



Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment Survey

Southmere Farm, Langstone, Hampshire PO9 1QX

Claire Ray – Langstone Estates

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Guidelines

This assessment has been designed to meet:

- Chartered Institute of Ecology and Environmental Management ‘Guidelines for Preliminary Ecological Appraisal’ (2013); and
- British Standard 42020 (2013) ‘Biodiversity – Code of Practice for Planning and Development’.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is enshrined in Government planning guidance, for example, paragraph 193 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

In consequence of the scale and intensity of the proposed development, the low impact on ecological receptors identified through both the site survey and search of local biological records, and the passive interface with the mitigation hierarchy, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application or support the recommendations for further surveys.

Executive summary

Arbtech Consulting Ltd. undertook a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Southmere Farm, Langstone, Hampshire PO9 1QX on 01/03/18. The aim of the survey was to complete an extended Phase 1 Habitat Survey of the survey area (all land that will be impacted by the proposals) and analyse it against a desk study, and complete a bat roost assessment of all structures on site.

The development proposals will involve demolition of all existing buildings to redevelop the site for housing - 3 x 4 bedroom detached houses, 2 with detached garage, 1 with integral garage.

Recommendations -

Ecological Factor	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements
Designated sites	The site approx. 200m north of the Langstone Harbour area and all associated overlapping designated sites. The development lies within the 5.6km buffer of the Solent Maritime SPA and will therefore need to provide financial contribution to the Solent Recreation Mitigation Strategy.	As the development is situated adjacent to a stream that feeds into these areas, there could be impacts from pollution of the water course. The increase in housing will lead to increase of public use of the designated areas and could impact breeding and	There will need to be a minimum of a 10m buffer between the construction zone and the water course. Environment pollution prevent guidelines will need to be followed in order to protect the stream from contamination.	The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99 None applicable.

		overwintering wildfowl with the increase in dogs/dog walkers and cats.		
Notable habitats and plants	A stream and deciduous woodland property habitat lies to the west of the site.	There will be indirect impacts through noise, light and pollution. Some tree removal may be necessary, reducing the size of this habitat and the buffer it forms between the construction zone and the stream.	Protective fencing should be erected along the western boundary of the development. There will be no construction activity within 10m of the stream. Pollution prevention guidelines will be followed. A sensitive lighting strategy will need to be implemented in order to protect the adjacent habitats from light pollution post development.	None applicable
Invasive / Non-native species	None present	No impacts	No further work required	None applicable
Bats	B1 has high habitat value for roosting bats. The internal and external structures provide excellent roosting habitat for both crevice and void dwelling bat species. The adjacent habitat provides excellent foraging and commuting resources.	Roosts could be destroyed and bats injured or killed during demolition of B1. The increase in lighting on site could disrupt foraging and commuting activity post development	Roost presence/likely absence surveys are required on B1. Three bat emergence/re-entry surveys are required during the active bat season (May – September). To comply with national guidelines at least two of the surveys should be completed during the optimal survey period (mid-May to August), and one of the surveys	To be confirmed following further surveys.

			must be a dawn re-entry survey. Three surveyors are required to provide full coverage of B1. Prior to the first survey a full internal inspection of B1 must be carried out. Low impact lighting strategies will be adopted from the guidance outlined in the Bat Conservation Trust “Bats and Lighting” publications: http://www.bats.org.uk/pages/bats_and_lighting.html The lighting on the site will: - Use narrow spectrum light sources to lower the range of species affected by lighting - Use light sources that emit minimal ultra-violet light - Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. - Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or	
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			below the horizontal. Light spill will be reduced via the use of low level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. External lighting will be positioned below the eaves, be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. Wall lights and security lights will be 'dimnable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.	
Birds	B1 is a confirmed nesting site for swallows. There is an owl box in B2 that could be used. B1 also has suitability for barn owls although this could not be confirmed due to lack of access. The woodland and stream provide habitat for a variety of species including	Active nests could be damaged or destroyed during building demolition and tree removal. There will be a loss of nesting habitat in the buildings. The woodland and stream could deteriorate leading	B1 should be checked for barn owl use during the further bat surveys when access has been provided. The owl box will need to be checked for use prior to demolition of B2. The nesting season should be avoided if possible. If the nesting season cannot be avoided (March-August) then a nesting bird check should be carried out immediately	Install the following bird boxes on the new buildings: Schwegler No 17 swift nest boxes Schwegler 1SP Sparrow Terraces Nest boxes should be positioned at least 3m above ground level where they will be

	waders and waterfowl that migrate up from Langstone Harbour to the south.	to a loss of habitat.	prior to the start of works. Any in use nests must be left until the young have fledged.	sheltered from prevailing wind, rain and strong sunlight.
Reptiles	The short grassland on site does not provide suitable reptile habitat.	No impact	No further surveys required	Areas of long grassland and scrub should be created. Log and stone piles should be added on site to improve reptile habitat. These should be south facing and adjacent to longer vegetation for cover.
Great crested newts	The short grassland on site does not provide suitable GCN habitat.	No impact	No further surveys required.	N/A
Other Terrestrial Mammals	Hedgehogs – the woodland and grassland provide suitable habitat for hedgehogs. Badgers – the woodland provides suitable badger habitat. There was no sign of any badger activity throughout the site or within 30m of the construction footprint.	Hedgehogs - Individual animals could be killed or injured during development if pits are left open. Badgers – no impact Dormice – no impact as the woodland will be	A water vole survey should be carried out to establish whether this species is present in the adjacent stream within 30m of the development. Two surveys should be carried out in suitable weather conditions over the spring/summer or early autumn. The surveys should be undertaken between March and October around a month apart.	Log piles should be added to provide refugia for hedgehogs and other species. Hedgehog boxes should be added in the gardens. Fruit trees could be planted to provide additional foraging resources. Gaps should be left in new fences to retain connectivity.

	Dormice – the woodland provides suitable habitat for dormice however it has poor connectivity to any larger areas of woodland or hedgerow network. Water voles – the stream provides suitable habitat for water voles. There is a strong population of water voles in the local area and this species is likely to be present in this habitat. Otters – as the stream is not connected to any major watercourse nearby it is unlikely that otters are present.	retained and protected. Water voles - Individual animals could be killed or injured during development if pits are left open. Pollution of the stream and surrounding vegetation from the development could lead to the habitat no longer being used by this species. The increase in human and pet activity could drive the population away. Animals could be predated by dogs or cats.	The following recommendations are given in order to mitigate against potential harm to terrestrial mammals during the development works. - Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. - Security lighting to be directed away from the undergrowth. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.	
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For full details of these recommendations, please go straight to section [4.0 Conclusions, Impacts and Recommendations](#). Otherwise, the full report starts below.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Ltd. was commissioned by Langstone Estates to undertake a Preliminary Ecological Appraisal (PEA) at Southmere Farm, Langstone, Hampshire PO9 1QX. An extended Phase 1 Habitat Survey of the survey area (all land that will be impacted by the proposals) has been carried out alongside a preliminary roost assessment on the buildings.

No previous surveys have been carried out by Arbtech.

1.2 Site Context

The site is located at National Grid Reference SU 7147 0527 and covers approx. 1,500m². The site lies on the southern outskirts of Langstone in close proximity to Chichester And Langstone Harbours Ramsar Site, Langstone Harbour Site of Special Scientific Interest (SSSI), and Chichester and Langstone Harbours Special Protection Area (SPA).

1.3 Scope of the report

This report describes the baseline ecological conditions at the site; evaluates habitats within the survey area in the context of the wider environment; and describes the suitability of those habitats for notable or protected species. It identifies significant ecological impacts as a result of the development proposals; summarises the requirements for further surveys and mitigation measures, to inform subsequent mitigation proposals, achieve Planning or other statutory consent, and to comply with wildlife legislation.

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development; establishing the baseline conditions for future monitoring. To achieve this, the following steps were taken:

- The desk study area and field survey area (generally 50m from the site boundary/proposed footprint and including the 'zone of influence' of the scheme) have been identified
- A desk study has been carried out including a data search from Hampshire Biodiversity Information Centre (HBIC).
- Baseline information on the site and surrounding area has been recorded through an 'Extended Phase 1 Habitat Survey', including a Phase 1 Habitat Survey (JNCC 2010) and recording further details in relation to notable or protected habitats and species
- The ecological features present within the survey area have been evaluated where possible (CIEEM, 2006)
- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act [WCA]) have been identified
- Likely impacts on features of value, as a result of the development proposals, have been identified
- Recommendations for further survey and assessment have been made
- Recommendations for mitigation and opportunities for enhancement have been provided based on current information

A survey plan is presented in Appendix 1, the proposed Project Plan is included in Appendix 2 (where available), desk study results are provided in Appendix 3, and a summary of relevant legislation can be found in Appendix 4.

1.4 Project Description

The development proposals will involve demolition of all existing buildings to redevelop the site for housing - 3 x 4 bedroom detached houses, 2 with detached garage, 1 with integral garage. The proposed site plan is included in Appendix 2 (where available).

2.0 Methodology

2.1 Desk Study methodology

Existing biological records data relating to the site and a surrounding 2km radius (the study area) are required to conform to national guidelines. The data search is confidential information that is not suitable for public release.

A review of the following information sources has also been undertaken to inform the assessment:

- Landscape structure using aerial images from Google Earth and OS maps
- Designated sites, habitat and granted EPSL records held on Magic.gov.uk.

2.2 Site Survey methodology

The survey was undertaken by Natalie Evans (Natural England Bat Licence Number: 2015-11257-CLS-CLS) on 01/03/18.

The methodology for the Phase 1 Habitat Survey is based on the best practice publication Phase 1 Habitat Survey Methodology (JNCC, 2010). All land parcels are described and mapped according to JNCC Phase 1 habitat classification (see site map in Appendix 1). Where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management.

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species. The likelihood of the presence of protected species is ranked; the habitats on site are evaluated against their likelihood to provide suitable habitat for protected species.

The ecological value of the survey area has been assessed based on the Guidelines for Ecological Impact Assessment (CIEEM, 2006), and the Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring (David Hill, 2005), using geographic frames of reference. The biodiversity value of any identified designated sites, habitat types and associated species assemblages has been considered. The distribution and extent of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were also noted throughout the survey area.

All features that will be impacted by the project proposals were assessed for their bat roosting and/or commuting habitat. The surveyor systematically surveyed all features suitable for bats and signs of bat activity.

For any surveyed buildings:

A non-intrusive visual appraisal from the ground using binoculars, inspecting the external features of the building(s) for potential access/egress points, and for signs of bat use. An internal inspection of the building was also made, including the living areas of derelict or abandoned buildings and the accessible roof spaces of all buildings, using an endoscope, torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

For any surveyed trees

A visual inspection from ground level using binoculars and where accessible an internal inspection of suitable roosting features using an endoscope, torch and ladders.

2.3 Suitability Assessment

The likelihood of occurrence of protected species is ranked according to the criteria listed in Table 1. The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Table 1: showing criteria considered when assessing the likelihood of occurrence of protected species

Present	Species are confirmed as present from the current survey or historical confirmed records.
High	Habitat and features of high quality for species/species assemblage. Species known to be present in wider landscape (desk study records). Good quality surrounding habitat and good connectivity.
Medium	Habitat and features of moderate quality. The site in combination with surrounding land provides all habitat/ecological conditions required by the species/assemblage. Within known national distribution of species and local records in desk study area. Limiting factors to suitability, including small area of suitable habitat, some severance/poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
Low	Habitats within the survey area poor quality. Few or no records from data search. Despite above, presence cannot be discounted as within national range, all required features/conditions present on site and in surrounding landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
Negligible	Very limited poor-quality habitats and features.

	No local records from desk study; site on edge of, or outside, national range. Surrounding habitats considered unlikely to support species/species assemblage.
Likelihood of bats being present	Feature of building and its context
Higher	Buildings/structures with features of particular significance for roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data).
Lower	A small number of possible roost sites/features, used sporadically by more widespread species. Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.
Likelihood of bats being present	Feature of tree and its context
Higher	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Lower	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.

2.4 Limitations – evaluation of the methodology

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

The survey was undertaken outside of the optimal Phase 1 Habitat Survey season therefore there will be an under-recording of plant species and may be an under-recording of field signs of protected wildlife. B1 could not be fully accessed therefore evidence of bat roosting may have been missed.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results is provided below; full details are included in Appendix 3.

3.2 Designated sites

There are seven overlapping statutory designated sites within the study area and 19 known non-statutory sites. Their location and extent are illustrated in Appendix 3. Table 3 (below) provides details of the designated site including its reasons for notification.

Table 2: Designated sites within 2km radius of the site

Designated Site Name	Distance from Site (Approx.)	Reasons for Notification from Natural England
Statutory Sites and Non-Statutory Sites		

Designated Site Name	Distance from Site (Approx.)	Reasons for Notification from Natural England
Chichester and Langstone Harbour Ramsar Site, Landstone Harbour SSSI, Solent Maritime Special Area of Conservation (SAC), Chichester and Langstone Harbours SPA and Langstone Harbour RSPB Reserve.	Starts approx. 195m south west	Langstone Harbour is a tidal basin which at high water resembles an almost landlocked lake. At low water extensive mud flats are exposed, drained by three main channels which unite to make a common and narrow exit to the sea. The harbour includes one of the largest areas of mixed saltmarsh on the south coast, and extensive cord-grass <i>Spartina anglica</i> marsh in an advanced state of degeneration. The Site of Special Scientific Interest including Farlington Marshes, a peninsula of grassland and marsh on reclaimed tidal silt protected by a sea wall; and a similar but much smaller area at Southmoor in the north-east of the harbour. The harbour is of international importance as a rich intertidal system supporting high densities of intertidal invertebrates and large populations of migrant and overwintering waders and wildfowl, dependent upon them and upon the extensive beds of eelgrass <i>Zostera</i> species. The <i>Zostera angustifolia</i> and <i>Z. noltii</i> beds are among the largest in Britain. The harbour is among the twenty most important intertidal areas in Britain as a summer and autumn assembly ground for waders during the moult (when they require abundant high protein food) and as a post-moult wintering ground. Dunlin <i>Calidris alpina</i> often exceed 30,000 individuals, or 6% of the British winter population, or 3% of the European and North African wintering population. Grey plover <i>Pluvialis squatarola</i> and black-tailed godwit <i>Limosa limosa</i> achieve numbers which represent 1–2% of the European and North African migration flyway population; and redshank <i>Tringa totanus</i> and ringed plover <i>Charadrius hiaticula</i> do so periodically. At times as many as 20% of the black-tailed godwit, 8% of the ringed plover and 8-10% of the grey plover wintering in Britain are present in the harbour. The total numbers of waders present sometimes exceeds 40,000. Langstone Harbour and the adjoining and connected Portsmouth and Chichester Harbours form a single, coherent ecosystem which is among the ten most important intertidal areas for waders in Britain. In the 1970s and 1980s Langstone Harbour alone has consistently supported in excess of 5,000 wintering dark-bellied geese <i>Branta bernicla</i>, or 5-10% of the world population depending on fluctuating population levels. It has supported up to 2.5% of the European winter population of shelduck <i>Tadorna tadorna</i> and regularly supports substantial numbers of other ducks in autumn and winter. Farlington Marshes intrudes into the north-west sector of the harbour. Its vegetation is strongly influenced by drainage water from the chalk and by brackish water infiltration. The marshes embrace a variety of habitats – brackish marsh, fresh marsh, a large lagoon with associated reed <i>Phragmites</i> beds, <i>Agrostis stolonifera</i> grassland and scrub. It is a vital high water wader roost for the Harbour and a major feeding ground for Brent geese after the <i>Zostera</i> beds in the Harbour have been consumed.

Designated Site Name	Distance from Site (Approx.)	Reasons for Notification from Natural England
West Hayling Local Nature Reserve (LNR)	1km south	West Hayling Local Nature Reserve, formerly known as the Hayling Oysterbeds, is home either permanently or on a migratory basis for tens of thousands of seabirds, which find that the thousands of hectares of intertidal mudflats contain a massive assemblage of marine invertebrate life.
Hayling Billy LNR	1km south east	Afforded Local Nature Reserve status in 2010, this old route of the Hayling Billy train provides beautiful views of one of the most unspoilt sections of Langstone Harbour, and is a great place to spot rare plants.
Warblington Meadow SSSI	1.4km east	Warblington Meadow Site of Special Scientific Interest is an unimproved grazing marsh adjoining Chichester Harbour and is of special interest for its gradation from freshwater, baserich marsh to old reclaimed saltmarsh, and for its rich associated flora, with a total of 158 species of flowering plants having been recorded up to the time of notification.
Manor Farm A Site of Importance for Nature Conservation (SINC)	<2km	Brent geese
Broadmarsh Playing Field SINC	<2km	Brent geese
Southmoor - Big Field (south edge) SINC	100m south west	
Southmoor Reserve SINC	<2km	<i>Carex Divisa</i> divided sedge
Hayling Billy Line SINC	<2km	<i>Carex Divisa</i> divided sedge
Stoke Common SINC	<2km	<i>Carex Divisa</i> divided sedge
Pyecroft's Meadow SINC	<2km	Brent geese, <i>Carex distans</i> (Distant Sedge), <i>Ononis spinosa</i> (Spiny Restharrow), <i>Salicornia europaea</i> (Common Glasswort)
East of Pyecroft's Meadow SINC	<2km	Brent geese
Wade Court Park SINC	<500m north east	<i>Egretta garzetta</i> (Little Egret) [

Designated Site Name	Distance from Site (Approx.)	Reasons for Notification from Natural England
Langstone Mill Pond SINC	<2km	<i>Tilia platyphyllos</i> (Large-Leaved Lime)
West of North Hayling B SINC	<2km	Brent geese
West of North Hayling D SINC	<2km	Brent geese
Warblington Castle Farm West SINC	<2km	Brent geese
North Common & Saltmarsh SINC	<2km	Brent geese, <i>Carex divisa</i> (Divided Sedge), <i>Inula crithmoides</i> (Golden-Samphire), <i>Ononis spinosa</i> (Spiny Restharrow), <i>Seriphidium maritimum</i> (Sea Wormwood)
North of Northney Road SINC	<2km	Brent geese
North Common East SINC	<2km	<i>Carex divisa</i> (Divided Sedge), <i>Galium parisiense</i> (Wall Bedstraw) [RDB]
Warblington Castle Farm East E SINC	<2km	Brent geese
Warblington Castle Farm East D SINC	<2km	Brent geese
Conigar Point Meadows	<2km	<i>Apium graveolens</i> , <i>Bromus arvensis</i> , <i>Bupleurum tenuissimum</i> , <i>Carex divisa</i> , <i>Carex extensa</i> , <i>Inula crithmoides</i> , <i>Limonium humile</i> , <i>Salicornia europaea</i>

Additionally, there are 119 sites designated for their importance for Brent geese and waders. Two of these sites; H27 and H28B are adjacent to the survey site to the south. These areas have no recorded use by Brent geese, but H27 has three species of waders recorded and its classification is uncertain and H28B has one recorded wader species and also has an uncertain classification.

3.3 Landscape

A review of the designated sites, aerial photographs (Figure 1), the Magic database and OS maps has been undertaken. Collated together, the site's local habitat is described below:

The local landscape offers valuable resources for a range of species, particularly woodland and aquatic habitats with grassland. There are at least 12 ponds within 500m of the site as well as an extensive ditch network (see appendix 3 for pond locations). Priority habitats within 2km of the site are listed in Table 3.

Table 3: Priority Habitat Inventory within 2km (Magic.gov.uk):

Habitat	Closest distance from site (approx.)
Deciduous Woodland	Adjacent to the east
Floodplain grazing marsh	Adjacent to the south
Good quality semi improved grassland	1.4km south east
Mudflats	290m south west
Intertidal substrate foreshore	300m south west
Coastal saltmarsh	600m south east
Lowland meadows	1.95km north west

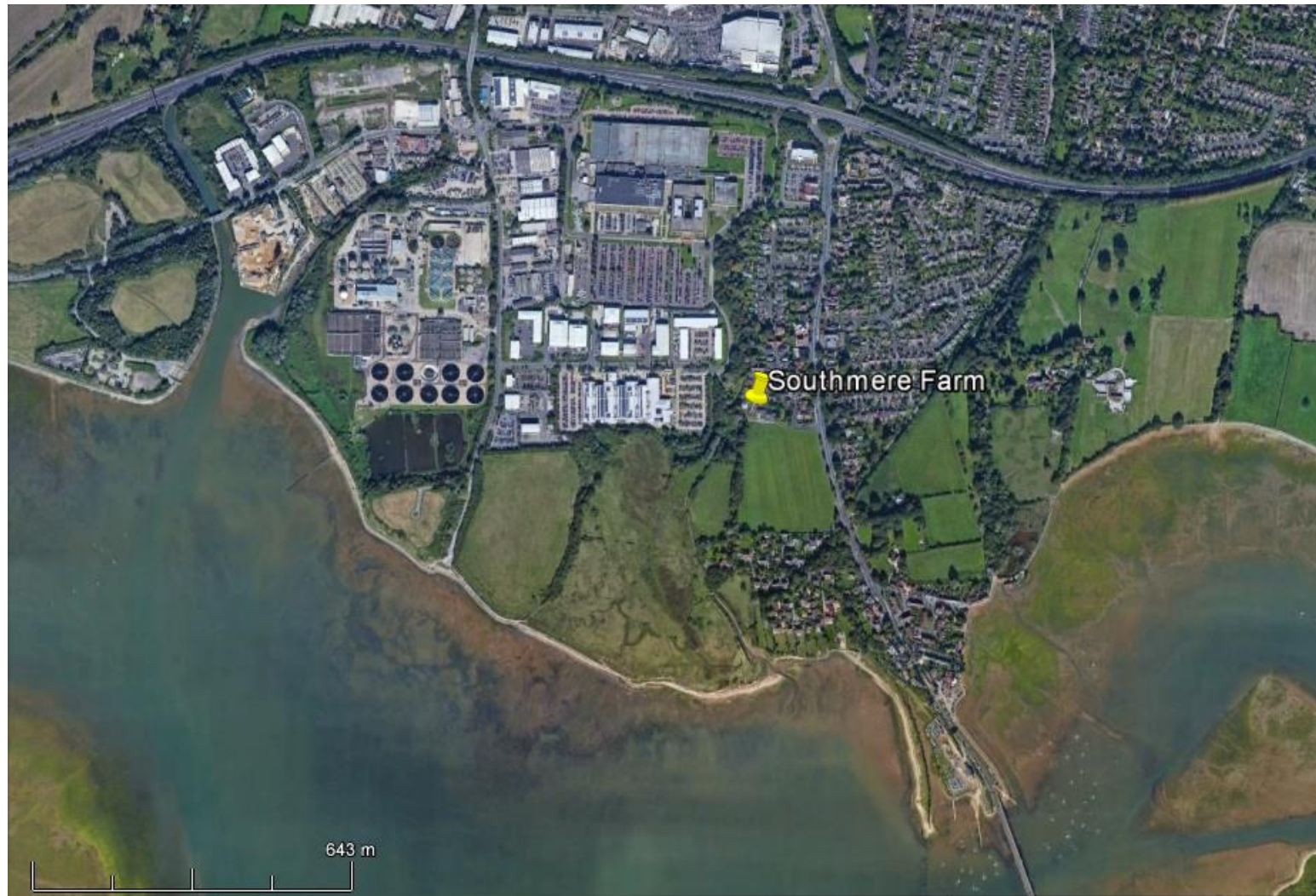


Figure 1: Aerial photo of site, showing landscape structure

3.4 Historical records

Historical records have been obtained from HBIC, and are summarised below:

Table 4: Historical records within 2km of the site

Taxon Group	Common name	Scientific binomial	Record details
Bats	Common pipistrelle	<i>Pipistrelle pipistrellus</i>	68 records
	Serotine	<i>Eptesicus serotinus</i>	13 records
	Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	70 records
	Unidentified myotis	<i>Myotis sp.</i>	19 records
	Natterer's	<i>Myotis nattereri</i>	Two records
	Brown long-eared bat	<i>Plecotus auritus</i>	One record
	Daubenton's	<i>Myotis daubentonii</i>	Four records
	Whiskered	<i>Myotis mystacinus</i>	One record
	Leisler's	<i>Nyctalus leisleri</i>	One record
	Noctule	<i>Nyctalus noctula</i>	23 records
	Unidentified pipistrelle	<i>Pipistrellus sp.</i>	22 records
	Nathusius pipistrelle	<i>Pipistrellus nathusii</i>	Three records
Birds			139 species recorded

Other mammals	Water vole	<i>Arvicola amphibius</i>	32 records
	Hedgehog	<i>Erinaceus europaeus</i>	Six records
	Badger	<i>Meles meles</i>	Two records
Reptiles	Slow worm	<i>Anguis fragilis</i>	23 records
	Grass snake	<i>Natrix natrix</i>	One record
	Adder	<i>Vipera berus</i>	Two records
	Common lizard	<i>Zootoca vivipara</i>	One record

A search of the Magic database for granted European Protected Species Mitigation Licences (EPSMLs) within a 2km radius found 1 licenced site and details are provided in Table 6 below.

Table 5: Granted EPSMLs (bats) within 2km of the site

Case reference of granted application	Approx. distance from site	Species Effected	Licence Start Date:	Licence End Date:	Impacts allowed by licence
2014-1826-EPS-MIT	1.1km north west	C-PIP	20/08/2014	01/11/2015	Destruction of a resting place

The EPSM licences in the surrounding area show that a common pipistrelle bat roost has been destroyed within 2km. The site has suitability to support this species.

3.5 Field Survey Results

The site of the proposed development area is illustrated in the map in Appendix 1. The environmental variables recorded at the time of the survey are shown in Table 6.

Table 6: Environmental variables during the survey

Date: 01/03/18	
Temperature	-2°C
Humidity	75%
Cloud Cover	100%
Wind	20mph
Rain/snow	Light snow

3.6 Site Feature descriptions and photos

J3.6 Buildings and Hard Standing

The site is dominated by a collection of farm outbuildings used for storage and keeping livestock.



B1

B1 is a timber barn with a gabled roof clad in felt shingles. The lower extension to the building has a hipped roof. The roof shingles on both sections are tight fitting with no raised areas for bat roosting.

There is an open doorway at the front of the main barn that provides full access to the internal void for bats and birds.



There are raised external boards on the barn that could provide suitable roosting and access features for bats.



At the corner of the extension where it joins to the main barn there is a large gap under the eaves which could be used by bats and nesting birds to access the internal void. Through this gap the general roof structure could be seen although this barn could not be accessed internally. The roof is lined with bitumen felt and has timber rafters and ridge beam on which bats could perch.



The internal void of the main barn is vaulted and the roof is lined with timber sarking. There are modern timber beams, rafter and ridge beam on which bats could roost. Only the central area was accessible. The cross beams and ledges around the barn provide suitable barn owl roosting habitat and potentially nesting habitat as well.

Swallows nests from the previous year were present.



On the western elevation there is raised lead flashing where the extension joins to the main barn at the gable end. There are also gaps around the old timber beams around the gable end. These features could be used by roosting crevice dwelling bats.



B2

B2 is a timber framed lean to/shed attached to B1. It has an open front and corrugated metal roof and sides.



Inside the structure there is an owl box at approx. 2.5-3m high. The interior was not accessible due to stored equipment and machinery. There were no obvious signs of use around the outside of the owl box.



B3

B3 is an open fronted hay barn with a timber frame and corrugated metal roof and sides.



B4

B4 is a timber framed, open fronted livestock shed with corrugated metal roof and sides.



B5

B5 is a timber framed, open sided shelter with a corrugated metal roof.



B4 – Improved Grassland

Surrounding the buildings is short improved grassland dominated by perennial ryegrass *Lolium perenne*.



G2 Running Water and A1 Woodland

Adjacent to the site to the west there is a stream (Langstone Brook) which flows south into the designated sites to the south associated with Langstone Harbour and surrounding habitats. The banks are vegetated with bramble *Rubus fruticosus*, willow *Salix sp.* and alder *Alnus glutinosa*. The stream lies within deciduous woodland priority habitat which extends out to the west and is partially within the site boundaries. Emergent vegetation in the stream includes water starwort *Callitriche stagnalis*, brooklime *Veronica beccabunga* and water mint *Mentha citrate*. The water appears clear and unpolluted. There was a large amount of bird activity in this area including woodland birds (greater spotted woodpecker and a diversity of finches, tits and thrushes) and also waders and waterfowl such as little egret *Egretta garzetta* and teal *Anas crecca*.



4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

Likelihood of the presence of protected species

The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat. The likelihood of occupancy of protected species is ranked according to the criteria listed in Table 1.

Where this report supports a planning application, the ecological interest of the study area (including the survey area) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity. It will be clearly stated where a preliminary value can be given and where further information is required.

Appropriate justification for this assessment is provided in Section 2.3 and Table 1 of this report.

4.2 Evaluation

Taking the desk study and site survey results into account, the following conclusions for ecological factors has been reached.

Table 7: Evaluation of site

Ecological Factor	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99
Designated sites	The site approx. 200m north of the Langstone Harbour area and all associated overlapping designated sites. The development lies within the 5.6km buffer of the Solent Maritime SPA and will therefore need to provide financial contribution to the Solent Recreation Mitigation Strategy.	As the development is situated adjacent to a stream that feeds into these areas, there could be impacts from pollution of the water course. The increase in housing will lead to increase of public use of the designated areas and could impact breeding and overwintering wildfowl with the increase in dogs/dog walkers and cats.	There will need to be a minimum of a 10m buffer between the construction zone and the water course. Environment pollution prevent guidelines will need to be followed in order to protect the stream from contamination.	None applicable.

Notable habitats and plants	A stream and deciduous woodland property habitat lies to the west of the site.	There will be indirect impacts through noise, light and pollution. Some tree removal may be necessary, reducing the size of this habitat and the buffer it forms between the construction zone and the stream.	Protective fencing should be erected along the western boundary of the development. There will be no construction activity within 10m of the stream. Pollution prevention guidelines will be followed. A sensitive lighting strategy will need to be implemented in order to protect the adjacent habitats from light pollution post development.	None applicable
Invasive / Non-native species	None present	No impacts	No further work required	None applicable
Bats	B1 has high habitat value for roosting bats. The internal and external structures provide excellent roosting habitat for both crevice and void dwelling bat species. The adjacent habitat provides excellent foraging and commuting resources.	Roosts could be destroyed and bats injured or killed during demolition of B1. The increase in lighting on site could disrupt foraging and commuting activity post development	Roost presence/likely absence surveys are required on B1. Three bat emergence/re-entry surveys are required during the active bat season (May – September). To comply with national guidelines at least two of the surveys should be completed during the optimal survey period (mid-May to August), and one of the surveys must be a dawn re-entry survey. Three surveyors are required to provide full coverage of B1. Prior to the first survey a full internal inspection of B1 must be carried out. Low impact lighting strategies will be adopted from the	To be confirmed following further surveys.

			guidance outlined in the Bat Conservation Trust “Bats and Lighting” publications: http://www.bats.org.uk/pages/bats_and_lighting.html The lighting on the site will: - Use narrow spectrum light sources to lower the range of species affected by lighting - Use light sources that emit minimal ultra-violet light - Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. - Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. Light spill will be reduced via the use of low level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. External lighting will be positioned below the eaves, be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on.	
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			Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.	
Birds	B1 is a confirmed nesting site for swallows. There is an owl box in B2 that could be used. B1 also has suitability for barn owls although this could not be confirmed due to lack of access. The woodland and stream provide habitat for a variety of species including waders and waterfowl that migrate up from Langstone Harbour to the south.	Active nests could be damaged or destroyed during building demolition and tree removal. There will be a loss of nesting habitat in the buildings. The woodland and stream could deteriorate leading to a loss of habitat.	B1 should be checked for barn owl use during the further bat surveys when access has been provided. The owl box will need to be checked for use prior to demolition of B2. The nesting season should be avoided if possible. If the nesting season cannot be avoided (March-August) then a nesting bird check should be carried out immediately prior to the start of works. Any in use nests must be left until the young have fledged.	Install the following bird boxes on the new buildings: Schwegler No 17 swift nest boxes Schwegler 1SP Sparrow Terraces Nest boxes should be positioned at least 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight.
Reptiles	The short grassland on site does not provide suitable reptile habitat.	No impact	No further surveys required	Areas of long grassland and scrub should be created. Log and stone piles should be added on site to improve reptile habitat. These should be south facing and adjacent to longer vegetation for cover.

Great crested newts	The short grassland on site does not provide suitable GCN habitat.	No impact	No further surveys required.	N/A
Other Terrestrial Mammals	Hedgehogs – the woodland and grassland provide suitable habitat for hedgehogs. Badgers – the woodland provides suitable badger habitat. There was no sign of any badger activity throughout the site or within 30m of the construction footprint. Dormice – the woodland provides suitable habitat for dormice however it has poor connectivity to any larger areas of woodland or hedgerow network. Water voles – the stream provides suitable habitat for water voles. There is a strong population of water voles in the local area and this species is likely	Hedgehogs - Individual animals could be killed or injured during development if pits are left open. Badgers – no impact Dormice – no impact as the woodland will be retained and protected. Water voles - Individual animals could be killed or injured during development if pits are left open. Pollution of the stream and surrounding vegetation from the development could lead to the habitat no longer	A water vole survey should be carried out to establish whether this species is present in the adjacent stream within 30m of the development. Two surveys should be carried out in suitable weather conditions over the spring/summer or early autumn. The surveys should be undertaken between March and October around a month apart. The following recommendations are given in order to mitigate against potential harm to terrestrial mammals during the development works. - Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. - Security lighting to be directed away from the undergrowth. - Any chemicals or pollutants used or created by	Log piles should be added to provide refugia for hedgehogs and other species. Hedgehog boxes should be added in the gardens. Fruit trees could be planted to provide additional foraging resources. Gaps should be left in new fences to retain connectivity.

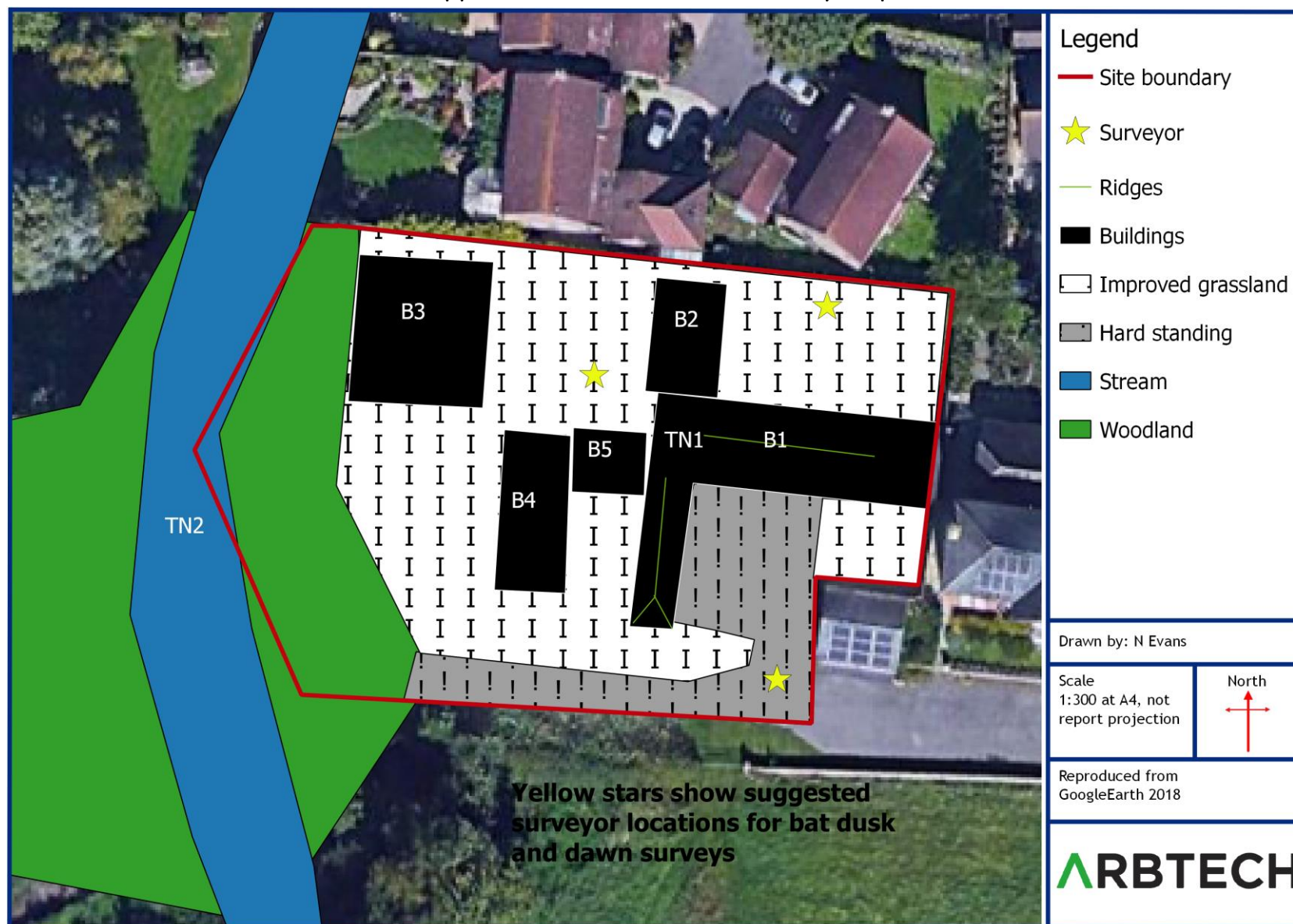
	to be present in this habitat. Otters – as the stream is not connected to any major watercourse nearby it is unlikely that otters are present.	being used by this species. The increase in human and pet activity could drive the population away. Animals could be predated by dogs or cats.	the development should be stored and disposed of correctly according to COSHH regulations.	
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5.0 Bibliography

- British Trust for Ornithology (2016) www.bto.org/about-birds/nbnw/putting-up-a-nest-box
- BS 42020, Biodiversity – Code of practice for planning and development (2013) <http://www.eoebiodiversity.org/pdfs/BS42020.pdf>
- BS 42020, Biodiversity – Code of practice for planning and development (2013) <http://www.bsigroup.com/LocalFiles/en-GB/biodiversity/BS-42020-Smart-Guide.pdf>
- Cheffings, C. and Farrell, L. (eds.) (2005) The Vascular Plant Red Data List for Great Britain. Joint Nature Conservation Committee, Peterborough.
- CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester. http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf
- CIEEM (2013) Guidelines for Preliminary Ecological Appraisal Institute of Ecology and Environmental Management http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf
- Collins, J. (ed.) (2012). Bat Surveys for Professional Ecologists – Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London. <http://www.bats.org.uk/pages/batsurveyguide.html>
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth (2017) accessed on 02/03/18.
- Gregory R.D., et al (2009). Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. <https://www.bto.org/sites/default/files/u12/bocc3.pdf>
- HMSO: Wildlife and Countryside Act 1981 (as amended) <http://jncc.defra.gov.uk/page-1377>
- HMSO: The Protection of Badgers Act 1992 (as amended) <http://www.legislation.gov.uk/ukpga/1992/51/contents>
- HMSO: Countryside & Rights of Way Act (2000) <http://jncc.defra.gov.uk/page-1378>
- HMSO: Natural Environmental and Rural Communities Act (2006) <http://www.legislation.gov.uk/ukpga/2006/16/contents>
- HMSO: The Conservation of Habitats and Species Regulations (2010) <http://www.legislation.gov.uk/uksi/2010/490/contents/made>
- JNCC (2004) Bat Workers Manual, 3rd Edition. <http://jncc.defra.gov.uk/page-2861>
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Magic database (2017) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 02/03/18

- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
http://roost.bats.org.uk/sites/default/files/publications/EnglishNature_BatMitigationGuidelines_2004.pdf
- National Planning Policy Framework, 2012 <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- Natural England (2007). Badgers and Development a Guide to Best Practice and Licensing. Natural England. Bristol. <http://www.wildlifeco.co.uk/wp-content/uploads/2014/03/badgers-and-development.pdf>
- Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10(4), 143-155.
https://www.waterways.org.uk/wrg/wrg_documents/gcn_hsi
- Paul Edgar, Jim Foster and John Baker (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth
<http://downloads.gigl.org.uk/website/Reptile%20Habitat%20Management%20Handbook.pdf>
- Tom Langton, Catherine Beckett and Jim Foster (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk. http://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf

Appendix 1: Phase 1 Habitat Survey Map



Target Notes

TN1 – building B1 – barn with high suitability for roosting bats, further surveys required.

TN2 – deciduous woodland priority habitat surrounding Langstone Brook, water vole surveys required.

Appendix 2: Proposed Site Plan

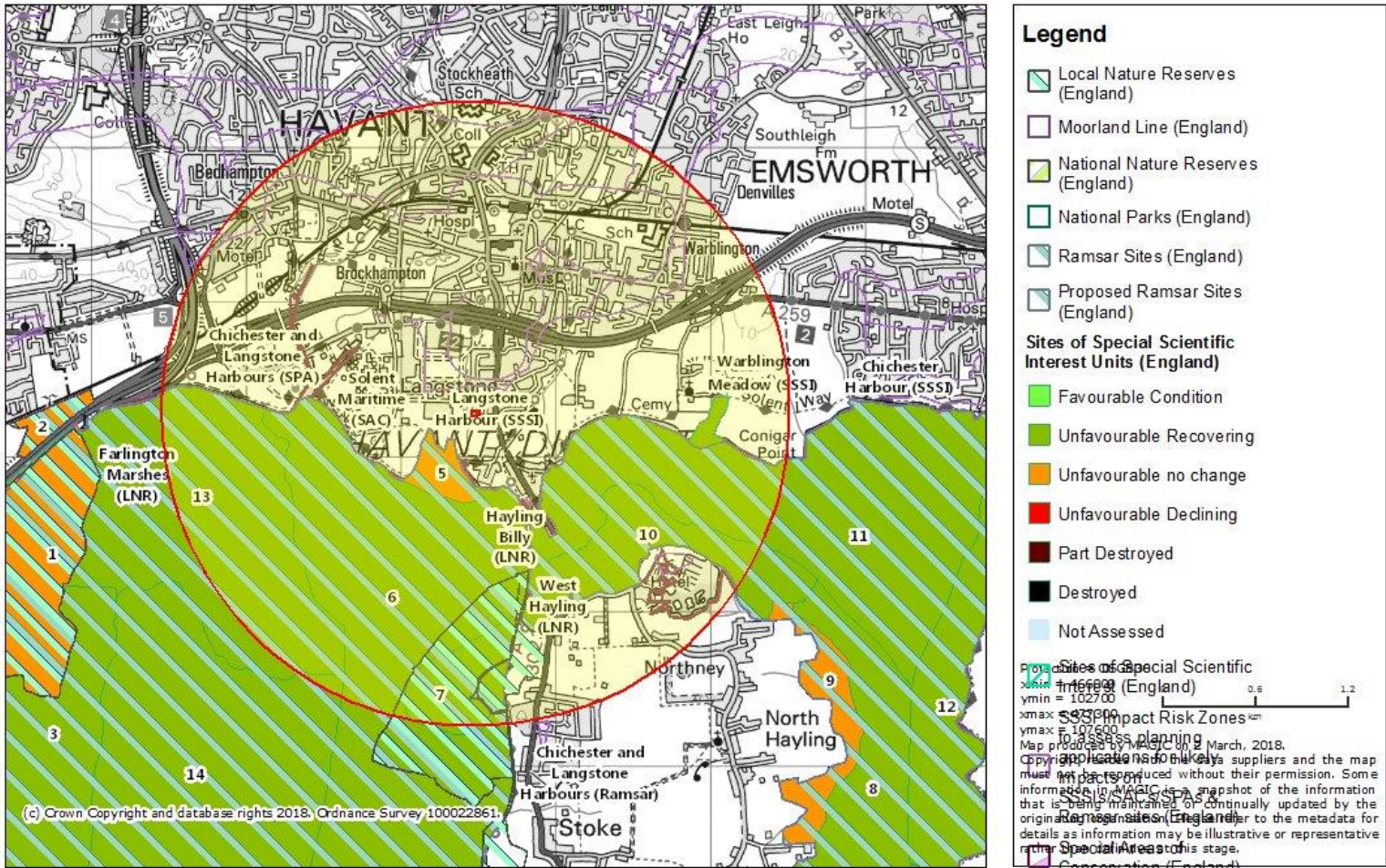


Appendix 3: Desk Study Information

Full historical records can be provided on request.

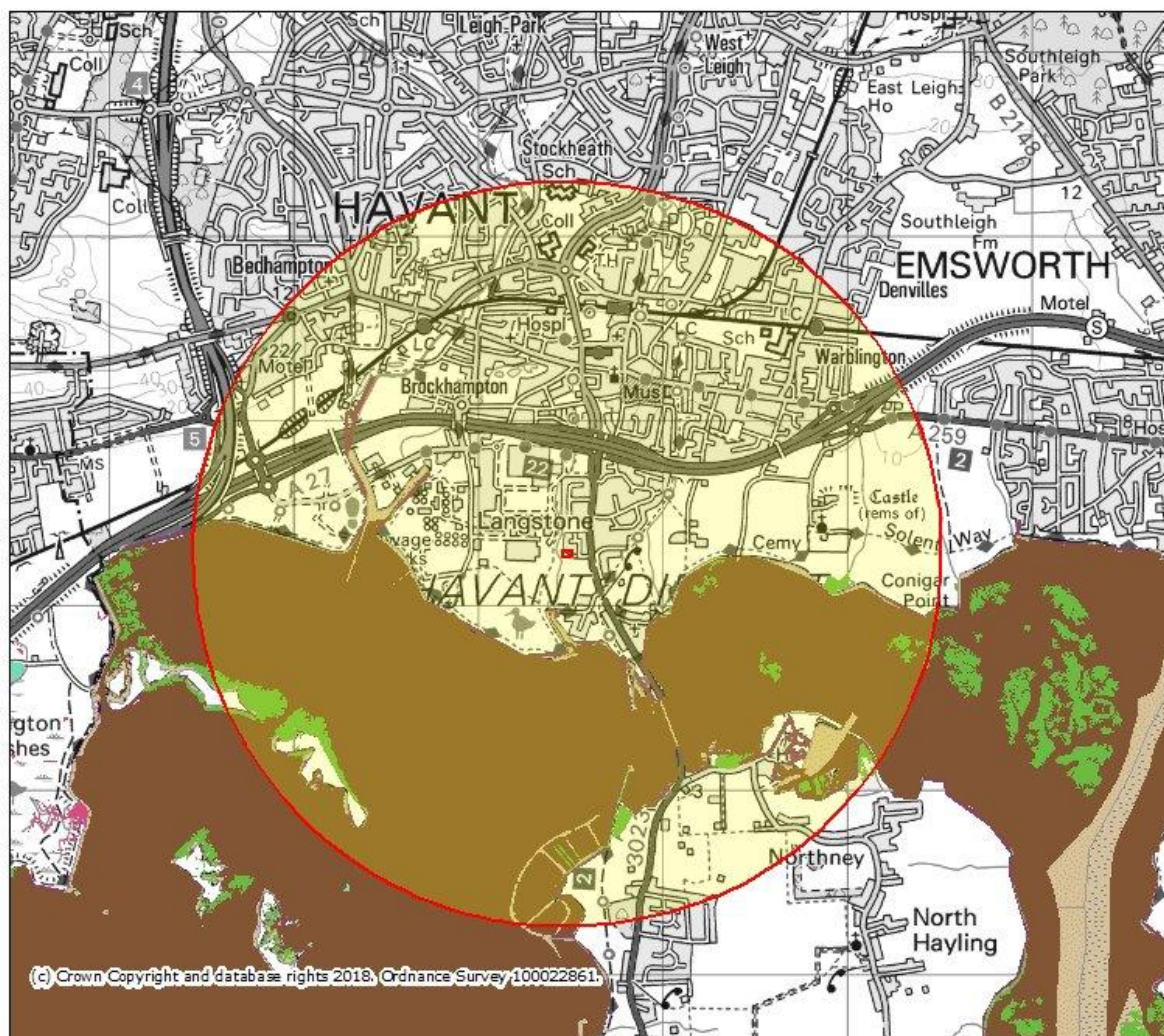
MAGiC

Designated Sites



MAGiC

Habitats - Coastal and Marine



Legend

Priority Habitat Inventory - Coastal Saltmarsh (England)	Mud and Gravel
Priority Habitat Inventory - Coastal Sand Dunes (England)	Not Present
Priority Habitat Inventory - Coastal Vegetated Shingle (England)	Rock Platform
Priority Habitat Inventory - Maritime Cliffs and Slopes (England)	Rock Platform with Bank of Gravel
Priority Habitat Inventory - Mudflats (England)	Rock Platform with Boulders/Loose Rock
Priority Habitat Inventory - Saline Lagoons (England)	Sand
Saline Lagoons (Wales)	Sand and Gravel
Saltmarsh (Wales)	Sand and Mud
Sand Dunes (Wales)	Unspecified
Intertidal Substrate Foreshore (England and Scotland)	Intertidal Substrate (Wales)
Boulders/Loose Rock	Mud
Gravel	Mud/Shingle
Made Ground (Man Made)	Rock
Mud	Rock/Shingle
	Sand
	Sand/Shingle
	Shingle

Projection = OSGB36

xmin = 466000

ymin = 103000

xmax = 477300

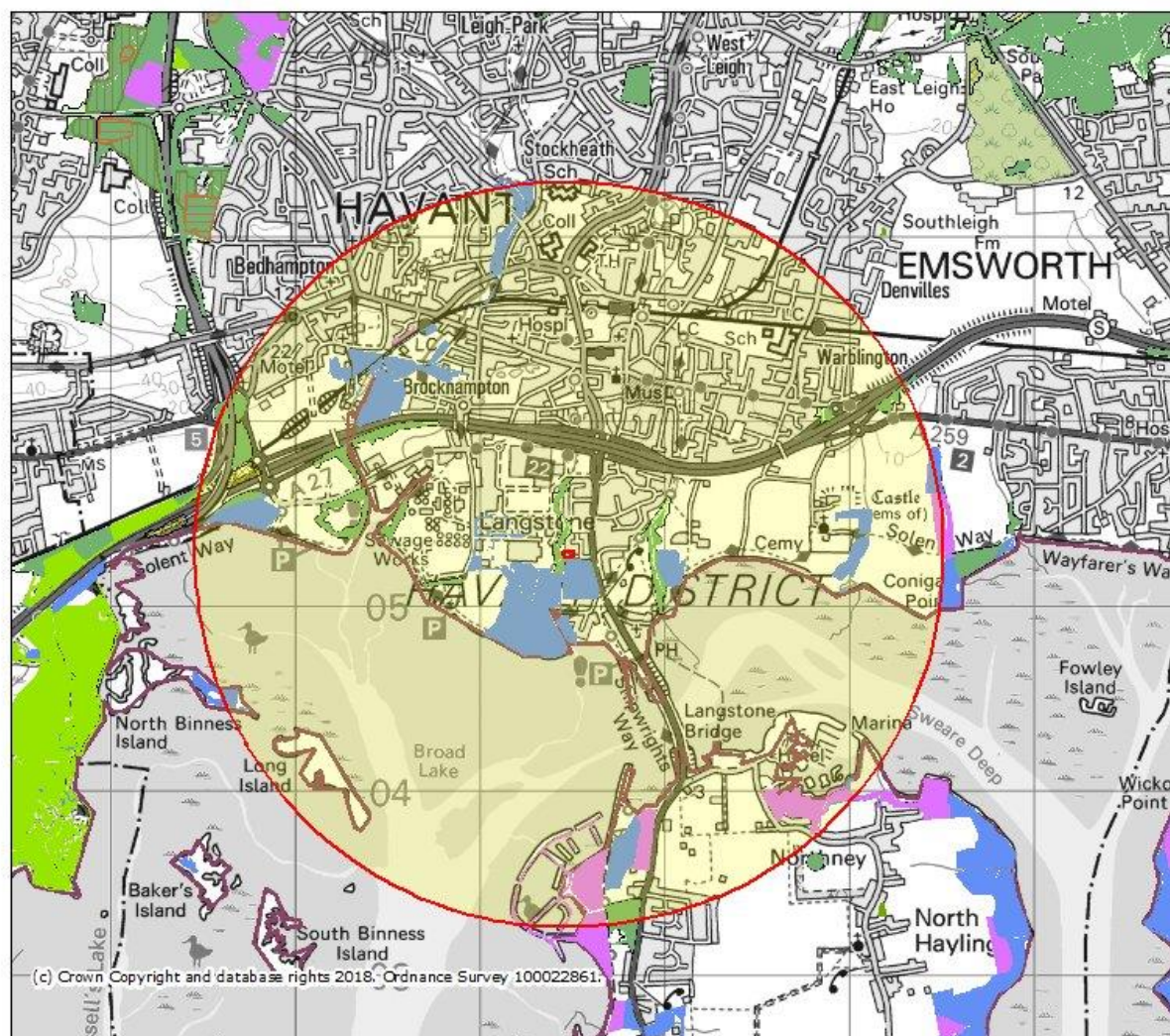
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MAGiC

Habitats - Grassland and Woodland



Legend

- Priority Habitat Inventory- Coastal and Floodplain Grazing Marsh (England)
- Priority Habitat Inventory- Good quality semi-improved grassland (Non Priority) (England)
- Priority Habitat Inventory- Lowland Meadows (England)
- Priority Habitat Inventory- Purple Moor Grass and Rush Pasture (England)
- Ancient Woodland (England)
- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland
- Priority Habitat Inventory- Deciduous Woodland (England)
- Forestry Commission Legal Boundary (England)
- National Forest Inventory (GB)
- Assumed woodland
- Broad leaved
- Cloud \ shadow
- Conifer
- Coppice
- Coppice with standards
- Failed
- Felled
- Ground prep
- Low density
- Mixed mainly broadleaved
- Mixed mainly conifer
- Shrub
- Uncertain
- Windthrow
- Young trees
- Priority Habitat Inventory- Traditional Orchards (England)
- Woodpasture and Parkland BAP Priority Habitat (England)

Projection = OSGB36

xmin = 466000

ymin = 103000

xmax = 477300

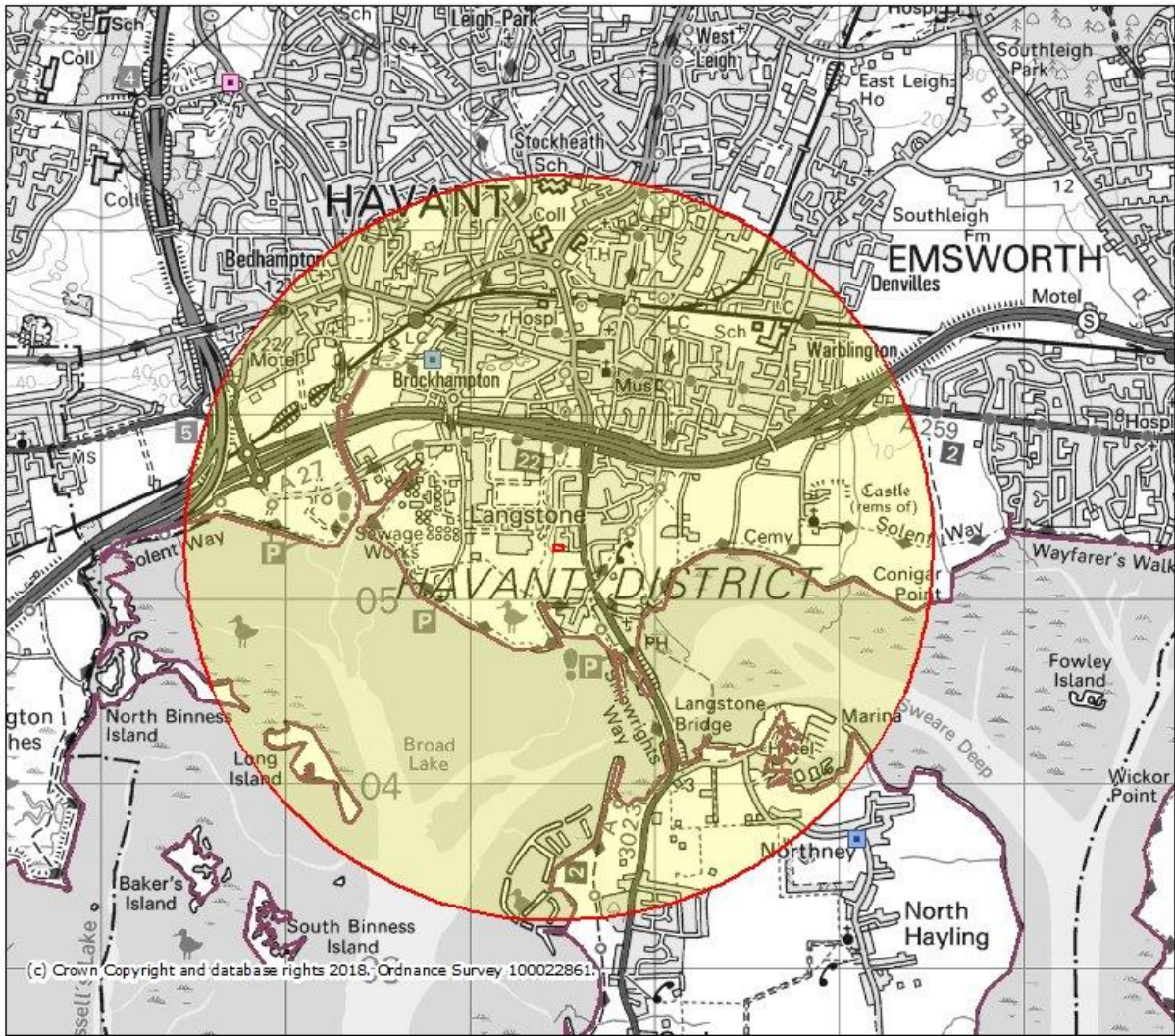
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MAGiC

EPSLs



Legend

Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile

Projection = OSGB36
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 ymax = 107900

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Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive the, Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe in order to conserve the 189 habitats and 788 species (non- bird) identified in Annexes I and II of the Directive (as amended).

SPAs are classified under Article 2 of the EC Birds Directive both for rare bird species (as listed on Annex I) and for important migratory species.

SACs and SPAs up to 12 nautical miles (nm) from the coast are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2010 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994. In Scotland, the requirements of Habitats Directive are implemented through a combination of the 1994 and the 2010 (reserved matters) Regulations. The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a means for designating and protecting SACs in UK offshore waters (from 12-200 nm).

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as “areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres” however they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs).

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within

the European Natura 2000 network and globally. Further provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and the Nature Conservation (Scotland) Act 2004.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Habitats Directive

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). The following notes are relevant for all species protected under the EC Habitats Directive:

In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

The Habitats Regulations do not define the act of ‘migration’ and, therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.

In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three ‘tests’:

the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment;

- There is no satisfactory alternative; and
- The action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000) and Nature Conservation (Scotland) Act 2004.

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

Effects on development works:

A development licence will be required from the relevant countryside agency for any development works liable to affect an active badger sett, or to disturb badgers whilst they occupy a sett.

Guidance has been issued by the countryside agency’s to define what would constitute a licensable activity. It is not possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) and are commonly referred to as “Schedule 1” birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects on development works:

Works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Herpetofauna (Amphibians and reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate

- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

Effects on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

Water voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

Effects on development works:

If development works are liable to affect habitats known to support water voles, the relevant countryside agency must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency (e.g. Natural England) for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the

population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters *Lutra lutra* are fully protected under the Conservation Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

An EPSM Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

Works which are liable to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Dormice

Dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White clawed crayfish

The white clawed crayfish *Austropotamobius pallipes* receives partial protection under Schedule 5 of the WCA in respect of Sections 9(1) and 9(5). This makes it an offence to:

- Intentionally take (capture) white-clawed crayfish.

Effects on development works:

The relevant countryside agency will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof
- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
 - Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
 - Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

Effects on development works:

An EPSM licence will be required from the relevant countryside agency for works which are liable to affect species of plants listed on Schedule 5 of the Conservation of Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England and Wales to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

Effects on development works:

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site however it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any land owner or occupier may be required prevent the spread of certain ‘injurious weeds’ including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY (ENGLAND)**National Planning Policy Framework**

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the ‘biodiversity duty’.

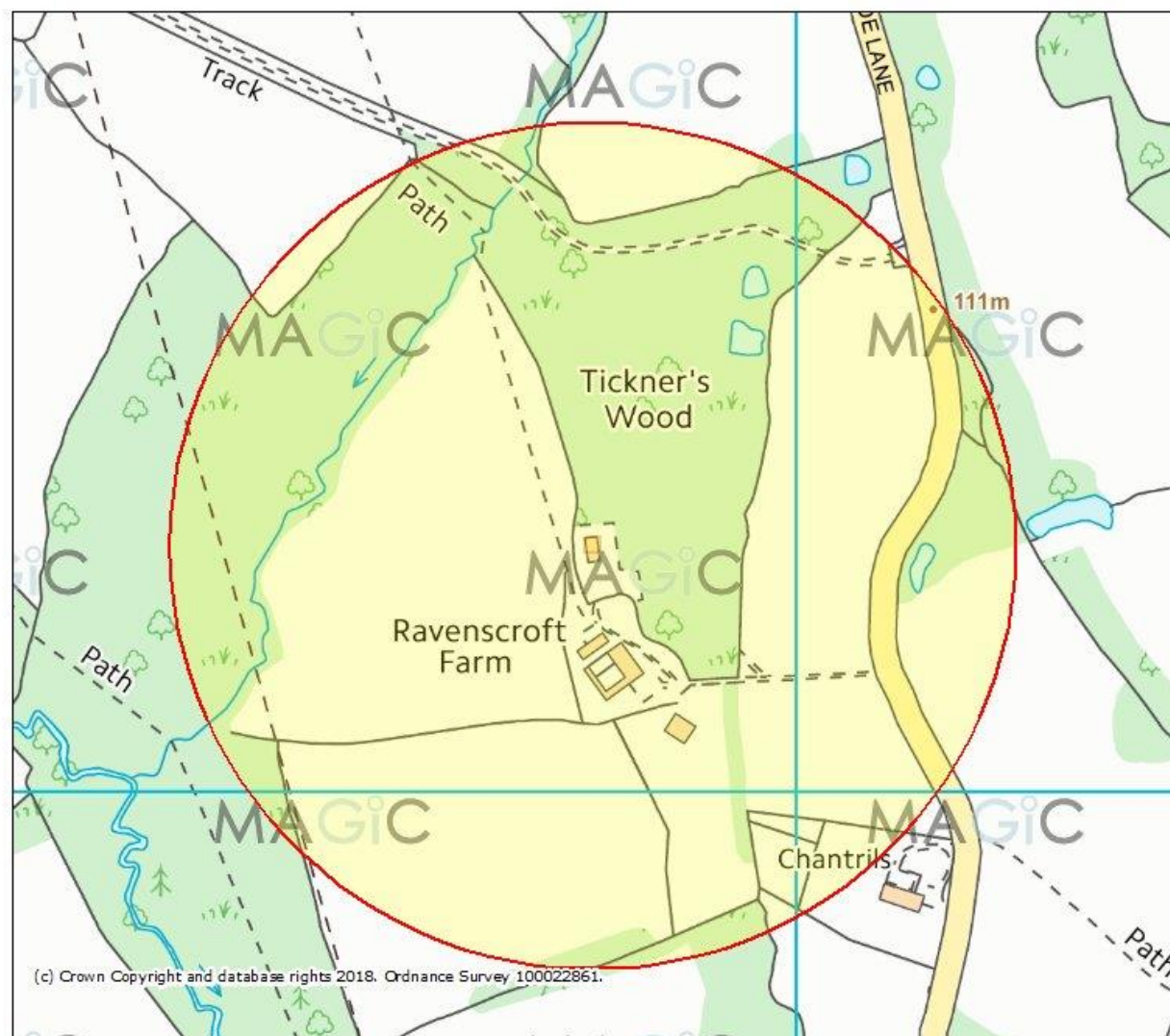
Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

Appendix 5: HSI Results and Pond Locations

SI	P1	P2	P3
1	1	1	1
2	0.6	0.1	0.5
3	0.9	0.9	0.9
4	0.67	0.67	0.67
5	1	1	1
6	1	1	1
7	0.67	0.67	0.67
8	1	1	1
9	1	1	1
10	0.5	0.4	0.3
X	0.121203	0.01616	0.060602
HIS	0.809751	0.661981	0.755524

MAGiC

Ponds within 250m



Projection = OSGB36

xmin = 545300

ymin = 140900

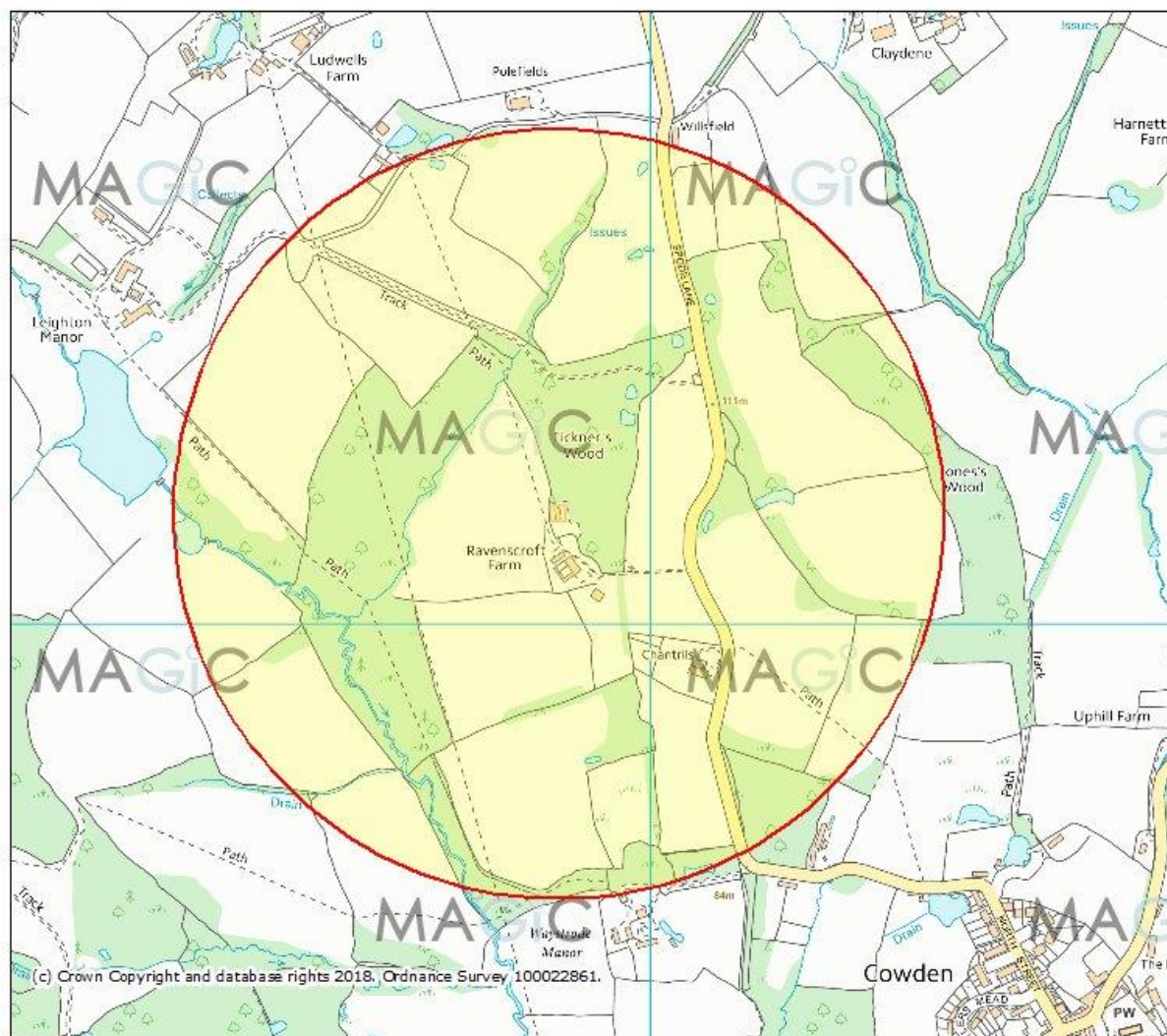
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ymax = 141400

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MAGiC

Ponds within 500m



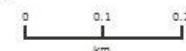
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xmax = 547300

ymax = 141700



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