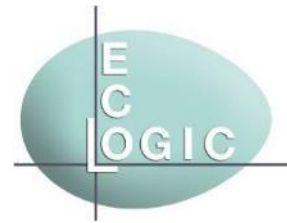


Preliminary Ecological Appraisal incl.
Bat and Protected Species Survey and
Biodiversity Metric Assessment



3 Lower Marsh Road
Warminster
Wiltshire
BA12 9PB

Planning Reference:		Report Reference:	250731 rev01
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Architect/Agent:	Lone Wolf Planning Ltd.		
Survey Date/s:	11 th August 2025		
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1.1 Introduction

It is proposed to demolish three buildings and remove a horse paddock to construct three dwellings with associated gardens and access on the site at 3 Lower Marsh Road, Warminster, Wiltshire, BA12 9PB.

1.2 Survey Results

The site predominantly consisted of modified grassland in the form of a horse paddock. The northern extent of the site consisted of three buildings, artificial unvegetated; unsealed surface and developed land; sealed surface. The site provides suitable habitat for amphibians (terrestrial habitat), badger, foraging bats, birds (foraging), hedgehog, invertebrates and reptiles.

1.3 Impacts

The proposal will result in the loss of 0.16 ha of modified grassland. External and internal lighting will also be introduced as part of the proposal. This will remove habitat for, and/or negatively impact: amphibians, badger, foraging bats, birds, hedgehog, invertebrates and reptiles.

1.4 Recommendations

Recommendations for mitigation, compensation and enhancement measures to ensure there are no negative impacts upon protected species are included within Section 6.

1.5 Conclusion

Through the Biodiversity Metric Assessment, the proposal currently represents a positive ecological impact through the creation of modified grassland and planting of nine individual trees. The development currently achieves +10% biodiversity net gain for area habitats.

The impacts for protected species have been assessed, and mitigation, compensation and enhancement measures have been recommended to reduce any predicted negative impacts and ensure opportunities for these species are retained and/or increased following development.

2.1 Proposals

It is proposed to demolish three buildings and remove a horse paddock to construct three dwellings with associated gardens and access on the site at 3 Lower Marsh Road, Warminster, Wiltshire, BA12 9PB.

2.2 Site Location & Description

The survey site was located within the southern extent of the town of Warminster, approximately 1 km south of the town centre. The survey site measured 0.26 ha and consisted of three buildings, modified grassland, artificial unvegetated; unsealed surface and developed land; sealed surface (Appendix 1). The site was immediately bordered by agricultural land, grassland and residential dwellings including associated gardens (Figure 2.1). The surrounding landscape consisted of agricultural land, buildings, dwelling and gardens associated with Warminster, small pockets of woodland and a sewage treatment facility. The River Wylye was located 250 m south of the site.

2.3 Survey Objectives

A Preliminary Ecological Appraisal (including a Bat and Protected Species Survey) and Biodiversity Metric Assessment were undertaken to consider and assess the perceived ecological impacts associated with the proposal, including any perceived impacts to:

- Legally protected species or species of conservation concern;
- Legally protected habitats or habitat of conservation concern;
- Any statutory or non-statutory sites of conservation interest; and,
- Opportunities to provide biodiversity enhancement(s).



Figure 2.1. Survey site boundary of 3 Lower Marsh Road, Warminster (red outline)

3.1 Preliminary Ecological Appraisal

3.1.1 Scope of the Assessment

The zone of influence covers the extent of the site, the site boundaries and areas directly adjacent to the site. The assessment considers designated sites, habitats and species of importance for biodiversity conservation and protected species.

3.1.2 Desk-based Review

A desk-based review was undertaken reviewing ecological data from the following resources:

- Review of the Government's (DEFRA) mapping website [MAGIC](#); and,
- Review of the Government's [Natural England Open Data Geoportal](#) website.

Review of the ecological data included a search of:

- International & European designated sites (Natura 2000 sites¹) – within the survey area and within 10 km of the survey area boundaries;
- Statutory sites (e.g. Sites of Special Scientific Interest (SSSIs)) within 1 km of the survey area boundaries;
- Non-statutory sites (e.g. Local Wildlife Sites (LWS)) designated for wildlife conservation within a 1 km radius of the site;
- Priority habitats – within the survey area and within 1 km of the survey area boundaries;
- European protected species license (EPSL) records issued by Natural England since 2009 – within the survey area and within 4 km of the survey area boundaries;
- Great crested newt pond survey records within 1 km of the survey area boundaries; and,
- Location of the site within a consultation/risk zone designated for a protected species.

¹ Natura 2000 is a European Union-wide network of nature conservation sites established under the EC Habitats and Birds Directives comprising Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

3.1.3 Field Survey

The field survey consisted of a walkover assessment of all areas of the site using the UK Habitat Classification System methodology (UKHab Ltd., 2023). This is a standard technique designed for classifying and mapping British habitats. A condition assessment for each habitat was undertaken on site, where applicable, following the Statutory Biodiversity Metric Condition Assessment Methodology (Defra, 2024).

Each habitat was assigned the appropriate alphanumeric code followed by any relevant secondary codes in accordance with UKHab Category Definitions v2.0 (UKHab Ltd., 2023). These codes are shown on the UK Habitat Classification Map (Appendix 1). Apart from buildings, habitat areas below the minimum mappable unit of 25 m² will be denoted by target notes and secondary codes. Target notes are used to indicate specific features, important habitats and/or field signs. An indicative list of observed plant species was compiled with the common name used in the main body of the report, and both the common and scientific names provided within Appendix 2.

The site survey was undertaken on the 11th August 2025 by William Clovis-Corbett and Julian Prow. All areas within the site were surveyed and assessed for indicators of ecological value, including the presence or signs of any protected or rare habitats and species. This included an external and internal inspection of the buildings on site, with the aid of head and hand-held torches, an endoscope, close-range binoculars, an extendable ladder and a digital camera.

3.2 Statutory Biodiversity Metric Assessment

As recommended by the Defra Statutory Biodiversity Metric (2024), the habitat types were defined using the UK Habitat Classification System 2.0 (2023). For each site habitat feature, the metric records:

- Habitat type;
- Area or length;
- Distinctiveness;
- Strategic significance; and,
- Connectivity.

From the recorded parameters the metric calculates:

- 'Habitat units' for area habitats (e.g. grassland, woodland etc.);
- 'Hedgerow units' for hedges and lines of trees; and,
- 'River units' for rivers and streams.

The habitat values assigned to created and enhanced habitats include factors associated with 'risk' relating to the difficulty and/or time required to establish the new habitat type.

The following were used for the calculation of the parameters, pre and post, development:

- The site visit undertaken on 11th August 2025;
- Desk-based review results (Section 4.1); and,
- Proposed site layout.

4.1 Desk-based Review

4.1.1 Statutory Designated Sites

Internationally Designated Sites of Nature Conservation

The desk-based review identified two statutory sites designated for nature conservation of international importance within 10 km of the site (Table 4.1).

Table 4.1. Statutory Designated Sites of International Importance

Name of site	Location in reference to site	Designation	Reason for designation
River Avon	250 m south	Special Area of Conservation (SAC)	The River Avon supports <i>Ranunculus fluitans</i> and <i>Callitricho-Batrachion</i> vegetation and unique sections running through chalk and clay. Also supports populations of Desmoulin's whorl snail, brook lamprey and Atlantic salmon
Salisbury Plain	2.5 km northeast	Special Area of Conservation (SAC) & Special Protection Area (SPA)	Supports the best remaining example of lowland juniper scrub on chalk in the UK. The SAC is also an important orchid site, and is believed to be the largest surviving semi-natural dry grassland within the EU

Nationally Designated Sites of Nature Conservation

The desk-based review identified three statutory sites of nature conservation of national importance within 1 km of the site (Table 4.2).

Table 4.2. Statutory Designated Sites of National Importance

Name of site	Location in reference to site	Designation	Reason for designation
River Avon System	250 m south	Site of Special Scientific Interest (SSSI)	The River Avon System supports <i>Ranunculus fluitans</i> and <i>Callitricho-Batrachion</i> vegetation and unique sections running through chalk and clay. Also supports populations of Desmoulin's whorl snail, brook lamprey and Atlantic salmon
Smallbrook Meadows	380 m northeast	Local Nature Reserve (LNR)	Consists of areas of lowland fen, wet woodland and other seasonally wet habitats that support diverse populations of orchid, birds and invertebrates.

River Wylfe	930 m northeast	Local Nature Reserve (LNR)	The River Wylfe forms part of the larger Langford Lakes reserve which support rare migratory species of wildfowl
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4.1.2 Non-Statutory Designated Sites

The desk-based review did not identify any non-statutory sites within 1 km of the survey site.

4.1.3 Priority Habitats

The desk-based review identified four priority habitats within 1 km of the survey site. These included: traditional orchard, deciduous woodland, priority ponds and lowland fen. The nearest of these was a 0.72 ha area of deciduous woodland located 250 m northeast of the survey site.

4.1.4 European Protected Species Licences (EPSLs)

Bats

The desk-based review identified six EPSLs granted for brown long-eared, common pipistrelle, serotine and soprano pipistrelle within 4 km of the site. The nearest of these was granted for the destruction of a resting and breeding place for common pipistrelle in 2013, located approximately 1.3 km northeast of the survey site.

4.1.5 Great Crested Newt Survey Records

The desk-based review identified one positive pond survey result (2017-2019) for great crested newt within 4 km of the site. The positive record was located 1.3 km southwest of the site on 26th April 2018.

4.1.6 Consultation/Risk Zones

The desk-based review identified that the site is located within an amber risk zone for great crested newt. Amber risk zones contain main population centres for GCN and comprise important connecting habitat that aid natural dispersal.

4.2 Field Survey

The environmental conditions for the field survey are provided in Table 4.3.

Table 4.3. Environmental conditions on 11th August 2025

Temperature (°C)	Wind Speed (Beaufort Scale)	Cloud cover (%)	Precipitation	Sunset time
24	2	5	None	N/A

Constraints:

The PEA records the plants species present at the time of the survey, therefore plants that appear during different times of the year may not be recorded. Botanical diversity was considered sufficient to classify and assess the habitats present. As part of the Bat & Protected Species Survey, a thorough search was made of all internal and external surfaces and an assessment made of the roof structure.

4.2.1 Habitats

The site predominantly consisted of modified grassland in the form of a horse paddock. The northern extent of the site consisted of three buildings, artificial unvegetated; unsealed surface and developed land; sealed surface. A UK Habitat map for the site is provided in Appendix 1. Each habitat was assigned the appropriate alphanumeric code in accordance with UKHab Category Definitions v2.0 (UKHab Ltd., 2023).

Artificial Unvegetated, Unsealed Surface – A1 & A3 (u1c)

Parcels A1 and A3 consisted of artificial unvegetated, unsealed surface and were located within the northern extent of the site (Figure 4.1). Parcel A1 was in the form of a gravel-covered driveway/access and Parcel A3 consisted of a sand covering within a horse paddock (Figure 4.2).



Figure 4.1. Northwestern extent of Parcel A1



Figure 4.2. Southeastern extent of Parcel A3

Developed Land; Sealed Surface – A2 (u1b6)

Parcel A2 was located within the northwestern extent of the site and consisted of

concrete hardstanding associated with the on-site buildings (Figure 4.3).



Figure 4.3. Parcel A2 (yellow), photo taken facing west

Modified Grassland – A4 & A5 (g4)

Parcels A4 and A5 consisted of modified grassland in the form of a rotationally horse-grazed grassland paddock (Figures 4.4-4.7). Parcel A4 was located within the southwestern extent and Parcel A5 located within the southeastern extent of the site. During the field survey, Parcel A5 was being actively grazed by horses and supported a very short sward height of approximately 3 cm with a herb cover of approximately 10%. Parcel A4 had been left to grow and supported a sward height of 5 – 30 cm with 40% herb cover. Parcel A4 and A5 supported 5 – 6 species per m² which included: perennial ryegrass, creeping bent, timothy, common bent, broad-leaved plantain, shepherd's purse, common ragwort, ribwort plantain, white clover, red clover, yarrow, common dandelion, creeping buttercup, fumitory species, fat hen, groundsel, *Euphorbia* species, many-seeded goosefoot, prickly sow thistle, hogweed, ground ivy, selfheal, common daisy, hawkweed and cut-leaved dead nettle. The modified grassland within parcel A4 and A5 was in 'poor' condition due to the low number of species per m² present.



Figure 4.4. Southern extent of Parcel A4



Figure 4.5. Species composition with Parcel A4



Figure 4.6. Southeastern extent of Parcel A5



Figure 4.7. Southwestern extent of Parcel A5

Buildings

Building B1

B1 was a single-storey L-shaped timber-built stable located within the northwestern extent of the site (Figures 4.8-4.10). B1 supported a pitched roof with a corrugated bitumen covering and ridge. A wooden lean-to was present on the eastern elevation and a metal-caged dog kennel lean-to was present on the southern elevation. Wooden barge boarding was present throughout and plastic skylights were present upon the southern elevation.

Building B2

B2 was a single-storey timber-built stable located adjacent to building B1 within the northwestern extent of the site (Figure 4.11). B2 supported a pitched roof with a corrugated bitumen covering and ridge. There was an open car port within the eastern extent of B2.

Building B3

B3 was a small timber-built horse shelter located in between Parcels A3 and A5 (Figures 4.12 & 4.13). B3 supported a single-sloping pitched roof with a corrugated bitumen covering and was open fronted on the northern elevation.



Figure 4.8. Northern and eastern elevations of building B1



Figure 4.9. Northern and western elevations of building B1



Figure 4.10. Southern elevation of building B1 and B2



Figure 4.11. Northern and eastern elevations of building B2



Figure 4.12. Northern elevation of building B3



Figure 4.13. Southern and eastern elevations of building B3

4.2.2 Off-site Habitats

Species-rich native hedgerow (h2a5)

A species-rich native hedgerow was located north of the site boundary and measured 2-4 m in height, 2-3 m in width and 53 m in length. The hedgerow was dissected by the site access. Species identified within the hedgerow included holly, ash, sycamore, bramble, hawthorn, pedunculate oak, honeysuckle, Himalayan firethorn, ivy, dog rose and blackthorn.

Individual Tree

A medium sized individual tree was identified within the hedgerow adjacent to the northwest extent of the site boundary. The tree was a mature pedunculate oak measuring 8 m in height.

4.3 Habitat Suitability for Protected & Priority Species

4.3.1 Amphibians

The modified grassland on site only provides a limited extent of suitable terrestrial habitat for amphibians due to the grazing regime.

4.3.2 Badger

There were no signs of badger identified during the field survey. However, in conjunction with the wider landscape, the modified grassland provides suitable foraging and dispersal habitat for badger.

4.3.3 Bats

Roosting

There were no bats, evidence of bats, access and/or suitable crevices identified in association with the buildings on site (B1, B2 & B3).

Foraging & Dispersal

The modified grassland provides suitable foraging habitat for bats in conjunction with the wider landscape.

4.3.4 Birds

There were no bird nesting sites identified in associated with buildings B1, B2 or B3. However, the modified grassland provides suitable foraging habitat for birds.

4.3.5 Dormouse

There was no suitable nesting or foraging habitat identified on site for dormice. The adjacent off-site habitats including hedgerows to the north represent suitable dormouse habitat.

4.3.6 Hedgehog

The modified grassland provides suitable foraging habitat for hedgehog.

4.3.7 Invertebrates

The modified grassland provides suitable habitat for a range of invertebrate species.

4.3.8 Reptiles

The modified grassland on site only provides a limited extent of suitable terrestrial habitat for reptiles due to the grazing regime.

4.4 Biodiversity Metric Assessment

The Biodiversity Metric Assessment demonstrates that the proposal will result in an increase of 0.1 (29.29%) 'area' habitat units through the creation of modified grassland, vegetated garden and planting of individual trees (Appendix 3).

The strategic significance of each habitat present on site has been assigned through consideration of the location within the landscape, habitat type and ecological importance for protected species. In the absence of a Local Nature Recovery Strategy (LNRS) the guidance states that creation of specific habitat types considered as ecologically important within the local plans or alternative documents, may be considered as 'high' strategic significance. Accordingly, the creation of habitat types identified as priority habitats (NERC 2006) are recorded as high strategic significance.

The baseline and proposed habitats including habitat distinctiveness, condition, strategic significance, and biodiversity units are presented in Table 4.4. Habitat area biodiversity unit change is summarised in Table 4.5 and the baseline and proposed maps are presented in Appendix 3.

Table 4.4. Number of Biodiversity Units for On-site and Off-site Area Habitats at Baseline

Map Ref	Habitat Type	Area (ha)	Habitat Distinctiveness	Habitat Condition	Strategic Significance	Baseline Biodiversity Units
A1, A3	Artificial unvegetated, unsealed surface	0.0768	V. Low	N/A	Low	0
A2, B1, B2, B3	Developed land; sealed surface	0.0218	V. Low	N/A	Low	0
A4, A5	Modified grassland	0.1638	Low	Poor	Low	0.33
Total On-site Area Habitat Biodiversity Units						0.33

Table 4.5. Area Habitat Biodiversity Unit Change Summary

Biodiversity Unit Type	Description		Biodiversity Units
Area Habitat	On-site baseline area habitat biodiversity units		0.3276
	On-site area habitat retention, creation and enhancement biodiversity units:		
	Created	0.1068 ha developed land; sealed surface 0.1027 ha vegetated garden 0.0529 ha modified grassland in poor condition 9 small sized individual urban trees in moderate condition	0.4235
Overall Net Unit Change			+0.10
Overall On-site Net % Change			+29.29%
Trading Rules Satisfied			Yes

5.1 Proposal

It is proposed to demolish three buildings and remove a horse paddock to construct three dwellings with associated gardens and access on the site at 3 Lower Marsh Road, Warminster, Wiltshire, BA12 9PB.

5.2 Desk-based Review

5.2.1 Statutory Designated Sites

Internationally Designated Sites of Nature Conservation

The desk-based review identified two statutory sites designated for nature conservation of international importance within 10 km of the site. The nearest of these was River Avon SAC located 250 m south of the survey site.

Nationally Designated Sites of Nature Conservation

The desk-based review identified three statutory sites of nature conservation of national importance within 1 km of the site. The nearest of these was River Avon SSSI located 250 m south of the survey site.

Due to the nature of the proposed works and the intervening distances between the site and the designated sites of nature conservation, it is considered that there will be no direct or indirect impacts upon these sites.

5.2.2 Non-Statutory Designated Sites

The desk-based review did not identify any non-statutory sites within 1 km of the survey site.

5.2.3 Priority Habitats

The desk-based review identified four priority habitats within 1 km of the survey site. The nearest of these was a 0.72 ha area of deciduous woodland located 250 m northeast of the survey site.

Due to the nature of the proposed works and the intervening distances between the site and the identified priority habitats, it is considered that there will be no direct or indirect impacts upon these habitats.

5.3 Protected & Priority Species Assessment

5.3.1 Amphibians

The modified grassland on site only provides a limited extent of suitable terrestrial habitat for amphibians due to the grazing regime. The desk-based review identified nine ponds within 1 km of the site. The nearest of these was located 150 m southeast of the survey site.

Great Crested Newt

The desk-based review identified one positive pond survey result for great crested newt located 1.3 km southwest of the site. The site is located within an amber risk zone for great crested newt. Such zones contain main population centres for GCN and comprise important connecting habitat that aid natural dispersal.

Great crested newt is afforded protection under the UK Wildlife and Countryside Act 1981 (as amended) in Schedule 5, and the EC Habitats and Species Directive (92/43/EC), enacted in the UK by the Conservation of Habitats and Species Regulations 2010. This level of protection makes it illegal to:

- deliberately capture, kill or injure great crested newt/s;
- damage or destroy a breeding site or resting place (including aquatic and terrestrial habitat whilst great crested newts are or aren't present at the time); and,
- to possess or sell a great crested newt.

The presence of great crested newt is typically associated with the presence of ponds, which form aquatic breeding habitat, and therefore tend to have relatively 'localised' distributions.

Due to the current land use of the grassland within the site as a horse paddock and the presence of habitat of higher suitability for great crested newt located off-site, it is considered unlikely that great crested newts are present on site. Despite this, precautionary measures are outlined within Section 6 to ensure great crested newts are not negatively impacted by the development.

Common Amphibians

Common amphibians such as common frog, common toad, smooth newt and palmate newt, are less dependent on established ponds and have a widespread distribution.

Common toad is listed within Section 41 of the Natural Environment and Rural Communities Act (NERC, 2006) and must be considered through the planning process. Public bodies, including LPAs, are minded to ensure due regard to the conservation of biodiversity of such species. Such considerations may seek to protect, re-establish or create habitat suitable for amphibian's post development.

It is understood that the modified grassland will be removed to facilitate the development, which will remove a limited extent of terrestrial habitat for amphibians. Accordingly, mitigation and compensation measures are provided in Section 6 to ensure amphibians are not harmed during the development.

5.3.2 Badger

There were no signs of badger identified during the field survey. However, in conjunction with the wider landscape, the modified grassland provides suitable foraging and dispersal habitat for badger.

Badgers are protected by the Protection of Badgers Act 1992 and the Wildlife and Countryside Act 1981 (as amended), Schedule 6. Under the Wildlife and Countryside Act, it is illegal to intentionally kill, capture, injure or ill-treat any badger.

It is understood that the modified grassland will be removed to facilitate the development, which will removed foraging habitat for badgers. Accordingly, precautionary mitigation measures should be employed to ensure badgers are not harmed or injured during the construction period of the development. These measures are detailed within Section 6.

5.3.3 Bats

The desk-based review identified six EPSLs granted for bats within 4 km of the site. The nearest of these was granted for the destruction of a resting and breeding place for common pipistrelle, located approximately 1.3 km northeast of the survey site.

Roosting

There were no bats, evidence of bats, access and/or suitable crevices identified in association with the buildings on site (B1, B2 & B3). Therefore, the works will not disturb roosting bats or significantly affect the distribution or abundance of local bat populations.

Foraging & Dispersal

The modified grassland provides suitable foraging habitat for bats in conjunction with the wider landscape.

As a signatory to the Bonn Convention (Agreement on the Conservation of Bats in Europe) the UK has committed to protecting bat habitats, which necessitates the identification and protection from damage or disturbance of foraging areas and commuting routes.

It is understood that the modified grassland will be removed to facilitate the development, which will remove foraging habitat for bats. External and internal lighting will also be introduced as part of the development. Therefore, mitigation measures in the form of a sensitive lighting plan, detailed within Section 6, will be required to ensure that dispersing and foraging bats are not negatively impacted by the proposal. Compensation measures which include habitat creation, are also detailed within Section 6.

5.3.4 Birds

There were no bird nesting sites identified in associated with buildings B1, B2 or B3. However, the modified grassland provides suitable foraging habitat for birds and the buildings could represent suitable nesting habitat for birds in future bird nesting seasons.

All birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended).

It is understood that the modified grassland and buildings will be removed to facilitate the development, which will remove foraging habitat and potential nesting habitat for birds. Mitigation & compensation measures which include habitat creation are provided in Sections 5 & 6.

5.3.5 Hedgehog

The modified grassland provides suitable foraging habitat for hedgehog.

Hedgehog are listed as a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006) with public bodies, including LPAs, minded to ensure due regard to the conservation of biodiversity of such species.

Such considerations may seek to protect, re-establish or create habitat suitable for hedgehog post development.

It is understood that the modified grassland will be removed to facilitate the development, which will remove habitat for hedgehog. External and internal lighting will also be introduced as part of the development. Therefore, mitigation and compensation measures are provided in Section 6 to ensure hedgehog are not negatively impacted by the development.

5.3.6 Invertebrates

The modified grassland provides suitable habitat for a range of invertebrate species.

It is understood that the modified grassland will be removed to facilitate the development, which will have a negative impact on invertebrate species. Measures will be incorporated to ensure opportunities for invertebrate species are available post development.

5.3.7 Reptiles

The modified grassland on site only provides a limited extent of suitable terrestrial habitat for reptiles due to the grazing regime.

Reptiles are protected against intentional killing and injury under the Wildlife and Countryside Act 1981 (as amended). Natural England states that activities such as site investigations and movements of machinery may breach this legislation by causing death or injury to reptiles (English Nature, 2004).

It is understood that the modified grassland will be removed to facilitate the development, which will remove habitat for reptiles. Accordingly, mitigation and compensation measures are provided within Section 6 to ensure reptiles are not harmed or injured during the works.

5.4 Biodiversity Metric Assessment

The Biodiversity Metric Assessment demonstrates that the proposal will result in an increase of 0.10 (29.29%) 'area' habitat units through the creation of modified grassland, vegetated garden and planting of individual trees (Appendix 3). The site currently achieves the minimum legal requirement of 10% increase in biodiversity units for area habitat.

6.1 Ecological Impacts

The proposal will result in the loss of 0.16 ha of modified grassland. External and internal lighting will also be introduced as part of the proposal. This will remove habitat for, and/or negatively impact: amphibians, badger, foraging bats, birds, hedgehog, invertebrates and reptiles.

6.2 Mitigation Measures

To ensure the identified protected species are not negatively impacted during and post-development the following measures will be undertaken (Appendix 4).

- **Excavations/Pipework:** Any excavations or pipework, which are to remain open overnight, should be fenced or covered to prevent potential entrapment and/or injury of species such as badger or hedgehog.
- **Vegetation Management:** The modified grassland should be maintained with a short sward height prior to and during the works to discourage amphibian and reptile colonisation.
- **Nesting Birds:** Ideally the demolition works will be timed to take place outside of the bird nesting season (considered to be March-August inclusive; although depending on the species, geographical area and weather, nesting can take place outside of these times). If the works are undertaken during the nesting bird season, a nesting bird check should be undertaken. Should nesting birds be found then works will be required to cease until the nest is no longer active (i.e., until the last chick has fledged).
- **Retained Habitats:** The root protection areas (RPA) of the retained off-site habitats (hedgerows and trees) must be considered and buffered accordingly. This is to avoid direct damage through the compaction and disturbance of root protection areas which could cause the deterioration of the retained off-site hedgerows and trees.
- **Pollution Prevention:** The construction phase of the works must be planned in accordance with pollution prevention for businesses (gov.uk; 2024) to avoid the release of any soil/spoil, fuels, oils & chemicals associated with machinery,

refuelling and construction equipment or cement and concrete into the adjacent watercourse.

- **Lighting Plan:** A wildlife sensitive lighting plan will be required ensuring that the retained and created habitats, and any adjacent habitats to site, are not impacted by light spill from the proposed development, including any potential bat roosts created. Specifications are detailed within Section 6.2.1.

6.2.1 Sensitive Lighting Specification

A sensitive lighting plan should be designed to ensure that any flight routes and surrounding habitats are not negatively impacted by lighting. The sensitive lighting plan should follow the below specification specifically ensuring that there is no light spill above 0.5 lux upon these features and surrounding habitats. Further information can be found within Guidance Note 08/23: Bats and Artificial Lighting at Night.

External Lighting

External lighting should be avoided, however if lighting is required, it will be installed adjacent to access, doorways, steps etc. only, at the minimum height permissible and directed below a 70-degree plane. Any external lighting associated with the development will be adapted to be based on a Passive Infrared Sensor (PIR) system (being motion-sensitive only to large objects) and on a short timer (no longer than 1 minute). The bat access points and corresponding flight lines linking the roosts to the surrounding environment must not be illuminated by any artificial lighting. Lighting will specifically not be positioned where it could illuminate surrounding vegetation (trees, hedgerows etc.) or any areas beyond the development area.

Lighting must be kept at the minimum height permissible. LED luminaires which lack UV elements with glass glazing should be used instead of mercury or metal halide lamps. This type of lighting can be used more directionally and will reduce the range of light wavelengths emitted thus significantly reducing the levels of light which may attract increased levels of invertebrate bat prey items. Such light should be positioned to only illuminate the required areas, limiting light spill, both horizontally and vertically beyond the site.

A warm white spectrum (ideally <2700 Kelvin) should be adopted to reduce the blue light component. Luminaires should feature peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats (Institution of Lighting

Professionals & the Bat Conservation Trust 2018). Additionally, hoods, cowls, louvers and/or shields should be used to further direct any lighting.

Internal Lighting

Internal lighting should be recessed where installed in proximity to windows and blinds should be fitted to reduce glare and light (Institution of Lighting Professionals & the Bat Conservation Trust 2018).

6.3 Compensation & Enhancement

The National Planning Policy Framework outlines the Government's commitment to minimise impacts on biodiversity and provide increases in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

The following compensation and enhancement measures should be included within the proposal to compensate for the loss of, or to enhance habitat for protected species (Appendix 5):

- **New Landscape Planting:** All new planting to be wildlife-attracting, native and of local provenance.
- **Habitat Creation:** The development includes the creation of 0.05 ha of modified grassland in poor condition and nine small sized individual urban trees in moderate condition.
- **Inbuilt Wildlife Provisions:** At least one bat roosting provision (Appendix 6), one bird nesting provision (Appendix 7) and one invertebrate provision (Appendix 8) are to be inbuilt within each of the proposed dwelling units (9 wildlife provisions in total).
- **Habitat Piles:** the creation of at least two habitat piles, consisting of hardwood logs and/or brash within undisturbed areas adjacent to the southern boundary of the proposed plots. Habitat piles should be approximately 1 m³ in size and preferably located within relatively undisturbed locations (Appendix 9).

6.4 Biodiversity Net Gain

The Biodiversity Metric Assessment demonstrates that the proposal will result in an increase of 0.10 (29.29%) 'area' habitat units through the creation of modified grassland and planting of individual trees (Appendix 3). The site currently achieves the minimum legal requirement of 10% increase in biodiversity units for area habitats.

6.5 Management Plans

Adoption of a Landscape Ecological Management Plan (LEMP) or Habitat Management & Monitoring Plan (HMMP) will be required to achieve the habitats and conditions specified within the metric calculation and maintain them over the 30-year agreement period. These measures should also be illustrated and detailed upon landscape plan(s) and construction drawings.

6.6 Conclusion

Through the Biodiversity Metric Assessment, the proposal currently represents a positive ecological impact through the creation of modified grassland and planting of nine individual trees. The development currently achieves +10% biodiversity net gain for area habitats.

The impacts for protected species have been assessed, and mitigation, compensation and enhancement measures have been recommended to reduce any predicted negative impacts and ensure opportunities for these species are retained and/or increased following development.

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APPENDICES

- Appendix 1: UK Habitat Classification Map
- Appendix 2: Species List
- Appendix 3: Biodiversity Metric Assessment
- Appendix 4: Mitigation & Constraints Plan
- Appendix 5: Compensation & Enhancement Plan
- Appendix 6: Examples of Inbuilt Bat Roosting Provisions
- Appendix 7: Examples of Inbuilt Bird Nesting Provisions
- Appendix 8: Example of an Inbuilt Invertebrate Provision
- Appendix 9: Examples of Habitat Piles



APPENDIX 2

SPECIES LIST

Common Name	Latin Name
Flora	
Ash	<i>Fraxinus excelsior</i>
Blackthorn	<i>Prunus spinosa</i>
Bramble	<i>Rubus fruticosus</i>
Broad-leaved plantain	<i>Plantago major</i>
Common bent	<i>Agrostis capillaris</i>
Common daisy	<i>Bellis perennis</i>
Common dandelion	<i>Taraxacum officinale</i>
Common ragwort	<i>Jacobaea vulgaris</i>
Creeping bent	<i>Agrostis stolonifera</i>
Creeping buttercup	<i>Ranunculus repens</i>
Cut-leaved dead nettle	<i>Lamium hybridum</i>
Dog rose	<i>Rosa canina</i>
Euphorbia species	<i>Euphorbia</i> sp.
Fat hen	<i>Chenopodium album</i>
Fumitory species	<i>Fumaria</i> sp.
Ground ivy	<i>Glechoma hederacea</i>
Groundsel	<i>Senecio vulgaris</i>
Hawkweed	<i>Hieracium</i> spp.
Hawthorn	<i>Crataegus monogyna</i>
Himalayan firethorn	<i>Pyracantha crenulata</i>
Hogweed	<i>Heracleum sphondylium</i>
Holly	<i>Ilex aquifolium</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Ivy	<i>Hedera helix</i>
Juniper	<i>Juniperus communis</i>
Many-seeded goosefoot	<i>Chenopodium polyspermum</i>
Pedunculate oak	<i>Quercus robur</i>
Perennial ryegrass	<i>Lolium perenne</i>
Prickly sow thistle	<i>Sonchus asper</i>
Red clover	<i>Trifolium pratense</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Selfheal	<i>Prunella vulgaris</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Sycamore	<i>Acer pseudoplatanus</i>
Timothy	<i>Phleum pratense</i>
White clover	<i>Trifolium repens</i>
Yarrow	<i>Achillea millefolium</i>
Fauna	
Atlantic salmon	<i>Salmo salar</i>

Common Name	Latin Name
Badger	<i>Meles meles</i>
Barn Owl	<i>Tyto alba</i>
Brook lamprey	<i>Lampetra planeri</i>
Brown long-eared bat	<i>Plecotus auritus</i>
Common Frog	<i>Rana temporaria</i>
Common Toad	<i>Bufo bufo</i>
Common pipistrelle	<i>Pipistrellus pipistrellus</i>
Desmoulin's whorl snail	<i>Vertigo moulinsiana</i>
Dormouse	<i>Muscardinus avellanarius</i>
Great crested newt	<i>Triturus cristatus</i>
Hedgehog	<i>Erinaceus europaeus</i>
Serotine	<i>Eptesicus serotinus</i>
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>



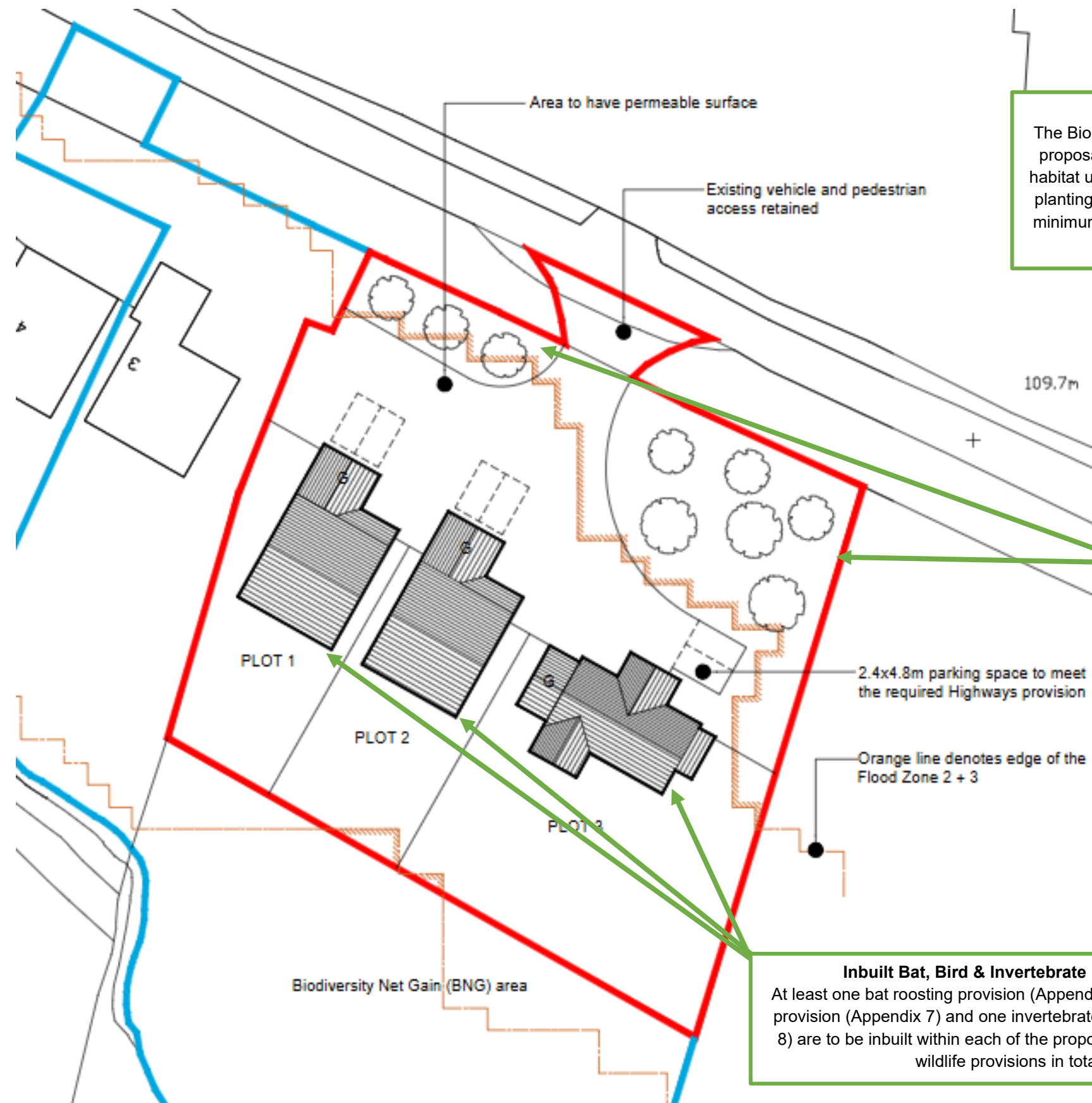


Habitat Piles:

The creation of at least two habitat piles, consisting of hardwood logs and/or brash within undisturbed areas within/adjacent to boundary vegetation. Habitat piles should be approximately 1 m³ in size and preferably located within relatively undisturbed locations (Appendix 9).

New Landscape Planting:

All new planting to be wildlife-attracting, native and of local provenance.

**Biodiversity Net Gain:**

The Biodiversity Metric Assessment demonstrates that the proposal will result in an increase of 0.10 (29.29%) 'area' habitat units through the creation of modified grassland and planting of individual trees. The site currently achieves the minimum legal requirement of 10% increase in biodiversity units for area habitats.

Habitat Creation:

The development includes the creation of 0.05 ha of modified grassland in poor condition and nine small sized individual urban trees in moderate condition.

Inbuilt Bat, Bird & Invertebrate Provisions:

At least one bat roosting provision (Appendix 6), one bird nesting provision (Appendix 7) and one invertebrate provision (Appendix 8) are to be inbuilt within each of the proposed dwelling units (9 wildlife provisions in total).

Segovia Build-In Woodstone Bat Box

Material: Woodcrete

Width: 210 mm

Height: 500 mm

Depth: 170 mm

Entrance Width: 160 mm

Entrance Height: 25 mm

Position: Built into external wall, below eaves or at a minimum height of 3 m with the entrance face at the front, remaining exposed and visible. The sides can be removed and multiple boxes placed next to each other to create a larger roosting space



Vivara Pro Woodstone Bat Tube

Material: Woodstone

Width: 160 mm

Height: 400 mm

Depth: 220 mm

Entrance Width: 150 mm

Entrance Depth: 20 mm

Weight: 6 kg

Position: Within external walls in place of a standard block on a southerly aspect, beneath eaves or at a minimum height of 3 m



Green & Blue Bat Block

Material: Cast concrete (75% waste materials from Cornish China Clay Industry)

Width: 215 mm

Height: 440 mm

Depth: 120 mm

Position: Within external walls in place of a standard block on a southerly aspect, beneath eaves or at a minimum height of 3 m



WoodStone Build in Open Nest Box

Suitable for: robins, wrens and blackbirds.

Material: Woodstone

Height: 180 mm

Width: 220 mm

Depth: 180 mm

Weight: 4.2kg

Position: Within external walls, at a minimum height of 2 m



Vivara Pro Estelle House Sparrow Terrace

Suitable for: House sparrows and individual blue & great tits

Material: Woodstone

Height: 210 mm

Width: 290 mm

Depth: 160 mm

Weight: 7.5 kg

Position: Within external walls, at a minimum height of 2 m



Schwegler Brick Nest Box (Type 24)

Suitable for: House sparrows, great tits, blue tits and nuthatches

Material: Woodcrete

Height: 235 mm

Width: 180 mm

Depth: 180 mm

Weight: 2.8 kg

Position: Within external walls, at a minimum height of 2 m



Green & Blue Bee Brick

Suitable for non-swarming solitary bees such as mason bees and leaf cutter bees.

Material: Concrete (75% waste materials from Cornish China Clay Industry)

Height: 215 mm

Width: 105 mm

Depth: 65 mm

Position: Within external wall in a southerly facing location, adjacent to garden/boundary habitats at a minimum height of 2 m.



Habitat Pile

Size: 2-8 m long x 1-1.5 m high

Materials: Logs, brash, bramble cuttings, grass cuttings

Location: Create in marginal habitats adjacent to both low, open vegetation and dense vegetation

Creation:

- A mixture of materials, shapes and sizes should be used to increase complexity of the structure
- The central core of the structure should be compacted and the outer layers laid loosely on top

Management:

- Add additional material to the habitat pile as it decomposes
- Consider partially burying, anchoring or securing with wire if located on a site with high public access

