

Ecological Impact Assessment



Stanmore House, Ewen
1st March 2024



Tyler
Grange

TG Report No. 12109_R05a_VKC

Project No:	Report No.	Date	Revision
12109	R05a	1st March 2024	a
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12109/P03



Summary

- S.1. This report has been prepared by Tyler Grange Group Limited on behalf of JVAT Developments Ltd. It sets out the findings of an Ecological Impact Assessment at Land at Stanmore House, Ewen, hereafter referred to as 'the site'. The proposals are for the construction of three new dwellings, with associated carparking and landscaping within the garden of the existing property.
- S.2. An 'extended' Phase 1/UK Habitat Classification (UK Habs) survey was undertaken on 12th July 2023. A summary of the results are as follows:
- The site comprises other neutral grassland, areas of ruderal vegetation, hardstanding, broadleaved trees, species poor hedgerows, a species-poor hedgerow with trees and a species-rich hedgerow with trees;
 - The site could support a population of common amphibians, including great crested newts, and reptiles and it is therefore recommended that precautionary working methods are implemented, involving carrying out pre-commencement checks and a phased vegetation clearance under the supervision of a licensed ECoW;
 - The population of bats using the site is expected to be of **local** ecological importance, with assessment of its geographic importance and mitigation informed by bat activity surveys undertaken within the optimal survey season (April to October), with an addendum report submitted during determination.
 - As the site may support a small number of hedgehogs, as well as commuting badgers, basic mitigation measures (as detailed in **Section 3**) will be adhered to during the construction and operational phases of the development.
- S.3. No direct impacts on statutory or non-statutory designated sites are considered likely as a result of the proposed development. The North Meadow and Clattinger Farm SAC Interim Recreation Strategy outlines the mitigation requirements (financial contribution at £323 per unit) required to contribute towards the alleviation and management of recreational pressures on the North Meadow component of the SAC.
- S.4. Habitats of negligible ecological importance to be lost to the development, namely the areas of hardstanding and ruderal vegetation, require no specific mitigation. Habitats of low ecological importance to be lost, namely the grassland habitat, will be compensated for through replacement planting in the form of native hedgerow and tree planting. The hedgerows and broadleaved trees within the site are to be retained.
- S.5. The above measures can be secured via an appropriately worded planning condition for the implementation of a CEMP, a LEMP and a sensitive lighting strategy to ensure the proposed mitigation and enhancements are secured.



Section 1: Introduction and Context

Introduction

- 1.1. This report has been prepared by Tyler Grange Group Ltd on behalf of JVAT Developments Ltd. It sets out the findings of an Ecological Impact Assessment (EclA) of Land at Stanmore House, Ewen, Cirencester, GL7 6BU (Ordnance Survey Grid Reference SU 00063 97445), hereafter referred to as 'the site'. See **Figure 1.1** for the indicative red line boundary.



Figure 1.1: Indicative red line boundary (© Google Aerial Imagery)

- 1.2. This assessment has been undertaken to inform a planning application for the construction of three new dwellings, with associated carparking and landscaping to include the planting of native hedgerows and trees, grassland and swales. The site proposals are shown in **Appendix 3**.

Site Context

- 1.3. The site is approximately 0.45 ha in size and comprises the following habitats - other neutral grassland, areas of ruderal vegetation, hardstanding, broadleaved trees and native hedgerows. The site is located within the village of Ewen and is surrounded by greenspace including arable land. The River Isis is located approximately 0.1 km southwest of the site boundary at its closest point.



Purpose

- 1.4. This report:
- Uses available background data and results of the field surveys to describe and evaluate the ecological features present within the likely "Zone of Influence"¹ (Zoi) of the proposed development;
 - Describes the actual or potential ecological issues and opportunities that might arise as a result of the site's development;
 - Where appropriate, makes commitments for mitigation measures for adverse effects on ecological features as well as ecological enhancements, to ensure conformity with policy and legislation listed in **Appendix 1**; and
 - Can be used to inform a planning application for the site's development.
- 1.5. This assessment and the terminology used are consistent with the Guidelines for Preliminary Ecological Appraisal² and the Guidelines for Ecological Impact Assessment³. A full methodology is set out in **Appendix 2**.

Methodology

- 1.6. Full methods for the data search and 'extended' Phase 1/ UK Habs survey can be found in **Appendix 2**.

Quality Control

- 1.7. All ecologists at Tyler Grange Group Limited are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) or are working towards membership, and act under the direction of members and abide by the Institute's Code of Professional Conduct⁴.

¹ Defined by the CIEEM (2018) Guidelines for Ecological Impact Assessment as the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries.

² CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

³ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

⁴ CIEEM (2022) Code of Professional Conduct, CIEEM, Winchester



Section 2: Ecological Features and Evaluation

Designated Sites

- 2.1. The data search was based on records purchased from Gloucestershire Centre for Environmental Records (GCER), as well as data from the Multi-Agency Geographic Information for the Countryside (MAGIC). See **Appendix 2** for full methodology.
- 2.2. The data search returned one Natura 2000 site (encompassing Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsar sites) within 10 km of the site, and one non-statutory designated site within 2 km of the site. These are detailed in **Table 2.1** below.
- 2.3. No nationally designated sites (encompassing National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) or Local Nature Reserves (LNR)) within 2 km of the site were returned by the data search.



Table 2.1: Designated Sites

Designated Site	Approximate Distance and Direction from Site	Citation	Ecological Importance
North Meadow & Clattinger Farm SAC	3.9 km southeast (Clattinger Farm component) 9 km south east (North Meadow Component)	Designated for its lowland hay meadows with meadow foxtail <i>Alopecurus pratensis</i> and great burnet <i>Sanguisorba officinalis</i> . The site also contains a large proportion of the surviving UK population of fritillary <i>Fritillaria meleagris</i> , a species highly characteristic of damp lowland meadows in Europe and now rare throughout its range.	International
Poole Keynes Conservation Road Verge (CRV)	1.8 km south	Designated for the presence of dwarf elder <i>Sambucus ebulus</i> .	County






Habitats and Flora



- 2.4. The habitats present on site are summarised below in **Table 2.2**, along with a description of the composition of the main plant species present and an assessment of their ecological importance. The location of habitats are shown on the Habitats Features and Preliminary Bat Roost Assessment Plan **12109/P03**.



Table 2.2: Habitats and Flora

Habitat	Description and Species	Ecological Importance	Photograph
Individual Trees	There are several small broadleaved trees scattered throughout the site, including a small group of trees in the northwest corner. Species present included elder <i>Sambucus nigra</i> , hawthorn <i>Crataegus monogyna</i> and willow <i>Salix</i> sp.	Although mature trees have inherent ecological value as they offer habitat opportunities for flora and fauna, the trees within the site are small and immature. As such this habitat is considered to be of negligible ecological importance .	
Hardstanding	There is an area of hardstanding in the west of the site.	Hardstanding provides no inherent ecological value and therefore this habitat type is of negligible ecological importance .	
Neutral grassland	The majority of the site comprises 'other' neutral grassland with cock's-foot <i>Dactylis glomerata</i> , meadow foxtail <i>Alopecurus pratensis</i> , perennial ryegrass <i>Lolium perenne</i> , Poa sp., Timothy <i>Phleum pratense</i> and Yorkshire fog <i>Holcus lanatus</i> present. Other species present include creeping buttercup <i>Ranunculus repens</i> , meadow buttercup <i>Ranunculus acris</i> and thistle <i>Cirsium</i> sp.	The grassland has been left unmanaged, with a long sward length, as shown in the photo. This habitat is common and widespread in the UK, and comprises common and widespread grasses and forbs. The neutral grassland within the site is unmanaged and therefore offers more potential ecological associations than a uniformly managed example of this habitat. It is therefore considered to be of local ecological importance .	



<p>Ruderal vegetation</p>	<p>There are three small patches of ruderal vegetation, one in the southwest corner of the site and two in the northeast of the site. Species present include bramble <i>Rubus fruticosus</i> agg., common nettle <i>Urtica dioica</i>, curled dock <i>Rumex crispus</i>, teasel <i>Dipsacus fullonum</i>, thistle and willowherb <i>Chamaenerion angustifolium</i>.</p>	<p>This habitat is very common in the wider landscape and comprises common and widespread species as is therefore considered to be of negligible ecological importance.</p>	
<p>Native hedgerows</p>	<p>There are four native hedgerows within the site boundary, as shown on plan 12109/P03. Species present include blackthorn <i>Prunus spinosa</i>, dogwood <i>Cornus sanguinea</i>, hawthorn and hornbeam <i>Carpinus betulus</i>.</p>	<p>The hedgerows are considered to meet the definition of Habitats of Principle Importance (HoPI), under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006⁵. As HoPIs, these hedgerows are considered to be of local ecological importance.</p>	

⁵ UK priority habitats and species are those subject to conservation action and referred to as Species of Principal Importance (SoPIs) or Habitats of Principal Importance (HoPIs). They are listed at Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act states that local planning authorities must have regard for the conservation of SoPIs and HoPIs



Protected and Notable Species

- 2.5. Habitats within the site may offer opportunities for the following species groups. Species which are considered likely absent from the site based on professional judgement, following consideration of the habitats within the site, signs of species presence at the time of survey and data search records, are not discussed. The potential for protected and priority species to be present within the site is described below.

Amphibians

- 2.6. The data search returned four records of amphibians within 2 km of the site, the nearest of which was that of a smooth newt *Lissotriton vulgaris*, located approximately 1.2 km west of the site boundary in 2021. No European Protected Species (EPS) licences were returned for great crested newts (GCN) *Triturus cristatus* within 2 km of the site.
- 2.7. The data search returned three waterbodies within 250 m of the site, (generally considered to be within the typical migratory range of GCN from a waterbody⁶), located approximately 200 m southeast of the site and 50 m southwest of the site. The terrestrial habitats on site, specifically the neutral grassland, ruderal vegetation and native hedgerows, offer some suitable terrestrial habitat for GCN and other common amphibians. Access to these waterbodies to conduct a habitat suitability index assessment (HSI), and environmental DNA surveys (eDNA) has been requested, a resident - the landowner on which the southeastern waterbody is located, confirmed that this feature is no longer present. Access for the remaining southwestern waterbodies has but yet been received.
- 2.8. Due to the lack of suitable breeding habitat on-site, only low numbers of GCN, if present in neighbouring ponds, would be expected to be present during their terrestrial phase. As such a population of amphibians on site would be considered to be of **negligible ecological importance**.

Bats

- 2.9. The data search returned three records of bats within 2 km of the site, the nearest of which was that of a lesser horseshoe *Rhinolophus hipposideros* bat, returned approximately 0.6 km east of the site boundary in 2019.
- 2.10. In addition, ten granted EPS licences for bats were returned within a 4 km radius of the site. The closest licence was located approximately 0.6 km northeast of the site (case reference: 2019-39761-EPS-MIT) and was granted for the destruction of a resting place of lesser horseshoe bats.

Day-time Bat Walkover

- 2.11. The site offers suitable habitat for foraging and commuting bats, in particular the neutral grassland, broadleaved trees and native hedgerows, suitably linked to habitat in the wider landscape including trees, grassland and waterbodies. Overall, the site is considered to have moderate suitability to support foraging and commuting bats (see **Table A2.1** in **Appendix**

⁶ Cresswell, W. & Whitworth, R., 2004. An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus*: English Nature Research Report 576, Peterborough: English Nature.



2). Notably, due to the site's size however, and limited extent of suitable foraging habitat, bats are unlikely to be reliant on the site alone as a foraging resource.

- 2.12. Given the size and extent of the habitats present on site, the population of bats present is expected to be of no more than **local ecological importance** and will be informed by further bat activity surveys carried out in the optimal survey period (April – October).

Birds

- 2.13. The data search returned 136 records of protected and notable bird species within 2 km of the site. Species of relevance to the site include house sparrow *Passer domesticus*, swift *Apus apus* and wren *Troglodytes troglodytes*. Habitats within the site, namely the neutral grassland, broadleaved trees and native hedgerows, offer habitat suitable to support common and widespread nesting birds.
- 2.14. It is considered the assemblage of birds that may use the site for foraging and breeding is of **negligible ecological importance**, nevertheless consideration for nesting birds to avoid a breach of legislation is discussed in **Section 3** of this report.

Eurasian Badger

- 2.15. No records of Eurasian badger *Meles meles* within 2 km of the site boundary were returned by the data search.
- 2.16. No setts were identified on site and no signs of badger were observed on site during the Phase I habitat survey. However, the grassland, ruderal vegetation and native hedgerows on site offer suitable foraging habitat for badgers and are suitably connected to the wider landscape that a local badger population could access and use the site, if present. A population of badgers on-site, if present, would be considered to be of **negligible ecological importance**.

Dormice

- 2.17. No records of hazel dormice *Muscardinus avellanarius*, were returned within a 2 km radius of the site.
- 2.18. The hedgerows on site, namely the species rich hedgerow with trees that bounds the east of the site, offer suitable habitat for hazel dormice and are suitably connected to similar habitats in the immediate surrounding area that dormice could use.
- 2.19. Given the suitable habitats on site are limited in their overall extent, with similar habitat in the wider area, the habitats on site are likely to form part of a larger range supporting a dormice assemblage, if present, which would be expected to be of at least **local ecological importance**.

Reptiles

- 2.20. The data search returned one record of slow worm *Anguis fragilis*, approximately 1.4 km east of the site in 2014.



- 2.21. Habitats within the site, namely the neutral grassland, ruderal vegetation and native hedgerows, offer habitat suitable to support a low number of common reptiles such as slow worm and common lizard *Zootoca vivipara*. There is a small spoil heap in the centre of the site and debris / building materials, shown in **Photograph 2.1** below, which offers suitable refugia for reptiles.
- 2.22. Due to the abundance of similar habitat within the surrounding area, it is unlikely that any assemblage would be wholly reliant on the habitats within the site. It is therefore considered that any assemblage utilising the site would be part of a wider population and as such would be considered to be of no more than **local ecological importance**.



Photograph 2.1: Spoil heap within the site

West European Hedgehog

- 2.23. The data search returned records of west European hedgehog *Erinaceus europaeus*, the closest of which was that of a hedgehog recorded approximately 40 m north of the site in 2021.
- 2.24. The native hedgerows, ruderal vegetation and neutral grassland habitat offer foraging opportunities for hedgehogs and thus the site may support small numbers of foraging and commuting hedgehogs. Hedgehog is listed as a Species of Principal Importance (SoPI) within Section 41 of the NERC Act 2006, with a declining population in the UK⁷ and as such a population of hedgehogs on site would be considered to be of up to **local ecological importance**.

⁷ Wilson & Wembridge. 2018. The State of Britain's Hedgehogs [Online] Available at: https://www.hedgehogstreet.org/wpcontent/uploads/2018/02/SoBH-2018_final.pdf



Section 3: Ecological Impacts, Mitigation, and Enhancement

Proposed Development

- 3.1. The proposals are for the construction of three new dwellings, with associated carparking and landscaping including planting of native hedgerows and trees, grassland and the creation of new swales. (see the landscape proposals in **Appendix 3**). The potential impacts at this site as a result of the proposed development are set out below, with reference to relevant legislation and planning policy, which is summarised in **Appendix 1**.

Potential Impacts and Requirement for Mitigation

- 3.2. Both the Countryside and Rights of Way (CROW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006 give the importance of conserving biodiversity a statutory basis, requiring government departments (which includes Local Planning Authorities) to have regard for biodiversity in carrying out their obligations (which includes determination of planning applications) and to take positive steps to further the conservation of listed species and habitats. These articles of legislation require Cotswold District Council to take measures to protect species or habitats from the adverse effects of development, where appropriate, by using planning conditions or obligations. Planning authorities should refuse permission where harm to the species or their habitats would result, unless the need for, and benefits of, the development clearly outweigh the harm.
- 3.3. The National Planning Policy Framework (NPPF) 2023 requires that the planning system should contribute to and enhance the natural and local environment, minimising impacts on biodiversity and providing net gains, as well as local planning policy, a summary of which is provided in **Appendix 1**.
- 3.4. Regarding Biodiversity Net Gain, the site is currently exempt from using the small sites metric until it becomes mandatory in April 2024. This is due to the proposals comprising residential development where the number of dwellings is between 1 and 9 on a site of an area 1 hectare or less.

Designated Sites

- 3.5. No direct impacts on either of the two designated sites, identified by the data search, are considered likely to arise as a result of the proposed development due to the substantial distance between them and the site and the nature of the proposals.
- 3.6. The site falls within the "outer" zone of influence for the North Meadow and Clattinger Farm SAC Interim Recreation Mitigation Strategy⁸ (which is set at 4.2 – 9.4 km from the boundary of the SAC) and is considered a "relevant development" which would be expected to provide

⁸ [North Meadow SAC Mitigation Strategy \(cotswold.gov.uk\)](https://www.cotswold.gov.uk/north-meadow-sac-mitigation-strategy)



mitigation measures under this strategy due to a net increase in overnight accommodation and potential visitors to the SAC.

- 3.7. This strategy was produced to mitigate the recreational pressures negatively impacting the North Meadow component of the SAC, and does not pertain to the Clattinger Farm component.
- 3.8. Small residential developments within the outer zone are expected to contribute financially to the North Meadow's increased wardening/rangers; monitoring; signage etc. (often termed SAMMs – Strategic Access Management and Monitoring).
- 3.9. This financial contribution, in line with Table 3. in the North Meadow and Clattinger Farm SAC Interim Recreation Mitigation Strategy is set at £323 per unit.

Habitats and Flora

- 3.10. Neutral grassland habitat, considered to be of local ecological importance, will be lost as a result of the proposed development. While the site is exempt from delivering a demonstrable biodiversity net gain, the loss of this habitat will be compensated for through the planting of native hedgerows and trees and the creation grassland, and sustainable urban drainage features (SUDs). Other features of ecological importance, notably the trees and native hedgerows, are to be retained and buffered as part of the proposed development, with three small trees within G4 (refer to Tyler Grange Arboricultural Impact Assessment 1209/R02f) being translocated on site to enable the proposed development.
- 3.11. Other habitats within the site which are to be lost as a result of the proposed development, specifically the areas of hardstanding and ruderal vegetation, which are of negligible ecological importance and require no specific mitigation for their loss.

Protected and Notable Species

Amphibians

- 3.12. The neutral grassland, ruderal vegetation and native hedgerows within the site offer habitat to support a low number of common amphibians, including common toad *Bufo bufo* (listed as a Species of Principal Importance⁹ (SoPI) in Section 41 of the NERC Act 2006 and therefore a material consideration in planning) and GCN.
- 3.13. The remaining waterbodies to the southwest of the site have not been assessed for its suitability to support breeding GCN as no return correspondence to the access request made has been received. Consequently, a precautionary approach to GCN and amphibian presence will be taken, whereby a precautionary working method statement (PWMS) will be produced and followed for any clearance of vegetation on site.
- 3.14. This will include reasonable avoidance measures to be implemented during site clearance i.e. clearance conducted outside of the hibernation season (October/November to March/April)

⁹ UK priority species are those subject to conservation action and are referred to as Species of Principal Importance (SoPIs). They are listed at Section 41 of the NERC Act 2006. Section 40 of the NERC Act states that local planning authorities must have regard for the conservation of SoPIs



to avoid disturbing hibernating individuals. Clearance would need to be preceded by a pre-works check of suitable habitat and phased clearance under a watching brief and fingertip searches where considered necessary, conducted by a suitably qualified Ecologist.

- 3.15. The proposed development creates an opportunity to incorporate site based enhancements for GCN and other amphibians, this could be achieved through the creation of hibernacula such as log piles, and creation and enhancement of terrestrial habitat through planting of native hedgerows, and the creation of SUDs features. The management of these features will be controlled via an appropriately worded planning condition to secure a Landscape Ecological Management Plan (LEMP).

Bats

- 3.16. As European protected species, all UK bats receive legal protection in England under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). In addition, planning policy set out in the National Planning Policy Framework (December 2023) requires planning authorities to consider bats when determining planning applications and to ensure that development proposals do not lead to an adverse effect on the conservation status of bat or other protected species.
- 3.17. The site offers habitat suitable for foraging and commuting bats, in particular the neutral grassland, broadleaved trees and native hedgerows. The highest value features on site (hedgerows) are to be retained, buffered and enhanced as part of the proposed development.
- 3.18. Given the size and extent of the habitats present on site, the population of bats present is expected to be of **Local** ecological importance and the assessment of the population of bats present, and required mitigation measures, will be informed by further bat activity surveys carried out in the optimal survey period (April – October).
- 3.19. Notwithstanding this, a lighting scheme should be designed (in accordance with BCT guidance note 08/23¹⁰) to maintain dark, unlit areas post-development by avoiding the illumination of potential bat foraging and commuting habitats within the site, particularly the retained and planted hedgerows and trees that are not already subject to illumination.
- 3.20. The installation of bat boxes on any retained trees or erected structures, would enhance the site by offering roosting opportunities bats. Enhancements for biodiversity are in line with Policy EN9 of the Cotswolds Local Plan.

Birds

- 3.21. All breeding birds, their nests, eggs and young are protected under the WCA 1981 (as amended), which makes it illegal to knowingly damage or destroy a nest site while it is in use or being built. Species listed under Schedule 1 of the WCA 1981 are afforded additional protection from disturbance while breeding.
- 3.22. Habitats within the site, including the neutral grassland that is to be removed as part of the proposed development, have potential to support nesting birds. All active nests are protected

¹⁰ Bat Conservation Trust 'Bats and Artificial Lighting at Night' ILP Guidance Note



by the WCA; therefore, vegetation clearance should be undertaken outside of the nesting bird season (typically March–August inclusive, however, this time frame is not defined in law and some species of birds will nest all year round).

- 3.23. If this is not possible, an Ecological Clerk of Works (ECoW) should first undertake a check of the area to be cleared for signs of active nests. If found, they will set-up an appropriate buffer (minimum 5 m) where no works can be undertaken until the nest becomes inactive or the young birds have fledged. These measures could be incorporated into a CEMP.
- 3.24. Habitat creation such as native hedgerow and tree planting will increase nesting opportunities on site. Additionally, bird boxes (such as the Vivara Pro Seville Woodstone nest box and the Vivara Pro Barcelona Woodstone nest box) could be incorporated within the scheme (expected to be secured via a suitably worded planning condition and controlled through a LEMP, in line with Policy EN9 of the Cotswold Local Plan).
- 3.25. Providing the above measures are followed no adverse impacts on birds would be anticipated as a result of the development.

Eurasian Badger

- 3.26. The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status. As well as protecting the animal itself, the 1992 Act also make the intentional or reckless destruction, damage or obstruction of a badger sett an offence.
- 3.27. No badger setts or signs of badger were identified during the Phase I survey. However, given the presence of suitable habitat on site for foraging, badgers could access and use the site if present in the local area.
- 3.28. Due to the presence of foraging habitat on site to support badgers, it would be recommended the following precautionary methods of works be undertaken, and controlled through the production of a CEMP:
 - A pre-commencement check for badgers is undertaken at a maximum of three months prior to work commencing on site;
 - In the unlikely event recent signs of badger activity, primarily excavation of setts are recorded on site prior to construction activities, further advice from an ecologist should be sought;
 - To ensure badgers are protected from accidental harm during construction, exposed trenches will be covered or have an inclined plank in them overnight, to offer a means of escape, should badgers be commuting across the site;
 - Store any chemicals in a secure, inaccessible area overnight;
 - Cap any temporarily exposed pipes overnight to prevent badgers from accessing them; and
 - Ensure any mounds of freshly dug soil, woodchip or other vegetation are flatted prior to works finishing overnight.



Reptiles

- 3.29. All reptiles are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally, or recklessly, kill or injure a reptile.
- 3.30. Habitats within the site, namely the neutral grassland, ruderal vegetation and native hedgerows, offer foraging opportunities and refugia for common reptiles. As suitable areas of vegetation require removal to facilitate the development, specifically the neutral grassland, a PWMS is recommended on the assumption that small numbers of common reptile species, such as slow worm, may be present.
- 3.31. This would involve phased vegetation clearance under the supervision of a competent ECoW. The first phase would be careful strimming vegetation to approximately 150 mm above ground level. This would then be left for 24 hours to encourage any reptiles present to move away from the works area. The second phase would comprise a fingertip search followed by strimming to ground level and rendered as bare ground. The ECoW would translocate any reptiles discovered to a suitable location outside of the works area.
- 3.32. Removal of suitable hibernacula, specifically the spoil heap within the site, should be avoided during the colder months (October/November to March/April), where possible, when reptiles could be hibernating.
- 3.33. The proposed development creates an opportunity to incorporate site based enhancements for reptiles, this could be achieved through the creation of hibernacula such as log piles, and creation and enhancement of terrestrial habitat through planting of native hedgerows, and the creation of SUDs features

West European Hedgehog

- 3.34. The grassland habitats, ruderal vegetation and native hedgerows offer suitable shelter and foraging habitat for hedgehogs.
- 3.35. Hedgehog is listed as a Species of Principal Importance (SoPI) within Section 41 of the NERC Act 2006, with a declining population in the UK¹¹. Consequently, they are a material consideration within the planning process, as Section 40 of the NERC Act 2006 places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. To demonstrate due care for this SoPI, basic mitigation measures will be adhered to during the construction and operational phases, namely:
- Any proposed fencing will have a 150 mm x 150 mm opening at its base level to maintain connectivity for hedgehogs which may be using the site;
 - Ensure any mounds of freshly dug soil, woodchip or other vegetation are flattened prior to works finishing overnight to prevent hedgehogs sheltering within these features;
 - Any hedgehogs encountered on site should be allowed to move off of their own accord.

¹¹ Wilson & Wembridge. 2018. The State of Britain's Hedgehogs [Online] Available at: https://www.hedgehogstreet.org/wpcontent/uploads/2018/02/SoBH-2018_final.pdf



- If this is not feasible, they should be moved via a heavy-duty gloved hand to a safe area on or off site, where no construction activity is occurring; and
- In the event that any vegetation clearance is required within hedgehog hibernation season (generally considered to be October to March, inclusive) it is recommended that a pre-start check to be carried out to avoid killing or injuring hibernating hedgehogs during the construction phase.

3.36. Providing the above mitigation measures are adhered to, it is considered that the development will not trigger legislation surrounding protected species.

Dormice

3.37. Suitable habitats for dormice within the site are set to be retained and buffered under the current proposals. Due to the limited area of suitable habitat for dormice on site, it is considered that a PWMS statement for dormice in relation to any areas of discrete hedgerow loss is appropriate to mitigate potential harm from de-vegetation works.

3.38. This would be produced and secured via an appropriately worded planning condition, and carried out under direct supervision of a suitably qualified licensed ECoW.

3.39. The proposed development provides opportunities to enhance the site for dormice through increasing the amount of native hedgerow planting on site, and securing the appropriate management of retained hedgerows through a LEMP.



Section 4: Conclusions

- 4.1. With the implementation of the mitigation and enhancements described in **Section 3**, it is considered that the proposed development could conform with relevant legislation, national planning policy and local planning policy as detailed in **Appendix 1**.
- 4.2. No direct impacts on statutory or non-statutory designated sites are considered likely as a result of the proposed development. The North Meadow and Clattinger Farm SAC interim recreation strategy outlines the mitigation requirements (financial contribution at £323 per unit) required to contribute towards the alleviation and management of recreational pressures on the North Meadow component of the SAC.
- 4.3. The population of bats using the site is expected to be of **Local** ecological importance, with assessment of its geographic importance and mitigation informed by bat activity surveys undertaken within the optimal survey season (April to October), with an addendum report of survey findings and mitigation measures submitted during determination.
- 4.4. As the site could support a small population of dormice, common reptiles, and amphibians, including GCN it is recommended that precautionary method of works be implemented during the construction phase for these species, as detailed in **Section 3**.
- 4.5. The above measures can be secured via an appropriately worded planning condition for the implementation of a CEMP, a LEMP , and a sensitive lighting strategy to ensure the proposed mitigation and enhancements are secured.



Appendix 1: Legislation and Planning Policy

Legislation

- A1.1. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:
- The Environment Act 2021;
 - The Wildlife and Countryside Act (WCA) 1981 (as amended);
 - The Conservation of Habitats and Species Regulations 2017 (as amended);
 - The Countryside and Rights of Way (CROW) Act 2000;
 - The Natural Environment and Rural Communities Act (NERC) 2006;
 - The Hedgerows Regulations 1997; and
 - The Protection of Badgers Act 1992.
- 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 2017 (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.

Environment Act 2021: Upcoming Town and Country Planning Act

- A1.5. The Environment Act gained Royal Assent in November 2022. Whilst the premise of Biodiversity Net Gain (BNG) has been around prior to this, the Assent of the Act sets the Framework for future legislation to be changed. This will be in the form of the Town and Country Planning Act (TaCPA), specifically Schedule 14 of the TaCPA, which will make Biodiversity Net Gain a condition of planning (not a planning condition). The target 'gain' is currently set at 10% but the Secretary of State has the ability to change this.



A1.6. The timescales for changes to the wording of the TaCPA are that it will be legally mandated and enforceable from January 2024.

National Planning Policy

National Planning Policy Framework (NPPF), December 2023

A1.7. The National Planning Policy Framework (NPPF) was updated in December 2023 and sets out the Government's planning policies for England and how these should be applied. It replaces the first National Planning Policy Framework published in March 2012.

A1.8. Paragraph 11 states that:

"Plans and decisions should apply a presumption in favour of sustainable development."

A1.9. Section 11 of the NPPF, paragraph 124, sub-section b states that planning policies and decisions should:

b) *"recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production"*

A1.10. Section 15 of the NPPF (paragraphs 180 to 194) considers the conservation and enhancement of the natural environment.

A1.11. Paragraph 180 states that planning and decisions should contribute to and enhance the natural and local environment by:

- a) *"protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- b) *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- c) *maintaining the character of the undeveloped coast, while improving public access to it where appropriate; and*
- d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures"*

A1.12. Paragraph 181 states that plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

A1.13. Paragraph 185 states that in order to protect and enhance biodiversity and geodiversity, plans should:

a) *"Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated*



sites of importance for biodiversity¹²; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation¹³; and

- b) *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”*

A1.14. When determining planning applications, Paragraph 186 states that local planning authorities should apply the following principles:

- a) *“if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons¹⁴ and a suitable compensation strategy exists; and*
- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”*

A1.15. As stated in paragraph 187 the following should be given the same protection as habitats sites¹⁵:

- a) *“potential Special Protection Areas and possible Special Areas of Conservation;*
- b) *listed or proposed Ramsar sites¹⁶; and*
- c) *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”*

A1.16. Paragraph 188 states that the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in

¹² Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

¹³ Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

¹⁴ For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.

¹⁵ The policies referred to are those in this Framework (rather than those in development plans) relating to: habitats sites (and those sites listed in paragraph 181) and/or designated as Sites of Special Scientific Interest; land designated as Green Belt, Local Green Space, an Area of Outstanding Natural Beauty, a National Park (or within the Broads Authority) or defined as Heritage Coast; irreplaceable habitats; designated heritage assets (and other heritage assets of archaeological interest referred to in footnote 68); and areas at risk of flooding or coastal change.

¹⁶ Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.



combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Local Planning Policy

Cotswolds Local Plan 2011 – 2031¹⁷ (adopted 2018)

A1.17. Policies relating to ecology and nature conservation can be found in Chapter 10: Built, Natural and Historic Environment, which are summarised as follows:

A1.18. Policy EN1 Built, Natural and Historic Environment

“New development will, where appropriate, promote the protection, conservation and enhancement of the historic and natural environment by:

- a) ensuring the protection and enhancement of existing natural and historic environmental assets and their settings in proportion with the significance of the asset;*
- b) contributing to the provision and enhancement of multi-functional green infrastructure;*
- c) addressing climate change, habitat loss and fragmentation through creating new habitats and the better management of existing habitats;*
- d) seeking to improve air, soil and water quality where feasible; and*
- e) ensuring design standards that complement the character of the area and the sustainable use of the development.”*

A1.19. Policy EN7 Trees, Hedgerows and Woodland

“1. Where such natural assets are likely to be affected, development will not be permitted that fails to conserve and enhance:

- a) trees of high landscape, amenity, ecological or historical value;*
- b) veteran trees;*
- c) hedgerows of high landscape, amenity, ecological or historical value; and/or*
- d) woodland of high landscape, amenity, ecological or historical value.*

2. Where trees, woodland or hedgerows are proposed to be removed as part of development, compensatory planting will be required.

¹⁷ Cotswold District Local Plan 2011 – 2031 (adopted 2018) [Online] Available at: <https://www.cotswold.gov.uk/media/k2kjqvq3b/cotswold-district-local-plan-2011-2031-adopted-3-august-2018-web-version.pdf> [Accessed 10/01/2024]



3. Development proposals affected by (2) above should, where appropriate, have regard to the potential for new or extended woodland to assist in carbon storage and to be a potential local source of biomass or biofuel.”

A1.20. Policy EN8 Biodiversity and Geodiversity: Features, Habitats and Species

“1. Development will be permitted that conserves and enhances biodiversity and geodiversity, providing net gains where possible.

2. Proposals that would result in significant habitat fragmentation and loss of ecological connectivity will not be permitted.

3. Proposals that reverse habitat fragmentation and promote creation, restoration and beneficial management of ecological networks, habitats and features will be permitted, particularly in areas subject to landscape-scale biodiversity initiatives. Developer contributions may be sought in this regard.

4. Proposals that would result in the loss or deterioration of irreplaceable habitats and resources, or which are likely to have an adverse effect on internationally protected species, will not be permitted.

5. Development with a detrimental impact on other protected species and species and habitats “of principal importance for the purpose of conserving biodiversity”(42) will not be permitted unless adequate provision can be made to ensure the conservation of the species or habitat.”

A1.21. Policy EN9 Biodiversity and Geodiversity: Designated Sites

“International Sites

1. Internationally designated wildlife sites (including proposed sites and sites acquired for compensatory measures) will be safeguarded from development that could cause a significant effect that would adversely affect their integrity.

National Sites

2. Development that is likely to have an adverse effect upon a nationally designated nature conservation site will not be permitted unless the benefits of development at the site clearly outweigh the impact development is likely to have both on (a) its special features and (b) the national network of Sites of Special Scientific Interest. Where a proposal is permitted appropriate mitigation or compensation will be required.

Local Sites

3. Development proposals that are likely to cause significant harm to locally identified wildlife sites and Local Nature Reserves, where such harm cannot be satisfactorily mitigated or adequately compensated for, will not be permitted unless it can be demonstrated that the benefits of the proposal clearly outweigh the impact of the development on the nature conservation value of the site.

4. Development should maintain Local Geological Sites for their scientific and educational value. Development that significantly adversely affects local geological features will be permitted only



where comparable sites can be identified or created elsewhere, or the impact can be adequately mitigated through other measures.”



Appendix 2: Methodology

Data Search

A2.1. A desk-based study was conducted whereby records of designated sites and records of protected and priority species were purchased and interrogated for the site and the surrounding landscape. The aim of the data search is to collate existing ecological records for the site and adjacent areas. Obtaining existing records is an important part of the assessment process as it provides information on issues that may not be apparent during a single survey, which by its nature provides only a 'snapshot' of the ecology of a given site.

A2.2. The following resources were consulted/contacted:

- Multi-Agency Geographic Information for the countryside (MAGIC) website¹⁸;
- Gloucestershire Centre for Environmental Records (GCER)¹⁹; (Data ordered on 29th June 2023 and received on 5th July 2023);
- Cotswold District Council website²⁰;
- Joint Nature Conservation Committee (JNCC) website²¹;
- Ordnance Survey mapping; and
- Google Maps, including aerial photography.

A2.3. The following areas of search around the boundary of the site boundary were applied:

- 4 km for European Protected Species licence records
- 2 km for protected and priority species, national statutory designated and non-statutory sites; and
- 10 km for European statutory sites.

'Extended' Phase I Habitat Survey and UKHabs

A2.4. An 'extended' phase I survey was carried out on 12th July 2023 by Harry Du Bois-Jones BSc Hons, a suitably experienced ecologist and qualifying member of CIEEM. The methods used during the walkover survey broadly followed methods used in an 'extended' Phase I habitat survey²² and entailed recording the main plant species and classifying and mapping habitat types with reference to the Habitat Definitions provided by the UK Habitat Classification Working Group²³.

¹⁸ <https://magic.defra.gov.uk/> [Accessed 10/01/2024]

¹⁹ Gloucestershire Centre for Environmental Records <https://www.gcer.co.uk/> [Accessed: 05/07/2023]

²⁰ Cotswold District Council (2024) <https://www.cotswold.gov.uk/> [Accessed 10/01/2024] <https://www.redbridge.gov.uk/planning-and-building/planning-policy/>

²¹ <http://jncc.defra.gov.uk/ProtectedSites/> [Accessed 10/01/2024]

²² Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC, Peterborough.

²³ UKHab Ltd. (2023). UK Habitat Classification Version 2.0 (at <https://www.ukhab.org>)



A2.5. Additionally, the habitats identified were evaluated for their potential to support legally protected and notable fauna species. Where access allowed, adjacent habitats were also considered in order to assess the site within the wider landscape and to provide information with which to assess possible impacts within the context of the site boundary.

Day-time Bat Walkover

A2.6. A day-time bat walkover (DBW) was undertaken on all habitats within the site boundary. The assessment was undertaken on 12th July 2023 by Harry Du Bois-Jones, alongside the phase I habitat survey, PBRA and GLTA. The DBW assessed habitats on-site for the likelihood to be used by foraging and commuting bats as detailed in **Table A2.1** below. This combined with desk study records of local bats and bat roosts, and potential for roosting bats on-site, is used to determine the suitability of the site for bat activity.

Table A2.1: Flight Path and Foraging Habitats Assessment Criteria, adapted from Collins, 2023²⁴

Suitability	Description of Habitats
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.

²⁴ Adapted from: Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6



Suitability	Description of Habitats
	Site is close to and connected to known roosts.

Evaluation

- A2.7. The evaluation of habitats and species is defined in accordance with published guidance²⁵. The scale of importance of each ecological feature is assigned within a defined geographical context, namely international and European, national, regional, county, and local. Below these are features considered to be of negligible importance.
- A2.8. Consideration will also be given to legally protected or controlled species which are ‘important features’ in the context of this assessment, for which mitigation measures are required to ensure legal compliance, regardless of their geographic scale of importance. Thus, it is possible for a feature of negligible ecological importance to be legally protected and hence require mitigation.
- A2.9. Evaluation is based on various characteristics that can be used to identify ecological features likely to be important in terms of biodiversity. These include site designations (such as Sites of Species Scientific Interest (SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological feature. In terms of the latter, quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

Impact Assessment

- A2.10. The assessment of impacts identifies impacts and their effects as a result of the proposed development on important ecological features. This includes consideration of impacts at all relevant stages of the development, including construction and operation/occupation [include decommissioning and restoration, if relevant – it won’t be for most projects]. The assessment includes reference to legislation and policy, and supplementary planning guidance where relevant.

Application of Mitigation Hierarchy

- A2.11. Application of the mitigation hierarchy is fundamental to the ecological impact assessment process. This requires consideration of the following measures, in order of priority, for all potential impacts, to determine the most appropriate mitigation, compensation and enhancement strategy for the project. This is taken into account within **Section 3** of this report and set out below:
- Avoidance – measures to avoid harm to ecological features (set out in **Section 3**);
 - Mitigation – measures to avoid or minimise potential impacts as part of the design or guaranteed by planning controls;

²⁵ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.



- Compensation – measures required to offset significant residual negative effects following avoidance and mitigation; and
- Enhancement – measures over and above requirements for avoidance, mitigation and compensation to provide biodiversity net gain.



Appendix 3: Site Proposals



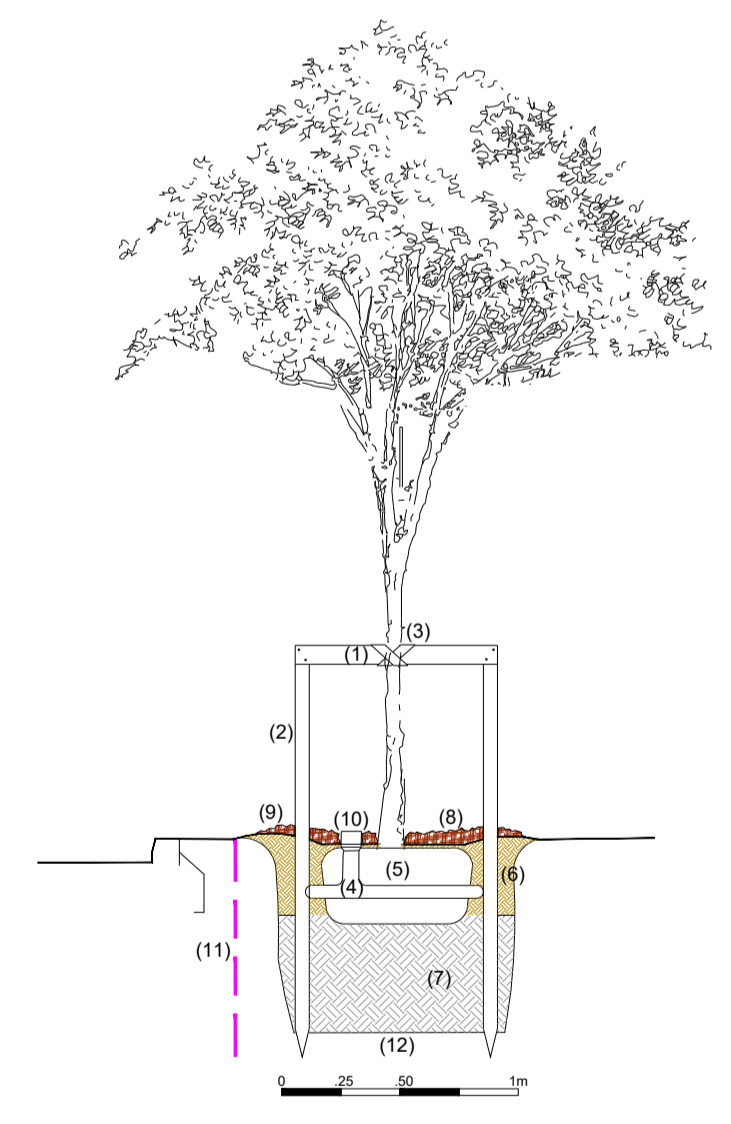


Planting Schedule

Trees		Species	Girth	Height	Specification
4	Acer campestre	6-8cm	250-300cm	B :2x :Light Standard :Clear Stem 150-175 :4 brks	
2	Alnus glutinosa	6-8cm	250-300cm	B :2x :Light Standard :Clear Stem 150-175 :4 brks	
1	Carpinus betulus	6-8cm	250-300cm	B :2x :Light Standard :Clear Stem 150-175 :4 brks	
146	Carpinus betulus	60-80cm	BR :Transplant		
4	Ilex aquifolium	150-175cm	leader with laterals		
2	Malus domestica 'Ansell'	175-200cm	Half Standard :M111 rootstock :Clear Stem 100-125cm :3 brks		
1	Malus domestica 'Arlingham Schoolboys'	175-200cm	Half Standard :M111 rootstock :Clear Stem 100-125cm :3 brks		
1	Malus domestica 'Ben Lans'	175-200cm	Half Standard :M111 rootstock :Clear Stem 100-125cm :3 brks		
2	Malus domestica 'Box Kernel'	175-200cm	Half Standard :M111 rootstock :Clear Stem 100-125cm :3 brks		
1	Malus domestica 'Chaxhill Red'	175-200cm	Half Standard :M111 rootstock :Clear Stem 100-125cm :3 brks		
1	Malus domestica 'Christmas Pippin'	8-10cm	RB :2x :Light Standard :3/5 brks		
1	Malus domestica 'Corse Hill'	175-200cm	Half Standard :M111 rootstock :Clear Stem 100-125cm :3 brks		
1	Malus domestica 'Elmore Pippin'	175-200cm	Half Standard :M111 rootstock :Clear Stem 100-125cm :3 brks		
1	Malus domestica 'Fletcher'	175-200cm	Half Standard :M111 rootstock :Clear Stem 100-125cm :3 brks		
1	Malus sylvestris	12-14cm	350-425cm RB :3x :Heavy Standard :Clear Stem 175-200 :3/5 brks		
2	Malus sylvestris	10-12cm	300-350cm C :Selected Standard :Clear Stem 175-200 :4 brks		
5	Prunus avium	6-8cm	250-300cm B :2x :Light Standard :Clear Stem 150-175 :4 brks		
1	Prunus domestica 'Dennistons Superb'	8-10cm	175-200cm RB :2x :Light Standard :3/5 brks		
3	Prunus padus	6-8cm	250-300cm B :2x :Light Standard :Clear Stem 150-175 :4 brks		
2	Quercus robur	6-8cm	250-300cm B :2x :Light Standard :Clear Stem 150-175 :4 brks		
1	Quercus robur	18-20cm	450-500cm RB :3x :Extra Heavy Standard :Clear Stem min. 200		
1	Salix alba	6-8cm	250-300cm B :2x :Light Standard :Clear Stem 150-175 :4 brks		
2	Sorbus aucuparia 'Streetwise'	12-14cm	350-425cm RB :3x :Heavy Standard :Clear Stem 175-200 :5 brks		
4	Tilia cordata	12-14cm	350-425cm RB :3x :Heavy Standard :Clear Stem 175-200 :3/5 brks		
1	Ulmus 'New Horizon'	6-8cm	250-300cm B :2x :Light Standard :Clear Stem 150-175 :4 brks		

Shrubs

Number	Species	Height	Specification	Density
223	Acer campestre	40-60cm	BR :1+1	0.3Ctr Double Staggered at 0.5m offset
665	Crataegus monogyna	40-60cm	BR :1+1	0.3Ctr Double Staggered at 0.5m offset
149	Euonymus europaeus	40-60cm	BR :1+1	0.3Ctr Double Staggered at 0.5m offset
149	Malus sylvestris	40-60cm	BR :1+1	0.3Ctr Double Staggered at 0.5m offset
149	Rhamnus cathartica	40-60cm	BR :1+1	0.3Ctr Double Staggered at 0.5m offset
149	Sambucus nigra	40-60cm	BR :1+1	0.3Ctr Double Staggered at 0.5m offset



- STANDARD TREE - PLANTING DETAIL**
SCALE - 1:20
- 100x38mm section, treated softwood timber cross spar fixed to posts with galvanised nails.
 - Pressure impregnated turned timber stakes (min 75mm diameter)
 - Rubber strap and rubber spacer collar - strap overlapped and fixed to timber cross spar with galvanised clout headed nails
 - Plastic perforated pipe - Greenleaf RootRain Metro or similar
 - Root ball
 - 300mm depth of topsoil in accordance with BS3882 with ameliorators in accordance with soil analysis
 - 500mm suitable loosened subsoil
 - 75mm amenity grade bark mulch with 100-120mm diameter clear area adjacent to tree bole
 - Raised edge to tree pit to retain mulch and precipitation
 - Watering tube
 - Root barrier located to protect services and hard surfaces as required
 - 1000x1000x800mm tree pit with the sides and bottom of pit to be broken up by forking prior to planting

Legend

- Application Boundary
- Ownership Boundary
- Retained Tree
- Retained Hedgerow
- Proposed Tree
- Proposed Native Hedgerow
- Proposed Species Rich Short Grass
- Proposed Meadow Grass
- Proposed Meadow Mix or similar
- Proposed Pond/Rain Garden
- Proposed Grid Stabilized Cotswold Chippings
- Proposed Porcelain Flag Paving
- Proposed Grid Stabilized Cotswold Chippings
- Cobbles to Threshold
- Compacted Gravel
- Proposed Dry Stone Walls
- Timber Post and Rail Fence

Client: Stanmore House

Title: Detailed Hard and Soft Landscape Plan

Planning:

Project	2159 DLA -	Level	DR	Client	DL 002 P01
Job Number	2159	Scale	1:200	Sheet	A1

DAVIES LANDSCAPE ARCHITECTS

Office 10, 1-2 King Street, Bristol, Gloucestershire, GL5 3BS
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Plans:

Plan 1: Habitat Features and Preliminary Bat Roost Assessment Plan
12109/P03





Legend

 Redline Boundary

Habitat Features

 Other neutral grassland


 Hardstanding/bare ground

 Ruderal

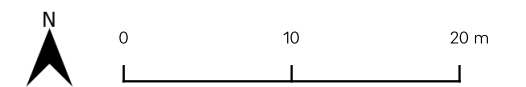
 Group of trees

 Species poor hedgerow

 Species poor hedgerow with trees

 Species rich hedgerow with trees

 Individual trees



Project	Stanmore House, Land at Ewen, Cirencester
Drawing Title	Habitat Features Plan
Scale	As Shown (Approximate)
Drawing No.	12109/P03
Date	January 2024
Checked	VKC/HDBJ



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