Elevations 1:100

Existing Front Elevation

Mitigation
Ideally, development work should not be started between 1 March and 1 October (inclusive).
Should it not be possible to time development work to avoid disturbance to nesting birds, potential access points to bird nesting locations should be closed off with mesh or fabric barriers, in order to prevent birds from nesting.
Should it be required that development work commences between March and September, the House should be inspected by a suitably qualified ecologist for evidence of nesting birds.
No works may commence if birds have started to build, or if they already occupy, nests.
If birds start nesting on/within the House - prior to or during development work - delays will be inevitable up to the moment when the young birds leave the nest.
Compensation and enhancement
In order to encourage small nesting birds to nest within Rhiwhiriaeth Isaf property: it is recommended that woodcrete (or similar) purpose-made bird nest boxes be installed.
Ideally nest box placement and construction of nesting features should be undertaken outside the bird breeding season (March-September inclusive).
Nest boxes may be placed under the eaves of the House, on other nearby buildings and/or on nearby trees. Ideally nest boxes should be positioned in areas of low future disturbance.
It is recommended that a minimum of:
a) two Swallow nest boxes (e.g. Schwegler Swallow No.10)
b) two generic bird species nest boxes (e.g. Schwegler 1B bird nest box)
c) two Tit nest boxes (e.g. Schwegler 2M woodcrete bird box)
be installed at Rhiwhiriaeth Isaf post-development.

Mitigation
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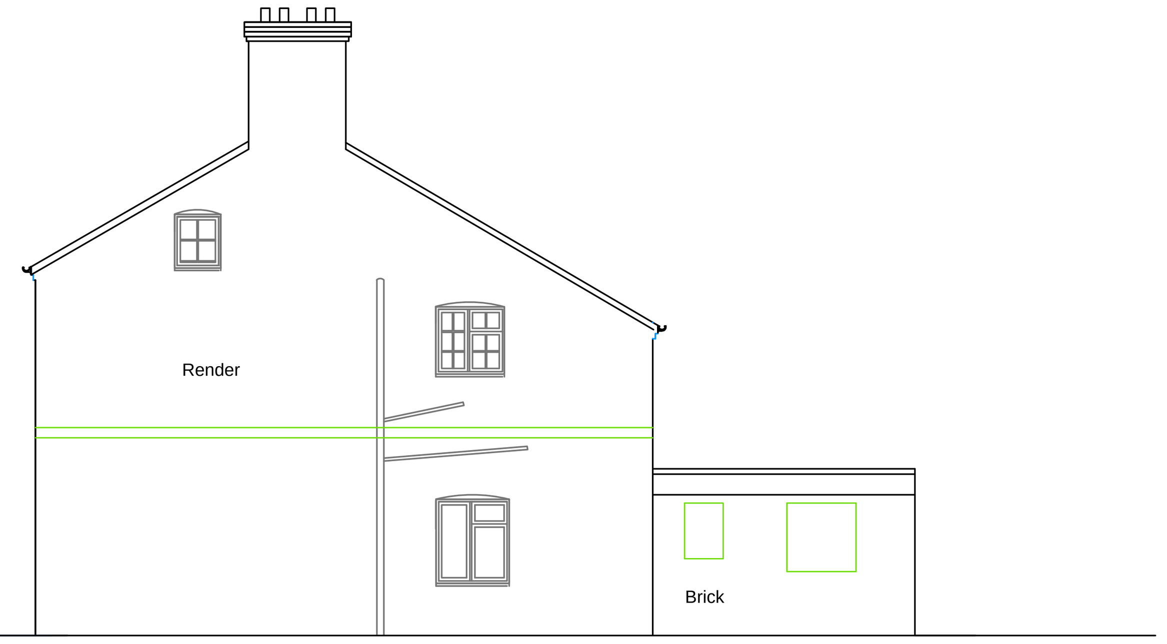
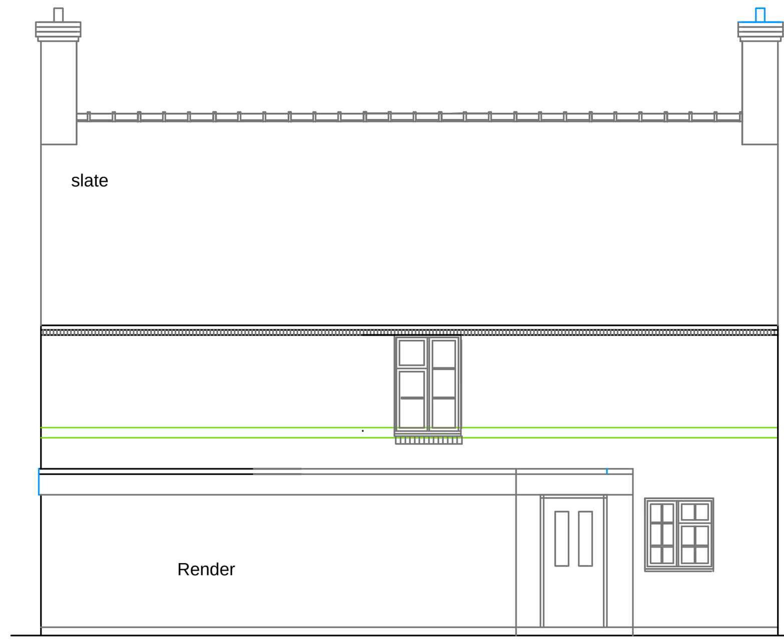
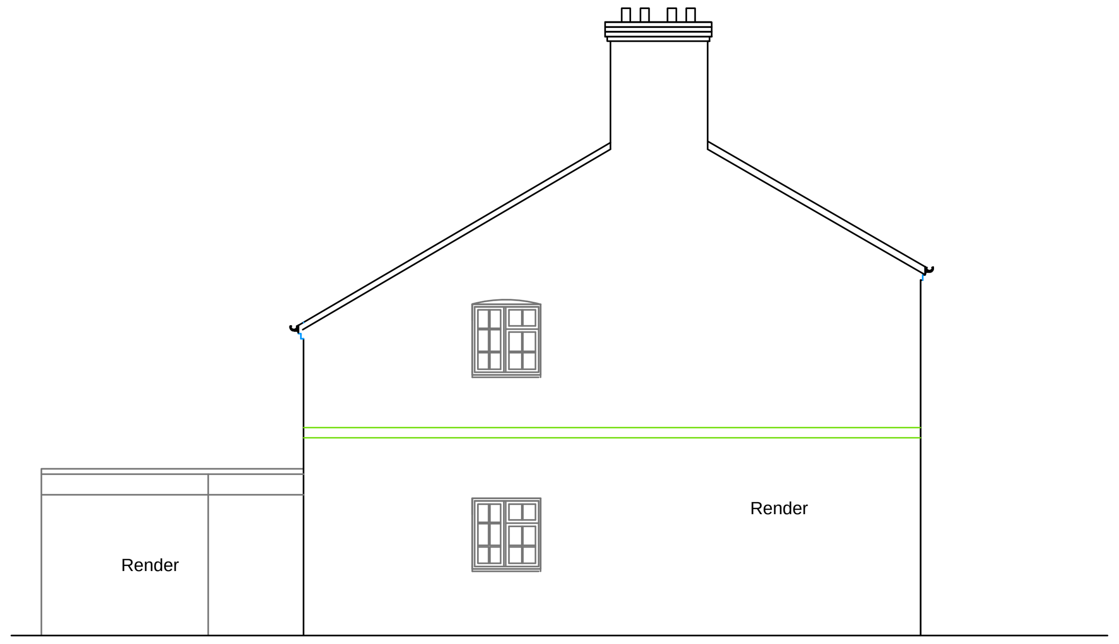
be installed at Rhiwhiriaeth Isaf post-development.



Existing Side Elevation

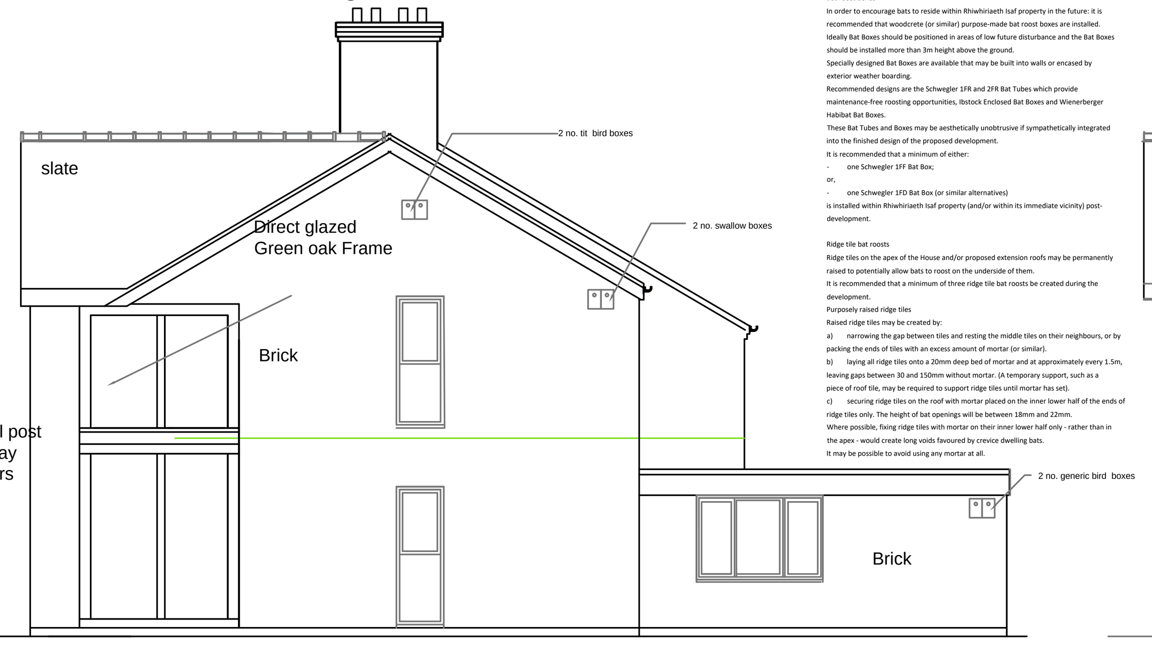


Existing Rear Elevation



Existing Side Elevation

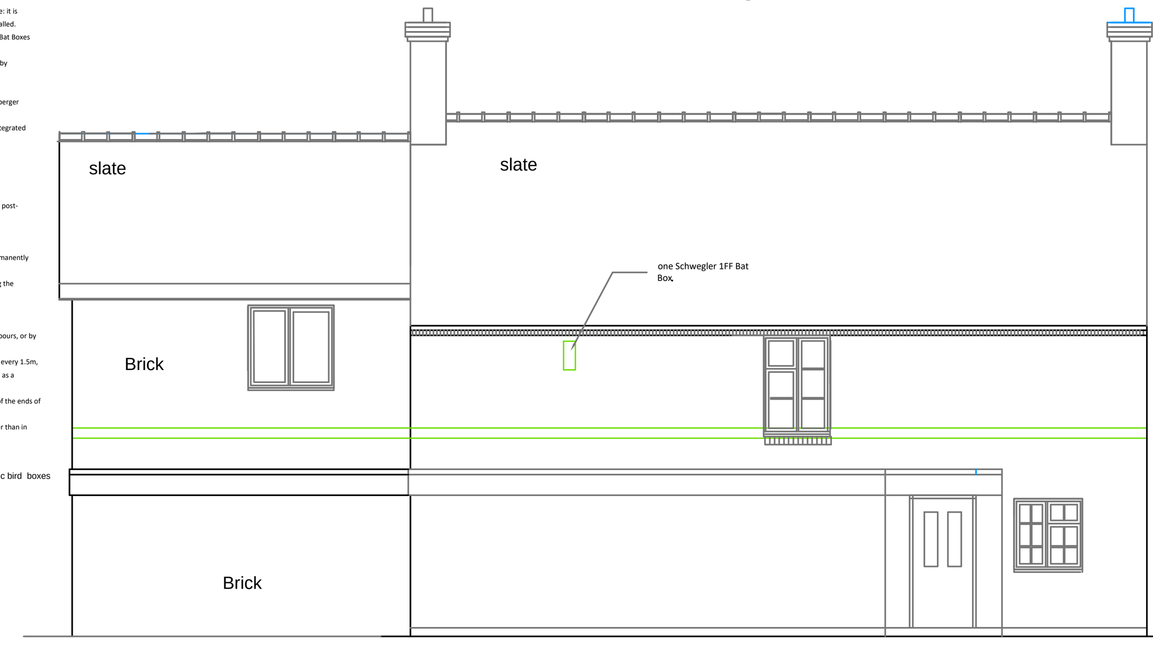
Proposed Front Elevation



Proposed Side Elevation

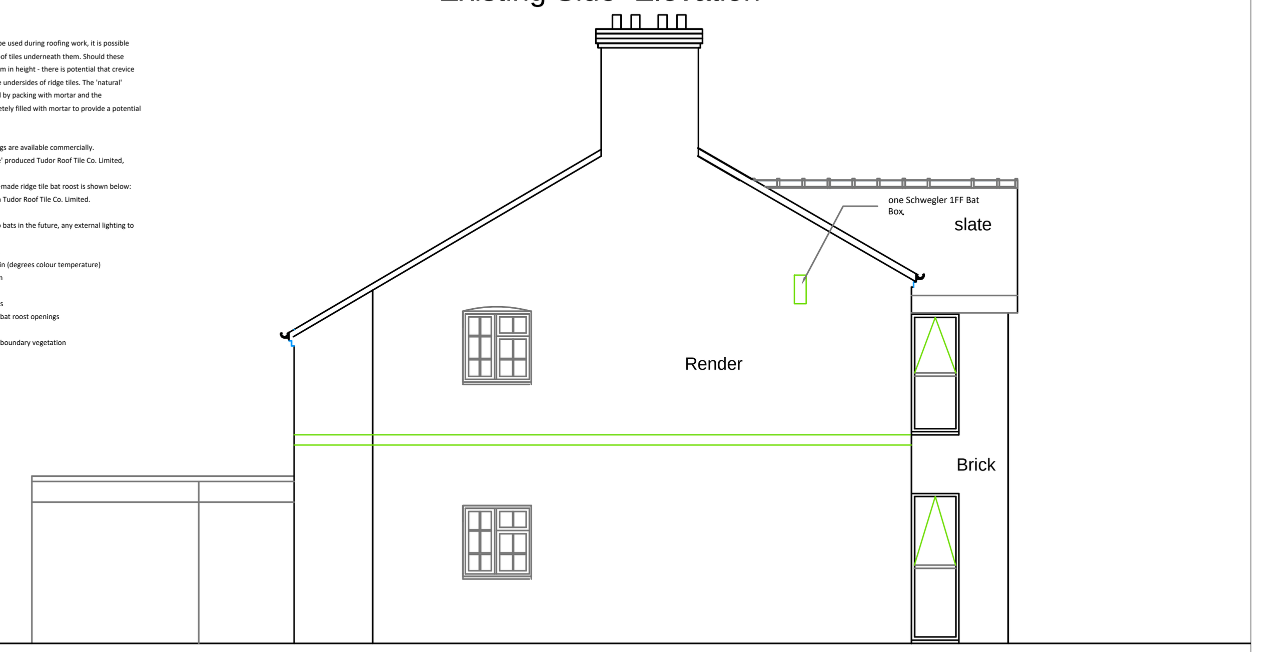
Appendix 2. Enhancement for Bat
Bat roost boxes
In order to encourage bats to reside within Rhiwhiriaeth Isaf property in the future: it is recommended that woodcrete (or similar) purpose-made bat roost boxes are installed.
Ideally Bat Boxes should be positioned in areas of low future disturbance and the Bat Boxes should be installed more than 3m height above the ground.
Specially designed Bat Boxes are available that may be built into walls or encased by exterior weather boarding.
Recommended designs are the Schwegler 1FR and 2FR Bat Tubes which provide maintenance-free roosting opportunities, Ibstock Enclosed Bat Boxes and Wienerberger Habibat Bat Boxes.
These Bat Tubes and Boxes may be aesthetically unobtrusive if sympathetically integrated into the finished design of the proposed development.
It is recommended that a minimum of either:
- one Schwegler 1FF Bat Box;
or,
- one Schwegler 1FD Bat Box (or similar alternatives)
is installed within Rhiwhiriaeth Isaf property (and/or within its immediate vicinity) post-development.

Ridge tile bat roosts
Ridge tiles on the apex of the House and/or proposed extension roofs may be permanently raised to potentially allow bats to roost on the underside of them.
It is recommended that a minimum of three ridge tile bat roosts be created during the development.
Purposely raised ridge tiles
Raised ridge tiles may be created by:
a) narrowing the gap between tiles and resting the middle tiles on their neighbours, or by packing the ends of tiles with an excess amount of mortar (or similar).
b) laying all ridge tiles onto a 20mm deep bed of mortar and at approximately every 1.5m, leaving gaps between 30 and 150mm without mortar. (A temporary support, such as a piece of roof tile, may be required to support ridge tiles until mortar has set).
c) securing ridge tiles on the roof with mortar placed on the inner lower half of the ends of ridge tiles only. The height of bat openings will be between 18mm and 22mm.
Where possible, fixing ridge tiles with mortar on their inner lower half only - rather than in the apex - would create long voids favoured by crevice dwelling bats.
It may be possible to avoid using any mortar at all.



Proposed Rear Elevation

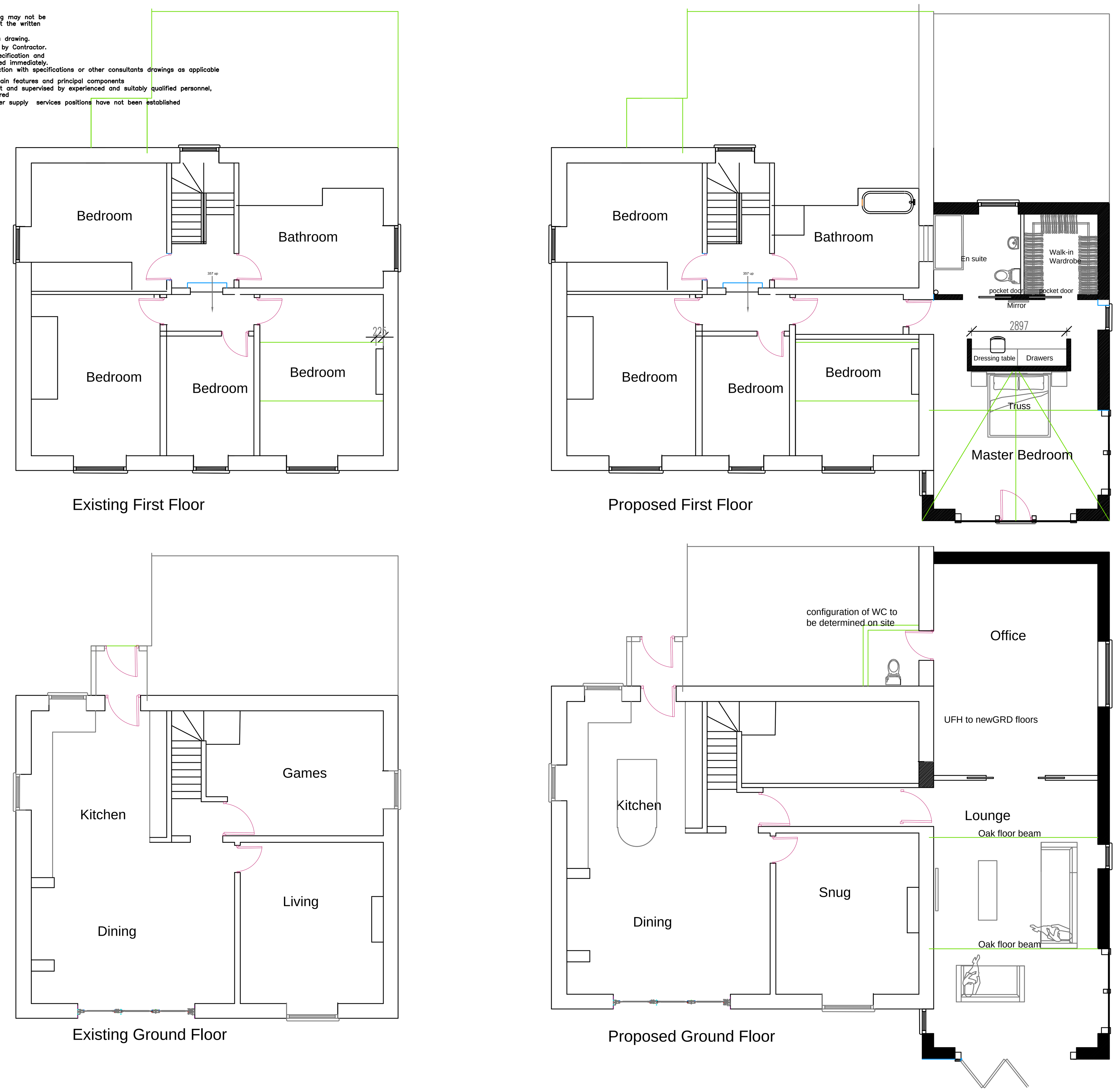
Reclaimed and/or misshaped ridge tiles
Should re-claimed and/or misshaped ridge tiles be used during roofing work, it is possible that not all of the ridge tile will fit closely with roof tiles underneath them. Should these gaps be between approximately 12mm and 22mm in height - there is potential that crevice dwelling bats may use them to gain access to the undersides of ridge tiles. The 'natural' gap of misshaped ridge tiles may be exaggerated by packing with mortar and the undersides of the ridge tile should not be completely filled with mortar to provide a potential roosting space for bats.
Purpose-made ridge tile bat roosts
Purpose-made ridge tiles with bat-access openings are available commercially.
For example, the handmade 'bat access ridge tile' produced Tudor Roof Tile Co. Limited, Dengemarsh Road, Lydd, Kent, TN29 9JH.
A picture of the Tudor Roof Co. Limited purpose-made ridge tile bat roost is shown below:
Please note: Star Ecology has no association with Tudor Roof Tile Co. Limited.
External Lighting
In order to avoid any unnecessary disturbance to bats in the future, any external lighting to be installed should:
- use Light emitting diodes (LED) luminaries
- have a warm white spectrum <2700o Kelvin (degrees colour temperature)
- have peak wavelengths higher than 550nm
- be set on motion-sensors
- use short duration (e.g. one minute) timers
- not be in the vicinity of, or shine towards, bat roost openings
- not shine towards (the) roof structure(s)
- not be in the vicinity of, or shine towards, boundary vegetation



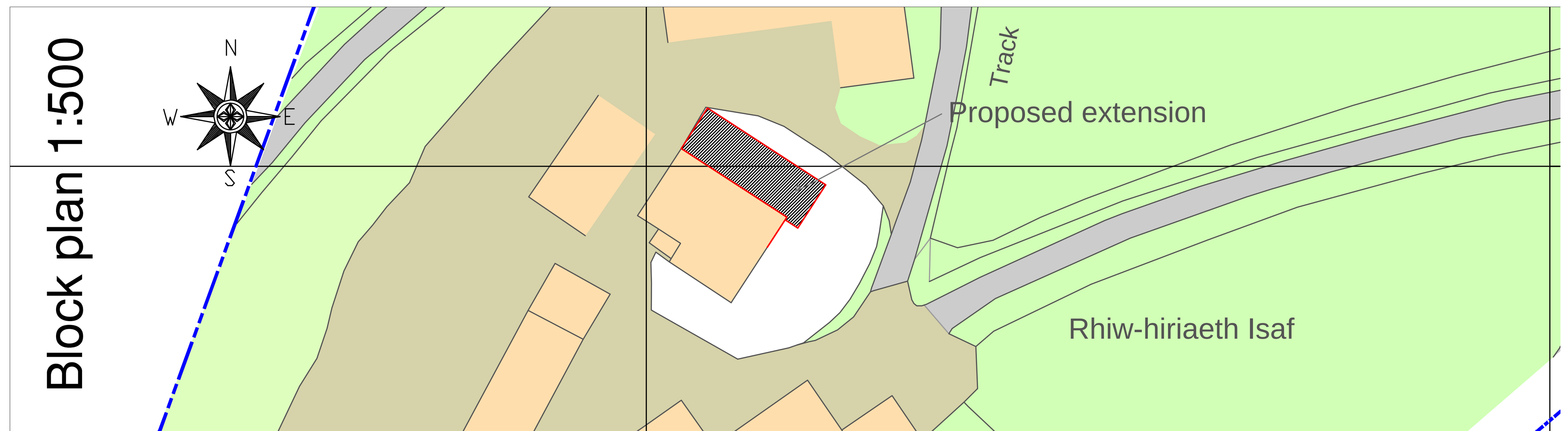
Proposed Side Elevation

NOTES:
1. Copyright: The contents of this drawing may not be reproduced in whole or in part without the written consent of . G. G Lloyd
2. No dimensions to be scaled from this drawing.
3. All dimensions to be checked on site by Contractor.
4. Where discrepancy occurs between specification and drawings then G. Lloyd must be notified immediately.
5 This drawing is to be read in conjunction with specifications or other consultants drawings as applicable
6 This drawing is intended to identify main features and principal components
Construction work should be carried out and supervised by experienced and suitably qualified personnel, therefore exhaustive detail is not required
7 Underground electric supply and water supply services positions have not been established

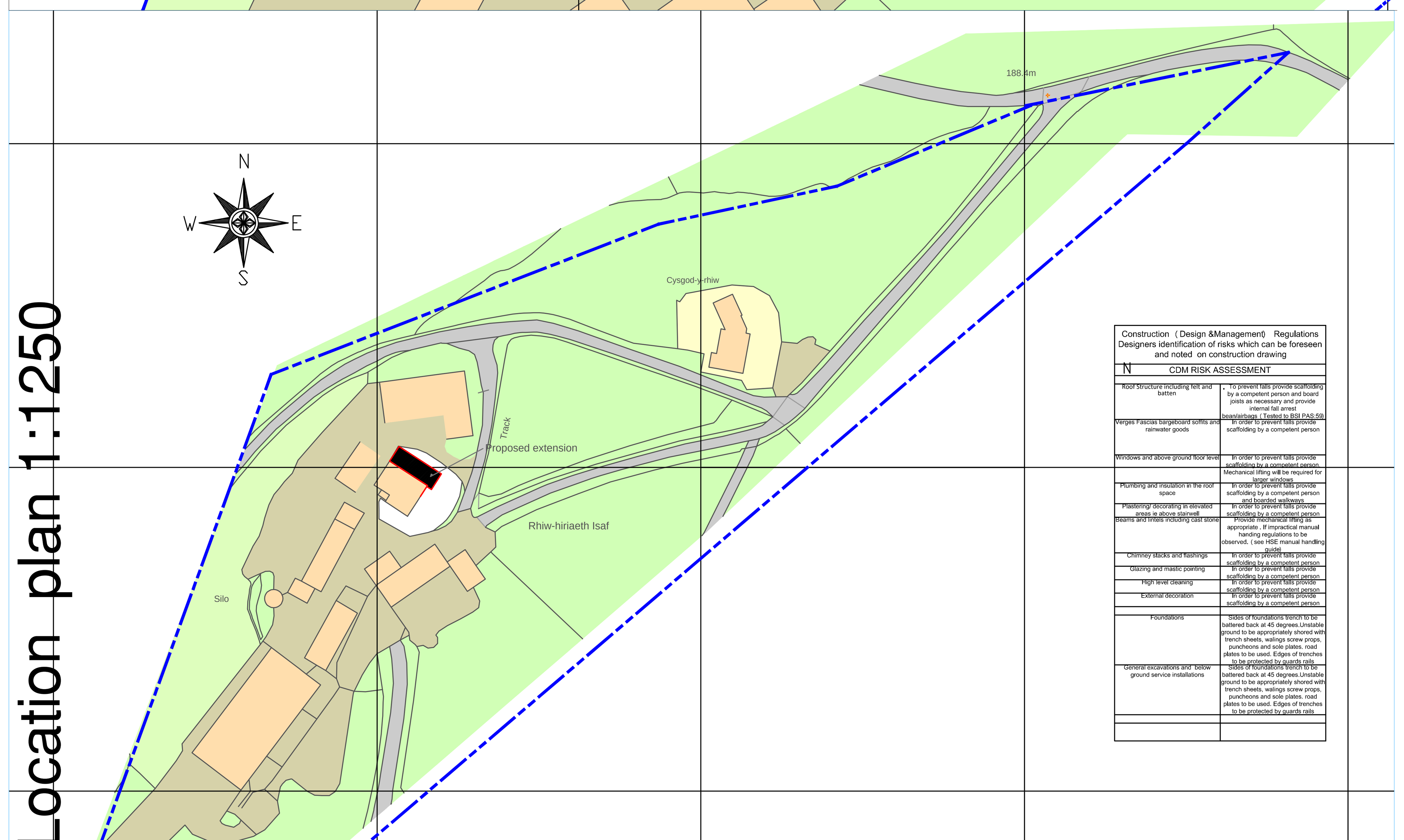
Floor plan 1:100



Block plan 1:500



Location plan 1:1250



Construction (Design &Management) Regulations
Designers identification of risks which can be foreseen and noted on construction drawing

N CDM RISK ASSESSMENT

Roof Structure including felt and batten	To prevent falls provide scaffolding by a competent person and board joists as necessary and provide internal fall arrest bean/airbags (Tested to BSI PAS:59)
Verges Fascias bargeboard soffits and rainwater goods	In order to prevent falls provide scaffolding by a competent person
Windows and above ground floor level	In order to prevent falls provide scaffolding by a competent person. Mechanical lifting will be required for larger windows
Plumbing and insulation in the roof space	In order to prevent falls provide scaffolding by a competent person and boarded walkways
Plastering/ decorating in elevated areas ie above stairwell	In order to prevent falls provide scaffolding by a competent person
Beams and lintels including cast stone	Provide mechanical lifting as appropriate . If impractical manual handing regulations to be observed. (see HSE manual handling guide)
Chimney stacks and flashings	In order to prevent falls provide scaffolding by a competent person
Glazing and mastic pointing	In order to prevent falls provide scaffolding by a competent person
High level cleaning	In order to prevent falls provide scaffolding by a competent person
External decoration	In order to prevent falls provide scaffolding by a competent person
Foundations	Sides of foundations trench to be battered back at 45 degrees.Unstable ground to be appropriately shored with trench sheets, walings screw props, puncheons and sole plates. road plates to be used. Edges of trenches to be protected by guards rails
General excavations and below ground service installations	Sides of foundations trench to be battered back at 45 degrees.Unstable ground to be appropriately shored with trench sheets, walings screw props, puncheons and sole plates. road plates to be used. Edges of trenches to be protected by guards rails

Date By Ch

LLOYD ARCHITECTURE

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e:design@lloydarchitecture.co.uk
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The Larches,
Llanfyllin,
Powys, SY22 5NF

Proposed Extension
Land at :Rhiwhiriath
Llanfair Caereinion
Powys
for Mr G Jones

Existing and Proposed Plans

Scale	Date	Drawn by	Checked	Number	Rev
1:100,1:500, 1:1250	2/24	GGL		692/01	A