Preliminary Ecological Appraisal

Westergate WTW, Level Mare Lane

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Report	Preliminary Ecological Appraisal
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Client	Portsmouth Water
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Table of Contents

Executive Summary

Ecosupport Ltd was instructed by Portsmouth Water to undertake a Preliminary Ecological Appraisal (PEA) of Westergate WTW, Level Mare Lane, Aldingbourne, PO20 3SA. This was required to identify any potentially important ecological features that may be affected by the proposed development. As part of this assessment, the following surveys were undertaken:

- Walkover survey with UK Habs habitat assessment (January 2025)
- HSI of the ponds and the ditch present within 250m of the site (January 2025)

The following important ecological features were identified on site, following the conclusion of the above survey work and that may be subject to adverse impacts in the absence of suitable mitigation / compensation:

- Moderate potential for foraging and commuting Badgers
- Low potential for GCN
- Potential for GCN, reptiles, Dormice and nesting birds within the blue line boundary

In the absence of any mitigation measures, the proposed development is anticipated to result in ***certain adverse impacts*** although measures are outlined within section 6.0 of this document to mitigate where impacts (which includes further survey work, where considered appropriate) have been identified as well as provide targeted ecological enhancements.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was instructed by Portsmouth Water to undertake a Preliminary Ecological Appraisal (PEA) of Westergate WTW, Level Mare Lane, Aldingbourne, PO20 3SA (here after referred to as 'the site'). The purpose of this survey was to assess any ecological impacts that may arise because of the proposed development. The objectives of the survey were as follows:

- Identify and classify any priority habitats;
- Assess the ecological value of the site;
- Identify any signs of protected species and potential features that may support them
- External building inspection to identify signs of bats (open cavities)
- Make recommendations for further survey work as necessary;
- Make recommendations for any necessary ecological avoidance and mitigation where possible at PEA stage.

NB: If the works do not take place within 18 months of this report[1] then the findings of this survey will no longer be considered valid and may require updating.

This report should be read in conjunction with the CEMP (SLR Consulting Limited).

1.2 Site Description & Location

The site is comprised of tarmac, hard standing and a small section of other neutral grassland located at Westergate WTW, Level Mare Lane, Aldingbourne, PO20 3SA (centred on OS grid reference SU 93993 06886) (**Fig 1**). The offsite, blueline boundary is within client ownership and contains lowland mixed deciduous woodland, Bramble scrub, other neutral grassland, hard standing, a couple of buildings and two ponds. To the north and north-west of the site, ancient deciduous woodland is present. Ancient woodland is present to the north-east and traditional orchard to the south-east of the site. Farmland fields are located to the south of the site and sparse housing to the west and south-east, alongside fields. The immediate surrounding environment is largely rural.

[1] https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf

Figure 1. Redline (planning application and area of impact) and blueline boundary of the site (Google Satellite 2025).

1.3 Proposed Development

The proposals will involve the creation of a building to place a pressure relief valve on the hard-standing and a section of the other neutral grassland on site.

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*
The Conservation of Habitats and Species Regulations 2017 transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

The Conservation of Habitats and Species Regulations 2019 (EU Exit) makes changes to the three existing instruments which transpose the Habitats and Wild Birds Directives so that they continue to work (are operable) upon the UK's exit from the European Union (EU). These include The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Marine Habitats and Species Regulations 2017. This instrument also amends section 27 of the Wildlife and Countryside Act 1981 to ensure existing protections continue. The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.1 The Wildlife and Countryside Act (1981) (as amended)
This is the primary piece of legislation by which biodiversity if protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 art II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrots Feather (*Myriophyllum aquaticum*).

2.1.2 The Countryside and Rights of Way Act (2000)
This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.3 Natural Environment and Rural Communities Act (2006)

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the *UK Post – 2010 Biodiversity Framework.*

2.1.4 Protection of Badgers Act

The Protection of Badgers Act (1992) relates to the welfare of Badgers (*Meles meles*) as opposed to nature conservation considerations. The Act prevents:

- The wilful killing, injury, ill treatment or taking of Badgers and / or
- Interference with a Badger sett
- Damaging or destroying all or part of a sett
- Causing a dog to enter a set and
- Disturbing a Badger while it is occupying a sett

Provisions are included within the Act to allow for the lawful licensing of certain activities that would otherwise constitute an offence under the Act.

2.1.5 The Environment Act (2021)

The Environment Act 2021 is the UK's new legislation for environmental protection in the UK, which includes protection of water quality, clean air, and biodiversity among other key protections. This Act provides the government power to set targets to reach long-term aims relating to the environment, which will be periodically reviewed and updated. This legislation also establishes a new environmental watchdog organisation, the Office for Environmental Protection (OEP), which will hold the government accountable on environmental issues.

Part 6 of The Environment Act relates to nature and biodiversity. This section makes provision for biodiversity net gain to be a condition of planning permission in England and a requirement for nationally significant infrastructure projects. Biodiversity net gain will require maintenance for a period of at least 30 years after the completion of enhancement works to be achieved.

The legislation also includes updates to existing environmental legislation, such as the NERC Act 2006, to strengthen biodiversity enhancement rather than just conservation and includes a requirement for local, or relevant, authorities to publish biodiversity reports. Further, The Environment Act places a requirement on responsible authorities to prepare local nature recovery strategies, which will outline nature conservation sites and priorities and opportunities for recovering or enhancing biodiversity within the local area. Within England, the legislation also provides Natural England with the power to publish 'species conservation strategies' and 'protected site strategies' to identify activities that may affect a species or site's status and outline their opinions on measures that would be appropriate to avoid, mitigate or compensate any adverse impacts.

2.2 Policy

2.2.1 National

The National Planning Policy Framework (NPPF) (2024) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 15 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity, the wider benefits from natural capital and ecosystem services, minimising impacts on and minimising impacts on and providing net gains for biodiversity including by incorporating features which support priority or threatened species such as swifts, bats and hedgehogs.

The NPPF states that plans should distinguish between the hierarchy of international, national and locally designated sites and land should be allocated with the least environmental or amenity value and take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure for the enhancement of natural capital at a catchment or landscape scale.

To protect and enhance biodiversity, plans should 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 biodiversity, wildlife corridors and stepping stones that connect them and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and 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.

The NPPF states determining planning applications, 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 SSSI, 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 SSSIs;
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 reasons and a suitable compensation strategy exists;

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.

Potential SPAs and possible SACs, listed or proposed Ramsar sites and sites required as compensatory measures for the previous should be given the same protection as habitats sites.

2.2.2 Local – Arun Local Plan 2011-2031 Adopted July 2018

Arun District Council will encourage and promote the preservation, restoration and enhancement of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species. In relation to designated sites, development will be permitted where it protects these sites and the species and habitats contained within them.

Proposed development likely to have an adverse effect on land with the designated features of any Site of Biodiversity or Geological Importance as designated in the Arun Local Plan or any subsequently designated sites (either individually or in combination with other developments), will not normally be permitted. Development on wildlife sites with the highest value will only be permitted exceptionally where the following can be demonstrated:

- There is no alternative solution (which shall be adequately demonstrated by the developer).
- There are reasons of public health or public safety or
- There are benefits of primary importance to the environment or iv. There are imperative reasons of overriding public interest.

Aside from the above however, the presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined. In determining any planning application affecting Sites of Biodiversity or Geological Importance the Council will ensure that the intrinsic natural features of particular interest are safeguarded or enhanced having regard to;

- The European, National or Local status and designation of the site;
- The nature and quality of the site's features, including its rarity value;
- The extent of any adverse impacts on the notified features of interest;
- The need for compensatory measures in order to re-create remaining features of habitats on or off the site.

Where appropriate the Council will ensure the effective management of designated sites through the imposition of planning conditions or Section 106 agreements as appropriate.

Policy ENV DM2 states the varying level of protection afforded to Pagham Harbour when considering development;

- Within Zone A (0-400m from the boundary) as identified on the Policies Maps, development will only be permitted in exceptional circumstances where the developer is able to demonstrate there will be no detrimental effects on Pagham Harbour, including non-native species and the water environment. Regard shall also be had to tests 1-4 as set out in Policy DM1 (Designated Sites of Biodiversity or Geological Importance).
- Within Zone B (0-5km) for all new residential development and development which is likely to have an impact on Pagham Harbour will be required to:
    - Make developer contributions towards the agreed strategic approach to access management at Pagham Harbour.
    - create easily accessible new green spaces for recreation within or adjacent to the development site. These shall be capable of accommodating the predicted increases in demand for local walking, including dog walking. Good pedestrian links shall be provided between housing areas and new and existing green space in order to discourage car use.
- Major developments (as defined in the GDPO 1995 as amended) taking place outside Zone B and close to its boundary will be considered on a case by case basis to determine any potential effects on Pagham Harbour, and the need for any avoidance or mitigation measures.

Policy ENV DM3 states that any development will retain and incorporate important ecological habitats, wildlife corridors and stepping stones as well as be designed to minimise any disturbance to these habitats. Developments that fail to do so will have their proposal rejected. Where a development scheme would result result in a habitat loss, mitigation measures will be proposed as part of the proposed scheme and such measures agreed with the Local Planning Authority prior to the determination of any planning application. Within Biodiversity Opportunity Areas (BOAs) identified within the local plan or where likely to have an impact on species or habitats within the BOAs, any application for planning permission shall include a properly conducted survey of the presence of that species and habitat and impact(s) that development may have on the BOA.

Development and biodiversity Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated

sites and facilitate species movement. Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person. All developments shall have regard to Natural England's standing advice for protected species.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Data Request

Any designated sites and protected species within 2km of the site were searched for using freely available online resources.

3.1.2 Waterbodies

Any ponds located within 250m of the proposed development were searched for using Magic Maps.

3.2 Field Survey

3.2.1 Habitats

The field survey work which forms the basis of the findings of this report was carried out by Shannon Dagnell Mbiol, Assistant ecologist on the 13th January 2025.

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.01 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Statutory Biodiversity Metric calculation. Where appropriate primary habitat codes were used although for some habitat types, the use of secondary habitat codes was necessary as well.

3.2.2 Badger

The site was thoroughly searched for evidence of use by Badgers (*Meles meles*), with the specific aim of identifying the presence and location of any setts. In accordance with the *Badgers and Development: A Guide to Best Practice and Licensing* (Natural England, 2011) guidance, the survey accounted for a 30m circumference from the site's boundary (observed where possible i.e. does not conflict with private dwellings). Evidence of Badgers could include latrines, dung pits, feeding remains and foraging evidence, trails and setts.

3.2.3 HSI Assessment

A Habitat Suitability Index (HSI) assessment, using the methods described by ARG UK (2010) and Oldham et al. (2000) was used to evaluate the suitability of the three ponds within 250m of the site for GCN and included an assessment of both aquatic (breeding) and terrestrial habitats. Ten suitability indices are incorporated into this assessment, these being geographic location, pond area, water permanence, water quality, shade percentage, waterfowl presence, fish presence, the number of ponds within 1km of the survey pond, terrestrial habitat within 250m of the pond and macrophyte coverage. This generates a value between 0 and 1, whereby an outcome of 0 would indicate unsuitable habitat and of 1, highly suitable habitat.

3.3 Assessment Methodology

3.3.1 Introduction

The methodology for the assessment of the likely ecological effects of the proposed development is based on CIEEM's *Guidelines for Ecological Assessment in the UK* (CIEEM 2018). Although this assessment does not constitute a formal Ecological/ Environmental Impact Assessment, the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

3.3.2 Valuation

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

3.4 Limitations

3.4.1 HSI Assessment

The HSI Assessment of the ponds was carried out outside of the optimal period (mid-April to late June). As a result, it is more difficult to pinpoint the invertebrate diversity, in addition to the plant communities present. Despite this, emerging plants were noted in all waterbodies and the invertebrate communities could be well anticipated based off of the pond's appearance. Consequently, this is not seen to have had an impact on the accuracy of the assessment.

3.4.2 Habitat Assessment

The survey was conducted outside of the optimal season for vascular flowering plants; however, this is not considered to have affected the accuracy of the site's valuation. This is because the majority of the habitat onsite was hard-standing and the habitats offsite could be classified accurately. In addition, all areas offsite and onsite could be accessed.

4.0 ECOLOGICAL BASELINE

4.1 Designated Sites

Using freely available online resources, no designated sites were found to be within 2km of the site.

4.2 Waterbodies

Three waterbodies were found to be within 250m of the site. Two of these ponds were within the offsite blueline boundary and one was just outside of this boundary, within the deciduous woodland.

4.3 Vegetation Survey Results

The vegetation within the site has been described below using the UK Habs Habitat Definitions Version 2.01 (UKHab Ltd., 2023, updated 2024). The below species noted should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. The habitat types on site comprise:

- Developed land, sealed surface (u1b) – road (800)
- Other neutral grassland (g3c)

4.3.1 Developed land, sealed surface (u1b) – road (800)

Most of the land on site was developed land; sealed surface in the form of the section of a road (**Fig 2**).

Figure 2. View of the section of hard-standing for building creation (taken January 2025).

4.3.2 Other neutral grassland (g3c)

A small section of other neutral grassland lies within the redline boundary (**Fig 3**). It is also proposed that a small section of another patch of grass may potentially be disturbed by the works (**Fig 4**). Species noted include Bristly Oxtongue (*Helminthotheca echioides*), White

Clover (*Trifolium repens*), Ragwort (Jacobaea spp.,), Creeping Buttercup (*Ranunculus repens*), Thistle (*Cirsium spp.,*), Ground Ivy (*Glechoma hederacea*), Nettle (*Urtica dioica*) and Bedstraw (*Galium* spp.,).

The species identified during the walkover, as outlined above, are indicative of modified grassland. Despite this, a walkover carried out in June 2023, by John Norton MCIEEM and Jenna Dewhurst, identified the following species; Yorkshire-fog (*Holcus lanatus*), Rough Meadow-grass (*Poa trivialis*) and Creeping Bent (*Agrostis stolonifera*), Red Fescue (*Festuca rubra*), Common Bent (*Agrostis capillaris*) and Perennial Rye-grass (*Lolium perenne*). Herbs such as Creeping Buttercup (*Ranunculus repens*), White Clover (*Trifolium repens*), Greater Bird's-foot-trefoil (*Lotus pedunculatus*), Yarrow (*Achillea millefolium*), Red Clover (*Trifolium pratense*), Creeping Cinquefoil (*Potentilla reptans*) and Lesser Stitchwort (*Stellaria graminea*), were also recorded. These indicate an other neutral grassland. This walkover outlined that the grassland nearby the buildings, and thereby that is part of the redline, was of an acidic nature. Species here included; Musk Mallow (*Malva moschata)*, Field Madder (*Sherardia arvensis)*, Spotted Medick (*Medicago arabica)*, Black Medick (*Medick lupulina)*, Field Forget-me-not (*Myosotis arvensis)* and Wall Speedwell (*Veronica arvensis)*.

Figure 3. View of the impacted other neutral grassland (taken January 2025)

Figure 4. View of the other neutral grassland whereby a small section is proposed to be impacted (taken January 2025)

The other neutral grassland within the blue line contained similar species to that within the redline boundary (**Figs 5**). A line of trees is located along the northern boundary, consisting of 11 trees within the blueline boundary (**Fig 6**).

Figure 5. View of the eastern section of other neutral grassland within the blueline boundary (taken January 2025).

Figure 6. View of the line of trees north of the site (taken January 2025).

Along the eastern boundary of the blueline, Bramble (*Rubus fruticosus*) scrub is abundant (**Fig 7, 8**). Several individual trees are also within the fencing, although only a couple close enough to the redline boundary, that could be impacted (**Fig 9**). A patch of lowland deciduous woodland was present to the east, between patches of bramble scrub (**Fig 10**).

The walkover carried out in June 2023 recorded the non-native bramble *Rubus armeniacus* along this eastern boundary. The trees present within the woodland were identified as Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior)*, Sycamore (*Acer pseudoplatanus)* and Elm (*Ulmus spp.,*).

Figure 7. View of the bramble scrub along the eastern boundary (taken January 2025)

Figure 8. View of the large patch of scrub to the south of the wider boundary (taken January 2025)

Figure 9. View of individual trees present to the north-east of the blueline (taken January 2025)

Figure 10. View of the lowland mixed deciduous woodland to the east of the blueline boundary (taken January 2025)

4.4 Badgers

During the walkover, no evidence of Badgers was found on site. Despite this, there was a deciduous woodland in close proximity to the site, which is a highly suitable habitat for foraging, burrowing and commuting Badgers. In addition, within the blueline boundary, other neutral grassland and Bramble were abundant, both of which can be used by foraging and commuting Badgers with good access to surrounding fields. Although the woodland was within 30m of the site, a road separates them, signifying that sett tunnels from the woodland would not be able to reach into the site. As a result, there is a ***moderate*** potential for foraging badgers onsite.

4.5 Reptiles

The other neutral grassland present within the redline boundary had a sward height which was too short and unvaried to support reptiles. Despite this, within the blueline boundary, the hedgerow and woodland boundaries were more suitable and could be utilized. A small hibernaculum was also located within the blueline boundary (**Fig 11**). These, however, will not be impacted by the works and were separated from the onsite area by either hard-standing or unsuitable grassland. The prior walkover carried out in June 2023 shows the sward to be higher, however, the areas to be impacted by the development are towards the road. Since there are suitable habitats within the blueline boundary, it is likely reptiles will be more toward the boundary edge. As a result, the site is considered to be of ***negligible*** potential for reptiles, with the wider blueline boundary considered to be of ***low*** potential.

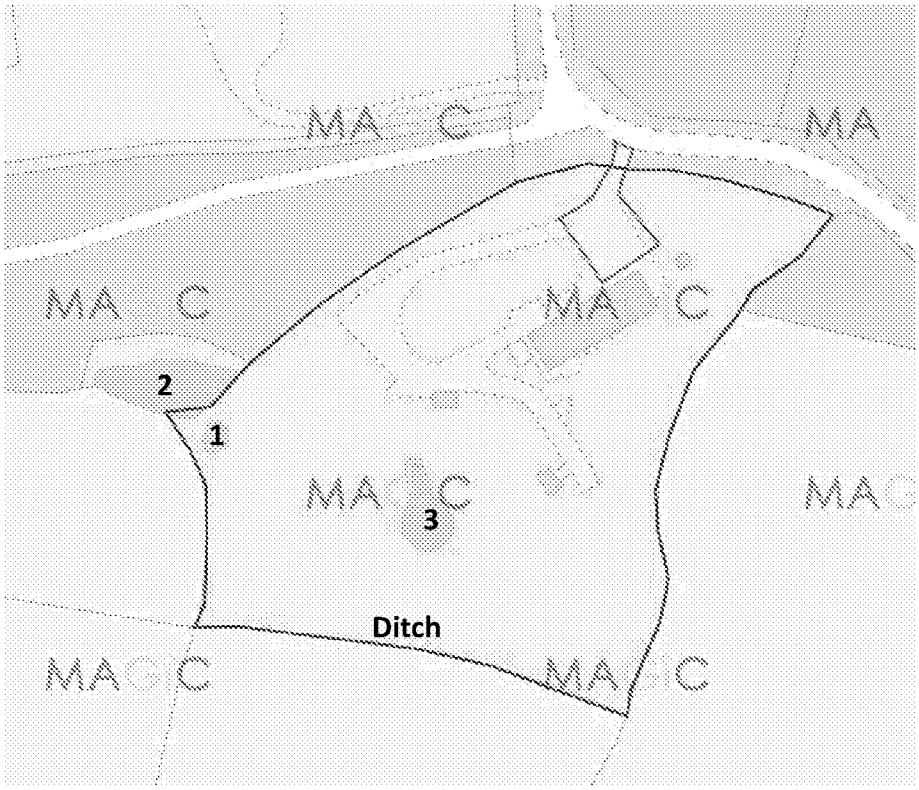
Figure 11. View of the hibernaculum present within the blueline boundary (taken January 2025)

4.6 Great Crested Newts

4.6.1 Waterbodies

Three waterbodies were present within 250m of the site, in addition to a ditch (**Fig 12**).

Figure 12. Map to outline the ponds and ditch present within 250m of the site (Magic Maps 2025)



Two ponds are present to the south of the blueline boundary. Pond 3 is roughly 0.012km in width (**Figs 13, 14, 15**) and the pond 1 is 0.0061km (**Figs 16, 17**). Species surrounding the latter pond include Bramble (*Rubus fruticosus*), Thistle (*Cirsium spp.,*), Reed (*Phragmites spp.,*) and Sedge species (*Carex spp.,*). The prior pond was surrounded mainly by Reed (*Phragmites spp.,*) and Sedge species (*Carex spp.,*). Pond 2 is approximately 0.013km in width and is within the deciduous woodland adjacent to the site (**Fig 18, 19**). Species surrounding this pond include Greater Pond Sedge (*Carex riparia)*, Bramble, Ivy (*Hedera helix*) and Holly (Ilex aquifolium). The ditch to the south of the blue line boundary is 0.099km in length (**Fig 20, 21**). Species surrounding this ditch include Bramble, Nettle (*Urtica dioica*), Ivy, Holly. Leaves, as well as sticks, were submerged under the water. A line of trees was present alongside the ditch (**Fig 22**).

During the June 2023 walkover, the following species were recorded surrounding pond 3: Hard Rush (*Juncus inflexus*), Soft Rush (*Juncus effusus*), Sharp-flowered Rush (*Juncus acutiflorus*), Hairy Sedge (*Carex hirta*), False Fox-sedge (*Carex otrubae*), Creeping Buttercup (*Ranunculus repens*), Greater Bird's-foot-trefoil (*Lotus predunculatus*). This survey outlined the species included within the southern treeline: Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus*) and Field Maple (*Acer campestre*).

Figure 13. View of the wetland patch and pond 3 (taken January 2025)

Figure 14. View of the pond 3 (taken January 2025)

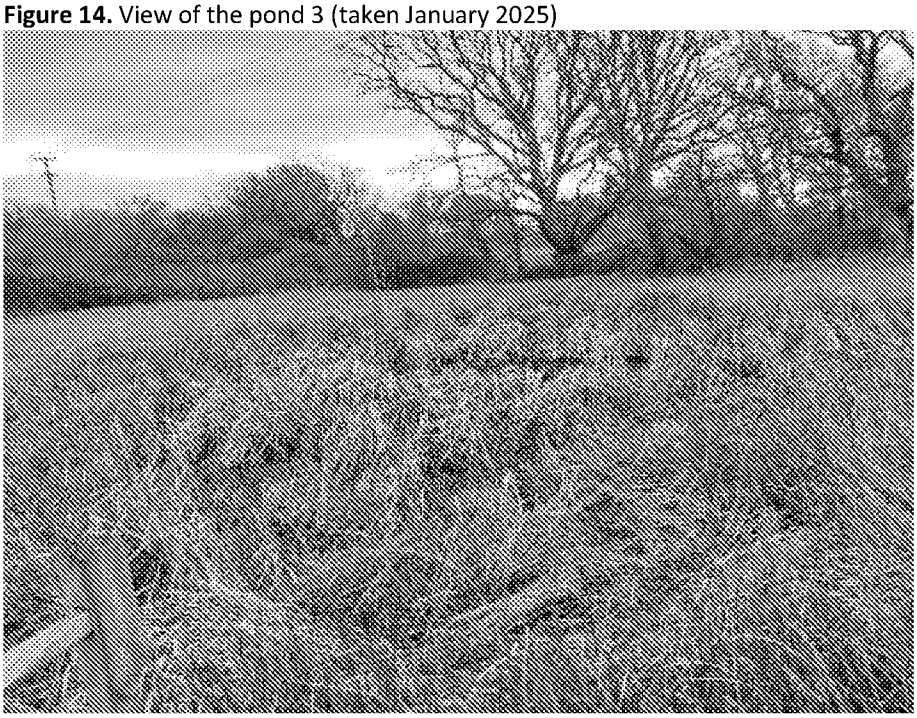


Figure 15. A closer view of the pond 3 (taken January 2025)

Figure 16. View of pond 1 (taken January 2025)

Figure 17. Closer view of pond 1 (taken January 2025)

Figure 18. View of pond 2 (taken January 2025)

Figure 19. View of pond 2 (taken January 2025)

Figure 20. View of a section of the ditch to the south of the blueline boundary (taken January 2025)

Figure 21. View of a section of the ditch located south of the blueline boundary (taken January 2025)

Figure 22. View of the line of trees present along the ditch (taken January 2025)

4.6.2 Site Assessment

Habitat Suitability Index (HSI) assessments were carried out on all three ponds and the ditch present within 250m of the site. As shown in the tables below, all three ponds and the ditch were of average suitability for GCN. Using freely available resources, no records of GCN were found within 2km of the site, although 6 Smooth Newt (*Lissotriton vulgaris*) records were noted. Therefore, the site is considered to be of ***negligible*** potential for GCN, although the blue line boundary is considered to be of ***low*** potential for GCN. This potential is not moderate

due to the presence of a road blocking the site from the ponds and ditches present and the low sward height of the grassland surrounding each waterbody. This greatly reduces the likelihood of GCN entering the site boundary, but rather that they reside in the nearby woodland.

Table 1. HSI results for waterbodies within 250m of the site

Waterbody Reference	HIS Score	Suitability
Pond 1	0.65	Average
Pond 2	0.62	Average
Pond 3	0.61	Average
Ditch	0.65	Average

4.7 Hazel Dormouse

There were no suitable habitats for Dormice on site, due to the majority of the site being hard standing and the remainder unsuitable, short sward grassland. Within the offsite boundary, there was an abundance of scrub, which was connected to both tree lines and hedgerows, providing a suitable habitat for Dormice. In addition, there was a deciduous woodland to the west and north of the site. Using freely available resources, 30 records of Hazel Dormice were noted within 2km of the site. Since the onsite habitat was highly unsuitable for Dormice, the site is of ***negligible*** potential for Hazel Dormice with the wider blueline supporting ***moderate*** potential.

4.8 Breeding and Nesting Birds

There were no suitable habitats for bird nesting or foraging onsite, since no trees or scrub were present. Despite this, within the offsite boundary, scrub was abundant, a treeline was located to the north and scattered trees to the east. These are all highly suitable habitats for foraging and nesting birds. Onsite, there is ***negligible*** potential for breeding and nesting birds and ***moderate*** potential within the wider blueline.

4.9 Bats

There were no suitable habitats for foraging and commuting bats onsite, since there were no trees, scrub, hedgerows, nor tree lines. However, within the blue line, there was a northern tree line, scrub along the eastern boundary, trees and ponds to the south. These habitats enhance invertebrate abundance and thereby are highly suitable for foraging bats. The tree and scrub boundaries also provide darker corridors for commuting. The trees within the blueline may provide roosting locations for bats. As a result, there is ***negligible*** potential for bats on site, however, there is ***moderate*** potential for roosting, foraging and commuting bats within the wider blueline.

5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION

5.1 Introduction

The CIEEM guidelines (CIEEM 2018) require that the potential impacts of the proposals should be considered in the absence of mitigation. For a significant adverse effect to occur, the feature being affected must be at least of local value. However, in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment. Although significant effects may be identified at this stage of the assessment, it is often possible to provide appropriate mitigation.

5.2 Site Preparation and Construction

5.2.1 Impacts to Habitats

The habitats present on site were other neutral grassland and hard standing. These habitats are only considered to be of ***negligible*** significance.

5.2.2 Impacts to Wildlife

5.2.2.1 Badgers

[redacted]

5.2.2.2 Dormice

Suitable habitats for dormice could be disturbed during the construction phase. This includes the scrub along the eastern boundary of the blueline and the treeline to the north. Damage to these habitats could lead to the disturbance, harm or even death of Hazel Dormice present. As a result, an ***adverse impact is possible*** at the ***local level***.

5.2.2.3 Nesting Birds

The trees and scrub to the east of the blueline, in addition to the northern tree line are suitable habitats for nesting birds that could be disturbed during the construction phase. This could lead to the disturbance, harm or even death of nesting birds present. As a result, an ***adverse impact is possible*** at the ***site level***.

5.2.2.4 Reptiles & GCN

Suitable habitats for GCN and reptiles in close proximity to the site, such as the verges adjacent to the woodland and scrub within the blue line boundary, could be impacted during the construction phase. This could lead to the disturbance, harm or even death of GCN present within these areas. As a result, an ***adverse impact is possible*** at the ***local level***.

5.2.2.6 Bats

There may be an increase in lighting and noise levels during construction. This could lead to the disturbance of bat commuting and foraging behaviour. Therefore, an ***adverse impact is possible*** at the ***local level***.

5.3 Site operation

5.3.1 Impacts to Wildlife

The development will likely result in an increase in light and noise levels within the general area, from the new building and during the construction. This can affect the behaviour, particularly the foraging, of wildlife. Therefore, an ***adverse impact is possible*** to wildlife at the ***site*** level.

6.0 RECOMMENDATIONS

6.1 Introduction

The below sections outline several recommendations for further survey work required to fully assess the potential ecological impacts of the development and ensure the proposed mitigation and compensation are appropriate and proportionate. In addition to this, measures are outlined to protect the existing features of value and provide enhancements post development.

6.2 Great Crested Newts

Due to the fact that the ponds and ditch within 250m of the site were of average suitability for GCN, it is recommended that barrier fencing should be installed around the redline boundary. This will separate it from the suitable habitats present in the blueline boundary, thereby ensuring no GCN will enter the construction site. In addition, no vehicles, nor machinery will go past the protective fencing, nor will materials be stored outside of it. This signifies that only the habitats to be impacted can be used for storage (as stated in the CEMP). The fencing will be installed prior to construction and will remain in place until all work is completed. Consequently, no habitats, nor wildlife will be disturbed outside of the fencing.

As there are habitats of average suitability for GCN in close proximity to the site, although isolated from the site boundary from a road, a Precautionary Methods Statement, is most suitable to prevent harm to GCN. This outlines that nothing will be disposed into any of the waterbodies, including the ditch, nearby the site and therefore, they will remain untouched. This will ensure they remain equally suitable for GCN post-development as they are pre-development and that any GCN present are not at risk of harm. Any work occurring to habitats suitable for GCN, such as vegetation surrounding ponds, woodland or longer sward grassland, must take place outside of the hibernation period (November – March), ensuring any potential refugia are avoided also. These areas would undergo a fingertip search by a suitably qualified ecologist prior to any works to ensure no GCN are present. ***In the unlikely instance that GCN are found on site during the works, all work must cease, and the supervising ecologist must be consulted*** (A license from Natural England may be required in this instance to facilitate the works).

6.3 Reptiles

There is a wood pile present on site which could act as a hibernaculum for reptiles. This must not be touched during the development works, nor the creation of enhancement features on site. In addition, it must be noted that the sward height of the grassland to be impacted by the development must be maintained to a short sward height. This will ensure it remains unsuitable for reptile use. The barrier fencing to be installed around the redline boundary, preventing the use of machinery outside of this will also protect taller swards of grassland around the boundary of the blueline, which are more suitable for reptiles.

6.4 Badgers

[redacted]

6.5 Hazel Dormice

According to the plans, no suitable vegetation should be impacted by the development works. However, if any vegetation is to be cut back, a fingertip search must be undertaken immediately prior to this, by a suitably qualified ecologist, to ensure there is no presence of Dormice. In order to protect the individual trees within the blueline boundary from being disturbed, all construction vehicles will remain on the onsite road at all times, maintaining a distance of 10m from the nearest trees, where this is possible (as outlined in the CEMP). These actions consequently protect habitats suitable for both Hazel Dormice and Nesting Birds.

6.6 Bats

6.6.1 During Construction

In order to avoid any disturbance to bats (and other potential nocturnal wildlife), construction works should be limited to daylight hours and should not be undertaken 30 minutes prior to dusk through to dawn. All lighting should be sensitive to the use of the site by nocturnal wildlife, for example by including low-level downward-facing / hooded lights that are sensor-operated where possible. No lighting will be facing the boundaries of the site, since these consist of highly suitable habitats for commuting and foraging bats.

6.7 Management

6.7.1 Woodland Management

Any limbs that are overhanging and must be cut back will need to be checked to ensure there are no PRFs on the tree and in particular on these limbs to be cut. If PRFs are found, they must be checked by a suitably qualified ecologist prior to any removal.

6.7.2 Pond Management

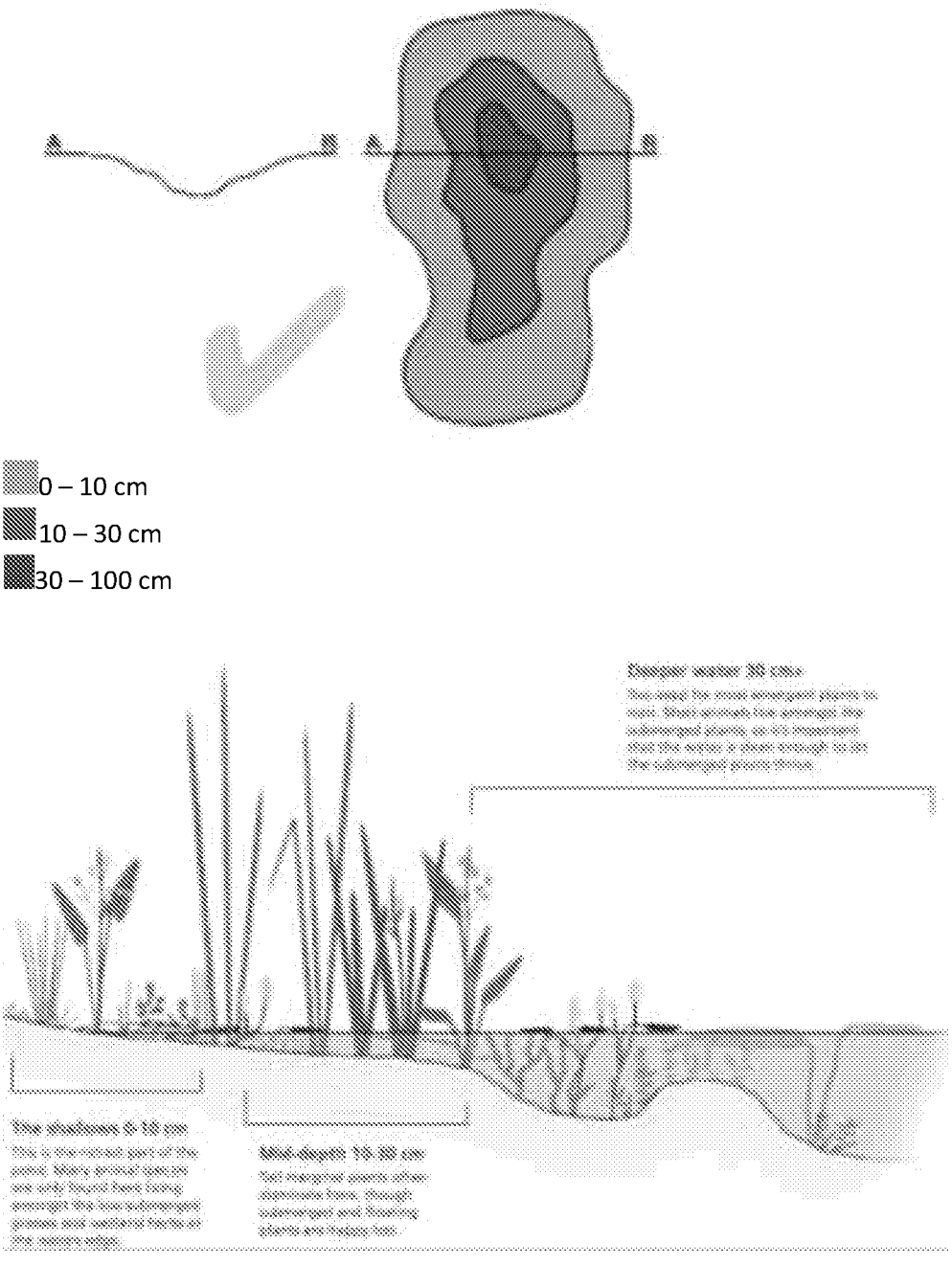
Management will be undertaken of the two ponds within the blueline, in addition to the ditch. Within the first few years, blanket weed can cover the ponds. This will be pulled out carefully, ensuring no damage to the pond or surrounding vegetation. Following settlement of the pond, wildlife will often reduce weed cover. However, if a plant species begins to dominate, this should be thinned. Only one third of a pond must be cleared per year. Any vegetation that has been cleared must be left along the edge of the pond for a few days to ensure trapped wildlife have sufficient time to return to the water. Following these few days, the vegetation should be removed to prevent the build-up of nutrients. Dense nettle patches can be treated with glyphosate-based weed killer, if necessary (this is best applied in late summer). Any dead wood can be left in the pond to provide habitat for both amphibians and invertebrates. It should be ensured that dense emergent vegetation does not exceed 30% of the pond cover.

If this does become the case, vegetation should be removed using hand tools in September-October.

In the case where vegetation surrounding the pond is lost, native aquatic species should be planted to maintain connectivity. These include Cow Parsley (*Anthriscus sylvestris*), Devil's-bit Scabious (*Succisa pratensis*), Hemp Agrimony (*Eupatorium cannabinum*), Teasel (*Dipsacus fullonum*), Purple loosestrife (*Lythrum salicaria*), Red Valerian (*Centranthus ruber*) and Yarrow (*Achillea millefolium*).

If the pond to the west is to be re-profiled to make it shallower, this should be done in line with the diagram inserted below (**Fig 23**).

Figure 23. Diagram of recommended pond outline (Freshwater Habitats Trust (2017))



6.7.3 Bramble Management

Bramble should not exceed 15% of the grassland cover and therefore must be managed. This will involve cutting back the scrub using hand-held tools. This management must be undertaken outside of the nesting bird season (this season spanning February – August, inclusive) (Natural England 2015). Bramble that is removed should be re-seeded with Emorsgate EM1 general purpose meadow mixture, or a wildflower mix similar.

6.8 Enhancements

6.8.1 Other neutral Grassland Enhancement to Wildflower Meadow

6.8.1.1 Planting

The other neutral grassland currently to the south of the blueline boundary, beyond the existing road, will be enhanced using EL1F Wild Flowers for Lawns mix. Prior to sowing the seeds, the ground must be prepared in late summer through mowing and creating gaps by raking. Approximately 50% bare ground should be created here. It must be ensured that the grassland is maintained to a short sward height prior to this to ensure there it does not become suitable for reptiles or amphibian commuting.

Sowing should be carried out in the autumn. The seed can be bulked with sand prior to ease distribution. The seed must be surface sown. Within the first year, the grassland should be cut to a height of 15cm, using a strimmer. Any dense nettles that establish will be removed and if necessary, glyphosate-based weed killer can be used in late summer.

6.8.1.2 Management

Ongoing management, between years 2-30, as follows, will be undertaken annually to maintain the grassland:

- If the grassland or hibernacula are damaged or destroyed, replace them like-for-like between April and October.
- An annual cut should be carried out in August, to reduce the growth of dominating coarse grasses and scrub. The cut should be to a height of 50-75mm. If a second cut is necessary, this should be carried out in late Autumn.
- Different sections of the grassland should be cut on different dates, allowing any present wildlife to move and to prolong the flowering season for wildlife. Mowing times should be varied from year to year to maintain diversity.
- Cuttings should only be kept on site for a week, before being removed, to reduce nutrient build up.
- Invasive species and dense nettle patches can be spot-treated with glyphosate- based weed killer, if necessary.
- The growth of some scrub can be beneficial to provide shelter for reptiles and amphibians, however, its growth should not exceed 15% of the grassland.

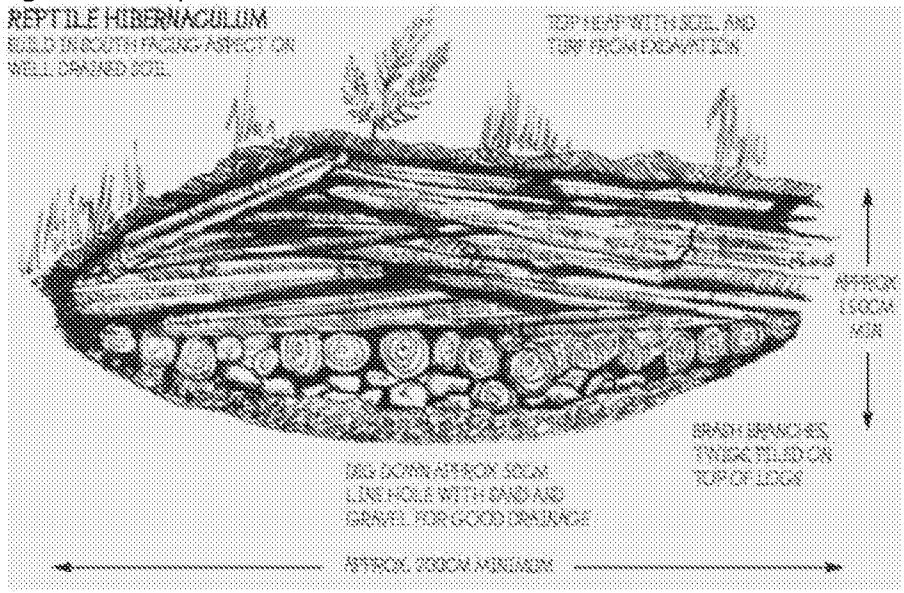
- No more than 50% of the grassland will be managed within the same year.

The grassland north of the ponds can be managed by relaxing mowing from late June for 4-8 weeks, cutting no lower than 25-40mm per cut. As outlined above, all cuttings should be kept on site for a week before being removed. One cut in June will be missed to allow flowering plants to set seed.

6.8.2 Hibernacula Creation

Enhancing the grassland to a longer sward wildflower lawn will encourage reptiles and amphibians to use the site further. As a result, two hibernacula will be located within the blueline boundary, at the edge of the woodland to the south-east. These will be wood-based and will provide a suitable hibernating location, promoting their use of the site further as travel to a hibernation spot will be minimal. This will aid increase biodiversity nearby the site. The creation of these hibernacula will be done following the guidelines outlined in the Reptile Habitat Management guidelines (Edgar, P et al., (2010)). It should be noted that at the edge of ponds, just above the high-water level, is an optimal location for a log pile hibernaculum (How to Rewild, Accessed 2025). Often, 3-4 foot long lengths of wood are piled in such a way as to create crevices for newts and a gently sloping bank. Initially, a sheet can be laid over the top to prevent soil filling the cracks, however, still allowing air and water entry. This sheet should be a 3-4 finger gap from the floor. Turf and soil will then cover it, ensuring gaps are left around the edges (Conservation & Access, Accessed 2025). Optimally, the hibernacula will be placed in a location where sun and shade are abundant. Scrub can be planted to the north of the hibernacula to create required shade. Cutting of grassland surrounding the hibernacula should be as outlined above.

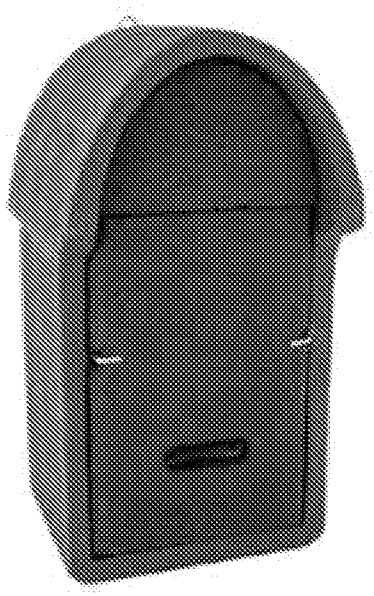
Figure 24. Example of a hibernacula.



6.8.3 Bat Boxes

In order to enhance the site for bats, four Large Multi Chamber WoodStone Bat Boxes will be installed on mature trees present within the offsite boundary (**Fig 25**). Preferably, these boxes will be installed on trees closer to the north of the site, since these are nearer to the woodland to the north. These bat boxes have a large internal space and can thereby host a colony of bats, and the rough surface within increases gripping ease. Woodstone is the building component of these boxes, allowing temperature consistency and breathability in the box. The boxes must be placed at a height between 3m and 6m, in a position which receives sunlight, but that is away from artificial light. They will be erected by or under the supervision of an ecologist. This bat box can be found at: https://www.nhbs.com/search?q=bat+box&qtview=223050.

Figure 25. Large Multi Chamber WoodStone Bat Box to be installed (NHBS, 2024).



7.0 CONCLUSION

A Preliminary Ecological Appraisal was undertaken of the site known as 'Westergate, WTW, Level Mare Lane, Aldingbourne, PO20 3SA' in relation to the proposed building creation to store a pressure relief valve. Since the surrounding habitats are highly suitable for GCN and reptiles, it has been proposed that hibernacula are positioned at the edge of the woodland to the south-east of the blueline boundary, following the planting of a wildflower mix. The wildflower mixture will be planted across the existing ponds to the south to interconnect them. Management practices, as outlined above, will ensure a long sward height is maintained, encouraging reptile and GCN commuting. Bat boxes are another enhancement that has been recommended in order to increase the site's value for foraging and roosting bats. This report has outlined the time of year that work, in relation to enhancements and the development, should be carried out and the important measures that must be undertaken during these works to prevent harm to GCN, reptiles, Hazel Dormice and Badgers.

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APPENDIX I –

UKHabs Map

Legend

- Site Boundary
- Offsite Boundary
- Bramble scrub (h3d)
- Wetland (f)
- Developed land. sealed surface (u1b)
- Buildings (u1b5)
- Pond (r1)
- Other neutral grassland (g3c)
- Lowland mixed deciduous woodland (w1f)
- Line of trees (w1g6)
- Individual trees

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Map	UK Habs Map - On site and Off site
Site	Westergate, WTW
Client	Portsmouth Water
Date	04/02/2025

POST-DEVELOPMENT MAP

Legend

- Site Boundary
- Offsite Boundary
- Bramble scrub (h3d)
- Wetland (f)
- Developed land. sealed surface (u1b)
- Buildings (u1b5)
- Pond (r1)
- Other neutral grassland (g3c)
- Lowland mixed deciduous woodland (w1f)
- Line of trees (w1g6)
- Individual trees

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Map	Post-Development Map
Site	Westergate, WTW
Client	Portsmouth Water
Date	04/02/2025