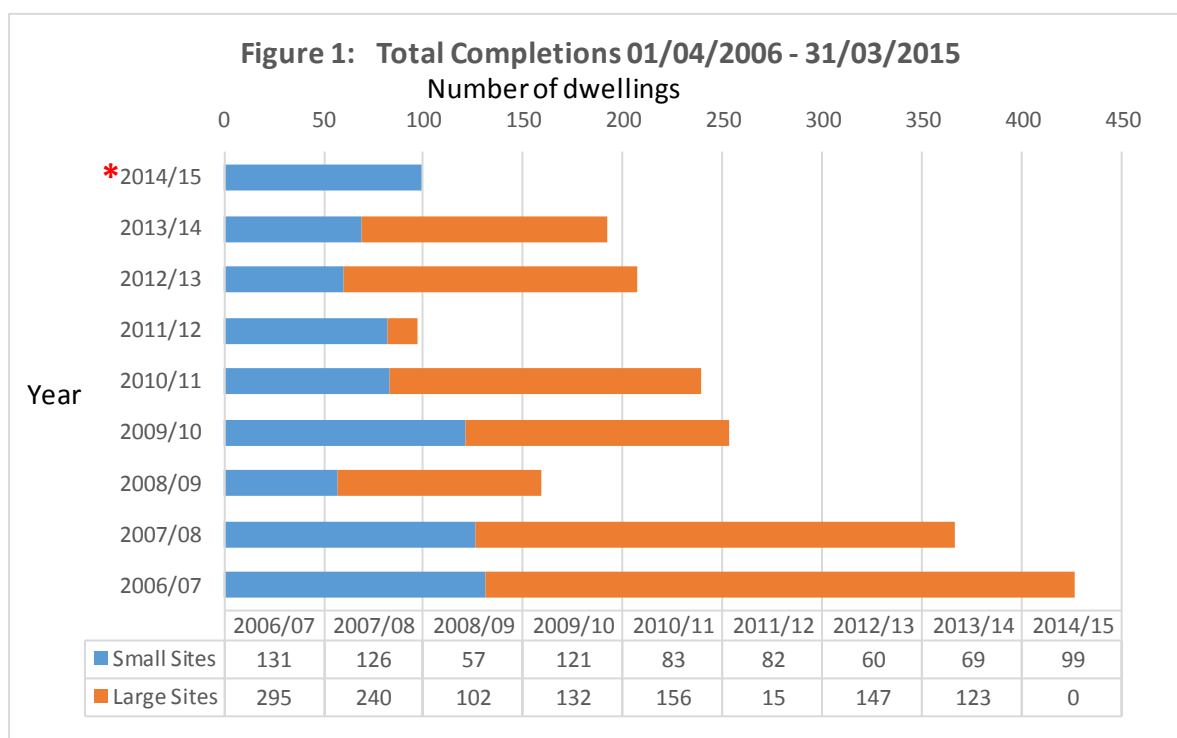
## 2.0 Monitoring Completions

2.1 A new detailed monitoring system (named - PCC Small Sites Housing Monitoring System) of planning consents resulting in new residential dwellings was established at the start of the Powys LDP Plan period (1<sup>st</sup> April 2011). Each consent is monitored against Building Control commencement and completion notices for small sites of less than five dwelling units, or through the annual JHLAS (Joint Housing Land Availability Study) for sites of five or more. All completions of permissions granted before 1<sup>st</sup> April 2011 (the start of the Plan period) are captured by analysing Building Control completions data. Using this detailed monitoring system it has been calculated that there have been 310 completions on small sites and 285 on large sites (allocated and windfall sites) giving a total of 595 dwellings being completed, since the start of the plan period (01/04/2011 to 31/03/2015). This gives a period of four years of data, this figure differs slightly to that published in the LDP due to changes in monitoring systems, this

includes the change from monitoring from 1<sup>st</sup> January- 31<sup>s</sup> December to 1<sup>st</sup> April to 31<sup>st</sup> March.

2.2 During the Exploratory Meeting held by the Planning Inspector to consider the Powys LDP, it was agreed that the Council should consider assessing data collected over a longer period. To do this the five years previous to the start of the 1<sup>st</sup> April 2011, LDP Plan period have been considered. This involved analysing data from the 1<sup>st</sup> April 2007, 1<sup>st</sup> April 2008, 1<sup>st</sup> April 2009, 1<sup>st</sup> April 2010 and the 1<sup>st</sup> April 2011 JHLA studies. For the five year period 01/04/2006 to 31/03/2011 the results showed that there were 518 completions on small sites and 925 on large sites giving a total of 1443 dwellings (on allocated and windfall sites).

2.3 Therefore, the total number of dwelling units completed in the nine year period (01/04/2006 to 31/03/2015) is 2038; of which 828 were on small sites and 1210 on large sites (allocated and windfall), see Appendix 1. Figure 1. below shows the distribution of these completions over the nine year period.



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2006 – 2015

\* Change in JHLAS methodology from survey approach to the use of Building Control completion certificates. This resulted in data quality issues meaning the JHLAS large site (2014/15) data has not been used in this paper.

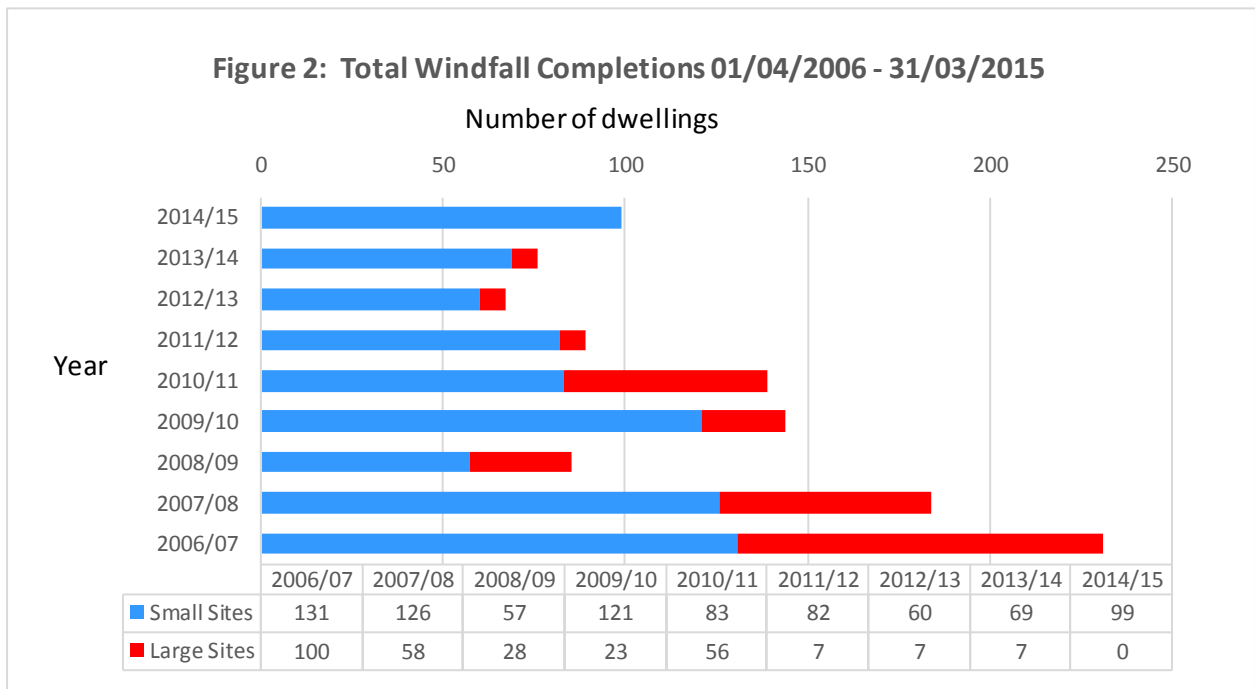
## The Total Number of Windfall Completions

2.4 Of the dwelling completions referred to above, it can be assumed that all the small sites, 828 dwelling units, are windfall due to the fact that the Powys Development Plans (current UDP and historic) only had site allocations for five or more dwellings.

All completions on large sites are recorded within the annual JHLAS surveys that have been undertaken, these comprise of a combination of completions on allocated sites and large windfall sites, so have been analysed to identify the windfall element.

2.5 From the total of 1210 dwelling completions recorded on large sites during the period 1/04/2006 to 31/03/2015, 286 are windfall units, with the remaining 1052 being built on allocated sites. Therefore, in total there have been 1114 (828 + 286) dwellings completed on windfall sites (out of the total 2038) since the start of the nine year period. This equates to 55% of the total completions coming from windfall sites; however, 74% of the total windfall site completions were on sites of four or less dwellings. (See Appendix 1).

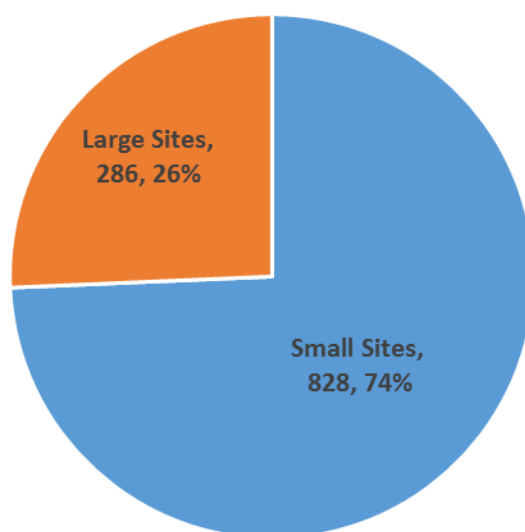
2.6 Figures 2. and 3., below show the annual distribution of the windfall site completions over the nine year period and the proportion of large and small sites.



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2006 – 2015

\* Change in JHLAS methodology from survey approach to the use of Building Control completion certificates. This resulted in data quality issues meaning the JHLAS large site (2014/15) data has not been used in this paper.

**Figure 3: Proportion of Windfall Site Completions on Small Sites Compared to Large Sites, 01/04/2006 - 31/03/2015**



*Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2006 – 2015*

### **3.0 How the additional data relates to that published in the Focussed Changes to the Deposit Draft LDP, 2015.**

3.1 The LDP Topic Paper – Phasing and Delivery of New Housing Provision 2016 (EB29) identified a windfall allowance of 87 units per annum over the Plan period based on an analysis of windfall rates over four years, between 2011 and 2015. To reflect the additional analysis undertaken on the completions recorded for the nine year period 01/04/2006 – 31/03/2015 the projected windfall allowance has been revisited and revised in this paper.

3.2 The methodology used to calculate the windfall allowance in the Deposit Plan included taking the total residential completions on windfall sites (small and large sites) between 01/04/2011 and 31/03/2015, a total of 349, which was then divided by the four years (period between 01/04/2011 and 31/03/2015) studied to give an average of 87.25 windfall units per year. This number was then multiplied by 11 to represent the remaining years in the Plan giving an estimate of 960 residential units.

3.3 For this review, using the same calculation as that used originally in the Deposit Draft, the total number of windfall units (1114) is divided by nine (to represent the nine years studied) resulting in a windfall allowance of 124 units per annum. This number is then multiplied by eleven to represent the remaining years of the Plan (01/4/2015 – 31/03/2026) which gives a total windfall projection of 1364 dwellings which equals an increase of 404 units compared to the 960 forecast in Focussed Changes Schedule.

- Calculation:  $1114/9 = 124$  windfall allowance,  $124 \times 11 = 1364$  windfall projection

#### 4.0 Is the Windfall Allowance Realistic and Achievable?

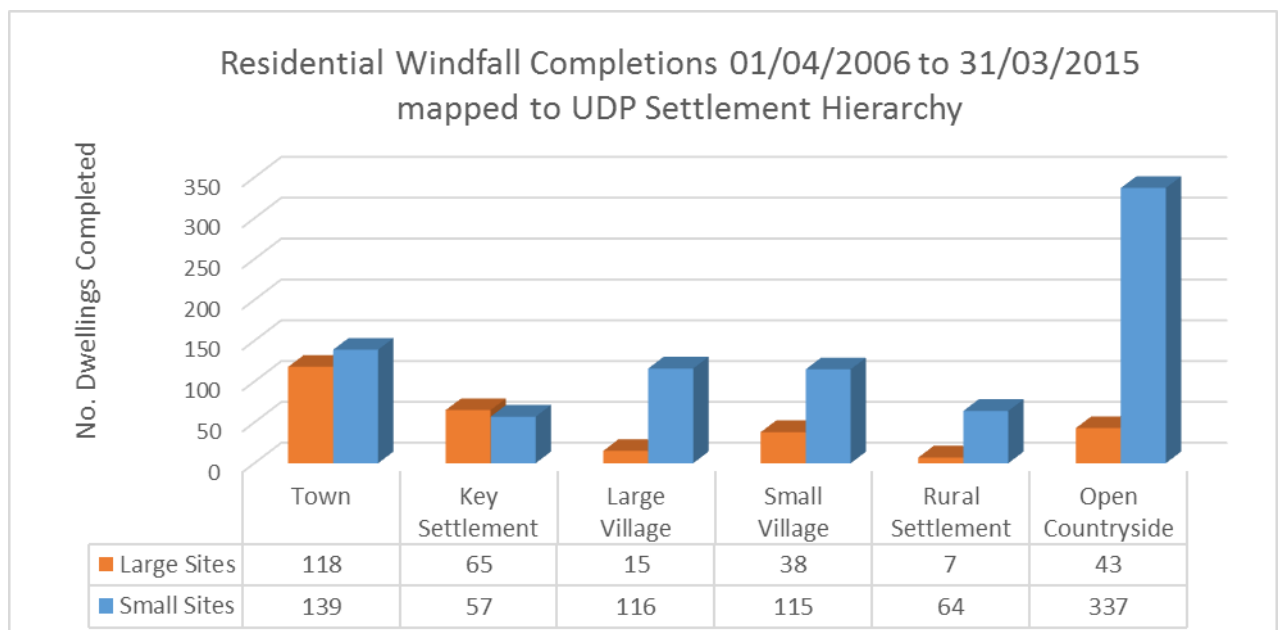
4.1 Extending the trend period has led to an increase in the annual windfall allowance from 87 to 124. This is because the longer trend period now includes years during better economic conditions when completion rates were higher. Consequently, the key issue that needs to be addressed is whether the windfall rate projected above is realistic and achievable and likely to continue with the new LDP policies in place. To test this further, an analysis has been conducted on the historic windfall completions to identify in which tiers of the LDP settlement hierarchy (outlined on P24 of LDP06) the completions have occurred and whether there will be a significant difference in what is likely to be given planning approval following adoption of the LDP. The analysis has been based on the settlement hierarchy as this is one of the most fundamental policy changes that will take place when the LDP replaces the current Unitary Development Plan upon adoption.

4.2 The Powys Unitary Development Plan settlement hierarchy comprises:

- Area Centres (12)
- Key Settlements (20)
- Large Villages (36)
- Small Villages (100)
- Rural Settlements (145)
- Countryside

4.3 Figure 4. below shows the distribution of development across the separate tiers of the UDP settlement hierarchy for the nine year period, 01/04/2006/ - 31/03/2015, categorising the residential completions on large or small sites. The compilation of the different development types and how they are spread across the hierarchy are discussed in detail in paragraphs 4.6 – 4.45 below.

Figure 4.



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2006 – 2015



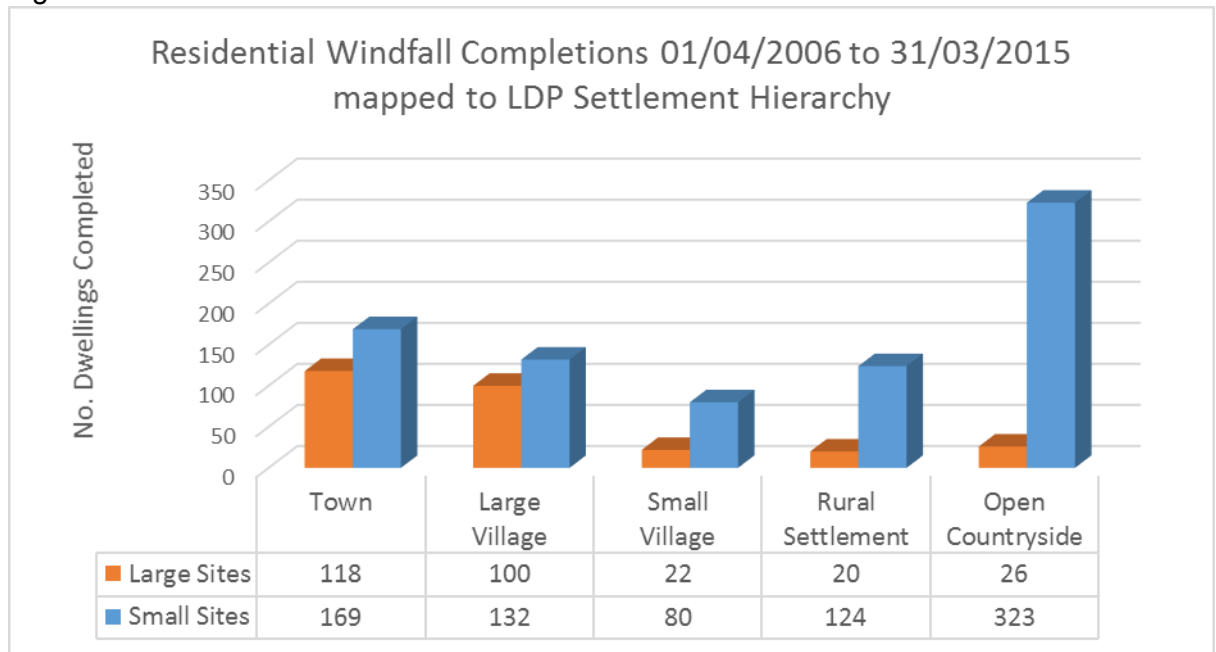
4.4 In contrast, the Powys Local Development Plan settlement hierarchy comprises:

- Towns (15)
- Large Villages (43)
- Small Villages (45)
- Rural Settlements – un - named
- Countryside

4.5 Figure 5, below, shows the distribution of completions over the same timeframe across the separate tiers of the LDP settlement hierarchy for the nine year period, 01/04/2006 - 31/03/2015, categorising the residential completions into large and small sites.

4.6 Paragraphs 4.7 – 4.44 below discuss in detail how the changes between the settlement hierarchies and policies are likely to affect the windfall completion rate for the remaining period of the LDP. In discussing these changes pie charts are used to illustrate the types of windfall development that have taken place across the tier of the settlement hierarchy and the percentage each type represents of the total for that tier of the hierarchy. Only data for the four year period 01/04/2011 – 31/03/2015 is used for this purpose as it is this data which is most reliable and in which we have the most confidence. Appendix 2 details completions of each windfall type by each Settlement Hierarchy tier, whilst a matrix of each windfall type and which tiers of the UDP/LDP hierarchy the development would be permitted is contained in Appendix 3.

Figure 5.



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2006 – 2015

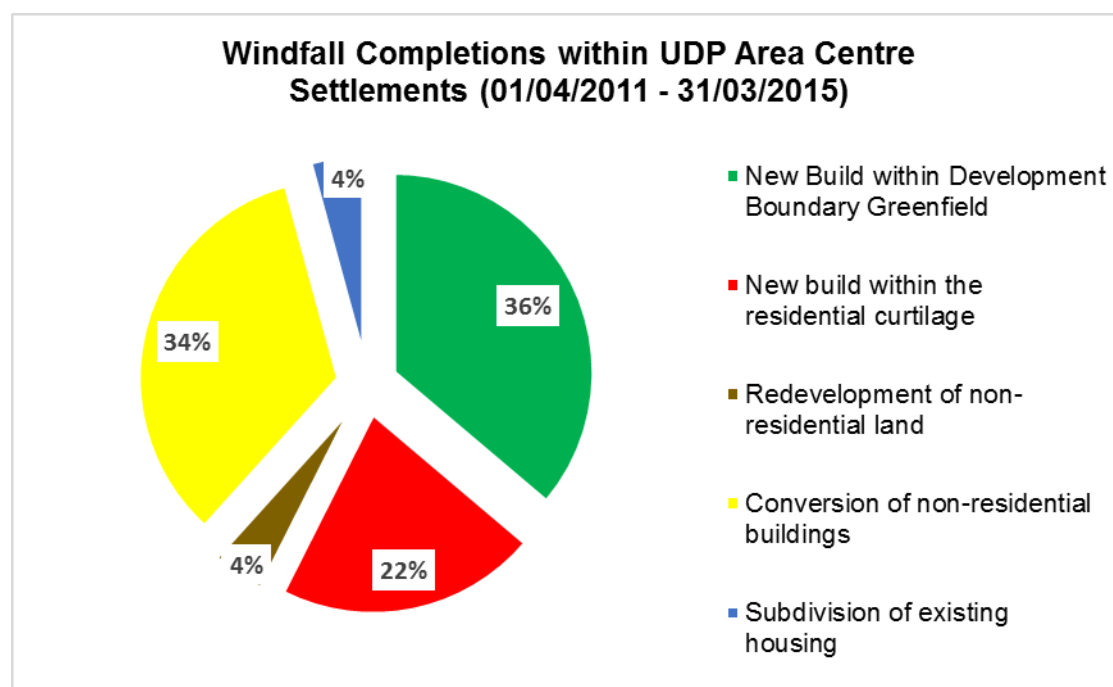
### Area Centres (23% of the Windfall Completions, 257 Residential Units)

4.7 This is the top tier of settlements in the UDP and includes the 12 largest settlements in Powys. All of these settlements are included as Towns within the Powys LDP together with an additional two, Montgomery and Llanwrtyd Wells and part of Hay on Wye (the rest of Hay on Wye is in the Brecon Beacons National Park LDP) giving a total of 15 settlements altogether.

4.8 The proportion of the dwelling units on windfall sites completed across Powys in the nine year period (01/04/2006 – 31/03/2015) within this tier of the settlement hierarchy equates to 23% (257 residential units) and of this 54% of those completions were on small sites and 46% on large sites.

4.9 The main windfalls that are found within this tier are the development of sites on greenfield unallocated land (this includes infill) within the development boundary, new houses built within the residential curtilage of an existing dwelling, the redevelopment of non-residential land, the conversion of non-residential buildings, and the subdivision of existing housing. Figure 6 below demonstrates the proportion of each of these different categories that have been completed within the Area Centres in the last four years.

Figure 6.



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2011 – 2015

4.10 With regards to any policy changes between the LDP and the UDP, there are no significant differences, these settlements remain the top tier of the settlement hierarchy and have development boundaries. In some settlements the development boundary has been purposely drawn to include areas of white land that may become available for windfall development. Additionally, with the school modernisation programme and public sector restructuring processes taking place it is

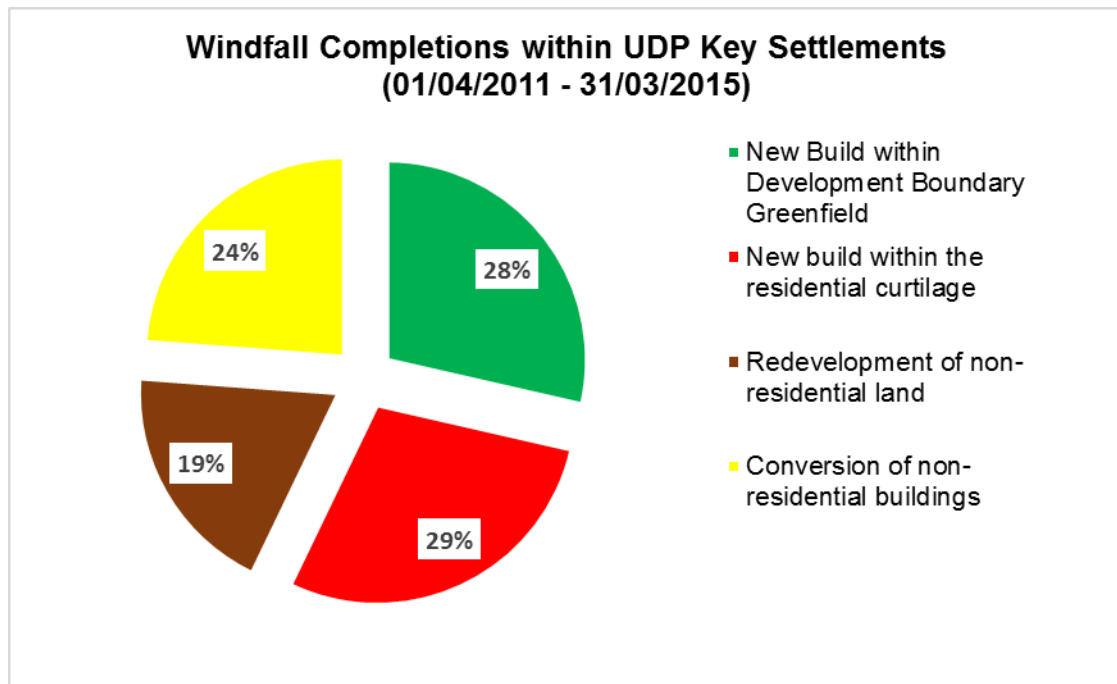
expected that a continuation of properties across the upper tier of the settlement hierarchy being made available for redevelopment or conversion will continue. Therefore it is not likely that there will be a change in the number of windfall completions within these settlements.

**Key Settlements (11% of the Windfall Completions, 122 Residential Units)**

4.11 The next tier down are the Key Settlements comprising twenty of Powys' smaller towns and larger villages. This tier is similar to the towns above, in terms of policies and development boundaries and as such the type of windfall completions expected here would be the same as that in the towns. This is further demonstrated by looking at the completions data displayed in Figure 7. below.

4.12 The proportion of dwelling units completed on windfall sites across Powys in the nine year period (01/04/2006 to 31/03/2015) within this tier of the settlement hierarchy equates to 11% of which 47% were on small sites and 53% on large sites.

**Figure 7.**



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2011 – 2015

4.13 There is no similar tier to the Key Settlements within the LDP settlement hierarchy. The Key Settlements Montgomery and Llanwrtyd Wells have been up-graded to Towns as detailed above, and one settlement (Sarn) has been reclassified as a Small Village, whilst the majority (17) of the Key Settlements have been designated as Large Villages in the LDP.

4.14 In policy terms, the deletion of Key Settlements simply removes a tier from the hierarchy re-allocating the settlements into different tiers according to a reviewed classification based on size (number of households) and the range of key services and facilities they provide. As both Towns and Large Villages have a similar policy approach

this change in the settlement hierarchy is not likely to result in a decrease in windfall completions.

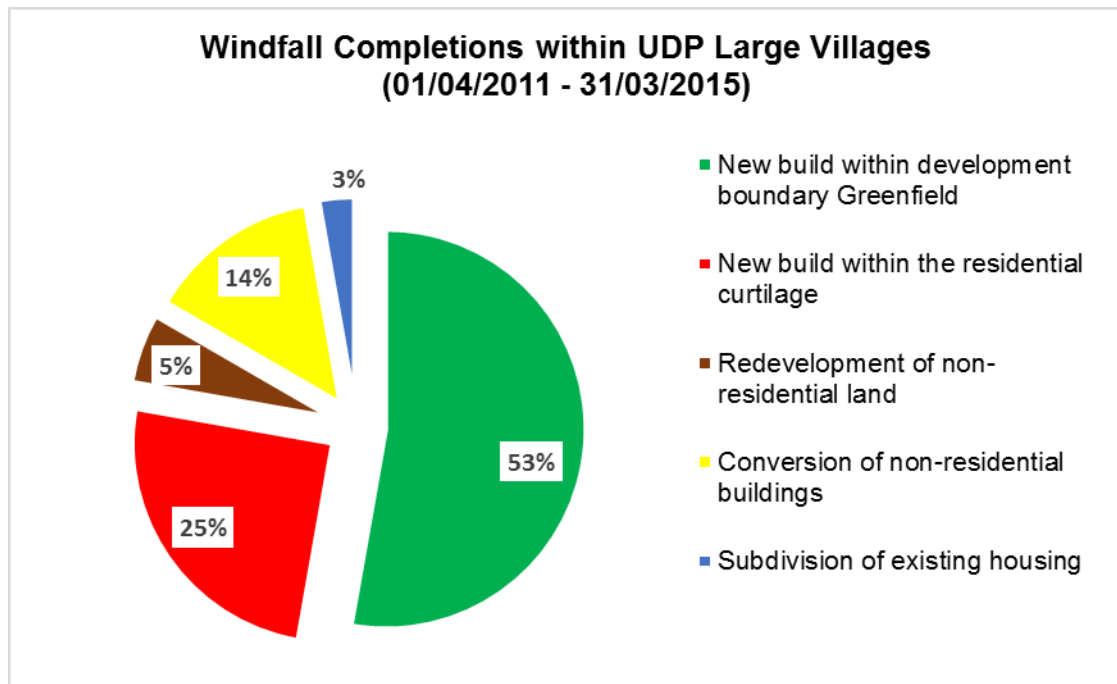
**Large Villages (12% of the Windfall Completions, 131 Residential Units)**

4.15 The third tier within the UDP settlement hierarchy are the 36 Large Villages. Here development demands are expected to be less than in the Area Centres and Key Settlements, but like the other two tiers they have development boundaries and allocations.

4.16 In policy terms the type of windfalls that would be expected here would be again similar to that found in the Towns and Key Settlements but at a lesser level, proportionate with the settlement’s reduced size, see Figure 8. below.

4.17 The proportion of the dwelling units completed on windfall sites across Powys in the nine year period (01/04/2006 – 31/03/2015) within this tier of the settlement hierarchy equates to 12%. Of this 12%, 89% of completions were on small sites and 11% on large sites.

**Figure 8.**



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2011 – 2015

4.18 In the LDP Large Villages are the second tier of the hierarchy of which there are 43. Some have been re-designated from Key Settlements (17) in the UDP, whilst some were previously ranked as Small Villages (4). The policy approach for Large Villages in the LDP is similar to that applied to Large Villages in the UDP, they have development boundaries and allocations and projected growth levels proportionate to their size and facilities. Therefore, again, this change in the settlement hierarchy is not likely to result in a decrease in windfall completions.

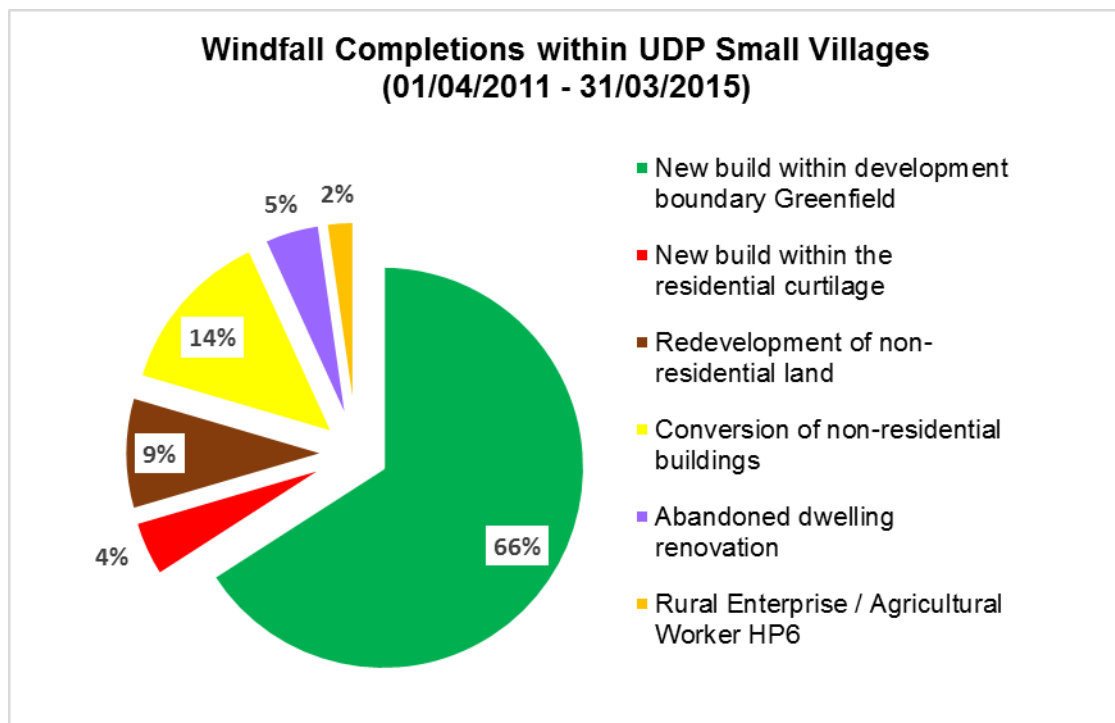
### Small Villages (14% of the Windfall Completions, 153 Residential Units)

4.19 In the UDP Small Villages are the fourth tier in the settlement hierarchy of which there are 100. Whilst the UDP recognised that they have little scope for development, they do have development boundaries and allocations where appropriate. The current UDP policy allows windfall developments on sites within this tier of up to five units.

4.20 The proportion of dwelling units completed on windfall sites across Powys in the nine year period (01/04/2006 – 31/03/2015) within this tier of the settlement hierarchy equates to 14% of which 75% of those completions were on small sites and 25% on large sites.

4.21 From Figure 9. below, it can be seen that within the four year period (01/04/2011 – 31/03/2015) there was a greater variation in the types of dwelling units completed compared to the higher tiers of the UDP settlement hierarchy. This is partially due to a change in the location of the development boundary between the Montgomeryshire, Brecknockshire and Radnorshire Local Plans and the UDP (a small number of the residential completions were the result of a planning permission granted before the adoption of the UDP) and a reflection of the more rural nature of these settlements. However, the majority of the residential units completed were still on greenfield sites within the development boundary.

**Figure 9.**



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2011 – 2015

4.22 It is at this tier that the most fundamental policy change between the UDP and LDP takes place. In the LDP there are only 43 Small Villages (as opposed to the 100 in the UDP) of which one has been re-designated from a Key Settlement (Sarn) and ten from Large Villages.

4.23 In the LDP the Small Villages do not have development boundaries or allocations so it is at this level that the greatest change will be experienced in windfall development. Any development proposed once the LDP has been adopted will be considered under LDP policies H1, H5 and H7 and National Planning Policy. These policies restrict development to small infill gaps (of one or two dwellings) or larger infill gaps if identified in a village action plan. Further development may only be permitted if small scale affordable/local needs housing or if it complies with the conversion of redundant buildings policy in TAN 6.

4.24 Due to the significant changes in the settlement hierarchy and the more restrictive policies regarding development in Small Villages it would be unrealistic to expect the windfall completions at this level to continue at the same rate. To adjust the windfall allowance to take these factors into account a closer inspection of the completions within the tier needs to be made. There are two elements that need to be taken into consideration; first, the reduction in the number of settlements and, second, the change to more restrictive policies within those settlements that are classified as Small Villages.

4.25 To analyse the impact of the change in the settlement hierarchy all the residential windfall completions for the nine year period (01/04/2006 to 31/03/2015) have been classified into both the LDP settlement hierarchy tiers and the UDP settlement hierarchy tiers. The results can be seen in Table 1.

**Table 1. Classification of windfall completions (01/04/2006 to 31/03/2015) for the UDP and the LDP Settlement Hierarchies**

UDP Settlement Hierarchy	Area Centre	Key Settlement	Large Village	Small Village	Rural Settlement	Open Countryside	Total
Small Sites	139	57	116	115	64	337	828
Large Sites	118	65	15	38	7	43	286
LDP Settlement Hierarchy	Town		Large Village	Small Village	Rural Settlement	Open Countryside	
Small Sites	169		132	80	124	323	828
Large Sites	118		100	22	20	26	286

Source: PCC Small Sites Housing Monitoring System , JHLAS, Planning Consents and Building Control Completion Notices 2006 – 2015

4.26 From the table it can be seen that in the the UDP settlement hierarchy 115 residential unit completions took place in the Small Villages. However, only 80 of these small site completions would have taken place within a Small Village settlement as defined by the LDP. This is due to the decrease in the number of Small Villages from 100 to 43. Most of the settlements that were Small Villages in the UDP (that no longer fall within this tier) have become Rural Settlements with further restrictions again on the types of development permitted (see paragraph 4.35 below).

4.27 The difference in the number of dwelling units completed on windfall sites between the LDP and the UDP Rural Settlement hierarchy tier is 60 (124 – 64). It can be assumed that the majority of these 60 dwellings, now classified as being within a LDP Rural Settlement, were completed within the UDP Small Village tier and permitted under its associated policies. It would be unrealistic to expect to see a continuation of the level

of completions shown in Table 1 for LDP Rural Settlements. Therefore, it is recommended that the calculation used for the windfall allowance discounts those units which have moved down the settlement hierarchy ( $124 - 64 = 60$ ,  $60/9$  (01/04/2006 – 31/03/2015 = 9 years) = 6.67 see paragraph 5.1 ).

4.28 Secondly, the differences in Policy approach for Small Villages between the UDP and the LDP needs to be taken into consideration (see paragraph 4.22). It is unlikely that the Small Villages will see many large sites other than those that are conversions permitted through TAN 6. Exceptions to this will be sites forming minor logical extensions for affordable housing or larger infill sites where identified in a village action plan. However, both types of development are not expected to be a regular occurrence. Assessing the last four years worth of data shows there were only nine dwelling units completed on large windfall sites within the Small Villages. These units therefore, also need to be discounted from the windfall allowance calculation ( $9/4 = 2.25$  (data collected for four years) see paragraph 5.1).

This figure of 2.25 units is realistic as a discount figure rather than taking the 38 large site windfall units completed over a nine year period, as shown in Table 1 above. The 38 units include conversions that are permitted under national policy so would not be included within any discount figure.

4.29 A discount also needs to be applied to small site residential windfall completions which come to a total of 44 residential units being completed within the Small Villages over the four year period (01/04/2011 – 31/03/2015). Figure 9 above shows that 66% (29 of the 44 units) of all completions that took place within this tier were new build developments on greenfield sites within the development boundary. A closer inspection of the 29 units completed to identify if they would have been classified as infill sites of one to two units between dwellings showed that only 25% of these sites fall within the criteria (Policy H1 in LDP06). Therefore, it is unrealistic to include the remaining 75% of units within the calculation being used to inform the windfall allowance ( $29 - 7$  (25%)) = 22 (75%),  $22/4 = 5.5$  (data collected for four years 01/04/2011 – 31/03/2015) see paragraph 5.1.

4.30 The remaining categories of development regarding conversions, redevelopment of non-residential land and the building of residential units within the curtilage of existing dwellings is expected to continue although in some circumstances at a reduced rate that is consistent with the relevant policies that include infill limited to one to two dwellings. However as changes in this are difficult to predict, this will be monitored, together with the number of units completed through the formation of minor logical extensions for affordable housing or larger infill sites where identified in a village action plan, to identify whether any further adjustments need to be made to the windfall allowance calculation at the Plan review stage.

All of the predictions discussed above align with the LDP Growth Strategy with development being directed to the most sustainable locations which are the upper tiers of the settlement hierarchy.

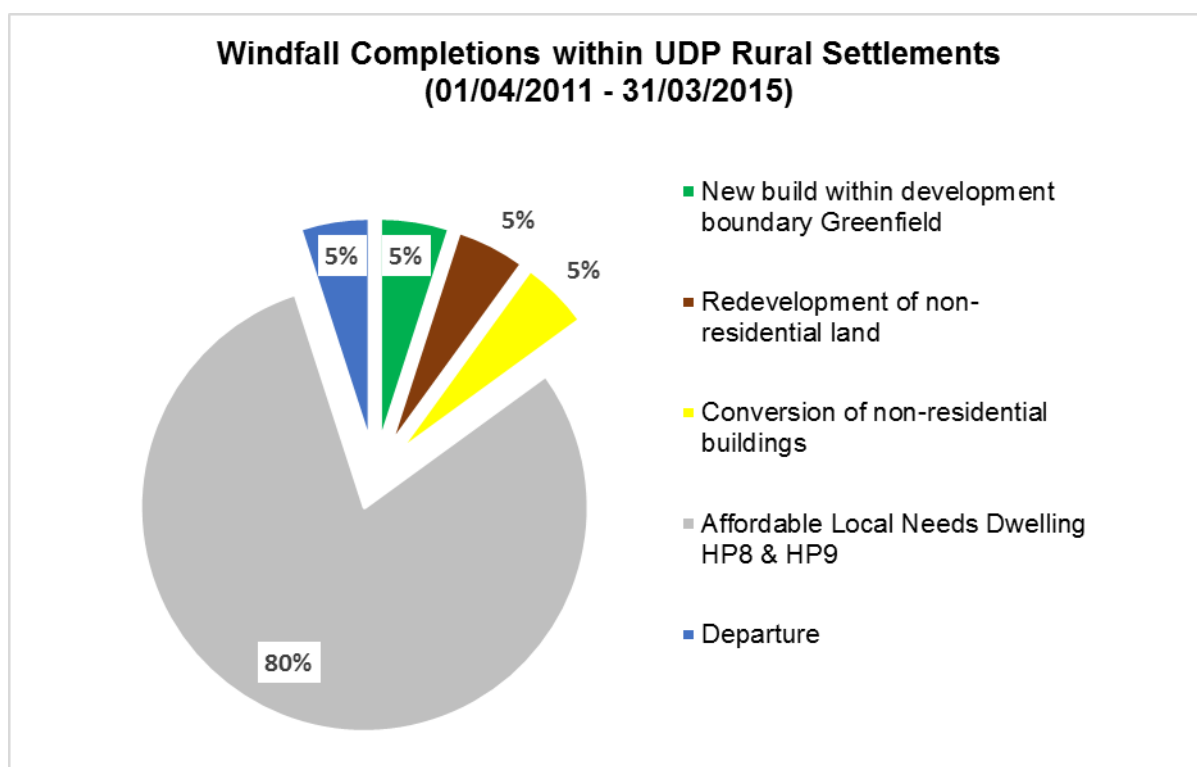
### **Rural Settlements (6% of the Windfall Completions, 71 Residential Units)**

4.31 In the UDP the lowest tier of settlements in the hierarchy are the Rural Settlements. These are named in a schedule within the Plan and generally consist of clusters of dwellings in a rural setting. Here the type of development is limited to sensitive in-filling of one or two dwellings to provide affordable local needs housing. These settlements do not have development boundaries or allocations.

4.32 The proportion of the dwelling units completed on windfall sites across Powys in the nine year period (01/04/2006 to 31/03/2015) within this tier of the settlement hierarchy equates to just 6% - 90% being completions on small sites. This figure demonstrates the restrictive approach to general housing in lower tier settlements.

4.33 Figure 10. below, shows that the majority of the dwellings completed within this settlement tier are Affordable Local Needs dwellings (80%). Figure 10. also shows a small percentage of sites being completed on sites within the development boundary; this is due to the planning application being permitted under a development plan previous to the adoption of the UDP where the dwelling would have been within a development boundary (this has only happened in a very small number of cases).

**Figure 10:**



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2011 – 2015

4.34 Most of the Rural Settlements in the UDP would be expected to remain as such in the LDP; however, whilst the UDP took the approach of naming the settlements, the LDP takes the approach that Rural Settlements are defined by the following characteristics:

- Historically recognised / named settlements; and
- Located in a rural setting and contain at least 10 dwellings; and
- Can be clusters of dwellings or more dispersed.

This may mean that where a Rural Settlement named in the UDP consists of less than ten dwellings it no longer falls within this tier of the settlement hierarchy and becomes reclassified as Open Countryside.



4.35 As discussed in paragraph 4.26 above there are less than half the number of Small Villages in the LDP compared to the UDP. The LDP reclassifies these settlements as Rural Settlements. However, the total number of Rural Settlements in the LDP is not changing dramatically to that in the UDP due to the number of UDP Rural Settlements failing to meet the ten dwellings criteria.

4.36 The LDP Policy is similar to the UDP in that the only dwellings permitted within this tier are single rural affordable homes, residential conversions and the renovation of former abandoned dwellings. Figure 10 above demonstrates that the majority of dwellings completed within this tier in the past have been the single, rural, affordable homes.

4.37 The most significant change between the LDP and the UDP policy at this level is in the eligibility criteria of any applicant / occupier of a Rural Affordable home. In the LDP, Policy H8 is more stringent than the eligibility criteria in the UDP Policy HP10 requiring the occupancy of such dwellings to be restricted to those who are in “housing need” as defined by the common allocation scheme and its procedural guidance (Powys County Council’s Housing Guidance). Due to this there may be a decrease in the number of rural affordable homes receiving planning permission once the LDP is adopted. However, the completions recorded within this tier of the UDP settlement hierarchy only accounted for 6% of the completions on windfall sites in total (01/04/2006-31/03/2015), so this change is not likely to have a significant impact on what is calculated for the windfall allowance. Again this will be monitored into the future to ensure the policy mechanisms are working in support of the LDP aims and objectives.

#### **Open Countryside (34% of the Windfall Completions, 380 Residential Units)**

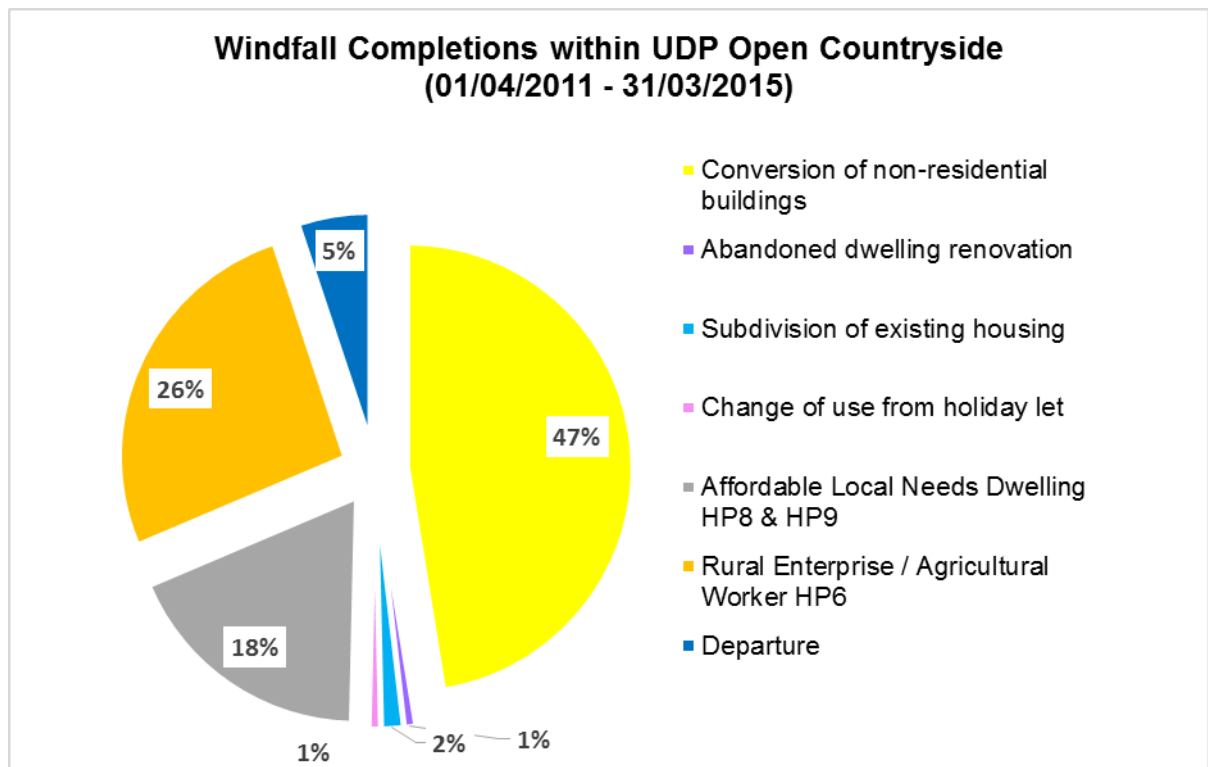
4.38 In both the UDP and the LDP all housing development in the Open Countryside is on windfall sites. Here development is restricted but not prevented. The majority of dwellings permitted in the Open Countryside are done so through National Policy, TAN 6 – Rural Enterprise / Agricultural Workers Dwellings, Conversions and One Planet Developments. In addition to this, both the UDP and the LDP have a policy for the renovation of abandoned dwellings.

4.39 Affordable Local Needs Dwellings are permitted in the UDP where they adjoin settlements with development boundaries (with the exception of Area Centres). These units are classed as Open Countryside because they fall outside of a development boundary but on the ground they appear as part of the settlement’s built form.

4.40 The proportion of the dwelling units completed on windfall sites across Powys in the nine year period (01/04/2011 – 31/03/2015) within this tier of the settlement hierarchy equate to 34% of which 89% were on small sites and 11% on large sites. All the completions on large sites were conversions.

4.41 The figure of 34% of completions being within this tier of the hierarchy demonstrates the rurality of Powys and the importance placed on Affordable Local Needs or Agriculture / Rural Enterprise dwellings that remain affordable or tied to the business in perpetuity so as to sustain the grounds for the exception which enabled the dwelling in the Open Countryside in the first place.

**Figure: 11.**



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2011 – 2015

4.42 It can be seen from Figure 11 above that the majority of the residential units (74%) completed were permitted in accordance with National Policy. The Policies that permitted the remaining units are similar between the UDP and the LDP. Therefore, it is not expected that change from the UDP to the LDP will have an effect on windfall rates at this tier in the Settlement Hierarchy.

4.43 However, there are other factors that may have an effect. These include a reduction in the supply of agricultural buildings that are suitable for conversion as the most appropriate ones have already been converted and the number of residential planning permissions being granted on the basis of a lack of five years supply of land for housing. The latter has seen a number of residential developments permitted on departure sites, in locations that fall outside of settlements development boundaries (both UDP and LDP), in the last 12 months. Although being defined as Open Countryside it must be assumed that they are in sustainable locations adjoining settlements in the upper tiers of the settlement hierarchy.

4.44 The permitting of these Departure Sites contributes to the windfall figure; however, once the LDP is adopted the Local Planning Authority will have a five year land supply making it more difficult for such applications to be approved.

## **5.0 Re-viewing the Windfall figure taking into account LDP Policy**

5.1 To review the windfall allowance the starting point is to take the total number of completions on windfall sites between 2006 and 2015 (a nine year period) which is 1114. This figure is then divided by nine to produce an average for the period - 124. The following adjustments then need to be made to account for the changes in the LDP settlement hierarchy and policies that will have an impact on the windfall completion rate over the remaining eleven years of the plan as detailed through the assessment in section four.

Nine Year Average Annual Windfall Completion Rate: 124 minus the following:

- 6.67 = to represent the loss of settlements allowing open market housing (see paragraph 4.27)
- 2.25 = to represent the loss of large windfall sites in Small Villages (see paragraph 4.28)
- 5.5 = to represent the change of policy to infill of only 1-2 dwelling units in Small Villages (see paragraph 4.29)

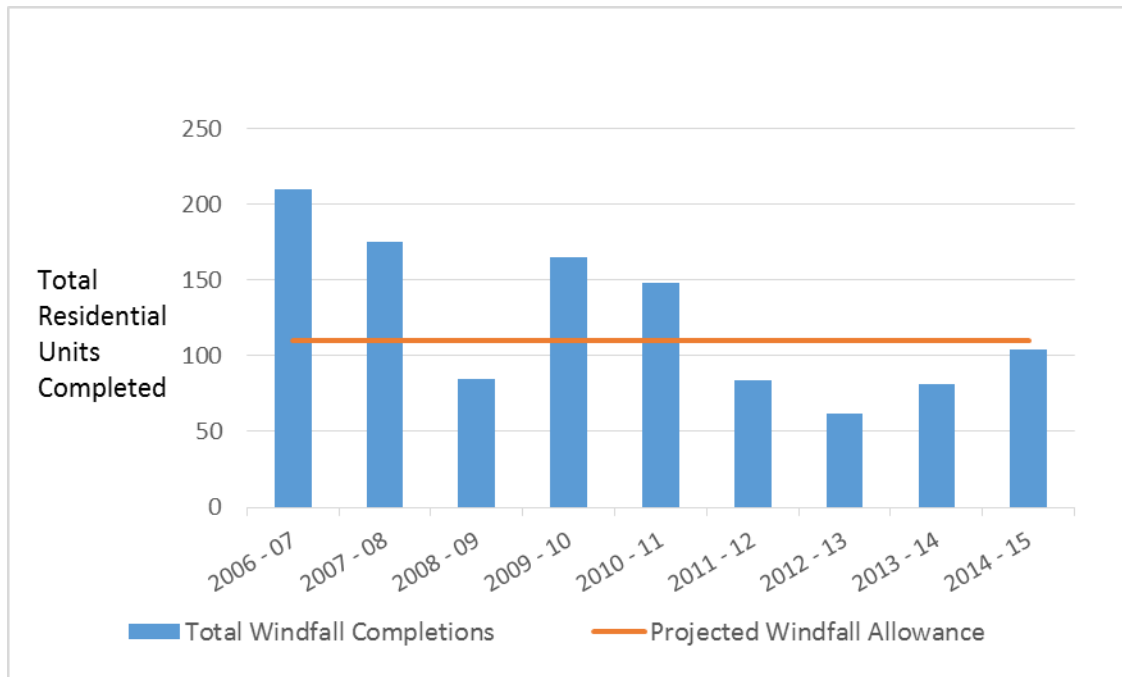
5.2 This gives a total following the above discount of 109.58, which can be rounded to 110 residential units per annum. The 110 residential units is a more representative windfall allowance that takes into account the last nine years' worth of data but is then adjusted to take into account the LDP policies moving forward.

5.3 Figure 12. below shows how a windfall allowance of 110 residential units relates to the nine years (01/04/2006 – 31/03/2015) known residential completions on windfall sites. The chart shows that in four of the nine years the windfall allowance was met with one year exceeding it by 121 units. In the other five years the number of units completed was less than the annual allowance by up to 43 units.

5.4 Although not included within the detailed analysis undertaken within this paper, the results from the PCC Small Sites Housing Monitoring System together with the JHLAS for 2016 (01/04/2015 to 31/03/2016) have been collated. The results show that there were 188 completions on windfall sites (79 on small and 109 on large sites). This is over the windfall allowance by 78 dwellings.

5.5 Windfalls by their very nature are unpredictable and are not planned for but it is expected that such development will occur over the Plan period and must therefore, be factored into housing provision. Whilst a windfall allowance of 110 has not been met every year over the trend period studied it does represent a fair assumption of what is likely to be achieved over the remainder of the Plan period particularly as the years 2014/15 and 2015/16 show the possible beginnings of an upward trend. It also represents an allowance rather than a target, but one which recognises the important contribution that these sites make to meet the housing demand and needs of Powys.

**Figure 12. Chart showing a Windfall Allowance of 110 Residential Units against 2006 – 2015 Residential Completion Data on Windfall Sites.**



Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2011 – 2015

## 6.0 Impact on the LDP strategy

6.1 The revised windfall allowance impacts on the housing provision number by increasing the windfall projection in table H2 from 960 to 1210, a total increase of 250 residential units, however it has no impact on the overall strategy.

## 7.0 How will this figure be taken forward?

7.1 The windfall allowance will be monitored annually to assess that it represents what is happening on the ground. Any significant deviation from the projections will be addressed through the review stage of the plan.

## 8.0 Conclusion

8.1 Extending the time frame to provide additional evidence in respect of the windfall calculation has led to an increased windfall allowance from 87 to 110. Whilst this increase requires an amendment to the housing provision figure in the LDP it is considered to be a more representative allowance being based on sound evidence for a nine year period and as such, is a realistic and achievable allowance. Upon adoption of the LDP the paper shows that the new LDP settlement hierarchy will result in some increased restrictions on windfall development in line with the move to a more sustainable development pattern, but it is clear that windfalls are expected to continue making a significant contribution to housing provision in Powys.

## Appendix 1 - All Residential Completions 01/04/2006 – 31/03/2015

		2014/15*	2013/14	2012/13	2011/12	2010/11	2009/10	2008/09	2007/08	2006/07	Totals
<b>All Completions</b>	Small Sites	99	69	60	82	83	121	57	126	131	828
	Large Sites	0	123	147	15	156	132	102	240	295	1210
		<b>99</b>	<b>192</b>	<b>207</b>	<b>97</b>	<b>239</b>	<b>253</b>	<b>159</b>	<b>366</b>	<b>426</b>	<b>2038</b>
											0
<b>Windfalls</b>	Small Sites	99	69	60	82	83	121	57	126	131	828
	Large Sites	0	7	7	7	56	23	28	58	100	286
		<b>99</b>	<b>76</b>	<b>67</b>	<b>89</b>	<b>139</b>	<b>144</b>	<b>85</b>	<b>184</b>	<b>231</b>	<b>1114</b>
<b>Percentage of comps that are windfall</b>		<b>100%</b>	<b>40%</b>	<b>32%</b>	<b>92%</b>	<b>58%</b>	<b>57%</b>	<b>53%</b>	<b>50%</b>	<b>54%</b>	<b>55%</b>

Source: Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2006 – 2015

\* Change in JHLAS methodology from survey approach to the use of Building Control completion certificates. This resulted in data quality issues meaning the JHLAS large site (2014/15) data has not been used in this paper.



**Appendix 2 Residential Completions on Windfall Sites, 01/04/2011 to 31/03/2015 by Windfall Category in the UDP Settlement Hierarchy**

Small sites and large Sites	New Build within Development Boundary - Greenfield	New build within residential curtilage	Redevelopment of non-residential land	Conversion of non-residential buildings	Abandoned Dwelling Renovation	Subdivision of existing housing	Change of use from holiday let	Affordable Local Needs Dwelling	Rural Enterprise / Agricultural Worker	Departure	Totals	%
Area Centre	17	10	2	16	0	2	0	0	0	0	47	15%
Key Settlement	6	6	4	5	0	0	0	0	0	0	21	7%
Large Village	19	9	2	5	0	1	0	0	0	0	36	12%
Small Village	29	2	4	6	2	0	0	0	1	0	44	14%
Rural Settlement	1	0	1	1	0	0	0	16	0	1	20	7%
Open Countryside	0	0	0	65	1	2	1	25	36	7	137	45%
<b>TOTALS</b>	<b>72</b>	<b>27</b>	<b>13</b>	<b>98</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>41</b>	<b>37</b>	<b>8</b>	<b>305</b>	
	24%	9%	4%	32%	1%	2%	0%	13%	12%	3%		

Source: Source: PCC Small Sites Housing Monitoring System, JHLAS, Planning Consents and Building Control Completion Notices 2011 – 2015

**Appendix 3 – Matrix Demonstrating How The Different Categories of Development Are Permitted Under UDP Policies and LDP Policies**

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		New Build within Development Boundary - Greenfield	New build within residential curtilage	Redevelopment of non-residential land	Conversion of non-residential buildings (National Policy)	Abandoned Dwelling Renovation in Rural Areas	Subdivision of existing housing	Change of use from holiday let	Affordable Local Needs Dwelling	Rural Enterprise / Agricultural Worker (National Policy)
<b>UDP Policies</b>	Area Centre (12)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No
	Key Settlement (20)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No
	Large Village (36)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No
	Small Village (100)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No
	Rural Settlement (145)	No	No	No	Yes	Yes	Yes	No	Yes	Yes
	Open Countryside	No	No	No	Yes	Yes	Yes	No	Yes (adj dev boundary)	Yes
<b>LDP Policies</b>	Town (15)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No
	Large Village (43)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No
	Small Village (45)	Infill only	Infill only	Infill only	Yes	Yes	Yes	Yes	Yes	No
	Rural Settlement	No	No	No	Yes	Yes	Yes	No	Yes	Yes
	Open Countryside	No	No	No	Yes	Yes	Yes	No	Yes (adj dev boundary)	Yes



**STUDY CONCERNING THE ECONOMIC  
VIABILITY OF PROVIDING  
AFFORDABLE HOUSING ACROSS  
POWYS**

**Undertaken in connection with the emerging  
Local Development Plan  
Completed on behalf of Powys Council**

**by**

**District Valuer Services (DVS)**

**August 2016**

## **EXECUTIVE SUMMARY**

DVS, part of the Valuation Office Agency, has been commissioned by Powys Council to produce financial appraisals in respect of a number of example residential development sites across the County to determine the ability of such schemes to support a level of Affordable Housing. They requested that we also look at why some sites which may have been previously considered 'unviable' are in fact being brought forward for development. It should be hoped that the targets set should be achievable.

The Council wished to test viability for a range of sites, and an appraisal approach was undertaken that would permit this reflecting a prescribed level of affordable housing and housing mix. A variety of site typologies has been agreed in previous testing for the Council and has been maintained as representative of the sites that will come forward in the County. The typologies were also tested in a variety of geographical locations or sub markets which should enable more general conclusions to be drawn about the viability implications locally of differing scenarios. Such sub markets show strong similarities in terms of house prices. We have also drawn from our experience of assisting the Council in their development management process on specific case viability studies, as well as using our local knowledge to hopefully reflect a relatively realistic scenario to show how sites may come forward - and also to distinguish between 'hotspots' and 'notspots' in terms of viability across the County.

The sites are all 'hypothetical' and their individual characteristics, any anticipated abnormal costs, etc. are not taken into account in the appraisals. Any potential planning application for such sites, and specific viability testing will involve more detailed data and will be viewed on its individual merits.

The valuations and appraisals were agreed to be as at 1 August 2016 and reflect current costs and values. It is important to stress that the prescribed 'test' developments designed to meet the Council's combined planning policies do not necessarily match any future actual development. Accordingly no dialogue has been entered into with landowners or developers in carrying out this study.

A total of twenty three typologies have been identified by the Council as being reflective of development in the County. We have considered notional development schemes for each site, which would meet the current Local Development Plan objectives. Each main typology has then been tested across the four sub market areas identified previously by the Council, and maintained again for this report.

We considered assumptions in respect of development costs and other financial and site assumptions required to carry out the appraisals. We would also note that the assumptions used and current costs and values adopted mean that the figures in this report are not comparable to any other report commissioned by the authority previously. Development appraisals were produced for each of the site typologies using the industry standard 'Argus' software which shows full cash flows etc and again would make comparing figures calculated using another toolkit inadvisable. The approach used was to determine the residual site value after taking into account the costs of development including the proposed Affordable Housing requirement; the likely income from sales and developer's profit. This methodology is the same as is used by nearly all developers when they are purchasing land and formulating their bids.

For Greenfield sites a level of profit on revenue of 17.5% on the Market Value element of the scheme was considered reasonable, and on Brownfield sites 20% - reflecting in our opinion the nature of the developments and their perceived associated risks.

It is accepted by established market commentators that a return to house price growth will occur but current market commentaries are mixed and it is impossible to predict when a return to higher house price sale levels will occur, which will make some sites 'viable'.

Taking into account the above, we would agree that the proposed affordable housing contribution targets in the Central (30%), Severn Valley (20%) and North (10%) areas are supported allowing for a degree of headroom also for further S106 contributions and additional costs on a site by site basis etc. This recommendation is based on the results produced and is considered reasonable in the context of the plan period and the current, exceptional, uncertain state of the market. It also reflects the split of affordable housing tenure types outlined in the report which is based upon identified needs. Testing was also carried out in Central at a 35% level of contribution. Whilst still viable we note that the adopted levels of contribution should reflect a comfortable margin of viability in order to reflect any future requirements, and that at a 35% level the margin was considered too small. It is inadvisable to plan for marginal viability and some flexibility should be left to allow for changes in costs or abnormals on a site specific basis etc. We would further recommend that the LDP allows for sites to be considered on an individual scheme-by-scheme basis with a full viability appraisal, if necessary.

The different levels between sub markets is supportable and reflects the potential of higher value areas to make more substantial contributions to affordable housing and S106 sums. Of the tests undertaken in the three sub markets of North, Central and Severn Valley **all** of the larger sites were viable at the above proposed levels of contribution apart from the 3 unit and single units schemes. This represents the delivery of 84.4% of the expected allocations. However we are confident that the viability issues with the smaller sites in these sub markets may be more reflective of the unit mix chosen for testing and the current proposed BCIS build cost of £1,616 psm for detached units impacting upon the testing rather than such sites in those areas being unviable as a whole. For example it may seem a natural reaction to choose to build larger units on a small 'exclusive' site - but as they will have also larger build costs it does not necessarily mean that viability margin is automatically improved.

The main area of concern is the South West where very few schemes appear viable. However we are conscious that schemes are still coming forward in this area which would suggest that there is the strong possibility as discussed in the paper that lower cost build contracts are being agreed, or less developers profit is being sought by developers in the area - hence the sites become viable. Any affordable target set in this area therefore may be currently seen as aspirational but we believe that some schemes may be able to provide some units as costs decrease or values increase - but this will be on a case by case assessment we would suggest. As some smaller unit schemes will be undertaken for owner occupation we are of the opinion that sites will continue to come forward in this area.

We would also note that by simply having a strong residual value, it is not guaranteed that a site will come forward for development, and those which may be unviable in methodology may also come forward for a number of reasons as discussed in the paper. Housing development on Brownfield sites for example is not necessarily less expensive than on Greenfield land due to existing infrastructure in place.

In addition, we would recommend regular revision of the viability appraisals to establish whether the main assumptions, particularly in respect of sale prices and build costs, have been subject to fluctuation. In the event that the parameters have moved to any significant degree (a 5% clear differential for example) it may be appropriate to review the affordable housing contribution target.

## **1. INTRODUCTION**

1.1 DVS, part of the Valuation Office Agency, has been commissioned by Powys Council to produce financial appraisals in respect of a number of typologies of residential sites across the County to determine the ability of development sites to support a level of Affordable Housing. The appraisals have been designed to assess the impact on development viability of the requirements for provision of Affordable Housing at various levels. The Council is producing a Local Development Plan ('LDP') which, when adopted, will serve as the statutory strategic spatial development framework for the County until 2026.

1.2 This study is a document which will be used in assessing the aspirational target for affordable housing, within the LDP. It is not intended, nor should it be used, as a basis for any individual case being considered under Development Management guidelines. In arriving at an overall target there will be sites which will perform better than the average and those that perform less well but the study will provide a reasonable achievable target from which policy may be derived.

### **Brief for this work**

1.3 The Council wished to test viability for a range of sites and an appraisal approach was undertaken that would permit this reflecting a prescribed level of affordable housing and housing mix. A variety of site typologies has been agreed in previous testing for the Council and has been maintained, with the aim of testing different site types in a variety of geographical locations. This would enable more general conclusions to be drawn about the viability implications locally of differing scenarios. We have also drawn from our experience of assisting the Council in their development management process on specific case viability studies, as well as using our local knowledge to hopefully reflect a relatively realistic scenario to show how sites may come forward in terms of suggested unit mix as is demonstrated in planning applications coming forward - and also to distinguish between 'hotspots' and 'notspots' in terms of viability across the County. We would add that within any sub market there will still be hotter and cooler locations in terms of viability.

1.4 The valuations and appraisals were agreed to be as at 1 August 2016.

### **DVS**

1.5 DVS, part of The Valuation Office Agency, provides valuation advice to public bodies throughout Wales, England and Scotland. It has extensive experience in carrying out development appraisals and employs specialists in commercial and residential development work, together with dedicated environmental and quantity surveyors to assist in appraisal work. In the last few years, Councils have increasingly commissioned us to assess the viability of development schemes in relation to their ability to support affordable housing and other obligations arising in the planning process.

## **2. INDIVIDUAL DEVELOPMENT SITES**

### **Introduction**

2.1 The number of site typologies tested are considered to give a representative sample so that sites of all size ranges, types and in all market areas, identified in previous work by Powys, were represented.

2.2 This section considers the key characteristics of the individual sites, together with the assumptions made about the proposed development for the purposes of producing appraisals. The sites are of varying sizes and have differing current uses, although most may be considered 'Greenfield' (this is a primarily a reflection of the preponderance of this type of site in the County) either in use as farmland or scrub. It may be commented that even previously developed or Brownfield sites may be considered to be less 'Brown' than in other areas as little heavy industrial use for example will have been undertaken on them.

2.3 The sites are all 'hypothetical' and their individual characteristics, any anticipated abnormal costs, etc. are not taken into account in the appraisals. Any potential planning application for such sites, and specific viability testing will involve more detailed data and will be viewed on its individual merits

2.4 We were not asked as part of this study to consider the appropriateness of any other items of developer contributions such as CIL.

### **Existing Data**

2.5 Having regard to the Council's brief and per previous viability work undertaken for the Council, we arrived upon hypothetical schemes for each site, to meet current planning objectives in terms of density and mix but also developers aspirations, and have formulated appraisals based upon house price and commercial data from our database of all reported property transactions (supported by wider market investigations), as at the agreed valuation date. Building Cost information has been obtained directly from our internal quantity surveyors and BCIS (the Building Cost Information Service of the Royal Institution of Chartered Surveyors).

2.6 No allowance has been made for ecological factors (bats, newts etc) or other potential site remediation costs, as these will be very site specific issues. Any such matters on specific sites coming forward for development would be taken account of in a specific viability test we would suggest.

### **The individual site typologies**

2.7 Details of the typologies identified by the Council are set out below:

**Table 1**

<b>Typology</b>	<b>Site size in Gross Hectares</b>
<b>Greenfield</b>	
Large 100	3.7
Larger 50	1.92
Med 25	0.96
10 edge	0.4
10 infill	0.33
7 infill	0.3
7 edge	0.35
5 infill	0.17
5 edge	0.25
3 infill	0.12
3 edge	0.18
Single infill	0.07
Single edge	0.1
<b>Brownfield</b>	
Large 50	1.43
Medium 25	0.71
Small 10	0.31
7 infill	0.2
5 infill	0.15
3 infill	0.1
Single infill	0.05

2.8 In terms of geographic spread the County has been subdivided into four sub-markets, and each main typology was tested for each area. Powys is a large and diverse County and it is clear that there are areas which are more high value and therefore viable than others. Care must be taken when looking at comparable properties to also strip out any such specifically high value properties in order not to skew an average.

2.9 The expectations for delivery against the plan against main site allocations and sub market are;

**Table 2**

	No. sites	No units	% units per area
<b>Central</b>			
Green 100	3	344	35.68%
Green 50	7	347	36%
Green 25	5	135	14%
Green 10 edge	4	47	4.88%
Green 10 infill	3	31	3.22%
Brown 50	1	60	6.22%
Brown 25	0	0	0
Brown 10	0	0	0
<b>Total</b>	<b>23</b>	<b>964</b>	<b>100%</b>
<b>Severn Valley</b>			
Green 100	2	285	37.75%
Green 50	2	124	16.42%
Green 25	10	261	34.57%
Green 10 edge	3	34	4.5%
Green 10 infill	4	51	6.75%
Brown 50	0	0	0
Brown 25	0	0	0
Brown 10	0	0	0
<b>Total</b>	<b>21</b>	<b>755</b>	<b>100%</b>
<b>North</b>			
Green 100	1	90	11.22%
Green 50	6	299	37.28%
Green 25	11	251	31.3%
Green 10 edge	10	116	14.46%
Green 10 infill	0	0	0%
Brown 50	0	0	0
Brown 25	1	32	3.99%
Brown 10	1	14	1.75%
<b>Total</b>	<b>30</b>	<b>802</b>	<b>100%</b>

<b>South West</b>			
Green 100	3	334	71.67%
Green 50	1	59	12.66%
Green 25	0	0	0
Green 10 edge	1	10	2.15%
Green 10 infill	2	22	4.72%
Brown 50	1	41	8.80%
Brown 25	0	0	0
Brown 10	0	0	0
<b>Total</b>	<b>8</b>	<b>466</b>	<b>100%</b>

2.10 In terms of overall provision therefore the sub markets will each provide the following percentage of the total;

- Central - 32%
- Severn Valley - 25%
- North - 27%
- South West - 16%

2.11 In the market place, there will be some variation in the specification of the final dwellings; and in the degree of aspiration for high quality design. Whilst recognising that across the County, the Council would aspire to achieve a high standard of urban design, we assumed the sites will be developed to a similar standard to that which is represented by the existing housing stock. We consider that this 'median' level of specification is also that accepted by the market in these locations. As a result a single median building cost assumption has been made for these sites and this level of specification is reflected in the prices achieved for the individual developments.

2.12 The hypothetical specification also takes into account costs for additional works required to comply with the 'Code for Sustainable Homes' and sprinkler systems and the methodology adopted to reflect these is detailed later in this report.

### **Development assumptions**

2.13 In order to test schemes that meet all aspects of present planning policy, we considered the unit numbers and mix to be met by each site. This was done by considering schemes as built out or proposed in Powys and informed by our own market knowledge and experience of viability cases. It may be summarised that developers prefer to build what may be considered a more marketable product in the market at that time - and usually that is a detached house and in a low density environment. We believe that these are the types of schemes most likely to come forward and so have tailored the suggest mix on that basis to try and reflect schemes which are likely to come forward.

2.14 The prescribed base development mixes for each site on a **fully open market basis** are set out below:



**Table 3**

<b>Typology</b>	<b>Density Per Ha</b>	<b>Suggested Mix</b>
<b>Greenfield</b>		
Large 100	31.8	2 bed terrace x 10 3 bed terrace x 14 2 bed semi-detached x 12 3 bed semi-detached x 24 3 bed detached x 16 4 bed detached x 24
Larger 50	28.9	2 bed terrace x 5 3 bed terrace x 7 2 bed semi-detached x 6 3 bed semi-detached x 12 3 bed detached x 8 4 bed detached x 12
Med 25	27	2 bed terrace x 2 3 bed terrace x 4 2 bed semi-detached x 3 3 bed semi-detached x 6 3 bed detached x 4 4 bed detached x 6
10 edge	25	3 bed semi-detached x 2 3 bed detached x 3 4 bed detached x 5
10 infill	30	3 bed semi-detached x 2 3 bed detached x 3 4 bed detached x 5
7 infill	30	3 bed semi-detached x 4 4 bed detached x 3
7 edge	25	3 bed semi-detached x 2 3 bed detached x 5
5 infill	31	3 bed semi-detached x 2 3 bed detached x 3
5 edge	25	3 bed semi-detached x 2 3 bed detached x 3
3 infill	27	3 bed semi-detached x 2 3 bed detached x 1
3 edge	23	4 bed detached x 3
Single infill	25	4 bed detached x 1
Single edge	20	4 bed detached x 1
<b>Brownfield</b>		
Large 50	39	2 bed terrace x 5 3 bed terrace x 7 2 bed semi-detached x 6 3 bed semi-detached x 12 3 bed detached x 8 4 bed detached x 12

Medium 25	37	2 bed terrace x 2 3 bed terrace x 4 2 bed semi-detached x 3 3 bed semi-detached x 6 3 bed detached x 4 4 bed detached x 6
Small 10	32	3 bed semi-detached x 2 3 bed detached x 3 4 bed detached x 5
7 infill	35	3 bed semi-detached x 4 4 bed detached x 3
5 infill	36	3 bed semi-detached x 2 3 bed detached x 3
3 infill	30	3 bed semi-detached x 2 3 bed detached x 1
Single infill	33	4 bed detached x 1

2.14 For the testing at different policy percentages the mixes are shown in the appendices. These mixes are based on analysis of schemes in development. Where Affordable housing is being provided the mix adopted is reflective of needs identified within the LHMA and they include smaller one bed units and flatted elements. Part units have been rounded up or down to remain realistic - and this explains why in some 30% and 35% testing the number of units and therefore results remain the same.

2.15 Density shown is for number of units per gross site area in hectares. This density reflects an average scenario for Powys as based on evidence but may be subject to influence on specific sites due individual site characteristics in terms of topography, developable area, estate roads where necessary, local market etc.

2.16 The property sizes tested have been derived from guidance provided to RSLs and based upon our own market experience and as adopted in other such testing. It is recognised that the eventual developers of each site will form their own views, subject to Planning policy requirements, on what the appropriate unit type mix and size of units are but, for the purposes of consistency, the following unit types have been tested across both the affordable and private tenure homes:

**Table 4**

Unit type	Size in sqm
One bed flat	50
Two bed flat	60
1 bed terrace house	60
2 bed terrace house	70
3 bed terrace house	83
2 bed semi-detached house	75
3 bed semi-detached house	88
3 bed detached house	100
4 bed detached house	120

2.17 The mix of dwellings focuses mainly on the need for family housing, as demonstrated in our experience and in consideration of current dwelling types in the County.

2.18 The housing mix, to a large extent, reflects current house types 'demanded' by the market. This is slightly at variance to the Local Housing Market Assessment which

considered a greater need for 1/2 bed affordable properties, rather than 3 bed. In our opinion, the market will not readily provide 1 bed properties and our appraisals have been tempered by realism to reflect the Developer's, and our own, views on market demand. Smaller unit types have been included in testing for affordable housing however. The final 'mix' serves to calculate the total size of development on each site, which will vary dependant on each location. The mix also provides the basis for calculation of final value which, again, reflects the appropriate type of development for the location.

2.19 Current 'market' housing can be provided by developers in both larger (particularly where 3 storey construction is adopted) and smaller sizes, both of which can result in greater site density in terms of smaller but more numerous units or similar densities backed up by larger homes; the net result of both approaches is the same : an increased built area (Square metres) per hectare.

2.20 We consider the densities used in the appraisals reflect the absence (or reduced provision) of any apartment type dwellings on any of the sites which we believe would be a correct assumption for development in Powys and reflects evidence observed.

### **Affordable Housing Assumptions**

2.21 In accordance with the brief, our appraisals assume that there will be a requirement to provide affordable housing on each site. The affordable housing as tested for valuation purposes is taken as advised by the Council. The main tenures tested were social rented, intermediate rent and intermediate houses for sale. The values for each type are £800 psm for socially rented units in all sub markets (based on StatsWales figures less assumed voids and management costs, and capitalised at a 5.5% yield and averaged out against unit size) and intermediate rents of £905 psm in the North and Severn Valley, £975 psm in Central and £935 psm in the South West. Intermediate for sale units where tested are valued at 70% of open market value.

2.22 The main testing level was undertaken at a provision of 75% socially rented units and 25% intermediate rented which we understand reflects the need identified by the Council's .

2.23 The affordable housing has been assumed to be sold by a Developer to an RSL. Planning Policy strongly supports the concept of integrated, mixed, developments and over the period of the LDP this is expected to be the case in Powys. From a viability perspective, we have assumed that such mixed developments will occur and that RSL's and Developers will work together, with the RSL's contributing at a similar level as elsewhere.

2.24 Each of the tested schemes assumes that no Social Housing Grant has been offered in support of the development of affordable housing. This is a conservative approach and effectively results in the Developer receiving lower payments from the RSL, for the affordable housing content, in the hypothetical appraisals, meaning that viability is more difficult to achieve. In the present climate availability of grant funding is uncertain and it was, therefore, considered inappropriate to test viability on that assumption. If/when grant funding is available RSL's may be able to pay developers higher sums which will improve their ability to provide more affordable housing, whilst maintaining viability.

2.25 It may also be noted that in high value areas the residual value usually falls as affordable housing is increased within a scheme, but with grant funding in lower value markets the converse may be true.

**OTHER DEVELOPER CONTRIBUTIONS**

**Other developer contributions**

2.26 The Council has analysed S106 sums that have been collected from approved schemes and based on this evidence we have adopted ;

**Table 5**

<b>Number of units</b>	<b>S106 sums</b>
100	£200,000
50	£50,000
25	£25,000
10	£10,000
Less than 10	None

2.27 We have also undertaken sensitivity testing at a £5,000 per unit level on larger 100 and 50 units schemes only following testing by other Authorities, but we believe that this level of contribution is unlikely to be secured in Powys. On that basis the larger schemes remained viable. Smaller size schemes were not tested.

2.28 If other developer contributions were to be required, for example for education, Welsh Language contributions, infrastructure (where this is a site specific ‘abnormal’ cost rather than a standard cost) etc., then this could impact on the amount of affordable housing which could reasonably be expected to be provided. These increased costs would reduce viability and developer profit margins unless they could be absorbed through reduced land prices paid to site vendors.

2.29 Whilst other payments may be required on particular sites, dependent upon specific local needs, the Council have clearly stated that after infrastructure provision Affordable Housing will then be prioritised. There may be instances where this is not the case, e.g. where infrastructure is required without which no development can take place, but these will be limited.

2.30 Community Infrastructure Levy may become a further factor during the period of the Plan. However, at this stage it is not adopted and it is difficult to gauge what impact it may have upon viability. For this study we have made no allowance for CIL although any review (as recommended) will need to take this into account.

**3. LOCAL MARKET CONDITIONS**

**Introduction**

3.1 This section provides an assessment of local market conditions. This provides the basis for the assumptions on house prices used in the financial appraisals for the typology sites.

3.2 In support of this exercise, we have considered values specific to the test sites identified. It is important to stress that a series of factors will influence values and that, although development schemes do have similarities, every site is unique to some degree. Consequently, whilst market conditions in general will broadly reflect national economic circumstances and local supply/demand factors, within an area there will be particular localities and site-specific factors that generate different values and costs. The range of sites tested in this study seeks to assess viability across varying localities for this reason.

3.3 The comments below relate to prevailing market conditions at the valuation date. It should be stressed that values fluctuate, and that we are at the moment in a time of perhaps greater market uncertainty than normal, and that assessments of viability will alter over relatively short periods of time.

3.4 Powys is predominantly rural with a population of some 133,000. The area, for housing development, has always been somewhat ‘quiet’ and has ‘hotspots’ as well as less successful locations due to the rural nature of the County, its predominantly agricultural economy and sparseness of population in some areas.

3.5 Apart from small developments (2 to 7 units), larger development is concentrated around existing settlement edges. Residential development in some areas is limited by the topography and environmental or other designations which prohibit development.

3.6 Each of the test sites and developments has been assessed having regard to new build sale prices, where available, or by reference to general value levels obtained from our database of all property sales. We assessed the property values on both a unit-by-unit basis and with reference to wider sale price trends. In assessing the sales data we stripped out any sales between connected parties or obvious outliers and such in order to achieve a more reliable average.

3.7 We have also noted a number of ongoing and recently completed housing developments. From these we obtained current asking prices and from our database were able to note prices actually achieved, on sales around the valuation date. From this extensive list of comparables, we attributed values in each of the locations for use in the appraisals. A more local focus may be useful as Powys does sit outside the norms of the market. Whilst Powys's position as a generally rural county situated away from the main UK population and economic centres is a great attraction for many, it also has implications for the local housing market. Therefore, we consider that house price growth may match the Wales average but in all likelihood average prices in more remote areas will remain very slightly behind the “All Wales” average.

3.8 In support of this exercise, we have considered values specific to the test sites identified. It is important to stress that a series of factors will influence values and that, although development schemes do have similarities, every site is unique to some degree. Consequently, whilst market conditions in general will broadly reflect national economic circumstances and local supply/demand factors, within an area there will be particular localities and site-specific factors that generate different values and costs. The range of sites tested in this study seeks to assess viability across varying localities for this reason.

3.9 As a result, typical prices for the market housing are reflected within the appraisals, as shown below;

**Table 6**

<b>Unit type</b>	<b>North</b>	<b>Central</b>	<b>Severn Valley</b>	<b>South West</b>
2 bed terrace	£120,000	£160,000	£120,000	£90,000
3 bed terrace	£130,000	£175,000	£135,000	£110,000
2 bed semi detached	£135,000	£165,000	£130,000	£105,000
3 bed semi detached	£165,000	£180,000	£165,000	£135,000
3 bed detached	£215,000	£230,000	£215,000	£150,000
4 bed detached	£250,000	£285,000	£280,000	£195,000

3.10 We consider the values adopted to be fair and reasonable and fully reflective of each of the local markets considered in the current climate, and bearing in mind the type and size of proposed 'average' unit.

3.11 Where smaller schemes are to be built we have added a premium that we believe would be applicable due to perceived 'exclusivity' of a smaller scheme as opposed to a larger estate build, and also as we believe that smaller schemes tend to be more architecturally driven and desirable. For small schemes ( 7 units and less) we have therefore added a 10% premium to values, and on single dwellings 15%.

3.12 All the figures reflect conditions as at the valuation date.

**4. ASSUMPTIONS FOR VIABILITY ANALYSIS**

**Introduction**

4.1 This section considers the costs and other assumptions required to produce financial appraisals for the individual sites.

**The financial appraisal model**

Development appraisals are in essence relatively straightforward and can be illustrated by the following equation:

$$\begin{aligned} & \textbf{Completed Development Value} \\ & \text{Less} \\ & \textbf{Development Costs (Land Acquisition + Construction + Fees + Finance)} \\ & \text{Equals} \\ & \textbf{Residue for Developer's Profit and Risk} \end{aligned}$$

**Development Costs**

**Construction Costs**

4.2 Based upon advice from our internal quantity surveyors and taking into account recently published Build Cost Information Service (BCIS) data, we have established a current base price per square metre construction costs for residential development in this area. The BCIS calculates build costs based upon actual tender and build price information.

4.3 The base figure adopted is £969 per square metre for new build houses and £1,128 psm for new build flats. For smaller sites of 3 and fewer units we have adopted a rate of £1,616 psm for detached housing and £1,150 psm for semi-detached and terraced housing. These are the median costs provided within the BCIS report, as at 23 July 2016 and adjusted for the Powys location.

4.4 By its nature this is a generalised figure as specific developers will have different priorities, but we consider it reasonable for the purposes of this exercise. We are not aware of any supporting scheme-specific build cost evidence provided by the developers, which is essential in support of any such differing build cost opinions particularly since there is a clear (yet understandable) commercial interest for developers to overstate build cost.

4.5 Currently DVS are reviewing a number of Developer appraisals, provided in support of discussions on viability tests on individual sites, which support the figures adopted. In view of this evidence and the comments made above, we are comfortable that the figures we have used are fair and reasonable.

4.6 In our experience the costs of affordable housing are unlikely to differ significantly from those used for the market housing due to the stringent requirements of Lifetime Homes and Development Quality Requirements required by the Welsh Government and their partner RSLs.

4.7 In respect of achieving a Code for Sustainable Homes standard we now consider these to have been absorbed into the 5 year default adopted which is reflective of enhanced building regulation standards also. We have adopted an uplift for sprinkler systems as advised by the Welsh Assembly Government of £3,075 per house and £875 per flatted dwelling as it is a legal requirement. There may be a need for Drainage Systems ('SuDS') at sites but as in reality the precise schemes would be difficult to quantify in terms of cost we have made no extra allowance for these within our overall costs.

4.8 The quantum of development may also be considered and may explain why some sites deemed unviable may in fact come forward for development as market information suggests cost efficiencies (in the range of 5 – 12.5%) can be achieved on larger developments, but again this is site/developer specific so for a general report may be excluded.

**Other normal development costs**

4.9 In addition to the per sq m build costs described above, allowance needs to be made for a range of infrastructure costs – roads, drainage, and services within the site; parking, footpaths, landscaping and other external costs; as well as offsite costs for drainage and other services.

4.10 Many of these items will depend upon individual site circumstances and can only be estimated following a detailed assessment of each site. This is not practical within the scope of this study and therefore, based upon the experience of our Quantity Surveyors, a general allowance in relation to the build costs has been made;

**Table 7**

<b>Site</b>	<b>External %</b>
Single units	5
Under 10 units	10
Over 10 units	15

4.11 In addition a 2.5% uplift has been added for 'contingencies'.

**Abnormal development costs**

4.12 We are aware that exceptional or abnormal costs could arise on some sites. Typically, abnormal costs would constitute items such as unusual site levelling, additional foundation costs where ground conditions are poor, provision of roundabouts/traffic lights for site access, cost of remediation for contaminated sites, etc.

4.13 We have not undertaken investigations regarding the availability and capacity of existing utility services, which was considered to be beyond the scope of this study. We have, therefore, assumed that such services are available and adequate for each of the sites.

4.14 We understand that some settlements in the County do currently have capacity issues regarding sewage but consider that this will affect each of them to a greater or lesser extent. Over the period of the plan it may be that other factors improve this situation or that one development in an area effectively 'pays' for upgrades which are then available for subsequent schemes in that locality. An allowance at this stage would be highly speculative, without much greater research and may not be appropriate for many sites which have no issues, or for those where the issues may be resolved in the future.

4.15 It may be that when discussions take place on actual sites, in the future, that provision of services will be an 'abnormal' cost (if such services are not readily available or require significant infrastructure contributions) and will need to be reflected in the viability of the particular site under consideration.

### **Land Values**

4.16 The land values adopted reflect an opinion of the level required for the land to be released onto the market for residential development. This may well be lower than transactions in the recent past, but our appraisals are based on current market conditions, with the affordable housing requirements as expected at the time and assuming the land is acquired at the date of valuation. It must be borne in mind that the sites we are assessing here do not have current planning in place - so we are assessing an amount which would convince a landowner to release land for development from its current use. This is not the same as a value for the transaction of a site which has planning agreed.

4.17 Evidence of land values at the present time is limited but anecdotal evidence of asking prices suggests that landowners' price aspirations remain firm and whilst there is some greater flexibility our market research suggests that distressed landowner vendors are rare.

4.18 Establishing the level at which a landowner would 'release' development land is subjective but is a critical element in any assessment of viability. Factors that could be taken into account include individual circumstances (including tax liability), expectations about changes in Government policy with regard to s106 and affordable housing delivery and opinion on the present and future trend in land values.

4.19 The general view is that landowners accept the need to reflect public realm expenses, for example educational, public open space contributions, highway works etc., in the land value they receive, and there is a general level of value for development land. This varies depending on the circumstances of each site.

4.20 The appropriate value will be that at which the vendor will be minded to sell when comparing the Existing Use Value of the land (plus any premium required to incentivise the vendor to sell) against alternative uses. Such alternatives could be very low, e.g. amenity, agricultural land at say £7,500 per acre, or at a higher level for industrial land. We would comment that a very high alternative use value for major industrial development is unlikely in a County like Powys.

4.21 As valuers, in our opinion, it is too simplistic to state that land value should be, say, 25-30% of Gross Development Value (as we understand has been proposed in some consultation workshops for similar studies). The land values' percentage of the overall GDV is relative but this is more of a yardstick for the developer, as this percentage will change as other factors change (i.e. development cost, risk, house prices etc.). It also ignores the fact that sites which are considered 'unviable' by developers may theoretically have a negative land value.



4.22 Essentially, in arriving at Market Value both parties will first consider what the land is likely to be worth at its highest alternative use value ('AUV' - often, but not always, residential development) and also what its existing use value ('EUV') is. In terms of alternative use value of the site if that value was higher and easily achievable (i.e. without time, money and risk associations) the prudent landowner would have already achieved this transition to the more valuable use it may also be suggested. Therefore, most land value benchmarks will have first reference to a site's existing use value.

4.23 The AUV informs both sides of the gain being made by the land owner, and the amount of this difference is their incentive to sell. If the incentive is relatively small then the landowner may not be minded to sell or may demand the full AUV. If the incentive is relatively large then the vendor may be keen to sell and the developer will try and take advantage of this by negotiating down the price. In these negotiations AUV and EUV are considered but not with any hard and fast rules and in every case each party will make their own assessment of what is an appropriate incentive to sell.

4.24 It is the above valuation methodology that we applied to each site (assessment of EUV and AUV) through the use of comparable land sales evidence and development appraisal modelling. In our Viability Study testing we have assumed land values that offer significant financial incentives (above EUV) to land owners, albeit that they are below what may be aspirational figures held by landowners from when land sales did not reflect the same obligations in regards to affordable housing or S106 sums or such.

**4.25 On this basis we have adopted a base Greenfield land value of £300,000 per hectare. For Brownfield sites we have adopted the same to reflect that we believe that any remediation costs that may require attention would be relatively minor as we are aware that Brownfield in Powys is unlikely to be truly Brownfield under most people's understanding and is more likely to be former storage or builders yard for example. Where abnormal costs are significant on any site we believe these would be assessed on a site specific basis through the development management process.** In our opinion these figures are able to provide a "life changing sum" which would incentivise a landowner to sell and provides accurately for the reality in the market place if compared to an existing EUV of £ per hectare.

4.26 For single plot and small sites we believe that the threshold for development should be judged on a plot basis as adopting the £ per hectare sums will create odd viability results due to the small size of the sites. For example a site of 0.1 hectare would be suggested to be viable at £3,000 and we would suggest it would be unlikely that a sum as small as that would be sufficient incentive for the landowner to release it for development. **Having reviewed recent sales evidence we would suggest that a viability threshold of £30,000 per plot is reasonable to adopt on small sites.**

4.27 In some cases the landowner could also be the developer (for example, a farmer with surplus land) and, in that situation, could decide to 'release' the land at a nominal sum and take his profit through sale of completed dwellings or even keeping a unit for self or family occupation, thus improving potential viability. This is why some single sites may certainly come forward where in the general market they are perceived as unviable due to lower profit expectations and overheads of the owner/developer.

4.28 Some development land agents may be keen to talk up the value of development land, and it is true to say that land sales can yield very large sums of money indeed. That said, because this information is often anecdotal or second hand a degree of caution has to be attached to it. This can be for many reasons such as a price being clean of abnormal costs yet to be deducted, the sale value reflecting existing infrastructure (i.e. "oven ready") or a significant difference between the net and gross development areas.

4.29 Where sites are either landlocked or would need the co-operation of a third party to create a suitable access we have not, generally, made any allowance for extra costs in these cases but have assumed that the main landholding would share some of its 'value' with the third party to create a developable site.

### **Fees**

4.30 We have assumed professional fees (Architects, Quantity Surveyors, Planning Consultants, Engineers, etc) amounting to 8% of build costs.

4.31 Professional fees can vary greatly from scheme to scheme, and from discussions and negotiations with developers (including at planning inquiry) we usually see fees below 12% and as low as 5% of build cost. From our current evidence we feel that 8% is fair and reasonable.

### **Financial and other appraisal assumptions**

4.32 It has been assumed throughout this study that VAT either does not arise or that its effects can be ignored.

### **Interest rate**

4.33 Our appraisals assume a finance rate of 6.5% for outgoings. We are aware, that this may be considered 'low' and that finance can be difficult to obtain at 'any rate'. However, we concluded this rate on the basis of developer appraisals being presented to us around the valuation date and consider it to be reasonable in the context of the exercise being undertaken. Many small builders will finance projects from retained funds and will use an opportunity cost rate - which is another reason why some sites deemed inviable on the hypothetical model may also come forward for development in reality.

4.34 We have allowed a 2% credit rate within the cashflow as is good practice. The credit interest rate for development finance may be argued to mirror the debit rate, as the development cash flow already allows for the drawing of developer profit and therefore any sales income should be used to offset borrowing costs on this or other development schemes i.e. the opportunity cost of scheme revenue matches the borrowing rate. However on some smaller sites, a lower credit interest may be adopted to allow for any hypothetical local/regional developers who may only have one concurrent development and not be in a position to make their money work quite so hard for them. It is not a case that it is suggested that any profit on sales income is taken out of the scheme and placed in a savings account offering 2% interest for example.

### **Developers' Profit**

4.35 We normally assume that a residential developer requires a return of 15-20% return on revenue (Gross Development Value) for 'Market or Private Housing'. For the purposes of this study we have adopted 17.5% for Greenfield sites and 20% for Brownfield sites to test the viability of each development. These are figures agreed on recent viability cases and in the current market offer what we believe is an acceptable return to the developer of schemes of this type.

4.36 Historically, the profit benchmark for developers was around 15% (on Gross Development Value for residential developments and on Cost for commercial developments) but as the market improved we saw returns regularly falling below. However, when the economy and property market fell (post 2007) we saw developer profit requirements shift up

to 20% (and more where risk was greater i.e. flatted development). Latterly, as stability returned to the market due to supply and demand mismatches, and developers have become more outwardly confident (if still more cautious in their decision making) a gradual easing of developer profit expectations has been observed. The base allowance for developer return of 17.5%/20% against GDV is inclusive of developer internal overheads.

4.37 We would also comment that there is a need to be clear about the basis upon which developer’s profit is quoted and measured. House builders tend to talk of profit gross of the cost of design fees, marketing, and finance. DVS make separate deductions in their appraisals for design fees, marketing and finance hence the lower profit figures adopted.

4.38 The appraisal model assumes that the Developer will construct the affordable housing for the RSL and charge an 6% ‘project management fee’ for doing so. This reflects the fact that this element of the development carries little risk as the units are effectively pre-sold.

**Phasing**

4.39 For the purposes of this study we have assumed the following development periods below, based upon our experience of similar schemes, having looked at actual completions within Powys and following discussions with our Building Surveyor colleagues.

4.40 There are numerous factors that can affect the timeframes of an individual development programme, including:

- a) Size of site;
- b) Its location;
- c) Prevailing market conditions at key stages of delivery and sales rates;
- d) Complexities surrounding ownership(s); and
- e) Complexities surrounding the resolution of any planning-related requirements.

4.41 However, presently there is an observed trend towards sales rates acting as a more notable influence upon the delivery of new development. This is commonly seen with estate style residential schemes, whereby the rapidity to sell units is heavily contributing to decision to speed up or slow down the build phase. A combination of reduced access and / or flexibility to development finance for the developer, and relative capacity remaining within the construction industry may offer a reasonable explanation for this.

4.42 The expected timeframes adopted reflect the current state of the market and the anticipated take up of housing on new developments, which as supply is still lower than demand will be relatively quick but we have assumed is at 2 units per month . Again this is based upon our experience in specific development cases where essentially we understand that developers build in relation to the sales period. It would be inadvisable to build out quicker than units can be sold to avoid empty properties on site for a prolonged period of time. The development periods adopted within the cash flows should be based on a combination of market intelligence and the BCIS construction duration calculator.

**Table 8**

Site	Lead In	Construction	Sale
100 units	6 months	42 months	48 months
50 units	6 months	24 months	25 months
25 units	6 months	18 months	13 months
10 units	3 months	15 months	5 months
5-7 units	3 months	15 months	3 months
3 units	3 months	11 months	2 months
Single units new build	3 months	12 months	1 month

## Site acquisition and disposal costs

### Site holding costs and receipts

4.43 The development is assumed to proceed immediately and so other than interest on the site cost during construction, no allowance has been made for holding costs, or indeed any income arising from ownership of the site. Acquisition Costs include current stamp duty rates and an allowance of 1.8% for site acquisition agents' and legal fees.

### Disposal costs

4.44 Sales/promotion and marketing fees are assumed to amount to 2.5% or 1.5% of market housing receipts depending on scheme size. In some larger schemes there may be increased marketing costs in show homes and media marketing to maintain sales rates, but this will be offset by reduced fees to agents. An addition of 0.5% legal fees for the sale of market units is also included. Where units are to be transferred to an RSL a fee has been included dependent on the number of units for legal completions.

## 5. RESULTS AND ANALYSIS OF VIABILITY RESULTS

The results of the test appraisals for the main site typologies, based on the assumptions set out above, are demonstrated in the table below. In summary the table indicates whether the benchmark land value can be achieved based on an Affordable housing provisions as proposed in the local plan.

5.1 Taking into account the above, we would agree that the proposed affordable housing contribution targets in the Central (30%), Severn Valley (20%) and North (10%) areas are supported allowing for headroom also for further S106 contributions and additional site costs etc. This recommendation is based on the results produced and is considered reasonable in the context of the plan period and the current, exceptional, uncertain state of the market. It also reflects the split of affordable housing tenure types outlined in the report. Testing was also carried out in Central at a 35% level of contribution. Whilst still viable we note that the adopted levels of contribution should reflect a comfortable margin of viability in order to reflect any future requirements, and that at a 35% level the margin was considered too small. It is inadvisable to plan for marginal viability and some flexibility should be left to allow for changes in costs or abnormalities on a site specific basis etc. We would further recommend that the LDP allows for sites to be considered on an individual scheme-by-scheme basis with a full viability appraisal, if necessary.

**5.2 The different levels between sub markets is supportable and reflects the potential of higher value areas to make more substantial contributions to affordable housing and S106 sums. Of the tests undertaken in the three sub markets of North, Central and Severn Valley all of the larger sites were viable at the above proposed levels of contribution. This represents the delivery of 84.4% of the expected allocated units. However we are confident that the viability issues with the smaller sites in these sub markets which appear to be unviable may be more reflective of the unit mix chosen for testing and the current proposed BCIS build cost of £1,616 psm for detached units impacting upon the testing rather than such sites in those areas being unviable as a whole. For example it may seem a natural reaction to choose to build larger units on a small 'exclusive' site - but as they will have also larger build costs it does not necessarily mean that viability margin is automatically improved.**

5.3 In terms of a threshold it would seem that a level of 5 units is suitable as the results show that under that level most sites become unviable in the North, Central and Severn Valley areas even on a fully open market basis. Therefore the sites would become even less viable

if Affordable housing or commuted sum requirements were expected.

5.4 We would also comment that on smaller and conversions sites viability should be considered in terms of the Existing Use Value of the site. In terms of 'garden' land the plot value would also need to be considered against how much value would be lost from the main dwelling by its reduction in land area. This is very difficult to capture in policy. For conversion schemes again the values and costs can vary hugely on a scheme to scheme basis. For example a Listed barn conversion may attract higher sales returns but also at an assumedly higher conversion costs. The costs on such schemes will be very much gauged on a case by case basis and against the scheme proposals - therefore making such schemes again difficult to generalise in policy in terms of any expected contribution. The viability threshold also must be considered against the Existing Use Value, which may be higher if it is already in commercial use for example rather than just as an agricultural building. Essentially for all such schemes we would suggest that they may need to be considered on a case by case basis and exempted from a policy requirement for an affordable housing contribution.

5.5 The results are shown below. For each larger site the threshold is £300,000 per hectare and for smaller sites of 3 units or less £30,000 per plot. It should be borne in mind that the results are very sensitive to the assumptions made - unit mix guiding build costs and gross development values, and external costs against site size for example. This results in smaller sites seemingly having a larger amount of 'headroom' compared to larger sites - but they are based on differing assumptions and should not therefore be compared on a like for like basis per hectare.

5.6 Where smaller sites are tested for Affordable unit contributions we have adopted a realistic view as to what is feasible on the ground and have rounded up or down part units. This explains why in some 30% and 35% testing the number of units and therefore results remain the same. Our assumptions are;

**Table 9.  
Table Key**

- Green fill = viable (over £300,000 per ha);
- Amber fill= marginal but likely to come forward (within a reasonable margin of the £300,000 benchmark - assumed to be 10% or where valuers opinion considers it to be reasonable to expect the site will com forward);
- Red lettering = unviable (negative value);
- Grey fill = not tested;
- No fill = positive figure but too far below benchmark to be marginal or viable

**Table 10**

Greenfield	Site size	OMV		North		
		Site	£ per ha	Small site per plot	10% Site	10% £ per ha
Large 100	3.7	1,783,759	482,097		1,144,981	309,454
Larger 50	1.92					

		984,921	512,980		781,574	407,070
Med 25	0.96	496,685	517,380		395,286	411,756
10 edge	0.4	331,666	829,165		281,537	703,843
10 infill	0.33	331,666	1,005,048		281,537	853,142
7 infill	0.3	343,006	1,143,353		269,608	898,693
7 edge	0.35	375,966	1,074,189		302,643	864,694
5 infill	0.17	256,482	1,508,718		182,244	1,072,024
5 edge	0.25	256,482	1,025,928		182,244	728,976
3 infill	0.12	28,735		9,578		
3 edge	0.18	- 48,929		- 16,310		
Single infill	0.07	2,774		2,774		
Single edge	0.1	2,774		2,774		
<b>Brownfield</b>						
Large 50	1.43	806,237	563,802		574,963	402,072
Medium 25	0.71	279,308	393,392		307,641	433,297
Small 10	0.31	283,955	915,984		237,363	765,687
7 infill	0.2	293,074	1,465,370		223,575	1,117,875
5 infill	0.15	232,968	1,553,120		170,009	1,133,393
3 infill	0.1	15,007		5,002		
Single infill	0.05	- 3,922		- 3,922		

**Table 11**

		Central						
		OMV			30%		35%	
Greenfield	Site Size	Site	£ per ha	Small site per plot	Site	£ per ha	Site	£ per ha
Large 100	3.7	3,590,637	970,442		1,369,177	370,048	1,267,294	342,512

Larger 50	1.92	1,933,382	1,006,970		903,158	470,395	720,976	375,508
Med 25	0.96	979,744	1,020,567		488,705	509,068	343,608	357,925
10 edge	0.4	503,796	1,259,490		285,467	713,668	285,467	713,668
10 infill	0.33	503,796	1,526,655		285,467	865,052	285,467	865,052
7 infill	0.3	469,372	1,564,573		300,101	1,000,337	300,101	1,000,337
7 edge	0.35	456,381	1,303,946		287,110	820,314	287,110	820,314
5 infill	0.17	313,922	1,846,600		143,885	846,382	143,885	846,382
5 edge	0.25	313,922	1,255,688		143,885	575,540	143,885	575,540
3 infill	0.12	65,358		21,786				
3 edge	0.18	38,043		12,681				
Single infill	0.07	32,453		32,453				
Single edge	0.1	32,453		32,453				
<b>Brownfield</b>								
Large 50	1.43	1,726,667	1,207,459		831,323	581,345	665,276	465,228
Medium 25	0.71	871,188	1,227,025		623,537	878,221	269,017	378,897
Small 10	0.31	450,724	1,453,948		260,810	841,323	245,046	790,471
7 infill	0.2	371,008	1,855,040		210,242	1,051,210	210,242	1,051,210
5 infill	0.15	289,114	1,927,427		209,042	1,393,613	209,042	1,393,613
3 infill	0.1	50,496		16,832				
Single infill	0.05	24,898		24,898				

**Table 12**

**Severn Valley**

Greenfield	Site size	OMV			20%	
		Site	£ per ha	Small site per plot	Site	£ per ha
Large 100	3.7	2,249,857	608,069		1,104,991	298,646
Larger 50	1.92					

		1,229,580	640,406		680,444	354,398
Med 25	0.96	622,553	648,493		377,393	393,118
10 edge	0.4	434,944	1,087,360		326,357	815,893
10 infill	0.33	434,944	1,318,012		326,357	988,961
7 infill	0.3	411,933	1,373,110		338,535	1,128,450
7 edge	0.35	433,406	1,238,303		360,008	1,028,594
5 infill	0.17	256,482	1,508,718		182,297	1,072,335
5 edge	0.25	256,482	1,025,928		182,297	729,188
3 infill	0.12	28,735		9,578		
3 edge	0.18	25,836		8,612		
Single infill	0.07	28,213		28,213		
Single edge	0.1	28,213		28,213		
<b>Brownfield</b>						
Large 50	1.43	1,043,662	729,834		443,143	309,890
Medium 25	0.71	524,845	739,218		291,129	410,041
Small 10	0.31	384,016	1,238,761		284,689	918,352
7 infill	0.2	376,493	1,882,465		339,808	1,699,040
5 infill	0.15	232,968	1,553,120		162,607	1,084,047
3 infill	0.1	15,007		5,002		
Single infill	0.05	20,839		20,839		

**Table 13**

<b>South West</b>						
		<b>OMV</b>			<b>5%</b>	
<b>Greenfield</b>	<b>Site Size</b>	<b>Site</b>	<b>£ per ha</b>	<b>Small site per plot</b>	<b>Site</b>	<b>£ per ha</b>
Large 100	3.7	- 802,138	- 216,794		<b>Not tested</b>	



Larger 50	1.92	- 409,357	- 213,207			
Med 25	0.96	- 212,307	- 221,153			
10 edge	0.4	- 46,587	- 116,468			
10 infill	0.33	- 46,587	- 141,173			
7 infill	0.3	120,548	401,827			
7 edge	0.35	74,780	213,657			
5 infill	0.17	53,879	316,935			
5 edge	0.25	53,879	215,516			
3 infill	0.12	- 75,586		- 25,195		
3 edge	0.18	- 188,577		- 62,859		
Single infill	0.07	- 45,461		- 45,461		
Single edge	0.1	- 45,461		- 45,461		
<b>Brownfield</b>						
Large 50	1.43	- 566,099	- 395,873			
Medium 25	0.71	- 292,971	- 412,635			
Small 10	0.31	- 86,022	- 277,490			<b>Not tested</b>
7 infill	0.2	92,662	463,310			
5 infill	0.15	36,032	240,213			
3 infill	0.1	- 86,599		- 28,866		
Single infill	0.05	- 50,806		- 16,935		

5.7 We were asked to assess the Economic Viability of providing Affordable Housing. We were also asked to look at why in areas and typologies deemed unviable that schemes are still coming forward. We would suggest firstly that viability can be affected by a whole range of issues including the overall economic climate/housing/commercial market but on more site specific basis factors include:

- 1) Assumptions on development including density and housing type and mix.
- 2) Percentage of affordable housing
- 3) Amount of Section 106 contributions
- 4) Local Authority planning policy

- 5) Final detail/conditions of planning consent
- 6) Site Abnormals
- 7) Infrastructure Requirements
- 8) Final development costs and profit etc.

**5.8 Looking at the proposed sub market spread we would note that all of the larger sites noted in Central, Severn Valley and North sub markets are viable in our testing - which provides 84.4% or 2,521 of the proposed 2,987 allocated units.**

5.9 A particular issue however appears to be with viability in the South West area based on the hypothetical study, but we do know that sites do come forward here for development.

5.10 Within any sub market there always will be pockets of higher viability which are difficult to capture in an area wide study - for example where a high quality style development is undertaken in an edge of settlement area with good access to major transport links and excellent views. Sites in locations such as this may well become viable in the South West and come forward for development.

5.11 We would suggest that there a number of other factors why any site deemed unviable in an area wide study may also in fact come forward in reality as has been demonstrated in Powys;

- **Values** - Current market commentaries are mixed and it is impossible to predict if higher house price sale levels will occur, which will make some unviable sites 'viable'. It is clearly appropriate however to take account of likely house price growth across the plan period to 2026, given established historic house price growth trends. An increase in house prices will bring some sites in the South West into viability we believe.
- **Phasing** - it is highly likely that some schemes will be built out and sold more quickly than our average assumptions, and on that basis viability will improve as finance will be calculated over a shorter time period, and therefore cost less. This may be seen on an RSL led scheme where the same pressure to build against sales rates is less prevalent as effectively all of the units are pre-sold. However we believe that based on the evidence that we have seen that the adopted phasing reflects Powys generally speaking.
- **Build costs** - we have used a median BCIS rate which may well be bettered in specific agreed build contracts or where smaller builders with lower overheads etc are employed to undertake the construction. We would comment though that it is impossible to predict how build costs will change over the next few years or even months following on from the recent EU referendum result as labour costs are part of the adopted build cost rates - they may increase or decrease. The build rate adopted for smaller schemes for example in our appraisals of £1,616 psm may feel too high for some schemes in Powys when compared to the product to be delivered having a relatively low value. We would suggest therefore that lower construction deals will be made and units will come forward.
- **Profit** - In some cases the landowner could also be the developer (for example, a farmer with surplus land) and, in that situation, could decide to 'release' the land at a nominal sum and take his profit through sale of completed dwellings or even keeping a unit for self or family occupation, thus improving potential viability. This is why some single sites may certainly come forward where in the general market they are perceived as unviable due to lower profit expectations and overheads of the

owner/developer. It should also be noted that RSLs are likely to have a lower profit margin than the level quoted for private sector house builders. As a result of this, it is evident that some of the sites would actually be viable for development solely by RSLs, sometimes without Social Housing Grant, as RSLs can have internal funds that allow them to bridge gaps in viability.

- **Finance** - Many small and self-builders will finance projects from retained funds and will use an opportunity cost rate - which is another reason why some sites deemed unviable on the hypothetical model may also come forward for development in reality. A self-builder also will benefit from their own occupation and so will look for no profit at all which will impact hugely upon perceived viability.
- **Mix** - a mix of higher value units may improve viability on a scheme but this will be weighed against increased build cost for larger units. We have only tested hypothetical mixes which may be different than that proposed in reality. A different mix of affordable tenures will also improve viability - for example less social rented units being required.
- **Grant funding** - any provision of grant funding will obviously impact upon viability in a positive way. Also the release of sites for RSL affordable only schemes is a possibility to provide more units.

5.12 Ultimately, flexibility between the three main delivery stakeholders (Landowners, Developers and the Public Sector (DVS would include RSLs here, although in cases they could move between all three hats) is the key. Historically, flexibility has been expected only from the Public sector and, whilst it is right to expect a flexible approach, the other stakeholders also need to recognise that they need to be flexible (whether it be on land values, margins etc.). Stakeholders appear to be engaging with this debate, and hopefully this will lead to better delivery of homes (private and affordable).

### Commuted Sums

5.13 As a general principle seeking onsite provision of affordable housing should always be the first priority to encourage mixed communities. However it has been suggested that a developers' stance may be against any form of affordable housing being permitted within a 'market' scheme, and there are other practical reasons why an offsite contribution may be preferred as against onsite. Also where smaller schemes are viable but policy levels of contribution would mean the delivery of only a 'part' of a unit which is not practicable to provide in reality then an offsite contribution may be suitable. Clearly, the Planning Authority have the ability to effectively ensure that mixed tenure developments occur in the future through their use of conditions in S106 documentation etc. It would, however, be relatively straightforward to provide a supplementary note on the appropriate sums to be requested for the provision of commuted sums should that prove necessary.

5.14 It may be suggested that the level of sum should essentially be the equivalent to the developer contribution if the affordable housing had been provided on site, and it is a calculation of the difference between the value of a 100% market housing scheme and the residual value of the scheme with the relevant percentage of affordable housing. The calculation of a commuted sum can be worked out by a set formula which gives clarity to developers. It must be assumed however that some expected contributions will be subject to further negotiations where viability arguments about the provision are raised.

5.15 Many formulas have been considered for such commuted sum calculations, and many are very complex and may be said to offer little clarity to prospective developers. We

recommend that a formula that removes the need for lengthy negotiations and independent assessments of Existing Use Values or residual values for example would save time and money for the authority and any developer. For transparency the use of the Acceptable Cost Guidance rates are recommended as they are widely available and kept up to date.

5.16 We would suggest that formulas that may be considered for adoption are;

**For Social Rented Properties:**

**Commuted Sum = (ACG £ per unit) x (% ACG) x N**

**For Intermediate Properties for sale or rent:**

**Commuted Sum = (OMV £ per unit) x (% OMV) x N**

(ACG = Acceptable Cost Guidance per dwelling; % ACG = Rate of Social Housing Grant payable to RSL's. In the absence of SHG this is to be provided by the developer (currently 58%); N = Number of units required according to Affordable Housing Target; OMV = Open market value per dwelling relating to the dwelling type that would otherwise have been expected on site; % OMV = Discounted Open Market Value rate for Low Cost Home Ownership or Intermediate Rented properties, set at a level considered affordable by the Council in the locality).

5.17 In addition to considering site viability on a case-by-case basis, there may need to be a discussion of the role of more wide-ranging commuted sum payments. In addition to the provision of financial payments (based on Welsh Government Acceptable Cost Guidance) or plots of land, developers could also be asked to provide actual built units on other sites they own. Furthermore, given that many sites are only providing one or a handful of units, where viability is limited they could provide a pro-rata financial contribution. For example, if a single plot site can only afford to provide 50% of the 'normal' affordable contribution then the home could be granted as an open market tenure home but a financial contribution equivalent to 50% of the normal commuted sum could be secured and passed to RSLs to assist with securing affordable homes elsewhere within the County.

5.18 If rigorously enforced, any affordable housing policy could restrict the number of sites coming forward for development. However, it could also help reduce land price expectations amongst landowners although if no flexibility is adopted (on a case-by-case basis) for those sites experiencing genuine, and evidenced, viability issues then this could lead to an overall reduction in affordable and open market housing delivery.

### **Delivery of Stated Affordable Housing Target and Monitoring**

5.19 It is very difficult to speculate whether any 'provisional' Preferred Strategy affordable housing target of new affordable units can be met by the plan end date. This will be dependent on many factors including policy requirements, wider economic conditions etc.

5.20 What we can say however is that a housing policy with clear targets and requirements but reflecting a flexible approach to each site will help. There is no reason why developers (whether self-build, RSLs or private developers) should not be able to provide reasoned and evidenced cases for potential sites that are struggling to meet the required affordable

provision and the Authority should engender a culture where these parties are encouraged to come forward and state their case.

5.21 There can be no guarantee that these cases will be accepted but the important point is that a dialogue is established and hopefully this would lead to greater delivery. A basic site viability test template could be created and made available for interested parties to review and use when submitting cases for flexibility within affordable housing policy.

5.22 The final point to make is one that has been reiterated through this study and viability testing, and that is the overriding importance of flexibility. A strong policy framework is essential but this should include clear and transparent flexibility in the assessment of each site for affordable housing provision. A clear, fair and flexible policy framework will engender goodwill and will hopefully be reciprocated in flexibility in landowners' price expectations and developers' expected margins. Where developers genuinely cannot provide the stated target on a particular site many local authorities now require the developer to pay for an independent analysis of the site to confirm their interpretation for the council. This in our view would be a reasonable and flexible policy to introduce.

5.23 We would comment also that the viability position should be monitored and kept under review. The main areas to be kept under review would be values and costs as these fluctuate constantly and will directly impact upon the residual land values.

5.24 The context to any increase in viability however is that a 10% 'sale price' increase does not mean a 10% increase in house prices for example, it means a 10% increase in house prices *relative* to all the other variables affecting development cost. In simple terms this could mean a 10% increase in house prices whilst all other variables (i.e. costs) remain static. It may well also be recognised that conversely even if house prices rise, a similar rate of increase in build costs would to all intents and purposes cancel out any improvement in viability.

5.25 It may be recommended that a simple monitoring of House Price Index movements across Powys on a year to year basis is measured against BCIS rates, and that if a divergence of 5% either way against a sample 100 unit scheme residual value in comparison to current levels is detected that this triggers a fuller review. Where the rate changes cancel one another out then a full review may not be required.

**Appendix 1 - Example Argus appraisal**

Greenfield Central 100

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Development Appraisal  
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26 August 2016

**APPRAISAL SUMMARY**

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## Summary Appraisal for Phase 1 Greenfield

Currency in £

**REVENUE**

Sales Valuation	Units	m <sup>2</sup>	Rate m <sup>2</sup>	Unit Price	Gross Sales
2 bed terrace - OMV	10	700.00	2,285.71	180,000	1,800,000
3 bed terrace - OMV	14	1,162.00	2,108.43	175,000	2,450,000
2 bed semi - OMV	12	900.00	2,200.00	165,000	1,980,000
3 bed semi - OMV	24	2,112.00	2,045.45	180,000	4,320,000
3 bed detached - OMV	16	1,800.00	2,300.00	230,000	3,680,000
4 bed detached - OMV	24	2,880.00	2,375.00	285,000	6,840,000
<b>Totals</b>	<b>100</b>	<b>9,354.00</b>			<b>20,870,000</b>

**NET REALISATION****20,870,000****OUTLAY****ACQUISITION COSTS**

Residualised Price (3.70 Ha 970,442.47 pHect)		3,590,637		3,590,637
Stamp Duty		169,032		
Agent Fee	1.80%	64,631		233,663

**CONSTRUCTION COSTS**

Construction	m <sup>2</sup>	Rate m <sup>2</sup>	Cost	
2 bed terrace - OMV	700.00 m <sup>2</sup>	969.00 pm <sup>2</sup>	678,300	
3 bed terrace - OMV	1,162.00 m <sup>2</sup>	969.00 pm <sup>2</sup>	1,125,978	
2 bed semi - OMV	900.00 m <sup>2</sup>	969.00 pm <sup>2</sup>	872,100	
3 bed semi - OMV	2,112.00 m <sup>2</sup>	969.00 pm <sup>2</sup>	2,046,528	
3 bed detached - OMV	1,800.00 m <sup>2</sup>	969.00 pm <sup>2</sup>	1,550,400	
4 bed detached - OMV	2,880.00 m <sup>2</sup>	969.00 pm <sup>2</sup>	2,790,720	
<b>Totals</b>	<b>9,354.00 m<sup>2</sup></b>		<b>9,064,026</b>	<b>9,064,026</b>

Contingency		2.50%	260,591	
S108			200,000	460,591

**Other Construction**

Sprinklers (Houses)	100.00 un	3,075.00 /un	307,500	
Externals		15.00%	1,359,604	1,667,104

**PROFESSIONAL FEES**

Professional fees		8.00%	833,890	833,890
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**DISPOSAL FEES**

Sales Agent Fee		2.50%	521,750	
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**APPRAISAL SUMMARY**

Sales Legal Fee	0.50%	104,350	
			626,100
<b>FINANCE</b>			
Debit Rate 6.500%, Credit Rate 2.000% (Nominal)			
Land		276,133	
Construction		8,912	
Other		456,689	
Total Finance Cost			741,735
<b>TOTAL COSTS</b>			<b>17,217,746</b>
<b>PROFIT</b>			<b>3,652,254</b>
<b>Performance Measures</b>			
Profit on Cost%		21.21%	
Profit on GDV%		17.50%	
Profit on NDV%		17.50%	
IRR		23.17%	
Profit Erosion (finance rate 6.500%)		2 yrs 12 mths	



## Appendix 2 - Unit mixes adopted on larger sites.

Note : Mixes are based on analysis of schemes in development. where Affordable housing is being provided the mix adopted is reflective of needs identified within the LHMA.

### 100% OMV

100 % OMV			No Units			
Unit type	No beds	%	100	50	25	10
Terrace	2	10%	10	5	2	0
	3	14%	14	7	4	0
SD	2	12%	12	6	3	0
	3	24%	24	12	6	2
Det	3	16%	16	8	4	3
	4	24%	24	12	6	5
Flats	1	0%	0	0	0	0
	2	0%	0	0	0	0
		100%	100	50	25	10

### 100 unit schemes

#### AH

Unit type	No beds	AH Total	SR	IR		OMV
		35%	75%	25%		
<b>100 units</b>		<b>35</b>	<b>26</b>	<b>9</b>	<b>Check</b>	<b>65</b>
Terrace	1	3	3	0	3	0
	2	2	2	0	2	5
	3	6	5	2	7	7
SD	2	6	6	0	6	6
	3	5	2	2	4	12
Det	3	4	2	2	4	13
	4	2	0	2	2	22
Flats	1	2	2	0	2	0
	2	5	4	1	5	0
		35	26	9	35	65

#### AH

Unit type	No beds	AH Total	SR	IR		OMV
		30%	75%	25%		
<b>100 units</b>		<b>30</b>	<b>23</b>	<b>7</b>	<b>Check</b>	<b>70</b>
Terrace	1	2	2	0	2	0
	2	2	2	0	2	6
	3	5	5	0	5	9
SD	2	6	6	0	6	6
	3	4	2	2	4	20
Det	3	4	1	3	4	12

	4	2	0	2	2	17
Flats	1	1	1	0	1	0
	2	4	4	0	4	0
		30	23	7	30	70

	<b>Unit type</b>	<b>No beds</b>	<b>AH Total</b>	<b>SR</b>	<b>IR</b>	
	<b>100 units</b>		<b>20%</b>	<b>75%</b>	<b>25%</b>	<b>OMV</b>
			<b>20</b>	<b>15</b>	<b>5</b>	<b>Check 80</b>
Terrace	1	2	2	2	0	2 0
	2	1	1	1	0	1 7
	3	4	3	3	1	4 10
SD	2	4	2	2	2	4 8
	3	2	1	1	1	2 22
Det	3	2	1	1	1	2 14
	4	1	1	1	0	1 19
Flats	1	1	1	1	0	1 0
	2	3	3	3	0	3 0
		20	15	5	20	80

	<b>Unit type</b>	<b>No beds</b>	<b>AH Total</b>	<b>SR</b>	<b>IR</b>	
	<b>100 units</b>		<b>10%</b>	<b>75%</b>	<b>25%</b>	<b>OMV</b>
			<b>10</b>	<b>8</b>	<b>2</b>	<b>Check 90</b>
Terrace	1	1	1	1	0	1 0
	2	1	1	1	0	1 9
	3	2	2	2	0	2 11
SD	2	2	1	1	1	2 10
	3	0	0	0	0	0 24
Det	3	1	1	1	0	1 15
	4	1	0	0	1	1 21
Flats	1	1	1	1	0	1 0
	2	1	1	1	0	1 0
		10	8	2	10	90

	<b>Unit type</b>	<b>No beds</b>	<b>AH Total</b>	<b>SR</b>	<b>IR</b>	
	<b>100 units</b>		<b>5%</b>	<b>75%</b>	<b>25%</b>	<b>OMV</b>
			<b>5</b>	<b>4</b>	<b>1</b>	<b>Check 95</b>
Terrace	1	0	0	0	0	0 0
	2	0	0	0	0	0 10
	3	0	0	0	0	0 14
SD	2	2	2	2	0	2 10
	3	2	1	1	1	2 22
Det	3	1	1	1	0	1 15

	4	0	0	0	0	24
Flats	1	0	0	0	0	0
	2	0	0	0	0	0
		5	4	1	5	95

### 50 unit schemes

#### AH

Unit type	No beds	AH Total	SR	IR		OMV
		35%	75%	25%	Check	
<b>50 units</b>		<b>17</b>	<b>13</b>	<b>4</b>	<b>Check</b>	<b>33</b>
Terrace	1	2	2	0	2	0
	2	1	1	0	1	2
	3	3	3	0	3	4
SD	2	3	2	0	2	0
	3	2	1	1	2	10
Det	3	2	2	1	3	6
	4	1	0	1	1	11
Flats	1	1	1	0	1	0
	2	2	2	0	2	0
		17	14	3	17	33

#### AH

Unit type	No beds	AH Total	SR	IR		OMV
		30%	75%	25%	Check	
<b>50 units</b>		<b>15</b>	<b>11</b>	<b>4</b>	<b>Check</b>	<b>35</b>
Terrace	1	1	1	0	1	0
	2	1	1	0	1	2
	3	3	3	0	3	2
SD	2	3	2	1	3	3
	3	2	1	1	2	10
Det	3	2	1	1	2	6
	4	1	0	1	1	12
Flats	1	0	0	0	0	0
	2	2	2	0	2	0
		15	11	4	15	35

#### AH

Unit type	No beds	AH Total	SR	IR	Check	OMV
		20%	75%	25%		
<b>50 units</b>		<b>10</b>	<b>8</b>	<b>2</b>		<b>40</b>
Terrace	1	1	1	0	1	0
	2	0	0	0	0	4
	3	2	2	0	2	3
SD	2	2	1	1	2	4
	3	0	0	0	0	12
Det	3	2	1	1	2	6
	4	1	1	0	1	11
Flats	1	0	0	0	0	0
	2	2	2	0	2	0
		10	8	2	10	40

**AH**

Unit type	No beds	AH Total	SR	IR	Check	OMV
		10%	75%	25%		
<b>50 units</b>		<b>5</b>	<b>4</b>	<b>1</b>		<b>45</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	5
	3	0	0	0	0	7
SD	2	2	1	1	2	2
	3	1	1	0	1	11
Det	3	0	0	0	0	8
	4	0	0	0	0	12
Flats	1	0	0	0	0	0
	2	2	2	0	2	0
		5	4	1	5	45

**AH**

Unit type	No beds	AH Total	SR	IR	Check	OMV
		5%	75%	25%		
<b>50 units</b>		<b>2</b>	<b>1</b>	<b>1</b>		<b>48</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	5
	3	0	0	0	0	7
SD	2	2	1	1	2	4
	3	0	0	0	0	12
Det	3	0	0	0	0	8
	4	0	0	0	0	12
Flats	1	0	0	0	0	0
	2	0	0	0	0	0
		2	1	1	2	48

## 25 unit schemes

AH						
Unit type	No beds	AH Total	SR	IR		OMV
		35%	75%	25%	Check	
<b>25 units</b>		<b>9</b>	<b>7</b>	<b>2</b>		<b>16</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	2
	3	2	1	1	2	2
SD	2	2	2	0	2	0
	3	2	1	1	2	4
Det	3	1	1	0	1	2
	4	0	0	0	0	6
Flats	1	0	0	0	0	0
	2	2	2	0	2	0
		9	7	2	9	16

AH						
Unit type	No beds	AH Total	SR	IR		OMV
		30%	75%	25%	Check	
<b>25 units</b>		<b>7</b>	<b>5</b>	<b>2</b>		<b>18</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	2
	3	2	1	1	2	1
SD	2	0	0	0	0	2
	3	2	1	1	2	4
Det	3	1	1	0	1	3
	4	0	0	0	0	6
Flats	1	0	0	0	0	0
	2	2	2	0	2	0
		7	5	2	7	18

AH						
Unit type	No beds	AH Total	SR	IR		OMV
		20%	75%	25%	Check	
<b>25 units</b>		<b>5</b>	<b>4</b>	<b>1</b>		<b>20</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	2
	3	2	1	1	2	3
SD	2	0	0	0	0	2

	3	1	1	0	1	3
Det	3	0	0	0	0	4
	4	0	0	0	0	6
Flats	1	0	0	0	0	0
	2	2	2	0	2	0
		5	4	1	5	20

**AH**

Unit type	No beds	AH Total	SR	IR		OMV
		10%	75%	25%		
<b>25 units</b>		<b>2</b>	<b>1</b>	<b>1</b>	<b>Check</b>	<b>23</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	2
	3	1	1	0	1	4
SD	2	0	0	0	0	2
	3	1	0	1	1	5
Det	3	0	0	0	0	4
	4	0	0	0	0	6
Flats	1	0	0	0	0	0
	2	0	0	0	0	0
		2	1	1	2	23

**AH**

Unit type	No beds	AH Total	SR	IR		OMV
		5%	75%	25%		
<b>25 units</b>		<b>1</b>	<b>1</b>	<b>0</b>	<b>Check</b>	<b>24</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	2
	3	0	0	0	0	4
SD	2	0	0	0	0	3
	3	1	1	0	1	5
Det	3	0	0	0	0	4
	4	0	0	0	0	6
Flats	1	0	0	0	0	0
	2	0	0	0	0	0
		1	1	0	1	24

**10 Unit schemes**

<b>AH</b>						
<b>Unit type</b>	<b>No beds</b>	<b>AH Total</b>	<b>SR</b>	<b>IR</b>		<b>OMV</b>
		<b>35%</b>	<b>75%</b>	<b>25%</b>		
<b>10 units</b>		<b>3</b>	<b>2</b>	<b>1</b>	<b>Check</b>	<b>7</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
SD	2	0	0	0	0	0
	3	2	1	1	2	0
Det	3	1	1	0	1	2
	4	0	0	0	0	5
Flats	1	0	0	0	0	0
	2	0	0	0	0	0
		3	2	1	3	7

<b>AH</b>						
<b>Unit type</b>	<b>No beds</b>	<b>AH Total</b>	<b>SR</b>	<b>IR</b>		<b>OMV</b>
		<b>30%</b>	<b>75%</b>	<b>25%</b>		
<b>10 units</b>		<b>3</b>	<b>2</b>	<b>1</b>	<b>Check</b>	<b>7</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
SD	2	0	0	0	0	0
	3	2	1	1	2	0
Det	3	1	1	0	1	2
	4	0	0	0	0	5
Flats	1	0	0	0	0	0
	2	0	0	0	0	0
		3	2	1	3	7

<b>AH</b>						
<b>Unit type</b>	<b>No beds</b>	<b>AH Total</b>	<b>SR</b>	<b>IR</b>		<b>OMV</b>
		<b>20%</b>	<b>75%</b>	<b>25%</b>		
<b>10 units</b>		<b>2</b>	<b>1</b>	<b>1</b>	<b>Check</b>	<b>8</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
SD	2	0	0	0	0	0
	3	2	1	1	2	0
Det	3	0	0	0	0	3
	4	0	0	0	0	5
Flats	1	0	0	0	0	0

2	0	0	0	0	0	0
	2	1	1	2	8	

**AH**

<b>Unit type</b>	<b>No beds</b>	<b>AH Total</b>	<b>SR</b>	<b>IR</b>		<b>OMV</b>
		<b>10%</b>	<b>75%</b>	<b>25%</b>		
<b>10 units</b>		<b>1</b>	<b>1</b>	<b>0</b>	<b>Check</b>	<b>9</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
SD	2	0	0	0	0	0
	3	1	0	1	1	1
Det	3	0	0	0	0	3
	4	0	0	0	0	5
Flats	1	0	0	0	0	0
	2	0	0	0	0	0
		1	0	1	1	9

**AH**

<b>Unit type</b>	<b>No beds</b>	<b>AH Total</b>	<b>SR</b>	<b>IR</b>		<b>OMV</b>
		<b>5%</b>	<b>75%</b>	<b>25%</b>		
<b>10 units</b>		<b>1</b>	<b>1</b>	<b>0</b>	<b>Check</b>	<b>9</b>
Terrace	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
SD	2	0	0	0	0	0
	3	1	0	1	1	1
Det	3	0	0	0	0	3
	4	0	0	0	0	5
Flats	1	0	0	0	0	0
	2	0	0	0	0	0
		1	0	1	1	9



# Renewable and Low Carbon Energy Assessment

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Renewable and Low Carbon Energy Assessment

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**List of Abbreviations**

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Abbreviation	Description	Abbreviation	Description
AAWS	Average Annual Wind Speed	ESCO	Energy Services Company
AD	Anaerobic Digestion	GIS	Geographical Information Systems
AHL	Anchor Heat Load	GW	Gigawatt
BD	Biodegradable	GWh	Gigawatt hours
BIR	Building Integrated Renewable	IMD	Indices of Multiple Deprivation
CAA	Civil Aviation Authority	kW	Kilowatt
CADW	Welsh Government Historic Environment Service	kWh	Kilowatt hours
CCHP	Combined Cooling Heat and Power	LCBP	Low Carbon Building Programme
CESP	Community Energy Saving Programme	LDP	Local Development Plan
CHP	Combined Heat & Power	LLPG	Local Land and Property Gazetteer
C&I	Commercial & Industrial	LLSOA	Low Level Super Output Area
CO2	Carbon Dioxide	LPA	Local Planning Authority
DECC	Department for Energy and Climate Change	LPG	Liquefied Petroleum Gas
DEFRA	Department for Environment, Food and Rural Affairs	LSB	Local Service Board
DH	District Heating	LWPA	Local Waste Planning Authority
DHN	District Heating Network	LZC	Low and Zero Carbon
DHW	Domestic Hot Water	MoD	Ministry of Defence
EfW	Energy from Waste	MSW	Municipal Solid Waste
EOP	Energy Opportunity Plan	MW	Megawatt
MWe	Megawatt electrical	SSSI	Sites of Special Scientific Interest
MWh	Megawatt hours	TAN	Technical Advice Note
MWhe	Megawatt hours electrical	TM	Technical Memorandum
MWt	Megawatt thermal	TWh	Terawatt hour
MWht	Megawatt hours thermal	VFR	Visual Flight Rules
NNR	National Nature Reserves		
NVZ	Nitrate Vulnerable Zone		
NWSW	National Waste Strategy Wales		
ODT	Oven Dried Tonnes		
OS	Ordnance Survey		
PCC	Powys County Council		
PPW	Planning Policy Wales		
PV	Photovoltaic		
RE	Renewable Energy		
REA	Renewable Energy Assessment		
SAC	Special Areas of Conservation		
SPA	Special Protection Areas		
SSA	Strategic Search Area		

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Building Engineering

## Executive Summary

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## Executive Summary

The Welsh Government has resolved that all local planning authorities will play the fullest part in reducing CO<sub>2</sub> emissions. Responsibility for delivery of a low carbon Powys rests with the various departments within the County Council, with key roles in planning, waste management, land-ownership and energy procurement. Acknowledging this responsibility, a county-wide Renewable Energy Assessment [excluding the Brecon Beacons National Park] has been prepared to assess the potential of the Powys County Council area to contribute to UK renewable energy generation targets.

In addition Planning Policy Wales<sup>1</sup> [PPW] provides support for the setting of carbon emission reduction targets in excess of national standards for strategic development sites, where policies for such target setting have been included in LDPs and are fully justified.

This report has been commissioned by Powys County Council to inform the Powys Local Development Plan.

Renewable Energy Assessments [REA] vary between local authorities dependent upon issues such as geography, land availability and also the priorities given by councils and communities to various policy objectives. This REA provides the results of a robust exercise to establish potential for renewable energy in Powys that would inform the selection of policy objectives, many of which could also be addressed through corporate action.

Whilst predominantly satisfying the need for providing part of robust evidence base, the REA might just as easily and effectively be utilised by public sector departments, possibly through the activities of the Local Service Boards [LSBs], and also relevant private sector organisations. Such activities might include aligning capital programmes of corporate estate, property, maintenance, energy and waste strategies with the findings of the Renewable Energy Assessment.

The delivery of a 'low carbon area' is a significant challenge that is being, or will soon have to be, faced by local authorities and the communities that they serve. Delivery will involve everyone but, significantly, professionals from a wide range of disciplines.

Utilising this REA to its greatest effect will require greater or lesser input from politicians, senior managers, finance experts, consultants, planners, developers, project managers, energy managers / technicians, engineers and waste management officers to name but a few.

Delivering some of the potential identified in this REA is likely to require considerable cooperation between local authorities

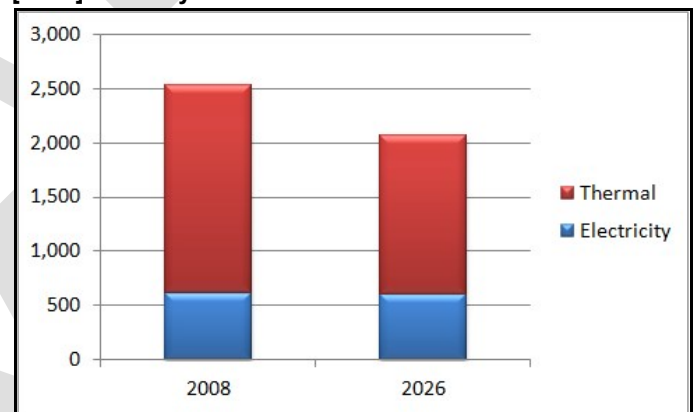
and other public sector bodies, and between public and private sector. The greatest challenge to this cooperation may arise in attempting to reduce the carbon emissions of existing building stock, or larger scale renewable electricity generating technologies.

The public sector, tasked with a leadership role, should be proactive in identifying cost effective approaches to contributing to meeting targets and facilitating the success of others. Powys County Council, through this REA, is fulfilling this role in identifying some of these potential opportunities within its area.

### Predicted energy consumption

The total predicted energy consumption for Powys in 2026 was calculated as 606GWh of electricity, and 1,463GWh of heat. This represents a reduction of total electrical consumption of circa 2GWh, and a reduction of thermal consumption of circa 452GWh from the 2008 baseline.

**Figure 1: Existing and predicted energy consumption [GWh] for Powys**



### Existing renewable energy capacity

The total existing installed capacity of small-scale [micro generation] renewable energy technologies in Powys in 2016 was calculated as 10.1MW of electrical power, and 68.8MW of thermal power (excluding the above mentioned biomass CHP).

Photovoltaic systems accounted for circa 9.3 MW of electrical power, with the vast majority of remaining attributed to micro wind at 0.6 MW. Technology types for renewable heating are unknown for non-domestic and domestic installations. However the Renewable Heat Incentive (RHI) register identifies 462 non-domestic renewable heat installations with installed capacity of 66.1MW. Also identified are 539 domestic renewable heating installations but the installed capacities are unknown: we have conservatively assumed 5kW per dwelling giving a total additional figure of 2.7MW.

<sup>1</sup> Planning Policy Wales [Edition 8, January 2016]

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The total existing renewable energy capacity in Powys for large scale renewable technologies was calculated as 326.6MW of electrical power, and 5.7 MW of thermal power. Wind developments accounted for 312.7MW electrical power. Biomass, including a planned 5.7MWt Biomass CHP system at Potter's Yard, Welshpool, accounted for all of the reported thermal energy capacity.

In the context of overall Welsh Government renewable energy targets as set out in the Energy Policy Statement, Powys is currently contributing approximately 16% of the 2015 to 2016 target of 2 GW of electrical energy associated with onshore wind.

The total existing renewable energy capacity in Powys [large scale and small scale] was calculated as 336.7 MW of electrical power, and 74.5 MW of thermal power.

**Table 1: Existing large scale renewable energy capacity in Powys**

Technology	Electricity [MWe]	Thermal [MWt]
Biomass	2.5	5.7
Hydropower	8.8	-
Landfill Gas	2.1	-
Wind Power	312.7	-
Other	0.5	-
<b>Total</b>	<b>326.6</b>	<b>5.7</b>

### Potential renewable energy capacity

#### *Potential building integrated renewable capacity*

This study has found that there is the potential to exploit a range of micro-generation technologies across the region. In most cases the potential is not spatially determined but is instead constrained by the size of the existing and future building stock and any incentives available.

The breakdown of estimated potential uptake in installed capacity and generated energy for Powys in 2026 is shown in the table 2.

**Table 2: Existing small scale renewable energy capacity in Powys**

Technology	Electricity [MW]	Thermal [MW]
Biomass	0.2	N/A
Heat Pumps	-	N/A
Photovoltaic	9.3	N/A
Solar Thermal	-	N/A
Wind Power	0.6	N/A
<b>Total</b>	<b>10.1</b>	<b>68.8 (split unknown)</b>

**Table 3: Potential building integrated renewable energy uptake in Powys in 2026**

Technology	Electricity [MW]	Thermal [MW]
Existing buildings	0.9	14.5
Future new buildings	6.4	15.0
<b>Total</b>	<b>7.3</b>	<b>29.5</b>

The maximum potential renewable electrical and thermal installed capacity across Powys in 2026 was calculated as circa 2,441 MWe and circa 247 MWt, as shown in table 4.

The total potential electrical capacity is dominated by solar PV farms and wind energy, with potential contributions from Biomass CHP, Anaerobic Digestion plants, hydro power sites, and building integrated renewable technologies.

The total potential thermal capacity across Powys in 2026 is dominated by the potential of energy crops for use with CHP and wood fuel resource used in biomass boilers for heating at circa 154MWt, and by the potential uptake from building integrated renewable energy technologies at circa 83 MWt. Waste heat derived from Biomass CHP systems and Anaerobic Digestion plants associated with energy crops, commercial and industrial waste, and animal slurry contributed to the remaining 11 MWt.



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**Table 4: Potential renewable energy resource in Powys in 2026**

Resource	Electricity [MWe]	Thermal [MWt]
Wind <sup>2</sup>	1,124	-
Biomass	46	154
Energy from Waste	7	11
Hydro	15	-
Solar PV Farms	1,234	-
Building Integrated	15	83
<b>Total</b>	<b>2,441</b>	<b>247</b>

### Energy Opportunity Plans

Energy opportunity plans were developed for the whole of Powys that considered the spatial relationship of existing renewable energy sites, demand for renewable energy [principally residential heat demand and key anchor heat loads], sources of waste heat, and the location of sites proposed for allocation.

Energy opportunity plans for Powys concluded with a more detailed analysis of three sites, namely, Llanidloes, Welshpool, and Newtown. A copy of the energy opportunity plans can be found in the Energy Opportunity Plan section of this report.

<sup>2</sup> This figure includes the current planning applications (consented is considered as existing) being considered within the SSA plus the resource in the wider county.

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## Renewable and Low Carbon Energy Assessment

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## Introduction

### Background to this Renewable Energy Assessment [REA]

The UK is subject to the requirements of the EU Renewable Energy Directive. These include a UK target of 15% of energy from renewables by 2020. The UK Renewable Energy Roadmap sets the path for the delivery of these targets, promoting renewable energy to reduce global warming and to secure future energy supplies.

The Welsh Government is committed to playing its part by delivering an energy programme which contributes to reducing carbon emissions as part of our approach to tackling climate change whilst enhancing the economic, social and environmental wellbeing of the people and communities of Wales in order to achieve a better quality of life for our own and future generations. This is outlined in the Welsh Government's Energy Policy Statement *Energy Wales: A Low Carbon Transition* (2012).

Whilst the delivery mechanisms for most of Wales' energy aspirations are outside the control of the planning, the Welsh Government has resolved that all Local Planning Authorities will play the fullest possible part in meeting statutory UK and EU targets on greenhouse gas emission reduction.

The use of fossil fuels is seen as a major contributor to greenhouse gas emissions, a major cause of global climate change and moving towards a low carbon energy based economy to tackle the causes of climate change and improve energy security are Welsh Government priorities.

#### Purpose of this REA

Local Authorities have several key roles to play that can facilitate the use and generation of renewable and low carbon energy. These include:

**Preparing planning policies** and allocating land in Local Development Plans

**Development management** – taking decisions on planning applications submitted to the LPA for development; as well as preparing Local Impact Assessments.

**Corporate** – taking action at a council wide level to achieve a low carbon economy.

**Leadership** – taking forward wider community action and communicating the need to increase the uptake of renewable energy.

This REA constitutes an evidence base to inform the preparation of the local development plan. Decisions can be taken on policies that can support and facilitate the deployment of renewable and low carbon energy systems. The REA [or

evidence base] consists of an assessment of the potential for renewable and low carbon energy generation, at different scales, and at different levels of detail.

In terms of development management, the REA [used in conjunction with the toolkit] can be useful in several ways.

**Firstly**, when assessing applications for new development sites, it can aid officers in discussions with developers around opportunities for district heating and making use of waste heat.

**Secondly**, when assessing applications for larger scale new generation schemes, it can enable officers to identify whether there is the potential for those schemes to supply heat to new or existing development.

**Thirdly**, in the case of wind developments, it can assist officers in understanding why a developer has chosen a particular location to develop a scheme.

However, as well as supporting Powys County Council planning officers with their LDP, the intention is that the renewable energy opportunities identified will also be useful in assisting Powys to fulfil its role as a community leader, leading by example through its actions.

#### Method employed by this REA

This REA was originally compiled based on the method set out in the Welsh Government guidance document 'Renewable energy: A toolkit for planners' July, 2010. A revision of the 'Toolkit' was produced for 2015 and, in response this REA has been updated to incorporate changes.

The method is based on a Geographic Information System (GIS) approach to enable spatial identification of renewable energy opportunities. The outputs of this approach are maps that accompany and support policies. The maps referred to in this REA can be located in the document 'Renewable and Low Carbon Energy Assessment – Maps'

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### Why is this REA important?

This REA will inform action to support the deployment and delivery of renewable energy installations on the ground. This is expected to assist in meeting the two key challenges for UK energy policy, namely: tackling climate change by reducing carbon dioxide emissions and improving energy security. At a more detailed level, this REA provides an evidence base for a number of suggested policy<sup>3</sup> objectives, as follows:

- Development of energy/ carbon reduction targets for strategic new development sites
- Identification and promotion of sites for renewable energy generation [not necessarily linked to new development]
- Development of area wide renewable energy targets [e.g. installed MW of heat and electricity generation] as a stimulus for concerted local action
- Informing the selection of land for development [allocation of sites], by identifying those sites with the greatest potential for sustainable energy and carbon reduction or sites that potentially could preclude renewable energy developments [e.g. by sterilising good wind power sites].
- Identification of opportunities for delivering strategic energy options that could link to an allowable solutions fund [i.e. some Council's, where land values may be less, view this as an opportunity to make sites more attractive to developers by making them "low and/or zero carbon enabled", rather than seeking to increase development burden by setting sustainability standards in excess of future Building Regulations.]
- To enable LPA exploration of requiring developers to connect to an existing or proposed district heating network [e.g. how much could they charge, how close would a development need to be and so on]

This REA delineates Powys County Council's evidence base to support each of the potential policy objectives set out above. The policy mechanisms to be employed by Powys County Council have also been developed through consideration of this study revision.

Within the REA, the 'accessible' renewable energy resource has been identified and an evaluation undertaken of three locations with opportunities for the incorporation of renewable and low carbon energy. The opportunities relate particularly to where renewable and low carbon energy may be linked to new development via district heating networks [DHNs].

This REA presents information that is potentially useful to developers and wider stakeholders alike in facilitating partnerships and taking forward delivery of the opportunities identified for Powys County Council.

<sup>3</sup> Meant in the broad sense, i.e. not just planning policy

### Wider corporate role

All local authorities including Powys County Council have objectives and requirements for mitigating and adapting to climate change that they need to meet. This REA enables Powys County Council to identify specific opportunities to facilitate renewable and low carbon energy generation.

These identified opportunities can form the basis of more detailed implementation plans, feasibility studies and practical action. This Renewable Energy Assessment can be utilised to assist in developing measures to tackle fuel poverty, through the promotion of district heating networks to serve existing as well as new developments. These opportunities can also help in delivering local economic benefits either in terms of locally grown fuel supplies, or by enabling a proportion of expenditure on energy to be retained within the local economy, from local generation, rather than going out to external energy companies<sup>4</sup>.

### Scope of this Renewable Energy Assessment

The scope of this Renewable Energy Assessment is set out below.

#### Planning

The REA focuses on planning policy though there are associated implications for development management. This assessment has been developed primarily for Powys County Council, as an evidence base that has informed renewable and low carbon energy targets, policies and site allocations in the LDP.

This REA, and the targets and policies that it informs, will necessitate procedures for use by development management officers to assess planning applications for either strategic new development sites that are incorporating renewable energy, or for stand-alone renewable energy generating systems: this assessment has informed Development Management policies with the detailed supplied in Renewable Energy SPG to be developed.

#### Technology

This assessment is not meant to be an exhaustive guide to the different renewable and low carbon energy technologies that are available. Technical Advice Note<sup>5</sup> provides an introduction to a range of renewable and low carbon technologies that should be the first point of reference. Other technology is listed by The Department for Energy and Climate Change<sup>6</sup> and the Energy Saving Trust<sup>7</sup>.

<sup>4</sup> Low Carbon Wales, Sustainable Development Commission , 2009

<sup>5</sup> Technical Advice Note 8, Renewable Energy , [http://wales.gov.uk/desh/publications/planning/technicaladvice/ta\\_n8/](http://wales.gov.uk/desh/publications/planning/technicaladvice/ta_n8/)

<sup>6</sup> DECC <http://www.planningrenewables.org.uk/page/index.cfm>

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### Energy Hierarchy

The REA focuses on renewable and low carbon energy generation, and the opportunities for promoting this through the Local Development Plan [LDP], rather than on improving energy efficiency in new or existing buildings. This is not to imply that the latter is less important in terms of mitigating climate change: it is at least as, if not more, important. However, it is not covered in this REA because there is only a limited amount that planning policy for new developments can contribute in this area, over and above the Approved Document Part L of the Building Regulations<sup>8</sup>. Again, we refer the reader to other excellent sources of information on energy efficiency in buildings, existing and new, that already exist<sup>9</sup>.

#### Transport

The REA does not include an assessment of the potential for renewable or low carbon fuels for transport.

#### Large scale on-shore wind

Whilst Strategic Search Areas (SSAs) are alluded to (as they have a considerable impact in Powys and effectively ring fence large-scale on-shore wind development), the REA is not intended to duplicate the analysis carried out in TAN 8 but rather is concerned with identifying ways in which to secure additional smaller scale opportunities outside of SSAs that would be determined either by the Welsh Government under The Developments of National Significance Regulations (2016) (DNS) or by the local planning authority. Additional local search areas are allocated to prioritise new wind development.

#### Policy wording

This REA comprises analysis that has been used to inform LDP the policies set out in 'Renewable Energy Policy' section.

#### Soundness

This REA does not provide a definitive template for sound evidence. The responsibility of preparing evidence for LDP policies and decisions taken in the LDP is the sole responsibility of the LPA. Assumptions and data used in carrying out this REA have been sought from established sources, and these are listed in the text. Where there is no established source AECOM has derived assumptions based on the best evidence available through dialogue with the LPA. In future, guidance, assumptions and data sources may change, particularly as technology and the policy and regulatory framework evolves.

<sup>7</sup> Energy Saving Trust at <http://www.energysavingtrust.org.uk/EnergySaving-Trust-advice-centre-Wales>

<sup>8</sup> Obviously, there is a lot that can be done to reduce energy use in existing buildings, but these do not generally fall with the remit of the planning system.

<sup>9</sup> E.g. from the Energy Saving Trust in Wales, as per the web-link given above.

### Defining renewable energy and low carbon energy

#### Renewable energy

There are many definitions of renewable energy<sup>10</sup>. A useful one is:

*“Renewable energy is that which makes use of energy flows which are replenished at the same rate as they are used”<sup>11</sup>*

The definition employed in PPW<sup>12</sup> [Paragraph 12.8.7] is as follows:

*“Renewable energy is the term used to cover those sources of energy, other than fossil fuels or nuclear fuel, which are continuously and sustainably available in our environment. This includes wind, water, solar, geothermal energy and plant material [biomass]”*

Another important characteristic of renewable energy, which will be explained in more detail below, is that unlike fossil fuels, it produces little or no net carbon dioxide [CO<sub>2</sub>] – which is one of the main greenhouse gas emissions.

Most forms of renewable energy stem directly or indirectly from the sun. The direct ones include, obviously, solar water heating, and photovoltaics [electricity]. Ground source and air source heat pumps<sup>13</sup>, make use of solar energy stored in the ground. The indirect forms are: wind power, as wind is caused by differential warming of the earth's surface by the sun; hydropower, as rainfall is driven by the sun causing evaporation of the oceans; and biomass energy [from burning organic matter], as all plants photosynthesise sunlight in order to fix carbon and grow.

The combustion of biomass fuel is acknowledged as carbon neutral, because although the combustion releases CO<sub>2</sub>, the same amount of CO<sub>2</sub> was taken out of the atmosphere when the biomass was growing. Biomass is generally regarded as fuel [other than fossil fuel], at least 98 per cent of the energy content of which is derived from plant or animal matter or substances derived there from [whether or not such matter or substances are waste]. This includes agricultural, forestry, or wood wastes or residues

The other two forms of renewable energy are tidal power, which relies on the gravitational pull of both the sun and the

<sup>10</sup> More specifically, the EU Renewable Energy Directive [see chapter 2] gives guidance on which technologies are eligible to qualify for meeting the UK's renewable energy target for 2020

<sup>11</sup> Sorensen, B. [1999] Renewable Energy [2nd Edition], Academic Press, ISBN 0126561524

<sup>12</sup> Planning Policy Wales [Edition 8, January 2016]

<sup>13</sup> Strictly speaking, these technologies are only partially renewable, as they also make use of, most commonly, grid electricity to power a compressor. However, if they have a good efficiency, they can provide a form of heating, in the UK, that produces less carbon per unit of output than using a gas condensing boiler.

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moon, and geothermal energy, which taps into the heat generated in the Earth's core.

Of all these, perhaps the most complex and multi-faceted is biomass energy, because it can take so many forms. It can include:

- Burning of forestry residues;
- Anaerobic digestion of animal manures and food wastes;
- Combustion of straw and other agricultural residues and products.
- Methane produced from the anaerobic digestion of biodegradable matter in landfill sites [i.e. landfill gas]; and
- Energy generated from the biodegradable fraction of waste going into an energy from waste plant.

This REA covers the following renewable energy technologies [considering both electricity and heat]:

- **Wind energy** [on-shore wind and community scale development]
- **Biomass energy:** including forestry residues, miscanthus, short rotation coppice and straw
- **Energy from Waste [EfW]** including waste wood, municipal waste, industrial and commercial waste
- **Anaerobic Digestion**, covering: food waste, agricultural wastes, and sewage sludge
- **Hydropower** energy
- **Building Integrated Renewable [BIR]**, covering: biomass boilers; air and ground source heat pumps, photovoltaics; small and micro wind power.

### Low carbon energy options

Low carbon energy options cover a range of energy sources that are not renewable, but can still produce less carbon than use of the conventional electricity grid or gas network, and are therefore considered an important part of decarbonising the energy supply. These options include:

- Waste heat, e.g. from power stations, or industrial processes
- Gas engine or gas turbine Combined Heat and Power [CHP], where the heat is usefully used

- Stirling engine or fuel cell CHP, where the heat is usefully used
- The non-biodegradable fraction of the output from energy from waste plants

This REA covers both renewable as well as low carbon forms of energy and the extent to which both can be considered has informed the policy objectives selected by Powys County Council.

### *Power vs. energy output*

In the context of this Renewable Energy Assessment, power is measured in either kiloWatts [kW], or MegaWatts [MW], which is a thousand kW, or gigaWatts [GW], which is a thousand MW. It is a measure of the electricity or heat output being generated [or used] at any given moment in time. The maximum output of a generator, when it is running at full power, is referred to as its installed capacity or rated power output.

Energy, on the other hand, is the product of power and time. It has the units of kWh [the h stands for "hour"] or MWh, or GWh. As an example, if a 2MW wind turbine ran at full power for 1 hour, it would have generated  $2 \times 1 = 2\text{MWh}$  of energy. If it ran at full power for one day [24 hours], it would have generated  $2 \times 24 = 48\text{MWh}$ .

This distinction is important, because in carrying out the renewable energy resource assessment certain assumptions have been made to calculate both the potential installed capacity [or maximum power output] of different technologies, as well as the potential annual energy output.

### *Electricity vs. Heat output*

In terms of the units used, to avoid confusion, it can be important to distinguish between whether a generator is producing electricity or heat. This is because some renewable energy fuels [i.e. biomass] can be used to produce either heat only, or power and heat simultaneously when used in a Combined Heat & Power [CHP] plant.

It is also important to be able to distinguish between renewable electricity targets and renewable heat targets. To do this, the suffix "e" is added in this REA to denote electricity power or energy output, e.g. MWe, or MWhe, whilst for heat, the suffix "t" is used [for "thermal"], to denote heat output, e.g. MWt, or MWht

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## Policy context and drivers for renewable energy

### Introduction

The UK is subject to the requirements of the EU Renewable Energy Directive. These include a UK target of 15% of energy from renewables by 2020. The UK Renewable Energy Roadmap sets the path for the delivery of these targets, promoting renewable energy to reduce global warming and to secure future energy supplies.

The Welsh Government is committed to playing its part by delivering an energy programme which contributes to reducing carbon emissions as part of our approach to tackling climate change whilst enhancing the economic, social and environmental wellbeing of the people and communities of Wales in order to achieve a better quality of life for our own and future generations. This is outlined in the Welsh Government's Energy Policy Statement *Energy Wales: A Low Carbon Transition* (2012).

Whilst the delivery mechanisms for most of Wales' energy aspirations are outside the control of the planning, the Welsh Government has resolved that all Local Planning Authorities will play the fullest possible part in meeting statutory UK and EU targets on greenhouse gas emission reduction.

The use of fossil fuels is seen as a major contributor to greenhouse gas emissions, a major cause of global climate change and moving towards a low carbon energy based economy to tackle the causes of climate change and improve energy security are Welsh Government priorities.

### UK and European energy policy context

EU Renewable Energy Directive: The UK has signed up to the Directive, agreeing to legally binding targets of 15% of energy from renewable sources by 2020. The UK Renewable Energy Strategy<sup>14</sup> suggests that by 2020, this could mean:

- More than 30% of our electricity generated from renewable energy sources
- 12% of our heat generated from renewable energy sources
- 10% of transport energy from renewable energy sources

The UK Renewable Energy Roadmap [2011] sets out how the UK could increase the use of renewable electricity, heat and

transport to meet this target and address the urgent challenges of climate change and national security of energy supply.

The Roadmap confirms that approximately 90% of the generation necessary to meet the 15% target can be delivered from a subset of eight technologies [see **table 5** overleaf]. The remaining renewable energy generation necessary to meet the 2020 target, will come from technologies such as hydropower, solar PV, and deep geothermal heat and power.

**Table 5: Technology breakdown [TWh] for central view of deployment in 2020**

Technology	Central range for 2020 [TWh]
Onshore wind	24 to 32
Offshore wind	33 to 58
Biomass [electricity]	32 to 50
Marine	1
Biomass [heat]	36 to 50
Heat Pumps	16 to 22
Renewable transport	Up to 48
Other	14
<b>Estimated 15% target</b>	<b>234</b>

### Wales' policy context for planning and renewable energy

Planning Policy Wales states that planning policy at all levels should facilitate delivery of both the ambition set out in Energy Wales: A Low Carbon Transition and UK and European targets on renewable energy. The Renewable Energy Directive<sup>15</sup> contains specific obligations to provide guidance to facilitate effective consideration of renewable energy sources, high-efficiency technologies and district heating and cooling in the context of development of industrial or residential areas, and

<sup>14</sup> The UK Renewable Energy Strategy, DECC, May 2009

<sup>15</sup> EU Renewable Energy Directive, 2009

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(from 1 January 2012) to ensure that new public buildings, and existing public buildings that are subject to major renovation fulfil an exemplary role in the context of the Directive. The issues at the heart of these duties are an established focus of planning policy in Wales, and in this context both local planning authorities and developers should have regard in particular to the guidance contained in Technical Advice Note 8: Planning for Renewable Energy and Planning for Renewable Energy – A Toolkit for Planners<sup>16</sup>

**Table 6: Wales' sustainable renewable energy potential 2020 to 2025**

Technology	Total capacity [GW]	Deliverable in main by
Onshore wind	2	2015 to 2017
Offshore wind	6	2015 to 2016
Biomass [electricity]	1	2020
Tidal range	8.5	2022
Tidal stream / wave	4	2025
Local electricity generation	1	2020
<b>Total [MWe]</b>	<b>22.5</b>	<b>2020 to 2025</b>

'Renewable Energy: A toolkit for Planners' sets out a method that local authorities might use to produce an evidence base in support of their Local Development Plans: this evidence base is referred to as a 'Renewable Energy Assessment'

This Renewable Energy Assessment can assist Powys County Council planning policy officers deliver the national planning policy expectations as set out in PPW<sup>17</sup>, namely:

- 4.12.5 Local planning authorities should assess strategic sites to identify opportunities to require higher sustainable building standards (including zero carbon) to be required. In bringing forward standards higher than the national minimum, set out in Building Regulations, local planning authorities should ensure that what is proposed is evidence-based and viable.

<sup>16</sup> 'Renewable Energy: A Toolkit for Planners – Welsh Government 2015 Update

<sup>17</sup> Planning Policy Wales [Edition 8, January 2016]

Such policies should be progressed through the Local Development Plan process in accordance with relevant requirements of legislation and national policy. Further advice is contained in Practice Guidance – Planning for Sustainable Buildings<sup>17</sup>.

- 4.12.6 Applications that reflect the key principles of climate responsive developments and exceed the standards set out in Building Regulations should be encouraged.
- 4.12.7 Particular attention should be given to opportunities for minimising carbon emissions associated with the heating, cooling and power systems for new developments. This can include utilising existing or proposed local and low and zero carbon energy supply systems (including district heating systems), encouraging the development of new opportunities to supply proposed and existing development, and maximising opportunities to co-locate potential heat customers and suppliers.
- 12.1.4 The Welsh Government aims to secure the environmental infrastructure necessary to achieve sustainable development objectives, while minimising adverse impacts on the environment, health and communities. New approaches to infrastructure will be needed in light of the consequences of climate change. The objectives are: to promote the generation and use of energy from renewable and low carbon energy sources at all scales and promote energy efficiency, especially as a means to secure zero or low carbon developments and to tackle the causes of climate change;
- 12.1.5 The planning system has an important part to play in ensuring that the infrastructure on which communities and businesses depend is adequate to accommodate proposed development so as to minimise risk to human health and the environment and prevent pollution at source. This includes minimising the impacts associated with climate change.
- 12.1.6 The capacity of existing infrastructure, and the need for additional facilities, should be taken into account in the preparation of development plans and the consideration of planning applications. In general, local planning authorities should seek to **maximise the use of existing infrastructure** and should **consider how the provision of different types of infrastructure can be co-ordinated**.
- 12.1.7 Local planning authorities must develop a strategic and long-term approach to infrastructure provision when preparing development plans. They should consider both the siting requirements of the



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utility companies responsible for these services to enable them to meet community needs and the environmental effects of such additional uses. Development may need to be phased, in consultation with the relevant utilities providers, to allow time to ensure that the provision of utilities can be managed in a way consistent with general policies for sustainable development.

- 12.1.8 It is essential that local planning authorities consult utility companies and other infrastructure providers and Natural Resources Wales at an early stage in the formulation of land use policies. Welsh Government guidance in *Local Development Plan Wales (2005)* provides details of the bodies which must be consulted about particular issues to ensure that plan policies are realistic and capable of implementation. Local authorities are also required to consult appropriate bodies and to take their views into account when determining planning applications.

#### *Existing renewable energy generation*

The Energy Wales: A Low Carbon Transition Plan [2012] reported that 62% of existing renewable generation in Wales stems from sources such as wind and solar with a further 25% coming from thermal renewable generation and 13% from hydro generation. Counting only installations of 100kW or above, current total operational wind farms in Wales have a capacity of 1,316MW, with 590MW being on-shore and of which 304MW are in mid-Wales.

#### *Permitted development rights*

To encourage take-up, changes have also been made in Wales to 'permitted development' rights to make provision for the installation of certain types of micro-generation by householders and for non-domestic buildings without the need for planning permission, namely solar photovoltaic and solar thermal panels, ground and water source heat pumps, flues for biomass heating and other technologies.

**Powys County Council area wide  
renewable energy assessment**

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## Baseline energy situation across Powys

### Calculating existing energy baseline

DECC report on the annual energy consumption [GWh] at a sub national level. The existing electrical and thermal energy consumption for Powys during 2008 was reported as 608 GWh and 1,915 GWh respectively.

Electrical consumption across Powys represents circa 3.7% of Wales total reported electrical consumption in 2008, and circa 0.2% of the UK's total reported electrical consumption.

Thermal consumption across Powys represents circa 3.4% of Wales total reported thermal consumption in 2008, and circa 0.2% of the UK's total reported electrical consumption.

**Table 7: Existing energy consumption [GWh] for the UK, Wales, and for Powys in 2008.**

	Electricity [GWh]	Thermal [GWh]
UK	304,625	815,624
Wales	16,267	55,657
<b>Powys</b>	<b>608</b>	<b>1,915</b>

### Calculating future energy baseline

The UK Renewable Energy Strategy reports on the current [2008] and future [2020] energy consumption across the UK for electricity and thermal energy sectors. The report confirms that between this period electricity energy consumption will contract by circa 0.3%, and that thermal energy consumption will contract by circa 15.8%.

Powys County Council's Local Development Plan period runs until 2026. As such this report has assumed that the rate of change associated with both electrical and thermal energy between 2008 and 2020 will continue unchanged. Thus the predicted electrical and thermal consumption across Powys in 2026 is 606 GWh, and 1,463 GWh respectively.

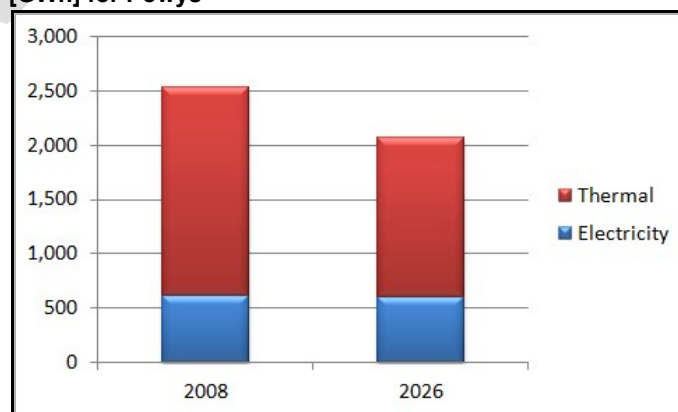
**Table 8: Predicted energy consumption [GWh] for Powys 2026**

	Electricity [GWh]	Thermal [GWh]
Baseline energy 2008	608	1,915
Projection to 2020 <sup>18</sup>	99.7%	84.2%
Predicted energy 2020	607	1,614
Percentage change from 2008 to 2026	-0.1%	-25.1%
Years to plan period	18	18
<b>Predicted energy 2026</b>	<b>606*</b>	<b>1,463*</b>

*\*Discrepancies due to rounding from MWh to GWh*

The figure below illustrates the change in the existing [2008] and predicted [2026], with total electrical consumption reducing by circa 2 GWh, and total thermal consumption reducing by circa 452 GWh.

**Figure 2: Existing and predicted energy consumption [GWh] for Powys**



<sup>18</sup> Based on projected change as identified in Table 2.1, of The UK Renewable Energy Strategy [2009]

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### Existing low and zero carbon energy technologies

To demonstrate the progress being made to establish a baseline of installed capacity to inform future potential and target setting, the capacity of Low and Zero Carbon [LZC] energy technologies already installed in the PCC LPA area has been established. Where LZC energy technologies already exist, the installed capacities [measured in MW] were recorded and incorporated as a contribution to overall final targets.

This assessment of existing capacity covers electricity and heat generation, and large scale as well as 'Building Integrated Renewables' [BIR] generation. For larger schemes, it also includes those that have received planning consent, but are not yet built.

The locations of the larger scale projects have been plotted using GIS. In particular, the locations of existing or consented wind farms have been noted to inform the wind resource assessment. The locations of existing energy from waste schemes and biomass schemes have also been marked for their potential contribution to supply heat to strategic new development sites.

Data for existing large scale projects has been derived from Powys County Council, DECC<sup>19</sup> and Ofgem<sup>20</sup>.

Data for existing has been collected at the LPA level on installed renewable heating capacity [such as wood chip boilers, heat pumps and solar water heating], and small scale electricity generation.

In addition, data provided by the Fit & RHI Register (Ofgem) has confirmed the installed capacities of small-scale / microgeneration installations.

Care has been taken to ensure no double counting has taken place, primarily through discussion with Powys County Council officers. Where duplicates occurred, the data from Powys County Council and then DECC was given preference over the other sources.

#### *Existing renewable electricity capacity*

The current total capacity (operational, under construction or consented) of large-scale and or stand-alone renewable energy technologies in Powys was calculated as 326.6MW of electrical power, and 5.7 MW of thermal power. Of which wind energy accounted for 312.7MW, hydro 8.8MW, landfill gas 2.1MW, fuelled 0.4MW and sewage gas the remaining 0.1MW of electrical power. Biomass, including a 5 MWt Biomass CHP system at Potter's Yard, Welshpool, accounted for all of the reported thermal energy capacity.

<sup>19</sup> DECC [2011] *RESTATS Monthly Extract*, <https://restats.decc.gov.uk/app/reporting/decc/monthlyextract> .

<sup>20</sup> Ofgem [2011] *Renewables & CHP – Accredited Stations*, <https://www.renewablesandchp.ofgem.gov.uk/Public/ReportManager.aspx?ReportVisibility=1&ReportCategory=0> .

Additional to the above, planning applications have been submitted or are being considered at appeal for a further 446MWe of wind energy and 21.6MWe from solar PV farms.

In the context of overall Welsh Government renewable energy targets as set out in the Energy Policy Statement, and including operational, under construction and consented, Powys is contributing approximately 16% of the 2015 to 2016 target of 2 GW of electrical energy associated with onshore wind.

#### *Strategic Search Areas*

In terms of the SSAs, the 2015 report from Powys County Council reports 78.95MW is currently operational, 140.3MW is consented and a further 347.0MW currently in the planning system: these figures are included in the above totals.

#### *Existing renewable heat capacity*

The total existing installed capacity of small-scale [micro generation] renewable energy technologies in Powys in 2016 was calculated as 10.1 MW of electrical power, and 60.4MW of thermal power (excluding the above mentioned biomass CHP). Photovoltaic systems accounted for circa 9.3 MW of electrical power, with the vast majority of remaining attributed to micro wind at 0.6 MW. Technology types are unknown for non-domestic and domestic installations for renewable heat but RHI register identifies 462 non-domestic renewable heat installations with installed capacity of 66.1MW. 539 domestic renewable heat installations are also identified but with no installed capacities: we have assumed 5kW per dwelling giving a total additional figure of 2.7MW.

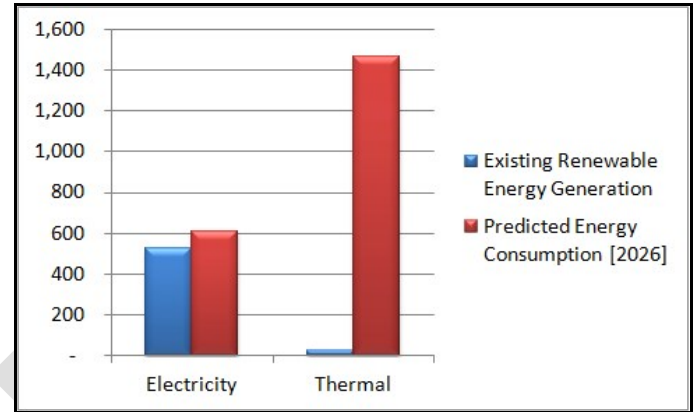
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**Table 9: Existing large scale renewable energy capacity in Powys**

Technology	Electricity [MWe]	Thermal [MWt]
Biomass	2.5	5.7
Hydropower	8.8	-
Landfill Gas	2.1	-
Wind Power	312.7	-
Other	0.5	-
<b>Total</b>	<b>326.6</b>	<b>5.7</b>

The figure below compares the amount of energy currently generated by existing renewable energy technologies and the predicted energy consumption across Powys in 2026.

**Figure 3: Difference between existing renewable energy generation [GWh] and predicted consumption [2026]**



**Table 10: Existing small scale renewable energy capacity in Powys**

Technology	Electricity [MW]	Thermal [MW]
Biomass	0.2	N/A
Heat Pumps	-	N/A
Photovoltaic	9.3	N/A
Solar Thermal	-	N/A
Wind Power	0.6	N/A
<b>Total</b>	<b>10.1</b>	<b>68.8 (unknown split)</b>

The total existing renewable installed capacity in Powys [large scale and small scale] was calculated as 336.7 MW of electrical power, and 74.5 MW of thermal power.

The amount of energy that this capacity could generate will depend on the capacity factor, of which is discussed in the section of this report titled 'Setting LPA Wide Renewable Energy Targets'. Based on the assumed capacity factors, the total existing renewable energy generation in Powys [large and small scale] was calculated as 524,427 MWh of electrical energy, and 28,120 MWh of thermal energy.

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## Wind Energy Resource

The focus of this section of the REA is on establishing the potential wind resource across Powys.

For the purposes of planning policy in Wales large scale wind power has been defined in TAN 8 as wind farms of > 25MW.. TAN8 provides details of 'Strategic Search Areas', [SSA] sites identified as suitable and potential locations for large scale wind. There are three SSA in Powys, namely Area B "Carno North", Area C "Newtown South", and Area D "Nant Y Moch".

This REA is primarily concerned with securing further opportunities for wind development of between 5MW and 25MW outside of the SSAs but, in the interest of completeness, the assessment of maximum available/potential wind resource across Powys includes both areas of land inside and outside of the SSA.

### Mapping

Maps have been produced to illustrate at each stage of the process the application of the method to identify spatial constraints and opportunities. At each stage, for ease of reading, maps have been split between northern, central and southern Powys. Throughout, references will be made to titles and reference numbers to correspond with maps contained in the accompanying document 'Renewable and Low Carbon Energy Assessment – Maps'

### Constraint to wind energy resource

To establish the potential wind energy resource across Powys, consideration has been given to the spatial constraints associated with restrictions to wind energy development. This assessment used the following principal constraints to wind energy development to establish the maximum potential wind resource across Powys. A comprehensive description of the method used for Powys is given in **Appendix A**.

- Special Protection Area (SPA)
- Special Area of Conservations (SAC)
- Candidate Special Area of Conservation (cSAC)
- RAMSAR sites
- National Nature Reserves (NNR)
- Site of Special Scientific Interest (SSSI)
- Marine Nature Reserves (MNR)
- Scheduled Ancient Monuments (SAM)
- Area of Outstanding Natural Beauty (AONB)
- Infrastructure – Topple distance plus 50m
- Other Infrastructure – Topple distance plus 10%

- Dwellings – Plus 500m (Noise Buffer)
- Watercourses
- Areas of historic and cultural importance

Additional constraints considered:

- Historic Landscapes
- Woodlands
- Ancient Woodlands
- National Parks
- Restricted Airspace

The purpose of this assessment was to establish the maximum potential wind energy resource across Powys. The assessment was based on constraints associated with a typical 2 MW wind turbine. However, this assessment does not necessarily preclude the potential development/deployment of larger or smaller wind turbines across Powys.

The wind constraints maps illustrate the principal constraints to the development/deployment of wind energy [excluding the proximity to residential dwellings]. These constraints can be attributed to existing environmental and historic protected sites. In addition, there is, significant areas of restricted airspace associated with the MoD exclusion zone around Mynydd Epynt, and the 5 km Civil Aviation Authority exclusion zone surrounding Welshpool Airport.

Given the subjective noise related impact that wind turbines have on residential dwellings and the spatial extent that such an impact can have on identifying potentially available wind resource, this study has reported on noise impact figures. This takes into consideration the impact of noise on residential dwellings, referred to as "*including impact on dwellings*", that assumes that there will be no wind energy within 500m distance of any residential property.

1. The following maps illustrating all constraints to wind development except wind speed have been produced as follows: Environmental & Heritage Constraints
  - a. North
  - b. Mid
  - c. South

### Sufficient wind speeds

The performance of wind turbines is a function of wind speed. A 1.5km<sup>2</sup> grid GIS data layer has been established for the Powys area and associated average annual wind speed at 45m above ground level (agl) has been attributed to reach respective 1.5km<sup>2</sup> cell. It has then been assumed that there is no wind potential in areas with an average annual wind speed of less than 6.0m/s.

Maps have been produced that show areas of sufficient wind speed. One colour denotes areas that have sufficient wind speed but does not apply exclusion buffers around existing development and another with the buffer constraint applied. The maps are labelled as follows:

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2. Sufficient wind speeds
  - a. North
  - b. Mid
  - c. South

#### Maximum available wind resource

This report has assumed that a maximum of five 2 MW wind turbines can be installed on 1km<sup>2</sup> of land: sites unable to support 5MW of generation have been removed from the maps at this stage.

Once the total area of unconstrained wind resource is established the total potential installed capacity can be calculated. Similarly, assuming that over the course of a year a 2 MW wind turbine will only generate energy for 27% of the time [2,365 hours], the total potential energy [GWh] can be calculated.

The installed capacity figure represents the maximum accessible wind resource in Powys, including areas of land within the SSA of Carno North, Newtown South, and Nant Y Moch. This figure does not take into consideration the impact on landscape character.

**Table 11: Maximum potential wind resource [km<sup>2</sup>] for Powys excluding impact on landscape.**

Wind Resource Priority	Area [km <sup>2</sup> ]	Potential GWh generated
1	198.06	4,684.12
2	66.30	1,568.00
<b>5</b>	<b>60.85</b>	<b>1,439.10</b>
<b>6</b>	<b>22.51</b>	<b>532.36</b>
<b>Total</b>	<b>347.72</b>	<b>8,223.58</b>

#### Local Search Areas (after application of steps 1 & 2)

Maps have been produced that show the location of land remaining once all constraints are removed: these areas are referred to as Local Search Areas. The maps are labelled as follows:

3. Local Search Areas
  - a. North
  - b. Mid
  - c. South

These maps illustrate the Local Search Areas referred to in Powys County Council Renewable Energy planning policies. Given the difficulties associated with identifying and developing land parcels for wind developments, it is intended that LSAs will be protected for wind energy development only.

#### Impact on landscape character

The impact on landscape character, although not considered a 'constraint' that would prevent the practical deployment of wind energy development, was recognised as a significant factor to be mindful of when reviewing opportunities for wind energy development across Powys.

An exercise can be undertaken whereby areas that are recorded as having a 'high' or 'outstanding' value attributed to them within the 'Character & Scenic Quality' column within the 'Visual & Sensory' Layer of LANDMAP can be identified and constrained within GIS maps: this exercise has not been undertaken as part of this assessment.

#### Cumulative impacts

It is recognised that only a minor proportion of the 'unconstrained' land identified will be able to be built out. This is because as wind farms are developed they effectively either prevent other sites situated close by from being developed or there is a need to avoid 'cumulative impacts'.

An illustrative exercise has been undertaken as part of this assessment that demonstrates how the consideration of cumulative impacts reduces the unconstrained or available land: the exercise effectively demonstrates the 'best case scenario' and is therefore used to inform target setting.

This exercise has removed the following land parcels:

- Unconstrained land within TAN8 already earmarked for wind development
- Removed land slivers of fire breaks and tracks that previous GIS was showing as 'unconstrained'
- Buffered existing wind turbines by 7km
- Undertaken theoretical build out exercise whereby each new wind farm is buffered by 7km: the largest and most likely sites to be developed were utilised as starting points (this process utilised the prioritisation method as outlined in the Renewable Energy: A Toolkit for Planners – Welsh Government 2015.

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The table below confirms the maximum potential wind resource for Powys including cumulative impact.

**Table 12: Maximum potential wind resource [km<sup>2</sup>] for Powys including cumulative impact.**

Wind Resource Priority	Area [km <sup>2</sup> ]	Potential GWh generated
1	28.31	669.53
2	14.19	335.59
<b>5</b>	19.65	464.72
<b>6</b>	5.66	133.86
<b>Total</b>	<b>67.81</b>	<b>1,603.70</b>

Maps have been produced that illustrate the result of applying the prioritisation method as set out in 'Renewable Energy: A Toolkit for Planners (2015). The maps are labelled as follows:

4. LSA sites in order of priority
  - a. North
  - b. Mid
  - c. South

A further set of maps have been produced to show how the land may be developed for wind generation if unconstrained parcels are built out exactly according to prioritisation of 'best' sites. The maps are labelled as follows:

5. Cumulative Impacts
  - a. North
  - b. Mid
  - c. South

These maps, as they are 'best case scenario' have been used to inform targets.

#### *Restrictions on development*

A further map has been produced that show which LSAs have the capacity to host greater than 25MW capacity: in these cases development will be restricted to between 5MW and 25MW.

#### *Further constraints to wind energy sites*

Further constraints to onshore wind development not considered within this REA include [and this is not meant to be

an exhaustive list] the practical access to sites required for development, landowner willingness for development to go ahead, political will, the time to complete planning procedures and an economic distance to the nearest appropriate electricity grid connection.

Wind energy sites, by nature, are most usually situated in rural settings away from residential development and where the wind resource is least constrained. This can mean that there is often no opportunity to utilise on-site the outputs from wind energy sites leaving export of electricity to grid as the only option. This REA has not utilised national grid data but it is recognised that Powys may wish to investigate overlaying GIS layers of the energy networks data available to them.

#### *Potential opportunities for future development*

In relation to wind energy sites, potential opportunities for PCC are:

- Investment interest of Energy Services Companies [ESCOs] may be secured through the identification of appropriate sites.
- Large scale renewable installations can provide significant revenue streams to LA's.



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## Biomass Energy Resource

The focus of this section of the REA is on establishing the potential biomass resource defined as either:

- Energy crops [miscanthus & short-rotation coppice] or
- Wood fuel resource

There is no consideration of the utilisation of straw as an energy source as Wales is a net importer.

Unlike wind farms, biomass can be utilised for the generation of both electricity and heat & domestic hot water [DHW]. The use of energy crops, forestry residues and recycled wood waste for energy generation can have a number of advantages:

- Provide opportunities for agricultural diversification
- Encourage increased management of woodland
- Can have positive effects on biodiversity
- Remove biodegradable elements from the waste stream
- CO<sub>2</sub> savings if replanting occurs and long distance transportation is avoided

The Welsh Government's Energy Policy Statement [2010] confirms a target of 1,000 MWe (1GWe) capacity from biomass by 2020. This is the equivalent of circa 7 TWh. Powys currently has an installed capacity of 2.5 MWe from biomass CHP.

### *Constraints to biomass energy resource*

To establish the potential biomass energy resource across an area, consideration should be given to the spatial constraints associated with restrictions to harvesting energy crops and wood fuel. This assessment used the following principal constraints to biomass energy to establish the maximum potential biomass energy resource across Powys. A comprehensive description of the method used for Powys is given in **Appendix B**.

- Agricultural land classification
- Areas of broadleaved woodland
- Areas of environmental protection (including ancient woodlands)
- Areas of historic and cultural importance

## Energy Crops

The principal constraint to harvesting energy crops across Powys is the availability of suitable agricultural land. So as not to conflict with the growing of food crops, this study has assumed that energy crops can only be potentially grown on agricultural land of grades 3b and 4, which is not constrained by environmental or historical protected areas. The majority [95%] of agricultural land across Powys is classified as either Grade 4 or 5, the latter likely being unsuitable for growing energy crops. The exclusion of ALC grade 5 land means there is no overlap with other uses such as for Solar PV farms (ALC grade 5 only).

Based on the above constraints the theoretical maximum area of land that could be planted with energy crops across Powys is identified as 2,263.05 km<sup>2</sup>. This gives consideration to existing agricultural land classifications, environmental and cultural constraints on the land.

This assessment has assumed that 10% of the suitable land area identified for energy crops could actually be planted with energy crops. This reflects a range of factors including competition with other crops and livestock as well as unsuitable topography. Therefore, the total usable area of land for energy crops across Powys is 226.31 km<sup>2</sup>.

The Planning for Renewable and Low Carbon Energy – A Toolkit for Planners, confirms an average figure of 1,200 oven dried tonnes [odt] of energy crops can be delivered per km<sup>2</sup>. Therefore the total energy crop yield across Powys is 271,572 odt per annum.

### *Installed Power and Heat Generation Capacity*

The amount of energy that the potential quantity of biomass could produce will be dependent on whether the fuel is burnt in facilities that only generate electricity [and the waste heat is not usefully used], or produce Combined Heat and Power [where the heat is usefully used], or is burnt in a boiler to produce heat only.

It has been assumed that the energy crop resource is used to fuel a biomass CHP system to produce electricity and utilise any waste heat. A typical biomass CHP system will require about 6,000 odt of energy crops for each 1MWe of installed power generation capacity. The biomass CHP system will also produce about 2 MWt of thermal output at the same time from the waste heat.

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Table 13 confirms the maximum potential energy crop resource for Powys.

**Table 13: Total potential energy crop resource for Powys.**

Available area [km <sup>2</sup> ]	2,263.05
Usable area [km <sup>2</sup> ]	226.31
Yield [odt per km <sup>2</sup> ]	1,200
Yield [odt]	271,572
Required yield per MWe	6,000
<b>Installed capacity [MWe]</b>	<b>45.26</b>
Heat to power ratio	2:1
<b>Installed capacity [MWt]</b>	<b>90.52</b>

### Wood Fuel

The total area of national forest across Powys as identified by the National Forestry Inventory [NFI] database is 688 km<sup>2</sup>, of which 256 km<sup>2</sup> is located in Forestry Commission owned land.

The Bioenergy Action Plan for Wales confirms that 60 oven dried tonnes [odt] of available wood fuel per km<sup>2</sup> of woodland per annum. Therefore the total wood fuel yield from all national forest across Powys is 41,280 odt per annum, of which 15,360 odt per annum could be derived from Forestry Commission owned land.

This is a long term, annual averaged sustainable yield, based on wood fuel that can be harvested from the small round wood stems, tips and branches of felled timber trees and thinnings, as well as poor quality round wood. This figure takes into account of competition from other markets in Wales, such as particle board manufacturing. The figure also takes into account technical and environmental constraints.

#### *Installed Power and Heat Generation Capacity*

The amount of energy that the potential quantity of biomass could produce will be dependent on whether the fuel is burnt in facilities that only generate electricity [and the waste heat is not usefully used], or produce Combined Heat and Power

[where the heat is usefully used], or is burnt in a boiler to produce heat only.

It has been assumed that the energy resource from wood fuel is utilised for heat only [i.e. a biomass boiler]. A heat only facility will require about 660 odt of wood fuel for each 1MWt of installed thermal generation capacity.

The table below confirms the maximum potential biomass resource for Powys.

**Table 14: Total potential energy resource from wood fuel for Powys.**

	Wood fuel
Available area [km <sup>2</sup> ]	688
Usable area [km <sup>2</sup> ]	688
Yield [odt per km <sup>2</sup> ]	60
Yield [odt]	41,280
Required yield per MWt	660
<b>Installed capacity [MWt]</b>	<b>62.5</b>

Of the potential 62.5 MWt that could be derived from woodland residue across Powys, 23.3 MWt could be derived from Forestry Commission owned land.

#### *Further constraints to biomass energy resource*

Although where areas of land have been indicated as having potential for the growing of energy crops, further detailed studies are required prior to action. Furthermore, market demand is likely to play a key role in what, and how much is planted.

Even where there is local demand for a biomass supply constraints, not considered within this REA, include [and this is not meant to be an exhaustive list] the proximity of plant and practical access to sites required for preparation and delivery of fuel.

In terms of plant, landowner willingness, political will, the time to complete planning procedures and an economic distance to the nearest appropriate electricity grid connection will all be key considerations but are not included within this assessment.

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Biomass energy generation [whether generating heat, power or both], by nature, is most usually situated a small distance away from residential development [though close enough to supply heat], where there is room for the development including fuel storage and access for large delivery vehicles.

This REA has not utilised national grid data but the LPA may wish to investigate overlaying GIS layers of the energy networks data available to them.

*Potential opportunities for future development*

In relation to biomass energy generation, potential opportunities for PCC are:

- Investment interest of Energy Services Companies [ESCOs] may be secured through the identification of appropriate sites and heat demand
- Large scale renewable installations can provide significant revenue streams to LA's.

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## Energy from Waste

Local Waste Planning Authorities [LWPAs] will have developed detailed plans on how to treat the Municipal Solid Waste [MSW] stream arising in the LWPA area. Some LWPAs, such as Powys County Council, will have worked with neighbours and Regional Waste Teams to investigate preferred options for the treatment of waste. It is these plans that will inform which particular technologies will be employed, their capacities and preferred locations. Therefore, this REA should be utilised to inform current and future local and / or regional waste strategies to ensure that planned generation of energy from waste plant is utilised to the fullest extent

Less is known about the plans of commercial waste operators to treat commercial and industrial waste streams. Organisations involved in such activity should be fully engaged to ensure that opportunities to utilise energy are not lost.

Further guidance should be sought from the Welsh Government in relation to whether energy from waste [EfW] from some or all EfW technologies is, or will be, considered to be 'renewable' energy and, where it is confirmed to be 'renewable', for what proportion of the residual waste stream [the proportion usually refers to the proportion of residual waste deemed to be the biodegradable [BD] element].

Towards Zero Waste describes the long term framework for resource efficiency and waste management up to 2050. It proposed the following targets for municipal waste:

- A minimum of 70% of waste being reused, recycled or composted by 2025;
- A maximum level of 30% energy being created from waste by 2025;
- Wales to achieve zero waste by 2050.

Other targets for consideration include no more than 75% of the 1995 biodegradable element of the municipal waste stream can be land-filled by 2010 and that waste fuelled CHP must achieve an operating efficiency of a minimum of 65% [EU Landfill Directive]. The NWSW is currently under review which is likely to generate targets for future treatment of waste.

Additional potential energy sources derived from waste as reported on in the Bioenergy Action Plan for Wales include food waste; agricultural wastes; and sewage sludge. As such this section of the REA will report under the following subheadings:

- Commercial and Industrial Waste
- Municipal Solid Waste

- Agricultural Waste
- Sewage Sludge

A comprehensive breakdown of assumptions and methodology behind this calculation are given in **Appendix C**.

### Commercial and Industrial Waste

The total predicted C&I waste across Powys in 2026, derived from the North Wales Regional Waste Plan, and the South Wales Regional Waste Plan, has been calculated as 78,090 tonnes. However, to avoid conflict with existing recycling targets, it has been assumed that only 30% of this waste stream would be available for energy recovery. Therefore the total predicted C&I waste that could be used for energy recovery across Powys in 2026 is 23,427 tonnes.

Energy from Waste facilities in Wales are required to be at least 65% efficient and therefore cannot generate electricity without using some of the heat. It has therefore been assumed that C&I waste will be burnt in facilities that produce Combined Heat and Power where the heat is usefully used or burnt.

Assuming that 10,320 tonnes of waste per annum are required for each 1MWe of electricity generating capacity in a CHP plant, and that a CHP facility will also produce about 2MWt of thermal output at the same time from the waste heat, the total potential capacity that could be supported by the C&I waste stream would be: 2.3 MWe and 4.6 MWt.

However, under the requirements of the EU Renewable Directive<sup>21</sup>, which is the basis for the UK's target of 15% of energy to come from renewable sources by 2020, only the biodegradable fraction of energy generation from waste is eligible to count towards the target. There is no specific guidance in Wales on what the biodegradable fraction should be assumed to be in future. The UK Government consultation on the re-banding of the Renewables Obligation suggested that the anticipated future biodegradable fraction, by 2020, would be about 35%, compared to a current nominal level of about 50%<sup>22,23</sup>.

Therefore assuming that 35% of the power and energy output of any waste facility count as renewable, the renewable electricity and heat capacity across Powys for C&I waste would be: **0.8 MWe and 1.6 MWt** respectively, as shown in **Table 15** overleaf.

<sup>21</sup> See <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:EN:PDF>

<sup>22</sup> See para. 9.10 of the Government Response to the Statutory Consultation on the Renewables Obligation Order 2009, December

<sup>23</sup> see <http://www.berr.gov.uk/files/file49342.pdf>

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**Table 15: Commercial and Industrial waste resource for Powys 2026**

	<b>Commercial &amp; Industrial Waste</b>
Total waste [tonnes]	78,090
Total residual waste [tonnes]	23,427
Required wet tonnes per 1MWe	10,320
Potential installed capacity [MWe]	2.3
Total renewable element	35%
<b>Potential installed capacity [MWe]</b>	<b>0.8</b>
Heat to power ratio	2:1
<b>Potential installed capacity [MWt]</b>	<b>1.6</b>

### Municipal and Solid Waste

The total predicted MSW across Powys in 2026, derived from the North Wales Regional Waste Plan, and the South Wales Regional Waste Plan, has been calculated as **117,541 tonnes**.

However, at the time of writing Powys County Council confirmed that they are in the process of appointing a supplier to export all domestic food waste to anaerobic digestion facilities that operate outside of the LPA area. This REA study therefore assumes that there will be no potential for Powys to derive energy from domestic food waste.

Whilst it is recognised that non organic food waste could be burnt to produce electricity and heat in a CHP system, as stated above, the EU Renewable Directive confirms that only the biodegradable fraction of energy generation from waste is eligible to count as renewable. Thus, if food waste is excluded from the total MSW, it is unlikely that a significant proportion of biodegradable waste will remain.

### Agricultural Waste

#### Animal Manure

The total numbers of cattle and pig across Powys have been confirmed as 205,951 and 5,060 respectively<sup>24</sup>.

Assuming that each cattle produces 1 tonne of slurry a month, and each pig produces 0.1 tonnes per month, and assuming that slurry is only collected for 6 months of the year<sup>25</sup> the total tonnage of available manure across Powys is: 1,238,742 tonnes.

However, in practice, it will not be possible or practical to collect all of this potential resource. This will be because many farms will not use a slurry system, but will collect the excreta as solid manure mixed with bedding which is then spread on the fields. Furthermore, it will not be practical to collect the slurry from some of the farms, because they may be too small or too dispersed for this to be economically viable.

The NFU Cymru and FUW were contacted to establish the split between the use of slurry and non-slurry systems on farms in Powys. However, no response was received. This study has therefore assumed that 50% of the farms use a slurry based system and that of these, it would be feasible to capture the slurry from 50%. Therefore the total available resource across Powys is: 309,686 tonnes.

An Anaerobic Digestion plant would be suitable to use animal slurry to produce both electric and heat. Assuming that 225,000 wet tonnes of slurry are needed to produce 1MWe, and that the heat to power ratio of an Anaerobic Digestion plant is 1.5 to 1, the potential installed capacity is: **1.4 MWe and 2.1 MWt [Table 16 over leaf]**.

<sup>24</sup> Agricultural Small Area Statistics 2002 to 2009, Welsh Government

<sup>25</sup> Assuming that livestock will only be kept under cover for, approximately, 6 months of the year.

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**Table 16: Potential installed capacity from total available animal slurry resource in Powys in 2026**

	Animal slurry
Total livestock [Cattle & Pigs]	211,011
Total slurry [tonnes]	1,238,742
Usable slurry [tonnes]	309,686
Required wet tonnes per MWe	225,000
<b>Potential installed capacity [MWe]</b>	<b>1.4</b>
Heat to power ratio	1.5:1
<b>Potential installed capacity [MWt]</b>	<b>2.1</b>

**Table 17: Potential installed capacity from total available poultry litter resource in Powys in 2026**

	Poultry litter
Total poultry <sup>26</sup>	1,598,040
Accessible Poultry [80%]	1,278,432
Total litter [tonnes]	53,694
Required tonnes of litter per MWe	11,000
<b>Potential installed capacity [MWe]</b>	<b>4.9</b>
Heat to power ratio	1.5
<b>Potential installed capacity [MWt]</b>	<b>7.3</b>

#### Poultry Litter

The total number of poultry recorded across Powys have been confirmed as 1,598,040<sup>27</sup>. The location of existing poultry farms across Powys have been established and have been illustrated on the energy opportunity plans. Given the spatial distribution of poultry farms across Powys, this report has assumed that 80% of poultry farms could provide poultry litter for conversion into energy.

Data is available from DEFRA which provides the amount of excreta produced by different types of poultry<sup>28</sup>. This suggests a figure of 42 tonnes of litter per year per 1,000 birds<sup>29</sup>.

An Anaerobic Digestion plant would be suitable to use poultry litter to produce both electric and heat. Assuming that 11,000 tonnes of litter per annum are needed to produce 1MWe, and that the heat to power ratio of an Anaerobic Digestion plant is 1.5 to 1, the potential installed capacity is: **4.9 MWe and 7.3 MWt** respectively.

In practice, as the potential capacity is less than 10MWe, it is unlikely that this would be enough to support a dedicated poultry litter power plant. However, the resource could be combined with animal slurry to support an anaerobic digestion facility of 6.3 MWe.

<sup>26</sup> The number of poultry was taken from the WAG Statistical Directorate Agricultural Small Areas spreadsheet - worksheet Regions'.

<sup>27</sup> Agricultural Small Area Statistics 2002 to 2009, Welsh Government

<sup>28</sup> See the DEFRA leaflets on guidance to farmers in Nitrate Vulnerable Zones, leaflet 3, table 3, see <http://www.defra.gov.uk/environment/quality/water/waterquality/diffuse/nitrate/documents/leaflet3.pdf>

<sup>29</sup> Based on the figure for laying hens, which is 3.5 tonnes per month

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### Sewage Sludge

The population of Powys in 2026 based on a population trend between 2000 and 2010 was projected as 140,066. Assuming that the average amount of sewage produced per person per year is 0.03 tonnes the total sewage sludge across Powys equates to circa 4,200 tonnes.

An Anaerobic Digestion plant would be suitable to sewage sludge to produce both electric and heat. Assuming that 13,000 tonnes of dry solids are needed to produce 1MWe, and that the heat to power ratio of an AD plant is 1.5 to 1, the potential installed capacity is: **0.32 MWe** and **0.48 MWt** respectively.

**Table 18: Potential installed capacity from total available sewage sludge resource**

	Sewage Sludge
Population [2026] <sup>30</sup>	140,066
Sewage per person [tonnes]	0.03
Total sewage [tonnes]	4,200
Required tonnes of sewage per MWe	13,000
<b>Potential installed capacity [MWe]</b>	<b>0.32</b>

At present, about 0.1 MWe is already being generated in the County, which is just under a third of the available resource. Given the dispersed settlement patterns across rural Powys it may be that the remainder of the resource is too dispersed for generation to be practical, as such it has been assumed that there is no additional resource available for sewage sludge.

<sup>30</sup> Based on a population of 131,300 in Powys in 2010 [[www.nomisweb.co.uk](http://www.nomisweb.co.uk)] and an average annual change in population of 1.00405 [average population change in Powys between 2000 and 2010].

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## Hydro Power Energy Resource

Existing hydro power installations across Powys have a combined total installed electrical capacity of 8.8 MWe, of which the Elan Valley Hydro Scheme and the Caban Coch site generate circa 3.1 MWe and 1.0 MWe respectively. However, there is significant potential across Powys to deliver additional renewable electricity.

The Environment Agency has published a study into the potential for small scale hydro power generation across England and Wales<sup>31</sup>. The results of which have been included within this study to establish the total potential resource across Powys.

The table below confirms the total potential hydropower capacity according to their relative environmental sensitivity to exploitation.

**Table 19: Potential hydropower capacity in Powys according to environmental sensitivity.**

Environmental sensitivity	Installed capacity [MWe]
Low	0.1
Medium	1.7
High	51.3
<b>Total</b>	<b>53.0</b>

Given that the existing installed capacity of 8MWe has already surpassed the predicted uptake of sites with a 'low' and 'medium' sensitivity, it is suggested that the potential hydro power resource across Powys could comprise those sites of low and medium sensitivity as well as 25% of the high sensitivity sites equating to **14.6 MW in total**.

<sup>31</sup> Mapping Hydropower Opportunities and Sensitivities in England and Wales: Technical Report, Entec UK on behalf of Environment Agency [2010]



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## Solar PV Farms

This section provides a summary assessment of the potential for Solar PV Farms in the Powys County Council LPA area.

### Background: Solar Photovoltaic Arrays

Photovoltaic (PV) solar cells / panels generate renewable electricity from the direct conversion of solar irradiation. PV is recognised as one of the key technologies in helping to meet the UK target of 15% renewable energy from final consumption by 2020. In 2012, 84% of all new renewable installations across Wales were Solar PV this figure is expected to increase due to a high level of interest in larger stand-alone (ground-mounted) installations.

DECC defines a “stand-alone” installation as a “solar photovoltaic electricity generating facility that is not wired through a building, or if it is wired through a building, the building does not have the ability to use 10% or more of the electricity generated”: this is typically a PV farm greater than 5MWe installed capacity (though dependent upon the electricity use of the building it is wired to). This definition is important as it defines qualifying rate of FiT.

As a relatively new phenomenon there is no standard agreed approach to constraints mapping for Solar PV Farms. This section therefore provides an approach, developed by AECOM on behalf of the Welsh Government, as to how to undertake a high-level assessment of the potential solar resource for ‘stand-alone’ PV farms.

### Mapping

Maps have been produced to illustrate at each stage of the process the application of the method to identify spatial constraints and opportunities. At each stage, for ease of reading, maps have been split between northern, central and southern Powys. Throughout, references will be made to titles and reference numbers to correspond with maps contained in the accompanying document ‘Renewable and Low Carbon Energy Assessment – Maps’

### Constraints to solar PV farm resource

To establish the solar PV farm resource across an area, consideration should be given to the spatial constraints associated with restrictions associated with buildings and other infrastructure, environmental and heritage constraints, slope and topology and land use. This assessment used the following principal constraints to establish the maximum potential PV farm energy resource across Powys. A

comprehensive description of the method used for Powys is given in **Appendix E**. Constraints include:

- Existing built environmental and infrastructure
- Environmental and heritage constraints
- Slope and topology
- Agricultural land classification
- Areas of broadleaved woodland
- Areas of environmental protection
- Areas of historic and cultural importance

The following maps illustrate the environmental and heritage constraints to solar PV farm development,

1. Environmental and Heritage Constraints
  - a. North
  - b. Mid
  - c. South

The performance of a photovoltaic panel system is directly related to the inclination, orientation and degree of shading of the panels. For the purposes of refining the areas suitable for PV farm development, assumptions have been made on the suitability of slope gradient and orientation for PV deployment. Data from Ordnance Survey, Terrain 50 dataset has been used to establish orientation of slope and potential for shading is contained within the. The following assumptions have been applied in this study:

Suitability of sites	Inclinations
All suitable:	0-3° from the horizontal
Only south-west to south east facing areas are suitable. All other orientations are considered constrained	Inclinations between 3-15° from the horizontal
All constrained	Inclinations >15° from the horizontal

Applying the above constraints provides a spatial indication of the maximum accessible ‘stand-alone’ solar PV resource in Powys. It can be seen with Solar PV farms that, even when all of the environmental and heritage constraints are removed and assessed for orientation there remains many sites potentially available for development. Based on the above slope & topology, environmental and heritage constraints, the area of

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land that could form a Local Search Area for PV Solar Farms across Powys is identified as 140.27 km<sup>2</sup>.

Solar PV Maps 2 (S2) is as follows:

2. Orientation with Environmental constraints removed
  - a. North
  - b. Mid
  - c. South

The location of built up areas and existing infrastructure is often a significant constraint to the deployment of large-scale 'stand-alone' PV farms and such features and geographic extents are mapped and excluded. This means that removing developed areas, sites where there are existing stand-alone renewable energy technologies as well as the areas 'protected' for wind development e.g. the SSAs and new LSAs.

In addition, 'Stand-alone' large-scale PV farms must be appropriately sited; this means utilising lower grade agricultural land (preferably of Agricultural Land Classification 5, or promoting the effective use of contaminated land, brownfield land, and previously developed / industrial land under national planning policy recommendations. The aim of this is to protect the best and most versatile agricultural land; however it is understood diversification helps to support agriculturally based businesses, promoting multi-functional use of land, etc. In all cases potential for benefits is to be weighed against this criterion.

Once all of these constraints are taken into consideration, the remaining sites can be defined as 'unconstrained' and these parcels are shown in map S3

3. Unconstrained Sites
  - a. North
  - b. Mid
  - c. South

The remaining sites after step 3 have been broadly grouped into areas appropriate for the development of Solar Farms. These are the Local Search Areas.

4. Local Search Areas
  - a. North
  - b. Mid
  - c. South

However, in reality, harnessing all of the PV Farm resource may result in cumulative impacts (these impacts might include visual, landscape or be constrained by capacity to feed into the nearest grid connection and/or buildings), particularly in more rural areas.

After giving consideration to existing agricultural land classifications (5 only), removing planned new development, sites of unconstrained wind potential and any potential solar farm sites < 1.2Ha (unlikely to be viable), a 3.5km buffer (agreed with Powys County Council) has been applied around each potential solar farm development to take into account any cumulative impact. The result of applying these criteria reduces the area of land that could form a Local Search Area for PV Solar Farms across Powys to 29.61 km<sup>2</sup>: this is essentially the theoretical maximum of land that can be utilised to generate electricity from PV Farms in Powys, as shown in the following maps (S5).

5. Local Search Areas with Cumulative Impact
  - a. North
  - b. Mid
  - c. South

A comprehensive description of the method employed to calculate the theoretical maximum is given in **Appendix D**.

It should also be noted that the above assessment ignores issues of landowner willingness, transport access and available grid connection and capacity.

According to the DECC UK Solar PV Strategy Part 1: 'Roadmap to a Brighter Future', the land area required for a 1MW fixed-tilt PV array is approximately 6acres (or 2.4Ha or 0.024km<sup>2</sup>). This figure has been utilised to calculate the potential installed capacity of each unconstrained site. A cut-off equivalent to 0.5MW (i.e. 3 acres, 1.2Ha or 0.012km<sup>2</sup>) has been applied, as any sites smaller than this are less likely to be viable (commercially speaking) for development. A capacity factor (CF) of 0.1 has been assumed in order to assess the annual energy output of the potential installed capacity.

The amount of energy that the potential land area dedicated to solar PV could produce in Powys is 1,081GWh.

Where areas of land have been indicated as having potential for PV farms, further detailed studies are required prior to action. Furthermore, market demand is likely to play a key role in what, and how much is developed.

In terms of plant, landowner willingness, political will, the time to complete planning procedures and an economic distance to the nearest appropriate electricity grid connection will all be key considerations but are not included within this assessment.

Solar PV farms are usually situated a small distance away from residential development though, in some cases, a private wire feeding electricity to nearby buildings may be viable. Whilst this will not change the energy outputs of the PV, it may alter the financial and carbon value of the development.

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This REA has not utilised national grid data but the LPA may wish to investigate overlaying GIS layers of the energy networks data available to them.

*Potential opportunities for future development*

In relation to solar PV farms, potential opportunities for PCC are:

- Investment interest of Energy Services Companies [ESCOs] may be secured through the identification of appropriate sites and heat demand
- Large scale renewable installations can provide significant revenue streams to LA's.

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## Building Integrated Renewable Energy Uptake

This section provides a summary assessment of the potential building integrated renewable [BIR] energy technology uptake in the Powys County Council LPA area undertaken in 2012. More detailed assumptions utilised in the BIR analysis can be found in **Appendix E**. The assessment is based on the method detailed in 'Renewable energy: A toolkit for planners'<sup>32</sup>.

The official definition of micro-generation is given in the Energy Act 2004 as electricity generating capacity of 50kW or less, and heat generating capacity of 45kW or less. However, for the purposes of this study, we are using the broader term Building Integrated Renewable [BIR]. BIR can include systems that are larger than micro-generation, such as biomass boilers for schools, which can be up to 500kW of heat output or more. However, BIR technologies are still linking to existing or new buildings and are therefore distinct, in terms of how their potential can be modelled, from the larger scale stand-alone technologies.

The term BIR also excludes those micro-generation technologies that are not renewable, such as fuel cells [where the hydrogen is produced from mains gas] and small scale CHP, using mains gas as the fuel source. This is because, for the potential purpose of setting area wide renewable energy targets, we are only interested in the potential uptake of those micro-generation technologies that are renewable.

BIR are taken to cover the following technologies:

- Solar photovoltaic [PV] panels
- Solar hot water panels
- Micro building-mounted wind turbines
- Small free standing wind turbines [15 kW]
- Micro scale biomass heating [i.e. wood chip or pellet boilers or stoves]
- Ground source heat pumps
- Air source heat pumps

Our calculation method includes the uptake of non-renewable micro-generation in order to account for those buildings which choose to take a non-renewable option. The totals for the low carbon technologies are reported in **Appendix F**, but are excluded from the BIR totals.

The potential BIR uptake analysis is formed of two distinct calculations:

- The uptake of BIR in the **existing** building stock [residential and non-residential]
- The uptake of BIR in **future new** buildings [residential and non-residential]

The uptake of BIR in the **existing** building stock [residential and non-residential] is primarily driven by the by financial attractiveness of installing BIR and the ease of retrofit. This section is based on statistical data from National databases

The uptake of BIR in **future new** buildings [residential and non-residential] is predominantly driven by future Building Regulations and planning policies. This section is based on the Powys County Council Housing Topic Paper and the adopted Unitary Development Plan.

These two calculations are brought together to report the total predicted new and existing BIR RE capacity for Powys broken down as follows:

- By 2015; 2020 and 2026;
- Renewable heat and electricity.

The Brecon Beacons National Park [BBNP] accounts for 17% of the total housing stock and therefore this is applied to the total predicted capacity to indicate the approximate split of potential BIR capacity across Powys.

### BIR uptake in existing buildings

#### *Existing building stock*

Using Census 2001 data and Welsh Statistics we have built up a year by year timeline of the building stock in Powys from 2001 to 2011. A similar timeline was also generated for nondomestic buildings [Bulks and Non-Bulks] based on hereditaments data and council-owned property databases. This information has been used to establish the age of the base case 2008 housing stock, and hence make an assumption on the heat demand of the 2008 base case stock. By understanding the age of the existing stock, and their heat demand, the modelling can recognise the increased benefits of installing renewable heat to older properties that are not as well insulated, for example.

A further analysis is required to establish the proportion of pre-1980 housing in the 2008 base case. This is because the Building Regulations requiring new constructions to reduce their energy consumption<sup>33</sup> was not in force before 1980 and a higher heating demand is attributed to this proportion of the 2008 base case housing stock. Welsh Statistics provided a

<sup>32</sup>

<http://wales.gov.uk/topics/planning/policy/guidanceandleaflets/toolkitforplanners/?lang=en>

<sup>33</sup> UK Building Regulations Part L (2010): Conservation of fuel and power

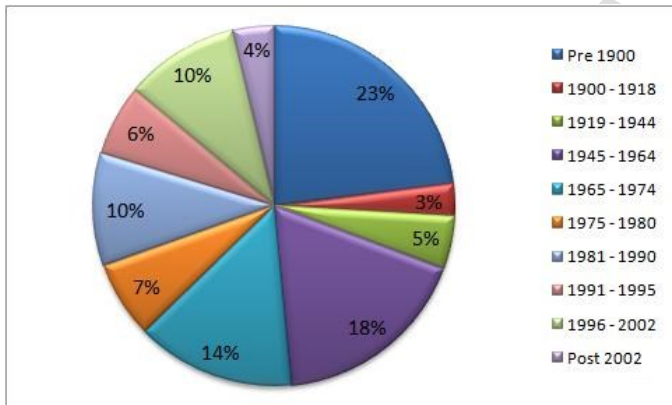
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breakdown of the age of the building stock as it was in 2008, shown in the pie chart below.

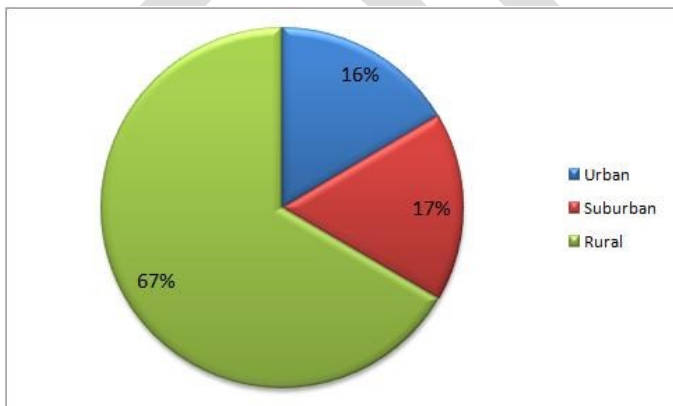
The pie chart shows that 70% of the 2008 housing stock was built before 1981. Combined with the anticipated number of new homes in Powys in the LDP plan period<sup>34</sup>, by the end of the plan period in 2026, the pre-1980 homes will still account for 61% of the Powys housing stock. Therefore, finding a low carbon solution for the older homes in Powys will be vital in reducing the overall CO<sub>2</sub> emissions of Powys by 2026.

The calculation for existing building uptake also takes into account the proportion of buildings in Powys which are in urban, suburban or rural locations, as well as those which are flats or houses. The BIR calculation model uses this information to make assumptions on the sizes of the homes, as well as their potential for renewable energy such as ground source heat pumps, which may require a significant amount of outdoor space. The pie chart below shows the split of housing by urban, suburban or rural classification<sup>35</sup>.

**Figure 4: Age of residential stock in Powys [2008]**



**Figure 5: Rural/Urban residential split in Powys [2004]**

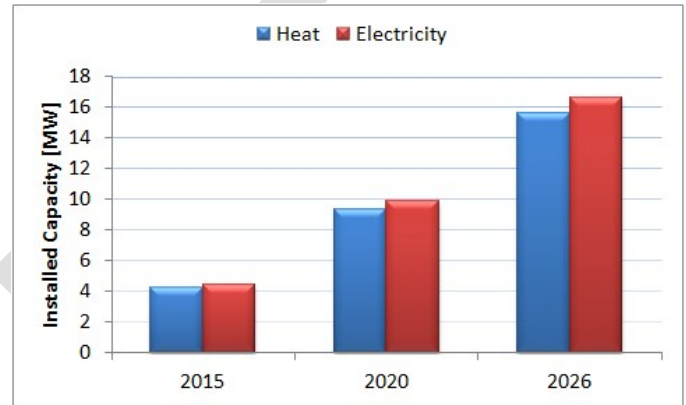


Results: BIR uptake in existing buildings

The results show that by 2026, the uptake of BIR in existing buildings in Powys would equate to 16.6 MW, which consists of 15.6 MW from renewable heat and 1.0 MW from renewable electricity.

The table below summarise this uptake over the key years 2015, 2020 and 2026.

**Figure 6: BIR uptake [cumulative] in existing buildings**



**Table 20: BIR uptake [cumulative] in existing buildings**

Building	2015	2020	2026
<b>Heat [MW]</b>			
Residential	4.2	9.3	15.6
Non Residential	0.0	0.0	0.0
<b>Sub-total</b>	<b>4.2</b>	<b>9.3</b>	<b>15.6</b>
<b>Electricity [MW]</b>			
Residential	0.2	0.5	0.8
Non Residential	0.0	0.1	0.2
<b>Sub-total</b>	<b>0.2</b>	<b>0.6</b>	<b>1.0</b>
<b>Total</b>	<b>4.4</b>	<b>9.9</b>	<b>16.6</b>

Future new buildings

<sup>34</sup> A total of 9,138 new homes between 2011 and 2026

<sup>35</sup> Rural and Urban Area Classification for Super Output Areas, 2004

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For the future new buildings, the uptake is likely to be predominantly driven by future Building Regulations and planning policies, requiring new buildings to reduce carbon dioxide emissions. In particular, and until Welsh Government consults on unilateral changes to devolved Welsh Building Regulations, this will be driven by the UK trajectory towards zero carbon dwellings by 2016 and for zero carbon nondomestic buildings by 2019. The key factors affecting uptake of any particular technology for this sector are likely to be the combination of technical viability, carbon savings, and the level of capital cost to a developer.

For Powys, the Housing Topic Paper<sup>36</sup> sets out a total of 9,138 homes to be built over the LDP period 2011 to 2026. This equates to around 609 homes per year. However, based on historic data, Powys has completed only 153 dwellings between 2008 and 2009. Therefore, the model carried out a sensitivity analysis based on the uptake depending on the rate of new build in Powys as follows:

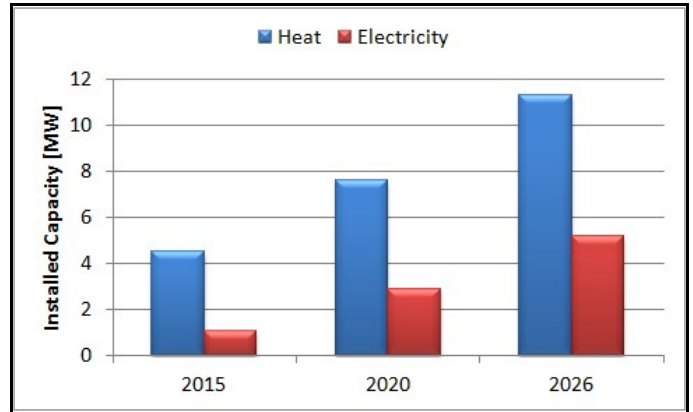
- Base scenario: 609 homes per year;
- Sensitivity case: 400 homes per year.
- Sensitivity case: 200 homes per year.

*Results –BIR uptake in future new buildings*

The results of the base scenario show that by 2026, the uptake of BIR in new buildings in Powys could equate to 22.8 MW, which consists of 15.9 MW from renewable heat and 7.0 MW from renewable electricity.

However, following consultation with Powys County Council regarding the modelled development rate of 609 homes per year; given the historically low development rate, a lower sensitivity rate of 400 homes per year was considered to be more appropriate for this assessment. Therefore, the uptake of BIR in new buildings in Powys could equate to 16.5 MW, which consists of 11.3 MW from renewable heat and 5.2 MW from renewable electricity.

The figure and table opposite summarise this uptake over the key years 2015, 2020 and 2026 for a build out rate of 400 homes per year.



**Table 21: BIR uptake [cumulative] in future new buildings**

Building	2015	2020	2026
<b>Heat [MW]</b>			
Residential	3.4	5.8	8.6
Non Residential	1.1	1.8	2.7
<i>Sub-total</i>	4.5	7.6	11.3
<b>Electricity [MW]</b>			
Residential	0.5	1.7	3.4
Non Residential	0.6	1.2	1.8
<i>Sub-total</i>	1.1	2.9	5.2
<b>Total</b>	<b>5.6</b>	<b>10.5</b>	<b>16.5</b>

**Figure 7: BIR uptake [cumulative] in future new buildings**

<sup>36</sup> Appendix 2 Draft Population and Housing Topic Paper [August 2011]

**Overall total for BIR uptake**

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This study has found that there is the potential to exploit a range of micro-generation technologies across the region. Based on the modelling assumptions used, the economically viable capacity for micro-generation technologies in Powys is circa 15.8 MWt and 6.1 MWe. In most cases the potential is not spatially determined but is instead constrained by the size of the existing and future building stock.

The breakdown of estimated potential uptake in installed capacity and generated energy for Powys in years 2015, 2020 and 2026 is shown in the table below.

**Table 22: Total potential BIR uptake [cumulative] across Powys**

Building	2015	2020	2025
<b>Heat [MW]</b>			
Existing building	4.2	9.3	4.5
Future new building	4.5	7.6	11.3
<i>Sub-total</i>	<i>8.7</i>	<i>16.9</i>	<i>15.8</i>
<b>Electricity [MW]</b>			
Existing building	0.2	0.6	0.9
Future new building	1.1	2.9	5.2
<i>Sub-total</i>	<i>1.3</i>	<i>3.5</i>	<i>6.1</i>
<b>Total</b>	<b>10.0</b>	<b>20.4</b>	<b>21.9</b>

### 2015 BIR uptake review

Since undertaking this analysis in 2012, data extracted from Ofgem datasets relating to FiT and RHI has revealed uptake predictions to have been conservative. Uptake of renewable electricity up to the end March 2016 has been 10.1MW (compared with 1.3MW predicted for end 2015) and 68.8MW of renewable heat (compared with 8.7MW predicted).

The full analysis has not been re-run but rather the following method applied. The Fit and RHI figures have been used instead of the 2015 'predicted' figure and then the modelled increases (as per the 2012 assessment) added to give a revised 2025 prediction. The revised figures are as follows:

Building	2015	2020	2025
<b>Heat [MW]</b>			
Existing building	68.8	73.9	79.1
Future new building	-	2.1	3.7
<i>Sub-total</i>	<i>68.8</i>	<i>76.0</i>	<i>82.8</i>
<b>Electricity [MW]</b>			
Existing building	10.1	10.5	10.8
Future new building	-	1.8	4.1
<i>Sub-total</i>	<i>10.1</i>	<i>12.3</i>	<i>14.9</i>
<b>Total</b>	<b>78.9</b>	<b>88.3</b>	<b>97.7</b>

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## Summary of Potential Renewable Energy Solutions

The maximum potential renewable electrical and thermal installed capacity across Powys in 2026 was calculated as circa 3,440MWe and circa 247MWt.

The total potential electrical capacity is dominated by potential solar PV farm and wind energy deployment, with contributions from Biomass CHP, Anaerobic Digestion plants, hydro power sites, and building integrated renewable technologies (e.g. roof-mounted solar PV). However, the figure for wind energy and solar farm PV represents a maximum potential resource (when cumulative impact is considered) and assumes that all potential areas would be developed.

The total potential thermal capacity across Powys in 2026 is dominated by potential energy crops for CHP and wood fuel resource used in biomass boilers for heating only at circa 90.52MWt (45.26MWe) and 62.5 MWt respectively. Potential uptake from building integrated renewable energy technologies could equate to a further 19 MWt. Waste heat derived from EfW and Anaerobic Digestion plants associated with, commercial and industrial waste, and animal slurry contributed to the remaining potential.

**Table 23: Potential renewable energy resource in Powys in 2026**

Resource	Electricity [MWe]	Thermal [MWt]
Wind <sup>37</sup>	1,124	-
Biomass	46	154
Energy from Waste	7	11
Hydro	15	-
Solar PV Farms	1,234	-
Building Integrated	15	83
<b>Total</b>	<b>42,441</b>	<b>247</b>

<sup>37</sup> This figure includes the current planning applications (consented is considered as existing) being considered within the SSA plus the resource in the wider county.



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## Identifying the Local Planning Authority Wide Contribution to the National Targets

The results of the area wide resource assessment provide an indication of the potential installed capacity for different technologies (in MW) that can be supported by the available resource.

The UK renewable energy target for 2020 is expressed in terms of a percentage of energy demand. In order to identify the potential contribution of Powys to meeting this target, estimation is required of how much energy the potential capacity might generate.

A simple and well established way of doing this is to use capacity factors [as referred to as load factors]. These factors, which vary by technology, are a measure of how much energy a generating station will typically produce in a year for any given installed capacity. This reflects the fact that the installed capacity is a measure of the maximum amount of power that a generating station can produce at any given moment. However, for reasons to do with either fuel availability, the need for maintenance downtime, or, for heat generating plant, a lack of heat demand at certain times of day or year, the capacity factor is always less than 1.

The annual energy output can be calculated by multiplying the installed capacity by its capacity factor and the number of hours in a year [8,760].

A summary of the different capacity factors for different technologies is given in the table overleaf.

### *Energy generated from existing renewable sources*

The total electrical energy that is currently being generated across Powys (or will be when all currently consented projects and those under construction are built) from renewable and low carbon energy technologies is circa 810 GWh, which equates to circa 133% of the total electrical consumption across Powys in 2008 and 134% of the total predicted electrical consumption across Powys in 2026. Electricity generation from large scale wind accounts for circa 740 GWh, 121% of total electrical consumption across Powys in 2008 or 122% of predicted electrical consumption across Powys in 2026.

The total thermal energy that is currently being generated across Powys from renewable and low carbon energy technologies is circa 146 GWh, which equates to circa 7.8% of the total thermal consumption across Powys in 2008 and 7.6% of the total predicted thermal consumption across Powys in 2026.

**Table 24: Capacity factors for renewable and low carbon technologies**

Technology	Capacity Factor <sup>38</sup>
Onshore wind	0.27
Biomass [electricity]	0.9
Biomass [heat]	0.5
Hydropower	0.37
Energy from Waste [electricity]	0.9
Energy from Waste [heat]	0.5
Landfill gas	0.60
Sewage gas	0.42
BIR [electricity]	0.1
BIR [thermal]	0.2

### *Energy generated from potential renewable sources*

The maximum potential electrical energy that could be generated across Powys from renewable and low carbon energy technologies (including existing and potential) in 2026 is circa 5,029 GWh, which equates to circa 30% of the total electrical consumption across Wales in 2008. However, excluding the contribution from renewable wind, the total potential renewable electricity that could be generated by 2026 is circa 1631 GWh.

The maximum potential thermal energy that could be generated across Powys from renewable and low carbon energy technologies in 2026 is circa 1,014 GWh.

<sup>38</sup> Capacity factors derived from the Planning for Renewable and Low Carbon Energy - A Toolkit for Planners.

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**Table 25: Existing large scale renewable energy generated in Powys**

Technology	Electricity [MWh]	Thermal [MWh]
Biomass	19,710	24,966
Hydropower	28,523	-
Landfill Gas	11,038	-
Wind Power	739,598	-
Other	1,840	-
<b>Total</b>	<b>800,709</b>	<b>24,966</b>

**Table 27: Potential renewable electricity generated in Powys in 2026**

**Table 26: Existing small-scale renewable energy generated in Powys**

Technology	Electricity [MWh]	Thermal [MWh]
Biomass	175	
Heat Pumps	-	
Photovoltaic	8147	
Solar Thermal	-	
Wind Power	526	
<b>Total</b>	<b>8848</b>	<b>120,538</b>

**Table 28: Potential renewable heat generated in Powys in 2026**

Resource	Capacity [MWt]	MWh generated
Biomass	154	674,520
Energy from Waste	11	48,180
Building Integrated	83	145,416
<b>Total</b>	<b>248</b>	<b>868,116</b>

2026

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Resource	Electricity [MW]	MWh generated
Wind	1,124	2,658,485
Biomass	46	362,664
Energy from Waste	7	55,188
Hydro	15	48,618
Solar PV Farms	1,234	1,080,984
Building Integrated	15	13,140
<b>Total</b>	<b>2,441</b>	<b>4,219,079</b>

### Setting LPA wide renewable energy targets

The above figures represent a theoretical maximum renewable energy resource that could be delivered by 2026 and it may be that developers will not come forward to deliver or more detailed individual site studies will constrain the figures further.

The tables below detail the approach taken by Powys to establish realistic targets on the proportion of renewable electricity and thermal energy that could be delivered across Powys in 2026.

For larger scale electricity generation, new Local Search Areas (LSAs) will be established in addition to the existing Strategic Search Areas (SSAs) to encourage wind development of between 5MW and 25MW: these sites will be protected for wind development. LSAs have also been identified for Solar PV Farms but, given the availability of the solar resource, are identified to assist developers rather than being afforded the 'protected' status: wind and solar PV is the primary strategy for delivering renewable energy generation in Powys.

Renewable heat is, by nature dependent upon a demand for its use. The demand for heat in Powys is limited and dispersed and therefore does not lend itself to the generation of large quantities of renewable heat in the county. However, the county does have considerable potential to produce energy crop and woody biomass which could facilitate neighbouring areas of Wales to generate renewable heat where there is demand. Powys could gear up for this role by developing its supply chain to deliver biomass generated Combined Heat and Power and renewable heat to building stock (both non-domestic and residential) wherever appropriate: this will be secured through an invite by the Council for developers to consider these options as part of the planning process.

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**Table 29: Resource summary table for renewable electricity in 2026**

Energy Technology	Existing Installed Capacity [MW]	Potential Installed Capacity [MW]	Capacity Factor	Existing Energy Generated [MWh]	Additional Potential for Energy Generated [MWh]	Percentage delivered by 2026	Total Additional Potential for Renewable Energy Delivered by 2026 [GWh]
Biomass [CHP]	2.5	46	0.90	19,710	362,664	5%	18
Energy from Waste	0.0	7	0.90	0	55,188	5%	3
Hydropower	8.8	15	0.37	28,523	48,618	30%	14
Landfill Gas	2.1	0	0.60	11,038	0	100%	0
Wind Power	312.7	1,124	0.27	739,598	2,658,485	25%	665
Solar PV Farms	-	1,234	0.10	-	1,080,984	50%	540
Other	0.5	0	0.45	1,971	0	100%	0
BIR	10.1	15	0.10	8,848	13,140	25%	3
<b>Total</b>	<b>336.7</b>	<b>2,441</b>	<b>-</b>	<b>809,688</b>	<b>4,219,079</b>	<b>-</b>	<b>1,243</b>
<b>Projected electrical energy demand [2026]</b>							<b>606</b>
<b>Percentage electricity demand in 2026 potentially met by renewable energy resource</b>							<b>205%</b>

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**Table 30: Resource summary table for renewable heat in 2026**

Energy Technology	Existing Installed Capacity [MW]	Potential Installed Capacity [MW]	Capacity Factor	Existing Energy Generated [MWh]	Additional Potential for Energy Generated [MWh]	Percentage delivered by 2026	Total Additional Potential for Renewable Energy Delivered by 2026 [GWh]
Biomass [CHP]	5.7	154	0.5	24,966	674,520	5%	34
Energy from Waste	0.0	11	0.5	0	48,180	10%	5
BIR	60.4	83	0.2	120,538	145,416	25%	36
<b>Total</b>	<b>66.1</b>	<b>248</b>	<b>-</b>	<b>145,504</b>	<b>868,116</b>	<b>-</b>	<b>75</b>
<b>Projected thermal energy demand [2026]</b>							<b>1,463</b>
<b>Percentage thermal demand in 2026 potentially met by renewable energy resource</b>							<b>5%</b>

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## Energy opportunity assessment

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## Energy opportunity assessment

This component of the REA considers some of the issues associated with mapping opportunities for the utilisation of renewable and low carbon heat. The analysis of the extent to which the utilisation of heat is viable, or likely to be viable, comprises a number of levels of complexity ranging from:

- Heat opportunities mapping
- Developing an energy opportunities plan for district heating networks
- Assessing the technical and financial viability of district heating networks

The reason for the different levels of complexity relates to the timing of when each level of analysis should be employed. For instance, heat opportunities mapping provides sufficient levels of detail for sieving candidate sites and to set a policy requiring a developer to investigate a DHN. Any policy requiring specific site/building CO<sub>2</sub> reduction targets, or connections to DHN, requires a more detailed economic and technical appraisal.

### Background

There are a number of reasons for identifying and understanding the nature of existing and future energy demand and infrastructure:

- Identification of public sector buildings to act as anchor 'heat' loads [AHLs]
- To know the energy densities of particular areas. New CHP/District Heating technology installations are more likely to be economically viable in areas of high density energy demand but can be more complex to install. This data assists with the identification of sites with significant potential
- The proportions of the relative demand for electricity and heat are also useful indicators as to what type of LZC technology might be appropriate in a particular area.
- Areas of high density energy demand may not always present the greatest opportunities. Energy density data needs to be combined with other data, such as the nature of energy demand, the composition of building types and uses, the accessible renewable energy resource, land and building ownership, existing infrastructure and any proposed development in order to isolate the greatest opportunity. These opportunities should also be reviewed against community priorities to align delivery to local requirements.

- Energy demand can be estimated from the types of proposed buildings, the quantity of development and the energy efficiency level. Energy efficiency can reduce the energy consumption, so it is important to estimate the future requirements in this regard.
- The locations of new development will be needed for assessments of strategic opportunities.

### Identifying anchor "heat" loads [AHLs]

'Anchor heat loads' pertain to existing buildings with an energy demand that could provide economically viable and practical opportunities for utilising heat. It is known as an 'anchor' load because further opportunities [e.g. from nearby buildings] may arise for connecting nearby buildings to the original anchor load.

An 'AHL' therefore refers to a non-residential energy demand that can act as a base for a District Heating [DH] schemes

Buildings that are located near to a point load [such as social housing, etc] and which may benefit from and contribute to the viability of DH schemes are known as a 'cluster'. A 'cluster' usually refers to a mix of social housing and non-residential buildings which, together, represent opportunities due to their:

- Complementary energy demand profile
- Planned development programme
- Commitment to reduce CO<sub>2</sub> emissions

The identification of AHLs and clusters requires the mapping of:

- Buildings owned by organisations with corporate climate change mitigation policies and an active commitment to reducing their carbon footprint, and;
- Planned new development / refurbishment by the 'anchor heat load' organisation. New development is likely to be the catalyst for such change. CHP / DH schemes are most cost-effective when installed as part of new development rather than retro-fitting.
- Social housing schemes. These organisations are often tasked with achieving greater than the minimum environmental performance standards. The inclusion of such developments in DH/CHP schemes often enhance the energy profile to provide further evening, weekend and night time energy demands.

AHLs can help a CHP/DH schemes to become a realistic prospect and there are usually particular conditions that need to be in place, such as planned new development and / or a commercial building / group of buildings with a significant demand for heat and / or with an energy profile suitable for the installation of a CHP unit.

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Given the responsibilities placed upon local authorities and the public sector in general for driving the climate change mitigation agenda, AHL's are often provided by buildings such as council administration centres, leisure buildings [particularly those with swimming pools] and hospitals; although shopping arcades and precincts have also been utilised in this way.

When it is proposed that private commercial buildings provide an 'AHL' the issue of 'ownership' is not as significant as when residential units are proposed for this role. The reason for this is that it is often impractical for developers to have to negotiate with many individual private householders whereas social landlords can more readily act on behalf of their tenants.

Investment interest of ESCOs may be secured through the identification of an anchor 'heat' load with the intention of development into a DH scheme.

#### *Social Housing Associations in Powys*

Housing Associations covering Powys include:

- Bromford & Carinthia Housing Association
- Clwyd Alyn HA
- CT Cantref
- CT Clwyd
- First Choice Housing Association
- Glamorgan & Gwent HA
- Gwalia Housing Group
- Melin Homes
- Mid-Wales HA
- Newydd HA
- Wales & West HA

The location of social housing is given in the energy opportunity plans at the end of this section.

#### **Identifying off gas areas**

Off gas areas refer to those areas not served by the gas mains network with the result being that many residents and, less often, businesses often utilise less economic and more polluting fuels for heat and Domestic Hot Water [DHW]. In the case of dwellings, this can be a contributing factor to fuel poverty. There are several important reasons for identifying these areas, namely:

- The use of fuels other than natural gas for heat and DHW often incur additional cost to the user. Whereas the economic case [at the time of writing] for the installation of renewable heat energy technologies may not be

particularly attractive in relation to natural gas, these increased costs may enable the development of a solid business case for the installation of building integrated LZC technologies.

- The reason DH schemes are often not developed in rural locations is often the same as the reason why the gas network has also not been extended – financial viability. It is the case however that rural housing can contribute to providing a useful energy demand profile to counterbalance the energy demands of commercial organisations [daytime requirement only] that may have installed CHP or plant large enough to supply DH scheme.
- CHP / DH fired by alternative fuels such as waste or biomass are often located in rural areas or on the urban fringe due to the space requirements necessitated by storage and vehicle access. They also tend to be located on industrial estates which offer opportunities to co-locate complementary businesses.

The maps within this Renewable Energy Assessment do not show off gas areas due to lack of access to data. However, it is recognised that given the rural nature of Powys, a significant number of properties outside of larger settlements are likely to be 'off gas'.

GIS mapping of these areas could be completed by Powys County Council.

#### **Mapping residential heat demand and density**

A report for DECC<sup>39</sup> suggests that DHNs are not feasible unless a heat demand is present of at least 3MW/km<sup>2</sup>. 'Density' of heat demand refers to kiloWatt hour [kWh] / square kilometre [km<sup>2</sup>] of heat energy consumed in dwellings.

Information relating to heat densities can be used to inform:

- The identification of AHLs by providing, or adding to, a viable opportunity for the introduction of renewable heat
- A mix of buildings and energy uses which, together, represent a potential complementary energy demand profile [dwellings providing evening, weekend and night time energy demands as opposed to the normal weekday energy demands of commercial organisations]
- The identification of opportunities relating to social housing providers who are often tasked with achieving greater than the minimum environmental performance standards.

When allocating quantities of energy to dwellings or other types of buildings it is a useful check to look at national sources of data to ensure figures are broadly supported and to check whether annual energy consumptions are above or below national average. Above national average consumption may

<sup>39</sup> The Potential and Costs of District Heating Networks. A Report to the Department of Energy and Climate Change, April 2009



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indicate lack of energy saving education or a higher proportion of poorly insulated buildings, etc.

When allocating energy consumptions to buildings Technical Memorandum [TM] 46 conversions used are average figures for particular buildings assuming particular fuels are employed [e.g. natural gas is used for heating]. Outputs from this REA achieve greater accuracy and add considerable value to functionality due to the age and type of buildings, particularly dwellings, being identified.

The importance of identifying residential heat demand and density pertains to:

- The potential demand for heat in any one particular area
- Contributing to the identification of AHLs
- Feeding into the analysis of potential LZC solutions  
*Residential heat demand across Powys*

Based on the amended DECC energy consumption data for Powys, there were no Lower Level Super Output Areas [LLSOA] that had a heat density that would be considered sufficient for viable connection to district heating networks. Two LLSOA had a heat density of greater than 2MW/km<sup>2</sup>, including Newtown Central, and Ystradgynlais [2.28 and 2.62 MW/km<sup>2</sup> respectively]. Therefore our existing heat demand map for Powys does not display LLSOA with a heat density below this threshold.

### Identifying areas of high fuel poverty

Fuel poverty is a key concern of national governments and local authorities alike. Local authorities, including Powys County Council, produce reports relating to the number of people or households regarded as 'fuel poor'. Often, it is those living in rural parts of the country who suffer disproportionately from fuel poverty and this is attributable to a number of factors. For example, typically, wages are lower than for those employed in more urban areas, there is often a higher proportion of unemployed and fewer job opportunities, etc. A greater proportion of households are not connected to mains services and pay higher prices for fuels such as Liquefied Petroleum Gas [LPG] and heating oil. The combination of factors means that energy bills can constitute a greater proportion of the household costs than for many urban households.

A contributory factor of fuel poverty can also be the lack of energy infrastructure in rural locations. Often gas networks have not been connected in very rural areas due to high capital cost in relation to revenue generated. This means that residents of rural locations are forced to seek alternatives to natural gas such as LPG, heating oil or some form of solid fuel. The upside is that where the installation of a renewable energy technology is considered in such locations the economic

payback and the potential CO<sub>2</sub> reductions are proportionately better than when considered against natural gas.

The inclusion of an analysis of fuel poverty in this REA will hopefully add value by assisting Powys County Council in its targeting of resources to address fuel poverty and this REA might be integrated with other tools to assess potentially effective ways of addressing the issue.

### Energy Efficiency Retrofit Programmes

Over the next decade, investment into the sector in Wales will also come from:

- Nest – Wales' demand led fuel poverty scheme
- The Welsh Housing Quality Standard
- Feed-In-Tariffs
- Renewable Heat Incentive
- Green Deal
- Energy Act – giving landlords the responsibility of improving the energy efficiency of the private rented sector by 2018
- Energy supplier obligations.

Around £1bn over the next decade is likely to be invested into the energy performance of Welsh homes.

### Identifying existing DHN & CHP schemes and sources of waste heat

It is important to establish existing energy infrastructure as it may provide opportunities for expanded connectivity or increased efficiency / viability. Identification of current utilisation of renewable energy resources is covered by this Renewable Energy Assessment, including the current proportion of potential area wide targets being met.

The utilisation of current sources of waste heat can provide opportunities to improve fuel efficiency and secure CO<sub>2</sub> emission reductions. Extending existing infrastructure to additional users can increase the viability of a particular scheme.

### What is a DHN

A District Heating Network [DHN] is the term given to a system providing multiple individual buildings with heat generated from a single source. The source is generally a building known as an energy centre in which heat can either be generated from traditional fossil fuels [from a boiler] or from a low carbon source such as biomass.

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Heat can be transmitted as hot water, or in some cases steam, along buried pipes to a number of buildings in the local area. The pipes are known as heat mains. A heat exchanger located in each building enables the delivery of heat.

New controllers are provided (very similar to those fitted and linked with gas boilers) to operate the system and buildings can retain usually retain their internal distribution system (e.g. radiators).

Heat is metered and billed to consumers in much the same way that gas or electricity is. This is combined with a service charge to cover maintenance of the shared distribution system (electricity and gas bills also incorporate a charge for these services).

#### *What is a CHP*

Combined heat and power [CHP] is simply where the energy centre produces heat as a by-product of electricity generation. The heat is used to supply the DH network in the conventional way, whilst the electricity is either sold locally or onto the wholesale electricity market. The heat from CHP units can also be used to meet cooling demands via the use of absorption chillers. This can involve either a centralised chiller, distributing "coolth" via a chilled water network, or decentralised absorption chillers in individual buildings. This approach is sometimes referred to as "tri-generation" or CCHP [Combined Cooling Heat and Power].

#### *Existing DHN and CHP schemes in Powys*

The UK Heatmap [DECC] confirms that there are no large scale heat loads [including CHP sites] in Powys. This is further confirmed by the Ofgem [Renewable Obligation Certificates] database. However, Powys County Council confirmed that planning permission had been granted to 2.5 MWe biomass CHP system at Potter's Recycling, Welshpool, of which circa 5 MWt of waste heat could potentially be utilised.

#### **Developing an Energy Opportunity Plan for DHNs**

The bringing together of various data layers described above, together with the location of candidate sites for new development, informs the development of an 'Energy Opportunities Plan'. Energy opportunity plans for northern Powys, Central Powys and Southern Powys are provided below.

An updated Energy Opportunities Plan has been produced for this Renewable Energy Assessment replacing Candidate Sites with proposed LDP allocations. In terms of opportunities for District Heating connected to residential dwellings, the change from candidate to allocated sites has reduced viability in all locations. The sites allocated to employment land are potential opportunities but securing district heating will be particularly dependent upon the types of building uses / processes that co-locate. New Heat Opportunities maps are presented for the two towns considered to have the greatest, albeit likely not viable opportunity. The maps are presented in the map companion document to this REA.

#### **Evaluation of District Heating Network Opportunities**

The development of the energy opportunity plans for northern Powys, Central Powys and Southern Powys enabled AECOM and Powys County Council to identify clusters of candidate sites located in close proximity to existing public sector buildings with a potentially suitable demand for heat.. Following consultation with Powys County Council, three towns were identified that have potential for a heat network, namely:

- Llanidloes;
- Welshpool;
- Newtown.

An evaluation of district heating network opportunities at Llanidloes, Welshpool and Newtown is given in the supporting document titled: District Heating Network Evaluation of Site Clusters.

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## Appendices

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## Appendix A: Wind Energy Resource Methodology

The following methodology was used to establish the maximum potential wind energy resource across Powys.

### Typology of wind turbine used for the assessment

AECOM have assumed that the following type of onshore wind turbine be used for this assessment:

- Rated output: 2MW
- Hub height: 80m
- Rotor diameter: 80m
- Height to blade tip at highest point [tip height]: 120m

### Average Annual Wind Speeds

AECOM have assumed that there is no wind energy potential in areas with an average annual wind speed of less than 6.0m/s at 45m height above ground level, based on the UK AAWS database as reported by DECC.

- Minimum AAWS: 6.0m/s at 45m agl.

### Environmental and Heritage Constraints

#### *Environmental Constraints*

AECOM have assumed that there will be no wind energy potential in the following national and regional environmentally designated areas:

- National Nature Reserves [NNR]
- RAMSAR Sites
- Special Areas of Conservation [SAC]
- Special Protection Areas [SPA]
- Sites of Special Scientific Interest [SSSI]
- Broad Leaved Woodland [based on National Forest Inventory]
- Local Nature Reserves

#### *Heritage Constraints*

AECOM have assumed that there will be no wind energy potential in the following national and regional historically designated areas:

- Within the tip height [120m] of any Scheduled Monuments [CADW]
- Within the tip height [120m] of any Listed Buildings [CADW]

### Physical Constraints

#### *Transport Infrastructure*

AECOM have assumed that there will be no wind energy potential within the following distances of key transport infrastructure as identified by OS Strategi Data:

- 170m [tip height plus 50m] of Motorways [based on OS Strategi]
- 170m [tip height plus 50m] of Primary Roads [based on OS Strategi]
- 170m [tip height plus 50m] of Railway Lines [based on OS Strategi]
- 132m [tip height plus 10%] of A-Roads [based on OS Strategi]
- 132m [tip height plus 10%] of B-Roads [based on OS Strategi]

#### *Other Physical Constraints*

AECOM have assumed that there will be no wind energy potential within the following distances from inland waters as identified by OS Strategi Data:

- Major River [assumed 10m wide] [based on OS Strategi]
- Secondary River [assumed 5m wide] [based on OS Strategi]
- Minor River [assume 5m wide] [based on OS Strategi]
- Canals [assume 5m wide] [based on OS Strategi]
- Lakes [based on OS Strategi]

### Residential Noise Constraints

AECOM have assumed that there will be no wind energy potential in the following residential areas:

- 500m from residential properties [as defined by the LLPG]

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### **Aviation and Radar Constraints**

AECOM have assumed that there will be no wind energy potential in the following CAA and MoD aviation exclusion zones as identified within the CAA Visual Flight Rules [VFR] Charts:

- Controlled Airspace [including military aircraft low flying zones, or Tactical Training Areas]
- UK Aerodrome Traffic Zones
- Military Aerodrome Traffic Zones
- High Intensity Radio Transmission Areas
- Aerodromes with instant approach procedures outside controlled airspace

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## Appendix B: Biomass Energy Resource Methodology

The following methodology was used to establish the maximum potential renewable energy resource as derived from Energy Crops across Powys.

### Proposed Environmental and Heritage Constraints

AECOM excluded the following designated areas from land that could be allocated for energy crops in Powys.

- Grades 1, 2, 3a & 5 Agricultural Land
- National Forest
- Scheduled Monuments
- Historic Parks and Gardens
- National Nature Reserve
- Special Area of Conservation [SAC]
- Special Protection Area [SPA]
- Site of Special Scientific Interest [SSSI]

AECOM noted that there is a single Nitrate Vulnerable Zones located in Powys [circa 2km west of Bishop's Castle, Shropshire]. However, the NVZ is circa 0.25 km<sup>2</sup> in area and as such is not considered to have any strategic importance with regards to establishing the total potential biomass energy crop resource across the whole of Powys.

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## Appendix C: Energy from Waste Resource Methodology

2024	1,106,458	325,681	396,473
2025	1,150,716	317,359	402,640
<b>2026</b>	<b>1,196,745</b>	<b>309,248</b>	<b>408,903</b>

### Total Waste for North Wales

The table below confirms the reported waste arising by waste stream for North Wales up to and including 2013. The average annual change in waste consumption was used to project the total waste arising up to 2026.

**Table C.1: Total MSW, and C&I Waste arising across North Wales<sup>40</sup>**

Year	Municipal Solid Waste	Industrial	Commercial
2004	504,973	546,663	291,208
2005	525,172	530,263	297,032
2006	546,179	514,355	302,973
2007	568,026	498,924	309,032
2008	590,747	483,957	315,213
2009	614,377	469,438	321,517
2010	638,952	457,233	326,661
2011	664,510	447,174	330,581
2012	691,090	439,124	333,226
2013	718,734	432,977	334,559
2014	747,483	421,912	339,763
2015	777,383	411,130	345,048
2016	808,478	400,623	350,416
2017	840,817	390,385	355,867
2018	874,450	380,409	361,403
2019	909,428	370,687	367,024
2020	945,805	361,214	372,734
2021	983,637	351,983	378,532
2022	1,022,983	342,988	384,420
2023	1,063,902	334,223	390,400

### Total Waste for North Powys

The North Wales Regional Waste Plan confirmed the proportion of MSW and C&I waste that was allocated to North Powys in 1998/99 as 6.11% and 6.16% respectively. Thus the total MSW across North Powys in 2026 was calculated as 73,159 tonnes, and the total C&I waste was calculated as 44,216 tonnes.

### Total Waste for South Powys

The South Wales Regional Waste Plan confirmed that the total MSW across South Powys in 2022 was 44,382 tonnes. However, the amount of MSW was predicted to remain the same since 2015, as such this figure was assumed to also represent the total predicted MSW for South Powys at 2026.

The total C&I waste for South Powys was predicted up to and including 2021. The average reduction in C&I waste over this period was calculated to be 378 tonnes per annum. Based on the reported 2021 figure of 35,765 tonnes, the projected 2026 figure for C&I waste across South Wales was calculated as 33,875 tonnes.

### Total Waste for Powys

The total MSW across Powys at 2026 was predicted to be 117,541 tonnes

The total C&I waste across Powys at 2026 was predicted to be 78,090 tonnes

<sup>40</sup> North Wales Regional Waste Plan 1 Review

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## Appendix D: Solar PV Farms

The following methodology was used to establish the maximum potential solar PV farm energy resource across Powys.

### Environmental and Heritage Constraints

#### *Environmental Constraints*

AECOM have assumed that there will be no solar PV farm energy potential in the following national and regional environmentally designated areas:

- National Nature Reserves [NNR]
- RAMSAR Sites
- Special Areas of Conservation [SAC]
- Special Protection Areas [SPA]
- Sites of Special Scientific Interest [SSSI]
- Broad Leaved Woodland [based on National Forest Inventory]
- Local Nature Reserves

#### *Heritage Constraints*

AECOM have assumed that there will be no solar PV farm energy potential in the following national and regional historically designated areas:

- Within 120m of any Scheduled Monuments [CADW]
- Within 120m of any Listed Buildings [CADW]

### Physical Constraints

#### *Transport Infrastructure*

AECOM have assumed that there will be no solar PV farm energy potential within the following distances of key transport infrastructure as identified by OS Strategi Data:

- 170m of Motorways [based on OS Strategi]
- 170m of Primary Roads [based on OS Strategi]

- 170m of Railway Lines [based on OS Strategi]
- 132m of A-Roads [based on OS Strategi]
- 132m of B-Roads [based on OS Strategi]

#### *Other Physical Constraints*

AECOM have assumed that there will be no solar PV farm energy potential near inland waters as identified by OS Strategi Data:

- Major River [10m] [based on OS Strategi]
- Secondary River [5m] [based on OS Strategi]
- Minor River [5m] [based on OS Strategi]
- Canals [5m] [based on OS Strategi]
- Lakes [based on OS Strategi]

### Residential Constraints

AECOM have assumed that there will be no solar PV farm energy potential in the following residential areas:

- 500m from residential properties [as defined by the LLPG]

### Aviation and Radar Constraints

AECOM have assumed that there will be no solar PV farm energy potential in the following CAA and MoD aviation exclusion zones as identified within the CAA Visual Flight Rules [VFR] Charts:

- Controlled Airspace [including military aircraft low flying zones, or Tactical Training Areas]
- UK Aerodrome Traffic Zones
- Military Aerodrome Traffic Zones
- High Intensity Radio Transmission Areas

Aerodromes with instant approach procedures outside controlled airspace



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## Appendix E: Building Integrated Renewable Energy Uptake Modelling

This Appendix sets out the methodology and assumptions behind the micro generation uptake modelling. Renewable and low carbon technologies are included in the calculation methodology in order to represent the decisions made by the building owners. However, the non-renewable uptakes are excluded from the totals presented in the main report.

### Micro generation uptake in existing stock

The potential uptake of renewable micro generation technologies in the existing housing stock and in the bulk of the existing non-residential building stock in was projected using a spreadsheet model developed by AECOM. This forecasts the uptake of micro generation technologies based on information about:

- The rates at which 'Primary' systems come up for necessary replacement and at which 'Discretionary' purchases are considered;
- The current housing stock and non-residential building stock;
- The identity and attributes of 'Primary' heating system options [including some renewable energy] and of 'Discretionary' renewable energy systems; and
- The relationship between system attributes [including cost and 'nuisance' factors] and purchasing decision-making – the Choice Model.

Installations in new homes and new non-residential buildings are subject to different drivers and were considered separately in this Appendix.

The system attributes assumed to influence purchasing decisions are:

- Capital cost;
- Net annual energy costs: electricity & heating fuel costs [after any renewable energy savings] minus any incomes from feed in tariffs, renewable heat incentive and exports of electricity to the grid;
- Annual maintenance costs;
- Whether fuel storage is required [e.g. for biomass pellets or woodchip];

- Whether the garden needs to be dug up [for ground source heat pumps installation in homes]; and
- Whether additional indoor 'cupboard' space is needed [for micro-CHP units in homes, as the technology is typically larger than the generator being replaced].

The model accounts for projected real [i.e. excluding inflation] changes in costs and prices over time.

### *Rate of consideration for Primary and Discretionary systems*

It is assumed in the model that householders or landlords may purchase micro generation technologies in one of two situations:

Firstly, as the 'Primary' heating system for a home, as a necessary replacement for a previous heat generator that has reached the end of its life. Once homes reach an age equal to the typical service life of a boiler, it is assumed that a fixed percentage of homes need a new primary heat generator each year. The replacement rate is assumed to be 6% per year. As the replacement is 'of necessity', it is assumed that one of the list of suitable heating options must be selected;

- Condensing gas boiler,
- Condensing oil boiler,
- Condensing LPG boiler,
- Direct electric heating,
- Ground source heat pump,
- Air source heat pump,
- Stirling engine CHP,
- Fuel cell CHP [non-residential only],
- Biomass pellet boiler, or
- Biomass woodchip boiler. Secondly, as a 'Discretionary' purchase where the status quo is not to have a micro generator, and therefore one of the 'system' options is not to install one. By definition, Discretionary systems may be purchased at any time. The assumption made in the model is that 10% of households and businesses consider purchasing a microgeneration system each year.

The following Discretionary generator options are included in the model:

- Micro-wind turbines
- Small wind turbines
- Solar water heating
- Solar PV

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### *Existing building stock*

The rates of consideration are combined with data on the building stock to determine the number of primary heat generator replacements being selected and the number of discretionary purchases of micro generators being considered each year.

System suitability for non-residential buildings is assumed to depend only on building type. For homes, the suitability of technology options depends on:

- Home type [house or flat],
- Age [pre-1980, 1981 – 2005 or 2006 – 2016],
- Tenure [owner occupied, private rented, or social rented],
- Rurality [urban, suburban, or rural], and
- Gas connectivity [connected to mains gas or off-gas].

As such, the model requires data on:

- The current total number of homes, and the breakdown by type, age, tenure, rurality and gas connection; and
- The number [and where possible the floor area] of non-residential buildings by type.

### *Housing stock data*

The modelling uses the most up to date and comprehensive data on house numbers and typology that were identified. Data on the numbers of homes were obtained from Welsh Statistics 'Dwelling Stock Estimates' [2010]<sup>41</sup> as well as the Appendix 2 Draft Population and Housing Topic Paper [August 2011] PCDC. NB. For the purpose of this calculation, caravans were removed from the total. From the LSOA Household Spaces and Accommodation Type [KS16] Census [2001] data, caravans in Powys equate to 0.9% of the total household spaces. However, the total does include vacant and second homes which accounts for 6% of the total household spaces.

The breakdown of the housing stock was arrived at as follows:

- The percentage split by home type [house or flat] was based on Household Spaces [UV56] Census 2001 data for Powys Unitary Authority.

- The percentage split by age was based on information provided directly from Welsh Statistics<sup>42</sup> for the 2008 dwelling stock in Powys.
- Percentage by tenure was based on Households [UV63] Census 2001 data for Powys Unitary Authority, and compared against similar statistics reported in the Draft Population and Housing Topic Paper.
- The percentage split by rurality was based on rural-urban designation of Middle Super Output Areas obtained through a custom query on the Neighbourhood Statistics portal of the Office of National Statistics website.
- The percentage split by gas network connectivity was based on data published on <http://www.energyefficiencywales.org.uk/targetwales.php> for the Targeting Energy Efficiency in Wales project.

The housing stock classification adopted in the model results in 144 housing sub-types. The number of homes of each sub-type is assumed to be the total number of homes multiplied by the respective percentages for type, age, tenure, rurality and gas connectivity.

The total number of homes in the stock is assumed to decline at 0.02% per year, reflecting historical rates of demolition across Wales.

### *Non-residential building stock data*

The modelling uses available data on non-residential buildings, accepting that with the possible exception of Valuation Office Agency data on Bulk classes, the data are not comprehensive. The numbers of non-residential buildings by type were obtained as follows:

Bulk class types [Valuation Office Agency]<sup>43</sup>

- Retail
- Offices
- Warehouses
- Factories

Other types [LPA data, as available]

- Hospitality
- Health
- Schools
- Leisure centres

<sup>41</sup>

<http://www.statswales.wales.gov.uk/TableViewer/tableView.aspx?ReportId=18911>

<sup>42</sup> Email from Huw Jones [SPF&P - SRD] on 30.08.11

<sup>43</sup> Hereditaments Floorspace and Rateable Value Statistics [2005 Revaluation], 2008

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The total number of non-residential buildings is assumed to be constant for the purposes of the model.

#### *The Choice Model for projecting purchasing decisions*

At the heart of the AECOM take-up model is a choice model for forecasting purchasing decisions given the attributes of alternative, competing system options. In outline, the choice model is based on the theory that consumers make decisions to maximise 'utility' – the net benefits as perceived by the consumer, and that consumers' utility calculations are based on differences in specific attributes of the available options.

Day-to-day utility calculations are largely implicit and evaluation varies from consumer to consumer. A particular type of market survey called a 'conjoint survey' was used to collect data in a way that can reveal the implicit utility calculations, given a set of what are assumed to be the key attributes. A statistical technique called 'conditional logit', a form of regression analysis, was then used to calculate the coefficients of the formulas that each group of consumers is implicitly using to make choices. The survey distinguished owner-occupiers from landlords and non-domestic building owners and, as expected, found they valued attributes differently. The survey and analysis also distinguished between 'Primary' and 'Discretionary' choices and hence developed independent uptake models. The coefficients derived were highly statistically significant, showing that within the groups identified, consumer survey responses suggested strong similarity in the implicit calculation of utility.

The benefit of the use of conditional logit analysis is that the results can be used to forecast purchasing decisions given the attributes of alternative system options. For Primary decisions, the model calculates the proportion of consumers that will select each of the suitable system options, given their attributes. [Costs, fuel prices, etc. vary over time, while non-cost attributes stay constant.] The modelling principles are identical for Discretionary decisions with the notable inclusion of "do nothing" among the system options.

A detailed mathematical explanation of the choice model is outside the scope of this report but further information on the conjoint survey and conditional logit analysis underpinning the modelling is available in the original Element Energy research report used as the basis for the model.<sup>44</sup>

#### **Micro generation uptake in new development**

Our analysis was based on standard assumptions about the renewable energy output that a range of technologies could deliver for different types of building. The micro generation technologies considered for new development were:

- Solar PV
- Solar water heating
- Air source heat pumps
- Ground source heat pumps
- Biomass boilers
- Small scale wind

We have assumed that 400 homes will be built annually across the Powys, based on the predicted increase over LDP plan period 2011 to 2026 of 9,138 homes.

Typical development scenarios were derived from CLG research analysing the cost of Code for Sustainable Homes compliance.<sup>45</sup> These were used to break down homes in to different development types and estimate the mix of homes compared to flats.

Expected employment/job numbers were taken from the LDP. These were converted into potential area [in m<sup>2</sup>] of new commercial development per building type.

The calculation model builds in a 2 year lag for the influence of the policy and regulation changes to affect the uptake of renewable energy e.g. for the increased BIR uptake due to the 2013 Part L changes are not applied until 2015.

For the purpose of assigning house types, an assumption is made on the different types of growth sites within Powys. Namely, Brownfield, Greenfield, Edge of town or Urban (mixed) sites. This is based on our assessment of the growth strategy for Powys. For each of these types of growth sites, a housing split is assumed as shown in table E1 overleaf.

<sup>44</sup> The growth potential for Microgeneration in England, Wales and Scotland, Element Energy, TNS, Willis, K., Scarpa, R., Munro, A., 200

<sup>45</sup> Code for Sustainable Homes: A Cost Review, CLG, March 2010

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**Table E1: Assumed housing split**

Size	Type	Density per hectare	Flats	Terraced	Semi Detached	Detached
Small	Brownfield	80	10%	65%	20%	5%
Small	Greenfield	40	10%	60%	20%	10%
Small	Edge of town	40	0%	40%	20%	40%
Medium	Urban [mixed]	80	10%	65%	20%	5%

The table below shows the assumed gross internal area per workspace [Source: Planning for employment land, translating jobs into land, Roger Tyms and Partners, April 2010; and Employment Densities: A Full Guide, Arup Economics and Planning, July 2001.

**Table E2: GIFA per workspace**

Type of building	Area [m <sup>2</sup> ]
Offices B1	255
Retail & Leisure	187
Industry	1,050
Storage	818
Health & Education	5,000
Other	426

# District Heating Networks Evaluation of Candidate Site Clusters

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## List of Abbreviations

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Abbreviation	Description	Abbreviation	Description
CAPEX	Capital Expenditure	LDP	Local Development Plan
CESP	Community Energy Saving Programme	LPA	Local Planning Authority
CHP	Combined Heat & Power	MW	Megawatt
CLG	Communities and Local Government	MWe	Megawatt electrical
CO <sub>2</sub>	Carbon Dioxide	MWh	Megawatt hours
DHN	District Heating Network	MWhe	Megawatt hours electrical
HOP	Heat Opportunity Plan	MWt	Megawatt thermal
ESCO	Energy Services Company	MWht	Megawatt hours thermal
GW	Gigawatt	NPV	Net Present Value
GWh	Gigawatt hours	PCC	Powys County Council
IRR	Initial Rate of Return	PFI	Private Financial Initiative
kW	Kilowatt	PV	Photovoltaic
kWh	Kilowatt hours	TWh	Terawatt hour



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## Introduction

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## **1 Introduction**

### **1.1 Background**

This report follows on from the wider Renewable and Low Carbon Energy Assessment for Powys County Council, and is intended to provide an evaluation of district heating network opportunities associated with candidate site clusters. Clusters of candidate sites were identified as part of the energy opportunity assessment which formed the latter stages of the Renewable and Low Carbon Energy Assessment.

The methodology used for this assessment is fully compliant with the Welsh Government Renewable Energy Toolkit (2015 revision). For each district heating network opportunity, existing buildings and future new developments are considered. For each site/ area a high level assessment is carried out of the technical and financial viability of combined heat and power [CHP] and district heating covering gas engine CHP and biomass heat only technologies.

For each option the potential carbon savings, costs and revenues were calculated, and the potential gap funding required to make a scheme commercially viable have been identified. The analysis considered two rates of return, or discount rates, namely: a typical public sector discount rate [6%] and a typical private sector commercial rate [12%].

### **1.2 Choice of Study Area**

Three towns were identified that had a cluster of proposed candidate sites located together, namely: Llanidloes, Welshpool, and Newtown. All three are in the Severn Valley.

These were identified as part of the Heat Opportunity Mapping tasks for the wider Renewable and Low Carbon Energy Assessment. From these three areas, a total of seven scenarios were modelled for the district heating network evaluation of candidate site clusters. These were as follows:

#### *Llanidloes*

- ③ Llanidloes 1: candidate sites to the east of A470
- ③ Llanidloes 2: as Option 1 plus extension to existing housing cluster in centre of Llanidloes with high proportion of social housing.

#### *Welshpool*

- ③ Welshpool 1: candidate sites close to existing anchor loads [High School and Leisure Centre]
- ③ Welshpool 2: as Option 1, plus extension to the Hospital and serving the existing housing in between with a high proportion of social housing.

#### *Newtown*

- ③ Newtown 1: a network connecting key anchor heat loads, Newtown High School and Leisure Centre, along with two schools, Maesyrhandir C P School and Ysgol Cedewain Newtown.
- ③ Newtown 2: as Option 1, plus connection to Powys College and existing housing en route.
- ③ Newtown 3: as Option 2, plus extension to new development adjacent Fronlas Farm

Capabilities on project:  
Building Engineering

### 1.3 Stakeholder Workshop

A stakeholder workshop was held at Powys County Council, on 14th June 2012. The workshop was attended by stakeholders from South and North, Powys County Council, as well as the Council's Local Development Plan [LDP] Team Leader, Sustainability Officer and Energy Manager. The Carbon Trust Wales representative was also present. The full list of attendees is included in **Appendix B**.

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Capabilities on project:  
Building Engineering

## Overview of Sites

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## 2 Overview of Sites

### 2.1 Overview

This section presents the results of a high level assessment of the potential for district heating and CHP for clusters of candidate sites within towns in the County. This resulted in focus on three areas of Powys, namely:

- ③ Llanidloes,
- ③ Welshpool,
- ③ and Newtown

For each site and scenario, the analysis presents the following information:

*Heat Opportunity Plan [HOP]:* A HOP showing cluster of candidate sites in the context of the surrounding area.

*General Overview:* Introduction to the option outlining the building typology and any specific details relating to any existing features that are of interest as well as proposed development plans.

*SWOT Analysis:* Covering existing and proposed buildings including any phasing and timing issues. In addition, details of the key opportunities and constraints within the site that could have an impact on the technical or commercial viability or the practical delivery of a network, as well as the potential for future expansion of a heat network.

*List of key existing buildings:* Using the data provided by the Council and from the Community and Local Government [CLG] database, we have identified a number of key existing buildings within the sites, and listed their heat demands. These heat demands are from Council gas consumption data or from additional data sought from Council contacts.

*List of potential new buildings:* The proposed buildings within the site have been identified from the list of candidate sites provided by the Council.

Housing numbers, and non-residential floor areas, for the new buildings are based on capacities or densities stated in candidate site proposal forms, or, where not available, an assumed dwelling density of 30 dwellings per hectare. This compares with a historic average density for the County of 26 dwellings per hectare. The estimate of non-residential floor areas is based on standard industry estimates of the ratio of floor area to plot area for different use classes.

An estimated heat demand for each of the development sites is given based on the likely capacity and use of each site, based on discussions with Powys County Council.

### 2.2 Llanidloes

#### General Overview

Llanidloes is located in central Powys, and has clusters of candidate development sites [residential and employment] to the east of the town centre. There is an existing leisure centre with a swimming pool located to the south and hospital located to the north. A new use class B2 area is also proposed, to the east of the town, which is an existing industrial estate

New residential development to the east of the river could be a catalyst for district heating. Particularly Site 332 [up to 60 homes; 21 dph] and surrounding sites 1,031, 1,035 and 1,096.

There are two key existing potential anchor heat loads [Leisure Centre and Hospital]; however, these are approximately 1 mile from the new development site, in opposite directions. The first option [Llanidloes 1.1] focuses on the new development only, and the second option [Llanidloes 1.2] extends into the centre to serve existing housing which has a heat density of 2.6MW/km<sup>2</sup> and 44% social housing.

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### SWOT Analysis

The table below provides an overview of existing and potential buildings at Llanidloes including any phasing and timing issues. In addition, details of the key opportunities and constraints within the site that could have an impact on the technical or commercial viability or the practical delivery of a network are summarised, as well as the potential for future expansion of a heat network.

SWOT Analysis		
Existing buildings	Potential Buildings	Phasing /timing issues
<p>Key potential anchor heat loads:</p> <ul style="list-style-type: none"> <li>③ Llanidloes Sports Centre</li> <li>③ Llanidloes High School</li> <li>③ Llanidloes War Memorial</li> </ul> <p>Hospital Other non-residential buildings:</p> <ul style="list-style-type: none"> <li>③ Llanidloes C P School</li> <li>③ Maes Y Wennol Care Home</li> <li>③ Maes Y Wennol Day Centre</li> <li>③ Bodlondeb Sheltered Housing</li> <li>③ Hafren Furnishers [Main Store]</li> <li>③ Community Centre</li> <li>③ Library</li> <li>③ Health Centre</li> <li>③ Youth Centre</li> </ul>	<p>Key sites:</p> <ul style="list-style-type: none"> <li>③ Site 104: 7,200 m<sup>2</sup> non-residential</li> <li>③ Site 332: up to 60 homes</li> <li>③ Site 633: 5,100 m<sup>2</sup> non-residential</li> <li>③ Site 1031: up to 127 homes</li> <li>③ Site 1035: up to 212 homes</li> <li>③ Site 1096: up to 25 homes</li> </ul>	<p>There are different developers for each site, each with different build out times. This could cause difficulties with coordination for a central energy centre.</p>

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SWOT Analysis
<b>Site opportunities</b>
<p>Potential to also connect site 679 with up to 95 new homes and 26,460 m<sup>2</sup> of non-residential development.</p> <p>Surrounding existing housing has a high proportion of solid wall homes which are 'hard to treat' and may benefit from connection to district heat network, in terms of cost effective carbon reduction. For example, 100% of the 137 homes in output area 00NNSA0011 have solid walls.</p> <p>At the stakeholder workshop, it was confirmed that 'Llanidloes Energy Solutions' has previously evaluated energy efficiency options and low and zero carbon energy opportunities across the town. This indicates good community interest in low carbon heating solutions and could make stakeholder engagement very successful.</p>
<b>Site constraints</b>
<p>No obvious large customers for electricity output close to the new development sites, therefore financial model assumes all electricity from any gas engine CHP is exported to the grid.</p> <p>The most significant potential anchor heat loads are too far away from the candidate development sites to make connection into a common heat network viable.</p>
<b>Next steps</b>
<p>Liaise with developers to ascertain interest in a central energy strategy.</p>

#### List of key existing buildings

The table below provides a summary of key existing buildings at Llanidloes.

Name	Annual Heat Demand [MWh]	Source
Llanidloes War Memorial Hospital	708	Wales NHS
Llanidloes Sports Centre	555	Powys County Council
Llanidloes C P school	267	Powys County Council
Llanidloes High School	671	Powys County Council
Maes y Wennol Care Home	406	Glasu Report
Maes y Wennol Day Centre	64	Glasu Report
Name	Annual Heat Demand [MWh]	Source
Bodlondeb Sheltered Housing	174	Glasu Report
Hafren Furnishers [main store]	375	Glasu Report

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Community Centre	348	Glasu Report
Library	24	Glasu Report
Health Centre	62	Glasu Report
Youth Centre	32	Glasu Report
<b>Total</b>	<b>3,687</b>	

### List of potential buildings

The table below provides a summary of proposed buildings and estimated year of build out at Llandiloes

Reference	Name	Maximum number of dwellings	Non residential floor area [m <sup>2</sup> ]	Estimated build out year
100	Land at Parc Hafren	0	14,447	2016
104	Land at Parc Derwen Fawr	0	7,224	2012
332	Land to South East of Rhos-y-Maen Uchaf	60	0	2012
633	Land adjacent to Chapel Farm	0	5,145	2012
675	Hafren Terrace and adjacent A470	0	22,500	2016
679	Land adjacent to Chapel Farm	95	26,460	2021
1,031	Chapel Farm, Gorn Road	127	0	2016
Reference	Name	Maximum number of dwellings	Non residential floor area [m <sup>2</sup> ]	Estimated build out year
1,035	Chapel Farm, Gorn Road	212	0	2016
1,096	Chapel Farm, Gorn Road	25	0	2016
<b>Total</b>	-	<b>519</b>	<b>75,776</b>	-



Capabilities on project:  
Building Engineering

## 2.3 Welshpool

### General Overview

Welshpool is located in northeast Powys and has a number of candidate urban infill development sites and urban extensions to the north, including a proposed [B1 / B8] site in north east Welshpool. In the centre, there is an existing hospital; high school and leisure centre to the north, and a cluster of social housing in the west. There is a Community Energy Saving Programme [CESP] area in the south, along with a candidate residential development site [site 525].

The potential sites indicated for this study are generally in the north of the town, and are predominately residential. Only a small mixed use development [site 929] near the High School and the proposed industrial site [B1/B8, site 513] are included within the preferred areas for district heating assessment.

The cluster of potential anchor heat loads and potential new residential development close to the leisure centre appear to be the most suitable energy centre location [Welshpool Option 1], with a possible extension to the Hospital and serving the existing housing in between which has 24% social housing [see Welshpool Option 2].

There could also be further extension to the new housing on the northwest edge of town. These residential developments could potentially be required to connect to any district heating network [DHN] as part of the planning requirements, if a network is established further to the east.

Capabilities on project:  
Building Engineering

## SWOT Analysis

The table below give an overview of existing and potential buildings at Welshpool including any phasing and timing issues. In addition, details of the key opportunities and constraints within the site that could have an impact on the technical or commercial viability or the practical delivery of a network are summarised, as well as the potential for future expansion of a heat network.

SWOT Analysis		
Existing buildings	Potential Buildings	Phasing /timing issues
<p>Key potential anchor heat loads:</p> <ul style="list-style-type: none"> <li>③ Welshpool High School,</li> <li>③ Welshpool Flash Leisure Centre</li> <li>③ Welshpool Community Hospital</li> </ul> <p>Other non-residential buildings:</p> <ul style="list-style-type: none"> <li>③ Welshpool Neuadd Maldwyn</li> <li>③ Ysgol Maesydre School</li> <li>③ Ardwyn Nursery &amp; Infants School Welshpool</li> <li>③ Welshpool Library</li> <li>③ Welshpool Powysland Museum</li> </ul>	<p>Key sites:</p> <ul style="list-style-type: none"> <li>③ Site 518: up to 50 homes</li> <li>③ Site 529: up to 172 homes</li> <li>③ Site 929: up to 109 homes</li> <li>③ Site 524: up to 40 homes</li> <li>③ Site 527: up to 103 homes</li> </ul>	<p>Potential phasing issues with proposed candidate sites if they do not progress to the LDP.</p>
Site opportunities		
<p>Extend to further new housing developments.</p> <p>Extend into centre, via social housing and Hospital. Majority of the social housing is run by Mid Wales Housing with some Powys County Council [PCC] stock. This shows a good potential for coordination of connections to a heat network.</p> <p>Existing housing in output area 00NNTG0008 has 12% of homes "off-gas", and nearby site 00NNTG0009 to the south has 84% homes "off-gas"</p> <p>At the stakeholder workshop, it was confirmed that there is a proposal for a biomass CHP facility at Potters Recycling, just east of the railway station. This could be a heat source for a wider DHN. The biomass CHP project is being supported by Carbon Trust Wales.</p> <p>Welshpool High School currently runs on oil boilers and therefore district heating could provide a good opportunity to reduce carbon emissions as it would provide a lower carbon source of heating.</p>		
Site constraints		
<p>Canal to the south east of the site. The feasibility of crossing the canal to reach all of Site 929 would need to be reviewed.</p> <p>At the stakeholder workshop, it was confirmed that the dwelling numbers in the plan candidate sites are likely to be lower than stated in the candidate sites, and that the proposed candidate sites 514 and 529 are located on playing fields and as such are unlikely to progress to the LDP.</p>		
SWOT Analysis		
Next steps		
<p>Liaise with Potters Recycling to discuss options for supplying heat to a wider DHN.</p> <p>Liaise with developers of site 518 and 929 to ascertain interest in central energy strategy.</p>		

Capabilities on project:  
Building Engineering

### List of key existing buildings

The table below provides a summary of key existing buildings at Welshpool.

Name	Annual Heat Demand [MWh]	Source
Welshpool Community Hospital	805	Wales NHS
Welshpool High School	1,171	Powys County Council
Welshpool Flash Leisure Centre [North]	1,872	Powys County Council
Welshpool Neuadd Maldwyn	269	Powys County Council
Ysgol Maesydre School	227	Powys County Council
Ardwyn Nursery & Infants School Welshpool	116	Powys County Council
Welshpool Library	61	Powys County Council
Welshpool Powysland Museum	66	Powys County Council
<b>Total</b>	<b>4,586</b>	

### List of potential buildings

The table below provides a summary of proposed buildings and estimated year of build out at Newtown.

Reference	Name	Maximum number of dwellings	Non residential floor area [m <sup>2</sup> ]	Estimated build out year
513	Buttington Cross Industrial Estate	0	4,945	2012
518	Land at Gallowtree Bank	50	0	2012
519	Red Bank	76	0	2012
523	Land Red Bank	100	0	2016
524	Land at Gungrog Hill	40	0	2012

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525	Berriew Road	88	0	2012
526	Land at Gungrog Hill [SE]	94	0	2021
527	Land at Gungrog Hill [near Hall]	103	0	2021
528	Land at Red Bank [South]	67	0	2021
529	Land at Gungrog Hill [NW]	172	0	2021
583	Site adjacent Brynfa House,	18	0	2012
917	Ardwyn Nursery and Infant School,	9	4,705	2021
929	Welshpool High School,	109	21,722	2016
1,063	Land off Red Bank, [East]	260	0	2012
1,164	Land off Red Bank, [West]	261	0	2016
<b>Total</b>	-	<b>1,447</b>	<b>31,372</b>	-

## 2.4 Newtown

### General Overview

The Newtown residential and mixed use candidate sites considered for this analysis are urban extensions to the south.

Key potential anchor heat loads are Newtown High School, Powys College and Newtown Leisure Centre all south of the railway line. There is the potential for extension of a network north of the railway line to connect to Council offices, the Hospital and a potential Sewage Gas site, however this is a relatively long distance.

As the potential new developments are located in the same area, both south of the river, and approx 2.5 miles from the Hospital, the modelling assumes that the heat network extent would be restricted to south of the railway line. These options would serve the Powys College, Newtown High School and Leisure Centre, as well as smaller schools, Maesyrrhandir C P School and Ysgol Cedewain Newtown.

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**SWOT Analysis**

The table below give an overview of existing and potential buildings at Newtown including any phasing and timing issues. In addition, details of the key opportunities and constraints within the site that could have an impact on the technical or commercial viability or the practical delivery of a network are summarised, as well as the potential for future expansion of a heat network.

SWOT Analysis		
Existing buildings	Potential Buildings	Phasing /timing issues
<p>Key potential anchor heat loads:</p> <ul style="list-style-type: none"> <li>③ Newtown Leisure Centre</li> <li>③ Hospital</li> <li>③ Newtown High School</li> <li>③ Powys College</li> </ul> <p>Other non-residential public buildings:</p> <ul style="list-style-type: none"> <li>③ Montgomery County Infirmary</li> <li>③ Maesyrrhandir C P School</li> <li>③ Ysgol Cedewain Newtown</li> <li>③ Newtown Area Library</li> <li>③ Newtown Robert Owen House</li> <li>③ Hafren Junior School Newtown</li> <li>③ Newtown Ladywell Green Nursery &amp; Infants School</li> <li>③ Newtown The Park Council Offices</li> <li>③ Newtown Old College Offices</li> <li>③ Treowen C P School Newtown</li> <li>③ Penygloddfa C P School Newtown</li> </ul>	<p>Key sites:</p> <ul style="list-style-type: none"> <li>③ Site 591: up to 95 homes</li> <li>③ Site 586: up to 30 homes</li> </ul>	<p>Coordination required with the timing with expansion works at High School.</p>
Site opportunities		
<p>At the stakeholder workshop, it was confirmed that the High School is likely to be expanded to include a Welsh Medium School [large primary school] which would increase the heat demand and provide an opportunity for any infrastructure works.</p> <p>Industrial estates located between development site 591 and High School which could have high heat demand. At the stakeholder workshop, it was confirmed that Mochdre Industrial Estate is one of the largest employment centres in Powys. However, there are currently no significant heat demand/users.</p> <p>The social housing cluster nearby at Garth Owen is either run by Mid Wales Housing or PCC and could provide further heat sales.</p> <p>A heat network could extend north into the town centre in the future.</p>		
SWOT Analysis		
Site constraints		

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Railway and river constraints.

At the stakeholder workshop, it was confirmed that the proposed level of new homes in the two candidate sites [591, 586] may be reduced by a proposal for a new bypass which could pass across the sites.

#### Next steps

Confirm the heat demand of Powys College as this is currently based on estimates rather than actual gas consumption.

#### List of key existing buildings

The table below provides a summary of key existing buildings at Newtown.

Name	Annual Heat Demand [MWh]	Source
Montgomery County Infirmary	887	Wales NHS
Newtown Maldwyn Leisure Centre [North]	1,291	Powys County Council
Maesyrrhandir C P School	198	Powys County Council
Ysgol Cedewain Newtown	215	Powys County Council
Newtown High School	1,173	Powys County Council
Newtown Area Library	171	Powys County Council
Newtown Robert Owen House	113	Powys County Council
Hafren Junior School Newtown	183	Powys County Council
Newtown Ladywell Green Nursery & Infants School	146	Powys County Council
Newtown The Park Council Offices	103	Powys County Council
Newtown Old College Offices	111	Powys County Council
Name	Annual Heat Demand [MWh]	Source
Treowen C P School Newtown	115	Powys County Council
Penygloddfa C P School Newtown	193	Powys County Council

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Powys College	671	Estimated
<b>Total</b>	<b>5,568</b>	

### List of proposed buildings

The table below provides a summary of proposed buildings and estimated year of build out at Newtown.

Reference	Name	Maximum number of dwellings	Non residential floor area [m <sup>2</sup> ]	Estimated build out year
586	Site adjacent Castell Y Dail. Heol Mochdre.	30	1,520	2012
591	Site adjacent Fronlas Farm, Mochdre Lane,	95	0	2016
<b>Total</b>	-	<b>125</b>	<b>1,520</b>	-

## Viability Appraisal

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Capabilities on project:  
Building Engineering

### **3 Viability Appraisal**

#### **3.1 Overview**

This section provides an analysis of the potential costs and benefits of the proposed district heating options described in section 2. It concentrates mainly on looking at the financial performance of the seven options.

#### **3.2 Technology options**

Two technologies have been modelled to show the comparison between using gas engine CHP and Biomass heat-only. This is to show the different benefits of the two technologies such as RHI incentives for biomass fuel, revenue from electricity sales with CHP, and lower carbon emissions factor for use of biomass.

#### **3.3 Measuring financial performance**

For the financial analysis, two key measures of financial performance have been presented, for the various options, namely:

Net Present Value [NPV] for two discount factors, 6% and 12%. The former equates to a typical value used for public sector, or public/private projects, such as Private Financial Initiative [PFI], whilst the latter equates to a typical rate of return that would be sought by commercial organisations. These two values give an indication of whether scheme options could be delivered on a purely commercial basis or whether there would need to be public sector involvement, with potential access to lower cost sources of finance. The NPV is a useful indicator as it shows, for any given discount factor and length of contract, how much gap funding may be required [if any] in order to make a project viable.

Internal Rate of Return [IRR]. The actual rate of return achieved is also shown, as this provides a quick way of assessing whether a scheme is likely to exceed either the 6% or the 12% rate of return thresholds discussed above.

For the NPV and IRR calculations, two project lifetimes, of 15 and 30 years, have been considered, given that the heat network and the energy centre are long term investments: in the case of the network, this may have a lifetime in excess of 30 years. This is done as it is important to understand not only the values of the NPV and IRR but also the time period over which they are calculated. A public sector entity generally can take a longer term view of returns, whereas commercial organisations may not be interested in a project with a 12% rate of return, if that is over 30 years, rather than 15.

However, it is important to note that for options with significant levels of new housing development, there is the potential for developer contributions towards the cost of the network, as it will help them meet their future mandatory requirements for zero carbon new homes<sup>46</sup>. These developer contributions could provide the level of gap funding needed to make the district heating network viable. Therefore, the commercial viability of a heating network for new development areas needs to be viewed as a combination of the NPV and IRR analysis described above, and the potential developer contributions.

It must be stressed that this contribution would not necessarily increase the developer's build costs, as it is a cost they would have to bear anyway through whatever option they choose to meet zero carbon. This is explained in more detail below.

#### **3.4 Cash flow analysis**

The cash flow analysis graph shown at the end of each capital expenditure [CAPEX] and cash flow section confirms the revenue and costs over a period of time. For example, the cash flow analysis will show where there are sudden outgoing costs, and this could indicate additional pipe may have been added to connect to a new development, or additional plant added to the energy centre.

The steady increase of a cumulative cash flow graph shows the rate of net revenue each year taking into account operating costs. Therefore, if the cumulative cash flow has a steep incline, then the incoming revenue from sales or incentives is

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<sup>46</sup> This is also true to a certain extent for non-residential buildings, although this is harder to quantify as the definition of zero carbon for non-dwellings is currently less well defined, and there is also a very wide variety of different building types.

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significantly greater than the operating costs. However, if there is shallow incline, than the incoming revenue will be closer in value to the outgoing costs. If there is no increase, then the net revenue is zero.

The year that the cumulative cash flow crosses the zero x-axis, indicates the year at which the project would breakeven.

The figures are undiscounted, which means that the future costs have not been discounted and are fixed at today's prices.

### 3.5 Potential developer contributions

From 2016, it is anticipated that all new housing will need to be "zero carbon". The current guidance is that in addition to meeting a base level of energy efficiency, this will consist of providing a certain level of carbon reduction on-site through on-site low carbon energy generation, which is referred to as "Carbon Compliance". The most recent work on this was published by the Zero Carbon Hub, in February 2011<sup>47</sup>. This work modelled the costs of meeting the Carbon Compliance element using photovoltaic panels [PV] and gas boilers for each dwelling. PV was used as a benchmark for the costs of meeting the Carbon Compliance target, as it can be readily applied to most dwellings, and with the recent fall in cost of PV panels over the last few years, is now one of the most cost-effective on-site generation technologies.

The study also calculated the contribution that district heating technologies could make to achieving Carbon Compliance, using either gas [engine] CHP or biomass heating, and the amount of PV that may still be required in each case to achieve compliance. Using this information, it is possible to deduce the potential capital cost savings that could arise from using district heating as a result of needing less, or no PV.

This estimated cost saving provides a value for the potential capital contribution that a developer could make towards connection to a district heating network. This assumes that a developer would not see any increase in their build costs beyond what they would incur through the use of the most cost-effective alternative solution [to district heating] to meeting the zero carbon requirement, which is assumed to be PV.

For each technology option an estimate of avoided cost is presented for each house type. The costs are based on the estimated price of the PV element in 2016, allowing for expected learning rates, but with no inflation added in. The cost of Carbon Compliance for PV is the cost of the PV element only, and does not include the cost of the gas boiler. The avoided costs and potential developer contribution are presented for each option within this report.

However, at the time of writing, it is important to note that there is significant uncertainty about the potential costs to developers of achieving Carbon Compliance, and hence the level of potential developer contributions described above. This is because the Government has yet to finalise the level of the Carbon Compliance target, and there is also uncertainty around the future costs of PV. If the Government decides to relax the Carbon Compliance target, or if PV costs fall faster than anticipated, then the potential developer contribution could reduce.

It is possible that developers could also see significant avoided costs for new non-domestic buildings from connecting to a DHN, particularly for mixed use developments, where the cost of the infrastructure could be shared with new housing. However, this could only be quantified as part of a more detailed assessment for individual sites.

### 3.6 Allowable Solutions

Once a developer has met the Carbon Compliance requirement on-site, the current definition of zero carbon requires that they deal with the remaining carbon emissions through so-called Allowable Solutions. The most recent Government impact assessment for the Zero Carbon Homes policy has estimated that the cost of Allowable Solutions would be £49 per tonne of CO<sub>2</sub> per annum, totalled over 30 years. This figure is in present value terms, and assumes, in effect, that this is the cost that the developer would pay upfront on completion of each new dwelling.

One of the potential Allowable Solutions, at the time of writing, could be to fund the connection of district heating networks to reduce the carbon emissions of existing buildings. This could potentially assist with the overall viability of a district heating scheme, and thereby help reduce the cost to a developer of connecting the new homes, as explained above. However, this

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<sup>47</sup> "Carbon Compliance, setting an appropriate limit for zero carbon new homes, findings and recommendations", February, 2011

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solution may require a local authority to have a policy mechanism in place to require payments into a local fund, rather than a developer paying into a national fund.

It is possible to estimate the approximate level of Allowable Solutions which may be raised in Powys through future development, based on the most recent estimates of the costs of Allowable Solutions from the Zero Carbon Hub. For each option, an estimate of the value of allowable solution fund is presented.

It should be noted, that as with the Carbon Compliance costs described above, at the time of writing there was significant uncertainty about the potential costs to developers of meeting Allowable Solutions. The Government has yet to confirm what the cost of Allowable Solutions will be, which solutions will be eligible and whether local authorities will be able to require payments into a local fund, or whether all payments will be made via a national scheme.

### 3.7 Key assumptions for assessment of costs and revenues

The cost assessments presented in this report are approximate only, and are based on budget prices from suppliers as well as typical industry benchmarks. The heat network costings have been based only on a desktop assessment of potential pipe routes, and make no allowance for actual ground conditions, buried services or other constraints. A Quantity Surveyor has not been involved in the preparation of these costings and therefore they should not be relied upon for detailed project costing.

Other key assumptions are as follows:

- ③ All capital costs are shown in 2012 prices, with no allowance for inflation, or technology learning rates that may reduce capital costs in the future.
- ③ All ongoing revenues and costs are shown in 2010 prices, with no allowance for inflation or real price increases over time.
- ③ All revenues are pre-tax.
- ③ All capital costs include an allowance of 10% for professional fees and a contingency of 15% for heat network costs and 10% for energy centres and plant.
- ③ The heat network can meet 80% of the annual heat demand on the network. The other 20% is assumed to be met by back up gas boilers at the energy centre, due either to plant downtime [about 10% of the year], or because peak heat demand exceeds the peak heat output from the plant.
- ③ For existing developments, the costing of the heat network includes the primary backbone and the secondary network to run along streets to serve buildings. However, it does not allow for the cost of heat exchangers or meters, the costs of final connections, or the costs of any internal pipework to buildings.
- ③ For Council properties, no account of CRC savings have been included in the cash flow analysis as these savings would not typically be seen by the network operator.
- ③ The cash flow model allows for the fact that future, and some existing, developments will be connected in different points in the future and not in year 1.
- ③ All other cost and technology assumptions used in these calculations are included in **Appendix A**.

Capabilities on project:  
Building Engineering

## **4 Llanidloes – Option 1**

### **4.1 General overview**

Llanidloes Option 1 focuses on the potential new development sites only and the model includes and assumes the following:

- ③ Site 104: 7,200 m<sup>2</sup> non-residential development
- ③ Site 332: up to 60 homes
- ③ Site 633: 5,100 m<sup>2</sup> non-residential development
- ③ Site 679: up to 95 homes, and 26,500 m<sup>2</sup> non-residential development
- ③ Site 1031: up to 127 homes
- ③ Site 1035: up to 212 homes
- ③ Site 1096: up to 25 homes

Therefore, overall the model assumes that a total of 519 homes, and 39,619m<sup>2</sup> non-residential development would be connected. However, the relatively steep topography of the sites may make this figure difficult to achieve in practice.

The model assumes different build dates for the development sites as follows:

- ③ Short term [approx 2012] sites: 104, 332, 633 [60 homes]
- ③ Midterm [approx 2016] sites: 1031, 1035, 1096 [364 homes]
- ③ Long term [approx 2021] site: 679 [95 homes]

Therefore a total of 459 homes will be built after 2016, therefore requiring to meet the Zero Carbon Homes policy.

#### *Key assumptions:*

As there is no obvious large electricity user on-site, the model assumes that all of the electricity generation from any gas engine CHP is exported to the grid.

The location of the energy centre is assumed to be within plot 1031 as this is central to the rest of the network.

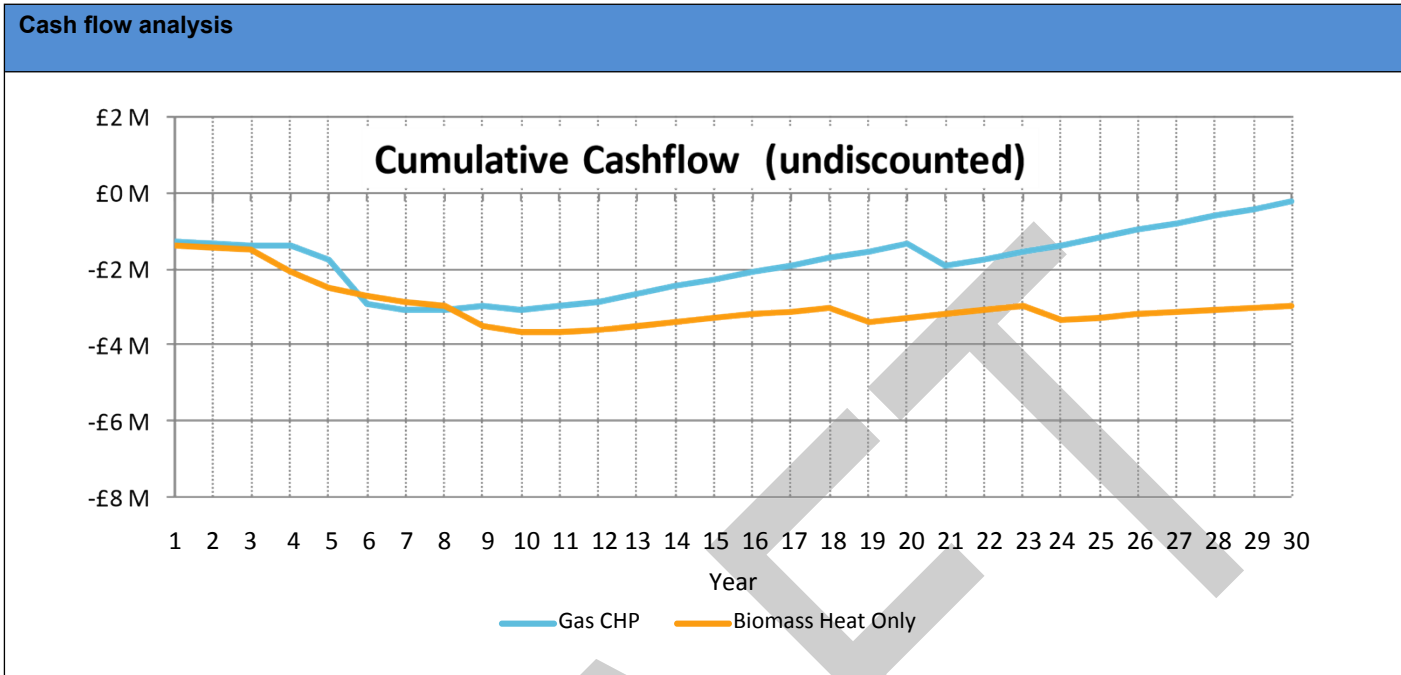
Capabilities on project:  
Building Engineering

## 4.2 CAPEX and Cashflow

Technical assessment	
Annual heating & hot water demand	7,298 MWh [at full build out]
Total backbone trench length	475 m
District heating CAPEX	£1.3 m
Peak load at the energy centre at full build out [thermal]	5.3 MW

Financial assessment			
CHP option financial viability		Biomass option financial viability	
CHP system size	1.4MW x 1	System size [thermal output]	0.7MW x 2
Install years	2017	Install years	2015 & 2020
Energy centre capital cost	£1.7 m	Energy centre capital cost	£1.97 m
Year 1 net revenue	-£0.0m	Year 1 net revenue	-£0.0 m
Year 30 net revenue	£0.19 m	Year 30 net revenue	£0.04 m
Without developer contribution		Without developer contribution	
15 yr NPV @ 6%	-£2.19 m	15 yr NPV @ 6%	-£2.81 m
15 yr NPV @ 12%	-£2.03 m	15 yr NPV @ 12%	-£2.44 m
15 yr IRR	No return achieved.	15 yr IRR	No return achieved.
30 yr NPV @ 6%	-£1.66 m	30 yr NPV @ 6%	-£2.72 m
30 yr NPV @ 12%	-£1.87 m	30 yr NPV @ 12%	-£2.41 m
30 yr IRR	No return achieved.	30 yr IRR	No return achieved.

Capabilities on project:  
Building Engineering



**4.3 Potential developer contributions**

This datasheet presents an estimate of the avoided costs to the developer for installing DHN, compared with PV, in order to meet the Carbon Compliance element of the zero carbon homes policy.

For Llanidloes, Option 1, we have assumed the following breakdown of house types to be built post 2016, based on information provided by the Council and assumed build out dates:

Flats:	37
Semi detached:	184
Terraced properties:	193
Detached properties:	46
<b>Total:</b>	<b>459</b>

The following table shows the potential cost saving per dwelling to the developer from connecting to a district heating system contributions and avoiding the costs of installing PV to meet Carbon Compliance. More PV would be avoided if a biomass option is chosen rather than a gas CHP option, because biomass has a lower carbon emissions rate than gas and would be able to save more carbon. The figures below are shown in assumed 2016 costs. The detailed calculation for how these costs were derived is provided in **Appendix C**.

Capabilities on project:  
Building Engineering

Total potential avoided photovoltaic cost from district heating solution [per dwelling]			
Gas engine CHP option		Biomass option	
Flat	£1,332	Flat	£1,332
Semi	£726	Semi	£3,004
Terrace	£1,637	Terrace	£3,444
Detached	£1,134	Detached	£4,033

The following table shows how this relates to the Llanidloes Option1 in terms of potential contributions from developers connecting to any DHN, based on the assumed levels of total housing development post 2016.

Total potential developer contributions [2016 costs] <sup>48</sup>			
Gas engine CHP option		Biomass option	
Flat	£48,911	Flat	£48,911
Semi	£133,257	Semi	£551,534
Terrace	£315,504	Terrace	£663,934
Detached	£52,060	Detached	£185,115
<b>Total</b>	<b>£549,731</b>	<b>Total</b>	<b>£1,449,494</b>

This shows that for both technology options, the potential cost which is offset by not needing to install as much PV to meet the Carbon Compliance element of the zero carbon homes policy would not be able to bridge the gap in funding required to deliver a reasonable rate of return for the schemes.

This option is for new developments only therefore the developers would be the only stakeholders involved in the DHN and could be easier to co-ordinate. However, as noted in the SWOT analysis, the build out times for these developments are unlikely to support a DHN scheme and co-ordination between the different developers is likely to be difficult.

<sup>48</sup> These costs are undiscounted. They also make no allowance for how the costs of Photovoltaics systems may fall after 2016, and therefore may be an overestimate for those development sites to be built out in the longer term.

Capabilities on project:  
Building Engineering

#### 4.4 Allowable Solutions

This datasheet presents an estimate of the value of an Allowable Solutions fund which could potentially be generated by the new homes, in order to meet the Allowable Solutions element of the zero carbon homes policy. This figure is calculated by totalling the total residual carbon emissions to be saved for each dwelling built after 2016, totalled over 30 years for that dwelling.

	No. of new homes [post 2016]	Total value of AS @ £49/tonne carbon over 30 years per dwelling	Potential value of Allowable Solutions [ @£49/tonne]
Flat	37	£1,122	£41,186
Semi	184	£1,229	£225,630
Terrace	193	£1,229	£236,911
Detached	46	£1,735	£79,618
<b>Total</b>	<b>459</b>	-	<b>£583,345</b>

For Llanidloes, Option 1, there would be no existing buildings connected to the DHN therefore this Allowable Solutions fund could not be used to fund the network, and would not help with the level of financial performance shown for this option. However, this indicates the value of Allowable Solutions that could be available to fund other projects within Powys to reduce carbon emissions from energy use in existing buildings.



Capabilities on project:  
Building Engineering

## 5 Llanidloes – Option 2

### 5.1 General overview

Llanidloes Option 2 connects the potential new development, as in Option1, and extends into the town centre to serve the existing housing in Output Area [00NNSA0008] which has a heat density of 2.6MW/km<sup>2</sup> and 44% social housing. This accounts for an additional 118 existing dwellings added to the network from day one.

#### *Key assumptions:*

As there is no obvious large electricity user on-site, the model assumes that all of the electricity generation from any gas engine CHP is exported to the grid.

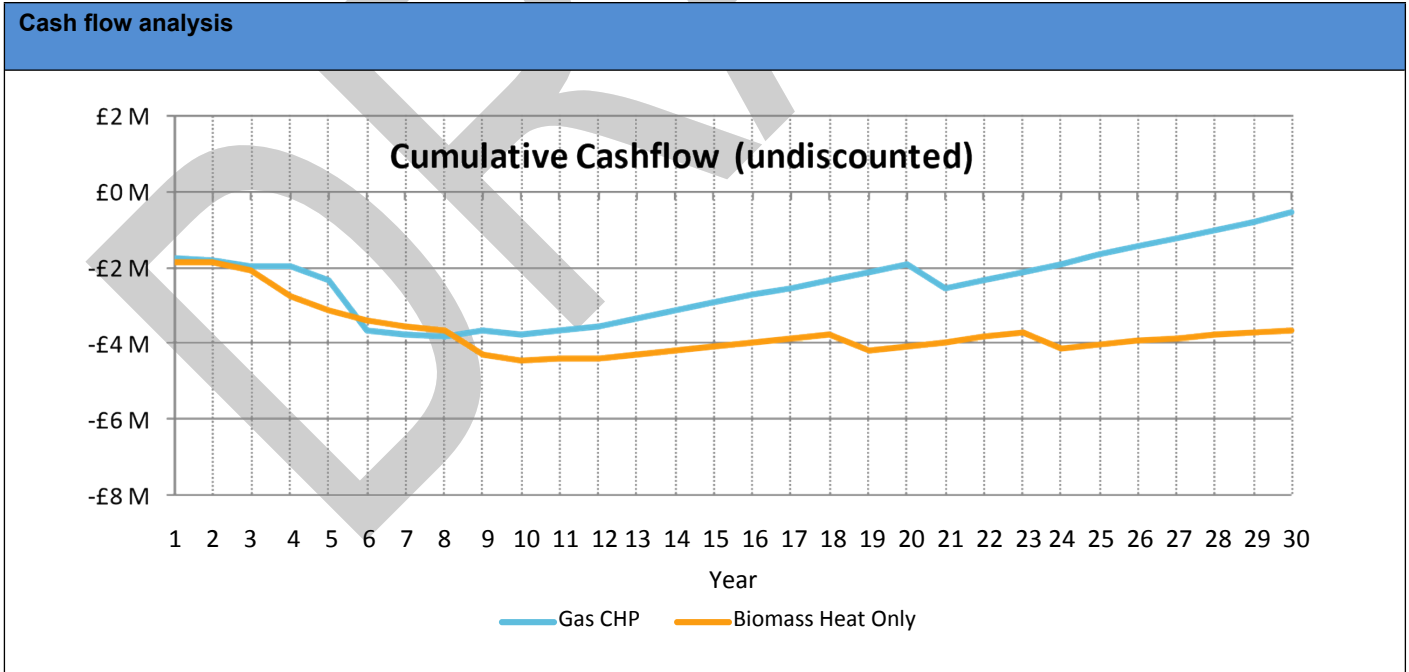
The location of the energy centre is assumed to be within plot 1031 as this is central to the rest of the network.

### 5.2 CAPEX and Cash flow

Technical assessment	
Annual heating & hot water demand	8,210 MWh [at full build out]
Total backbone trench length	669 meters
District heating CAPEX	£1.96 million
Peak load at the energy centre at full build out [thermal]	5.7 MW

Capabilities on project:  
Building Engineering

Financial assessment			
CHP option financial viability		Biomass option financial viability	
CHP system size	1.6 MW x 1	System size [thermal output]	0.8 MW x 2
Install years	2017	Install years	2015 & 2020
Energy centre capital cost	£1.93 million	Energy centre capital cost	£2.24 million
Year 1 net revenue	£0.06 million	Year 1 net revenue	£0.06 million
Year 30 net revenue	£0.22 million	Year 30 net revenue	£0.06 million
Without developer contribution		Without developer contribution	
15 yr NPV @ 6%	-£2.8 million	15 yr NPV @ 6%	-£3.49 million
15 yr NPV @ 12%	-£2.59 million	15 yr NPV @ 12%	-£3.05 million
15 yr IRR	No return achieved.	15 yr IRR	No return achieved.
30 yr NPV @ 6%	-£2.19 million	30 yr NPV @ 6%	-£3.38 million
30 yr NPV @ 12%	-£2.41 million	30 yr NPV @ 12%	-£3.02 million
30 yr IRR	No return achieved.	30 yr IRR	No return achieved.



Capabilities on project:  
Building Engineering

### 5.3 Potential developer contributions

This datasheet presents an estimate of the avoided costs to the developer for installing DHN, compared with PV, in order to meet the Carbon Compliance element of the zero carbon homes policy.

For Llanidloes, Option 1, we have assumed the following breakdown of house types to be built post 2016, based on information provided by the Council and assumed build out dates:

Flats:	37
Semi detached:	184
Terraced properties:	193
Detached properties:	46
<b>Total:</b>	<b>459</b>

The following table shows the potential cost saving per dwelling to the developer from connecting to a district heating system contributions and avoiding the costs of installing PV to meet Carbon Compliance. More PV would be avoided if a biomass option is chosen rather than a gas CHP option, because biomass has a lower carbon emissions rate than gas and would be able to save more carbon. The figures below are shown in assumed 2016 costs. The detailed calculation for how these costs were derived is provided in **Appendix C**.

Total potential avoided photovoltaic cost from district heating solution [per dwelling]			
Gas engine CHP option		Biomass option	
Flat	£1,332	Flat	£1,332
Semi	£726	Semi	£3,004
Terrace	£1,637	Terrace	£3,444
Detached	£1,134	Detached	£4,033

The following table shows how this relates to the Llanidloes Option 2 in terms of potential contributions from developers connecting to any DHN, based on the assumed levels of total housing development post 2016.

Total potential developer contributions [2016 costs] <sup>49</sup>			
Gas engine CHP option		Biomass option	
Flat	£48,911	Flat	£48,911
Semi	£133,257	Semi	£551,534
Terrace	£315,504	Terrace	£663,934
Detached	£52,060	Detached	£185,115
<b>Total</b>	<b>£549,731</b>	<b>Total</b>	<b>£1,449,494</b>

As there is the same number of new homes for Option 2 as for Option 1, the potential developer avoided costs are the same, however the proportion of the gap funding required is smaller because this option serves nearby existing homes as well.

<sup>49</sup> These costs are undiscounted. They also make no allowance for how the costs of Photovoltaics systems may fall after 2016, and therefore may be an overestimate for those development sites to be built out in the longer term.

Capabilities on project:  
Building Engineering

#### 5.4 Allowable Solutions

This datasheet presents an estimate of the value of an Allowable Solutions fund which could potentially be generated by the new homes, in order to meet the Allowable Solution element of the zero carbon homes policy. This figure is calculated by totalling the total residual carbon emissions to be saved for each dwelling built after 2016, totalled over 30 years for that dwelling.

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Capabilities on project:  
Building Engineering

## 6 Welshpool – Option 1

### 6.1 General overview

Welshpool Option 1 connects the key potential anchor heat loads, High School and Leisure Centre, with the candidate development sites in the north of the town. The proposed candidate sites included in the model are as follows:

- ③ Site 518: 50 homes
- ③ Site 929: 108 homes, and 21,600m<sup>2</sup> of non residential development, B1c/B2/B8 use classes
- ③ Site 526: 94 homes

Therefore, overall the model assumes that a total of 253 new homes, and the two existing non-residential buildings, would be connected. The model assumes different build dates for the development sites as follows:

- ③ Short term [approx 2012] sites: 518 [50 homes]
- ③ Midterm [approx 2016] sites: 929 [108 homes]
- ③ Long term [approx 2021] sites: 526 [94 homes]

Therefore a total of 202 homes will be built after 2016, therefore requiring to meet the Zero Carbon Homes policy.

#### *Key assumptions:*

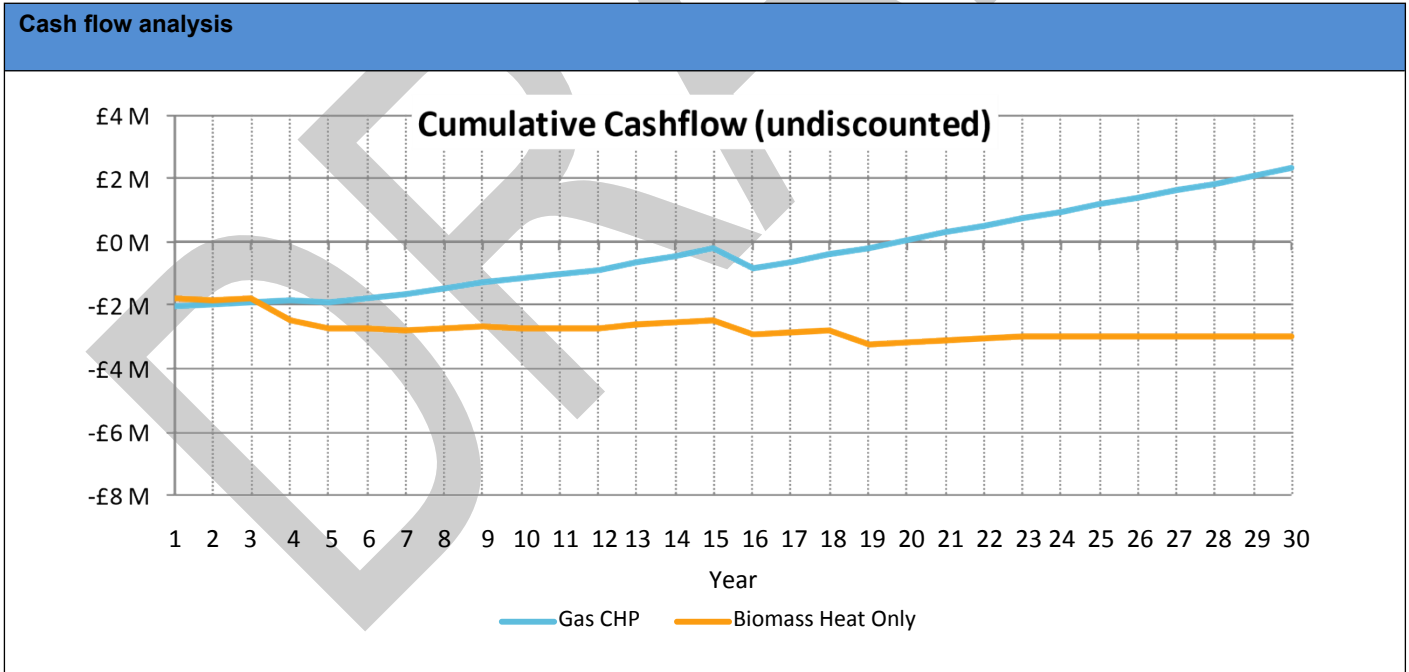
It is assumed that the energy centre would be located close to either the school or leisure centre, and therefore, the model assumes that 25% of the electricity generation from any gas engine CHP [at full build out] would be used on site, and therefore receive a higher price and the remainder would exported to the grid. This figure is based on an estimate of the total annual electricity demand for the two buildings, based on their floor area.

### 6.2 CAPEX and Cashflow

Technical assessment	
Annual heating & hot water demand	8,178 MWh [at full build out]
Total backbone trench length	389 m
District heating CAPEX	£701,678
Peak load at the energy centre at full build out [thermal]	3.8 MW

Capabilities on project:  
Building Engineering

Financial assessment			
CHP option financial viability		Biomass option financial viability	
CHP system size	1.6MW x 1	System size [thermal output]	0.8MW x 2
Install years	2012	Install years	2012 & 2015
Energy centre capital cost	£1.65 m	Energy centre capital cost	£1.96 m
Year 1 Net Revenue	£0.1 m	Year 1 net revenue	£0.02 m
Year 30 Net Revenue	£0.23 m	Year 30 net revenue	£0.01 m
Without developer contribution		Without developer contribution	
15 yr NPV @ 6%	-£0.94 m	15 yr NPV @ 6%	-£2.36 m
15 yr NPV @ 12%	-£1.29 m	15 yr NPV @ 12%	-£2.23 m
15 yr IRR	No return achieved.	15 yr IRR	No return achieved.
30 yr NPV @ 6%	-£0.37 m	30 yr NPV @ 6%	-£2.56 m
30 yr NPV @ 12%	-£1.15 m	30 yr NPV @ 12%	-£2.32 m
30 yr IRR	4.5%	30 yr IRR	No return achieved.



Capabilities on project:  
Building Engineering

### 6.3 Potential developer contributions

This datasheet presents an estimate of the avoided costs to the developer for installing DHN, compared with PV, in order to meet the Carbon Compliance element of the zero carbon homes policy.

For Welshpool, Option 1, we have assumed the following breakdown of house types to be built post 2016, based on information provided by the Council and assumed build out dates:

Flats:	16
Semi detached:	81
Terraced properties:	85
Detached properties:	20
<b>Total:</b>	<b>202</b>

In practice, the actual numbers of new dwellings suggested for the candidate sites may be less, which would reduce the level of potential developer contributions.

The following table shows the potential cost saving per dwelling to the developer from connecting to a district heating system contributions and avoiding the costs of installing PV to meet Carbon Compliance. More PV would be avoided if a biomass option is chosen rather than a gas CHP option, because biomass has a lower carbon emissions rate than gas and would be able to save more carbon. The figures below are shown in assumed 2016 costs.

Total potential avoided photovoltaic cost from district heating solution [per dwelling]			
Gas engine CHP option		Biomass option	
Flat	£1,332	Flat	£1,332
Semi	£726	Semi	£3,004
Terrace	£1,637	Terrace	£3,444
Detached	£1,134	Detached	£4,033

The following table shows how this relates to the Welshpool Option 2 in terms of potential contributions from the developers connecting to any DHN, based on the assumed levels of total housing development post 2016.

Total potential developer contributions [2016 costs] <sup>50</sup>			
Gas engine CHP option		Biomass option	
Flat	£21,525	Flat	£21,525
Semi	£58,645	Semi	£242,723
Terrace	£138,849	Terrace	£292,189
Detached	£22,911	Detached	£81,467
<b>Total</b>	<b>£241,930</b>	<b>Total</b>	<b>£637,904</b>

<sup>50</sup> These costs are undiscounted. They also make no allowance for how the costs of Photovoltaics systems may fall after 2016, and therefore may be an overestimate for those development sites to be built out in the longer term.

Capabilities on project:  
Building Engineering

This analysis shows that a greater potential developer contribution could be achieved with a biomass heat only scheme compared to gas engine CHP because the biomass option saves more carbon. However, the biomass heat only scheme did not achieve an IRR in the financial analysis without developer contributions compared with the 4.5% 30 year IRR achieved for gas engine CHP.

#### 6.4 Allowable Solutions

This datasheet presents an estimate of the value of Allowable Solutions fund which could potentially be generated by the new homes, in order to meet the Allowable Solution element of the zero carbon homes policy. This figure is calculated by summing the total residual carbon emissions to be saved for each dwelling built after 2016, over 30 years for that dwelling.

	No. of new homes [post 2016]	Total value of AS @ £49/tonne carbon over 30 years per dwelling	Potential value of Allowable Solutions [ @£49/tonne]
Flat	16	£1,122	£18,125
Semi	81	£1,229	£99,297
Terrace	85	£1,229	£104,262
Detached	20	£1,735	£35,039
<b>Total</b>	<b>202</b>	-	<b>£256,722</b>

For Welshpool, Option 1, this Allowable Solution fund could potentially be used to fund the network serving the high school and leisure centre. In practice, however, it may take many years to collect this amount of Allowable Solution if the sites are only developed slowly, and therefore only a smaller proportion of this may be available at the time required to fund the installation of the network to the school and leisure centre.

As confirmed at the stakeholder workshop, the high school currently uses oil boilers, which have higher carbon intensity than gas boilers. Therefore, comparatively high carbon savings could be achieved by connecting the high school to the DHN and so the potential Allowable Solution fund could be able to deliver a high concentration of carbon savings by funding the DHN to this anchor heat load.



Capabilities on project:  
Building Engineering

## 7 Welshpool – Option 2

### 7.1 General overview

Welshpool Option 2 connects the key anchor heat loads, High School and Leisure Centre, with the candidate new development sites in the north of the town and extends to the hospital and existing housing in between, which accounts for an additional 286 dwellings. The potential development sites included in the model in addition to Option 1 are as follows:

- Site 524: 40 new homes
- Site 527: 103 homes

Therefore, overall the model assumes that a total of 395 new homes, 286 existing homes, and the three existing non-residential buildings, would be connected.

The model assumes different build dates for the two housing development sites as follows:

- Short term [approx 2012] sites: 518 and 524 [90 homes]
- Midterm [approx 2016] sites: 929 [108 homes]
- Long term [approx 2021] sites: 526 and 527 [197 homes]

Therefore a total of 305 homes will be built after 2016, therefore requiring to meet the Zero Carbon Homes policy.

#### *Key assumptions*

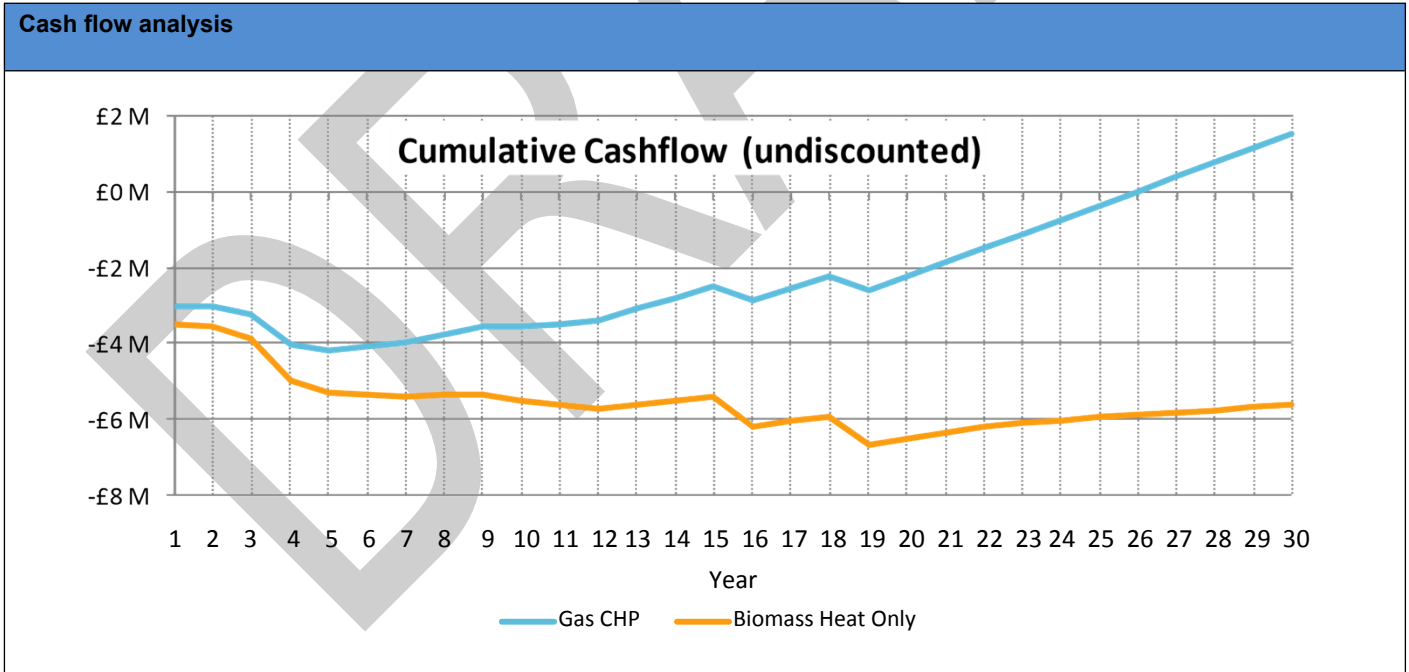
It is assumed that the energy centre would be located close to either the school or leisure centre, and therefore, the model assumes that 15% of the electricity generation from any gas engine CHP [at full build out] would be used on site, and therefore receive a higher price and the remainder would exported to the grid. This figure is based on an estimate of the total annual electricity demand for the two buildings, based on their floor area.

### 7.2 CAPEX and Cash flow

Technical assessment	
Annual heating & hot water demand	12,861 MWh [at full build out]
Total backbone trench length	1,273 m
District heating CAPEX	£2,740,000
Peak load at the energy centre at full build out [thermal]	6.4 MW

Capabilities on project:  
Building Engineering

Financial assessment			
CHP option financial viability		Biomass option financial viability	
CHP system size	1.2MW x 2	System size [thermal output]	1.2MW x 2
Install years	2012 & 2015	Install years	2012 & 2015
Energy centre capital cost	£2.73 m	Energy centre capital cost	£3.21 m
Year 1 net revenue	£0.19 m	Year 1 net revenue	£0.1 m
Year 30 net revenue	£0.38 m	Year 30 net revenue	£0.07 m
Without developer contribution		Without developer contribution	
15 yr NPV @ 6%	-£2.99 m	15 yr NPV @ 6%	-£4.93 m
15 yr NPV @ 12%	-£3.13 m	15 yr NPV @ 12%	-£4.54 m
15 yr IRR	No return achieved.	15 yr IRR	No return achieved.
30 yr NPV @ 6%	-£2.06 m	30 yr NPV @ 6%	-£5.12 m
30 yr NPV @ 12%	-£2.89 m	30 yr NPV @ 12%	-£4.64 m
30 yr IRR	1.6%	30 yr IRR	No return achieved.



Capabilities on project:  
Building Engineering

### 7.3 Potential developer contributions

This datasheet presents an estimate of the avoided costs to the developer for installing DHN, compared with PV, in order to meet the Carbon Compliance element of the zero carbon homes [ZCH] policy.

For Welshpool, Option 2, we have assumed the following breakdown of house types, based on information provided by the Council and assumed build out dates:

Flats:	24
Semi detached:	122
Terraced properties:	128
Detached properties:	31
<b>Total:</b>	<b>305</b>

The following table shows the potential cost saving per dwelling to the developer from connecting to a district heating system contributions and avoiding the costs of installing PV to meet Carbon Compliance. More PV would be avoided if a biomass option is chosen rather than a gas CHP option, because biomass has a lower carbon emissions rate than gas and would be able to save more carbon. The figures below are shown in assumed 2016 costs.

Total potential avoided photovoltaic cost from district heating solution [per dwelling]			
Gas engine CHP option		Biomass option	
Flat	£1,332	Flat	£1,332
Semi	£726	Semi	£3,004
Terrace	£1,637	Terrace	£3,444
Detached	£1,134	Detached	£4,033

The following table shows how this relates to the Welshpool Option 2 in terms of potential contributions from developers connecting to any DHN, based on the assumed levels of total housing development post 2016.

Total potential developer contributions [2016 costs] <sup>51</sup>			
Gas engine CHP option		Biomass option	
Flat	£32,501	Flat	£32,501
Semi	£88,548	Semi	£366,488
Terrace	£209,648	Terrace	£441,176
Detached	£34,593	Detached	£123,007
<b>Total</b>	<b>£365,290</b>	<b>Total</b>	<b>£963,172</b>

This shows that although the potential avoided costs could be significant for Welshpool option 2, the savings are a relatively small proportion of the funding gap hence significant additional funding would be required.

<sup>51</sup> These costs are undiscounted. They also make no allowance for how the costs of Photovoltaics systems may fall after 2016, and therefore may be an overestimate for those development sites to be built out in the longer term.

Capabilities on project:  
Building Engineering

#### 7.4 Allowable Solutions

This datasheet presents an estimate of the value of Allowable Solutions fund which could potentially be generated by the new homes, in order to meet the Allowable Solution element of the zero carbon homes policy. This figure is calculated by summing the total residual carbon emissions to be saved for each dwelling built after 2016, over 30 years for that dwelling.

	No. of new homes [post 2016]	Total value of AS @ £49/tonne carbon over 30 years per dwelling	Potential value of Allowable Solutions [ @£49/tonne]
Flat	24	£1,122	£27,367
Semi	122	£1,229	£149,928
Terrace	128	£1,229	£157,425
Detached	31	£1,735	£52,905
<b>Total</b>	<b>305</b>	-	<b>£387,625</b>

For Welshpool, Option 2, there are more existing buildings and homes being served by the network than in Option 1 hence there are more savings in existing buildings to be achieved that could be used for an Allowable Solutions fund. The potential value of the fund for Welshpool Option 2 could make a significant difference to the viability of the DHN scheme.

Capabilities on project:  
Building Engineering

## 8 Newtown – Option 1

### 8.1 General overview

This option connects the key potential anchor heat loads, Newtown High School and Leisure Centre, along with two primary schools, Maesyhandir C P School and Ysgol Cedewain Newtown. There are no new development sites included with this option.

#### *Key assumptions*

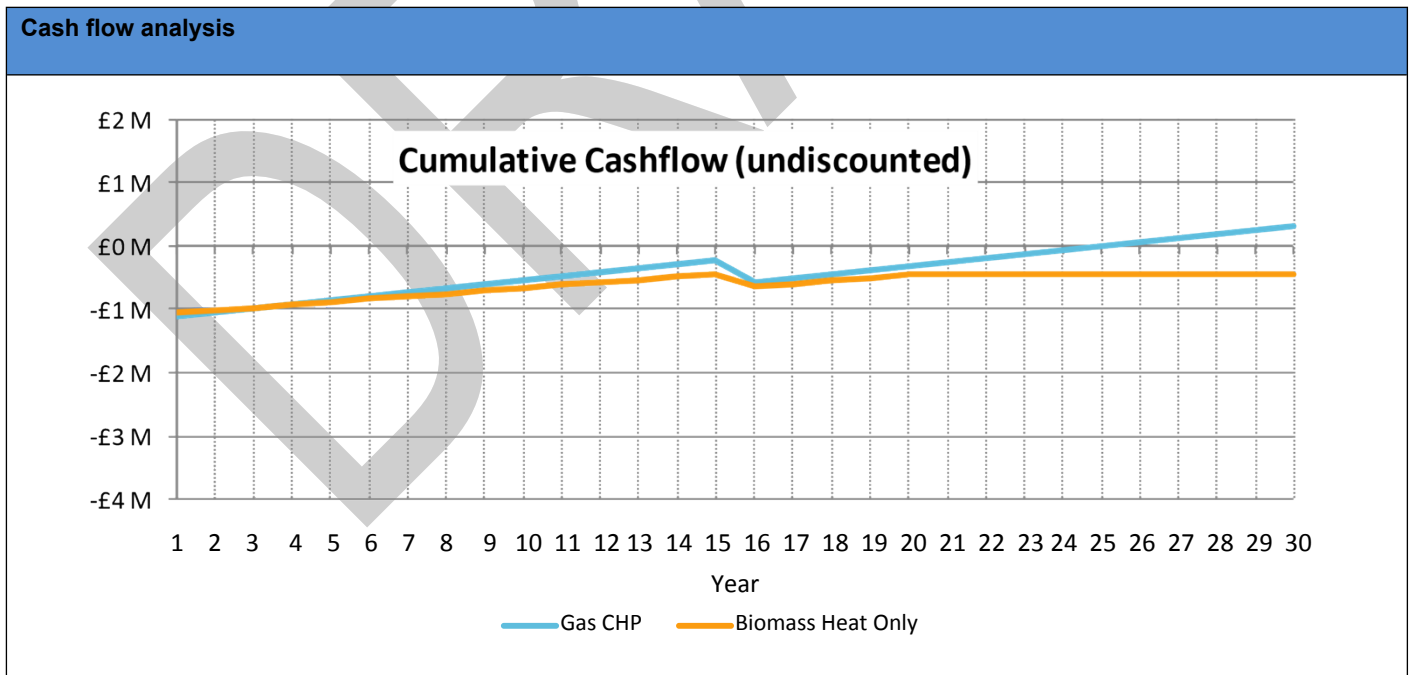
It is assumed that the energy centre would be located close to either the high school or leisure centre, and therefore, the model assumes that 20% of the electricity generation from any gas engine CHP [at full build out] would be used on site, and therefore receive a higher price and the remainder would be exported to the grid. This figure is based on an estimate of the total annual electricity demand for the two buildings, based on their floor area.

### 8.2 CAPEX and Cash flow

Technical assessment	
Annual heating & hot water demand	3,595 MWh [at full build out]
Total backbone trench length	805 m
District heating CAPEX	£400,000
Peak load at the energy centre at full build out [thermal]	1.7 MW

Capabilities on project:  
Building Engineering

Financial assessment			
CHP option financial viability		Biomass option financial viability	
CHP system size	0.7MW x 1	System size [thermal output]	0.3MW x 2
Install years	2012	Install years	2012 & 2012
Energy centre capital cost	£0.59 m	Energy centre capital cost	£0.78 m
Year 1 net revenue	£0.06 m	Year 1 net revenue	£0.04 m
Year 30 net revenue	£0.06 m	Year 30 net revenue	£0.00 m
Without developer contribution		Without developer contribution	
15 yr NPV @ 6%	-£0.51 m	15 yr NPV @ 6%	-£0.63 m
15 yr NPV @ 12%	-£0.64 m	15 yr NPV @ 12%	-£0.72 m
15 yr IRR	No return achieved.	15 yr IRR	No return achieved.
30 yr NPV @ 6%	-£0.41 m	30 yr NPV @ 6%	-£0.65 m
30 yr NPV @ 12%	-£0.63 m	30 yr NPV @ 12%	-£0.73 m
30 yr IRR	1.7%	30 yr IRR	No return achieved.



Capabilities on project:  
Building Engineering

### **8.3 Potential developer contributions**

For Newtown, Option 1, there are no new developments hence no avoided costs to be calculated.

### **8.4 Allowable Solutions**

For Newtown, Option 1, there are no new developments hence no Allowable Solutions costs to be calculated.

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Capabilities on project:  
Building Engineering

## 9 Newtown – Option 2

### 9.1 General overview

This option connects key potential anchor heat loads, Newtown High School and Leisure Centre, along with two schools, Maesyryhandir C P School and Ysgol Cedewain Newtown as in Option 1. Option 2 extends this to Powys College and existing housing en route, which accounts for an additional 258 dwellings, with 70% social housing.

For this option, it is assumed that all the properties are connected within a short timescale and therefore are all included from year 1, apart from the proportion of existing homes which are owner occupiers and these are connected progressively year by year.

#### *Key assumptions*

It is assumed that the energy centre would be located close to either the high school or leisure centre, and therefore, the model assumes that 8% of the electricity generation from any gas engine CHP [at full build out] would be used on site, and therefore receive a higher price and the remainder would be exported to the grid. This figure is based on an estimate of the total annual electricity demand for the two buildings, based on their floor area.

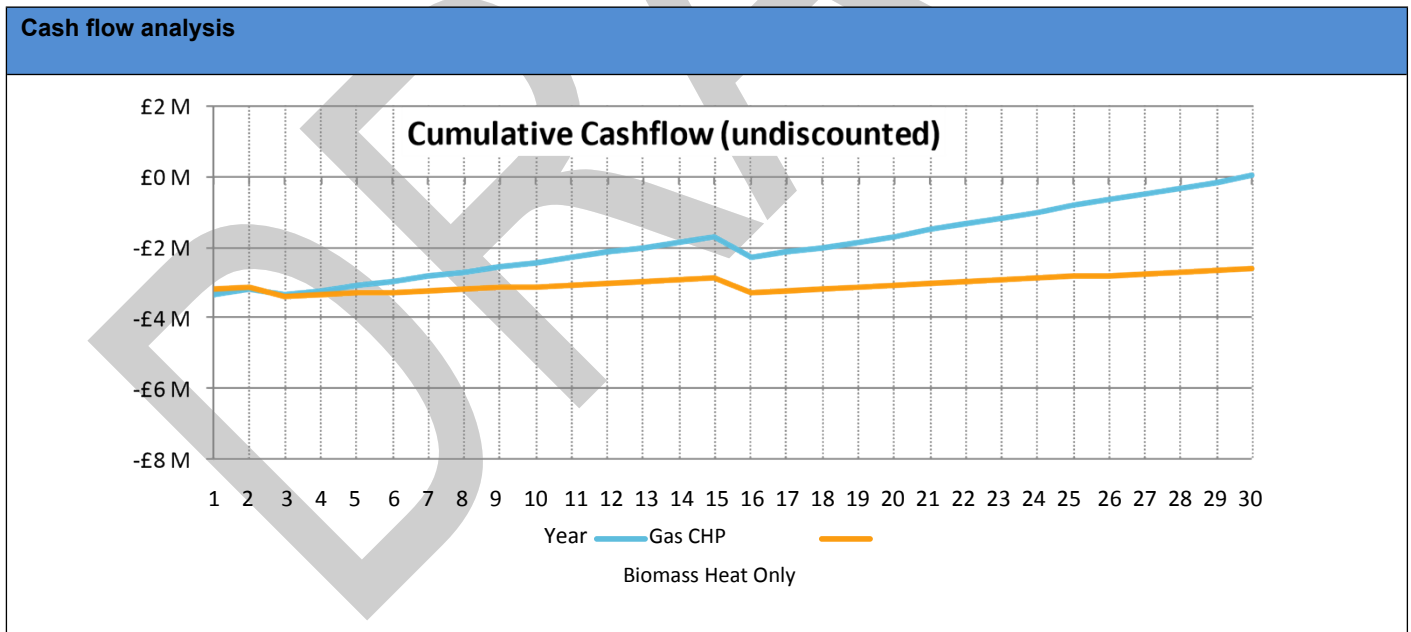
### 9.2 CAPEX and Cash flow

Technical assessment	
Annual heating & hot water demand	6,759 MWh [at full build out]
Total backbone trench length	1,825 m
District heating CAPEX	£2,230,000
Peak load at the energy centre at full build out [thermal]	3.3 MW



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Financial assessment			
CHP option financial viability		Biomass option financial viability	
CHP system size	1.3MW x 1	System size [thermal output]	0.7MW x 2
Install years	2012	Install years	2012 & 2012
Energy centre capital cost	£1.37 m	Energy centre capital cost	£1.62 m
Year 1 net revenue	£0.33 m	Year 1 net revenue	£0.24 m
Year 30 net revenue	£0.17m <sup>52</sup>	Year 30 net revenue	£0.05 m
Without developer contribution		Without developer contribution	
15 yr NPV @ 6%	-£2.24 m	15 yr NPV @ 6%	-£2.93 m
15 yr NPV @ 12%	-£2.46 m	15 yr NPV @ 12%	-£2.89 m
15 yr IRR	No return achieved.	15 yr IRR	No return achieved.
30 yr NPV @ 6%	-£1.87 m	30 yr NPV @ 6%	-£2.91 m
30 yr NPV @ 12%	-£2.38 m	30 yr NPV @ 12%	-£2.91 m
30 yr IRR	0.0%	30 yr IRR	No return achieved.



<sup>52</sup> This falls relative to year 1, as in year 1 there is a one off income from the existing social housing which pays a connection charge to cover costs of connection

Capabilities on project:  
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### **9.3 Potential developer contributions**

For Newtown, Option 2, there are no new developments hence no avoided costs to be calculated.

### **9.4 Allowable Solutions**

For Newtown, Option 2, there are no new developments hence no Allowable Solutions costs to be calculated.

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Capabilities on project:  
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## 10 Newtown – Option 3

### 10.1 General overview

This option connects key anchor heat loads, Newtown High School and Leisure centre, along with two schools, Maesyrrhandir C P School and Ysgol Cedewain Newtown, Powys College and existing housing. Option 3 extends this to the proposed candidate site 591 which has total number of 95 new homes. Site 586 is not included for connection due to the low densities proposed on the site. The model assumes that site 591 would have a medium term build out rate and would connect to the network in 2016, and will be required to meet the Zero Carbon Homes policy.

Therefore, overall the model assumes that a total of 95 new homes, 258 existing homes and the five existing non-residential buildings would be connected.

#### Key assumptions

It is assumed that the energy centre would be located close to either the high school or leisure centre, and therefore, the model assumes that 8% of the electricity generation from any gas engine CHP [at full build out] would be used on site, and therefore receive a higher price and the remainder would exported to the grid. This is figure is based on an estimate of the total annual electricity demand for the two buildings, based on their floor area

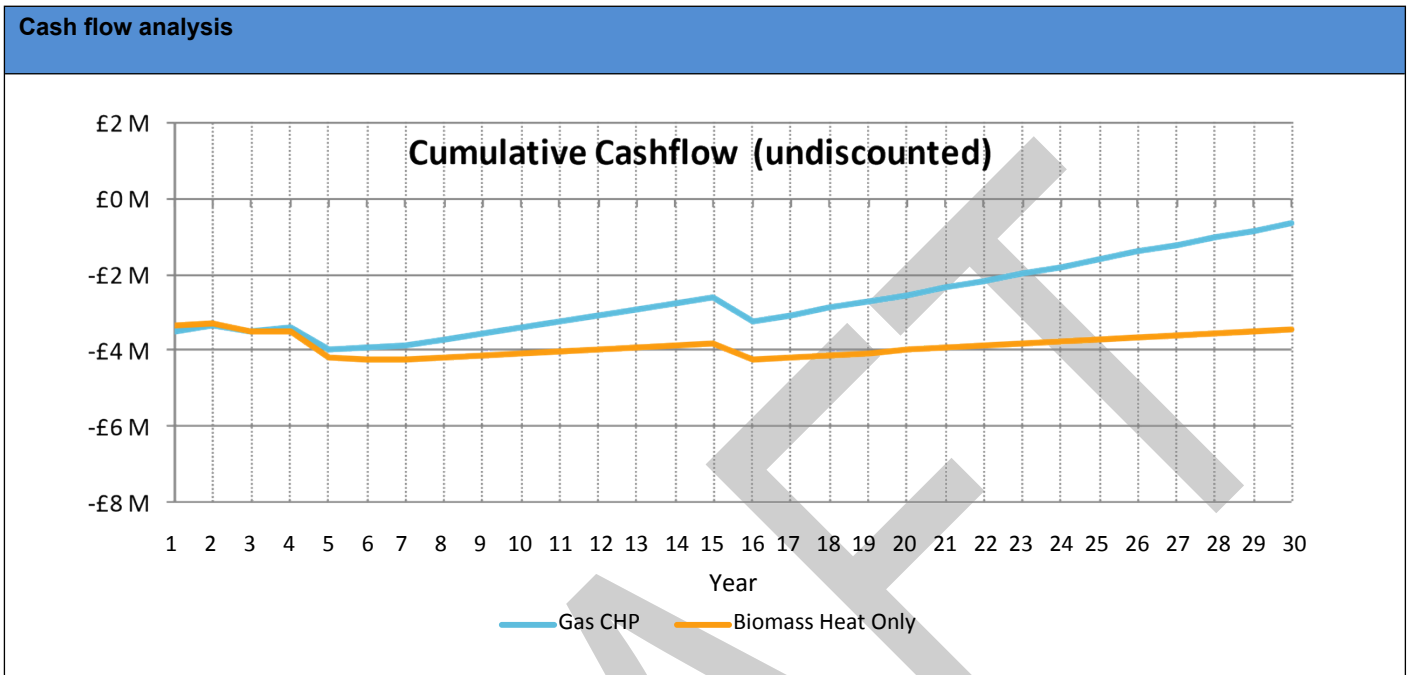
### 10.2 CAPEX and Cash flow

Technical assessment	
Annual heating & hot water demand	7,320 MWh [at full build out]
Total backbone trench length	2,816 m
District heating CAPEX	£2,950,000
Peak load at the energy centre at full build out [thermal]	3.7 MW

Financial assessment			
CHP option financial viability		Biomass option financial viability	
CHP system size	1.4MW x 1	System size [thermal output]	0.7MW x 2
Install years	2012	Install years	2012 & 2012
Energy centre capital cost	£1.5 m	Energy centre capital cost	£1.77 m
Year 1 net revenue	£0.32 m	Year 1 net revenue	£0.24 m
Year 30 net revenue	£0.19 m	Year 30 net revenue	£0.05 m
Without developer contribution		Without developer contribution	
15 yr NPV @ 6%	-£2.96 m	15 yr NPV @ 6%	-£3.68 m
15 yr NPV @ 12%	-£3.06 m	15 yr NPV @ 12%	-£3.49 m
15 yr IRR	No return achieved	15 yr IRR	No return achieved
30 yr NPV @ 6%	-£2.55 m	30 yr NPV @ 6%	-£3.63 m
30 yr NPV @ 12%	-£2.96 m	30 yr NPV @ 12%	-£3.5 m

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30 yr IRR	No return achieved	30 yr IRR	No return achieved
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**10.3 Potential developer contributions**

This datasheet presents an estimate of the avoided costs to the developer for installing DHN, compared with PV, in order to meet the Carbon Compliance element of the zero carbon homes policy. For Newtown, Option 3, we have assumed the following breakdown of house types, based on information provided by the Council and assumed build out dates:

Flats:	8
Semi detached:	38
Terraced properties:	40
Detached properties:	10
<b>Total:</b>	<b>95</b>

The following table shows the potential cost saving per dwelling to the developer from connecting to a district heating system contributions and avoiding the costs of installing PV to meet Carbon Compliance. More PV would be avoided if a biomass option is chosen rather than a gas CHP option, because biomass has a lower carbon emissions rate than gas and would be able to save more carbon. The figures below are shown in assumed 2016 costs.

Total potential avoided photovoltaic cost from district heating solution [per dwelling]			
Gas engine CHP option		Biomass option	
Flat	£1,332	Flat	£1,332

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Semi	£726	Semi	£3,004
Terrace	£1,637	Terrace	£3,444
Detached	£1,134	Detached	£4,033

The following table shows how this relates to the Newtown Option 3 in terms of potential contributions from the developers connecting to the DHN.

<b>Total potential developer contributions [2016 costs] <sup>53</sup></b>			
<b>Gas engine CHP option</b>		<b>Biomass option</b>	
Flat	£10,123	Flat	£10,123
Semi	£27,580	Semi	£114,152
Terrace	£65,300	Terrace	£137,416
Detached	£10,775	Detached	£38,314
<b>Total</b>	<b>£113,779</b>	<b>Total</b>	<b>£300,004</b>

For Newtown, Option 3, the new development accounts for only a small portion of the total heat delivered on the network therefore the relative costs avoided by the developers by connecting the heat network are small in proportion to the whole DHN option. Even when compared only to the uplift in NPV from Option 3 and Option 2, which is -£720,000 over 15 years, at a discount rate of 6%, the potential avoided costs are only a small proportion of the total additional costs to connect. This shows that extending to the proposed candidate site 591 does not increase the financial viability of the DHN.

#### 10.4 Allowable Solutions

This datasheet presents an estimate of the value of Allowable Solutions fund which could potentially be generated by the new homes, in order to meet the Allowable Solution element of the zero carbon homes policy. This figure is calculated by summing the total residual carbon emissions to be saved for each dwelling built after 2016, over 30 years for that dwelling.

	<b>No. of new homes [post 2016]</b>	<b>Total value of AS @ £49/tonne carbon over 30 years per dwelling</b>	<b>Potential value of Allowable Solutions [ @£49/tonne]</b>
Flat	8	£1,122	£8,524
Semi	38	£1,229	£46,699
Terrace	40	£1,229	£49,034
Detached	10	£1,735	£16,479
<b>Total</b>	<b>95</b>	<b>-</b>	<b>£120,736</b>

For Newtown, Option 3, this Allowable Solution fund could be used to help fund the rest of the network. However, the size of the fund is only a small proportion of the total costs.

#### 10.5 Summary table for financial assessment

<sup>53</sup> These costs are undiscounted. They also make no allowance for how the costs of Photovoltaics systems may fall after 2016, and therefore may be an overestimate for those development sites to be built out in the longer term.

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The table on following page summarises the financial assessment of each district heating option.

*Notes on table*

1. The heat demand shown is the demand at the energy centre, after allowing for network losses
2. The capital cost for the energy centre includes the energy centre building, and internal plant, including the lead low carbon plant [gas engine CHP or biomass boiler], supplementary gas boilers to meet peak loads and for back up, and thermal storage.

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Option	Network size		CAPEX [£ million]				IRR		Net Present Value [£ million]				Potential gap funding [£ million]	
	Annual heat demand [MWh]	Peak thermal demand [MW]	Heat network	Technology	Energy Centre	Total	15 year	30 year	15 years @ 6%	15 years @ 12%	30 years @ 6%	30 years @ 12%	Developer contribution	Allowable Solution contribution
Llanidloes [Option 1]	7,298	5.3	£1.30	Gas	£1.70	£3.00	n/a	n/a	-£2.19	-£2.03	-£1.66	-£1.87	£0.55	£0.58
				Biomass	£1.97	£3.27	n/a	n/a	-£2.81	-£2.44	-£2.72	-£2.41	£1.45	£0.58
Llanidloes [Option 2]	8,210	5.7	£1.96	Gas	£1.93	£3.89	n/a	n/a	-£2.80	-£2.59	-£2.19	-£2.41	£0.55	£0.58
				Biomass	£2.24	£4.20	n/a	n/a	-£3.49	-£3.05	-£3.38	-£3.02	£1.45	£0.58
Welshpool [Option 2]	8,178	3.8	£0.70	Gas	£1.65	£2.35	n/a	4.50%	-£0.94	-£1.29	-£0.37	-£1.15	£0.24	£0.26
				Biomass	£1.96	£2.66	n/a	n/a	-£2.36	-£2.23	-£2.56	-£2.32	£0.64	£0.26
Welshpool [Option 1]	12,861	6.4	£2.74	Gas	£2.73	£5.47	n/a	1.60%	-£2.99	-£3.13	-£2.06	-£2.89	£0.37	£0.39
				Biomass	£3.21	£5.95	n/a	n/a	-£4.93	-£4.54	-£5.12	-£4.64	£0.96	£0.39
Newtown [Option 1]	3,595	1.7	£0.40	Gas	£0.59	£0.98	n/a	1.70%	-£0.51	-£0.64	-£0.41	-£0.63	-	-
				Biomass	£0.78	£1.18	n/a	n/a	-£0.63	-£0.72	-£0.65	-£0.73	-	-
Newtown [Option 2]	6,759	3.3	£2.23	Gas	£1.37	£3.59	n/a	0.00%	-£2.24	-£2.46	-£1.87	-£2.38	-	-
				Biomass	£1.62	£3.84	n/a	n/a	-£2.93	-£2.89	-£2.91	-£2.91	-	-
Newtown [Option 3]	7,320	3.7	£2.95	Gas	£1.50	£4.45	n/a	n/a	-£2.96	-£3.06	-£2.55	-£2.96	£0.11	£0.12
				Biomass	£1.77	£4.74	n/a	n/a	-£3.68	-£3.49	-£3.63	-£3.50	£0.30	£0.12

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## Key Findings

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## **11 Key Findings**

### **11.1 Overview**

This section provides a summary of the financial analysis of the options and key findings for each of the sites.

### **11.2 Llanidloes**

Llanidloes options 1 and 2 did not achieve an internal rate of return [IRR] for either of the sites or technology options. This is largely due to the low density of the new developments, and marginal total heat load.

Financial viability for these options could be increased by maximising the revenue from the Renewable Heat Incentive [RHI] and selecting a total system size of less than 1MW. For the purpose of this modelling, this level of detailed plant sizing has not been carried out, as for some heat demand profiles, selecting a smaller system can reduce the overall performance of the system and hence would need to be assessed in more detail.

Combined with the foreseen difficulties with coordinating the new developments build out dates and developers' strategies, this site is not recommended for further analysis. However, it should be noted that there is good community support for such schemes as the Llanidloes Energy Solutions community group has already been investigating the available options.

### **11.3 Welshpool**

Welshpool option 1 achieves an IRR for the gas engine CHP option of 4.5% after 30 years, and breaks even after 20 years. The gap funding that would be needed to take the scheme to a 6% IRR is in the region of £370,000.

However, the biomass heat-only option does not break even over the 30 year period. This is because the Renewable Heat Incentive [RHI] tariff for this size of system [greater than 1MWth] is relatively low, and, unlike the gas engine CHP, the scheme does not have a revenue from electricity sales.

For Welshpool option 2, the financial performance is less favourable, and the gas engine CHP option does not break even until year 26. This is because of the relatively long run of network required to reach the hospital.

For both Welshpool options, there is a potential for capital contributions from developers of new developments, as connection to a heating network could help them to meet zero carbon requirements from 2016. This contribution could be in the region of £240,000 for gas engine CHP, as well as up to a further £260,000 from Allowable Solutions. These potential sources of capital could help provide gap funding to improve the financial performance of the network.

For Welshpool there is also the added potential for heat to be supplied into a network from the proposed biomass CHP scheme at Potters Recycling, located just to the east of the railway station.

### **11.4 Newtown**

Newtown option 1 achieves an IRR of 1.7% for the gas engine CHP option after 30 years, and breaks even in year 26. As there are no new developments there is not the further benefit of potential developer contributions.

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Without a new development, the attractiveness of Newtown option 1 is that the scheme has less reliance on private developers, and the stakeholders in the DHN could be engaged straightaway. In addition, it is understood from the stakeholder workshop that the High School is planning to expand to include a Welsh Medium School and this may provide a catalyst for a district heating connection.

Newtown options 2 and 3 add significantly to the capital cost and do not improve the financial performance. However, it should be noted that the heat demand for Powys College is based on a floor area estimate, and actual gas consumption should be sourced to update this calculation.

## 11.5 Conclusion

Overall, Welshpool option 1 is the most viable site, and could form the basis of a heat network that could link existing and new development. We recommend this option for further analysis, including discussion with potential ESCO's, as well as investigating options for utilising waste heat from the proposed Potters Recycling biomass CHP scheme. Welshpool Option 2, which would also connect to the existing hospital as well as existing housing, could become more viable in the future if the hospital were to expand, or additional incentives for district heating were introduced.

Llanidloes has limited potential due to the lack of suitable anchor heat loads, and low density and phasing issues for the new developments. Therefore, district heating is unlikely to be viable to the north east area of the town, where the candidate new development sites are located.

Newtown options 1 and 2 may be worth investigating further in the future, if the High School expands to become a Welsh Medium School, as this would increase the heat and electricity loads and improve viability. It may also help to reduce some of the capital costs of the network and energy centre as these could be partially integrated into the school expansion. We were also unable to obtain data on the actual gas demand for Powys College. If this is significantly higher than our estimates, or if the College has plans to expand, this could also improve viability. If any significant new development sites are proposed in the area between the High School and the College in the future, then we recommend that the Council should consider the role that those sites could play in helping to facilitate the development of a heating network.

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## Appendices

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## Appendix A: Modelling Assumptions

### Introduction

This appendix lists the assumptions used in calculating the heat demands, CO<sub>2</sub> savings and cash flow analysis. It includes the following sections:

- ③ Technical
- ③ Revenue

### Technical Assumptions

#### Carbon emissions factors

Based on Building Regulations Part L 2010 figures as given below:

Fuel	Carbon factor [kgCO <sub>2</sub> /kWh]
Gas	0.198
Electricity	0.517
Grid displaced electricity	0.529

#### Estimated Heat demands

The area heat demand [MWh/year] were based on CIBSE TM46 benchmarks adjusted with Degree Days to the Wales [-3 % from table A1.1]. These were based on building types and building areas.

#### Pipework costs

Based on previous quotes by PPSL providing Logstor Ror pipework increased in line with inflation

Size [mm]	Rate per meter [£]	Size [mm]	Rate per meter [£]
DN25/90	£ 132.30/m	DN150/250	£ 271.95/m
DN32/110	£ 140.70/m	DN200/315	£ 341.25/m
DN40/110	£ 147.00/m	DN250/400	£ 512.40/m
DN50/125	£ 53.30/m	DN300/450	£ 657.30/m
DN65/140	£ 158.55/m	DN400/520	£ 803.25/m
DN80/160	£ 169.05/m	DN500/710	£ 941.85/m
DN100/200	£ 191.10/m	DN600/800	£1,092.00/m
DN125/225	£ 219.45/m		

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### Notes

- ③ Rates are per single pipe and need to be doubled for flow and return.
- ③ Operating Temperatures up to 140°C.
- ③ All inclusive means there is an allowance in the rates for fittings, site joints and termination seals.
- ③ Rates exclude for associated civil works.

### Civil engineering costs [trenching]

Based on previous quotes by PPSL providing Logstor Ror pipework increased in line with inflation

Size [mm]	Hard Dig £/m	Soft Dig £/m
DN25/90	315	220.5
DN32/110	325.5	231
DN40/110	346.5	241.5
DN50/125	367.5	257.25
DN65/140	378	273
DN80/160	409.5	294
DN100/200	441	315
DN125/225	504	357
DN150/250	619.5	441
DN200/315	682.5	477.75
DN250/400	735	514.5
DN300/450	840	588
DN400/520	897.75	674.1
DN500/710	955.5	677.25
DN600/800	1018.5	729.75

### Notes

Civil work all inclusive of:

- ③ excavation and reinstatement per meter of trench
- ③ exclude special surfaces, close shoring, dewatering & traffic management

### Civil engineering costs for energy centres

Energy Centre costs for civils based on 0.4m<sup>2</sup>/kWe and a Capex of £1000/m<sup>2</sup>.

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### Contingency and design fees

Multiple of 1.265 on the overall network costs. This assumes 15% contingency and 10% to cover professional fees.

### Plant assumptions

	Size [MWth]	Heat Efficiency	Electrical Efficiency	CAPEX per kW	Maintenance per kWhth	Lifespan [Years]
Gas CHP	0.5	42%	32%	£864	0.5 pence	15
Gas CHP	0.9	42%	32%	£864	0.5 pence	15
Gas CHP	1.2	40%	35%	£657	0.5 pence	15
Gas CHP	2.2	42%	38%	£657	0.5 pence	15
Gas Boiler	any	90%	n/a	£60	0.0 pence	20

### CHP plant operation

Fraction of load met by CHP: 90%  
CHP Load Factor: 50%

### Heat network operation

Network losses: 6% of total heat demand  
Pumping electricity: 1% of total heat demand  
Heat standing charge: £100 per household  
Network maintenance: 1% of heat network CAPEX

### Revenue Assumptions

#### Cash flow assumptions

No inflation included;  
All costs based on 2012 costs;  
Full plant replacement included at year 15 for gas fired CHP and biomass boilers.

### Renewable Heat Incentive [RHI] Tariff for biomass boilers

	Size [MWth]	Price [p/kWh]
Medium commercial biomass	0.2 to 1.0 MWth	Tier 1: 4.9p
		Tier 2: 2.0p
Large commercial biomass	> 1.0 MWth	1.0p

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*Fuel Costs for energy centre*

<b>Fuel</b>	<b>Commercial Price [p/kWh]</b>
Gas	2.00p
Electricity	8.50p
Woodchip	1.29p
CCL [gas]	0.16p

*Heat Sales*

Heat sale to customers is based on typical boiler efficiencies with a 10% discount to incentivise connecting to the network.

<b>Customer</b>	<b>Heat sale price [p#kWh]</b>
Residential	5.25p
Commercial	3.20p

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### Appendix B: Notes from Stakeholder Workshop

List of attendees at stakeholder workshop held at Powys County Council, Llandrindod Wells, dated 14-06-2012. The workshop was attended by the following stakeholders and project team members:

- ③ Chris O'Brien [Planning Policy Officer - South, Powys County Council] ③ Peter Morris [LDP Team Leader, Powys County Council]
- ③ Michael Lloyd [Planning Policy Officer - North, Powys County Council]
- ③ Heather Delonnette [Sustainability Officer, Powys County Council]
- ③ Gareth Richards [Energy Manager, Powys County Council] ③ Karen Griffiths [Carbon Trust].
- ③ Mark Morant [AECOM]
- ③ Stephen Ward [AECOM]

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### **Appendix C: Detailed methodology for developer contributions and Allowable Solutions**

This appendix sets out the methodology used in calculating the potential developer contributions and value of allowable solutions. The aim of this calculation is to set out an estimate of the additional cost of district heating networks [DHNs] for new developments, over and above the cost of what would be required from an alternative microgeneration solution to meet future Building Regulations, and in particular the future requirements for zero carbon new homes by 2016.

This estimate of costs is based on the latest information available from published studies, and these are referenced below, as appropriate. However, we would stress that these figures can only be treated as a rough guide at this stage, as there are many uncertainties. The main one of these is that the definition of the requirement for zero carbon homes by 2016 has yet to be fully defined, and has already been subject to several changes over the last 2-3 years.

The estimate of costs given here is for new dwellings only. In terms of non-domestic buildings it is far harder to come up with generic indicative costs for DHNs, or to estimate the avoided costs for meeting the requirement for zero carbon non-domestic buildings. For the former, this is because non-domestic buildings are far more varied in their size and layout on a site and therefore do not lend themselves to generic modelling in the same way as homes. For the latter, the detail of what zero carbon will actually mean is far less developed and the level of cost analysis that exists for zero carbon homes does not exist for nondomestic buildings.

It is possible that developers could see significant avoided costs for new non-domestic buildings from connecting to a DHN, particularly for mixed use developments, where the cost of the infrastructure could be shared with new housing. However, this could only be quantified as part of a more detail assessment for individual sites.

### **The cost to a developer of meeting the on-site carbon compliance element of zero carbon**

The most recent work on this was published by the Zero Carbon Hub, in February 2011<sup>54</sup>. This work modelled the costs of meeting the carbon compliance element using PV and gas boilers for each dwelling. The study also calculated the contribution that district heating technologies could make to achieving Carbon Compliance, using either gas [engine] CHP or biomass heating, and the amount of PV that may still be required in each case. Using this information, it is possible to deduce the potential capital cost savings that could arise from using district heating as a result of needing less, or no PV. A summary of this data is shown in the table below, for each dwelling type.

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<sup>54</sup> "Carbon Compliance, setting an appropriate limit for zero carbon new homes, findings and recommendations", February, 2011

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**Table: summary of potential avoided cost of PV from using district heating**

Type of dwelling	Floor area [m <sup>2</sup> ]	Carbon compliance level [kgCO <sub>2</sub> per m <sup>2</sup> per year]	Cost of carbon compliance with PV [2016 prices] excluding fabric	PV required if no district heating [m <sup>2</sup> ]	PV required with district heating [m <sup>2</sup> ]		Cost saving from district solution [in 2016 prices] per dwelling	
					Gas CHP	Biomass heating	Gas CHP	Biomass heating
Flat	54.5	14	£1,332	4.92	0.0	0	£1,322	£1,332
Semi	76	11	£3,004	11.4	5.8	0	£726	£3,004
Terrace	76	11	£3,444	9.4	3.6	0	£1,637	£3,444
Detached	118	10	£4,033	14	8.7	0	£1,134	£4,033

*Notes on table:*

- Where the table says 2016 prices, this means the estimated price of the PV element in 2016, allowing for expected learning rates, but with no inflation added in.
- The cost of carbon compliance for PV is the cost of the PV element only, and does not include the cost of the gas boiler.

The cost saving shown for the district heating solution relates only to the avoided cost of needing less PV, it does not allow for any other cost savings from a district solution

From this table it can be seen that by 2016 [when PV costs are expected to be less than they are now, in real terms], the potential avoided cost of meeting Carbon Compliance to a developer from connecting to a district heating system could be in the range of £726-£3,444 per dwelling, depending on the technology and the dwelling type, for higher density developments consisting of flats, or terraced and end-of-terrace/ semi-detached homes.

### The cost of district heating networks

A relatively recent, and robust source of data for this is the report for DECC by Poyry and AECOM on the potential for DHNs in the UK, from 2009<sup>55</sup>. The data in the Poyry report was based on installing DHNs to supply existing dwellings. This is generally more expensive than for new dwellings. This is because for the latter, the heat demands are lower, and therefore a smaller heat main size can be used, and also the trenches for the heat mains can be dug in unmade, or softer ground, rather than having to excavate and re-instate a section of existing road or pavement.

The table below shows a summary of the estimated costs for a DHN to serve new dwellings, derived from the Poyry report. Based on data held by AECOM on heat main costs, we have estimated that the DHN infrastructure cost for new build would be roughly 30% less than that for existing dwellings, and the cost for DNH branches would be 20% less. The figures shown are for the network only, and exclude any costs for the energy centre, and for the heat exchanger and heat meter for each dwelling. The cost for the latter two items is roughly equivalent to the installed cost for a gas boiler, and therefore the net cost of these can be assumed to be zero, assuming the comparison is with a dwelling with its own gas boiler.

<sup>55</sup> "The Potential and Costs of District Heating Networks, a report to the Department of Energy and Climate Change, April 2009

Capabilities on project:  
Building Engineering

**Table: Estimated costs of DHNs for new dwellings**

Dwelling	DHN infrastructure cost [Poyry]	With reduction for new build [30%]	DHN branch cost [Poyry]	With reduction for new build [20%]	Total DHN cost [excluding energy centre] for new build
Flat	£712	£498	£752	£602	£1,100
Terrace	£2,135	£1,495	£1,912	£1,530	£3,024
Semi [Dense]	£2,719	£1,903	£2,598	£2,078	£3,982
Semi [Less Dense]	£2,719	£1,903	£3,198	£2,558	£4,462

Notes on table:

- All costs shown are in 2009 prices.
- The DHN branch cost relates to the cost of pipe braches to serve residential streets and spurs off to serve individual dwellings.
- The DHN infrastructure cost relates to the heat mains that would run down the main roads to connect the streets together and to the energy centre, assuming the energy centre was located within or in close proximity to the development.
- These figures exclude any costs for an energy centre.
- These costs do not allow for the potential avoided cost for a developer if they do not provide a gas supply to each dwelling.

The table shows that the cost of the DHN network could be in the range of £1,100 to just under £4,000 per dwelling for higher density developments, consisting of flats, terraced homes and end-of-terrace/ semi-detached homes.

A comparison of these costs with the avoided costs for carbon compliance, and the resulting net cost, is shown summarised in the table below. This shows that the net cost is actually negative [i.e. a net cost saving] for flats, and for high density housing is about £500 for biomass heating, and up to about £2,300 for gas CHP. These costs could potentially be reduced further if a) as mentioned above, the developer chooses not to provide a gas supply to each dwelling<sup>56</sup>, and therefore sees a saving in gas infrastructure and b) if the developer or ESCo is able to share trenches with other infrastructure being installed on site [such as water, electricity and fibre optic cabling] which could reduce the costs of installation. **Table: Net costs for DHNs to met zero carbon**

Type of dwelling	Cost saving from district solution [in 2016] per dwelling		Secondary DHN costs per dwelling	Net cost for district heating	
	Gas CHP	Biomass heating		Gas CHP	Biomass heating
Flat	£1,332	£1,332	£1,100	-£232	-£232
Semi	£726	£3,004	£3,024	£2,298	£20
Terrace	£1,637	£3,444	£3,982	£2,345	£538
Detached	£1,134	£4,033	£4,462	£3,328	£429

<sup>56</sup> Some ESCOs may require this anyway, if they are investing capital in a scheme, to help provide a long term guarantee of heat supply to the dwellings to support their efforts to obtain finance

Capabilities on project:  
Building Engineering

The proportion of this net cost, if there is one, that will be passed on to the developer will depend on a range of factors including:

- ③ Whether the energy centre already exists to serve other heat loads, or whether a new energy centre needs to be provided specifically for the new development. The costs shown above are for the DHN only, so if a new energy centre was required, this would be an additional cost per dwelling.
- ③ The overall financial viability of the DHN and the energy centre.
- ③ The mix and density of heat loads.
- ③ The actual predicted carbon savings for each dwelling.
- ③ The level of financial return required by the ESCo.
- ③ For gas engine CHP, [or in fact for any form of CHP] the ability of the ESCO to sell the electricity at retail prices to a large electricity user, rather than at wholesale prices to the grid.

### Allowable Solutions

Once a developer has met the Carbon Compliance requirement on-site, the current definition of zero carbon requires that they deal with the remaining carbon emissions through Allowable Solutions. The most recent Government impact assessment for the Zero Carbon Homes policy<sup>57</sup> has estimated that the cost of Allowable Solutions would be £49 per tonne of CO<sub>2</sub> per annum, totalled over 30 years. This figure is in present value terms, and assumes, in effect, that this is the cost that the developer would pay upfront on completion of each new dwelling. The table below shows the potential value [or cost] of the Allowable Solutions for different dwelling types.

Table: summary of potential costs for Allowable Solutions for different dwelling types

Type of dwelling	Floor area [m <sup>2</sup> ]	Carbon compliance level [kgCO <sub>2</sub> per m <sup>2</sup> per year]	Cost of Allowable Solutions per dwelling [discounted] @£49 per tonne over 30 years
Flat	54.5	14	£1,122
Semi	76	11	£1,229
Terrace	76	11	£1,229
Detached	118	10	£1,735

One of the potential Allowable Solutions, at the time of writing, could be to fund the connection of district heating networks to reduce the carbon emissions of existing buildings. This could potentially assist with the overall viability of a district heating scheme, and thereby help reduce the cost to a developer of connecting the new homes, as explained above. However, this solution may require a local authority to have a policy mechanism in place to require payments into a local fund, rather than a developer paying into a national fund.

<sup>57</sup> CLG, Zero Carbon Homes, Impact Assessment, May 2011



**Powys Local Development Plan  
Viability Topic Paper**

**September 2016**

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## EXECUTIVE SUMMARY

This paper provides an update to the Council's position in relation to the viability of the development expected to be delivered by the Plan. This follows the updating and review of the viability evidence previously submitted for examination as part of the evidence base for the Local Development Plan.

The residential element of the Local Development Plan and Community Infrastructure Levy Viability Assessment (2014) has been updated and reviewed by the District Valuer Service (August 2016) the results of which have been used to inform it's case in relation to the viability of development expected to be delivered by the Plan.

The South West sub-market area has been amended slightly to include only the area to the south of the National Park – the communities of Ystradgynlais and Tawe-Uchaf. Parts to the north of the National Park previously within the South West have been incorporated into the Central sub-market area. The sub-market area names taken forward are 'Central', 'Severn Valley', 'North' and 'South West' and are illustrated on a map in Appendix 5.

The update has involved a review of the scale, location, existing uses, mix, and density of site typologies modelled for use in the development appraisals in order to ensure that they are reflective of the development planned by the LDP and informed by past delivery.

Viability assumptions applied to the development appraisals have also been reviewed and changes to these are explained and reasoned in Appendix 1. The updated viability results are reflective of changes in house price values, construction costs, land values and other values, at the time of the update in August 2016, and also of other changes made to assumptions to reflect the characteristics of development expected in Powys.

A review of the cost implications of the individual policy requirements of the latest version of the Plan (Further Focussed Changes to the LDP) concluded that most requirements, and therefore costs, would be site specific and dependent on the location, scale and impact of the development, which would be difficult to capture in this high level viability testing (see Appendix 2).

The higher viability threshold (or benchmark land value) applied by DVS means that higher residual values will be required in order for development to be considered viable. However, the viability threshold applied is considered to be more realistic and comparable to other relevant LDP studies carried out as noted in Appendix 3.

In terms of the general outcomes of the updated Viability Assessment (2016) for viability, the results indicate that development on sites of 5 or more units within the Central, Severn Valley, and North sub-market areas would be viable, however development viability is more challenging in the South West and on small sites of 3 units or less. Brownfield development is found to be generally viable.

With regards to development in the South West, the Council has evidence of development being delivered in this area, but also of development interest demonstrated by planning permissions and current planning applications (Appendix 4). The DVS has set out certain factors that explain how development may still be viable on the ground, including increases

in house prices, lower build costs, and lower profit margin expectations, and there are other factors likely to be particularly relevant to viability in the South West, including its accessibility (labour markets and transportation of materials), and evidence of increasing sale rates (which may shorten build out periods).

Reference is also made to the detailed site specific evidence of the deliverability of proposed allocations in the South West provided in the *Housing Allocations Position Statement (September 2016)* which provides confidence that allocations can be delivered in this area.

Based on evidence of past completions, generally supportive future planning policies and certain relevant viability factors, small sites are expected to continue to be a reliable and deliverable source of housing during the remainder of the Plan period.

The conclusions of the updated viability evidence are positive in that they indicate that, on the whole, the development planned by the LDP is viable and can be delivered. Whilst the potential implications of the non-delivery of development in the South West and on small sites have been considered, this is not expected to be a likely scenario, due to the other evidence referred to by the Council, which provides confidence that development can be brought forward in the South West and on small sites. Development viability is not expected to have significant or negative implications for the delivery of the Plan or on its overall Strategy.

The Council is also proposing to monitor future changes to assumptions related to viability, including changes to house prices and costs, along with other relevant development assumptions, in order to identify any changes that may be relevant to the delivery of the Plan and in order to inform any future review of viability and of the Plan.



## 1. INTRODUCTION

1.1 The aim of this topic paper is to summarise, interpret and consider the main findings and implications of the updated and reviewed viability assessment carried out in response to concerns raised by the Inspector regarding the findings of the Local Development Plan and Community Infrastructure Levy Viability Assessment (2014) and the potential implications of these findings for housing delivery within the Plan.

### *Background*

1.2 The original Local Development Plan and Community Infrastructure Levy Viability Assessment (2014) (reference EB13) carried out by HDH Planning and Development Ltd was submitted as part of the evidence base to support the submitted Powys Local Development Plan – Composite Version – Deposit Plan plus Focussed Changes January 2016 (LDP34). The results of the original HDH Viability Assessment (2014) found housing development within two of the four sub-market areas to be unviable. The modelled sites in the sub-market areas of Central Powys and Severn Valley sub-market areas were found to be generally viable, however most of the modelled sites in the sub-market areas of the Rural North and South West were found to be unviable according to the viability threshold adopted by HDH. Many of the modelled small sites and all of the modelled brownfield sites were also found to be unviable across all sub-market areas according to the viability threshold adopted by HDH.

1.3 Following submission of the Powys Local Development Plan (LDP) for examination in February 2016, and subsequent letter from the LDP Inspector dated 5<sup>th</sup> of April 2016, the decision was made to update the residential element of the Viability Assessment (2014). This was intended to reflect changes in construction costs and house prices in Powys since the original study (which was based on data from March 2014), but more importantly to address the questions raised by the Inspector regarding the deliverability of the quantum of housing development envisaged in the LDP.

1.4 Further discussions took place at the subsequent Exploratory Meeting held by the Inspector on the 10<sup>th</sup> of May 2016, where the Council explained that the draft updated viability evidence provided by HDH suggested that some sites were less viable and some were marginally viable, however the Council also explained that it was witnessing development on the ground in these less viable areas.

1.5 The Council commissioned an update to the HDH Viability Assessment (2014) and the Council also arranged for the District Valuer Service (DVS) to review the updated Viability Assessment carried out by HDH. This review involved further testing including the review of the values and costs used by HDH and also of other key viability assumptions. This review has led to the production of a further Viability Assessment with a new set of viability results. The reviewed Viability Assessment carried out by the DVS (August 2016) is considered to improve the robustness of the evidence-base for the Plan. The Council has decided to take the results and conclusions of the DVS review forward to act as the updated Viability Assessment (2016) and therefore to inform the Council's case in relation to the viability and deliverability of the Plan.

## *Content of the paper*

1.6 This paper, firstly, compares the assumptions applied by HDH Viability Assessment in 2014 with those used by the DVS in its review in 2016, before summarising and analysing the updated results provided in the DVS review. It then goes on to consider the general conclusions of the updated Viability Assessment (2016) in terms of development viability in Powys, with further detailed analysis and evidence provided in relation to the more challenging areas of viability identified. The paper concludes by considering the implications of this updated evidence for the viability of housing proposed to be delivered by the Plan and for the overall strategy of the Plan.

1.7 Further site specific evidence in relation to the deliverability of the housing allocations and commitments identified by the Inspector is provided within separate papers – the *Housing Allocations Position Statement (September 2016)* and *Explanation of the Housing Commitments (September 2016)*.

1.8 The implications of the further viability work for affordable housing provision and policies within the Plan are also discussed in a separate paper – the *Affordable Housing Topic Paper Update (September 2016)*.

## **2. EXPLANATION OF CHANGES TO THE VIABILITY EVIDENCE BASE**

### *Housing sub-market areas*

2.1 The HDH Viability Assessment (2014) identified four county price zones (otherwise known as sub-market areas) within Powys - 'Central Powys', 'Severn Valley', 'Rural North' and 'Southwest Powys'. Varying residential market values based on house price values per square metre were applied to the appraisals of sites within these areas. These areas were illustrated on a map in figure 4.6 of the Viability Assessment (2014).

2.2 It is important to note that a slight amendment has been made to these areas in the updated viability work. The area to the north of the Brecon Beacons National Park which was previously included within the Southwest Powys sub-market area, has now been included in the Central sub-market area. It should be noted that no allocations are proposed by the Plan within the area affected by this change, which includes parts of the communities of Trallong, Maescar and Llywel that lie outside the Brecon Beacons National Park. The South West sub-market area now only includes the communities of Ystradgynlais and Tawe-Uchaf to the south of the Brecon Beacons National Park.

2.3 The Housing sub-market areas, as amended, are as illustrated on the map attached in Appendix 5.

2.4 It is also noted that some of the names by which the sub-market areas are referred to have been amended between the 2014 and 2016 Viability Assessments. The name for 'Severn Valley' remains the same, 'Central Powys' becomes 'Central', the 'Rural North' is now named 'North', and 'Southwest Powys' is now referred to as 'South West'. For clarity, therefore, the names of the sub-market areas going forward are 'Central', 'Severn Valley', 'North' and 'South West'.

## *Review of typologies*

2.5 As part of the update, the site typologies tested in the original study were reviewed in order to ensure that they continued to be reflective of the development planned, particularly as the allocations had been subject to changes, with new sites added, sites removed and sites amended, since the first version of the Deposit Plan in 2014, when the original study was conducted.

2.6 The main change involved in the testing of larger sites is the testing of a large 50 unit site as oppose to a 70 unit site. Small greenfield sites of 10 units and also small sites of less than 10 units have been modelled as both edge of settlement sites and infill sites in order to reflect the varied location of smaller sites in Powys. 7 unit schemes have also been tested.

2.7 The majority of the typologies tested are reflective of greenfield sites expected to come forward by the Plan. Greenfield sites account for 95% of the proposed allocated units. A limited range of brownfield site typologies have been tested reflecting the scale of allocated brownfield sites and to account for small brownfield sites likely to come forward as windfall. Larger 100 unit schemes are only tested as greenfield sites to reflect the absence of brownfield allocations and of previous schemes of this size. Brownfield sites of 50 units are tested, whereas they were only previously tested up to sites of 25 units, in order to account for a proposed allocation. Small brownfield sites have only been tested as infill to reflect the location where these types of sites are generally found in Powys.

2.8 In terms of the assumed existing and alternative uses of sites modelled, greenfield sites continue to be tested as being in agricultural use. HDH tested brownfield sites as having an alternative industrial use value, whereas DVS has not accounted for high value alternative industrial uses on brownfield sites. HDH also tested certain small modelled sites based on existing/alternative uses as paddocks, gardens and garages. Further explanation as to the existing/alternative use values applied in both studies are set out in Appendix 1.

2.9 The assumed open market and affordable housing mixes applied to the site typologies have been reviewed against past evidence of house type mixes being delivered on the ground, also taking into account the needs identified in the Local Housing Market Assessment and DVS experience of market demand. The mix applied by the DVS to open market housing is set out in table 3 of the report.

2.10 The assumed densities applied to the site typologies have also been reviewed to reflect evidence of densities being achieved on the ground on recent developments. This evidence suggested that developments were being built to higher densities than those previously assumed. This was particularly the case for brownfield sites where densities of up to 35 units per ha were being seen on larger brownfield sites as oppose to 32 units per hectare previously applied, and densities on larger greenfield sites where averaging 27 units per hectare compared to the 22 units per hectare previously applied. The density guidelines set out in policy H3 and the capacity of allocations in terms of the number of units indicated in Appendix 1 of the Composite Plan (LDP34) have been amended accordingly.

2.11 The HDH study (2014) assumed a certain amount of on-site open space would be provided on larger sites and this was taken into account in the amount of developable area. The DVS has not accounted for open space provision as the policy requirement for this would be based on site specific circumstances.

#### *Review of viability assumptions*

2.12 In updating the Viability Assessment to take into account changes in house prices values and costs since the original study in March 2014, this also provided an opportunity to review the viability assumptions used in the HDH Viability Assessment (2014) to test their accuracy and relevance to the particular characteristics, location and scale of development in Powys.

2.13 The review of viability assumptions by the DVS has lead in some instances to the use of different assumptions, which are a result of changes in values, use of different evidence sources, and also changes in the approach used to identify these values. The local experience of the DVS in carrying out site specific viability assessments in Powys and Wales has informed this review. Changes to the key viability assumptions are summarised in Appendix 1, which also provides commentary on the reasons for the changes.

2.14 The potential implications of any proposed policy requirements have also been reviewed as illustrated in Appendix 2 in line with the latest version of the Plan – Further Focussed Changes September 2016. This review found that many of the cost implications of the individual policy requirements of the Plan would be site specific and their relevance to particular developments would largely depend on the location, scale and impact of the development, which would be difficult to capture in this high level viability testing. It is noted that HDH accounted for additional costs associated with Sustainable Urban Drainage Systems (policy DM5) of 5% on brownfield sites and also accounted for abnormal costs along with higher professional fees and contingency (policy DM9). These additional costs have not been accounted for within the reviewed DVS study (2016) as they are considered to be site specific. As explained in the DVS report, the residual values generated for the modelled sites leaves adequate headroom for at least some additional costs to be absorbed by the development.

2.15 Consideration has also been given to the likely impact of the changes made to the assumptions on the viability of development.

2.16 In terms of any changes made to reflect the timing of the studies, whilst it is difficult to compare the house price values used in both studies, due to the different sources and methods used, the values used by DVS are based on current market evidence as of August 2016 and therefore they will reflect any increases in house prices values that have occurred since March 2014. It is understood that house prices in Powys have generally increased over the period between the original study (March 2014) and the DVS study (August 2016). According to the Land Registry's House Price Index for Powys (June 2016), average house prices in Powys have increased by 4.9% since June 2015, and it is noted that during this period Powys has experienced the same increase as has been experienced at the Wales level.

2.17 It would appear that house price values assumed by DVS in the sub-market area of the North are higher than those applied by HDH when viewed in relation to the house price values applied in other sub-market areas - the values being closer to those found in the Severn Valley. This should improve viability in the North.

2.18 This overall increase in house price values, viewed on its own, is likely to improve viability. However, it is also understood that build costs have increased over this period. For example, it is noted that the build cost of a 100 unit scheme applied by DVS is £65 per square metre higher than the cost applied by HDH, however the main difference in costs relates to smaller sites due to the application of the higher specific BCIS costs relating to sites of 3 or less by the DVS. Costs for meeting sprinkler requirements have also been increased by approximately £500 per dwelling to match official Welsh Government estimates.

2.19 Increased build costs, on their own, will have a negative impact on viability, however this potential impact is mitigated to some extent by the reduced allowance for external costs applied by DVS to large 100 unit schemes and also to single plots. The DVS approach towards costs on brownfield sites, by not applying abnormals and contingencies for instance, is likely to improve viability for brownfield sites.

2.20 The changes to the allowances made for other section 106 contributions (not related to affordable housing) by reducing the allowance for smaller sites and removing an allowance for sites of less than 10, whilst maintaining the allowance for larger 100 unit schemes at £2,000 per dwelling, is likely to improve the viability of smaller sites of less than 10 units.

2.21 The changes discussed above will directly impact on viability in terms of the residual values generated for the modelled development schemes. In order to test the viability of modelled development schemes, the residual values have been compared with the viability threshold (otherwise referred to as benchmark land value) which seeks to reflect the price level at which a landowner is likely to release the land for development. In order for development to be deemed viable (according to high level testing), the residual value must exceed the viability threshold.

2.22 As is noted within the commentary of Appendix 1, the approach taken towards establishing the viability threshold is broadly similar in both studies. The current agricultural land value adopted by DVS is lower than that previously adopted but is based upon market evidence. The higher viability threshold applied by DVS, which affects large and small sites, greenfield and brownfield sites alike, means that higher residual values will be required in order for development to be considered viable. However, the viability threshold applied is considered to be more realistic and comparable to other relevant LDP studies carried out as noted in Appendix 3.

2.23 In conclusion, therefore, some of the changes made to the assumptions, including increases in house prices values and reduction of external costs, have the potential to have a positive impact on viability, however the increase identified in build costs identified is likely to counter this improvement to some extent. Overall, therefore, and particularly due to changes over time, it is likely that the outcome of these changed assumptions for viability will be slightly more positive than those of the previous study.

### 3. THE UPDATED AND REVIEWED VIABILITY RESULTS

3.1 This section summarises and analyses the results of the updated and reviewed Viability Assessment carried out by the DVS.

3.2 To clarify, the Council is basing the following comparison on the results presented in tables 9-12 of the DVS study (2016) and the results in table 10.5 of the HDH study (2014). The focus is also on the results provided at 0% affordable housing i.e. for open market housing schemes, as this confirms whether development is viable or not. The viability testing of affordable housing contributions is discussed in a separate paper – *Affordable Housing Topic Paper Updated (September 2016)*.

3.3 In terms of presentation of the results, the previous study presented the results on a £ per ha basis, whereas the DVS results are shown on a £ per hectare and a £ per site basis in the DVS work. Whilst the previous presentation of the results was useful in terms of drawing comparisons between the results for different typologies, by presenting results on a £ per site basis, this reflects the residual value according to the site area of the particular site typology. For this reason, the DVS results considered are mainly those presented on a £ per site basis.

3.4 It is difficult to directly compare the results gained by the DVS in 2016 and HDH in 2014 as not only are the results based on different data sources obtained at different times, but also some of the viability and development assumptions applied are different, and the development appraisals undertaken have been produced using different models – the DVS has used the ‘Argus’ model, whereas HDH has used a bespoke model developed by HDH. However, the following comparisons can be made in terms of general outcomes for viability:

- The updated results continue to show that there is considerable variation in viability across the County, with the Central sub-market area appearing to be the most viable area, and South West the least viable area.
- The updated results in Central and Severn Valley for greenfield site typologies larger sites of 10 units or more are similar to the previous results, in that all were found to be viable.
- The updated results for North show improved viability as all greenfield site typologies relating to allocations are found to be viable, whereas larger 100 unit and large 70 unit sites were found to be only marginally viable in the 2014 study.
- The results for the South West continue to indicate that development relating to allocations is generally unviable. All site typologies in this area continue to have negative residual values, with the exception of greenfield and brownfield sites for 5 and 7 unit (infill and edge) that now have positive residual values, and both greenfield and brownfield 5 and 7 unit infill sites (but not edge) exceed the viability threshold and therefore are found to be viable.

- The results for small sites of less than 10 units are similar for both studies. Both studies found that schemes of 3 units or less in the Central, Severn Valley and North sub-market areas were unviable.
- The results for brownfield sites show that across the Central, Severn Valley and North sub-market area, these sites are generally found to be viable, whereas they were previously found to be unviable. Brownfield schemes continue to be generally unviable in the South West.
- Marginal viability results are only found in single unit typologies in certain areas, whereas they were also previously found in larger and large sites in the North and smaller 10 unit schemes in the Severn Valley (bearing in mind that the definition of marginal viability differs between the two studies, as explained in Appendix 1).

3.5 In view of the general outcomes of the reviewed Viability Assessment (2016) for viability, set out above, it can be concluded that development on sites of 5 or more units within the Central, Severn Valley, and North sub-market areas would be viable according to the high level viability testing carried out. Sites of this size are reflective of the scale of allocations and anticipated large windfall sites. However, small sites of 3 units or less, which are more representative of the scale of small windfall sites that are expected to come forward, are found to be unviable.

3.6 The DVS Viability Assessment (2016) also concludes that brownfield development, which was previously found to be largely unviable, is potentially viable. This apparent improvement in the viability of brownfield development appears to be as a result of the changes to the assumptions applied by the DVS to brownfield sites, as explained in Appendix 1.

3.7 The Viability Assessment (2016) continues to identify certain areas of concern in terms of viability, and therefore further consideration has been given to the apparent viability challenges in the South West area and also to the viability challenges of small sites.

#### **4. VIABILITY IN THE SOUTH WEST SUB-MARKET AREA**

4.1 Both the HDH (2014) and the DVS (2016) studies have identified challenging issues with the viability of development in the South West. Based on the assumptions used and sites modelled, on the whole the appraisals have generated negative residual values in this area. This appears to be mainly as a result of the relatively low house price values currently experienced in this area, which do not appear to be sufficient to outweigh the costs of development.

4.2 Notwithstanding the results of both studies in respect of development viability in the South West, the Council has evidence of development completions and developments under construction on the ground, and therefore of development being delivered in this area, but also of developments proposed with planning permission and current planning applications.

### *Delivery of UDP allocations*

At the time that the Powys UDP was adopted, two sites included in the Plan had been completed. This included a development in Abercrave for 20 units (B1 HA2) and a development in Gurnos for 15 units (B34 HA3). Since the adoption of the UDP, further schemes on allocated sites in Ystradgynlais for 6 units (B30 HA2) and another for 3 units (B30 HA3) have been completed.

### *Joint Housing Land Availability data*

4.3 According to sites recorded in the Powys JHLAS database (2009 onwards) in the South-West area, which represent the supply of sites of 5 units or more in this area, it is noted that 2 sites have been completed, another 2 sites are mainly completed, and work has commenced on a further site. All sites have planning permission, except for 1 site which is an allocation under the UDP.

### *Small site evidence*

4.4 With regards to small site completions, according to the Council's small site monitoring data (recording small sites that have been completed or are under construction since the beginning of the Plan period in 2011), 8 sites have been completed, 1 is partially completed, and 2 sites are under construction.

### *Planning permissions*

4.5 Reference has also been made to records of recent planning permissions as this provides an indication as to the scale and type of development that may come forward, and therefore the housing land supply. This also provides an indication of interest in development in the area.

4.6 Based on planning permissions granted since March 2010 until June 2016, the following is noted:

- 57 planning applications have been granted planning permission in the South-West, approving a total of 289 dwellings.
- 6 permissions planned a total of 222 units on large sites.
- 51 permissions related to small sites (of less than 5 units), approving a total of 67 units, half of which were planned on single plots.
- The majority of units (198 units) were planned on brownfield sites, with 80 units planned on greenfield sites.
- The majority of units (145 units) were new build within the development boundary, with 58 units new build in residential curtilages.
- Very few other types of development were planned - 1 barn conversion, 2 flat conversions to 2 units, and 1 new build flat scheme.

### *Current planning applications*



4.7 There are currently 8 planning applications being processed in respect of residential development in the South West sub-market area, as listed in Appendix 6. This includes an application made in outline in respect of a residential development for 10 dwellings, with the remainder involving proposed single dwellings.

#### *Deliverability of development in the South West*

4.8 The above evidence proves that development has happened in the past in this area and is continuing to happen, based on past completions and sites under construction. The relatively limited number of units and sites involved are likely to be reflective of general market conditions in recent years. Importantly, in terms of future development, it is clear that there is continued interest in development in this area, based on planning permissions granted and also current planning applications. This provides confidence that development will continue to be delivered in the future.

4.9 The viability results are based on the hypothetical sites modelled and general assumptions assumed which are necessary in order to carry out a high level assessment at a Plan wide level. Whilst the sites modelled and assumptions used are considered to generally reflect the proposed housing land supply, from allocations and windfall, under the LDP, it is inevitable that viability as it plays out on the ground will depend on the site specific circumstances of each development and developer, and therefore detailed viability factors cannot be captured in a high level study.

4.10 The DVS has outlined several factors which may explain why sites are still coming forward and could continue to come forward in areas found to be unviable, such as the South West (see paragraph 5.11 of the DVS report). These include factors, such as continued increases in house price values, quicker build out periods, lower build costs and lower profit margin expectations, which will improve viability and potentially make specific developments viable.

4.11 In terms of the particular characteristics of the South West, it is noted that the South West is positioned closer to the large potential labour markets of the Swansea area and is relatively accessible in terms of its transport links, and therefore this may enable lower developer overheads in terms of labour and materials, along with shorter build out periods, which would all have positive effects on the financing of development. Reference is made to developers building according to the sales period and therefore increases in sales rates are likely to have a positive impact on build out rates and viability. According to the average volume of sales recorded by the Land Registry indicate that in the SA9 area (which includes the South West sub-market area), sales rates have generally increased in this area since 1995 and apart from the impact of the downturn in 2008, sales have continued to increase year on year.

4.12 Landowner expectations in the South West may be generally lower than in other more viable areas of the County which may enable land to be released for a lower sum than assumed in the study, and general expectations in terms of the design and type of housing products to be developed may also be lower. In the town of Ystradgynlais, in particular, more urban forms of development may be expected, compared to rural areas, and there are likely to be opportunities for development on infill sites which may already benefit from existing infrastructure.

4.13 The Council also understands the importance of evidencing the deliverability of the development sites that it proposes to allocate in order to meet the housing needs of this area. A total of 8 sites (providing a total of 466 units) are allocated in the South-West, 7 of which are proposed in the town of Ystradgynlais and 1 of which is proposed in the large village of Abercrave. Two committed sites (providing a total of 63 units) have been included, one in the town of Ystradgynlais and another in the large village of Coelbren. Detailed evidence of the deliverability of these allocations is provided in the *Housing Allocations Position Statement (September 2016)*. This Statement concludes that based on the activities of site owners and site promoters of the site allocations, and other development activity as referred to above, there is continued confidence that the site allocations in the South-West can come forward.

## **5. SMALL SITE VIABILITY**

5.1 Both the HDH (2014) and the DVS (2016) studies have identified small sites of 3 units or less as generally unviable across all sub-market areas. The continued negative residual values of these small sites in the South West reflects the overall results in this area, however in the other sub-market areas, more positive residual values are found and their viability varies by size of scheme and by sub-market area. With the exception of single units greenfield schemes in Central, which are found to be viable, all would be either marginally viable, or their residual values, whilst being positive, are not sufficient to be within a reasonable margin of the viability threshold, and therefore are not deemed to be viable. The residual values for 3 unit greenfield edge schemes and single unit brownfield in the North are negative and therefore are not viable.

5.2 It would appear that the premium costs applied to schemes of 3 units or less is likely to explain the apparent unviability of these sites. The DVS also refers to the sensitivity of the results to the housing mix assumed for 3 unit schemes, and that alternative mixes may improve viability. Some of the factors discussed by the DVS to explain why sites deemed to be unviable in the study may still happen, could also be relevant to small site viability, particularly in terms of the possible lower profit expectations and financing arrangement of small developers. It is also likely that a small scale scheme would be carried out for or by an individual and would not be speculative as such, and therefore would not be driven by the same viability concerns as those that larger developers are concerned with.

5.3 Notwithstanding the results of both studies in respect of the development viability of small sites, the Council has evidence of development completions and developments under construction on the ground, and therefore of small site developments being delivered.

5.4 Data gathered for the purposes of explaining and reviewing the windfall allowance (*Explanation and Review of the Windfall Allowance September 2016*) in relation to past completions in Powys since April 2016 indicates that 828 completions of the total 2038 completions took place on small sites of less than 5 units. 99 units were completed on small sites between April 2014 and March 2015. This represents 74% of the total number of windfall completions, and therefore small sites are an important component of the housing land supply on windfall sites. A quarter of all windfall (both on large and small sites) involved new build on greenfield within the development boundary, and it is also noted that almost a

third involved conversions of non-residential buildings to dwellings. Affordable local need dwellings and rural enterprise dwellings also featured within the mix but at lower proportions.

5.5 Single and small multiple unit schemes of less than 5 units, therefore, have taken place in the past in Powys, and there will continue to be opportunities for windfalls of this scale to come forward in the future in Powys, and such would generally be permitted in principle by future planning policies as they have been under the adopted UDP policies.

5.6 Barn conversions and flat conversions were not tested in the original 2014 study and have not been tested by the DVS in 2016. DVS has explained that values and costs can vary hugely for conversions on a scheme by scheme basis, and this would clearly make it difficult to accurately appraise the likely viability of such schemes. However, again these types of schemes have been delivered in the past and therefore the Council can remain confident that they will continue to be delivered and contribute towards the Council's housing land supply for small sites.

5.7 In view of the evidence of past completions and factors which explain how small sites are being delivered, it is considered that these sites can and will continue to be delivered.

## **6. IMPLICATIONS FOR THE VIABILITY AND DELIVERABILITY OF THE PLAN**

6.1 This section considers the implications of the conclusions of the updated viability evidence, and taking into account other relevant evidence, for the viability and deliverability of the Plan and its strategy.

6.2 The conclusions of the Viability Assessment (2016) indicate that, on the whole, the development planned by the LDP is viable and can be delivered. Whilst the assessment also indicates that the viability of development in the South West and also on small sites may be challenging, other evidence relating to housing delivery, proposals and interest in these challenging areas, taking into account other relevant factors that may improve viability in the South West and on small sites, suggests that housing developments can be delivered on the ground.

6.3 Whilst regard has been given to the potential impact that non-delivery of development in areas of challenging viability, this is not deemed to be a likely scenario, given the other evidence relating to deliverability, as mentioned above.

### *Housing and spatial strategy*

6.4 The LDP plans for growth by dispersing growth proportionally around the Plan area to meet housing and other needs. The approach towards housing development is aimed at enabling the distribution of the most growth to the most sustainable locations. The LDP's spatial strategy is based on a sustainable settlement hierarchy with levels of development allocated to settlements commensurate with their size (number of households) and position in the hierarchy. The sustainable settlement hierarchy underpins the decisions on allocating new housing growth across the Plan period.

6.5 In accordance with this Strategy (focusing on the South West) development in the South West will be focused mainly on the town of Ystradgynlais and also to a lesser extent on the large village of Abercrave and Coelbren, in the form of allocations, commitments and to a lesser extent large and small windfall. In the small village of Cae Hopkin, small sites may be permitted as modest infill or as extensions for affordable housing exception sites.

6.6 Based on the evidence discussed above relating to viability and deliverability of development, the ability of the Plan to deliver housing in line with its Strategy is not considered to be compromised. If housing development expected in the South West area was not delivered, this would impact on the ability of the Plan to meet the needs of the communities of the South West and to ensure their sustainability. However, in view of the assessment of viability and evidence that supports the deliverability of development in the South West and on small sites, the Council can be confident that the housing development envisaged by the Plan can be delivered and that development viability should not impact on the overall strategy as it relates to housing development.

#### *Housing provision*

6.7 The impact of the viability evidence on the contribution that allocations and windfall make towards the housing provision proposed in the Plan has been considered. The impact on the Plan's overall housing provision number of 5,596 in terms of its components is set out below.

#### *Allocations*

6.8 84% of the total allocated units, and 74 allocated sites, are in areas that are found by the updated Viability Assessment (2016) to be viable. The viability evidence therefore supports the viability of the majority of allocated sites and units. Development is expected to be deliverable on allocated development in the South West, as set out in the *Housing Allocations Position Statement (September 2016)*.

6.9 Furthermore, by allocating land this will provide increased certainty for developers to invest and also removes an element of risk, which enables developers to have confidence in the County, and which may help to make development in less viable areas worthwhile.

#### *Commitments*

6.10 95% of the total committed units (1115 units) are in areas that the updated Viability Assessment (2016) has found to be viable. The evidence therefore supports the viability of the majority of committed sites units, and other evidence mentioned above, and within the *Housing Commitments Topic Paper (September 2016)* is considered to support the deliverability of outstanding committed sites.

6.11 Furthermore, a significant proportion (77% if include large and small site completions) of the overall number of committed sites included in the Plan have either been delivered or are being delivered on the ground. It should also be noted that an allowance of 40% has been made within the Further Focussed Changes to the LDP (September 2016) for non-delivery of committed sites that have not started, and therefore the Plan is only expecting 610 units to come forward on outstanding commitments.

### *Anticipated Windfall*

6.12 327 units are anticipated to come forward on large windfall sites and 883 units are anticipated to come forward on small windfall sites during the remainder of LDP period.

6.13 Large windfall sites are expected to contribute towards 5.5% of the overall housing provision number, and the windfall projection on large sites is 327 units over the 11 years of the remainder of the Plan period. Taking into account the above evidence on viability and delivery of sites, including past delivery on these types of sites, it can be expected that large windfall development will continue to be developed.

6.14 Anticipated development on small sites accounts for 15% of the overall housing provision number, projected at 883 units, over the remainder of the Plan. As explained above, small sites can be delivered as evidenced through past completions, and therefore it is considered that small sites can continue to be a reliable and deliverable source of housing during the remainder of the Plan period.

### *Impact on the ability to meet dwelling requirement number*

6.15 The LDP seeks to meet the housing requirements of the County, and the dwelling requirement figure identified by the Plan is 4,500 units. The above evidence provides confidence that the identified housing requirements can be met as development within the Plan area is generally found to be viable. The potential unviability of development in the South West and small sites identified, if realised, would not have a significant impact on overall housing provision with the Plan and would not compromise the ability of the Plan to meet the overall dwelling requirement of the County. This scenario could impact on the ability to meet the dwelling requirements of the South West, however development is expected to be delivered in this area to meet these requirements.

### *Impact on the housing trajectory*

6.16 The trajectory sets out the phasing expected of development proposed by the Plan, including proposed allocations and commitments, and is used to inform the expected 5 year housing land supply following adoption and throughout the Plan. The phasing assumptions applied in the Viability Assessment (2016) have been used to inform the phasing of sites within the trajectory, however consideration has also been given to site specific factors and constraints that are likely to influence when and over how long a period a development is likely to be delivered.

6.17 It is noted that some of the allocations in the South West are expected to be delivered within the next 5 years of the Plan period, whilst others are not expected to be delivered until the later stages of the Plan period. The potential for viability to improve over time could assist in their delivery. The trajectory demonstrates that a 5 year housing land supply is expected to be available at adoption of the LDP and that this supply can be maintained throughout the Plan period.

### *LDP policies*

6.18 In view of the positive viability results for much of the Plan's area and proposed sites, the Council is confident that the majority of planned and anticipated development can meet

the policy requirements set out in the LDP whilst also maintaining development viability. In areas of apparent unviability, this does not appear to be as a direct consequence of policy requirements and is instead a reflection of the local housing market and the balance between house prices and costs in those areas.

6.19 Where policy requirements involve section 106 obligations requiring financial contributions, a general allowance has been accounted for within the Viability Assessment. However, planning obligations will be negotiated on a case by case basis and requirements will depend on the nature, location and scale of the development, and the need to mitigate any adverse impacts on local infrastructure and the community. There is a mechanism within the policy which allows for viability to be taken into account subject to the submission of detailed viability evidence by the developer.

6.20 The viability of affordable housing policy requirements is detailed in the *Affordable Housing Topic Paper (September 2016)*.

### *Conclusions on implications for the Plan and Strategy*

6.21 In view of the above discussion, and based on the conclusions drawn from the viability evidence and other evidence relating to housing deliverability, development viability is not expected to have a negative impact on the delivery of the Plan or on its overall Strategy. Consideration has been given to the potential implications of non-delivery of development planned and anticipated in the South West by the Plan, however these implications have been considered on the basis of the worse-case scenario whereby no development would come forward in this area. If this were to be the case, the above discussion demonstrates that the impact would not be significant in terms of the overall housing numbers proposed by the Plan. However, it is recognised that this scenario would have a localised impact on housing delivery in the South West sub-market area.

6.22 The Council does not consider the complete non-delivery of development in this area to be a realistic scenario, given that there is evidence of development happening on the ground and of development interest, along with developer intentions to bring allocations forward for development in this area. On this basis, development viability is not expected to have any significant or negative implications for the Plan and its Strategy.

## **7. MONITORING AND REVIEW**

7.1 For the purposes of monitoring viability on an annual basis and throughout the remainder of the Plan period, it will be important for key viability assumptions to be monitored in order to identify any changes that may affect development viability and that may have implications for the delivery of the Plan. The original study in 2014 recommended that house prices be monitored either every 4 years or if house prices change by more than 10%. The DVS has recommended that changes in both house prices and costs should be monitored, as a 10% increase in house prices would need to be viewed in relation to changes in other variables, including costs, which would impact on overall viability.

7.2 DVS recommends that changes in values and costs could be monitored concurrently by calculating the residual value of a 100 unit scheme and identifying a significant divergence between the costs and value. It is suggested that a divergence of 5% would be significant enough to warrant review of viability. This is considered to provide a practical way of monitoring and identifying potentially significant changes in viability that also takes into the relationship between values and costs. It is also considered to be appropriate to monitor existing use values, based on agricultural land values, as significant increases/decreases may impact on benchmark land values.

7.3 It is also proposed to monitor other development assumptions applied in the viability study in order to ensure their continued relevance to planned development and also to inform any future review or update of the Viability Assessment. These include:

- Density of development being proposed and delivered on the ground. The density of proposed and completed developments will be monitored against the densities applied in the Viability Assessment and against the guidelines provided in policy H3.
- The mix of housing being proposed and delivered on the ground, particularly given the sensitivity of viability to the mix assumed.
- The level of other section 106 contributions (not related to affordable housing) is also proposed to be monitored in the AMR.
- Build out periods of sites as this is relevant to the financing of development.
- Changes in relevant policy requirements at a national and local level that may have cost implications for development.

7.4 Specific monitoring proposed in order to inform review of the affordable housing requirements is discussed in the *Affordable Housing Topic Paper (September 2016)*.

## **8. CONCLUSION**

8.1 The updated Viability Assessment (2016) indicates that most of the housing land supply identified by the Local Development Plan, including allocations, commitments and windfall development, can be brought forward during the Plan period, and is not expected to be constrained by viability issues.

8.2 In terms of the key changes to the viability results compared to the original Viability Assessment (2014), the improved results for development in the North sub-market area means that development in this area is deemed to be viable according to the Viability Assessment (2016). Development on brownfield sites is also found to be generally viable due to the approach taken which does not account for abnormal costs as these are site specific and therefore cannot be captured in a high level assessment such as this.

8.3 In areas where the viability evidence suggests that viability may be more challenging, namely in the South-West sub-market area and on small sites of 3 or less units, the Council is confident that development can still come forward as is evident from past delivery, general

development interest and site specific developer intentions, and deliverability evidence for allocations.

8.4 Development viability is not expected to have significant or negative implications for the overall housing delivery of the Plan or on its Strategy. Proposed allocations in the South West have been demonstrated to be deliverable and the windfall allowance for small sites is considered to be realistic.

8.5 The Council is also proposing to monitor future changes to assumptions related to viability in order to identify any changes that may be relevant to the delivery of the Plan and in order to inform any future review of viability and of the Plan.



## **9. APPENDICES**

- Appendix 1 Explanation of changes made to key viability assumptions between the 2014 and 2016 Viability Assessments.
- Appendix 2 Review of the cost implications of the proposed LDP policy requirements.
- Appendix 3 Viability thresholds applied in other LDP Viability Assessments.
- Appendix 4 A list of current planning applications in the South West.
- Appendix 5 A map of the sub-market areas, as amended, in 2016 – TO FOLLOW

## APPENDIX 1

Table clarifying the differences in the key assumptions applied in the original HDH Local Development Plan Viability Assessment (October 2014) and the DVS Viability Study (August 2016), along with reasons for changes in approaches and values applied.

<b>ASSUMPTION</b>	<b>OCTOBER 2014 REPORT (HDH)</b>	<b>AUGUST 2016 REPORT (DVS)</b>	<b>REASONS</b>
<b>Approach towards identifying an appropriate Viability Threshold (also referred to as Benchmark Land Value)</b>	Comparing the Residual Value generated by the viability appraisals with the Existing Use Value (EUV) or an Alternative Use Value (AUV) plus an appropriate uplift to incentivise the landowner to sell. A competitive return for the landowner is considered. Judgement informed by reference to market value of the land both with and without planning permission.	DVS has assessed existing and alternative use values and has referred to comparable land sales evidence in order to identify a benchmark land value that offers significant financial incentives to landowners, but is also reflective of likely planning obligations and affordable housing contributions. The threshold, therefore, may be below what may historically have been aspirational figures held by landowners.	Both HDH and DVS have been informed by viability guidance available from sources such as the Harman report and the RICS Viability in Planning Guidance note, and it is understood DVS were part of the group that authored the RICS guidance. As such both HDH and DVS believe that any benchmark land value must be reflective of full planning policy requirements whilst also offering a suitable incentive over EUV to the landowner to release the land for development to be realistic.
<b>Existing and alternative use values</b>	Agricultural land value of £25,000 per hectare	Agricultural land value of £17,300 per hectare based on values of pasture land in Wales RICS/RAU Rural Land Market Survey (second half	The assumed agricultural land value has been reduced in order to reflect market evidence of average values in Wales and taking into account the fact that agricultural land is generally in use as pasture land in Powys.

		of 2015)	
	Industrial land value of £250,000 per hectare	Industrial land value not included.	Considering the real nature of the land likely to come forward in Powys no specific industrial land value has been taken into account by DVS as it is believed in its nature it will be more akin to Greenfield and that high value alternative industrial uses are highly unlikely to exist in fact. The demand for this type of land in Powys is also expected to be relatively limited.
	Paddock land value of £50,000 per hectare.	Paddock land value not included.	Paddock uses are not considered to be generally reflective of the planned development sites, or of potential alternative uses, in Powys.
	Residential land value (based on garden land) of £500,000 per hectare.	Garden land value not included.	Garden land uses are not considered to be generally reflective of the planned development sites, or of potential alternative uses, in Powys.
	Garage land value of £250,000.	Garage land value not included.	Garage uses are not considered to be generally reflective of the planned development sites, or of potential alternative uses, in Powys.
<b>Viability Threshold (benchmark land values) identified</b>	Large greenfield sites (10 or more units):  Residual value to exceed Existing Use Value (EUV) +20% and an additional £200,000 per hectare –	Large greenfield sites (10 or more units): £300,000 per hectare.	A higher viability threshold has been applied by DVS which is based on their experience of specific viability cases and other area wide studies. A table summarising the viability threshold applied by other Authorities in their LDP Viability Assessments is provided within Appendix 3. The viability threshold applied by the DVS is the same as that applied to greenfield sites in the Ceredigion study, which is a

	averages as £230,000 per hectare.		predominantly rural area similar to Powys. Other studies have applied lower thresholds of £250,000, and others higher thresholds. However, by comparing with other similar areas, notably Ceredigion, it is clear that the viability threshold assumed by HDH in 2014 is on the low side, which may have partly been a reflection of lower expectations within the market at that time.
	<p>Large brownfield sites (10 or more units):</p> <p>Residual value to exceed Existing Use Value (EUV) +20%. Averaged at £260,000 per hectare.</p>	<p>Large brownfield sites (10 or more units):</p> <p>£300,000 per hectare.</p>	<p>HDH has differentiated between the Viability Threshold for greenfield and brownfield, whereas the DVS has applied the same Viability Threshold to both greenfield and brownfield sites, explaining that remediation costs of sites in Powys are expected to be relatively minor and that true higher value alternative industrial uses are unlikely to be in evidence.</p> <p>The Council considers it to be appropriate to apply the same Viability Threshold to both greenfield and brownfield sites. Any abnormal costs or associated costs reflecting the risk involved in the development of brownfield sites, will be site specific and where these exist, they should be reflected in the price paid for the land. The same principle applies to any abnormal costs associated with development on greenfield sites.</p>
	<p>Small greenfield sites (less than 10 units):</p> <p>Residual value to exceed Existing Use Value (EUV) +20% and an additional £200,000 per hectare</p>	<p>Small greenfield sites (less than 10 units):</p> <p>£30,000 per plot</p>	<p>HDH has applied the same viability threshold (calculated on a £ per hectare basis) to small sites as the large sites as set out above.</p> <p>DVS has applied a higher viability threshold of £30,000 per plot to sites of less than 10 units, which is based on a review of recent sales evidence. The DVS considers that single plots and small sites should be based on a plot basis due to the size of the sites involved.</p>

			The Council considers it appropriate to apply a higher Viability Threshold (relative to site size) to small sites, as otherwise this would result in relatively low and potentially unrealistic viability thresholds for small sites.
	Small brownfield sites (less than 10 units):  Residual value to exceed Existing Use Value (EUUV) +20%	Small brownfield sites (less than 10 units):  £30,000 per plot	The Council considers it appropriate to apply a higher Viability Threshold to small sites compared to larger sites, and also to apply the same Viability Threshold to brownfield and greenfield sites, for the same reasons as set out above.
<b>Definition of marginal viability</b>	Where the Residual Value is above the Alternative Use Value but below the Viability Threshold. HDH considered developments with marginal 'amber' residual values as being not viable.	Where the Residual Value is within a reasonable margin of the Viability Threshold – 10% - the DVS considers it to be still likely that the development will come forward.	The definition applied previously was based on the potential viability of a scheme if the residual value exceeded the alternative use value. However, this would cover residual values within a wide and varying margin of the Viability Threshold, and would not reflect the likely uplift expected by the landowner to incentivise to sell. The DVS approach recognises that Residual Values that are too far below the Viability Threshold to be considered to be marginally viable, would not be viable, and instead has applied a margin of within 10% of the Viability Threshold, within which development could be deemed viable.

<p><b>Approach towards identifying house price values</b></p>	<p>HDH has applied different residential market values (on a £ per square metre basis) to each sub-market area. Values are based on current asking prices on active developments at the time of the Assessment, and informed by the general pattern of all house prices across the study area.</p>	<p>DVS has calculated typical prices for different unit types across the different sub-market areas. Regard has been given to new build sale prices and also to general value levels of all property sales.</p>	<p>The method used to estimate house price values differs between the HDH and DVS studies.</p> <p>The Council agrees with the method used by DVS as this is based on typical prices for actual house types.</p>
<p><b>House price values</b></p>	<p>Central - £2,250            Severn Valley - £2,100            North - £1,850            South-West - £1,500</p>	<p>Exact values applied by DVS based on house type within each sub-market area are set out in Table 6 of the DVS report. The average value for each sub-market area is as follows:</p> <p>Central - £200,000            Severn Valley - £175,000            North - £170,000            South-West – £130,000</p>	<p>Due to the different methods and sources used to estimate house price values and therefore the house sale values applied in the two studies cannot be directly compared.</p> <p>Both studies assume the highest values are found in the Central sub-market area, and that the lower values are found in the South West. However, it is noted that the values applied by DVS in the North and Severn Valley generally show more similarity to each other than in the values assumed by HDH, where values applied in the Severn Valley were notably higher than in the North.</p> <p>The values used by DVS are current as of August 2016 and therefore it is considered to be appropriate to apply these values in the viability testing.</p>

	Additional 10% premium applied to units on small sites and 15% premium applied to single units.	Additional 10% premium applied to units on small sites (of 7 units or less) and 15% premium applied to single units, based on perceived 'exclusivity' of a smaller scheme as opposed to a larger estate build, and also as smaller schemes tend to be more architecturally driven and desirable.	The DVS continues to apply an additional 10% premium to small sites and an additional 15% for single sites, as previously applied by HDH.
<b>Developer profit</b>	20% of Gross Development Cost	<p>Open market housing:</p> <p>Greenfield site - 17.5% of Gross Development Value</p> <p>Brownfield site - 20% of Gross Development Value</p> <p>Affordable housing:</p> <p>6% of Gross Development Value</p>	<p>The method used for calculating developer profit differs between the HDH and DVS studies. HDH calculates profit as a percentage of the Gross Development Cost, whereas DVS calculates profit as a percentage of the Gross Development Value.</p> <p>The Council agrees with the method used by DVS as this is the default methodology for calculating developer profit residential development viability assessments according to the Harman Guidance.</p> <p>DVS also applies varied levels of profit depending on whether the site is greenfield/brownfield (given the perceived higher risk of brownfield sites and higher potential for unknown contamination), and also accounts for a lower profit for affordable housing than for open market housing. HDH applies a flat percentage for developer profit to all types of housing and sites.</p> <p>The Council considers it appropriate to vary the profit level</p>

			expected of greenfield and brownfield sites, and reduced profit level expected of the affordable housing element of a scheme. The level of profit assumed by the DVS is within the range normally allowed for developer profit, taking into account the level of profit allowed for in other studies.
<b>Build costs</b>	Based on BCIS costs re-based to Powys (March 2014):  Ranging from £849 per square metre to £1,225 per sqm varied by size of site and whether greenfield/brownfield.  e.g. £900 per sqm for a larger 100 unit scheme	Based on BCIS median estate housing general costs and costs for 3 and fewer units re-based to Powys as at 23 <sup>rd</sup> of July 2016:  £969 per square metre for houses  £1,128 per square metre for flats	It is understood that construction costs have generally increased and therefore it is considered appropriate to apply costs in line with up-to-date data.
	On sites of 3 and fewer units:  25% higher build costs applied.  £1,225 per square metre	On sites of 3 and fewer units:  £1,616 per square metres for detached dwellings  £1,150 per square metre for semi-detached and terraced housing	HDH stated that the costs for small sites according to BCIS are just over 25% higher than those applied to larger sites. It is considered appropriate to apply a higher cost assumption to flats and small sites of 3 and fewer units in line with the current relevant BCIS cost data. The higher costs expected on small sites is also consistent with the premium house price value expected, which reflects the generally higher expectation on small site development in terms of their design and individual character.
<b>External</b>	20% of build costs for	15% of build costs for over	HDH has applied higher costs to large greenfield sites as these



<b>costs</b>	large greenfield sites  10% of build costs for small sites	10 units  10% of build costs for under 10 units  5% of build costs for single units  Based upon the experience of the DVS Quantity Surveyors and as agreed on specific viability cases which have suggested a general tone.	would be more likely to require substantial expenditure on bringing services to the site and have greater areas of external landscaping.  DVS has applied lower external costs allowances to large greenfield sites and single sites as suggested by the tone of specific viability work.  The Council considers that the level of external costs applied by the DVS to larger sites is more reflective of the scale and nature, and therefore of infrastructure requirements, of development sites in Powys. The reduced allowance applied for single units also reflects the relatively limited external costs likely to be involved in this scale of site.
<b>Building regulations/ Sprinklers</b>	Additional cost of £2,500 per dwelling. Estimate of £1,000 per house where there is adequate water pressure, however where water pressure is inadequate, there will be extra costs, and therefore a higher figure of £2,500 has been assumed to cover this extra cost.	£3,075 per dwelling £875 per flatted dwelling  Based on official estimates (Welsh Government Ministerial Statement 'Regulating for automatic fire suppression systems in domestic buildings' May 2012).	The DVS has allowed for a higher cost for meeting sprinkler requirements which came into force in January 2016. The cost per dwelling accounted for HDH in 2014 was lower than the DVS, however DVS are based on the Welsh Assembly Government estimates. DVS has also accounted for a lower cost for sprinklers in flatted dwellings, which appears reasonable.
<b>Section 106 allowance for other</b>	£2,000 per dwelling  Based on deriving the aggregate cost of s106	Larger 100 units - total £200,000 per site	The decision to change the section 106 allowances made for other contributions was informed by evidence of average contributions secured in the past according to the Council's Section 106 Register,

<p><b>contributions</b></p>	<p>contributions by drawing on the historic level of s106 contributions by the Council.</p>	<p>Large 50 units - total £50,000 per site</p> <p>Medium 25 units - total £25,000 per site</p> <p>Small 10 units - total £10,000 per site</p> <p>Less than 10 units - £0.</p> <p>Based on evidence from the Council of the S106 sums that have been collected from approved schemes.</p> <p>A higher contribution of £5,000 contribution has also been tested.</p>	<p>accounting for section 106 agreements requiring contributions that had been entered into since 2011 to-date. Analysis of the information contained on the Register indicated that on average £1,000 per dwelling had been secured, however the amount secured per dwelling ranged from a minimum of £100 per dwelling to a maximum of £2,600 per dwelling.</p> <p>It was noted that higher sums had been secured per dwelling on some of the larger sites, which indicated that there was a need to reflect this by varying the allowance made for larger and smaller sites. This approach is considered to be appropriate given the likelihood that larger sites will have greater on-site and off-site infrastructure requirements due to their scale.</p> <p>Consideration was also given to likely additional contributions resulting from new policy requirements within the LDP, including the policy requirement in connection with Language Action Plans in respect of the Welsh language, which may involve contributions. However, this requirement only generally applies to developments of more than 10 in areas identified as Welsh language strongholds.</p> <p>DVS has tested larger sites at higher S106 levels of £5,000 per dwelling and they remain viable. The exact amounts secured and delivered through section 106 agreements under the LDP will be monitored and viability reviews triggered if the contributions made are found to be higher or lower than reality.</p> <p>No allowance has been made for section 106 contributions for sites of less than 10 units as LDP policy requirements relating to potential contributions do not generally apply to sites of this scale.</p>
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## APPENDIX 2 Review of the cost implications of the proposed LDP policy requirements

This review of planning policy requirements and their likely cost implications is based on proposed LDP policies as per the Further Focussed Changes to the Powys Local Development Plan (September 2016). This review clarifies how any cost implications identified applies to developments, the likely nature of the costs involved, and also how the cost has been accounted for within the updated Viability Assessment (2016) carried out by the DVS.

LDP proposed policy	Does the policy have a cost implication?	Application (to all development, specific types of development or specific sites).	Time defined?	Nature of costs	How is the cost accounted for within the Viability Assessment?
<i>SP1 Housing Growth</i>	No	N/A	N/A	N/A	N/A
<i>SP2 Employment Growth</i>	No	N/A	N/A	N/A	N/A
<i>SP3 Affordable Housing Target</i>	Yes.	All housing developments are expected to contribute towards meeting the affordable housing target, however the detailed application of the affordable housing requirements of the plan is explained under policy	No.	By requiring affordable housing contributions to be made by housing developments, lower house price values will be gained for affordable housing than open-market houses, which impacts on the Gross Development Value of	The scope for requiring affordable housing whilst maintaining development viability has been tested within the Viability Assessment.

		H4.		a scheme.	
<i>SP4 Retail Growth</i>	No	N/A	N/A	N/A	N/A
<i>SP5 Settlement Hierarchy</i>	No.	All Developments	N/A	N/A	N/A
<i>SP6 Distribution of Growth across the Settlement Hierarchy</i>	No.	All developments	N/A	N/A	N/A
<i>SP7 Safeguarding of Strategic Resources and Assets</i>	Yes.	Site specific depending on whether the proposal would impact on these assets.	No.	This policy would generally prevent development that has an adverse impact on the identified assets. Where development affecting these assets is found to be acceptable in principle, this may be subject to mitigation measures and appropriate design solutions.	These are site specific costs and therefore are not directly captured within the viability appraisal.

<i>DM1 Planning Obligations</i>	Yes.	In theory, this policy is applicable to all development, however in practice planning obligations are required to be relevant, necessary and reasonably related to the proposed development. Affordable housing obligations will be applicable to developments of 5 or more dwellings. Other requirements in relation to open space and Welsh language will only be applicable to developments of 10 dwellings or more.	No.	Planning obligation costs will be in the form of on and/or off-site contributions towards various matters, including infrastructure and utility requirements, affordable housing, community facilities, and other matters as explained in the policy. Such could be in the form of provision, improvement, financial contributions and mitigation measures.	The costs associated with planning obligations (not relating to affordable housing) are accounted for within the section 106 allowance adopted in the Viability Assessment.
<i>DM2 The Natural Environment</i>	Yes.	Application would depend on the specific characteristics of the site and impact on features of the natural environment.	No.	Costs would be site specific and may take the form of enhancement, compensation and mitigation measures. Other technical costs associated with survey requirements.	These are site specific costs and therefore are not directly captured within the viability appraisal. Technical costs are generally covered under professional fees.
<i>DM2A Public Open Space</i>	Yes.	Development on areas of open space.	No.	Where the loss of open space is found to be justified, there may be costs involved to ensure alternative provision can be made for open space. There may also be technical costs involved in evidencing that the loss is	These are site specific costs and therefore are not directly captured within the viability appraisal. Technical costs are generally covered under

				justified.	professional fees.
<i>DM3 Landscape</i>	Yes.	Application will depend on the landscape impact of the specific development.	No.	Where applicable, there may be costs for mitigation and enhancement measures, implementation of landscaping schemes, and technical costs in connection with landscape impact assessment requirements.	These are site specific costs and therefore are not directly captured within the viability appraisal. Technical costs are generally covered under professional fees.
<i>DM4 Development and Flood Risk</i>	Yes.	This policy prevents highly vulnerable development within tidal or fluvial floodplains, which includes residential development. Assessment may be required in other areas of high flood risk.	No.	Design costs and alleviation measures where appropriate. Technical costs associated with assessment.	These are site specific costs and therefore are not directly captured within the viability appraisal. Technical costs are generally covered under professional fees.
<i>DM5 Flood Prevention Measures and Land Drainage</i>	Yes.	A. Applicable to all development susceptible to floodrisk and adjacent to watercourses, culverts.  B. The requirement relating to sustainable Urban Drainage Systems applies to all development.	No.	A. Potential costs involved in implementing floodrisk improvement measures, restoration and enhancement of floodplains, de-culverting, watercourse buffer maintenance, water management, attenuation measures.  B. Costs involved in the implementation of SUDS.	These are site specific costs and therefore are not directly captured within the viability appraisal. Technical costs are generally covered under professional fees.

				Technical assessments where de-culverting proposed, maintenance strategies, SUDS.	
<i>DM6 Dark Skies and External Lighting</i>	Yes.	Developments that involve lighting schemes. Particularly relevant to proposals in areas adjoining the Brecon Beacons National Park as a Dark Sky Reserve.	No.	Design and mitigation costs, costs of appropriate lighting. Technical costs involved in lighting appraisals and protected species assessments.	These are site specific costs and therefore are not directly captured within the viability appraisal. Technical costs are generally covered under professional fees.
<i>DM7 Mineral Safeguarding</i>	No.	N/A	N/A	N/A	N/A
<i>DM8 Existing Mineral Workings</i>	Yes.	Developments within the buffer zone around mineral working sites.	No.	This policy is generally prohibitive towards residential development within buffer zones. There will be costs for mitigation measures where developments within the buffer zone are found to be appropriate.	Mitigation costs would be site specific and therefore are not directly captured within the viability appraisal.
<i>DM9 Contaminated and Unstable Land</i>	Yes.	Applicable to developments on contaminated or unstable land.	No.	Costs involved in remediation. Technical costs involved in risk assessment, monitoring, validation.	These are site specific costs and therefore are not directly captured within the viability appraisal. Technical costs are generally covered under professional fees.

DM11 <i>Protection of Existing Community Facilities and Services</i>	No direct costs. This policy is aimed at protecting community facilities and services.	N/A	N/A	N/A	N/A
DM14 Welsh Language Strongholds	Yes.	Only applies to proposals for 10 or more dwellings within the settlements listed in the policy as being within the identified Welsh Language Strongholds.	No.	Costs associated with funding mitigation measures, such as phasing, affordable housing, bilingual signage, support and funding for language lessons, language initiatives, local cultural events, provision of places in Welsh medium schools. Also the cost of producing a Language Action Plan.	The costs associated with planning obligations, which includes Welsh Language mitigation measures, are accounted for within the section 106 allowance adopted in the Viability Assessment.
DM15 Design and Resources	Yes.	This policy applies to all development. Whilst some of the requirements will generally apply to all development, the application of certain requirements will depend on the relevance to the proposed development. For instance, criteria 3 and 4 will only apply where historic areas or	No.	Costs involved in achieving appropriate design solutions in relation to the different requirements of this policy in relation to the historic environment, amenity, open space, highways, parking, transport, utilities, energy efficient measures, renewable energy, water conservation, waste management and renewable heat.	The build costs and external costs assumed within the Viability Assessment capture the general costs that would be associated with some of these design aspects. However, some of these design requirements will be site specific.



		features are affected by a proposal, open space requirements will only apply to sites of 10 or more units, and the requirement to investigate renewable heat systems only applies to schemes over a certain heat demand density (which it is understood is only likely to be required in connection with large high density schemes).		Technical costs involved in appraisals, assessments, statements, and plans.	Technical costs are generally covered under professional fees.
DM15A Air Quality Management	Yes	In terms of housing development, this will only apply to development proposals where they are likely to create or exacerbate air pollution problems, and in particular within the identified air quality management area. Other requirements are more relevant to agricultural development.	No.	This policy is generally prohibitive towards developments that may lead to or contribute towards air pollution problems. However, where it is found acceptable, there may be costs involved in mitigation measures. Also technical costs involved in air quality impact assessments.	These are site specific costs and therefore are not directly captured within the viability appraisal. Technical costs are generally covered under professional fees.
DM17 Protection of Existing Employment	No.	N/A	N/A	N/A	N/A

Sites					
E1 Employment Proposals on Allocated Employment Sites	No.	N/A	N/A	N/A	N/A
E2 Employment Proposals on Non-allocated Employment Sites	No.	N/A	N/A	N/A	N/A
E3 Employment Proposals on Allocated Mixed Use Employment Sites	No.	N/A	N/A	N/A	N/A
E4 Bronllys Health Park	No.	N/A	N/A	N/A	N/A
T1 Transport Infrastructure	No.	N/A	N/A	N/A	N/A

T1A Safeguarding of Disused Transport Infrastructure	No	N/A	N/A	N/A	N/A
T2 Newtown By-pass	No	N/A	N/A	N/A	N/A
H1 Housing Development Proposals	No	N/A			
H1A Housing Sites	No	N/A	N/A	N/A	N/A
H2 Housing Delivery	Yes.	Requirement for housing mix to reflect local housing need applies to all residential development. Appropriate phasing may also be applicable to certain developments.  Requirement for development briefs in connection with large or mixed developments, or sensitively located	No.	Achieving an appropriate mix and phasing may affect the costs, values and financing of development.  Technical costs in preparing a development brief.	Appropriate mixes and phasing are taken into account in the Viability Assessment.  Technical costs are generally covered under professional fees.

		developments.			
H3 Housing Density	Yes.	Requirement for development to be of an appropriate density and to accord with the guide ranges.	No.	Achieving an appropriate density may affect costs and values of a development by either limiting the number of housing that can be provided on a site or by requiring a higher density development with smaller house types.	Appropriate densities are taken into account in the Viability Assessment.
H4 Affordable Housing Contributions	Yes.	A contribution towards affordable housing will be required from open market housing development of 5 or more dwelling units or 0.25 ha. Target contributions will vary by sub-market area are as follows:  Central Powys 30%  Severn Valley 20%  Rural North 10%  South West/ Ystradgynlais 0%.	No.	The term 'contribution' is defined as either a financial contribution ('commuted sum') or on-site provision and the contribution negotiated may come in a variety of forms, although the range of units types and sizes must reflect local housing needs.	Affordable housing contributions and costs associated with affordable housing provision are accounted for and their viability across sub-market areas is tested within the Viability Assessment.
H5 Affordable Housing Exception	No.	N/A	N/A	N/A	N/A

Sites					
H7 Rural Affordable Homes	No.	N/A	N/A	N/A	N/A
H8 Affordable Housing Eligibility	No.	N/A	N/A	N/A	N/A
H9 Householder Development	No.	N/A	N/A	N/A	N/A
H11 Renovation of Abandoned Dwellings	Yes.	Applicable only to proposals for the renovation of abandoned dwellings.	No.	Design costs.	Site specific and therefore not accounted for within the viability assessment.
H12 Replacement Dwellings	Yes.	Applicable only to proposals for replacement dwellings.	No.	Design costs.	Site specific and therefore not accounted for within the viability assessment.
H13 Gypsy and Traveller Sites and Caravans	No.	N/A	N/A	N/A	N/A
R1 New Retail Development	No.	N/A	N/A	N/A	N/A

R1A Retail Allocations	No	N/A	N/A	N/A	N/A
R2 Development Within Town Centre Areas	No.	N/A	N/A	N/A	N/A
R3 Large Out-of-Centre Retail Developments	No.	N/A	N/A	N/A	N/A
R4 Neighbourhood and Village Shops and Services	No.	N/A	N/A	N/A	N/A
TD1 Tourism Development	No.	N/A	N/A	N/A	N/A
TD2 Alternative Uses of Existing Tourism Development	No.	N/A	N/A	N/A	N/A
TD3 Montgomery	No.	N/A	N/A	N/A	N/A

Canal and Associated Development					
W1 Waste	No.	N/A	N/A	N/A	N/A
RE1 Renewable Energy	No.	N/A	N/A	N/A	N/A
M1 Existing Mineral Sites	No.	N/A	N/A	N/A	N/A
M2 New Mineral Sites	No.	N/A	N/A	N/A	N/A
M3 Borrow Pits	No.	N/A	N/A	N/A	N/A
C1 Community Facilities and Indoor Recreation	No.	N/A	N/A	N/A	N/A
MD1 Development Proposals by the MOD	No.	N/A	N/A	N/A	N/A

## APPENDIX 3

### BENCHMARK LAND VALUES APPLIED IN OTHER LDP VIABILITY ASSESSMENTS

Other LDP Viability Assessments	Benchmark land value applied	Status of LDP
Ceredigion Study concerning the economic viability of providing affordable housing (August 2010, and updated October 2010 and July 2011)	Between £300,000 per ha (for greenfield) to £500,000 per ha (for town)	Adopted 2013
Gwynedd and Anglesey Affordable Housing Viability Study (update October 2014)	£250,000 per hectare	Submitted for examination.
Vale of Glamorgan Affordable Housing Viability Study (update August 2014)	<p>£300,000 per ha</p> <p>Also referred to lower expectations in lower value areas such as the Barry.</p> <p>NOTED: Action Points for the Council include re-running viability appraisals, amending the benchmark land values used in the viability report to reflect realistic values in light of the available evidence, and to consider the potential for assuming different land values for the different spatial areas.</p>	Examination postponed following hearings to allow for action points and matters arising changes to be considered.
Cardiff LDP Viability Testing Report (updated 2014)	<p>Brownfield: £1,500,000 per net Ha</p> <p>Greenfield: £1,200,000 per net Ha</p> <p>Large Brownfield: £1,200,000 per net Ha</p> <p>Large Greenfield: £1,000,000 per net Ha</p>	Adopted January 2016.
Caerphilly Affordable Housing Viability	Between £125,000 per ha and	Adopted 2010.



Study (October 2015)	£300,000 per ha.  Between £200,000 and £280,000 per gross hectare depending on the market area, applied in earlier study for adopted LDP.	Replacement LDP withdrawn 2016.
Carmarthenshire County Council Affordable Housing Viability Study (Update May 2013)	£250,000 per hectare	Adopted 2014
Denbighshire Affordable Housing Viability Study (2009)	£250,000 upwards.	Adopted 2013
Newport Affordable Housing Viability Report (March 2012)	£500,000 per hectare	Adopted 2015
Neath Port Talbot Affordable Housing Viability Study (August 2012)	£408,000 per ha to £672,000 per ha varied by area.  £188,000 per ha to £266,500 per ha for industrial.  Residual values also assessed against the existing use value +30% as a benchmark.	Adopted 2016
Rhondda Cynon Taf Affordable Housing Viability Study (2009)	£150,000 to £550,000 per hectare.  £350,000 per hectare average.	Adopted 2011
Conwy Affordable Housing Viability Study (2011)	£600,000 per hectare.	Adopted 2013.
Pembrokeshire Affordable Housing Viability Assessment (2010)	£400,000 per hectare.	Adopted 2013.
Wrexham and Flintshire Affordable Housing and Community Infrastructure	£300,000 per hectare.	LDP in

Levy and Development Viability Assessment (2014)		preparation.
Monmouthshire CIL Viability Assessment (2014)	£250,000 per hectare for greenfield.  £600,000 per hectare for brownfield.	Adopted 2014.
Torfaen Affordable Housing Viability Study (updated 2013)	£700k per ha in lower value areas to £1.2m per ha in higher value areas	Adopted 2013.
Swansea Affordable Housing Viability Assessment (2013 and updated May 2016)	Between £490,000 per hectare and £790,000 per hectare.	LDP in preparation.
Shropshire Viability Study (2013)	£490,000 per ha  £885,000 per ha  £1,300,000 per ha  Varied by area.  Highest in rural south, middle in the range for rural north, lowest in Shrewsbury north.	Adopted Core Strategy 2011 and SAMDev 2015.
Herefordshire Viability Study	£600,000 per hectare	Adopted October 2015.

## APPENDIX 4

### LIST OF CURRENT PLANNING APPLICATIONS FOR HOUSING IN THE SOUTH-WEST SUB-MARKET AREA

Reference number	Valid Date	Site location	Proposed development	Decision Status	Community Council
<a href="#">P/2016/0123</a>	04/07/2016	Land off Brecon Road Penrhos Ystradgynlais	Erection of a dwellinghouse on site of former cottage and all associated works (revised proposal)	Pending	Ystradgynlais
<a href="#">P/2016/0488</a>	03/05/2016	47 Commercial Street Ystradgynlais	Change of use of premises to a dwelling	Pending	Ystradgynlais
<a href="#">P/2016/0123</a>	04/07/2016	Land off Brecon Road Penrhos	Erection of a dwellinghouse on site of former cottage and all associated works (revised proposal)	Pending	Ystradgynlais
<a href="#">NMA/2016/0010</a>	03/02/2016	Plot 1 & 2 Land Rear of 16 Station Road Ystradgynlais	Application for non-material amendments to planning application P/2014/0090 in respect of alterations to drawings	Pending	Ystradgynlais
<a href="#">P/2016/0047</a>	15/02/2016	Land at Former Cynlais School Playing Field Ystradgynlais	Residential development, formation of vehicular access road and all associated works (outline)	Pending	Ystradgynlais
<a href="#">P/2015/0622</a>	06/07/2015	Land adjacent to Wharf Cottage Gurnos Road Ystradgynlais	Full: Erection of a dwellinghouse with integral garage and all associated works	Pending	Ystradgynlais
<a href="#">P/2016/0613</a>	01/06/2016	Land opposite 2 Tanygraig Cottages Caerlan Abercrave	Erection of a dwellinghouse and formation of vehicular access	Pending	Ystradgynlais
<a href="#">P/2016/0386</a>	17/05/2016	Development Rear of Glandwr House Heol Cwmturch	Outline planning permission for a one bed dwelling with all matters reserved	Pending	Ystradgynlais

		Lower Cwmtwrch			
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**Appendix 5 A map of the sub-market areas, as amended, in September 2016**

TO FOLLOW

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