



APPENDIX 4.1 -  
ECOLOGICAL APPRAISAL AND DESK STUDY

HAMBLE AIRFIELD  
HAMBLE LE RICE  
HAMPSHIRE

NOVEMBER 2021

ON BEHALF OF CEMEX



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## SUMMARY

1. LC Ecological Services Limited (LCES) were commissioned by CEMEX UK to conduct a preliminary ecological appraisal of the land at the former Hamble Airfield, Hamble Lane, Hamble-le-Rice, Eastleigh, Hampshire. This was required to support a planning application for a quarrying project.
2. An ecological appraisal is essentially a baseline habitat survey which is extended to include an assessment of a site's potential to support any legally protected, notable and or invasive species. The survey is conducted with the objective of identifying any ecological constraints, such as habitats of high nature conservation value, habitats that could potentially support legally protected or notable species, and the presence of invasive species.
3. It is considered that the following designated sites could potentially be impacted by the proposed project: Solent and Southampton Water Special Protection Area (SPA) and Ramsar, Solent Maritime Special Area of Conservation (SAC), Solent and Dorset Coast SPA, Lee-On-The Solent to Itchen Estuary Site of Special Scientific Interest (SSSI), Lincegrove and Hackett's Marshes SSSI, Mercury Marshes Local Nature Reserve (LNR), Badnam Copse Site of Importance for Nature Conservation (SINC), West Wood (Royal Victoria Country Park) SINC, Mallards Moor SINC, Mercury Marsh South SINC and Mercury Marina Saltmarsh SINC.
4. A number of priority habitats were identified within two kilometres of the application site. It is recommended that relevant off-site habitats should be included as baseline features within a detailed ecological impact assessment for the project.
5. The site identified to be an ecological 'network opportunity' area.
6. The site and adjacent land is designated as a non-statutory site for use by waders and brent geese, although it is confirmed as being a site with only negative records.
7. The site mainly comprises an extensive area of semi-improved grassland and scrub mosaic. In addition to this, there are small stands of regenerating broadleaved woodland adjacent to the north-western boundaries of the site, sections of native hedgerow alongside the north-eastern boundaries, and scattered trees (mostly in the southern half of the site). It is recommended that all existing habitats on site should form part of the baseline of an ecological impact assessment for the project.
8. The native hedgerows on site were identified to qualify as both UK Biodiversity Action Plan (BAP) priority hedgerow habitat and as 'Important' under the Hedgerow Regulations 1997. It is recommended that the hedgerows should be retained on site and included as part of the baseline of an ecological impact assessment for the project.

9. The site is considered to provide suitable habitat for badger and the desk study returned records of badger within two kilometres of the site. It is recommended that badger is included as a baseline feature within an ecological impact assessment for the project.
10. The habitats on site, including the grassland and scrub mosaic, native hedgerows and broadleaved woodland stands, could potentially support roosting, foraging and commuting bats. Further surveys are recommended to inform an ecological impact assessment for the project.
11. The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site all provide suitable breeding and wintering habitat for a wide range of bird species. The site was also considered to hold some potential to support waders and waterfowl from the nearby coastal areas. Further surveys are recommended to inform an ecological impact assessment for the project.
12. The native hedgerows, dense scrub and broadleaved woodland on site provides suitable habitat for hazel dormouse and the site also has connectivity with further suitable habitat for dormice to the north-east, north and north-west. Further surveys are recommended to inform an ecological impact assessment for the project.
13. The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site all provide suitable habitat for European hedgehog and the desk study returned records of hedgehog within two kilometres of the site. It is recommended that hedgehog is included as a baseline feature within an ecological impact assessment for the project.
14. The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site could potentially support a wide variety and notable assemblages of terrestrial invertebrates. Further detailed surveys are recommended to inform an ecological impact assessment for the project.
15. The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site all provide suitable habitat for common reptile species, including slow-worm and common lizard. The desk study returned local records of slow-worm, common lizard, grass snake and adder. Further targeted surveys are recommended to inform an ecological impact assessment for the project.

## 1.0 INTRODUCTION

LCES were commissioned by CEMEX UK to conduct a preliminary ecological appraisal of the land at the former Hamble Airfield, Hamble-le-Rice, Hampshire, SO31 4NL (approximate central Grid Ref: SU 47765 07807) to support a planning application for phased aggregate extraction on the site, including the erection of a processing plant with silt lagoons and associated infrastructure, and post-quarrying restoration of the land.

Full details of the proposed project are included in the environmental statement (CEMEX UK, 2021).

An ecological appraisal is essentially a baseline habitat survey which is extended to include an assessment of a site's potential to support any legally protected, notable and or invasive species. The survey is conducted with the objective of identifying any ecological constraints, such as habitats of high nature conservation value, habitats that could potentially support legally protected or notable species, and the presence of invasive species.

Section 2 of the report provides some background information on the legislative requirements and relevant policy. Section 3 details the methodologies adopted for the ecological surveys that were conducted and section 4 provides an account of the survey results. The recommended initial baseline for an ecological impact assessment for the proposed project is summarised in Section 5.

## 2.0 LEGISLATION AND POLICY

### 2.1 Legislation

The following legislation may be of relevance to the proposed works. Full details of statutory obligations with respect to biodiversity and the planning system can be found in DCLG Circular 06/2005.

- **The Conservation of Habitats and Species Regulations 2017:** This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into domestic law. The Regulations provide protection for a number of species including:
  - All species of bat;
  - Dormouse (*Muscardinus avellanarius*);
  - Otter (*Lutra lutra*); and
  - Great crested newt (*Triturus cristatus*).

This legislation makes it an offence to deliberately capture, kill or injure individuals of these species listed on Schedule 2 and damage or destroy their breeding site or place of shelter. It is also illegal to deliberately disturb these species in such a way as to be likely to significantly affect: (i) the ability of any significant group of the species to survive, breed or rear or nurture their young; or (ii) the local distribution or abundance of the species<sup>1</sup>;

This legal protection means that where development has the potential to impact on bats, or other European protected species, the results of a protected species survey must be submitted with a planning application.

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are also protected under this legislation. These are a network of sites designated for supporting habitats or species of high nature conservation importance in the European context. Any activity that has a detrimental effect on these European sites is made an offence under the Regulations. Where a development is likely to have a significant impact on a European site, the Regulations require a rigorous assessment of the impacts, known as an Appropriate Assessment.

- **The Wildlife and Countryside Act 1981 (and amendments):** Protected fauna and flora are listed under Schedules 1, 5 & 8 of the Act. Species likely to be of relevance include:

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<sup>1</sup> Note that the amendment to the Habitats Regulations in August 2007 and January 2009 has resulted in an increase in the threshold of illegal levels of disturbance to European Protected Species (EPS). An offence is only committed if the deliberate disturbance would result in significant impacts to the EPS population. However, it should be noted that activities that cause low levels of disturbance to these species continue to constitute an offence under Section 9 of the Wildlife and Countryside Act (see below).

- All species of **bat**. It is an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost;
- All species of British **reptile** (in particular grass snake (*Natrix helvetica*), common lizard (*Zootoca vivipara*), adder (*Vipera berus*) and slow-worm (*Anguis fragilis*)). It is illegal to kill or injure these species; and
- **Great crested newt**. It is illegal to obstruct access to any structure or place which great crested newts use for shelter or protection or to disturb any great crested newt while it is using such a place.
- **Water vole (*Arvicola amphibius*)**. It is an offence to intentionally kill, injure or take water vole, intentionally or recklessly damage, destroy, obstruct access to water vole burrows or disturb them whilst in a burrow.

This Act also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built). In addition, it is an offence to disturb any nesting bird listed on Schedule 1 or their young.

Schedule 9 of the Act lists those species for which it is an offence to cause their spread. Schedule 9 species that are most likely to be encountered are Japanese knotweed (*Fallopia japonica*) and New Zealand pigmyweed (*Crassula helmsii*).

Sites of Special Scientific Interest (SSSIs) are also protected under the Wildlife and Countryside Act 1981. These are a network of sites identified as being of national nature conservation importance and hence afforded legal protection.

- **The Countryside and Rights of Way Act 2000:** This Act strengthens nature conservation and wildlife protection. It places a duty on Government Ministers and Departments to conserve biological diversity, provides police with stronger powers relating to wildlife crimes, and improves protection and management of SSSIs.
- **The Protection of Badgers Act 1992:** This Act makes it an offence to wilfully take, injure or kill a badger (*Meles meles*); cruelly mistreat a badger; interfere with badger setts. A licence is required for work which may damage or disturb a sett.
- **Wild Mammals (Protection) Act 1996:** This Act provides protection for all wild animals from intentional acts of cruelty.
- **Hedgerow Regulations 1997:** These Regulations establish a set of criteria for assessing the importance of hedgerows. Where a hedgerow is deemed to be 'important' its removal is prohibited without consent from the local Planning Authority

## **2.2 Policy**

The following policy is of relevance to the proposed works:



- **National Planning Policy Framework (NPPF):** This sets out the Government's vision for biodiversity in England with the broad aim that planning, construction, development and regeneration should maintain and enhance, restore or add to biodiversity and geological conservation interests. NPPF includes sections on legally protected species and sites (see Section 2.1).
- **Local Sites (including Sites of Importance for Nature Conservation (SINCs), Local Nature Reserves (LNR), and Biological Notification Sites (BNSs)/County Wildlife Sites (CWSs):** These are a network of sites designated for their nature conservation importance in a local context. Although they are not afforded legal protection they contribute towards local and national biodiversity. Where such development is permitted, the local planning authority will use conditions and/or planning obligations to minimise the damage and to provide compensatory and site management measures where appropriate.
- **Biodiversity Action Plans (BAPs):** BAPs set out policy for protecting and restoring priority species and habitats as part of the UK's response as signatories to the Convention on Biological Diversity. BAPs operate at both a national and local level with priority species and habitats identified at a national level and a series of Local BAPs that identify ecological features of particular importance to a particular area of the country. The requirement to consider and contribute towards BAP targets was strengthened through the Countryside and Rights of Way Act 2000. Habitat and Species Action Plans that are likely to be of relevance include:
  - Native hedgerows (UK BAP)

## **3.0 METHODOLOGY**

### ***3.1 Desk study***

Hampshire Biodiversity Information Centre (HBIC) provided records of protected, notable and invasive species, and details of any non-statutory designated sites, priority habitats and ecological networks within 2 kilometres of the site. The Multi-Agency Geographical Information for the Countryside (MAGIC) website was used to provide information on any statutory designated sites and protected species licenses within 5 kilometres of the proposed development.

### ***3.2 Phase 1 habitat survey***

Detailed walkover surveys of the site were undertaken on 26<sup>th</sup> May 2017 and 10<sup>th</sup> May 2019 by senior ecologist Andrew Heideman, and an update walkover survey was undertaken on 11<sup>th</sup> June 2021, also by Andrew Heideman. The standard phase 1 habitat survey methodology (JNCC, 2016) was adopted whereby habitats are categorized and mapped using colour codes (appendix I). A search was undertaken for any legally protected or invasive species of plants, and a general description of the vegetation communities present on site was recorded, listing species encountered and scoring their abundance using the DAFOR scale shown below:

- D Dominant;
- A Abundant;
- F Frequent;
- O Occasional;
- R Rare;
- L Local (used as a prefix to any of the above).

### ***3.3 Hedgerow Regulations assessment***

The walkover field survey identified that the hedgerows on site qualified as UK BAP hedgerow habitat and could also potentially qualify as 'Important' under the Hedgerow Regulations 1997. A follow-up Hedgerow Regulations assessment was undertaken by Andrew Heideman on 13<sup>th</sup> April 2018 in order to determine whether any of the hedgerows on site could qualify as 'Important'. The hedgerows on site were assessed in relation to the various qualifying features, stated within the Hedgerow Regulations 1997, used to classify 'Important' hedgerows. Essentially, 'Important' hedgerows are identified according to the number of woody species and additional features they comprise. A summary of qualifying hedgerows and additional features is presented in table 1. below.

**Table 1. Hedgerows qualifying as ‘Important’ under the Hedgerow Regulations 1997 and a summary of additional features.**

<b>Summary of ‘Important’ hedgerows</b>
<p><u>Hedgerows that are at least 20 metres in length, have existed for 30 years or more, and meet the following criteria:</u></p> <p><u>Hedgerow must include:</u></p> <p>(a) at least 7 woody species;</p> <p>(b) at least 6 woody species, and has associated with it at least 3 additional features.</p> <p>(c) at least 6 woody species, including one of the following -  black-poplar tree (<i>Populus nigra ssp betulifolia</i>);  large-leaved lime (<i>Tilia platyphyllos</i>);  small-leaved lime (<i>Tilia cordata</i>);  wild service-tree (<i>Sorbus torminalis</i>); or</p> <p>(d) at least 5 woody species, and has associated with it at least 4 additional features.</p> <p><u>Or hedgerow must:</u></p> <p>be adjacent to a bridleway or footpath, a road used as a public path, or a byway open to all traffic, and include at least 4 woody species, and at least 2 additional features.</p>
<b>Additional features</b>
<ul style="list-style-type: none"> <li>• a bank or wall which supports the hedgerow along at least one half of its length.</li> <li>• gaps which in aggregate do not exceed 10% of the length of the hedgerow.</li> <li>• where the length of the hedgerow does not exceed 50 metres, at least one standard tree.</li> <li>• where the length of the hedgerow exceeds 50 metres but does not exceed 100 metres, at least 2 standard trees.</li> <li>• where the length of the hedgerow exceeds 100 metres, such number of standard trees (within any part of its length) as would when averaged over its total length amount to at least one for each 50 metres.</li> <li>• at least 3 woodland (ground flora) species within one metre, in any direction, of the outermost edges of the hedgerow.</li> <li>• a ditch along at least one half of the length of the hedgerow.</li> <li>• hedgerow connections scoring 4 points or more (a connection with another hedgerow scores one point and a connection with a pond or a woodland in which the majority of trees are broad-leaved trees scores 2 points; and a hedgerow is connected with something not only if it meets it but also if it has a point within 10 metres of it and would meet it if the line of the hedgerow continued).</li> <li>• a parallel hedge within 15 metres of the hedgerow.</li> <li>• The hedgerow is adjacent to a bridleway or public footpath, or a byway open to all traffic.</li> </ul>

For each individual hedgerow assessment, the length of the hedgerow was measured and the number of woody species and any additional features recorded. For woody species counts the following guidelines were applied (as stated within the Hedgerow Regulations 1997):

(a) where the length of the hedgerow does not exceed 30 metres, count the number of woody species present in the hedgerow.

(b) where the length of the hedgerow exceeds 30 metres, but does not exceed 100 metres, count the number of woody species present in the central stretch of 30 metres.

(c) where the length of the hedgerow exceeds 100 metres, but does not exceed 200 metres, count the number of woody species present in the central stretch of 30 metres within each half of the hedgerow and divide the aggregate by two.

(d) where the length of the hedgerow exceeds 200 metres, count the number of woody species present in the central stretch of 30 metres within each third of the hedgerow and divide the aggregate by three.

## 4.0 RESULTS

### 4.1 Desk study

#### *Designated sites*

Details of the designated sites for nature conservation located within the vicinity of the application site (statutory designated sites within a 5 kilometres radius and non-statutory designated sites within a two kilometres radius) are provided in table 2 below.

Plans depicting the locations of statutory and non-statutory designated sites within a two kilometres radius of the application site are included as appendices III and IV respectively.

**Table 2: Statutory designated sites within a 5 kilometres radius and non-statutory designated sites within a 2 kilometres radius of Hamble Airfield**

Site name	Conservation status	Distance & direction from site (km)	Size (Ha)	Habitat description
Solent & Southampton Water	SPA <sup>2</sup>	320m east	11325	The site qualifies for breeding populations of common tern ( <i>Sterna hirundo</i> ), little tern ( <i>Sterna albifrons</i> ), Mediterranean gull ( <i>Larus melanocephalus</i> ), roseate tern ( <i>Sterna dougallii</i> ), sandwich tern ( <i>Sterna sandvicensis</i> ); and overwintering black-tailed godwit ( <i>Limosa limosa islandica</i> ), dark-bellied brent goose ( <i>Branta bernicla bernicla</i> ), ringed plover ( <i>Charadrius hiaticula</i> ), teal ( <i>Anas crecca</i> ) and an internally important assemblage.

<sup>2</sup> SPA: Special Protection Area

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Site name	Conservation status	Distance & direction from site (km)	Size (Ha)	Habitat description
	Ramsar <sup>3</sup>	320m east	5346.44	The site comprises estuaries and adjacent coastal habitats including intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland, and grazing marsh. Supporting an important assemblage of rare plants and invertebrates with at least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site. Species to qualify the site for Ramsar status include migratory ringed plover, overwintering dark-bellied brent goose, Eurasian teal, and black-tailed godwit, as well as overwintering waterfowl assemblage.
Solent Maritime	SAC <sup>4</sup>	320m east	165,300	The Solent encompasses a major estuarine system on the south coast of England. Designated for its estuary, salt meadow, coastal lagoons, mudflats. Qualifying species includes Desmoulin's whorl snail ( <i>Vertigo moulinsiana</i> ).
Solent and Dorset Coast	SPA	410m east	89,078	The River Hamble forms part of the Solent and Dorset Coast maritime SPA which is designated for its importance as foraging habitat for terns ( <i>Sternidae spp</i> ).
Lee-On-The Solent to Itchen Estuary	SSSI <sup>5</sup>	320m east	585.79	The Site of Special Scientific Interest extends along the eastern shore of Southampton Water from Lee-on-the-Solent to the mid-Itchen estuary and includes the lower estuary of the River Hamble. The site comprises extensive intertidal muds with a littoral fringe of vegetated shingle, saltmarsh, reedbed, marshy grasslands and deciduous woodland on alluvium, valley gravels (Hamble Common), and Bracklesham Beds (Hook Links).

<sup>3</sup> Ramsar: Internationally important wetland site

<sup>4</sup> SAC: Special Area of Conservation

<sup>5</sup> SSSI: Site of Special Scientific Interest

Site name	Conservation status	Distance & direction from site (km)	Size (Ha)	Habitat description
Lincegrove and Hackett's Marshes	SSSI	320m north-east	37.3	The site comprises mature saltmarsh on the west bank of the River Hamble estuary. The saltmarsh vegetation is dominated by sea purslane ( <i>Halimione portulacoides</i> ) and common cord-grass ( <i>Spartina anglica</i> ), the latter species having invaded the marsh during the present century.
Hythe to Calshot Marshes	SSSI	2.4km south-west	591.8	The Hythe to Calshot Marshes Site of Special Scientific Interest encompasses the most extensive remaining areas of saltmarsh and mudflats in Southampton Water. Southampton Water supports nationally important numbers of migratory and over-wintering waders and wildfowl.
Upper Hamble Estuary and Woods	SSSI	2.8km north-east	148.7	Upper Hamble Estuary and Woods Site of Special Scientific Interest comprises the uppermost section of the estuary of the River Hamble and associated saltmarsh, reedswamp and ancient semi-natural woodland habitats.
The New Forest	SSSI	4.7km south-west	28924.5	The New Forest encompasses the largest area of unsown vegetation in lowland England. Habitats present comprise lowland heath, valley and seepage step mire, or fen, and ancient pasture woodland, including riparian and bog woodland.
North Solent	SSSI	4.99km south	1186.65	The reserve has a diverse range of habitats ranging from open shore and mudflats to saltmarsh, coastal grazing marsh, neutral and acidic grassland, woodland, valley mire and heathland.
Mercury Marshes	LNR <sup>6</sup>	320m east	6.36	The site consists of some woodland species, reedbed and intertidal mud, creeks and islands.
Hook with Warsash	LNR	590m east	251.61	Over 500 acres at the mouth of the River Hamble, including intertidal mudflats and a shoreline almost 3 miles long. There are a variety of habitats of which some are regionally rare and declining.

<sup>6</sup> LNR: Local Nature Reserve

Site name	Conservation status	Distance & direction from site (km)	Size (Ha)	Habitat description
Hackett's Marsh	LNR	955m north-east	20.36	The saltmarsh and meadows are grazed by cattle in summer and autumn on a carefully controlled rotation. A hay crop is occasionally taken from the outer paddocks. Scrub is cut back in the winter along with some pond management.
Holly Hill Woodland Park	LNR	1km east	28.13	A historic parkland situated alongside the River Hamble. The site comprises two areas including Winnards Copse, an ornamental area with a lake and Cawtes Copse which includes native woodland, some of which is ancient semi-natural woodland.
Westwood Woodland Park	LNR	1.8km north-west	49.47	The site comprises ancient woodlands and grasslands adjacent to Netley Abbey.
Warsash Common	LNR	2.2km south-east	23.38	A mix of rough grassland and heathland, and comprising a variety of habitats including dry woodland, open meadows, wet woodland and seasonal ponds, the Common supports a rich array of flora and fauna
Manor Farm	LNR	2.9km north-east	144.06	The site is located south of a stretch of the River Erewash and contains woodland and grassland habitats.
Netley Common	LNR	3.2km north	12.75	It is the city's last remaining piece of open heathland including grassland with islands of scrub and gorse, surrounded by a mixed woodland fringe.
Millers Pond	LNR	3.5km north-west	8.06	Semi-natural woodland, providing important open green space in the local area.
Calshot Marshes	LNR	4.5km south	51.14	An area of saltmarsh that supports significant populations of overwintering wading birds. The site is also considered internationally significant for its population of dark-bellied brent geese.
Kites Croft	LNR	4.5km east	17.04	The reserve runs from the A27 (Southampton Road) along the Brownwich stream. There are two ponds, woodland and associated meadows alongside the Brownwich stream. The site supports common dormouse.

Site name	Conservation status	Distance & direction from site (km)	Size (Ha)	Habitat description
Wildern	LNR	4.5km north	9.66	Wetland habitat with a mosaic of ponds and wet meadows that supports a variety of bird and invertebrate life.
Gull Coppice	LNR	4.5km north-east	12.74	Gull coppice comprises an area of broadleaved secondary woodland alongside an area of wildflower rich grassland that is undergoing colonisation by native tree species.
Peartree Green	LNR	4.8km north-west	17.78	A diverse habitat with areas of woodland and scrub within Southampton which is run by a group of volunteers.
Round Coppice	LNR	5km north-east	6.35	An enclosed area of ancient woodland with a scattering of hazel coppice stools.
Badnum Copse	SINC <sup>7</sup>	65m north-east	10.09	An area consisting of semi-natural woodland of local importance, ancient semi-natural woodland and semi-natural coastal and estuarine habitats.
West Wood (Royal Victoria Country Park)	SINC	220m west	16.46	An area of ancient semi-natural woodland.
Mercury Marsh South	SINC	226m east	1.37	Mercury marsh south is an area of semi-natural coastal and estuarine habitat including saltmarsh and intertidal mud flats.
Mercury Marina Saltmarsh	SINC	340m east	3.85	A semi-natural coastal and estuarine habitat that supports several notable species including marsh-mallow ( <i>Althaea officinalis</i> ), narrow-leaved bird's-foot-trefoil ( <i>Lotus glaber</i> ), parsley water-dropwort ( <i>Oenanthe lachenalii</i> ), annual beard-grass ( <i>Polypogon monspeliensis</i> ) and reflexed saltmarsh-grass ( <i>Puccinellia distans</i> ).
Mallards Moor	SINC	375m north-east	11.30	An area of ancient semi-natural woodland of restricted distribution within the county.
Petters Copse	SINC	1.2km south-west	0.82	An area of ancient semi-natural woodland.

<sup>7</sup> SINC: Site of Importance for Nature Conservation



Site name	Conservation status	Distance & direction from site (km)	Size (Ha)	Habitat description
Hook-With-Warsash LNR (Wendleholme)	SINC	1.2km east	10.39	Grasslands which have become impoverished through inappropriate management but which retain sufficient elements of relic unimproved grassland to enable recovery.
Netley to Hamble Shore	SINC	1.2km west	3.19	Netley to Hamble Shore comprises semi-natural coastal and estuarine habitats.
St Mary's Road Wood	SINC	1.2km north-west	3.52	St Mary's Road wood comprises pasture woodland and wooded commons, which are of significant biological and historical interest.
Spear Pond Gully	SINC	1.3km north-west	1.74	Small area of comprising ancient semi-natural woodland.
Downkilm Copse	SINC	1.3km east	3.33	An area of ancient semi-natural woodland and other woodland where there is a significant element of semi-natural woodland surviving.
Hamble Common North	SINC	1.4km south	3.72	Hamble Common North consists of agriculturally unimproved grasslands
Piland's Wood (Lower)	SINC	1.4km north	2.19	An area of ancient semi-natural woodland
Netley Lodge	SINC	1.4km west	14.16	Netley Lodge comprises ancient semi-natural woodland, semi-natural woodland of restricted distribution within the county and unimproved wetland.
Crableck Wood and Saltmarsh	SINC	1.5km north-east	0.95	An area of ancient semi-natural woodland and areas of semi-natural coastal and estuarine habitats.
Hamble Common West	SINC	1.5km south	6.44	Hamble Common West consists of areas of heathland vegetation; including matrices of dwarf shrub, acid grassland, valley mires and scrub as well as connecting afforested heathland
Priors Hill Copse/Hound Grove	SINC	1.5km north-west	14.54	An area of ancient semi-natural woodland.
Bursledon Meadow	SINC	1.5km north-east	1.30	An area of agriculturally unimproved grassland

Site name	Conservation status	Distance & direction from site (km)	Size (Ha)	Habitat description
River Hamble Mudflats and Saltmarsh - 1	SINC	1.7km north-east	8.69	Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands
Brook Wood, Fareham	SINC	1.8km south-east	4.72	Woodland where there is a significant element of ancient semi-natural woodland surviving.
Winnard's & Cawte's Copses	SINC	1.8km east	36.90	An area of ancient semi-natural woodland.
Piland's Wood (Upper)	SINC	1.8km north	5.50	An area of ancient semi-natural woodland.
Priors Hill Brickworks	SINC	1.8km north-west	7.52	Woodland with a significant area of surviving semi-natural woodland. Poor unimproved grassland and areas of afforested heathland which retains significant amounts of heathland vegetation
West Wood Grange Field	SINC	1.8km north-west	22.14	Grasslands which have become impoverished through inappropriate management but which retain sufficient elements of relic unimproved grassland to enable recovery. A Site of nature conservation interest which occurs in an area otherwise deficient in such interest, and/or is known to be of particularly high value to local communities e.g. community wildlife sites.
Netley Farm Closed Landfill Site	SINC	1.8km north-west	45.52	A site that supports the notable plant species annual beard-grass ( <i>Polypogon monspeliensis</i> ) and narrow-leaved bird's-foot trefoil ( <i>Lotus tenuis</i> )
Brooklands Wood	SINC	1.9km east	1.86	An area of woodland where there is a significant element of ancient semi-natural woodland surviving.
River Hamble Mudflats and Saltmarsh - 2	SINC	1.9km north-east	1.72	Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands

Site name	Conservation status	Distance & direction from site (km)	Size (Ha)	Habitat description
Brixedone Saltmarsh and Mudflat	SINC	1.95km north-east	3.31	Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands. The site supports the notable coastal plant species <i>Salicornia ramosissima</i> , <i>Cochlearia anglica</i> , and <i>Althaea officinalis</i>

*It is considered that the proposed project could potentially have impacts on the following designated sites due to their close proximity to the application site, the level of landscape and habitat connectivity across the intervening land, the nature of the proposals, and the conservation importance of the sites and their designation criteria/qualifying features:*

- *Solent and Southampton Water Special Protection Area (SPA) and Ramsar*
- *Solent Maritime Special Area of Conservation (SAC)*
- *Solent and Dorset Coast SPA*
- *Lee-On-The Solent to Itchen Estuary Site of Special Scientific Interest (SSSI)*
- *Lincegrove and Hackett's Marshes SSSI*
- *Mercury Marshes Local Nature Reserve (LNR)*
- *Badnam Copse Site of Importance for Nature Conservation SINC*
- *West Wood (Royal Victoria Country Park) SINC*
- *Mallards Moor SINC*
- *Mercury Marsh South SINC*
- *Mercury Marina Saltmarsh SINC*

*It is recommended that these designated sites are included as baseline features within a detailed ecological impact assessment for the project. The application site also lies within the SSSI Impact Risk Zones and the nature of the proposals is a type identified by Natural England as having the potential to result in adverse effects on nearby SSSIs, SPAs or SACs, (namely: Minerals, Oil and Gas). Therefore, it is also advised that a Habitats Regulations Assessment is undertaken for the project.*

*Due to the close proximity of the Badnam Copse SINC, a request was made to the relevant landowners to undertake a botanical survey of this site in order to make a thorough assessment of the site's current nature conservation value and potential impacts on it arising from the project. This was not possible due to both landowners refusing access, proof of this is included as appendix V.*

*It is considered highly unlikely that the proposed project will result in any impacts to any of the other identified designated sites within the study area, mainly due to the substantial intervening distances, lack of landscape connectivity, and the nature of the proposals. It*

*is therefore advised that all other identified designated sites should be excluded from any further assessments.*

### ***Priority habitats***

The map of priority habitats within two kilometres of the application site provided by HBIC (refer to appendix VI) shows small fragmentary stands of broadleaved woodland adjacent to the west and east of the site and larger stands forming part of the nearby SINC's to the west and north-east, including West Wood, Badnam Copse and Mallards Moor. Other priority habitats identified within the wider surrounding land include coastal and floodplain grazing marsh, coastal vegetated shingle, coastal saltmarsh, intertidal mudflats, reedbeds, lowland heathland, and lowland dry acid grassland.

*It is recommended that relevant off-site habitats should be included as baseline features within a detailed ecological impact assessment for the project.*

### ***Ecological networks***

The map of ecological networks within two kilometres of the application site provided by HBIC (refer to appendix VII) shows that the application site and adjacent land to the north-east are highlighted as 'network opportunity' areas.

*It is recommended that any habitat enhancement measures or post-quarrying restoration of the site should seek to maximise the site's potential as an ecological network area.*

### ***Wader and brent goose sites***

The site and adjacent land is designated as a non-statutory site for use by waders and brent geese (*Branta bernicla*), although it is confirmed as being a site with only negative records (confirmed absence of waders and/or brent geese) during surveys (refer to appendix VIII).

*Further bird surveys are advised to establish whether or not the site is currently being used by either brent geese or wading bird species.*

### ***Protected, notable and invasive species records***

Table 3 below lists records of protected, notable and non-native invasive species within two kilometres of the Hamble Airfield site provided by HBIC.

**Table 3: Protected, notable and invasive species records within 2 kilometres of the Hamble Airfield site**

Common Name	Scientific name	Status	Dates
<b><i>Amphibians and Reptiles</i></b>			
Slow-worm	<i>Anguis fragilis</i>	Schedule 5 WCA <sup>8</sup> , UKBAP <sup>9</sup>	243 records dated between 2000 and 2017 including 2 records from within the site.
Common toad	<i>Bufo bufo</i>	UKBAP	5 records between 2000 and 2007.
Grass snake	<i>Natrix natrix</i>	Schedule 5 WCA, UKBAP	5 records between 2005 and 2017.
Great crested newt	<i>Triturus cristatus</i>	Annex II <sup>10</sup> , Schedule 2 Habs Regs <sup>11</sup> , Schedule 5 WCA, UKBAP	38 records between 2005 and 2013.
Adder	<i>Vipera berus</i>	Schedule 5 WCA, UKBAP	2 records dated 2005 and 2017.
Common lizard	<i>Zootoca vivipara</i>	Schedule 5 WCA, UKBAP	57 records dated between 1997 and 2017 including 2 records from within the site.
<b><i>Birds</i></b>			
Lesser redpoll	<i>Acanthis cabaret</i>	Red List BoCC <sup>12</sup> , UKBAP	22 records dated between 1994 and 2017 including a record on site.
Skylark	<i>Alauda arvensis</i>	Red List BoCC, UKBAP	40 records dated between 1996 and 2019.
Kingfisher	<i>Alcedo atthis</i>	Schedule 1 WCA, Annex I <sup>13</sup> , Amber List BoCC	599 records between 1994 and 2019.
White-fronted goose	<i>Anser albifrons</i>	Red List BoCC,	2 records dated 2015.
Tree pipit	<i>Anthus trivialis</i>	Red List BoCC, UKBAP	27 records dated between 1993 and 2019.
Short-eared owl	<i>Asio flammeus</i>	Annex I, Amber List BoCC	33 records dated between 1993 and 2018.
Long-eared owl	<i>Asio otus</i>	CR <sup>14</sup>	1 record dated 2010
Pochard	<i>Aythya ferina</i>	Red List BoCC,	27 records dated between 1996 and 2016.
Scaup	<i>Aythya marila</i>	Schedule 1 WCA, Red List BoCC, UKBAP	2 records dated 2009 and 2018.

<sup>8</sup> WCA: Wildlife and Countryside Act 1981 (as amended)

<sup>9</sup> UKBAP: UK Biodiversity Action Plan - Priority Species

<sup>10</sup> Annex II of the Habitats Directive

<sup>11</sup> Habs Regs: The Conservation of Habitats and Species Regulations (amended) 2017

<sup>12</sup> BoCC: Birds of Conservation Concern

<sup>13</sup> Annex I of the EC Birds Directive

<sup>14</sup> CR: County rare

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Common Name	Scientific name	Status	Dates
Bittern	<i>Botaurus stellaris</i>	Annex I, Schedule 1 WCA, UKBAP	13 records dated between 1997 and 2015.
Dark bellied brent goose	<i>Branta bernicla</i>	Amber List BoCC, UKBAP	489 records dated between 1994 and 2019.
Barnacle goose	<i>Branta leucopsis</i>	Annex I, Amber List BoCC	5 records dated between 2002 and 2015.
Red breasted good	<i>Branta ruficollis</i>	Annex I	1 record dated 1997.
Lapland bunting	<i>Calcarius lapponicus</i>	Schedule 1 WCA	3 records dated 1997 and 2000.
Purple sandpiper	<i>Calidris maritima</i>	Schedule 1 WCA	1 record dated 1996.
Ruff	<i>Calidris pugnax</i>	Annex I, Schedule 1 WCA, Red List BoCC	16 records dated between 2000 and 2019.
Nightjar	<i>Caprimulgus europaeus</i>	Annex I, UKBAP, Amber List BoCC	20 records dated between 1998 and 2019.
Cetti's warbler	<i>Cettia cetti</i>	WCA Schedule 1	873 records dated between 1993 and 2019.
Little ringed plover	<i>Charadrius dubius</i>	WCA Schedule 1	35 records dated between 1994 and 2018.
Ringed plover	<i>Charadrius hiaticula</i>	Red List BoCC	446 records dated between 1993 and 2019.
Black tern	<i>Chlidonias niger</i>	Annex I, Schedule 1 WCA	9 records dated between 2002 and 2019.
Marsh harrier	<i>Circus aeruginosus</i>	Annex I, Schedule 1 WCA, Amber List BoCC	23 records dated between 1996 and 2019.
Hen harrier	<i>Circus cyaneus</i>	Annex I, Schedule 1 WCA, Red List BoCC	3 records dated between 1997 and 2000.
Long-tailed duck	<i>Clangula hyemalis</i>	Schedule 1 WCA, Red List BoCC	13 records dated between 1994 and 2019.
Hawfinch	<i>Coccothraustes coccothraustes</i>	UKBAP, Red List BoCC	6 records dated between 1998 and 2019.
Cuckoo	<i>Cuculus canorus</i>	UKBAP, Red List BoCC	67 records dated between 1993 and 2018.
Lesser spotted woodpecker	<i>Dendrocopos minor</i>	UKBAP, Red List BoCC	52 records dated between 1993 and 2013.
Little egret	<i>Egretta garzetta</i>	Annex I	87 records dated between 1993 and 2019.
Yellowhammer	<i>Emberiza citrinella</i>	Schedule 1 WCA, Red List BoCC, UKBAP	2 records dated 1995 and 1996.
Reed bunting	<i>Emberiza schoeniclus</i>	UKBAP, Amber List BoCC	433 records dated between 1997 and 2019.
Merlin	<i>Falco columbarius</i>	Annex I, Schedule 1 WCA, Red List BoCC	8 records dated between 1995 and 2017.
Peregrine	<i>Falco peregrinus</i>	Annex I, Schedule 1 WCA	28 records dated between 1993 and 2019.
Hobby	<i>Falco subbuteo</i>	Schedule 1 WCA	33 records dated between 19931 and 2019.

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Common Name	Scientific name	Status	Dates
Pied flycatcher	<i>Ficedula hypoleuca</i>	Red List BoCC	8 records dated between 1993 and 2002.
Brambling	<i>Fringilla montifringilla</i>	Schedule 1 WCA	20 records dated between 1994 and 2018.
Black-throated diver	<i>Gavia arctica</i>	Annex I, Schedule 1 WCA, UKBAP, Amber List BoCC	8 records dated between 1994 and 2018.
Great northern diver	<i>Gavia immer</i>	Annex I, Schedule 1 WCA, Amber List BoCC	90 records dated between 1994 and 2019.
Red-throated diver	<i>Gavia stellata</i>	Annex I, Schedule 1 WCA	19 records dated between 1994 and 2017.
Storm petrel	<i>Hydrobates pelagicus</i>	Annex I	1 record dated 2000.
Little gull	<i>Hydrocoloeus minutus</i>	Annex I, Schedule 1 WCA	13 records dated 2002 and 2019.
Wryneck	<i>Jynx torquilla</i>	Schedule 1 WCA, UKBAP	9 records dated between 2010 and 2015.
Herring gull	<i>Larus argentatus</i>	UKBAP, Red List BoCC	47 records dated between 1994 and 2019.
Lesser black-backed gull	<i>Larus fuscus</i>	Red List BoCC	86 records dated between 1994 and 2019.
Mediterranean gull	<i>Larus melanocephalus</i>	Annex I, Schedule 1 WCA, Amber List BoCC	64 records dated between 1993 and 2019.
Bar-tailed godwit	<i>Limosa lapponica</i>	Annex I, Amber List BoCC	79 records dated between 1993 and 2019.
Black-tailed godwit	<i>Limosa limosa</i>	Schedule 1 WCA, UKBAP, Red List BoCC	93 records dated between 1994 and 2019.
Linnet	<i>Linaria cannabina</i>	Red List BoCC	60 records dated between 1994 and 2019.
Grasshopper warbler	<i>Locustella naevia</i>	UKBAP, Red List BoCC,	9 records dated between 1999 and 2010.
Common crossbill	<i>Loxia curvirostra</i>	Schedule 1 WCA	10 records dated between 1994 and 2013.
Woodlark	<i>Lullula arborea</i>	Annex I, Schedule 1 WCA, UKBAP	6 records dated between 1998 and 2010.
Nightingale	<i>Luscinia megarhynchos</i>	Red List BoCC	31 records dated between 1995 and 2018.
Bluethroat	<i>Luscinia svecica</i>	Annex I, Schedule 1 WCA	7 records dated between 2002 and 2019.
White spotted bluethroat	<i>Luscinia svecica cyaneola</i>	Annex I, Schedule 1 WCA	1 record dated 2018.
Velvet scoter	<i>Melanitta fusca</i>	Schedule 1 WCA	1 record dated 2019.
Common scoter	<i>Melanitta nigra</i>	Schedule 1 WCA, UKBAP, Red List BoCC	74 records dated between 1994 and 2019.
Smew	<i>Mergellus albellus</i>	Annex I, Amber List BoCC	2 records dated 1993 and 2010.

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Common Name	Scientific name	Status	Dates
Black kite	<i>Milvus migrans</i>	Annex I	2 records dated 1993 and 2010.
Red kite	<i>Milvus milvus</i>	Annex I, Schedule 1 WCA	34 records dated between 1996 and 2019.
Grey wagtail	<i>Motacilla cinerea</i>	Red List BoCC	83 records dated between 1993 and 2019.
Yellow wagtail	<i>Motacilla flava</i>	UKBAP, Red List BoCC	136 records dated between 1995 and 2019.
Spotted flycatcher	<i>Muscicapa striata</i>	UKBAP, Red List BoCC	67 records dated between 1993 and 2019.
Curlew	<i>Numenius arquata</i>	UKBAP, Red List BoCC	454 records dated between 1993 and 2019.
Whimbrel	<i>Numenius phaeopus</i>	Schedule 1 WCA, Red List BoCC	278 records dated between 1993 and 2019.
Leach's petrel	<i>Oceanodroma leucorhoa</i>	Annex I, Schedule 1 WCA, Amber List BoCC	1 record dated 2010.
Osprey	<i>Pandion haliaetus</i>	Annex I, Schedule 1 WCA, Amber List BoCC	21 records dated between 1999 and 2019.
Bearded tit	<i>Panurus biarmicus</i>	Schedule 1 WCA	141 records dated between 1993 and 2019.
House sparrow	<i>Passer domesticus</i>	UKBAP, Red List BoCC	39 records dated between 2011 and 2019.
Honey-buzzard	<i>Pernis apivorus</i>	Annex I, Schedule 1 WCA, Amber List BoCC	2 records dated 1993 and 2010.
Shag	<i>Phalacrocorax aristotelis</i>	Red List BoCC	8 records dated between 1994 and 2016.
Black redstart	<i>Phoenicurus ochruros</i>	Schedule 1 WCA, Red List BoCC	45 records dated between 1994 and 2019.
Spoonbill	<i>Platalea leucorodia</i>	Annex I, Schedule 1 WCA, Amber List BoCC	11 records dated between 1995 and 2017.
Snow bunting	<i>Plectrophenax nivalis</i>	Annex I, Schedule 1 WCA, Amber List BoCC	6 records dated between 1997 and 2013.
Glossy ibis	<i>Plegadis falcinellus</i>	Annex I	1 record dated 2012.
Golden plover	<i>Pluvialis apricaria</i>	Annex I	500 records dated between 1993 and 2019.
Slavonian grebe	<i>Podiceps auritus</i>	Annex I, Schedule 1 WCA, Red List BoCC	17 records dated between 1994 and 2018.
Red-necked grebe	<i>Podiceps grisegena</i>	Red List BoCC	5 records dated between 1993 and 2016.
Black-necked grebe	<i>Podiceps nigricollis</i>	Schedule 1 WCA, Amber List BoCC	7 records dated between 1994 and 2019.
Marsh tit	<i>Poecile palustris</i>	UKBAP, Red List BoCC	19 records dated between 1998 and 2017.



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Common Name	Scientific name	Status	Dates
Spotted crane	<i>Porzana porzana</i>	Annex I, Schedule 1 WCA, Amber List BoCC	3 records dated 2003 and 2019.
Avocet	<i>Recurvirostra avosetta</i>	Annex I, Schedule 1 WCA, Amber List BoCC	55 records dated between 1993 and 2019.
Firecrest	<i>Regulus ignicapilla</i>	Schedule 1 WCA,	376 records dated between 1994 and 2019.
Kittiwake	<i>Rissa tridactyla</i>	Red List BoCC	22 records dated between 1999 and 2018.
Whinchat	<i>Saxicola rubetra</i>	Red List BoCC	159 records dated between 1993 and 2019.
Woodcock	<i>Scolopax rusticola</i>	Red List BoCC	14 records dated between 1995 and 2019.
Garganey	<i>Spatula querquedula</i>	Schedule 1 WCA	3 records dated between 1994 and 2010.
Arctic skua	<i>Stercorarius parasiticus</i>	UKBAP, Red List BoCC	5 records dated between 1993 and 2013.
Common tern	<i>Sterna hirundo</i>	Annex I, Amber List BoCC	58 records dated between 1993 and 2019.
Arctic tern	<i>Sterna paradisaea</i>	Annex I, Amber List BoCC	11 records dated between 2001 and 2019.
Sandwich tern	<i>Sterna sandvicensis</i>	Annex I, Amber List BoCC	144 records dated between 1994 and 2019.
Little tern	<i>Sternula albifrons</i>	Annex I, Schedule 1 WCA, Amber List BoCC	4 records dated between 2001 and 2010.
Turtle dove	<i>Streptopelia turtur</i>	UKBAP, Red List BoCC	4 records between 1994 and 2001.
Starling	<i>Sturnus vulgaris</i>	UKBAP, Red List BoCC	74 records dated between 1998 and 2019.
Dartford warbler	<i>Sylvia undata</i>	Annex I, Schedule 1 WCA	179 records dated between 1994 and 2019, including seven records on the Hamble Airfield site dated between 2004 and 2006.
Wood sandpiper	<i>Tringa glareola</i>	Annex I, Schedule 1 WCA, Amber List BoCC	10 records dated between 2004 and 2019.
Greenshank	<i>Tringa nebularia</i>	Schedule 1 WCA, Amber List BoCC	1137 records dated between 1993 and 2019.
Green sandpiper	<i>Tringa ochropus</i>	Schedule 1 WCA, Amber List BoCC	95 records dated between 1993 and 2019.
Redwing	<i>Turdus iliacus</i>	Schedule 1 WCA, Red List BoCC,	64 records dated between 1994 and 2019.
Song thrush	<i>Turdus philomelos</i>	UKBAP, Red List BoCC,	72 records dated between 1997 and 2019.

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Common Name	Scientific name	Status	Dates
Fieldfare	<i>Turdus pilaris</i>	Schedule 1 WCA, Red List BoCC	30 records dated between 1993 and 2019.
Ring ouzel	<i>Turdus torquatus</i>	UKBAP, Red List BoCC,	2 records dated 2018.
Mistle thrush	<i>Turdus viscivorus</i>	Red List BoCC,	31 records dated between 1993 and 2019.
Barn owl	<i>Tyto alba</i>	Schedule 1 WCA	30 records dated between 1994 and 2019.
Hoopoe	<i>Upupa epops</i>	Schedule 1 WCA	2 records dated 2006 and 2007.
Lapwing	<i>Vanellus vanellus</i>	UKBAP, Red List BoCC	404 records dated between 1993 and 2019.
<b>Mammals – bats</b>			
Barbastelle bat	<i>Barbastella barbastellus</i>	Schedule 2 Habs Regs, Schedule 5 WCA, Annex II, UKBAP	1 record dated 2017.
Unidentified bat species	<i>Chiroptera sp.</i>	Schedule 2 Habs Regs, Schedule 5 WCA	7 records dated between 1997 and 2016.
Serotine	<i>Eptesicus serotinus</i>	Schedule 2 Habs Regs, Schedule 5 WCA	31 records dated between 1987 and 2018.
Daubenton's bat	<i>Myotis daubentonii</i>	Schedule 2 Habs Regs, Schedule 5 WCA	5 records dated 2001 and 2016.
Whiskered bat	<i>Myotis mystacinus</i>	Schedule 2 Habs Regs, Schedule 5 WCA	3 records dated 2016 and 2020.
Whiskered/Brandt's bat	<i>Myotis mystacinus/brandtii</i>	Schedule 2 Habs Regs, Schedule 5 WCA	5 records dated between 2001 and 2017 including a record from on the site.
Natterer's bat	<i>Myotis nattereri</i>	Schedule 2 Habs Regs, Schedule 5 WCA	7 records dated between 2004 and 2017
Myotis species	<i>Myotis sp.</i>	Schedule 2 Habs Regs, Schedule 5 WCA	20 records dated between 2012 and 2018.
Leisler's bat	<i>Nyctalus leisleri</i>	Schedule 2 Habs Regs, Schedule 5 WCA	
Noctule	<i>Nyctalus noctula</i>	Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP	43 records dated from 1997 to 2019 including records on site.
Nathusius's pipistrelle	<i>Pipistrellus nathusii</i>	Schedule 2 Habs Regs, Schedule 5 WCA	6 records dated 2016 and 2018.
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Schedule 2 Habs Regs, Schedule 5 WCA	126 records dated between 2000 and 2020.
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP	89 records dated between 1999 and 2019.
Pipistrelle species	<i>Pipistrellus sp.</i>	Schedule 2 Habs Regs, Schedule 5 WCA	55 records dated between 1984 and 2018.
Brown long-eared	<i>Plecotus auritus</i>	Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP	24 records dated between 1987 and 2017.

Common Name	Scientific name	Status	Dates
Long-eared bat species	<i>Plecotus sp.</i>	Schedule 2 Habs Regs, Schedule 5 WCA	22 records dated between 1998 and 2018.
<b><i>Mammals – Terrestrial (non-bats)</i></b>			
European water vole	<i>Arvicola amphibius</i>	Schedule 5 WCA, UK BAP	3 records dated between 1992 and 2009.
West European hedgehog	<i>Erinaceus europaeus</i>	UK BAP	42 records dated 1997 and 2019.
European otter	<i>Lutra lutra</i>	Annex II, Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP	1 record dated 2006.
Eurasian badger	<i>Meles meles</i>	PBA <sup>15</sup>	6 records dated between 2008 and 2020.
<b><i>Invertebrates</i></b>			
Grey dagger	<i>Acronicta psi</i>	UKBAP	10 records dated between 1995 and 2009.
Knot grass	<i>Acronicta rumicis</i>	UKBAP	9 records dated between 2000 and 2004.
Flounced chestnut	<i>Agrochola helvola</i>	UKBAP	1 record dated 2004.
Beaded chestnut	<i>Agrochola lychnidis</i>	UKBAP	2 records dated between 2001 and 2003.
Ear moth	<i>Amphipoea oculea</i>	UKBAP	3 records dated between 2000 and 2003.
Mouse moth	<i>Amphipyra tragopoginis</i>	UKBAP	1 record dated 2000.
Dusky brocade	<i>Apamea remissa</i>	UKBAP	2 records dated 2000.
Garden tiger	<i>Arctia caja</i>	UKBAP	1 record dated 2005.
Centre-barred sallow	<i>Atethmia centrago</i>	UKBAP	1 record dated 2000.
Minor shoulder-knot	<i>Brachylomia viminalis</i>	UKBAP	8 records dated between 1995 and 2000.
Mottled rustic	<i>Caradrina morpheus</i>	UKBAP	4 records dated between 2000 and 2011.
Light crimson underwing	<i>Catocala promissa</i>	UKBAP	1 record dated 1993.
Dark crimson underwing	<i>Catocala sponsa</i>	UKBAP	1 record dated 2000.
Broom moth	<i>Ceramica pisi</i>	UKBAP	2 records dated 2001.
Streak	<i>Chesias legatella</i>	UKBAP	2 records dated 1999 and 2009.
Broom tip	<i>Chesias rufata</i>	UKBAP	1 record dated 2000.
Latticed heath	<i>Chiasmia clathrata</i>	UKBAP	1 record dated 2000.

<sup>15</sup> PBA: Protection of Badgers Act

Common Name	Scientific name	Status	Dates
Small heath	<i>Coenonympha pamphilus</i>	UKBAP	18 records dated between 1996 and 2020.
Small blue	<i>Cupido minimus</i>	UKBAP	2 records dated 2010 and 2019.
Oak lutestring	<i>Cymatophorina diluta</i>	UKBAP	3 records dated between 1980 and 2000.
Small square spot	<i>Diarsia rubi</i>	UKBAP	3 records dated between 2000 and 2001.
Small phoenix	<i>Ecliptopera silaceata</i>	UKBAP	7 records dated between 2000 and 2009.
Dusky thorn	<i>Ennomos fuscantaria</i>	UKBAP	2 records dated between 2000 and 2009.
Galium carpet	<i>Epirrhoe galiata</i>	UKBAP	1 record dated 2000.
Crescent	<i>Helotropha leucostigma</i>	UKBAP	2 records dated 2001.
Small emerald	<i>Hemistola chrysoprasaria</i>	UKBAP	1 record dated 2000.
Ghost moth	<i>Hepialus humuli</i>	UKBAP	1 record dated 2000.
Grayling	<i>Hipparchia semele</i>	UKBAP	20 records between 1997 and 2020.
Rustic	<i>Hoplodrina blanda</i>	UKBAP	8 records dated between 2000 and 2020.
Rosy rustic	<i>Hydraecia micacea</i>	UKBAP	3 records dated 2000.
Wall	<i>Lasiommata megera</i>	UKBAP	4 records dated between 2005 and 2012.
White admiral	<i>Limenitis camilla</i>	UKBAP	14 records dated between 1996 and 2017.
Rosy minor	<i>Litologia literosa</i>	UKBAP	4 records dated between 2001 and 2009.
Stag beetle	<i>Lucanus cervus</i>	Annex II, UKBAP	232 records dated between 1975 and 2019 including records on site.
Lackey	<i>Malacosoma neustria</i>	UKBAP	12 records dated between 2000 and 2006.
Dot moth	<i>Melanchra persicariae</i>	UKBAP	3 records dated between 2000 and 2001.
Pretty Chalk Carpet	<i>Melanthia procellata</i>	UKBAP	1 record dated 2003.
Silver-studded blue	<i>Plebejus argus</i>	UK BAP	13 records dated between 2001 and 2020.
Grizzled skipper	<i>Pyrgus malvae</i>	UKBAP	62 records dated between 1987 and 2009.
Large wainscot	<i>Rhizedra lutosa</i>	UKBAP	4 records dated between 1995 and 2002.

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Common Name	Scientific name	Status	Dates
White-letter hairstreak	<i>Satyrrium w-album</i>	Schedule 5 WCA, UK BAP	12 records dated 2001 and 2020.
Mullein Wave	<i>Scopula marginepunctata</i>	UKBAP	3 records dated 2000.
White ermine	<i>Spilosoma lubricipeda</i>	UKBAP	6 records dated between 2000 and 2012.
Buff ermine	<i>Spilosoma lutea</i>	UKBAP	6 records dated between 2000 and 2005.
Hedge rustic	<i>Tholera cespitis</i>	UKBAP	1 record dated 2000.
Blood-vein	<i>Timandra comae</i>	UKBAP	2 records dated 2000.
Cinnabar	<i>Tyria jacobaeae</i>	UKBAP	40 records dated between 1993 and 2010.
Oak hook-tip	<i>Watsonalla binaria</i>	UKBAP	15 records dated between 2000 and 2005.
Sallow	<i>Xanthia icteritia</i>	UKBAP	7 records dated between 1993 and 2000.
<b>Higher plants</b>			
Slender hare's-ear	<i>Bupleurum tenuissimum</i>	UKBAP	2 records dated between 2011 and 2015.
Divided sedge	<i>Carex divisa</i>	UKBAP	1 record dated 2019.
Cornflower	<i>Centaurea cyanus</i>	UKBAP	1 record dated 2000.
Deptford Pink	<i>Dianthus armeria</i>	Schedule 8 WCA, UKBAP	1 record dated 2011.
Butcher's broom	<i>Parapholis incurva</i>	Annex V <sup>16</sup>	52 records dated between 1990 and 2019.
Triangular club-rush	<i>Schoenoplectus triqueter</i>	Schedule 8 WCA, UKBAP	1 record dated 2006.
<b>Invasive plants</b>			
Water fern (fairy moss)	<i>Azolla filiculoides</i>	Schedule 9 WCA	1 record dated 2005.
Three-cornered garlic	<i>Allium triquetrum</i>	Schedule 9 WCA	8 records dated between 2001 and 2019.
Wall cotoneaster	<i>Cotoneaster horizontalis</i>	Schedule 9 WCA	1 record dated 2002.
Himalayan cotoneaster	<i>Cotoneaster simonsii</i>	Schedule 9 WCA	5 records dated between 1994 and 2019.
New Zealand pigmyweed	<i>Crassula helmsii</i>	Schedule 9 WCA	3 records dated between 1998 and 2013.
Montbretia	<i>Crocsmia x crocosmifolia</i>	Schedule 9 WCA	10 records dated between 1998 and 2019.
Canadian waterweed	<i>Elodea Canadensis</i>	Schedule 9 WCA	3 records dated 1997 and 1998.

<sup>16</sup> Annex 5 of the Habitats Directive

Common Name	Scientific name	Status	Dates
Nuttall's Waterweed	<i>Elodea nuttallii</i>	Schedule 9 WCA	1 record dated 2009.
Japanese knotweed	<i>Fallopia x bohemica</i>	Schedule 9 WCA	39 records dated between 1997 and 2019.
Shallon	<i>Gaultheria shallon</i>	Schedule 9 WCA	2 records dated between 2002 and 2013.
Giant hogweed	<i>Heracleum mantegazzianum</i>	Schedule 9 WCA	1 record dated 2016.
Indian balsam (Himalayan Balsam)	<i>Impatiens glandulifera</i>	Schedule 9 WCA	14 records dated between 1997 and 2020.
Curly waterweed (Curly Pondweed)	<i>Lagarosiphon major</i>	Schedule 9 WCA	1 record dated 1998.
Variegated yellow-archangel	<i>Lamiastrum galeobdolon argentatum</i>	Schedule 9 WCA	7 records dated between 1997 and 2019.
Parrot's-feather	<i>Myriophyllum aquaticum</i>	Schedule 9 WCA	7 records dated 1998 and 2018.
Rhododendron	<i>Rhododendron ponticum</i>	Schedule 9 WCA	64 records dated 1994 to 2020.
False acacia	<i>Robinia pseudoacacia</i>	Schedule 9 WCA	7 records dated 2008 to 2019.
Japanese rose	<i>Rosa rugosa</i>	Schedule 9 WCA	11 records dated 1997 to 2015.

*These records of protected, notable and invasive species in the vicinity of the site increase the likelihood of them being present where suitable habitat is identified in the field survey.*

## 4.2 Field survey

### 4.2.1 Vegetation

Descriptions of the habitats and features recorded on site during the walkover surveys are provided below, whilst a phase 1 habitat map with accompanying target notes is included as appendix I. Site photography is included as appendix II.

The site mainly comprises an extensive area of semi-improved grassland and scrub mosaic. In addition to this, there are small stands of regenerating broadleaved woodland adjacent to the north-western boundaries of the site, sections of native hedgerow alongside the north-eastern boundaries, and scattered trees (mostly in the southern half of the site).

***Semi-improved grassland (Target notes TN1 and TN2)***

The vast majority of the semi-improved grassland recorded on site (TN1, photo 1) comprised rank and overgrown swards that were dominated by tussocks of coarse grasses, particularly false oat-grass (*Arrhenatherum elatius*), cock's-foot (*Dactylis glomerata*), red fescue (*Festuca rubra*) and Yorkshire-fog (*Holcus lanatus*). Common herbaceous species and ruderals, including yarrow (*Achillea millefolium*), ribwort plantain (*Plantago lanceolata*), wild carrot (*Daucus carota*), red clover (*Trifolium pratense*), curled dock (*Rumex crispus*), hogweed (*Heracleum sphondylium*), creeping thistle (*Cirsium arvense*) and common ragwort (*Jacobaea vulgaris*), were present amongst the swards in occasional to rare abundance levels, and some more desirable grassland species, such as greater bird's-foot-trefoil (*Lotus pedunculatus*) and oxeye daisy (*Leucanthemum vulgare*) and perforate St John's-wort (*Hypericum perforatum*), were also present in rare, scattered abundance. The sward structure and average height was variable, with some sections comprising tall swards, between 0.8 and 1.1 metres average height, dominated by false oat-grass (refer to appendix photo), and other sections being shorter, more open and with greater variety and abundances of herbaceous species. Substantial accumulations of thatch were recorded at ground level throughout most of the swards.

Despite the majority of the semi-improved grassland on site being of a rank and overgrown condition, there was also an element of unimproved and more botanically-interesting acid grassland present amongst some sections of the sward, particularly in the north-east region of the site where it appears that there may be a higher level of wild grazing by deer and rabbits taking place (TN2, photo 2). These areas of more botanically-diverse acid grassland were characterised by shorter, more open swards, between approximately 4 and 15 centimetres in average height, that were less dominated by coarse grasses, and supported higher frequencies of finer grasses and various desirable indicator species, including sweet vernal-grass (*Anthoxanthum odoratum*), common bent (*Agrostis capillaris*), smooth meadow-grass (*Poa pratensis*), crested dog's-tail (*Cynosurus cristatus*), early hair-grass (*Aira praecox*), common bird's-foot-trefoil (*Lotus corniculatus*), sheep's sorrel (*Rumex acetosella*), lady's bedstraw (*Galium verum*) and heath speedwell (*Veronica officinalis*). The notable species corky-fruited water-dropwort (*Oenanthe pimpinelloides*) and subterranean clover (*Trifolium subterraneum*) were each recorded in single locations within these more diverse areas of semi-improved grassland.

A full species list for the semi-improved grassland recorded on site is provided in table below 4.

**Table 4: Species recorded within the short semi-improved grassland**

Common name	Latin name	Abundance	Status
<b><i>Bryophytes</i></b>			
Broom fork-moss	<i>Dicranum scoparium</i>	LO-R	Common and widespread
Plait-moss	<i>Hypnum sp</i>	LO-R	-
Common feather-moss	<i>Kindbergia praelonga</i>	LF-R	Common and widespread
Neat feather-moss	<i>Pseudoscleropodium purum</i>	F-O	Common and widespread

Common name	Latin name	Abundance	Status
Springy turf-moss	<i>Rhytiadelphus squarrosus</i>	LF-O	Common and widespread
<b>Grasses, sedges, rushes and horsetails</b>			
Common bent	<i>Agrostis capillaris</i>	LF-R	Common and widespread
Early hair-grass	<i>Aira praecox</i>	LO-R	Typically occurs in short acid grassland and on dry heathland
Meadow foxtail	<i>Alopecurus pratensis</i>	LO-R	Common and widespread
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	LF-R	Typically occurs in more diverse grasslands
False oat-grass	<i>Arrhenatherum elatius</i>	D-A	Common and widespread
Soft brome	<i>Bromus hordeaceus</i>	LF-O	Common and widespread
A sedge	<i>Carex sp</i>	R	-
Crested dog's-tail	<i>Cynosurus cristatus</i>	O	Typically occurs in more diverse grasslands
Cock's-foot	<i>Dactylis glomerata</i>	F	Common and widespread
Field horsetail	<i>Equisetum arvense</i>	LO-R	Common and widespread
Red fescue	<i>Festuca rubra</i>	D-A	Common and widespread
Yorkshire-fog	<i>Holcus lanatus</i>	A	Common and widespread
Compact rush	<i>Juncus conglomeratus</i>	R	Common and widespread
Perennial rye-grass	<i>Lolium perenne</i>	R	Common and widespread
Field wood-rush	<i>Luzula campestris</i>	LF-R	Typically occurs in more diverse grasslands
Annual meadow-grass	<i>Poa annua</i>	LO-R	Common and widespread
Smooth meadow-grass	<i>Poa pratensis</i>	LA-O	Typically occurs in more diverse grasslands
Rough meadow-grass	<i>Poa trivialis</i>	LF-R	Common and widespread
Rat's-tail fescue	<i>Vulpia myuros</i>	LF-R	Typically occurs in short, dry grasslands and on disturbed ground
<b>Herbaceous plants</b>			
Yarrow	<i>Achillea millefolium</i>	F	Common and widespread
Daisy	<i>Bellis perennis</i>	LO-R	Common and widespread
Common knapweed	<i>Centaurea nigra</i>	R	Common and widespread
Common centaury	<i>Centaureum erythraea</i>	R	Typically occurs in unimproved grasslands
Common mouse-ear	<i>Cerastium fontanum</i>	F	Common and widespread
Creeping thistle	<i>Cirsium arvense</i>	F-O	Common and widespread
Field bindweed	<i>Convolvulus arvensis</i>	LF-R	Common and widespread
Beaked Hawk's-beard	<i>Crepis vesicaria</i>	LO-R	A common and widespread neophyte
Wild carrot	<i>Daucus carota</i>	LF-O	Common and widespread
Foxglove	<i>Digitalis purpurea</i>	R	Common and widespread
Wild teasel	<i>Dipsacus fullonum</i>	LO-R	Common and widespread
Hairy tare	<i>Ervilia hirsuta</i>	O-R	Common and widespread
Cleavers	<i>Galium aparine</i>	LO-R	Common and widespread
Lady's bedstraw	<i>Galium verum</i>	O-R	Typically occurs in short unimproved grasslands



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Common name	Latin name	Abundance	Status
Cut-leaved crane's-bill	<i>Geranium dissectum</i>	O	Common and widespread
Hogweed	<i>Heracleum sphondylium</i>	O	Common and widespread
Perforate St John's-wort	<i>Hypericum perforatum</i>	O-R	Common and widespread
Cat's-ear	<i>Hypochaeris radicata</i>	F-O	Common and widespread
Common ragwort	<i>Jacobaea vulgaris</i>	F-O	Common and widespread
Grass vetchling	<i>Lathyrus nissolia</i>	R	Common and widespread
Meadow vetchling	<i>Lathyrus pratensis</i>	LO-R	Typically occurs in more diverse grasslands
Ox-eye daisy	<i>Leucanthemum vulgare</i>	O	Typically occurs in more diverse grasslands
Common bird's-foot trefoil	<i>Lotus corniculatus</i>	LF-R	Typically occurs in more diverse grasslands
Greater bird's-foot trefoil	<i>Lotus pedunculatus</i>	LO-R	Common & widespread
Corky-fruited water-dropwort	<i>Oenanthe pimpinelloides</i>	R (one plant recorded in NE of the site)	Occurs locally in unimproved neutral and acid grasslands, mostly in southern England
Wild parsnip	<i>Pastinaca sativa</i>	R	Typically occurs in dry unimproved grasslands
Mouse-ear-hawkweed	<i>Pilosella officinarum</i>	R	Typically occurs in short unimproved grasslands on well-drained soils
Ribwort plantain	<i>Plantago lanceolata</i>	F-O	Common and widespread
Creeping cinquefoil	<i>Potentilla reptans</i>	O-R	Common and widespread
Self-heal	<i>Prunella vulgaris</i>	O-R	Common and widespread
Bulbous buttercup	<i>Ranunculus bulbosus</i>	R	Typically occurs in unimproved grasslands
Creeping buttercup	<i>Ranunculus repens</i>	O	Common and widespread
Common sorrel	<i>Rumex acetosa</i>	O	Typically occurs in more diverse grasslands
Sheep's sorrel	<i>Rumex acetosella</i>	LF-R	Typically occurs in short acid grassland and on dry heathland
Curled dock	<i>Rumex crispus</i>	O	Common and widespread
Lesser stitchwort	<i>Stellaria graminea</i>	LF-R	Typically occurs in more diverse acid and neutral grasslands
Hedge woundwort	<i>Stachys sylvatica</i>	R	Common and widespread
Dandelion	<i>Taraxacum</i> agg.	F	Common and widespread
Goat's-beard	<i>Tragopogon pratensis</i>	R	Common and widespread
Hop trefoil	<i>Trifolium campestre</i>	O-R	Typically occurs in more diverse grasslands
Lesser trefoil	<i>Trifolium dubium</i>	LO-R	Common and widespread
Red clover	<i>Trifolium pratense</i>	O	Common and widespread
White clover	<i>Trifolium repens</i>	LF-R	Common and widespread
Subterranean clover	<i>Trifolium subterraneum</i>	R (one plant recorded in	Typically occurs in short and dry unimproved acid

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Common name	Latin name	Abundance	Status
		NE of the site)	grassland
Common nettle	<i>Urtica dioica</i>	LO-R	Common and widespread
Germander speedwell	<i>Veronica chamaedrys</i>	F	Common and widespread
Heath speedwell	<i>Veronica officinalis</i>	LO-R	Typically occurs in unimproved acid grassland and heathland on well-drained soils
Common vetch	<i>Vicia sativa</i>	O	Common and widespread
Common dog-violet	<i>Viola riviniana</i>	LO-R	Common and widespread

*The semi-improved grassland on site is considered to be of low to moderate botanical value, it is recommended that this habitat should be included as part of the baseline of an ecological impact assessment for the project.*

**Scrub (Target note TN3)**

There are considerable stands of dense and scattered scrub which cover a large proportion of the site. The scrub comprises a diverse range of woody species, however, by far the most abundant was bramble (*Rubus fruticosus* agg.) which formed extensive, thick stands. The extent of scrub on site, particularly bramble, is considered to have expanded notably since the first walkover survey undertaken in 2017. A full species list is provided in table 5 below.

**Table 5: Species recorded within the scrub on site.**

Common name	Latin name	Abundance	Status
<b>Trees and shrubs</b>			
Field maple	<i>Acer campestre</i>	O	Common and widespread
Sycamore	<i>Acer psuedoplatanus</i>	O	Common and widespread
Silver birch	<i>Betula pendula</i>	LF-R	Common and widespread
Butterfly-bush	<i>Buddleja davidii</i>	R	Common and widespread
Dogwood	<i>Cornus sanguinea</i>	LF-O	Common in woodland, scrub and calcareous soil
Hazel	<i>Corylus avellana</i>	R	Common and widespread
Hawthorn	<i>Crataegus monogyna</i>	O-R	Common and widespread
Common broom	<i>Cytisus scoparius</i>	O-R	Common and widespread
Spindle	<i>Euonymus europaeus</i>	R	Common and widespread
Ash saplings	<i>Fraxinus excelsior</i>	O	Common and widespread
Ivy	<i>Hedera helix</i>	F-O	Common and widespread
Apple	<i>Malus pumila</i>	R	Common and widespread
Cherry	<i>Prunus sp</i>	R	-
Blackthorn	<i>Prunus spinosa</i>	LF-O	Common and widespread
Pedunculate oak saplings	<i>Quercus robur</i>	LF-O	Common and widespread
Dog-rose	<i>Rosa canina</i>	O-R	Common and widespread
Bramble	<i>Rubus fruticosus</i> agg.	D	Common and widespread
Grey willow	<i>Salix cinerea</i>	O-R	Common and widespread

Common name	Latin name	Abundance	Status
Elder	<i>Sambucus nigra</i>	O-R	Common and widespread
Whitebeam	<i>Sorbus aria</i> agg.	R	-
Rowan	<i>Sorbus aucuparia</i>	R	Common and widespread
Gorse	<i>Ulex europaeus</i>	LF-O	Common and widespread
Wayfaring tree	<i>Viburnum lantana</i>	R	Common and widespread
Guelder-rose	<i>Viburnum opulus</i>	R	Common and widespread

*The scrub on site comprises common and widespread species and is therefore considered to be of low botanical value, nevertheless it is recommended that this habitat should be included as part of the baseline of an ecological impact assessment for the project due to its extent across the site.*

#### ***Native hedgerows (Target note TN4, H1 & H2)***

A total of two established, species-rich native hedgerows were recorded on site, one alongside the northern boundary (H1) and one alongside the north-eastern boundary (H2). These hedgerows comprised a good variety of native woody species, including numerous mature standard pedunculate oak (*Quercus robur*) and ash (*Fraxinus excelsior*) trees, and reasonably diverse field layer vegetation which included a number of ancient woodland axiophytes, such as wood sage (*Teucrium scorodonia*), dog's mercury (*Mercurialis perennis*) and bluebell (*Hyacinthoides non-scripta*). The hedgerows ranged from approximately 1.5 to 4 metres in average height and 1.5 to 3.5 metres in average width and appeared to have been left largely unmanaged. Both hedgerows were noted to have a significant number of gaps. The hedgerows on site are summarised in table 6 below.

**Table 6: native hedgerows recorded on site**

Key (see Phase 1 map)	Woody species	Field layer	Height of hedgerow (m)	BAP status (comprising 80% or more cover of at least one woody UK native species)	General description
H1	Silver birch ( <i>Betula pendula</i> ) Hazel ( <i>Corylus avellana</i> ) Hawthorn ( <i>Crataegus monogyna</i> ) Ash ( <i>Fraxinus excelsior</i> ) Holly ( <i>Ilex aquifolium</i> ) Crab apple ( <i>Malus sylvestris</i> ) Blackthorn ( <i>Prunus spinosa</i> ) Pedunculate oak ( <i>Quercus robur</i> ) Elder ( <i>Sambucus nigra</i> ) Gorse ( <i>Ulex europaeus</i> )	Lords-and-ladies ( <i>Arum maculatum</i> ) False-brome ( <i>Brachypodium sylvaticum</i> ) Cleavers ( <i>Galium aparine</i> ) Hedge bedstraw ( <i>Galium mollugo</i> ) Ground-ivy ( <i>Glechoma hederacea</i> ) Ivy ( <i>Hedera helix</i> ) Bluebell ( <i>Hyacinthoides non-scripta</i> ) Honeysuckle ( <i>Lonicera periclymenum</i> ) Barren strawberry ( <i>Potentilla sterilis</i> ) Bramble ( <i>Rubus fruticosus</i> agg.) Wood sage ( <i>Teucrium scorodonia</i> ) Germander speedwell ( <i>Veronica chamaedrys</i> ) Common dog-violet ( <i>Viola riviniana</i> )	1.5 - 3	Yes	Intact species-rich native hedgerow with standard trees. Significant number of gaps in hedge line.
H2	Hazel Hawthorn Ash Holly Blackthorn Pedunculate oak Rose ( <i>Rosa sp</i> ) Butcher's broom Elder Yew ( <i>Taxus baccata</i> ) English elm ( <i>Ulmus procera</i> )	Lords-and-ladies Ground-ivy Ivy Yorkshire fog ( <i>Holcus lanatus</i> ) Bluebell Honeysuckle Rough-stalked meadow-grass ( <i>Poa trivialis</i> ) Barren strawberry Bramble Greater stitchwort ( <i>Stellaria holostea</i> ) Wood sage Common nettle ( <i>Urtica dioica</i> )	1.5 - 4	Yes	Intact species-rich native hedgerow with numerous standard oak trees. Significant number of gaps in hedge line.

Hedgerow Regulations Assessment

The results of the hedgerow regulations assessment are presented in table 7 below.

**Table 7: Results of the hedgerow regulations assessment**

Hedge number	Hedge length (metres)	Woody species recorded in hedgerow	Average/total number of woody species recorded in surveyed sections	Hedgerow adjacent to a bridleway or footpath, a road used as a public path, or a byway open to all traffic	Additional features	Total number of additional features	Qualifies as 'Important' under the Hedgerow Regulations 1997 (Yes/No)
H1	178	Silver birch ( <i>Betula pendula</i> ) Hazel ( <i>Corylus avellana</i> ) Hawthorn ( <i>Crataegus monogyna</i> ) Ash ( <i>Fraxinus excelsior</i> ) Holly ( <i>Ilex aquifolium</i> ) Crab apple ( <i>Malus sylvestris</i> ) Blackthorn ( <i>Prunus spinosa</i> ) Pedunculate oak ( <i>Quercus robur</i> ) Elder ( <i>Sambucus nigra</i> ) Gorse ( <i>Ulex europaeus</i> )	7	No	<ul style="list-style-type: none"> <li>where the length of the hedgerow exceeds 100 metres, such number of standard trees (within any part of its length) as would when averaged over its total length amount to at least one for each 50 metres.</li> <li>a parallel hedge within 15 metres of the hedgerow.</li> <li>a bank or wall which supports the hedgerow along at least one half of its length.</li> <li>at least 3 woodland species within one metre, in any direction, of the outermost edges of the hedgerow – wood false-brome (<i>Brachypodium sylvaticum</i>), barren strawberry (<i>Potentilla</i></li> </ul>	4	Yes

					<i>sterilis</i> ), wood sage ( <i>Teucrium scorodonia</i> ), bluebell and common dog-violet ( <i>Viola riviniana</i> ).		
H2	535	Hazel Hawthorn Ash Holly Blackthorn Pedunculate oak Rose ( <i>Rosa sp</i> ) Butcher's-broom ( <i>Ruscus aculeatus</i> ) Elder Yew ( <i>Taxus baccata</i> ) English elm ( <i>Ulmus procera</i> )	7	Yes	<ul style="list-style-type: none"> <li>• where the length of the hedgerow exceeds 100 metres, such number of standard trees (within any part of its length) as would when averaged over its total length amount to at least one for each 50 metres.</li> <li>• a parallel hedge within 15 metres of the hedgerow.</li> <li>• a bank or wall which supports the hedgerow along at least one half of its length.</li> <li>• at least 3 woodland species within one metre, in any direction, of the outermost edges of the hedgerow – bluebell, barren strawberry and wood sage.</li> </ul>	4	Yes

*Both of the native hedgerows on site comprise 80% or more cover of at least one woody UK native species meaning they qualify as UK BAP Hedgerow habitat. Both hedgerows also qualify as 'Important' under the Hedgerow Regulations 1997. It is recommended that the hedgerows should be retained on site and included as part of the baseline of an ecological impact assessment for the project.*

**Broadleaved woodland (Target note TN5)**

Two narrow bands of regenerating broadleaved woodland were recorded adjacent to the northern-western boundaries of the site. The canopies of these woodland stands were generally of a young stage of growth and were mostly dominated by semi-mature specimens of pedunculate oak and silver birch (*Betula pendula*), together with occasional to rare sycamore (*Acer pseudoplatanus*) ash and goat willow (*Salix caprea*). The understory layers largely consisted of a mixture of field maple (*Acer campestre*), hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*), together with pedunculate oak, sycamore and silver birch saplings. The field layers were generally species-poor throughout and mostly dominated by ivy (*Hedera helix*), bramble and bracken (*Pteridium aquilinum*). However, a number of desirable ancient woodland indicators were also present in occasional to rare abundance, including bluebell, dog's mercury, soft shield-fern (*Polystichum setiferum*) and broad buckler-fern (*Dryopteris dilatata*). A full summary of the species recorded within the broadleaved woodland stands is provided in table 8 below.

**Table 8: Species present within the broadleaved woodland stands**

Common name	Latin name	Abundance	Status
<b>Canopy</b>			
Sycamore	<i>Acer pseudoplatanus</i>	F-O	A common and widespread, fully naturalised neophyte
Silver birch	<i>Betula pendula</i>	D-O	Common and widespread
Ash	<i>Fraxinus excelsior</i>	O-R	Common and widespread
Pedunculate oak	<i>Quercus robur</i>	D	Common and widespread
Goat willow	<i>Salix caprea</i>	O-R	Common and widespread
<b>Understorey</b>			
Field maple	<i>Acer campestre</i>	A-F	Common and widespread
Silver birch	<i>Betula pendula</i>	F-O	Common and widespread
Hazel	<i>Corylus avellana</i>	F-O	Common and widespread
Hawthorn	<i>Crataegus monogyna</i>	F-O	Common and widespread
Wild plum	<i>Prunus domestica</i>	O-R	Common and widespread
Blackthorn	<i>Prunus spinosa</i>	LF-O	Common and widespread
Pedunculate oak saplings	<i>Quercus robur</i>	F-O	Common and widespread
Dog rose	<i>Rosa canina</i>	O-R	Common and widespread
Butcher's-broom	<i>Ruscus aculeatus</i>	R	Typically occurs in ancient woodlands and old hedgerows
Elder	<i>Sambucus nigra</i>	O-R	Common and widespread
Rowan	<i>Sorbus aucuparia</i>	R	Common and widespread
<b>Field layer</b>			
Garlic mustard	<i>Alliaria petiolata</i>	LO-R	Common and widespread
Lords-and-ladies	<i>Arum maculatum</i>	R	Common and widespread
Hart's-tongue	<i>Asplenium scolopendrium</i>	O-R	Common and widespread
Rough-stalked feather-moss	<i>Brachythecium rutabulum</i>	F	Common and widespread

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Common name	Latin name	Abundance	Status
Broad buckler-fern	<i>Dryopteris dilatata</i>	O-R	Typically occurs in ancient woodlands
Male-fern	<i>Dryopteris filix-mas</i>	O-R	Common and widespread
Ash seedlings	<i>Fraxinus excelsior</i>	O	Common and widespread
Cleavers	<i>Galium aparine</i>	O	Common and widespread
Ground-ivy	<i>Glechoma hederacea</i>	F-O	Common and widespread
Ivy	<i>Hedera helix</i>	D	Common and widespread
Hogweed	<i>Heracleum sphondylium</i>	R	Common and widespread
Bluebell	<i>Hyacinthoides non-scripta</i>	LO-R	Typically occurs in ancient woodlands and old hedgerows
Common feather-moss	<i>Kindbergia praelonga</i>	F	Common and widespread
Dog's mercury	<i>Mercurialis perennis</i>	LF-O	Typically occurs in ancient woodlands and old hedgerows
Rough meadow-grass	<i>Poa trivialis</i>	O-R	Common and widespread
Soft shield-fern	<i>Polystichum setiferum</i>	O	Typically occurs in ancient woodlands and old hedgerows
Bracken	<i>Pteridium aquilinum</i>	D-F	Common and widespread
Bramble	<i>Rubus fruticosus</i> agg.	D	Common and widespread
Common nettle	<i>Urtica dioica</i>	F-O	Common and widespread
Common dog-violet	<i>Viola riviniana</i>	O-R	Common and widespread

*The stands of broadleaved woodland on site are considered to be mostly of low botanical value, this is based on their limited extent on site, their young, regenerating growth stage, sub-optimal condition and lack of botanical diversity. Nevertheless, it is recommended that the hedgerows should be retained on site and included as part of the baseline of an ecological impact assessment for the project.*

**Scattered trees (Target notes TN6 & TN7)**

Scattered trees recorded on site (TN6) mostly comprising semi-mature specimens of pedunculate oak, English elm (*Ulmus procera*), cherry (*Prunus sp*), bird cherry (*Prunus padus*), silver birch (*Betula pendula*), ash, whitebeam, sycamore and rowan. These trees were largely recorded in the southern half of the site.

An additional row of mature trees, comprising mostly pedunculate oak and a single ash, were also recorded off-site, adjacent to the north-west boundary along the footway on the east side of the B3397 Hamble Lane (TN7). These trees were also covered during the walkover survey because felling and/or management of some of these trees will likely be required to facilitate the creation of a main site accessway for the project.

*The scattered trees recorded both within and off-site are considered to be mostly of low botanical value, due to their comprising unexceptional specimens of common and widespread species. The trees recorded just off-site alongside Hamble Lane were the*



*most mature specimens recorded and therefore considered the most valuable. It is recommended that the scattered trees should be included as part of the baseline of an ecological impact assessment for the project.*

#### **4.2.2 Protected species assessment**

##### ***Badger***

The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site all provide suitable foraging and sett building habitat for badger. No evidence of badger activity was identified on site during the update walkover survey. There are numerous tracks through the grassland and scrub on site, although these are considered to have been mostly created by people using the site for recreation. It is considered that badgers would likely be dissuaded from using the site and constructing setts on it given the high level of public recreation and dog walking. However, there is potential that badgers could occasionally utilise the site at night-time for foraging purposes, and/or the large stands of dense scrub may conceal old, disused, or partially-used setts. The desk study returned seven records of badger within two kilometres of the site.

*It is recommended that badger is included as part of the baseline of an ecological impact assessment for the project.*

##### ***Bats***

The scattered trees (both within the site and just off-site), hedgerow trees and trees within the broadleaved woodland stands could all potentially support roosting bats.

The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site have been assessed as 'Moderate' in terms of their suitability to support foraging and commuting bats (Collins, 2016). The variety and quality of the habitats on site indicates that there will likely be a good abundance and range of invertebrate prey available to support local bat populations. The site is also well connected to further suitable habitat for foraging and commuting bats within the surrounding locality, including grasslands, scrub, native hedgerows, stands of broadleaved woodland and residential gardens.

*Further surveys for both roosting and foraging and commuting bats are recommended to inform an ecological impact assessment for the project.*

##### ***Breeding and wintering birds***

The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site all provide suitable breeding and wintering habitat for a wide range of common garden, woodland, farmland and migratory bird species, including some UKBAP species of conservation concern, such as bullfinch (*Pyrrhula pyrrhula*), house sparrow (*Passer domesticus*), song thrush (*Turdus philomelos*), dunnock (*Prunella modularis*), starling

(*Sturnus vulgaris*), linnet (*Carduelis cannabina*) and skylark (*Alauda arvensis*). In addition to the above, the desk study returned seven records of the protected bird species Dartford warbler (*Sylvia undata*) on the former Hamble Airfield site.

### Waders and waterfowl

The site lies within 320 metres of three statutory designated terrestrial sites within the national site network (NSN). The three terrestrial sites are: Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, and Solent Maritime SAC. The River Hamble, which lies approximately 410 metres to the east of the site, also forms part of the Dorset and Solent Coast SPA. These sites are designated for supporting internationally important populations of breeding and over-wintering birds. The overwintering populations of dark-bellied brent geese and waders are of particular note due to their use of adjacent fields for foraging and roosting at high tide. Sites used by migratory waterbirds listed as qualifying features on the SPA citation are considered part of (or functionally linked with) the SPA and development of these sites would require Habitats Regulations Assessment for potential impacts.

The former Hamble airfield was identified as having the potential to support wintering brent geese and waders from the Solent in the 2010 Solent Wader and Brent Goose Strategy. At the time the site was classified as uncertain for negative use by waders and brent geese as there were no confirmed records of either. The current version of the strategy (Whitfield, 2020) has removed the site from the strategy. Data provided by HBIC in 2021 shows the site and adjacent land to be designated as a non-statutory site for use by waders and brent geese, although it is confirmed as being a site with only negative records (confirmed absence of waders and/or brent geese) during surveys.

*Further surveys for both breeding and wintering birds are recommended to inform an ecological impact assessment for the project.*

### ***Great crested newts***

The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site all provide suitable terrestrial habitat for great crested newts, with opportunities for foraging and potential refugia and hibernacula. No waterbodies are present on site and a review of online mapping did not identify any potentially suitable ponds or waterbodies within a 500 metre radius of the site.

The desk study returned 38 individual records of the species from a location over 1 kilometre to the north-east of the site on the other side of the railway line and a small watercourse. These records are outside of the typical great crested newt dispersal range of 500 metres and the small watercourse and rail line would likely present significant barriers to great crested newt movements, it is therefore considered highly unlikely that great crested newts from the recorded location would be using the Hamble Airfield site.

*It is recommended that great crested newt can be screened out of any ecological impact assessments for the project.*

### ***Hazel dormouse***

The native hedgerows, dense scrub and woodland on site provide suitable habitat for hazel dormouse, with a good range of food sources, such as bramble, hazel, hawthorn and blackthorn, and dense woody vegetation suitable for constructing nests within. The site also has connectivity with further suitable habitat for dormice to the north-east, north and north-west, including areas of broadleaved woodland, stands of scrub and hedgerows. There is some arboreal connectivity across both Satchell Lane to the north-east and Hamble Lane to the north-west, and the site directly links with stands of scrub along the rail line cuttings to the north. No records of dormice or any European protected species mitigation (EPSM) licences for the species were identified within two kilometres of the site during the desk study. However, they are known to be present within the wider locality and there is a cluster of granted EPSM licences for the species located between 3.9 and 6.3 kilometres to the east of the site. It was therefore considered possible that dormouse could be present on site.

*Further presence / absence surveys for hazel dormouse are recommended to inform an ecological impact assessment for the project.*

### ***Hedgehog***

The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site all provide suitable habitat for European hedgehog (*Erinaceus europaeus*), offering substantial foraging opportunities as well as potential refugia and hibernacula. The desk study returned 42 records of hedgehog within two kilometres of the site.

*It is considered that European hedgehog could be present on site and should therefore be included as part of the baseline of an ecological impact assessment for the project.*

### ***Invertebrates***

The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site could potentially support a wide variety and notable assemblages of terrestrial invertebrates, as well as notable species of conservation importance. Common blue (*Polyommatus icarus*) and the UK BAP Priority species small heath (*Coenonympha pamphilus*) were recorded during the walkover surveys in 2017 and 2021. The desk study returned records of the protected and UKBAP species stag beetle (*Lucanus cervus*) on the former Hamble Airfield site.

*Further detailed surveys for terrestrial invertebrates are recommended to inform an ecological impact assessment for the project.*

### ***Reptiles***

The grassland and scrub mosaic, native hedgerows and broadleaved woodland on site all provide suitable habitat for common reptile species, including slow-worm and common lizard, offering substantial foraging opportunities as well as potential refugia and hibernacula. The desk study returned 243 records of slow-worm (including two records on the former Hamble Airfield site), 57 records of common lizard (including two records on the former Hamble Airfield site), five records of grass snake and two records of adder within two kilometres of the site.

*Further targeted surveys for reptiles are recommended to inform an ecological impact assessment for the project.*

## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

### ***5.1 Summary of initial baseline ecological features***

On the basis of this updated ecological appraisal of the Hamble Airfield application site, including both field survey and desk-based study, it is advised that the following ecological features below should form the initial baseline of an impact assessment for the proposed project. However, some of the identified species or species groups may be screened out at a later stage dependent on the results of the recommended Phase 2 survey work.

#### **Designated sites**

- *Solent and Southampton Water Special Protection Area (SPA) and Ramsar*
- *Solent Maritime Special Area of Conservation (SAC)*
- *Solent and Dorset Coast SPA*
- *Lee-On-The Solent to Itchen Estuary Site of Special Scientific Interest (SSSI)*
- *Lincegrove and Hackett's Marshes SSSI*
- *Mercury Marshes Local Nature Reserve (LNR)*
- *Badnam Copse Site of Importance for Nature Conservation SINC*
- *West Wood (Royal Victoria Country Park) SINC*
- *Mallards Moor SINC*
- *Mercury Marsh South SINC*
- *Mercury Marina Saltmarsh SINC*

#### **Habitats (on-site)**

- *Semi-improved grassland*
- *Scrub*
- *Native hedgerows*
- *Broadleaved woodland*

- *Scattered trees*

**Habitats (off-site)**

- *Semi-improved grassland*
- *Scrub*
- *Native hedgerows*
- *Broadleaved woodland*
- *Plantation woodland*
- *Coastal habitats*
- *Urban, residential, and developed land*

**Species or species groups**

- *Badger*
- *Bats (rooting)*
- *Bats (foraging and commuting)*
- *Breeding birds*
- *Wintering birds*
- *Hazel dormouse*
- *Hedgehog*
- *Invertebrates*
- *Reptiles*

## 6.0 REFERENCES

Atherton, I., Bosanquet, S. and Lawley, M. (2010) *Mosses and Liverworts of Britain and Ireland – a field guide*. British Bryological Society.

CEMEX UK (2021) *Environmental Statement for the Former Hamble Airfield - Chapter 10 Ecology and Biodiversity*.

Department for Communities and Local Government (2005). *Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

Hampshire Biodiversity Information Centre (2021). *Data search reference - HBIC Ref 10193, The former Hamble Airfield site*.

Joint Nature Conservation Committee (2016) *Handbook for Phase I Habitat Survey*. JNCC.

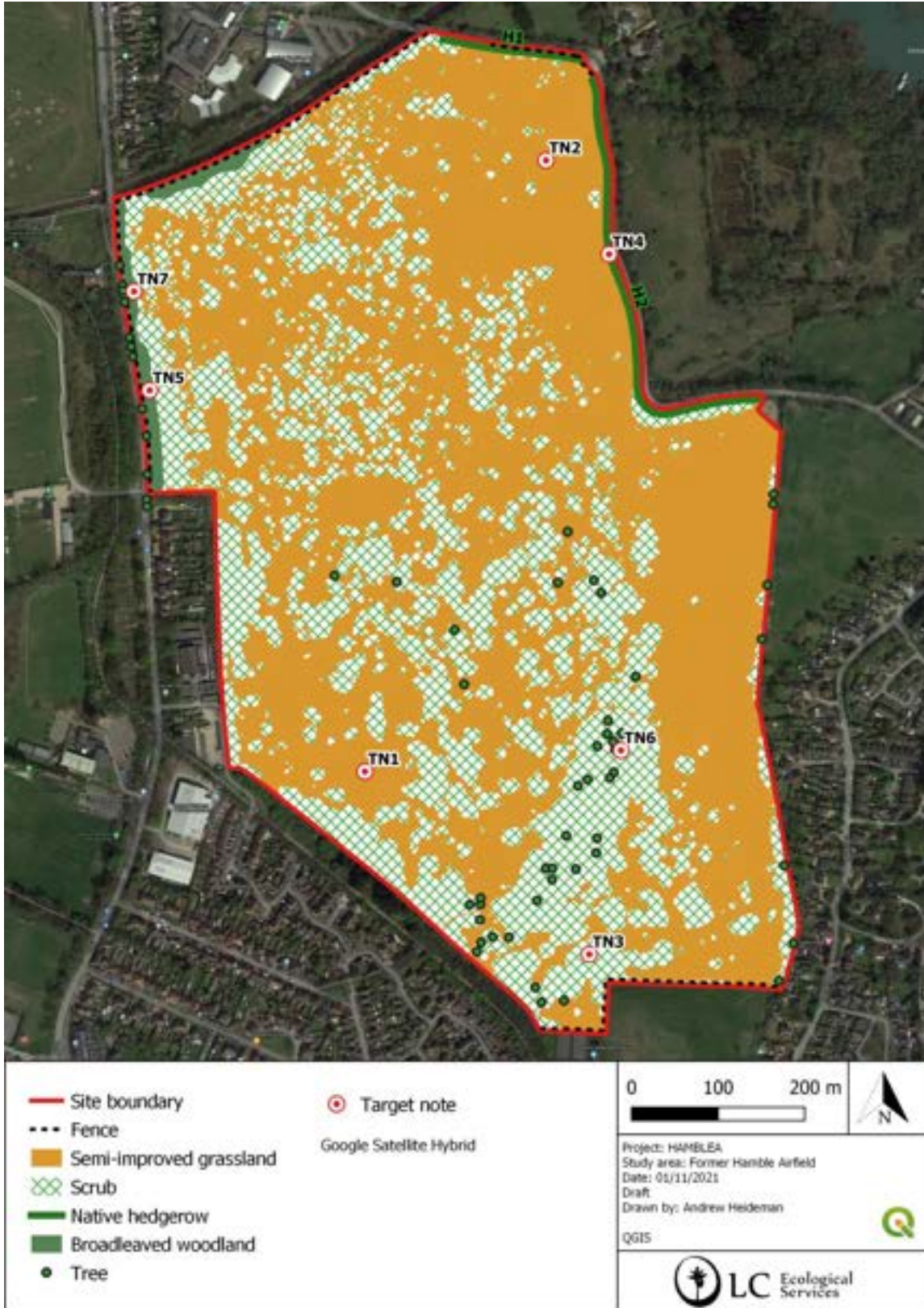
Ministry of Housing, Communities and Local Government. (2021) *National Planning Policy Framework*.

Multi-Agency Geographical Information for the Countryside (MAGIC) Website at [www.magic.gov.uk](http://www.magic.gov.uk).

Stace, C. (2019) *New Flora of the British Isles, 4th Ed.* C and M Floristics.

Whitfield, D (2020) *Solent Waders and Brent Goose Strategy*. Hampshire and Isle of Wight Wildlife Trust. Curdridge.

## APPENDIX I: Phase 1 habitat map



**Target notes to accompany Phase 1 habitat map**

Target Note	Description
T1	Semi-improved grassland comprising rank and overgrown swards that were dominated by tussocks of coarse grasses, particularly false oat-grass ( <i>Arrhenatherum elatius</i> ), cock's-foot ( <i>Dactylis glomerata</i> ), red fescue ( <i>Festuca rubra</i> ) and Yorkshire-fog ( <i>Holcus lanatus</i> ). Common herbaceous species and ruderals, including yarrow ( <i>Achillea millefolium</i> ), ribwort plantain ( <i>Plantago lanceolata</i> ), wild carrot ( <i>Daucus carota</i> ), red clover ( <i>Trifolium pratense</i> ), curled dock ( <i>Rumex crispus</i> ), hogweed ( <i>Heracleum sphondylium</i> ), creeping thistle ( <i>Cirsium arvense</i> ) and common ragwort ( <i>Jacobaea vulgaris</i> ), were present in occasional to rare abundance levels, and some more desirable grassland species, such as greater bird's-foot-trefoil ( <i>Lotus pedunculatus</i> ) and oxeye daisy ( <i>Leucanthemum vulgare</i> ), were also present in rare, scattered abundance.
T2	Areas of semi-improved grassland comprising an element of unimproved and botanically-interesting acid grassland. These areas were characterised by shorter, more open swards that were less dominated by coarse grasses, and supported higher frequencies of finer grasses and various desirable species, including sweet vernal-grass ( <i>Anthoxanthum odoratum</i> ), smooth meadow-grass ( <i>Poa pratensis</i> ), crested dog's-tail ( <i>Cynosurus cristatus</i> ), early hair-grass ( <i>Aira praecox</i> ), common bird's-foot-trefoil ( <i>Lotus corniculatus</i> ), sheep's sorrel ( <i>Rumex acetosella</i> ), lady's bedstraw ( <i>Galium verum</i> ) and heath speedwell ( <i>Veronica officinalis</i> ). The notable species corky-fruited water-dropwort ( <i>Oenanthe pimpinelloides</i> ) and subterranean clover ( <i>Trifolium subterraneum</i> ) were also recorded within this grassland.
T3	Stands of dense and scattered scrub comprising a diverse range of native (and some non-native) woody species, however by far the most abundant scrub species was bramble ( <i>Rubus fruticosus</i> agg.) which formed extensive thick stands.
T4	Species-rich native hedgerows comprising a good variety of native woody species, including numerous mature standard pedunculate oak ( <i>Quercus robur</i> ) and ash ( <i>Fraxinus excelsior</i> ) trees, and reasonably diverse field layer vegetation including a number of ancient woodland axiophytes, such as wood sage ( <i>Teucrium scorodonia</i> ), dog's mercury ( <i>Mercurialis perennis</i> ) and bluebell ( <i>Hyacinthoides non-scripta</i> ). The hedgerows ranged from 1.5 to 4 metres in height and 1.5 to 3.5 metres in width and had a significant number of gaps.
T5	Stands of regenerating broadleaved woodland with canopies generally of a young stage of growth and mostly dominated by semi-mature specimens of pedunculate oak and silver birch ( <i>Betula pendula</i> ), together with occasional to rare sycamore ( <i>Acer pseudoplatanus</i> ), ash and goat willow ( <i>Salix caprea</i> ). The understory layers largely consisted of a mixture of field maple ( <i>Acer campestre</i> ), hazel ( <i>Corylus avellana</i> ), hawthorn ( <i>Crataegus monogyna</i> ) and blackthorn ( <i>Prunus spinosa</i> ), together with pedunculate oak, sycamore and silver birch saplings. The field layers were generally species-poor and dominated by ivy ( <i>Hedera helix</i> ), bramble and bracken ( <i>Pteridium aquilinum</i> ). However, a number of ancient woodland indicators were also present, including bluebell, dog's mercury, soft shield-fern ( <i>Polystichum setiferum</i> ) and broad buckler-fern ( <i>Dryopteris dilatata</i> ).
T6	Scattered trees, mostly comprising semi-mature specimens of pedunculate oak, English elm ( <i>Ulmus procera</i> ), cherry ( <i>Prunus</i> sp), bird cherry ( <i>Prunus padus</i> ), silver birch, ash, whitebeam, sycamore and rowan.
T7	Mature trees, comprising mostly pedunculate oak and a single ash, recorded just off-site, along the footway on the east side of the B3397 Hamble Lane.



## APPENDIX II: Site photography



**Photo 1:** semi-improved grassland in the south of the site comprising tall, rank swards dominated by coarse grass species.



**Photo 2:** semi-improved grassland in the north-east region of the site comprising shorter, more open swards and exhibiting an element of unimproved acid grassland



**Photo 3:** stands of dense and continuous scrub on site.



**Photo 4:** native hedgerow H1 which runs along a section of the northern site boundary.



**Photo 5:** native hedgerow H2 which runs along the north-eastern site boundary.



**Photo 6:** a view within the broadleaved woodland stand adjacent to the north-west boundary of the site.



**Photo 7:** another view within the broadleaved woodland stand adjacent to the north-west boundary of the site.



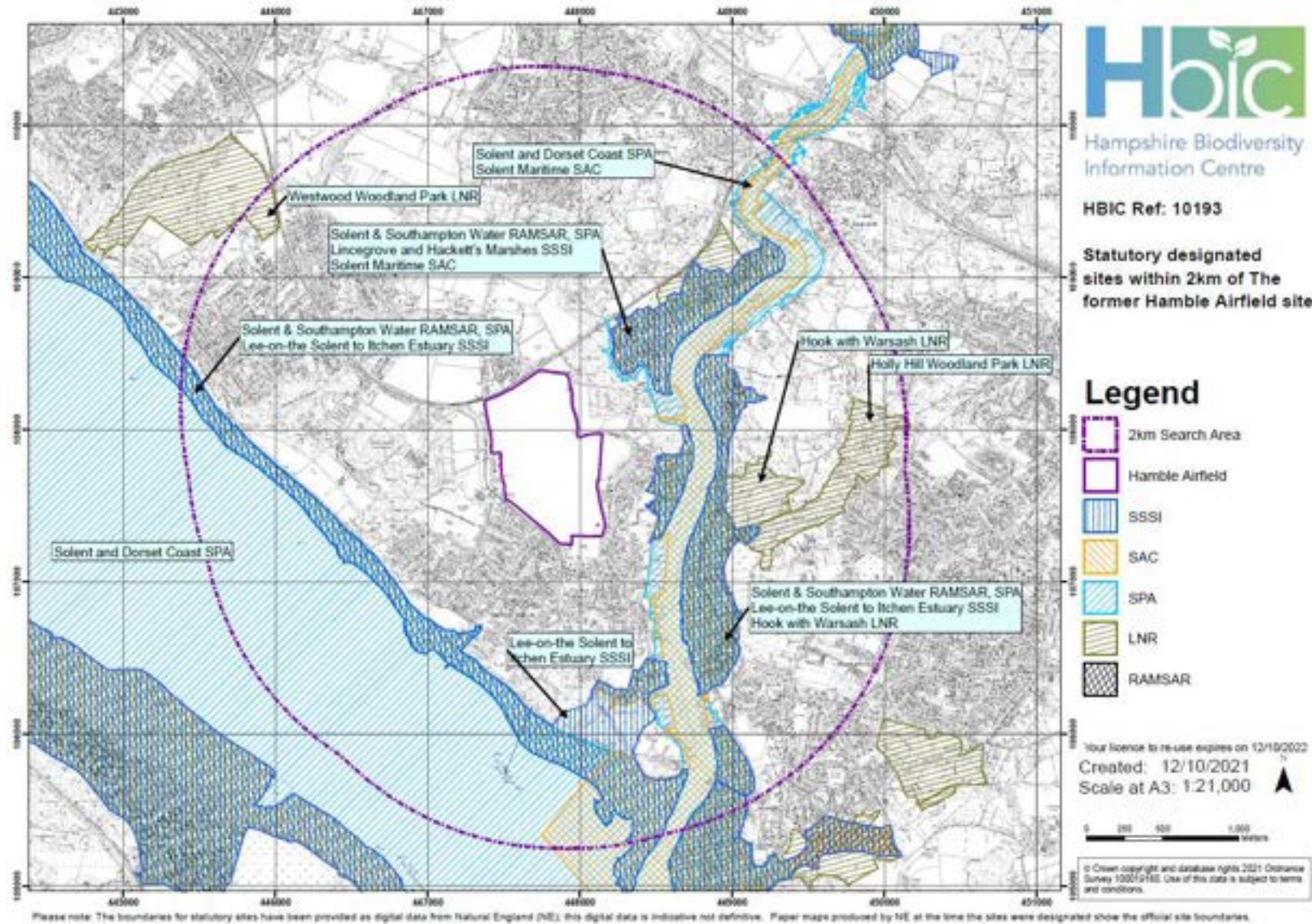
**Photo 8:** scattered semi-mature trees in the southern region of the site.



**Photo 9:** scattered mature trees, mostly pedunculate oak (*Quercus robur*), located off-site adjacent to the north-west boundary along the footway on the east side of the B3397 Hamble Lane

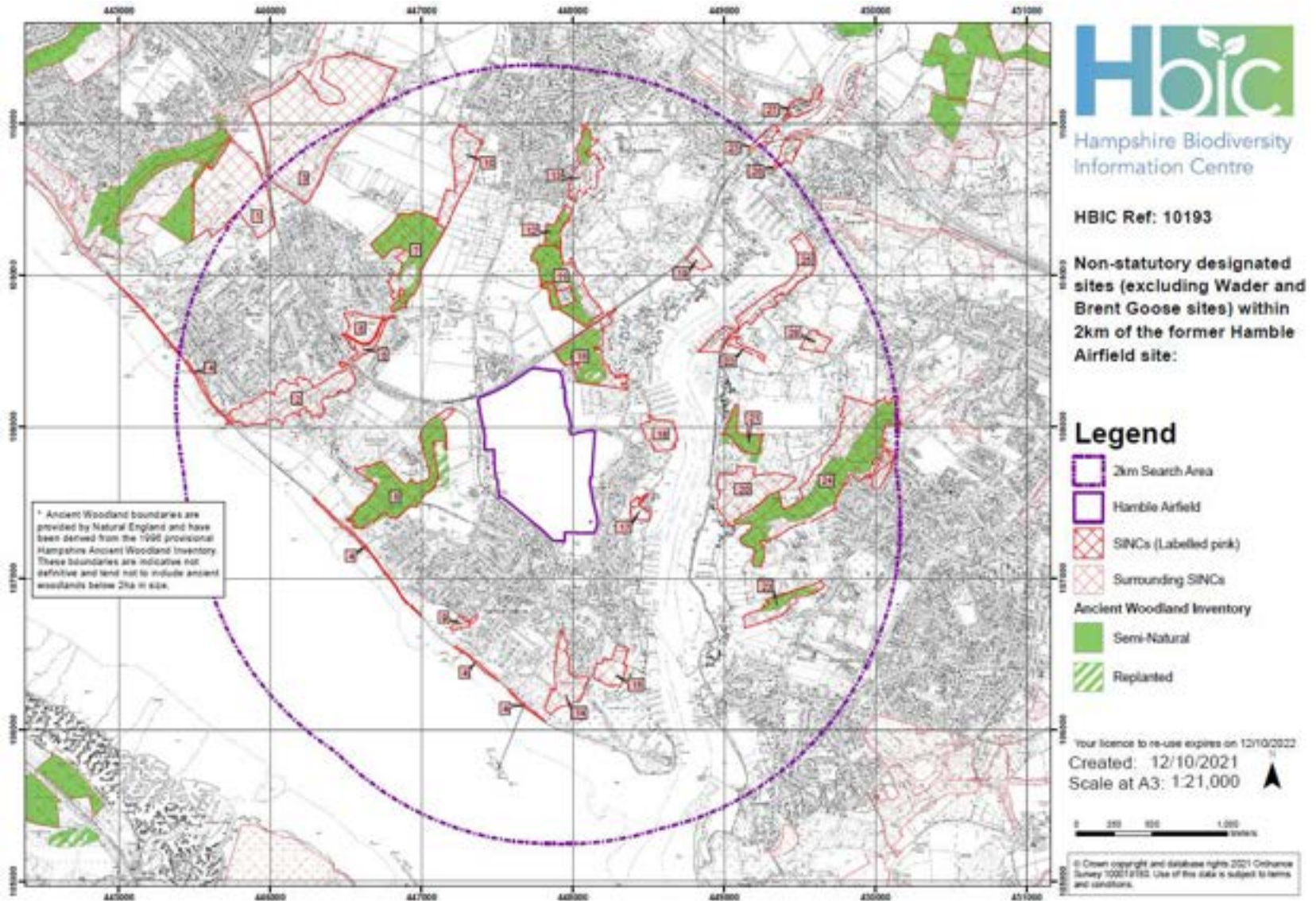


### APPENDIX III: Statutory designated sites within 2km of the application site





## APPENDIX IV: Non-statutory designated sites within 2km of the application site

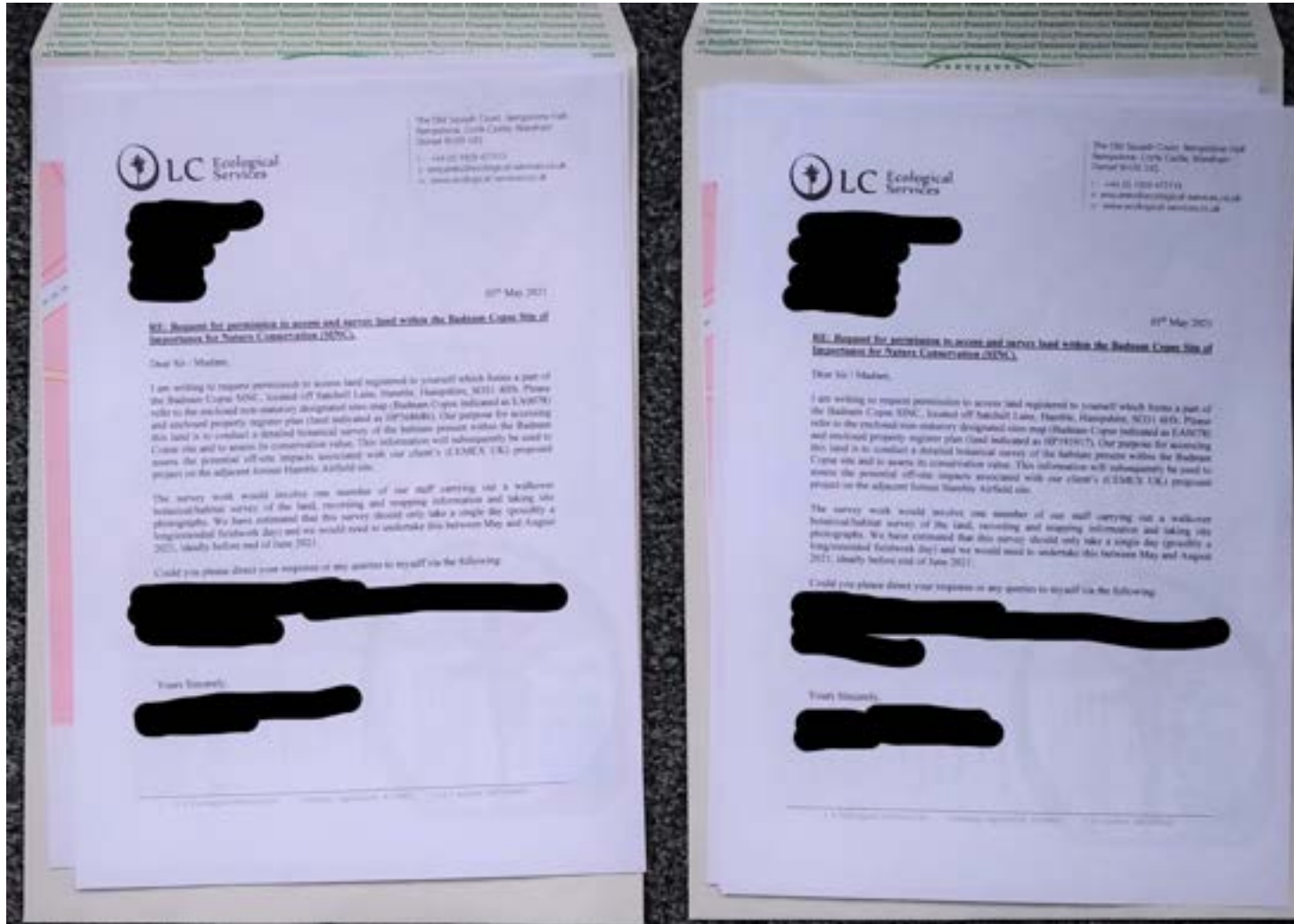


**Details of Sites of Importance for Nature Conservation (SINCs) within the search area:**

<b>Map Label</b>	<b>Status</b>	<b>SINC Name</b>
1	SINC	West Wood Grange Field
2	SINC	Netley Lodge
3	SINC	Netley Farm Closed Landfill Site
4	SINC	Netley to Hamble Shore
5	SINC	Spear Pond Gully
6	SINC	St. Mary's Road Wood
7	SINC	Priors Hill Copse/Hound Grove
8	SINC	West Wood (Royal Victoria Country Park)
9	SINC	Petters Copse
10	SINC	Priors Hill Brickworks
11	SINC	Mallards Moor
12	SINC	Piland's Wood (Lower)
13	SINC	Piland's Wood (Upper)
14	SINC	Hamble Common West
15	SINC	Hamble Common North
16	SINC	Badnum Copse
17	SINC	Mercury Marsh South
18	SINC	Mercury Marina Saltmarsh
19	SINC	Bursledon Meadow
20	SINC	Hook-With-Warsash LNR (Wendleholme)
21	SINC	Downkiln Copse
22	SINC	Crangleck Wood & Saltmarsh
23	SINC	Brook Wood, Fareham
24	SINC	Winnard's & Cawte's Copses
25	SINC	River Hamble Mudflats & Saltmarsh - 1
26	SINC	River Hamble Mudflats & Saltmarsh - 2
27	SINC	Brixedone Saltmarsh & Mudflat
28	SINC	Brooklands Wood

## APPENDIX V: Evidence of access requests to survey Badnam Copse SINC

### Letters sent to landowners



CEMEX  
Ecological appraisal - Hamble Airfield

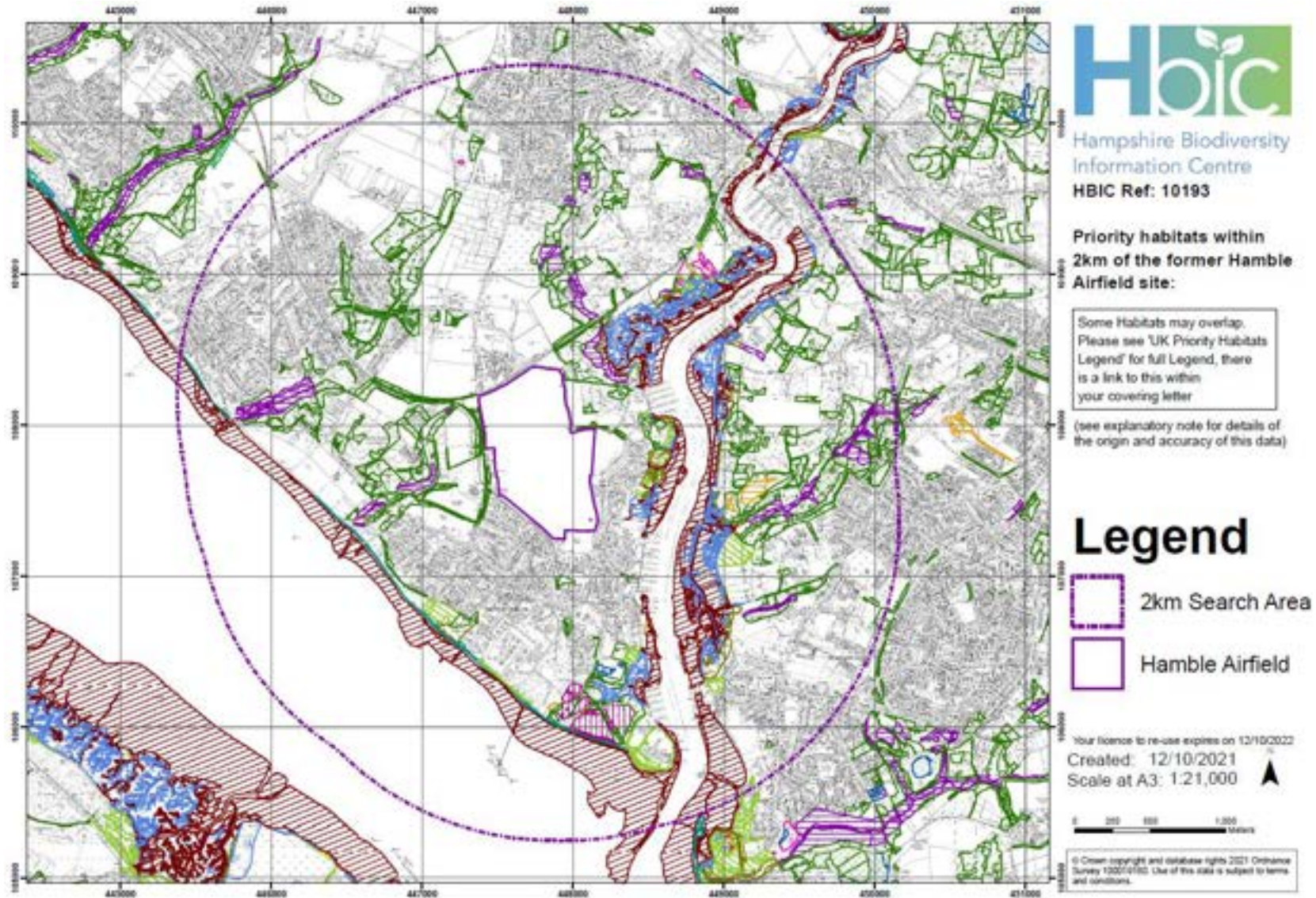
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Email responses from landowners



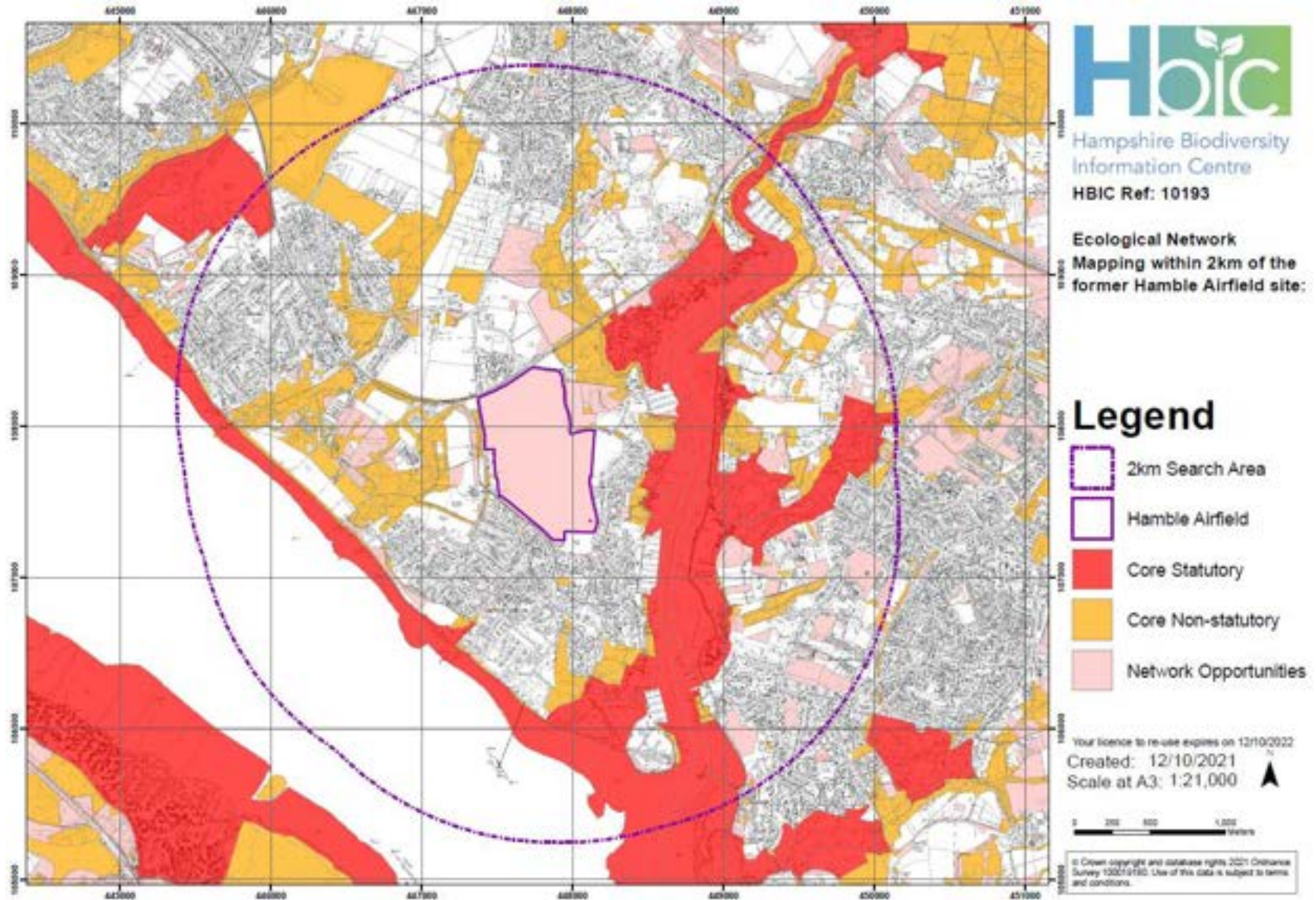


## APPENDIX VI: Priority habitats within 2km of the application site





## APPENDIX VII: Ecological networks within 2km of the application site



### APPENDIX VIII: Wader and brent goose sites within 2km of the application site

