



Ecological Assessment Report

Barn at Meadowside, Trasmeer, Cornwall



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Summary

- S1. This report has been prepared by Redstone Ecology Ltd to inform a Class Q application for the conversion of an existing barn into a new dwelling. The site is located at Meadowside, Trasmeer, PL15 8QU and National Grid Reference (NGR) SX 2292 8770.
- S2. The site comprises an existing barn which is located within a parcel of land comprising modified grassland bound by post and wire fence on the southern boundary with native hedgerow on the northern and western boundaries and ornamental hedgerow on the eastern boundary. Trees are located on the northern boundary. Agricultural land is located within the wider area which includes hedgerows, open pasture and woodland.
- S3. The habitats which are to be impacted on by the proposals are of negligible ecological importance and the barn had “negligible” potential for roosting bats with all areas inspected. The structure had potential for nesting birds although no nests were recorded. Precautionary measures have therefore been included to ensure no impacts occur to breeding birds.
- S4. The proposals would include the erection of bat and bird boxes on a retained mature tree which would enhance the site for these species post development. This is all within land which is within the ownership of the client.
- S5. The proposed development would therefore protect, maintain and enhance biodiversity in accordance with policies concerning the conservation of biodiversity in the National Planning Policy Framework (2021) and Policy 23 Natural environment of the Cornwall Local Plan Strategic Policies 2010-2030, (November 2016). The proposed mitigation would ensure there would be no adverse effects on the favourable conservation status of bats in the locality..

Section 1: Introduction

Introduction

1.1. Redstone Ecology Ltd were commissioned by Alfred Daniel to complete an Ecological Assessment to support a Class Q application for the conversion of an existing barn into a new dwelling. The site is located at Meadowside, Trasmeer, PL15 8QU and NGR SX 2292 8770 (refer to Figure 1). This report was undertaken following BS42020:2013 and Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines (2018). As the site is primarily built-form, the scope of the report focuses on roosting bats and nesting birds and includes the following sections:

- Results of the desk study, bat and nesting bird survey for the site;
- Assessment of the impacts of the proposals on bats and nesting birds;
- Provision of mitigation and enhancement measures for adverse impacts; and,
- Summary of residual effects i.e. those occurring after mitigation.

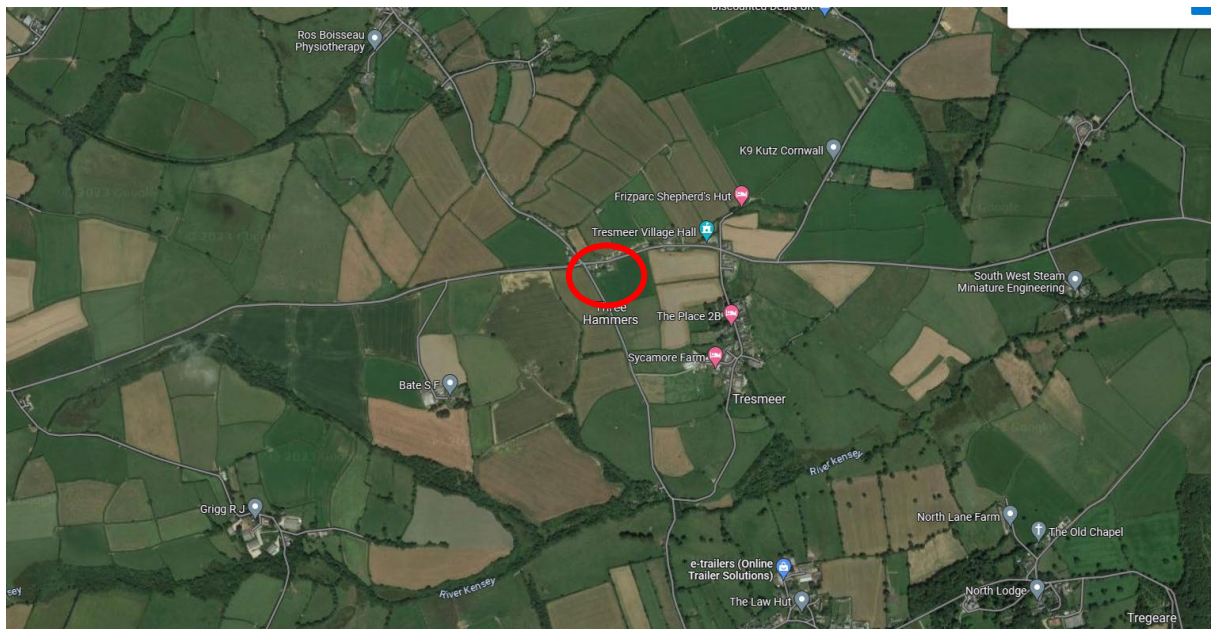


Figure 1: Aerial photograph showing site location

Legislation and planning policy

National planning policy

1.2. The Government's key national planning policy is set out in the National Planning Policy Framework (NPPF), published in 2021. The NPPF includes the Government's policy on the protection of biodiversity through the planning system. It states that local plan policies and planning decisions should seek to minimise impacts on biodiversity and provide net gains in biodiversity. Planning policies should promote the conservation, restoration and enhancement of priority habitats, ecological networks, and the protection and recovery of priority species populations (e.g. Habitats and Species of Principal Importance under the NERC Act 2006).

Local planning policy

- 1.3. Policy 22 European Protected Sites – Mitigation of recreational impacts from development and Policy 23 Natural Environment of the Cornwall Local Plan Strategic Policies 2010-2030, (November 2016) are relevant to this proposed development. Full details are provided in Appendix 1.

Wildlife legislation

- 1.4. Bats and their roosts are fully protected by UK legislation, and all birds, and their nests, eggs and young are protected under UK legislation. Several bat and bird species are also Species of Principal Importance for Conservation of Biodiversity in England (Priority). Full details are provided within Appendix 2.

Methodology

Desk study

- 1.5. Information on statutory designated sites of nature conservation value within 1km of the site was obtained by searching the following websites and resources:
- MAGIC website (www.magic.gov.uk); and
 - Devon County Council Environmental Viewer (<http://map.devon.gov.uk/DCCViewer>).
- 1.6. In addition to this a 2km search for European Protected Species Licences was completed using MAGIC. The information obtained from the above websites was considered sufficient for this ecological assessment given the small size of the site and low value habitats that occurs on-site.

Bats

- 1.7. A Preliminary Roost Assessment of the building was undertaken on 20th June 2023 in accordance with standard bat survey protocols (Collins, 2023). This involved a detailed search of the interior and exterior of the building for evidence of bats (e.g. bats, droppings, feeding remains, staining). Information on potential or actual bat access points and roost locations were also recorded. Ladders, Zeiss 10x56 binoculars, and high-powered torches were used as necessary and the survey was carried out under a Natural England bat survey licence (John Polley MCIEEM Licence No. 2015-11916-CLS Level 2).
- 1.8. Based on the survey results, the building was categorised in line with current Bat Conservation Trust guidelines (Collins, 2023).

Birds

- 1.9. A search for evidence of nesting birds (i.e. active or disused nests) was undertaken during the building inspection on 20th June 2023.

Survey limitations

- 1.10. All surveys were undertaken following best practice guidelines and no limitations were noted. The survey also included an assessment of the other habitats present.

Quality assurance and surveyor experience


- 1.11. The author and lead surveyor John Polley has over 18 years' experience working in the ecological sector and is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). He has extensive experience of protected species survey and Natural England licensing. He holds a Class 2 Natural England (NE) bat survey licence. CIEEM's Code of Conduct was followed during the survey and reporting.


Section 2: Ecological Baseline


Desk Study


- 2.1. There are no statutory designated sites within 1km of the site.
- 2.2. This site is located within a Site of Special Scientific Interest Impact Risk Zone however the criteria for any potential impacts do not include single unit development schemes or barn conversions.
- 2.3. There is a single European Protected Species Licence within 2km of the site (reference 2018-33839-EPS-MIT) which is for brown long-eared *Plecotus auritus* and lesser horseshoe *Rhinolophus hipposideros* non breeding roosts. This is from 2018 and located c. 1.1 km north east of the site.

Habitats/species within the site

Habitat/ Species	Description /Likely presence	Importance	Photo
Building	<p>The barn had a main pitched roof running from east to west with a half-pitched roof running north and a smaller half pitched roof extension on the eastern gable end. The roof was clad with metal corrugate sheets. The frame of the barn utilised concrete beams with the sides also clad using corrugate metal sheets. A gap was present all along the northern face of the barn where the corrugate sheets over hung the lower section of the external face of the barn (refer to Photograph 2). On the southern elevation corrugate uPVC sheets were present allowing light into the barn. Gaps were present on the eastern gable end wall where this adjoined the roof (Photograph 4). A large door was present on the western elevation which was clad with corrugate metal sheets (Photograph 1). A smaller door was present on the eastern elevation. Both provided gaps for potential access for fauna (Photograph 4).</p> <p>The corrugate metal clad extension on the eastern gable end of the building had corrugate uPVC sheets which allowed this to be light and airy.</p>	No inherent ecological importance	 <p>Photograph 1: Western elevation of barn</p>

Habitat/ Species	Description /Likely presence	Importance	Photo
			 <p data-bbox="1265 911 2049 943">Photograph 2: Gap where overhang present on northern elevation</p>

Habitat/ Species	Description /Likely presence	Importance	Photo
			 <p data-bbox="1263 911 1928 943">Photograph 3: Internal area of main pitched roof section.</p>

Habitat/ Species	Description /Likely presence	Importance	Photo
			 <p data-bbox="1263 868 2063 932">Photograph 4: Small door on eastern elevation along with gap at top of wall where adjoins roof.</p>
Nesting Birds	The barn provided suitable nesting habitat for farmland and urban species including house sparrow, blue tit and blackbird. No nests were however recorded.	Site	See building photos
Bats	The structure was inspected internally and externally for features which could support a roost and for any evidence of bat usage. Access points recorded included gaps at the eaves, gable ends, along the ridge and around the doorways. Internally the structure was open, light and airy.	Site	See building photos

Habitat/ Species	Description /Likely presence	Importance	Photo
	<p>The gaps at the eaves and gable ends did not go into any crevices suitable to support a roosting bat. The internal beams, ridge beam and floor were inspected and no evidence of bats were recorded including droppings, staining or feeding remains. As such the structure was assessed as having “negligible” roost suitability.</p> <p>The offsite hedgerows and trees provide foraging and commuting habitat for a variety of species including light sensitive species.</p>		
Surrounding area	<p>The barn is located within a parcel of land comprising modified grassland bound by post and wire fence with native hedgerow on the northern and western boundaries and ornamental hedgerow on the eastern boundary. Trees are located on the northern boundary. Agricultural land is located within the wider area which includes hedgerows, open pasture and woodland.</p>	Site to Local	N/A

Section 3: Assessment of ecological effects

The proposed development

- 3.1. The proposed development would comprise conversion of the existing barn into a single dwelling (refer to Appendix 3). There would be no removal of offsite hedgerow or trees and the site would use an existing access point to the barn off the lane which runs to the west of the site.
- 3.2. Bird and bat boxes would be installed on the retained tree on the northern boundary hedgerow (refer to Appendix 4).

Unmitigated effect during construction

- 3.3. No effects on designated sites of nature conservation value are predicted during construction.
- 3.4. No adverse impacts to bats are predicted as no roosts were recorded and the construction phase retains and protects the hedgerow and trees.
- 3.5. There is a risk that conversion could disturb a nesting bird should this be undertaken in the bird breeding season (March to August inclusive). This is predicted to be a negative effect at Site level.
- 3.6. As such mitigation measures to ensure legal compliance would be implemented; refer to Section 4

Post construction effects

- 3.7. No adverse effects on designated sites of nature conservation value are predicted
- 3.8. The bat box proposed on the tree would provide additional roosting habitat suitable for species such as pipistrelle, Myotis sp and long-eared bats. Any proposed external lighting would be cowled or recessed using warm white LED bulbs (Institution of Lighting Professionals & the Bat Conservation Trust 2023) to reduce the risk of any light increases in the wider area including the boundary hedgerows. Overall post construction impact to bats would be Negligible in the long-term.
- 3.9. The bird box proposed on the tree would provide replacement bird nesting habitat. Overall post construction impact to birds would be Negligible in the long-term.

Section 4: Mitigation, compensation and enhancement

Bats

- 4.1. No external lighting would be used during the construction phase. Furthermore, any external lighting would be cowled or recessed using warm white LED bulbs (Institution of Lighting Professionals & the Bat Conservation Trust 2023) to reduce the risk of any light increases in the wider area including the boundary hedgerow.
- 4.2. The proposed bat box (1 traditional wooden bat box) retained tree would provide additional roosting habitat for this species post development.

Birds

- 4.3. The bird nesting season typically runs from March through to the end of August. If it is necessary to start works in the bird nesting period, then a pre-works check for nesting birds should be undertaken by an ecologist. If nesting birds were found, work in that area would need to be delayed until all chicks had fledged.
- 4.4. One nest box (traditional wooden bird box) would be installed on a single tree on the northern boundary hedgerow.

Mechanism for mitigation delivery

- 4.5. The ecological mitigation measures detailed in this report could be secured through a planning condition.

Section 5: Residual effects and conclusions

Construction effects

- 5.1. No effects on designated sites are anticipated during construction.
- 5.2. Adverse effects on birds could occur should conversion of the barn be completed in bird breeding season,
- 5.3. Precautionary measures would be adopted to prevent any potential impact on nesting birds so no effects would occur during construction.

Post-construction effects

- 5.4. Effects on the bats in the post-construction phase are considered to be Negligible. The proposed bat box would provide supplementary habitat for a range of species including long-eared, Myotis sp and pipistrelle bats. The proposed sensitive lighting measures would ensure no impacts to foraging or commuting light sensitive bats occurs resulting in a Negligible effect in the long-term.
- 5.5. The proposed bird box on a single tree on the western boundary would enhance the site for birds resulting in a Negligible effect in the long-term.

Conclusions

- 5.6. The proposed development would therefore protect, maintain and enhance biodiversity in accordance with policies concerning the conservation of biodiversity in the National Planning Policy Framework (2021) and Policy 23 Natural environment of the Cornwall Local Plan Strategic Policies 2010-2030, (November 2016). The proposed mitigation would ensure there would be no adverse effects on the favourable conservation status of bats in the locality.

References

Chartered Institute of Ecology and Environmental Management (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater and Coastal. CIEEM, Winchester.

Cornwall Council (2016) Cornwall Local Plan Strategic Policies 2010-2013 (Adopted November 2016)

Collins, J. (Ed) 2023. Bat surveys good practice guidelines – 4th edition. BCT, London.

Institution of Lighting Professionals and Bat Conservation Trust (2023) Guidance Note 08/23 Bats and artificial lighting at night. Institution of Lighting Professionals, Rugby.

Mitchell-Jones, A. J. (2004). Bat Mitigation Guidelines. Natural England/English Nature, Peterborough.

Mitchell-Jones, A. J. & McLeish, A. P. (2004). Bat Workers' Manual - 3RD Edition). JNCC, Peterborough.

Russ, J. (2012) British Bat Calls: A Guide to Species Identification. Pelagic Publishing.

Appendix 1: Legislation

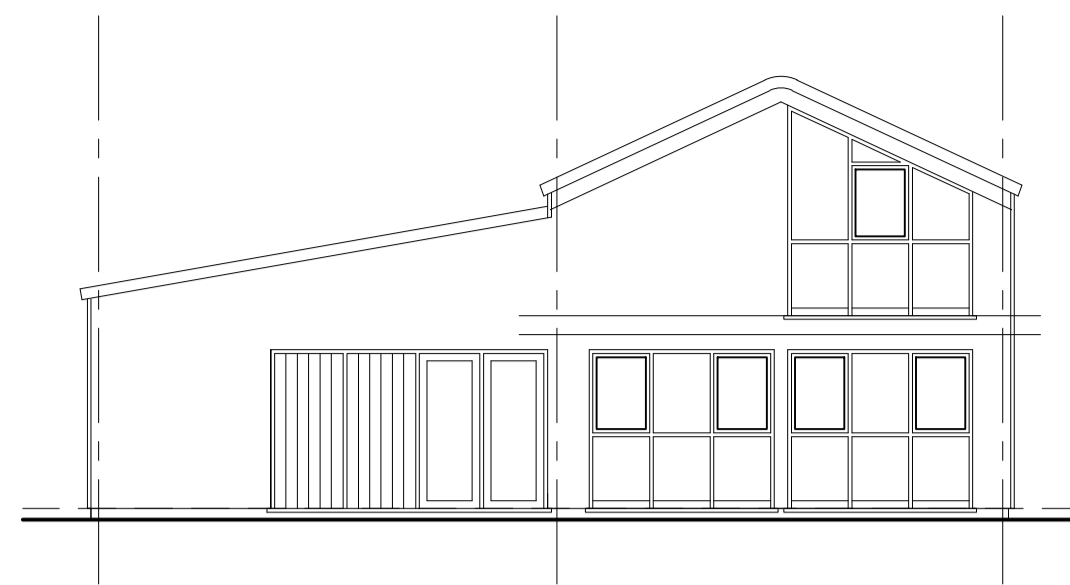
Legislative Context

- A1.1. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
 - The Conservation of Habitats and Species Regulations 2010 (as amended);
 - The Countryside and Rights of Way (CRoW) Act 2000;
 - The Hedgerows Regulations 1997;
 - The Protection of Badgers Act 1992; and
 - The Natural Environment and Rural Communities Act (NERC) 2006.
- A1.2. The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through The Conservation of Habitats and Species Regulations 2010 (as amended).
- A1.3. In Britain, the WCA 1981 (as amended) is the primary legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants.
- A1.4. The CRoW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

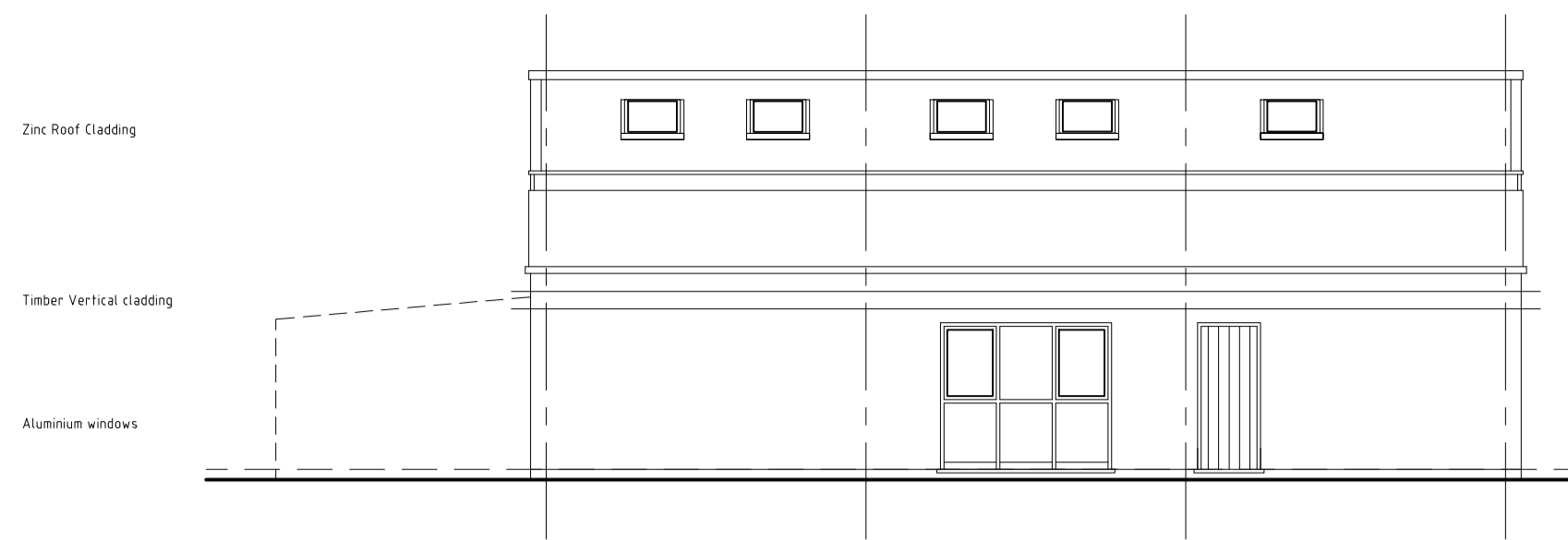
Species and Habitats of Principal Importance and the UK Biodiversity Action Plan

- A1.5. The UK Post-2010 Biodiversity Framework succeeded the UK BAP partnership in 2011 and covers the period 2011 to 2020. However, the lists of Priority Species and Habitats agreed under the UKBAP still form the basis of much biodiversity work in the UK. The current strategy for England is 'Biodiversity 2020: A Strategy for England's wildlife and ecosystem services' published under the UK Post-2010 UK Biodiversity Framework. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed for the UK BAP remain valuable resources for background information on priority species under the UK Post-2010 Biodiversity Framework.
- A1.6. Priority Species and Habitats identified under the UKBAP are also referred to as Species and Habitats of Principal Importance for the conservation of biodiversity in England and Wales within Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

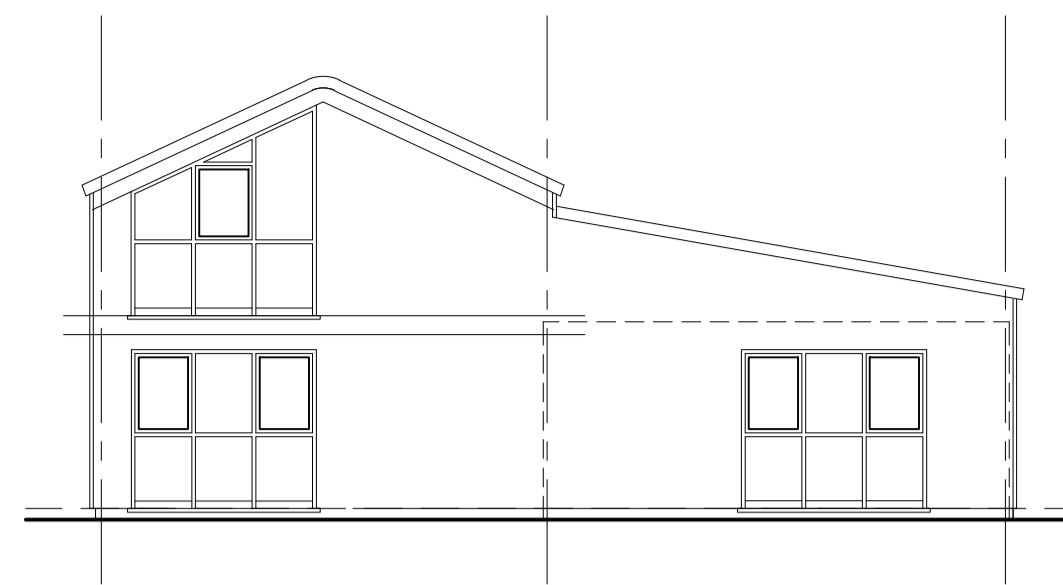
Appendix 2: Proposed Development Plan



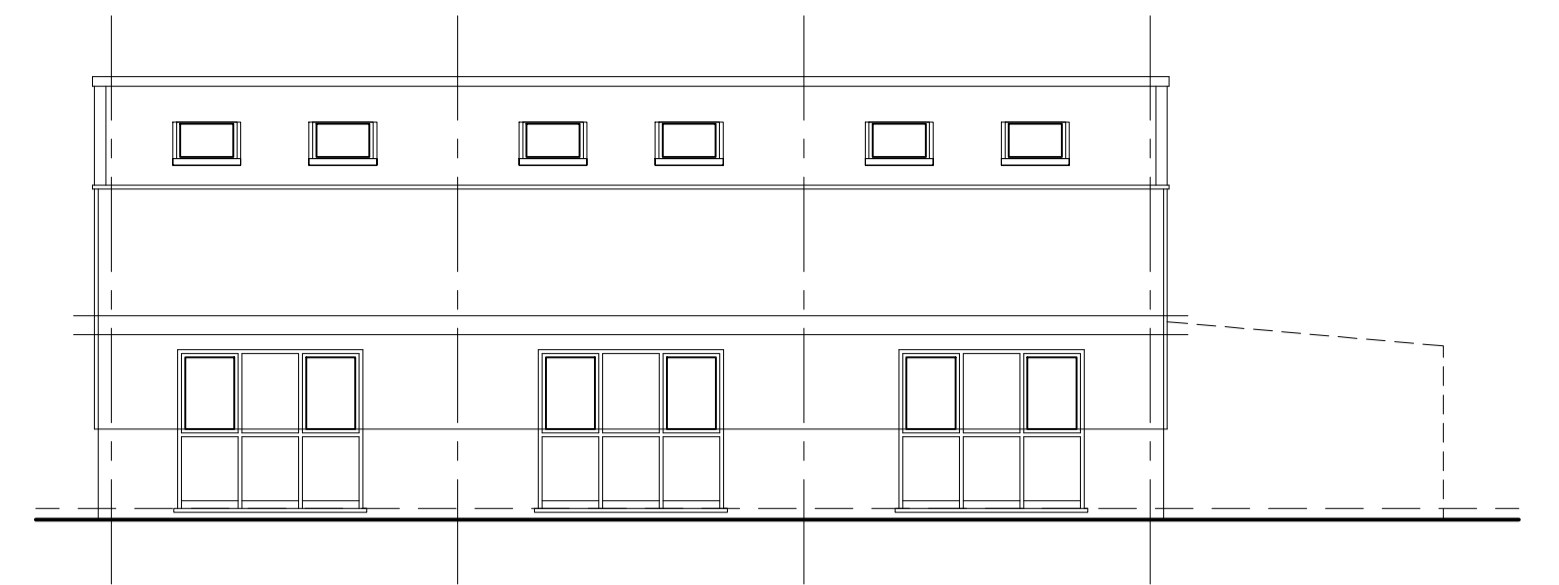
Front Elevation



Side Elevation

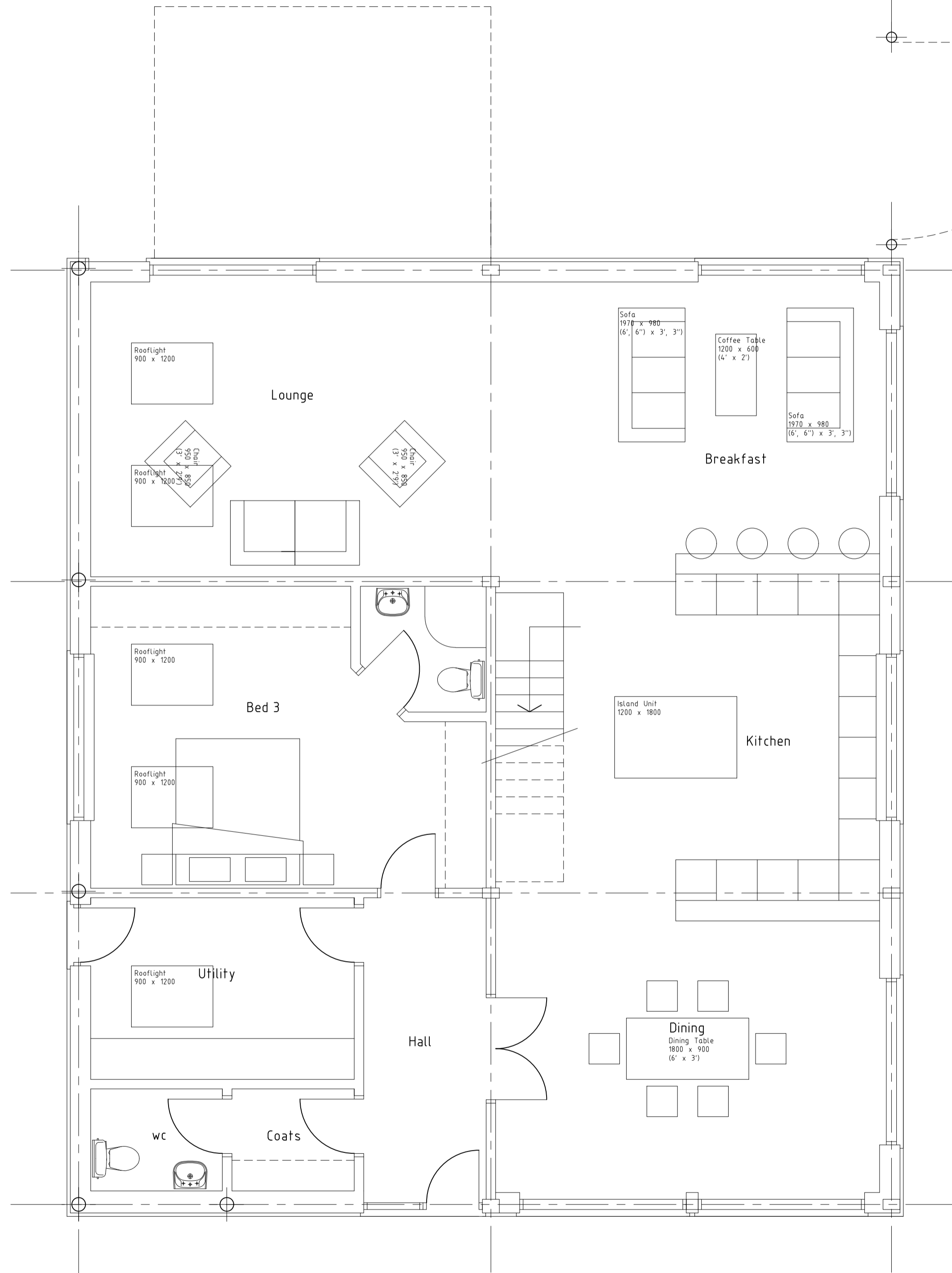


Rear Elevation

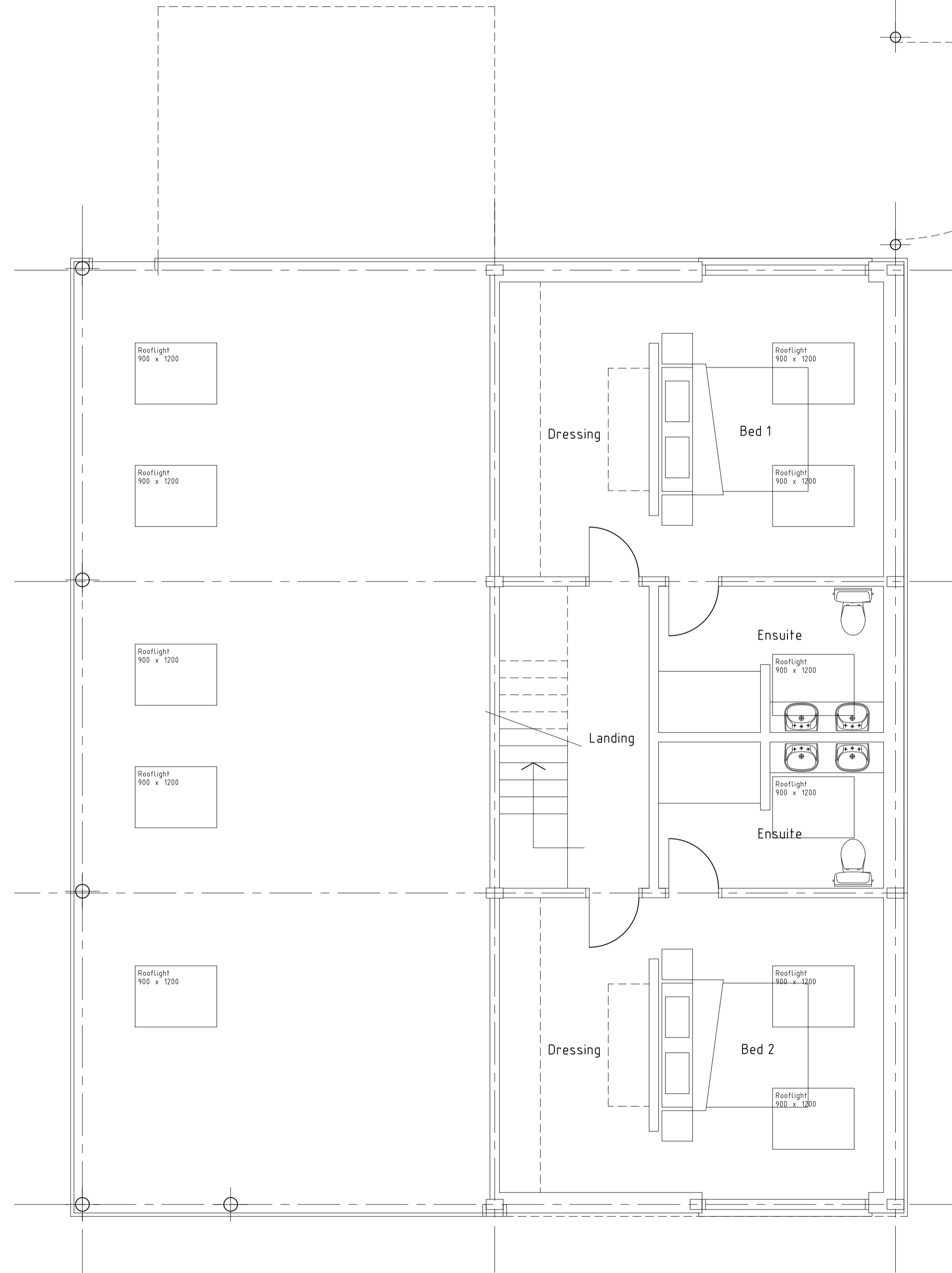
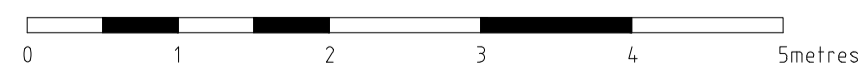


Side Elevation

Zinc Roof Cladding
 Timber Vertical cladding
 Aluminium windows



Ground Floor Plan



Ground Floor Plan



DEREK SAUNDERS BSc MRICS MaPS
 26 TAMAR AVENUE
 TORQUAY
 TQ2 7LP

Client: MR & MRS DANIEL
 Project: LAND AT MEADOWSIDE TRESMEER
 Drawing: SCHEME 1

Drwg No: 1532/SK001 Scale: 150 / 1:100
 Date: AUG 2023 Revision:

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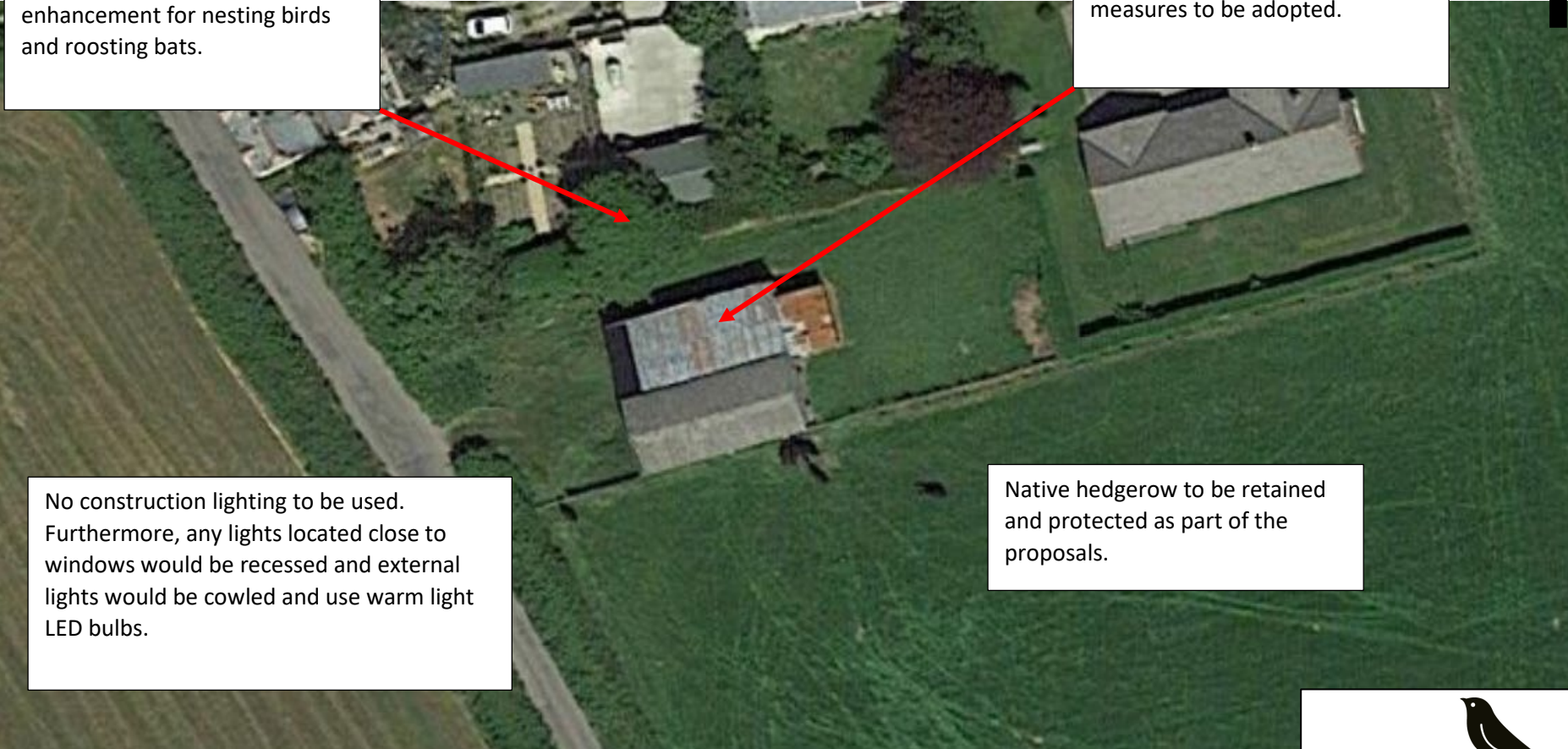
Appendix 3: Ecological Constraints and Opportunities Plan

Bat and bird boxes located on mature tree provide an enhancement for nesting birds and roosting bats.

Barn to be converted and potential constraint of nesting birds. As such precautionary measures to be adopted.

No construction lighting to be used. Furthermore, any lights located close to windows would be recessed and external lights would be cowed and use warm light LED bulbs.

Native hedgerow to be retained and protected as part of the proposals.



Opportunities and Constraints
Site: Barn at Meadowside
Client: Alfred Daniel
Date: 11/10/2023