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Ecological Assessment

Site Name

Harts Farm Way, Havant

Client

Forsa Energy Gas
Holdings Ltd

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Author

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Rev4	Rozel Hopkins MSci (Hons)	Lynn Spencer ACIEEM BSc (Hons)	29/05/2024	Inclusion of results from great crested newt survey	

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About the Author

This report has been prepared by Rozel Hopkins, a Consultant Ecologist at The Ecology Co-op, with 4 years' experience. She has Level 1 bat and great crested newt survey licenses and as a Qualifying member of the Chartered Institute for Ecology and Environmental Management (CIEEM) is bound by their code of professional conduct.

About the Reviewer

This report has been reviewed by Emma Baker, who is a Senior ecologist with 6 years' experience. She holds Level 1 great crested newt and hazel dormouse survey licenses. As a Full member of the Chartered Institute for Ecology and Environmental Management (CIEEM), she is bound by their code of professional conduct.



Report Summary

Purpose	The Ecology Co-op was commissioned by Forsa Energy Gas Holdings Ltd to undertake a Preliminary Ecological Appraisal of land at Harts Farm Way further to a proposal to construct a gas fuelled capacity mechanism embedded generation plant.
Context	The site is dominated by hardstanding which has not been maintained within recent years, leading to plants beginning to establish and areas of fallen deadwood and leaf litter forming. Large patches of buddleia and bramble scrub are also present. The condition of the site and habitats present indicate an establishing open mosaic habitat is beginning to form. This habitat does not meet the definition of priority habitat. A ditch is also located along the western and northern boundaries. The site is situated in an urban location, with industrial buildings surrounding the site at all aspects except for at the north, where the A27 is present with an embankment of mature woodland.
Key findings	The site is within the 'Zone of Influence' of multiple designated sites and therefore a separate Habitat Regulations Assessment (HRA) Screening Statement has been produced to accompany this report. This found that there was not the potential for significant effects and therefore an Appropriate Assessment is not considered to be required. Open mosaic habitat is starting to establish on site, however this habitat does not meet the criteria for Priority Habitat. It is recommended that habitat features are created to compensate for the loss the habitats identified on site, which should include native species-rich scrub and bee bank creation. A Construction Environment Management Plan (CEMP) is also recommended to ensure that both direct and indirect effects to the adjacent ditch are minimised during the construction phase.
Recommendations	Precautionary measures will also be required for the following species: • dormice when removing scrub; • reptiles during the removal of ruderal vegetation, scrub and rubbish; • hedgehogs when removing scrub and ruderal vegetation; • water voles during construction; and • breeding birds when removing scrub. These precautionary measures should be outlined in further detail within the Construction Environmental Management Plan (CEMP).
Are further surveys required?	None



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1 INTRODUCTION

1.1 Purpose of the Report

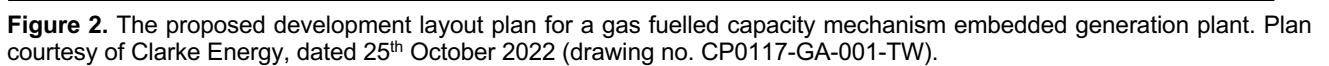
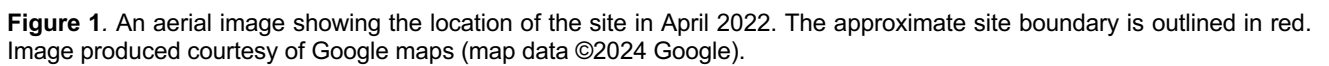
The Ecology Co-op has been commissioned to undertake a Preliminary Ecological Appraisal (PEA) of land at Harts Farm Way by Forsa Energy Gas Holdings Ltd. This report presents the findings of a walkover survey undertaken by Rozel Hopkins MSci (Hons) a Qualifying member of the Chartered Institute of Ecology and Environmental Management, and Natural England Level 1 Bat Survey Class and Level 1 Great Crested Newt Licence holder, assisted by Kate Ellis BSc (Hons) on 18th December 2023. It provides details on the potential for any protected/notable species and/or habitats to be present at the site and a simple assessment of the potential ecological constraints and opportunities in relation to the construction of a gas fuelled capacity mechanism embedded generation plant. Recommendations for further surveys that are likely to be required to inform a planning application and Ecological Impact Assessment (EclA) of the proposal are provided where necessary, and possible measures to avoid, mitigate and/or compensate for significant adverse effects are summarised. The potential to incorporate ecological enhancement measures as part of the scheme is discussed, in addition to any requirement to achieve biodiversity net gain.

This PEA report is designed to inform the client and their team (as appropriate) about the initial findings of the site walkover and desk study research in relation to the site proposals, highlighting the key ecological constraints and opportunities, and any further survey requirements. It is not intended for submission in support of a planning application but can be used to inform a future Ecological Impact Assessment (EclA).

1.2 Background

This site measures 0.32ha and is situated on the southern outskirts of Havant, Hampshire, PO9 1JN. The central grid reference for the site is SU 70610 05829. It is situated in an urban location, with industrial buildings surrounding the site at all aspects except for at the north, where the A27 is present with an embankment of mature woodland. Figure 1 shows the boundary of the site.

The proposed development includes the construction of a gas fuelled capacity mechanism embedded generation plant to support the National Grid (Figure 2). The proposal for the site already has planning under application APP/17/00511 as amended by APP/18/01281, decided on 13th December 2018. However, the current landowner wishes to submit a new application to use five 4.5MW generators, rather than the ten 2MW generators covered by the original application.





1.3 Policy and Legislation

Legal protection applying to relevant bird, mammal, herpetofauna, invertebrate species and flora, and current nature conservation planning policy is outlined in Appendix 1 of this report.

Where possible, this report provides guidance on how the proposal can be designed to meet the requirements of both local planning policy and the National Planning Policy Framework (NPPF). Details of the NPPF can be found in Appendix 1 and relevant local planning policy by Havant Borough Council is provided in Appendix 2.

2 METHODOLOGY

The methodologies used for this survey are in accordance with the Guidelines for Preliminary Ecological Appraisal¹, but also consider the Guidelines for Ecological Report Writing, Second Edition².

2.1 Desk Study

A search for existing records of protected species, species of conservation concern and invasive non-native species was requested from the Hampshire Biodiversity Information Centre within a radius of 1km of the site.

A search of on-line mapping resources was undertaken to identify the location of any features of potential ecological interest including ponds within 500m (relevant to great crested newts *Triturus cristatus*), watercourses (relevant to riparian mammals and crayfish) and connectivity to woodland, scrub, and hedgerow networks (relevant to bats and dormice *Muscardinus avellanarius*) in the wider landscape around the site. The connectivity of the site to these features, buildings and other semi-natural habitats, such as grassland and heathland, are also relevant to great crested newts, reptiles and a wide variety of notable species of conservation concern.

The MAGIC website resource (www.magic.gov.uk) was used to identify the location of designated sites for nature conservation and European Protected Species (EPS) licences granted in relation to the survey site.

2.2 Field Survey

A site walkover survey was undertaken on 18th December 2023 during which the habitats contained within the site were described and evaluated. Since this site is relatively small in scale and contains limited semi-natural habitat diversity, it was not considered necessary to undertake comprehensive UKHab mapping of the site. All habitat types contained within the site, together with the dominant botanical species and indicators of important habitat types, such as ancient woodland or unimproved grassland, have simply been listed and described where identified.

Habitats and features at the site were evaluated for their potential to support legally protected species and/or species of conservation interest. In addition, observations of any important plant communities, bird assemblages

¹ CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

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



or other potentially valuable ecological features were recorded.

Details of the preliminary survey methods for each legally protected species are given below. Any site-specific limitations to the survey, e.g. access constraints or seasonal constraints, are set out in section 3.12.

2.3 Badgers

Badgers *Meles meles* exploit a range of habitats, including gardens, coniferous woodland, deciduous woodland, mixed woodland and arable land. They live in an underground system of tunnels and nesting chambers, known as a sett, with territories ranging from 30ha to 150ha or more.

Habitats within the site and surrounding area were broadly assessed for their potential to support badgers. Any signs of badger activity, for example setts, footprints, latrines, well-worn paths and foraging marks, were recorded.

2.4 Bats

Bats can use a wide range of features for roosting purposes, including loft spaces, cavity walls, loose tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with holes, splits, cracks, cavities, ivy and loose bark.

Trees, buildings and other structures were broadly assessed for their potential to support roosting bats and further surveys are recommended as appropriate. The habitats surrounding the site and wider landscape were also broadly assessed for their potential to support foraging and commuting bats.

2.5 Breeding Birds

Birds can use a wide range of natural and artificial habitats when breeding, including trees, hedgerows, fields, houses and garden sheds. The habitats contained within the site and adjacent areas were broadly assessed for their potential to support important bird species/assemblages, and breeding birds. Any birds identified during the site visit were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern³ and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981).

2.6 Dormice

Dormice are found in deciduous woodland and hedgerows, feeding on flowers, pollen, fruits, insects and nuts, favouring hazel *Corylus avellana* and honeysuckle *Lonicera periclymenum* for food and as bedding. The site was broadly assessed for its potential to support dormice. This included use of on-line mapping resources to assess the surrounding area for connectivity to large blocks of woodland, scrub and extensive hedgerow

³ Stanbury, A., Eaton, M., Aebischer, N., Balmer, N., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). Birds of Conservation Concern 5: the status of bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man. British Birds 114, pp 723-747.



networks.

2.7 Great Crested Newt

Great crested newts breed in ponds during the spring and spend the rest of the year feeding on invertebrates primarily in semi-natural habitats including woodland, hedgerows, marshes and tussocky grassland. A desk study was undertaken to identify ponds and wet ditches within 500m of the site that might support breeding great crested newts. Where access permission was granted, or ponds could be viewed from public roads or footpaths, the ponds were assessed for their potential to support great crested newts using the Habitat Suitability Index (HSI) (Oldham et al 2000)⁴. The value of the site for terrestrially foraging great crested newts and any features that might be used by hibernating newts has also been assessed.

2.7.1 Environmental DNA (eDNA) Survey

An eDNA survey was undertaken by Rozel Hopkins MSci (Hons), a great crested newt level 1 licenced surveyor, and Meerabai Kings MSci (Hons) on 22nd May 2024. The eDNA sampling was carried out in accordance with the survey methodologies defined within Natural England's accepted protocol (Biggs *et al.*, 2014)⁵.

Twenty water samples were taken from Ditch 1 and Pond 1 together (due to their connectivity) to form the basis of the DNA sample. The samples were taken using a sterile ladle and emptied into a sterile self-supporting Whirl-Pak bag. These samples were taken from locations around the margin of the pond which could be used by GCN for egg laying or displaying.

Once all 20 samples were collected, the sterile self-supporting bag was shaken to mix any DNA across the whole waterbody sample. A sterile plastic pipette was used to transfer approximately 15 ml of the mixed waterbody sample water into a sterile conical tube. This was undertaken for each of the six sterile conical tubes in the kit. Each sterile conical tubes contained 35 ml of ethanol to preserve any DNA within the samples.

The box of six sterile conical tubes was returned the following day at ambient air temperature to the Surescreen Scientifics eDNA testing service for laboratory analysis.

2.8 Reptiles

The common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica* and adder *Vipera berus* are widespread species that can be found in any of these habitats, whereas smooth snake *Coronella*

⁴ Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000). Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). *Herpetological Journal* 10, 143-155.

⁵ Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Griffiths, R.A., Foster, J., Wilkinson, J., Arnett, A., Williams, P. and Dunn, F., (2014). *Analytical and methodological development for improved surveillance of the Great Crested Newt*. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Freshwater Habitats Trust: Oxford.



austriaca and sand lizard *Lacerta agilis* have much more restricted and isolated populations on lowland heathland and sand dunes.

Habitats on the site were broadly assessed for their potential to support reptiles. Particular attention was paid to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (rough grassland and scrub). Further surveys are recommended as appropriate.

2.9 Riparian Wildlife

Any watercourses identified during the desk study or field survey were assessed for their suitability to support otter *Lutra lutra*, water vole *Arvicola amphibius* and American mink *Neovison vison*. Suitable habitat includes grassy banks along slow-moving rivers, ditches, streams, lakes, ponds, canals, as well as marshland and upland. Field signs include faeces, latrines, feeding stations, burrows, footprints and runs or pathways.

2.9.1 Water Vole Survey Walkover

A walkover to assess the ditch adjacent to the site for water voles was carried out on 15th April 2024 by Lynn Spencer BSc (Hons) ACIEEM, Ben Small MSc (Hons) and Jenna Fairchild MSc (Hons). Approximately 400m of ditch was assessed during the visit (Figure 3), including the area which lies adjacent to the development's red line boundary.





Figure 3. An aerial image showing the location of the site in April 2022 (red) and the area of the ditch assessed for water vole suitability. Image produced courtesy of Google maps (map data ©2024 Google).

2.10 Other Notable Species

The site's habitats were broadly assessed for their potential to support species of principal importance for nature conservation (Section 41 NERC Act 2006) and other notable species. This includes mammals such as harvest mouse *Micromys minutus*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, and many bird species. The site was broadly assessed for its potential to support important invertebrate assemblages with particular attention paid to features such as standing dead-wood, wet flushes, bare earth banks and botanically rich areas.

3 BASELINE CONDITIONS

3.1 Designated Sites and Granted EPS Licences

There are eight statutory designated sites within 2km and two non-statutory designated sites within 1km of the proposed development site. The closest of these are Langstone Harbour Site of Special Scientific Interest (SSSI) and Solent Maritime Special Area of Conservation (SAC). These are both designated due to their important tidal and estuarine habitats which support a number of wading birds and waterfowl. All designated sites are described in Table 1 and statutory designated site locations are shown in Figure 4.

There is one granted EPS licence for mitigation projects within 1km of the site boundary (see Figure 5). The licence is located 500m north-east of the site and concerns the destruction of a common pipistrelle *Pipistrellus pipistrellus* resting place in 2014, licence number 2014-1826-EPS-MIT.

Table 1. Designated sites.

Site name	Designation	Features listed on citation	Proximity
Statutory designated sites			
Langstone Harbour	Site of Special Scientific Interest (SSSI)	Tidal basin with exposed mud flats at low tide. It has one of the largest areas of mixed saltmarsh on the South Coast and is one of the 20 most important intertidal areas within Britain. It supports large populations of waders and wildfowl. The site supports Dunlin <i>Calidris alpina</i> (30,000 individuals), grey plover <i>Pluvialis squatarola</i>, black-tailed godwit <i>Limosa limosa</i>, redshank <i>Tringa totanus</i> and ringed plover <i>Charadrius hiaticula</i>. Langstone Harbour and the adjoining and connected Portsmouth and Chichester Harbours form a single ecosystem which is among the ten most important intertidal areas for waders in Britain. Langstone Harbour alone has consistently supported in excess of 5,000 wintering dark-bellied geese <i>Branta bernicla</i> and up to 2.5% of the European winter population of shelduck <i>Tadorna tadorna</i>. Langstone Harbour has been the forum for important ecological research on estuarine eutrophication and the relationship with algal blanketing of the muds.	490m south



Solent Maritime	Special Area of Conservation (SAC)	This area of the Solent supports the following Annex I habitats: <u>Estuaries</u>: major estuarine system including four bar-built estuaries and four plain estuaries. Sediment habitats include estuarine flats, often with intertidal areas supporting eelgrass <i>Zostera</i> spp. and green algae, sand and shingle spits, and natural shoreline transitions. Unusual features within the mudflats include the presence of very rare sponges in the Yar estuary and a sandy 'reef' of the polychaete <i>Sabellaria spinulosa</i> on the steep eastern side of the entrance to Chichester Harbour. <u>Spartina swards (<i>Spartinion maritimae</i>)</u>: Solent Maritime is the only site for smooth cord-grass <i>Spartina alterniflora</i> in the UK and is one of only two sites where significant amounts of small cord-grass <i>S. maritima</i> are found. It is also one of the few remaining sites for Townsend's cord-grass <i>S. x townsendii</i> and holds extensive areas of common cord-grass <i>Spartina anglica</i>. <u>Atlantic salt meadows (<i>Glauco-Puccinellitalia maritimae</i>)</u>: Solent Maritime comprises large number of separate areas of saltmarsh which are of an ungrazed type and support a different range of communities dominated by sea-purslane <i>Atriplex portulacoides</i>, common sea-lavender <i>Limonium vulgare</i> and thrift <i>Armeria maritima</i>. This transitions to freshwater reedswamp and alluvial woodland as well as coastal grassland. Typical Atlantic salt meadow is still widespread in this site, despite a long history of colonisation by cord-grass <i>Spartina</i> spp. The following Annex 1 habitats are present but not the reason for the destination: Sandbanks which are slightly covered by sea water all the time, Mudflats and sandflats not covered by seawater at low tide, Coastal lagoons, Annual vegetation of drift lines, Perennial vegetation of stony banks, <i>Salicornia</i> and other annuals colonizing mud and sand, "Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")".	490m south
Chichester and Langstone Harbours	SSSI, Special Protection Area (SPA) and Ramsar	Large estuarine basin which at low tide supports wintering wildfowl and waders within the extensive mud and sandflats at low tide. The surrounding pasture also supports a range of breeding birds. Supports the following non-breeding birds: bar-tailed godwit <i>Limosa lapponica</i>, common <i>Sterna hirundo</i>, curlew <i>Numenius arquata</i>, dark-bellied brent goose <i>Branta bernicla bernicla</i>, dunlin <i>Calidris alpina alpina</i>, grey plover <i>Pluvialis squatarola</i>, little tern <i>Sternula albifrons</i>, pintail <i>Anas acuta</i>, red-breasted merganser <i>Mergus serrator</i>, redshank, ringed plover, sanderling, sandwich tern <i>Thalasseus sandvicensis</i>, shelduck <i>Tadorna tadorna</i>, shoveler <i>Spatula clypeata</i>, teal <i>Anas crecca</i>, turnstone <i>Arenaria interpres</i>, wigeon <i>Mareca penelope</i> and a range of other waterbirds. There are also a number of small ponds contained by	1.6km south-east



		the site as well as areas of woodland. There are notable invertebrate species on the site including the conehead grasshopper <i>Conocephalus discolor</i> , as well as range of moths.	
Farlington Marshes	Local Nature Reserve (LNR)	This site is 125ha of flower-rich grazing marsh on the northern side of Langstone Harbour. It is internationally important for bird populations and supports a variety of butterflies.	1.8km west
West Hayling	LNR	Home for either permanently or migratory thousands of seabirds, which feed on the invertebrate life of the mudflats.	1.9km south-east
Hayling Billy	LNR	Old Hayling Billy trainline which supports rare plants and gives good views over Langstone Harbour.	2km south-east
Non-statutory designated sites			
Southmoor Reserve	Sites of Importance for Nature Conservation (SINC)	2.19ha of coastal grazing marsh which is home to a number of birds including skylarks <i>Alauda arvensis</i> , linnets <i>Linaria cannabina</i> , greenfinches <i>Carduelis chloris</i> and goldfinches <i>C. carduelis</i> . Southern marsh orchids <i>Dactylorhiza praetermissa</i> and divided sedge <i>Carex divisia</i> also grow here.	860m south-east
Southmoor – Big Field (South Edge)	SINC	0.49ha of habitat comprising of either semi-natural coastal or estuarine habitats.	900m south

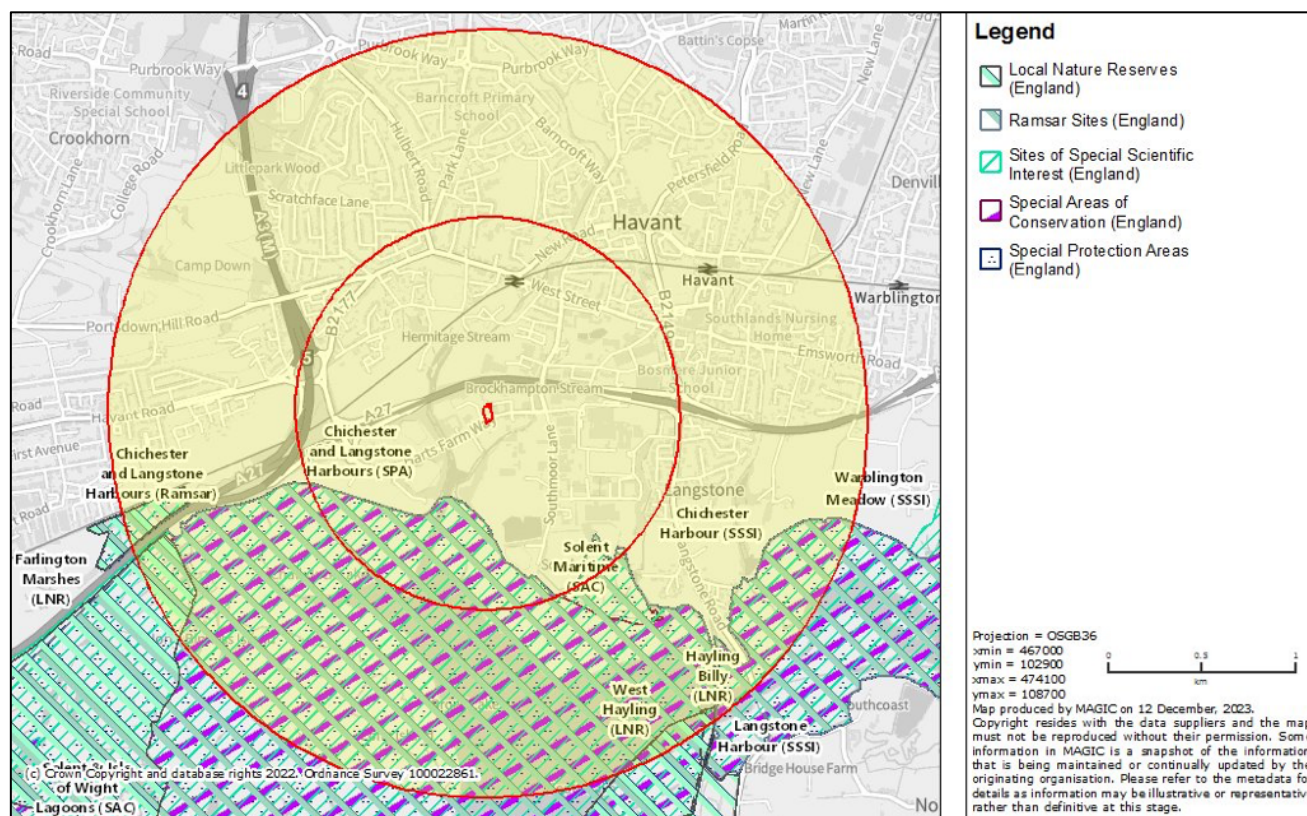


Figure 4. Designated sites within a radius of 1 and 2km of the application site. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>), contains public sector information licensed under the Open Government Licence v3.0).

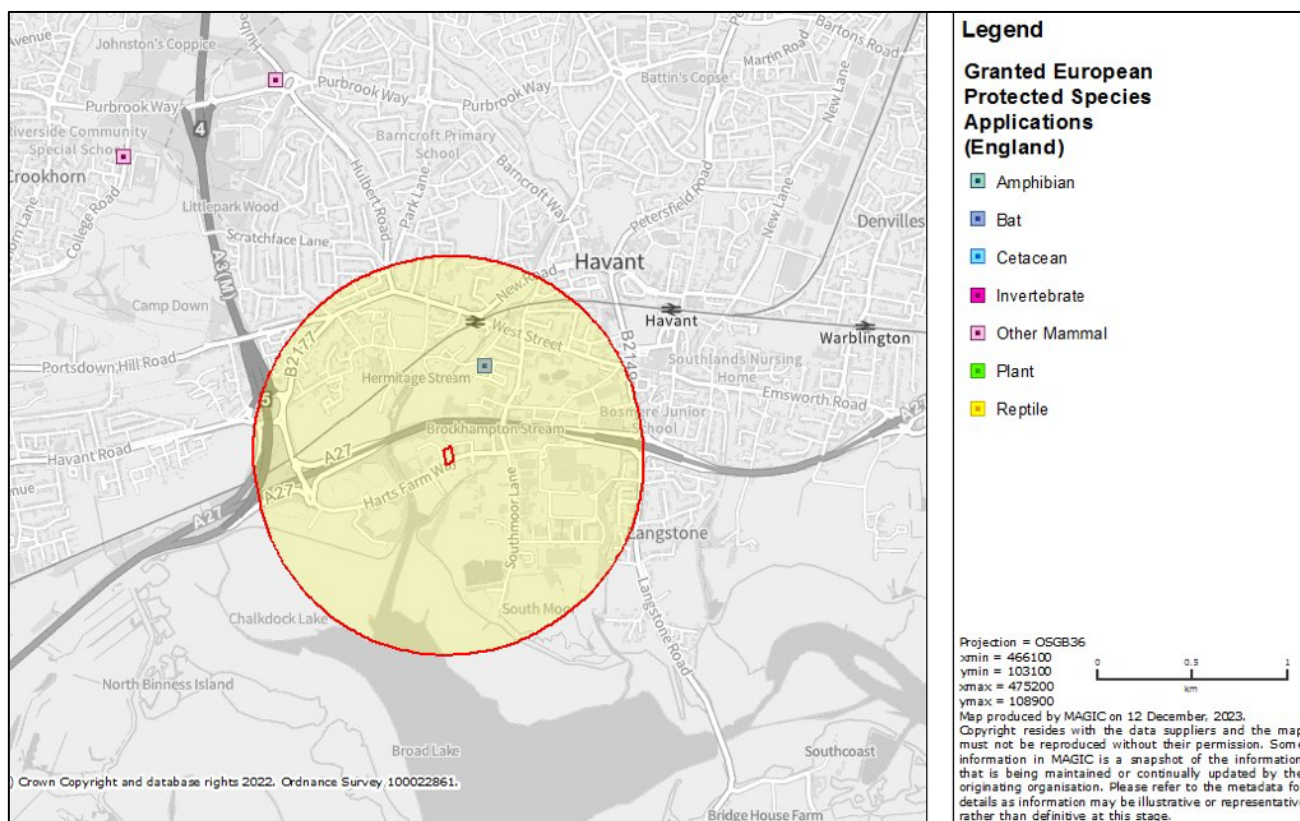


Figure 5. Granted EPS licences within 1km of the application site. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>), contains public sector information licensed under the Open Government Licence v3.0).

3.2 Habitats

The site is dominated by hardstanding which has not been maintained within recent years, leading to plants beginning to establish and areas of fallen deadwood and leaf litter forming. The ruderal vegetation comprises of ground ivy *Glechoma hederacea*, a cranesbill *Geranium* species, herb Robert *Geranium robertianum*, creeping thistle *Cirsium arvense*, dog's mercury *Mercurialis perennis*, teasel *Dipsacus fullonum*, bristly oxtongue *Helminthotheca echioides*, chickweed *Stellaria media*, Canadian fleabane *Erigeron canadensis*, ribwort plantain *Plantago lanceolata*, hogweed *Heracleum sphondylium* and dandelion *Taraxacum officinale* agg. Mosses are abundant between cracks in the hardstanding. Large patches of buddleia *Buddleja davidii* and bramble *Rubus fruticosus* agg. scrub is also present, particularly along the site boundaries and close to the existing entrance at the north. There are a number of rubbish and rubble piles present throughout the site, particularly in the northern areas. A ditch is located along the western and northern boundaries.

The condition of the site and habitats present indicate an establishing open mosaic habitat is beginning to form, but this has only recently arisen in the past four to five years as prior to this aerial imagery shows the site was frequently cleared of vegetation. In addition, aerial imagery shows that much of the buddleia has only established recently, with much smaller extents of scrub shown in aerial images from 2022 (as demonstrated in the aerial image in Figure 1, which shows the extent of buddleia is smaller than at the time of the site visit). The habitat does not meet the definition for Priority habitat at this stage in time.

An area of priority lowland deciduous woodland is located 100m north of the site, along the A27 embankment (Figure 6). There is also an area of coastal and floodplain grazing marsh located north of the A27.



Photograph 1a (left) & b (right). Left – View south-west of the south-west corner of the site, showing a mature beech tree at the site boundary and bramble and buddleia scrub. Right – View of the southern boundary of the site, showing bramble and buddleia scrub.



Photograph 2a (left) & b (right). Left – View east over the site, showing concreted sections beginning to be colonised by buddleia, mosses and other ruderal vegetation.



Photograph 3a (left) & b (right). Left – View north over the site. Right – Views of buddleia scrub, fallen deadwood and other vegetation.



rubbish piles.



Photograph 4a (left) & b (right). Left – Bramble scrub along the eastern boundary. Right – Bramble scrub and piles of rubbish in the north-eastern section of the site.

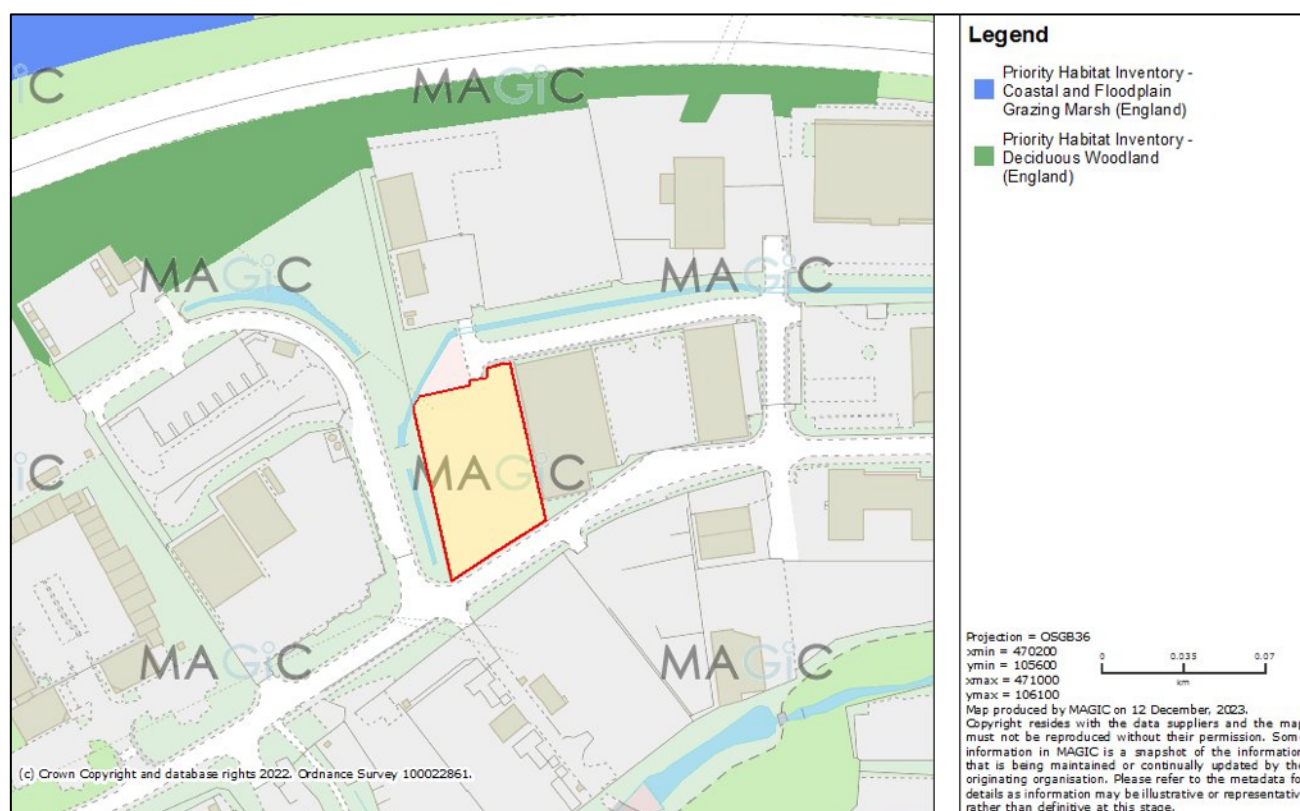


Figure 6. Habitats of importance for nature conservation. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>), contains public sector information licensed under the Open Government Licence v3.0).

3.3 Badgers

No signs of any badger activity were seen during the survey assessment, though there are habitats of value for this species at the site boundaries and to the north. It is likely that if any setts were situated within 30m of the site boundary, then evidence of badger activity would have been observed.



Records of badgers are not provided by the records centre, due to the sensitive nature of this information.

3.4 Bats

No buildings are present within the site. In addition, all trees within the scrub within the site boundary and to be impacted by the proposed works are small individuals with negligible suitability to support roosting bats.

The scrub and scattered ruderal habitat within the site would attract some invertebrate prey for foraging bats. The tree lines and ditch along the western boundary could also provide linear commuting features for bats. Within the wider landscape, industrial land dominates the area, with some small pockets of woodland and mature tree lines along the A27. These have connectivity to the site through the north, which could act as linear features for commuting bats. Ditches are present to the north-east and south-east of the site which may attract bats that frequently forage near water such as soprano pipistrelles *Pipistrellus pygmaeus* and Daubenton's bats *Myotis daubentonii*. Overall, the site is assessed as having low value for foraging and commuting bats but may be used by common species as part of a wider resource.

The Hampshire Biodiversity Information Centre provided 161 bat records in the search area comprising ten identified species, which are detailed in Table 2 below. The closest of these was a bat record of individual noctules *Nyctalus noctula* and serotines *Eptesicus serotinus*, located approximately 80m south from the site and dated to 2022 and 2023 respectively.

Table 2. Bat records returned within a 1km radius of the site.

Species Common name/Scientific name	Number of records
Common pipistrelle	60
Soprano pipistrelle	37
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	2
<i>Pipistrellus</i> species	4
Brown long-eared <i>Plecotus auritus</i>	3
Long eared species <i>Plecotus</i> sp.	1
Serotine	11
Noctule	22
Leisler's bat <i>Nyctalus leisleri</i>	1
Barbastelle <i>Barbastella barbastellus</i>	2
Myotis species <i>Myotis</i> sp.	14
Daubenton's Myotis	1
Whiskered bat <i>Myotis mystacinus</i>	1
Unidentified bat species	2

3.5 Breeding Birds

The bramble and buddleia scrub present within the site and the boundaries has the potential to support a variety of common nesting birds.



The SxBRC provided numerous bird records for the search area concerning a total of 129 species. Most of these species are relatively common and widespread, but the list includes 22 species of principal importance for conservation (S41 NERC Act 2007), and 50 species listed on Schedule 1 of the Wildlife and Countryside Act. In addition, 48 species are red listed on the Birds of Conservation Concern.

A high proportion of the records are non-breeding visitors or occasional visitors to the woodland and estuarine habitats within the wider landscape and are not relevant to the application site. However, the following S41 species could potentially breed on the site: bullfinch *Pyrrhula pyrrhula* and house sparrow *Passer domesticus*.

3.6 Dormice

The bramble and buddleia scrub has some suitability for dormice but provides sub-optimal foraging and refuge habitat, particularly as the scrub is relatively sparse in extent. The site has connectivity at the north to mature woodland located along the A27.

While no records of this species were provided by HBIC, this species is known to be under-recorded and could occur in any suitable habitat in Hampshire.

3.7 Great Crested Newts and other Amphibians

The scrub and ruderal vegetation throughout the site could act as suitable refuge and foraging habitat for amphibians. Furthermore, the piles of rubbish, rubble and deadwood could offer refuge and hibernation opportunities.

There are no waterbodies contained within the proposed development site. A search of aerial imagery and mapping identified three waterbodies within 250m of the site, the most utilised area of habitat by a great crested newt population from a breeding pond ⁶ (see Figure 7). These are detailed in Table 3 below.

Only a portion of Ditch 1 was accessed during the initial site visit in December 2023 (delineated in Figure 7), with a section of this located along the west and northern boundaries of the site. This ditch was filled with water at the time, at a depth of approximately 30-40cm. The ditch is bordered by a mature tree line which means it is subject to a high degree of shading. The terrestrial value of the tree line and surrounding habitat in the wider area for amphibians is moderate, with the areas of mature woodland, grassland and scrub at the north of the site offering suitable foraging habitat and cover for this group of species.

HBIC returned no records for amphibians within 1km of the site boundary.

⁶ Froglife (2001) *Great Crested Newt Conservation Handbook*, page 10 - https://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf

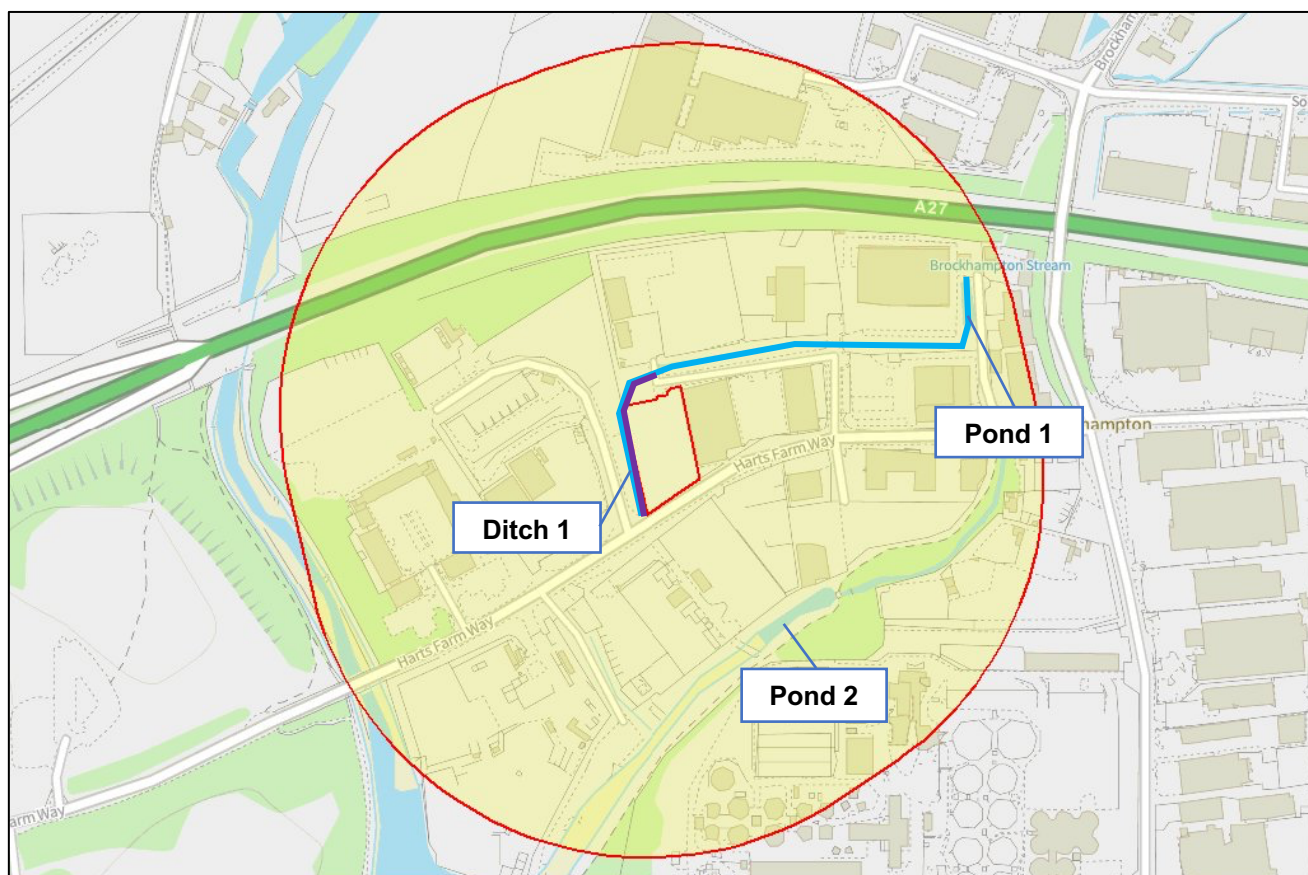


Figure 7. Waterbodies within 250m of the site. A blue overlay line has been produced to show the extent of Ditch 1, including culverted sections under roads. A purple line delineates the area of Ditch 1 that was accessed to carry out a Habitat Suitability Index calculation in December 2023, which has been applied for the entirety of the ditch. Produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

Table 3. Pond descriptions

Pond	NGR	Description	HSI value	Interpretation
Ditch 1	SU 70583 05821	A ditch located along the western and northern boundaries of the site.	0.63	'average' suitability (see full results in Appendix 3).
Pond 1	SU 70832 05934	Pond connected to Ditch 1.	N/A	Connected to Ditch 1 so included within assessment
Pond 2	SU 70648 05657	A pond within Brockhampton Stream, a stream connected to Langstone Harbour.	N/A	Not suitable due to its' direct connectivity to Langstone Harbour and therefore high salinity levels.



3.7.1 Environmental DNA (eDNA) Survey

The eDNA results of the combined sampling of Ditch 1 and Pond 1 indicate that eDNA belonging to GCN was not detected in the samples submitted (see Figure 8). As the result was negative, it can be reasonably assumed that GCN are absent from this waterbody. Therefore, no further surveys or mitigation in respect to great crested newts are required in this instance and great crested newts are not considered further within this report.

Results						
Lab ID	Site Name	OS Reference	Degradation Check	Inhibition Check	Result	Positive Replicates
1279	Harts Farm Way	SU7060605867	Pass	Pass	Negative	0/12
Matters affecting result: none						
Reported by: Daisy Chambers			Approved by: Chelsea Warner			

Figure 8. Great Crested Newt eDNA technical report from SureScreen Scientifics for Pond 1 and Ditch 1 (combined) at Harts Farm Way.

3.8 Reptiles

There are multiple habitats on site that are suitable for common reptile species such as common lizard and slow worm. This includes the scrub and ruderal vegetation throughout the site, which comprises habitat of value for foraging and refuge purposes. Furthermore, these habitats extend from the northern site boundary to meet the verges of the A27, which can be good wildlife corridors for reptiles, especially given the shelter of the woodland. In addition, the piles of rubble, rubbish and fallen deadwood could create suitable basking spots for lizards and shelter opportunities.

The HBIC search indicates the presence of slow worm and common lizard within 1km of the site. The closest record is a finding of four slow worms in 2008 along the southern embankment of the A27.

3.9 Riparian Wildlife

The ditch along the west and northern boundaries has some suitability to support water vole. In addition, the HBIC records search indicates the presence of European water vole and European eel *Anguilla anguilla* within 1km of the site. The closest water vole record is located in a ditch 900m west of the site.

3.9.1 Water Vole Survey Walkover

No signs of water vole were identified within the survey walkover. During the site visit it was found that whilst the ditch system has some suitability, the bank profile of the ditches is predominately too low to support a burrow system for water voles. In addition, there was little consistently deep water throughout



the ditch system which would limit dispersal for water voles to the area adjacent to the project boundary. The ditch banks were also thick with vegetation in places which would further reduce their suitability.

3.10 Invasive Non-native Species

Buddleia scrub was identified around the site and its' boundaries. Although not listed on Schedule 9 of the Wildlife and Countryside Act, this is a non-native and invasive species.

The HBIC biodiversity records search indicates the presence of few-flowered garlic *Alium paradoxum*, three-cornered garlic *Allium triquetrum*, Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera*, false Virginia-creeper *Parthenocissus inserta* and Japanese rose *Rosa rugosa* within 1km of the site. The closest record is Japanese rose located 280m south-west of the site in 2021.

3.11 Other Notable Species

No evidence of any other notable species was found during the walkover survey.

The majority of the habitat within the site boundaries including the scrub and ruderal vegetation, is suitable habitat for hedgehogs to shelter and forage. HBIC provided eight records for hedgehog within 1km of the site. All of these were located on the far side of the A27, the closest being a record 500m north dated to 2019.

The site supports early-establishing open mosaic habitat of scrub, ruderal vegetation, rubble piles and deadwood piles, a habitat matrix which can support a rich assemblage of invertebrates, including rare and scarce invertebrates when well-established. However, this habitat has only recently formed within the last four to five years, and therefore it is unlikely that substantial populations of any notable invertebrates have colonised within this time.

3.12 Survey Limitations

An initial site assessment such as this is only able to act like a 'snapshot' to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey but may be evident at other times of the year. For this reason, habitats are assessed for their potential to support some species, even where no direct evidence (such as droppings) has been found.

4 IMPACT APPRAISAL

4.1 Designated Sites

The site lies within the 'Zone of Influence' of four National Site Network sites and two SSSIs (Langstone Harbour SSSI, Solent Maritime SAC, Chichester and Langstone Harbours SSSI, SPA and Ramsar) and the potential impact from this development is unknown. A separate Habitat Regulations Assessment (HRA) Screening



Statement has been produced to accompany this report⁷. This found that there was not the potential for significant effects and therefore an Appropriate Assessment is not considered to be required.

There are highly likely to be impacts on nearby designated sites during the construction phases of the development, including noise, light and dust pollution. As such, best working practices relating to noise levels, dust suppression through damping and surface water will help to minimise any risk of impacts.

4.2 Habitats

4.2.1 Open Mosaic Habitat

Much of the site comprises of hard standing, ruderal vegetation and bramble and buddleia scrub, habitats that are common and widespread and considered to have lower ecological value. However, these habitats together indicate that an open mosaic habitat is beginning to establish. As these habitats have only recently formed within the past four to five years, the botanical and habitat diversity of the site is not sufficient to yet reach the criteria for priority habitat under Section 41 of the NERC Act 2007 and therefore there will be no loss of priority habitat. Nonetheless, to compensate for the loss of the habitat features identified within the current site, it is recommended that new features are created within the development, including scrub planting and the creation of a bee bank around the site boundaries.

Scrub Creation

It is particularly recommended that areas of native species-rich scrub are created around the site to compensate for any loss of this habitat type. This could include species such as bramble or blackthorn *Prunus spinosa*. All native species should be sourced from certified nurseries in the UK, to avoid the spread of disease or pests. Given the arrival of Ash dieback *Hymenoscyphus fraxineus*, it is strongly recommended that current advice from DEFRA, Forestry Commission and Woodlands Trust is followed regarding the planting of this species⁸.

Bee Bank Creation

The creation of a bee bank would provide areas of bare ground to compensate for the loss of this habitat type, particularly benefiting burrowing mining bees *Andrena* spp. by providing shelter. The creation of a bee bank would involve piling a mound of loose, sandy soil (at least 60cm in height) in an open, south-facing aspect of the site to create a warm environment. Once established, the bank should be monitored and any weeds that appear on the bank removed. A suitable wildflower mix can be planted on any sandy soil adjacent to the bee bank.

4.2.2 Ditch

There is a ditch located along the western and northern boundaries. Without the adoption of careful works practices, the proposed development has the potential to result in the degradation of the ditch either through direct pollution from sedimentation and run-off. Any works within 8m of the ditch must adhere to the Environment

⁷ The Ecology Co-op (2023). *Habitats Regulations Assessment - Harts Farm Way, Havant*

⁸ Defra, 2013. *Chalara Management Plan*. Available at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221051/pb13936-chalara-management-plan-201303.pdf



Agency's Pollution Prevention Guidelines⁹ (note these guidelines have been withdrawn, however, in the absence of updated guidance, provide the most relevant advice regarding pollution prevention) and suitable mitigation measures outlined in a Construction Environment Management Plan (CEMP) to ensure that both direct and indirect effects to the ditch by the works are minimised.

4.3 Badgers

No signs of badger activity were identified during the assessment and no badger setts are situated on or near to the proposed construction zone. No further surveys for badgers are recommended. However, shortly prior to works commencing, a pre-construction check for evidence of badger setts within site must be carried out by a suitably qualified ecologist. If any evidence of a sett is identified, works will need to be postponed until Natural England is contacted regarding the requirement to obtain a Badger CL35 Licence.

4.4 Bats

As the site may be used by foraging and commuting bats, it is important that the potential for disturbance from artificial lights is considered. The proposed development is likely to require an 'ecologically sensitive lighting scheme' in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 4).

4.5 Breeding Birds

The scrub within the site has potential to support a variety of common nesting birds. It will be essential for the development to consider the nesting bird season and any vegetation removal must be timed to avoid of the nesting bird season between 1st March to 31st August inclusive, unless features are first searched by a suitably qualified ecologist and no active nests are found. If an active nest is identified, a minimum exclusion zone for all works within a 5m radius of the nest must be established to protect it from disturbance until the young have fledged.

4.6 Dormice

Whilst the bramble and buddleia scrub have low value for dormice, the potential presence of dormice cannot be completely ruled out given the connectivity to woodland in the wider landscape. A dormouse nest tube survey is not recommended as it is not considered to be proportionate to the small scale of the proposed impact on suitable vegetation. Furthermore, there is not sufficient habitat upon the site for a nest tube presence/likely absence survey to be carried out. As a result, reasonable avoidance measures are recommended. This must include:

- all scrub removal will be undertaken only under a watching brief by a suitably qualified ecologist. In order to ensure compliance with legislation protecting dormice, the advice of the ecologist shall be adhered to under all circumstances;
- a tool box talk will be provided to the contractors on being vigilant for dormouse nests while carrying out the vegetation clearance and fence removal;

⁹ Environment Agency (2013). Pollution Prevention Guidelines: PPG1.



- all vegetation will be cleared slowly and methodically using hand-held trimmers and chainsaws as appropriate, only following a thorough hand search;
- the ecologist will undertake thorough fingertip searches of the vegetation being removed to confirm the absence of any dormouse nests; and
- should any dormice or evidence of dormice be identified at any time, then work would have to cease whilst an EPS licence is applied from Natural England and suitable mitigation strategy is put in place.

As dormice are nocturnal, it is important that the potential for disturbance from artificial lights is considered, as for bats (see Appendix 4).

4.7 Reptiles

The development will result in the loss of ruderal vegetation, scrub and rubbish piles, which have suitability for common reptile species such as slow worm and common lizard. However, the proposed impact zone is small, with areas of the site comprising completely of hardstanding. Therefore, in this instance no further reptile surveys are recommended. Instead, precautionary measures are advised, to avoid any harm to reptiles during the construction phase of the development. This will involve the following:

- Prior to any other works commencing, of pre-commencement inspection of all suitable habitat within the development impact zones must occur by a suitably qualified ecologist. In the event any reptile is found, it must be relocated to suitable habitat outside of the development zone.
- The removal of all tall vegetation will then be subject to a two-phase trim approach. The first trim would reduce the vegetation to 15cm in height to encourage any reptiles to move out of the area. A second pass would reduce the vegetation height to 5cm which would render the habitat unsuitable. These works should be undertaken by an ecologist who is trained in the use of suitable machinery to ensure that the 'two-phase vegetation removal' work is compliant.
- Vegetation removal must be phased to encourage reptiles to disperse northwards along the western and northern boundaries to areas of suitable habitat within the wider landscape.
- Dismantling of any rubbish, rubble or deadwood piles must be carried out by hand during under the supervision of an ecologist. This should be carried out when air temperatures are above 8°C to avoid disturbing hibernating reptiles. All debris should be removed offsite or into a skip after dismantling to prevent build-up of suitable habitat elsewhere on site.

4.8 Riparian Wildlife Invasive Non-native Species

Whilst buddleia is not a Schedule 9 species, it is invasive so care should be taken during site preparation to prevent it from spreading further, especially into the woodland north of the site.



4.9 Other Notable Species

The hedgehog has suffered dramatic population declines in recent decades¹⁰ although it remains fairly widespread. The scrub on site has the potential to be used by this species for foraging, commuting and shelter and these habitats will be lost during the proposal. No further surveys are recommended as at present there are no set survey guidelines for hedgehogs. However, where any suitable habitats for hedgehogs are removed, site preparation must be preceded by a hand search completed by a suitably qualified ecologist to ensure that if the event a hedgehog is present it can be identified and moved safely out of the way unharmed. This can be undertaken at the same time as reasonable avoidance measures for dormice.

5 OPPORTUNITIES FOR ENHANCEMENT

The proposed development represents an opportunity for habitat enhancement to benefit insects, birds, and bats. Any planting scheme should include native shrub species and flowering species known to encourage insect diversity. Such enhancement measures are in line with the recommendations of the NPPF and as such would be considered favourably when determining the planning application.

The client is also encouraged to consider including bat roosting opportunities onto mature trees at the site boundaries such as bat boxes. For example, two Vivara Pro WoodStone bat box could be installed upon the south or eastern face of the tree trunks at least 3m from the ground. As best practice, the lighting scheme should be designed to minimize light spill (see Appendix 4), around these roosting features and potential commuting routes.

In addition, two bird boxes, such as 1B Schwegler Nest Boxes, could be installed on trees between 1.5-3m high close to other vegetation.

More tailored enhancements can be outlined once Phase 2 surveys of the site have been undertaken.

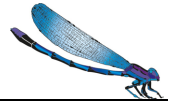
6 CONCLUSIONS

Habitats identified at Harts Farm Way includes hardstanding with establishing ruderal vegetation and buddleia and bramble scrub atop. These habitats together indicate that an open mosaic habitat is beginning to establish, which can be of particular benefit to scarce and notable invertebrates, but as they have only recently formed, this habitat does not meet the criteria for priority habitat. To compensate for the loss of this early-establishing mosaic habitat, it is recommended that new habitat features are created within the development, including scrub planting and the creation of a bee bank. A ditch also is located along the western and northern boundaries of the site which could be vulnerable to sedimentation and runoff during the construction phase, so a CEMP should be produced, detailing measures to prevent impacts upon this ditch.

Precautionary mitigation will be required for:

- dormice when removing scrub;
- reptiles during the removal of ruderal vegetation, scrub and rubbish;

¹⁰ British Wildlife (December 2016) Britain's Hedgehogs: research and the conservation effort in the face of serious decline. British wildlife Vol. 28, pp78-86)



- hedgehogs when removing scrub and ruderal vegetation;
- invasive species (buddleia) during site preparation;
- water voles during construction; and
- breeding birds when removing scrub.

The enhancement opportunities identified in section 5 of this document will result in new opportunities for birds and bats and likely beneficial effects for biodiversity at the site should they all be

It is important that no habitat clearance or other site preparation work should be undertaken until planning permission has been granted and all relevant protections for habitats of importance and protected species have been detailed and implemented. Please be advised that any work to remove or modify habitats outside of typical management may undermine a future planning application.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op, info@ecologyco-op.co.uk, www.ecologyco-op.co.uk, Office: 01798 861800.



APPENDIX 1 – Wildlife Legislation and National Planning Policy

Introduction

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to wildlife in general and certain species. It includes current national planning policy relevant to nature conservation.

The ‘Birds Directive’, ‘Habitats Directive’ and ‘Natura 2000 Sites’

The Council Directive 79/409/EEC on the Conservation of Wild Birds (“the Birds Directive”) sets a framework for the protection of wild birds. Under the Directive, several provisions are made including the designation and protection of ‘Special Protection Areas’ (SPAs) – areas which support important bird populations, and the legal protection of rare or vulnerable species.

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the “Habitats Directive”) directs member states of the EU to take measures to maintain the favourable conservation status of important habitats and species. This requires the designation of a series of sites which contain important populations of species listed on Annex II of the Directive (for example Bechstein’s bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus* and white-clawed crayfish *Austropotamobius pallipes*). Together with ‘Special Areas of Conservation’ (SACs), SPAs form a network across Europe of protected areas known as the ‘Natura 2000 sites’.

Annex IV lists species in need of more strict protection, these are known as “European Protected Species (EPS)”. All bat species, common dormice *Muscardinus avellana*, otter *Lutra lutra* and great crested newts *Triturus cristatus* are examples of EPS that are regularly encountered during development projects.

The ‘Habitats Regulations’

The Conservation of Habitats and Species Regulations 2017, as amended (the “Habitats Regulations”) is the principle means of transposing the Habitats Directive and the Birds Directive, and updates the Conservation (Natural Habitats, &c.) Regulations 1994 (“the 1994 regulations”) in England and Wales.

‘Natura 2000’ sites, now known as National Site Network sites under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, receive the highest level of protection under the Regulations which requires that any activity within the zone of influence of these sites would be subject to a Habitats Regulations Assessment (HRA) by the competent authority (e.g. planning authority), leading to an Appropriate Assessment (AA) in cases where ‘likely significant effects’ to the conservation objectives are identified.

For European Protected Species, Regulation 41 makes it a criminal offence to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb wild animals of such species;
- deliberately take or destroy their eggs (where relevant);
- damage or destroy a *breeding or resting place* of such an animal;
- possess, control, sell or exchange any live or dead animal or plant, of such species;
- deliberately pick, collect, cut, uproot or destroy a wild plant of such species.

The Habitats Directive and Habitats Regulations provide for the derogation from these prohibitions for specific



reasons provided certain conditions are met. An EPS licensing regime allows operations that would otherwise be unlawful acts to be carried out lawfully. Natural England is the licensing Authority and, in order to grant a license, ensures that three statutory conditions (sometimes referred to as the ‘three derogation tests’) are met:

- a licence can be granted for the purposes of “preserving public health or safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53 (2) (e);
- a licence can be granted if “there are no satisfactory alternatives” to the proposed action;
- a licence shall not be granted unless the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Wildlife and Countryside Act (1981) as amended.

This remains one of the most important pieces of wildlife legislation in the UK. There are various schedules to the Act protecting birds (Schedule 1), other animals including insects (Schedule 5), plants (Schedule 8), and control of invasive non-native species (Schedule 9).

Under the Wildlife and Countryside Act (WCA) 1981, all wild birds (with the exception of those listed on Schedule 2), their eggs and nests are protected by law and it is an offence to:

- take, damage or destroy the nest of any wild bird while it is in use or being built
- take or destroy the egg of any wild bird
- disturb any bird listed on Schedule 1, while it is nest building, or at a nest with eggs or young, or disturb the dependant young of any such bird.

Schedule 5 lists all non-avian animals receiving protection to a varied degree. At its strongest, the Act makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturb animals while occupying such places. Examples of species with *full protection* include all EPS, common reptile species, water vole *Arvicola amphibius*, white-clawed crayfish *Austropotamobius pallipes* and Roman snail *Helix pomatia*. Other species are protected from sale, barter or exchange only, such as white letter hairstreak *Satyrrium w-album*.

The Act makes it an offence to intentionally pick, uproot or destroy any plant or seed, and sell or possess any plant listed on Schedule 8. It is also an offence to intentionally uproot any wild plant not listed on Schedule 8 unless authorised [by the land owner]. Species on Schedules 5 and 8 are reviewed every 5 years when species can be added or removed.

Measures for the prevention of spreading non-native species which may be detrimental to native wildlife is included in the Act, which prohibits the release of animals or planting of plants into the wild of species listed on Schedule 9 (for example, Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandifera*, New Zealand Pygmyweed *Crassula helmsii*).

The Wildlife and Countryside Act 1981 (as amended) also prohibits certain inhumane methods of traps and devices for the capture or killing of wild animals and certain additional methods such as fixed trap, poisoning with gas or smoke, or spot-lighting with vehicles for killing species listed on Schedule 6 of the Act (this includes all bat species, badger, otter, polecat, dormice, hedgehog and red squirrel).

Natural Environment and Rural Communities (NERC) Act (2006)

The NERC Act (2006) created the statutory nature conservation body Natural England, and places a statutory



duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of *habitats and species of principal importance for the conservation of biodiversity* in England (commonly referred to as the 'Biodiversity Duty'). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers. Section 41 of the NERC Act lists the habitats and species of principle importance. This includes a wide range of species from mosses, vascular plants, invertebrates through to mammals and birds. It originates from the priority species listed under the UK Biodiversity Action Plan (UK BAP) with some omissions and additions.

Environment Act (2021)

The Environment Act sets a target of halting the decline in species through the inclusion of a legally binding 2030 species abundance target. Aiming to restore natural habitats and enhance biodiversity, the Act requires new developments to improve or create habitats for nature (through mechanisms such as mandatory Biodiversity Net Gain), and tackle deforestation. Going forwards, UK businesses will need to look closely at their supply chains as amongst other measures they will be prohibited from using commodities associated with wide-scale deforestation. Woodland protection measures are also strengthened through the Act.

The Act enables the reform of the Habitats Regulations and further improves protection for nature through the establishment of Local Nature Recovery Strategies that support national Nature Recovery Networks. In addition, the Act provides for the production of Protected Site Strategies and Species Conservation Strategies, aimed at supporting the design and delivery of strategic approaches to deliver better outcomes for nature.

Protection of Badgers Act (1992)

The badger *Meles meles* is afforded specific legal protection in Britain under the Protection of Badgers Act (1992), and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) (see above).

Under this legislation, it is a criminal offence to:

- intentionally kill, injure, take, possess, or cruelly ill-treat, a badger, or to attempt to do so;
- interfere with a sett, by damaging or destroying it;
- to obstruct access to, or any entrance of, a badger sett; or
- to disturb a badger when it is occupying a sett.

A licence may be obtained from Natural England to permit certain prohibited actions for a number of defined reasons including interference of a sett for the purpose of development, provided that a certain number of conditions are met. Note that licenses are not normally granted for works affecting badgers between the end of November and the start of July.

National Planning Policy Framework

The National Planning Policy Framework (NPPF 2023)¹¹ sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system.

Paragraph 179b, which states that council policies should “*promote the conservation, restoration and*

¹¹ HM Government (2023). National Planning Policy Framework. Department for Communities and Local Government. Available online at: https://assets.publishing.service.gov.uk/media/64f991c99ee0f2000fb7c001/NPPF_Sept_23.pdf.



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 Office of the Deputy Prime Minister (ODPM) Circular 06/2005, 2005)¹². In accordance with the NPPF, it is important that developments should contribute to and enhance the natural and local environment by:

- minimising impacts on existing biodiversity and habitats;
- providing net gains in biodiversity and habitats, wherever possible;
- establishing coherent ecological networks that are more resilient to current and future pressures.

UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP), first published in 1994, was the UK’s response to the commitments of the Rio Convention on Biological Diversity (1992) until 2010, when the UK BAP was replaced by the UK Post-2010 Biodiversity Framework. This framework covers the period 2011 to 2020 and forms the UK government’s response to the new strategic plan of the United Nations Convention on Biodiversity (CBD) published in 2010. This promotes a focus on individual countries delivering target for protection for biodiversity through their own strategies.

The most recent biodiversity strategy for England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra (2011), and a progress update was provided in July 2013 (Defra 2013).

'Biodiversity 2020' builds on the Natural Environment White Paper for England – 'The Natural Choice', published on 7 June 2011, and sets out the strategic direction for biodiversity policy for the next decade.

Biodiversity 2020 deliberately avoids setting specific targets and actions for local areas and species because the Government believes that local people and organisations are best placed to decide how to implement the strategy in the most appropriate way for their local area or situation.

Birds of Conservation Concern (BoCC)

In 1996, the UK’s leading non-governmental bird conservation organisations listed the conservation status of all bird species in the UK against a series of criteria relating to their population size, trends and relative importance to global conservation. The lists, known as the 'Red', 'Amber' and 'Green' lists (in order of decreasing concern) are used to inform key conservation policy and decisions. The lists are reviewed every five years and are a useful reference for determining the current importance of a particular site for birds. The most recent review was undertaken in 2021 (Stanbury et al, 2021), which provides an up to date assessment of the conservation status of birds in the UK.

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<http://www.legislation.gov.uk/ukpga/1992/51/contents>

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APPENDIX 2 – Havant Borough Council Planning Policy

Table 4. Summary of Havant Borough Council Core Strategy (March 2011).

Policy Title	Policy Summary
CS11 - Protecting and Enhancing the Special Environment and Heritage of Havant Borough	Planning permission will be granted for development that: • Protects and where possible enhances the borough statutory and non-statutory designated landscapes, habitats and features of hydrological and geological interest. This will be achieved by appropriate mitigation measures including creation of new habitats and water bodies/courses or planting of new trees and woodlands. Attention should be paid to: SPAs, SACs, SSSIs, NNRs, SINCs and LNRs. • Supports an ongoing programme of survey of habitats and species and designation of Sites of Importance for Nature Conservation. • Ensures partnership working with landowners to ensure land management practices restore and enhance where possible new valued landscapes, habitats and their soil structure, particularly the ancient woodland remnants of the Forest of Bere. • Protects wildlife corridors to prevent the fragmentation of existing habitats and to allow species like Brent Geese to respond to the local affects of climate change
CS16 – High Quality Design	All development should demonstrate that its design integrates with existing local landscape features and promotes wildlife and biodiversity



APPENDIX 3 – Great Crested Newt ‘Habitat Suitability Index’ Values

Table 5. HSI calculation for ponds assessed during the survey.

	Ditch 1/Pond 1	
NGR	SU 70586 05836	
SI attribute	SI value	Notes
Location	1.00	SE England
Pond area	1.00	670m ²
Pond drying	0.1	Annual
Water quality	0.67	Moderate
Shade cover	0.6	80%
Water-fowl	1.00	Absent
Fish presence	0.67	Possible
No. ponds	0.75	5
Terrestrial habitat	0.67	Moderate
Macrophytes	0.7	40%
HSI value	0.63	‘Average’ suitability



APPENDIX 4 – Reducing Impacts of Artificial Light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts to other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness.

Guidelines issued by the Bat Conservation Trust¹³ should be referred to when designing the lighting scheme. Note that lighting designs in very sensitive areas should be created with consultation from an ecologist and using up-to-date bat activity data where possible. The guidance contains techniques that can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

Avoid lighting key habitats and features altogether

There is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation; however, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species.

Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- dark buffers, illuminance limits and zonation;
- sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill;
- consideration of the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consideration should be given to the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cat eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times;
- screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding;
- glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features;

¹³ Bat Conservation Trust and Institute for Lighting Professionals (2023) Guidance note 8. Bats and Artificial Lighting. <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>



- creation of alternative valuable bat habitat on site, whereby additional or alternative bat flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development;
- dimming and part-night lighting. Depending on the pattern of bat activity across the key features identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

Demonstrate compliance with illuminance limits and buffers

- *Design and pre-planning phase*; it may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking*; as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

Lighting Fixture Specifications

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- Lighting spectra: peak wavelength >550nm
- Colour temperature: <2700K (warm)
- Reduction in light intensity
- Minimal UV emitted
- Upward light ratio of 0% and good optical control

Further reading:

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End.
