

Appendix 5.1

Preliminary Ecological Appraisal

(Part 2 of 3)



great crested newt was recorded on Site during the 2019 Phase 1 habitat survey in the form of standing water ditches, ponds and terrestrial habitat such as tall ruderal and scrub mosaics. To reconfirm the presence/likely absence of great crested newts within the ponds on Site and within 250m, a survey using the environmental DNA (eDNA) method is recommended. Should the eDNA samples record presence of great crested newt DNA within the waterbodies sampled, a standard three method presence/absence survey as documented in the great crested newt conservation handbook may be required within the appropriate season (late March to late June) to support the DCO amendment.

BIRDS

- 4.4.22. The Habitat Regulations 2017 Part 1 Regulation 10(2) & (3) state that local authorities ‘*must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...*’. The legislation continues to state that economic and recreation requirements must be taken into consideration in considering which measures are appropriate.
- 4.4.23. Under the Wildlife and Countryside Act 1981 (as amended) all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young. Yellowhammer, reed bunting, house sparrow, starling, song thrush which were recorded during the Phase 1 habitat survey are SPIs. Yellowhammer, reed bunting, tree sparrow and starling are also listed on Lincolnshire BAP. Over 50 bird species were recorded during breeding bird surveys in 2011.
- 4.4.24. Two nationally designated sites, North Killingholme Haven Pits SSSI and Humber Estuary SSSI (which underpin the Humber Estuary SAC, SPA and Ramsar) are located to the south and east of the Site respectively. The Humber Estuary SPA and SSSI, and North Killingholme Haven Pits SSSI are designated for their bird interest, including both breeding and non-breeding waterfowl, waders and wetland birds. Much of the habitat on Site was suitable for nesting birds, including the trees, scrub, buildings, and ponds which provide nesting opportunities for waterfowl. The Site also provides a wide variety of foraging opportunities.
- 4.4.25. Spring and autumn passage and wintering bird surveys specifically designed to target SPA bird species are recommended to understand the range and abundance of species using the Site between July and April. Breeding bird surveys should also be undertaken to reconfirm bird breeding activity relevant to the Project.

5 CONCLUSIONS

- 5.1.1. The Site comprised areas of dense and scattered scrub, tall ruderal, semi-improved grassland, waterbodies (including ponds and standing water ditches) and associated marginal vegetation. Dry ditches, coastal saltmarsh, intertidal mudflats and brackish water were also recorded within the Site. The site also comprised urban features such as buildings, fences, a wall and large areas of hardstanding. The wider environment comprised a mix of coastal habitats such as brackish water, coastal saltmarsh and mudflats comprising boulders and rocks and mud on the east, improved and marshy grasslands and arable land to the west and north. There have been no significant changes to the habitats within the Site since the surveys to support the 2013 DCO application.
- 5.1.2. Parts of three European sites, the Humber Estuary SAC, SPA and Ramsar sites (known collectively as the Humber Estuary European Marine Site) were located within the Site. Two nationally designated sites, the Humber Estuary SSSI and North Killingholme Haven Pits SSSI are also located within and adjacent to the Project (respectively). The Humber Estuary SSSI underpins the Humber Estuary SAC, SPA and Ramsar sites. There are no changes to the boundaries or reasons for designation of these designated sites since the 2013 DCO application.
- 5.1.3. No additional non-statutory designated sites have been designated since the 2013 DCO application. Two previously designated (at the time of the 2013 DCO application) Local Wildlife Sites have since been de-designated.
- 5.1.4. No evidence of significant changes in the presence/absence or distribution of protected or notable species reported in the 2013 DCO application, was identified during the 2019 desk study and extended Phase 1 habitat survey. Further ecological surveys are required to confirm this as recommended in this report, including:
- EDNA surveys for great crested newts;
 - Presence/likely absence surveys for reptiles;
 - Breeding, wintering, and passage bird surveys, including for species associated with the nearby Humber Estuary SPA, Ramsar Site, and SSSI;
 - Targeted badger survey;
 - Water vole and otter survey; and
 - Internal building inspections to confirm suitability for roosting bats, with follow-on dusk emergence / dawn return surveys if internal inspections confirm these are necessary.
- 5.1.5. Overall, this PEA has found that the ecological value of the site is likely to remain similar to that previously recorded for the DCO application. A number of further ecological surveys need to be completed to confirm this, as listed above.

REFERENCES

PROJECT REFERENCES

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- C.GEN Killingholme Ltd (2013) North Killingholme Power Project DCO. Environmental Statement Volume II - Appendix 7.4 Bat Survey Report
- C.GEN Killingholme Ltd (2013) North Killingholme Power Project DCO. Environmental Statement Volume II - Appendix 7.6 Water Vole Survey Report
- C.GEN Killingholme Ltd (2013) North Killingholme Power Project DCO. Environmental Statement Volume II - Appendix 7.7 GCN and Breeding Bird Report
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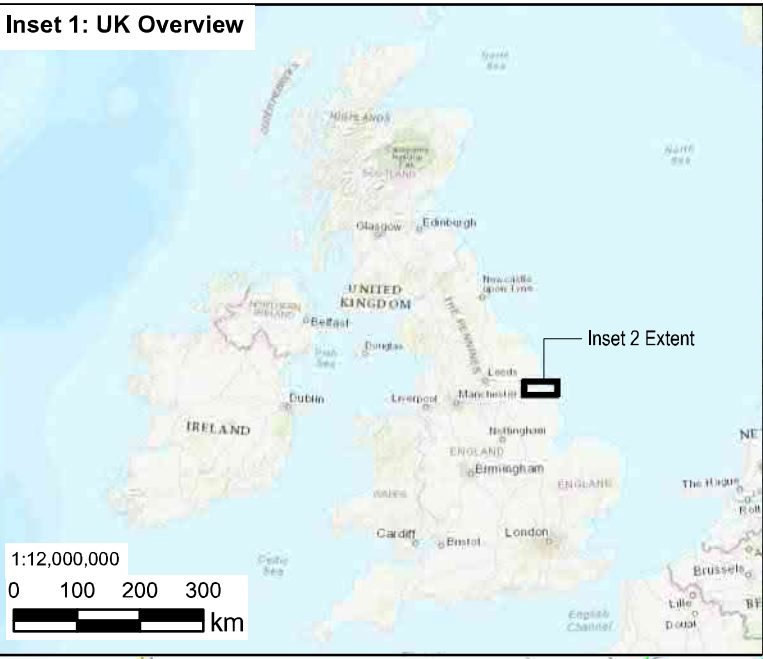
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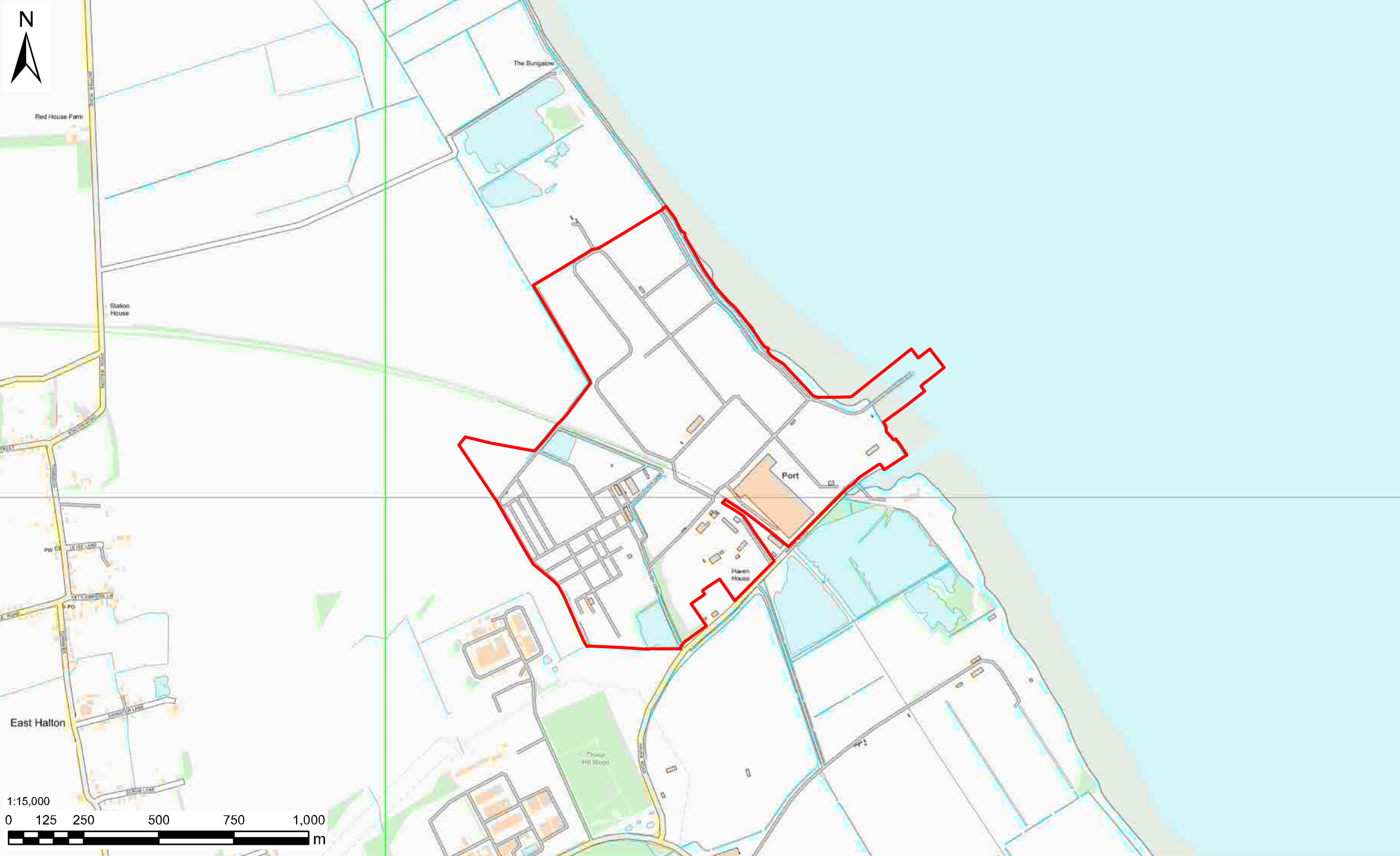
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Key

Principal Project Area



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PROJECT: **North Killingholme DCO Amendments**

TITLE: **Figure 1 Site Location**

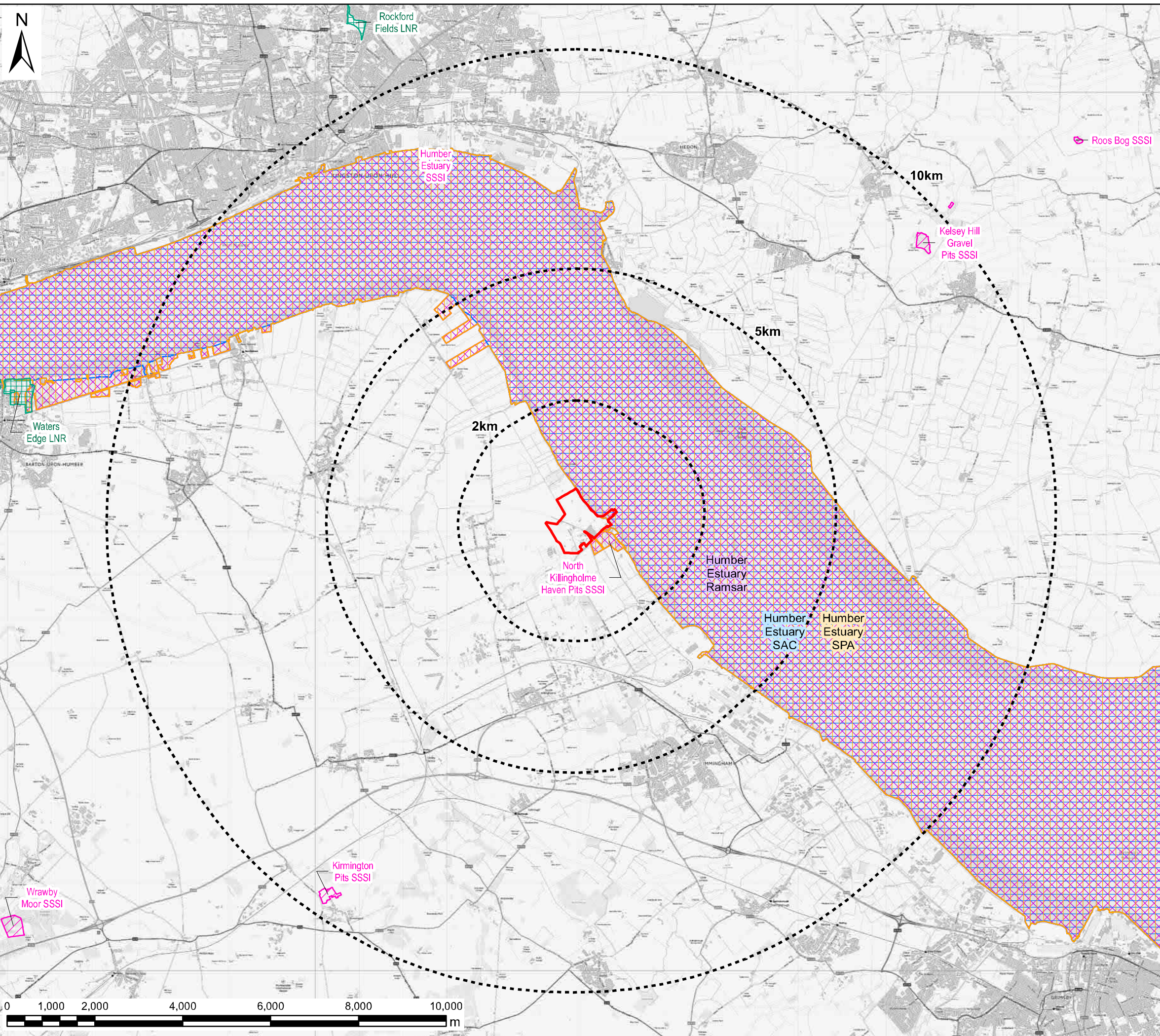
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Key					
	Principal Project Area		2km, 5km and 10km Buffers		Local Nature Reserve (LNR)
	Special Protection Area		Special Area of Conservation		Ramsar Site - Wetland of International Importance
	Site of Special Scientific Interest (SSSI)				

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TITLE: **Figure 2
Statutory Designated Sites**

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Key

- Principal Project Area
- 2km Buffer

Non-statutory Designated Sites

- Local Wildlife Site (LWS)
- Lincolnshire Wildlife Trust (LWT)

Priority Habitat

- Coastal and floodplain grazing marsh
- Coastal saltmarsh
- Deciduous woodland
- Good quality semi-improved grassland
- Mudflats
- Saline lagoons
- No main habitat but additional habitats
- Lowland mixed deciduous woodland
- Intertidal mudflats
- Lowland meadows
- Reedbeds

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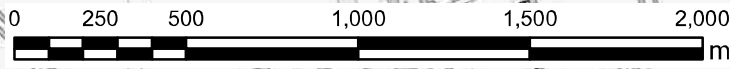
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TITLE: **Figure 3
Non-statutory Designated Sites,
Priority Habitat and Ancient Woodland**

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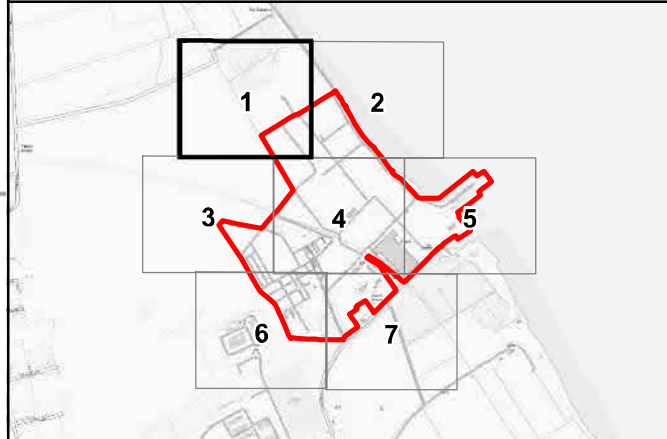
Key

- Principal Project Area
- 20m Survey area

Phase 1 habitats

- Hard standing
- Improved grassland
- Marsh/marshy grassland
- Scrub - dense/continuous
- Standing water

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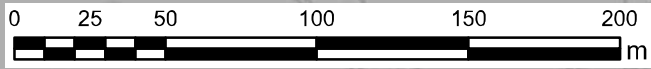
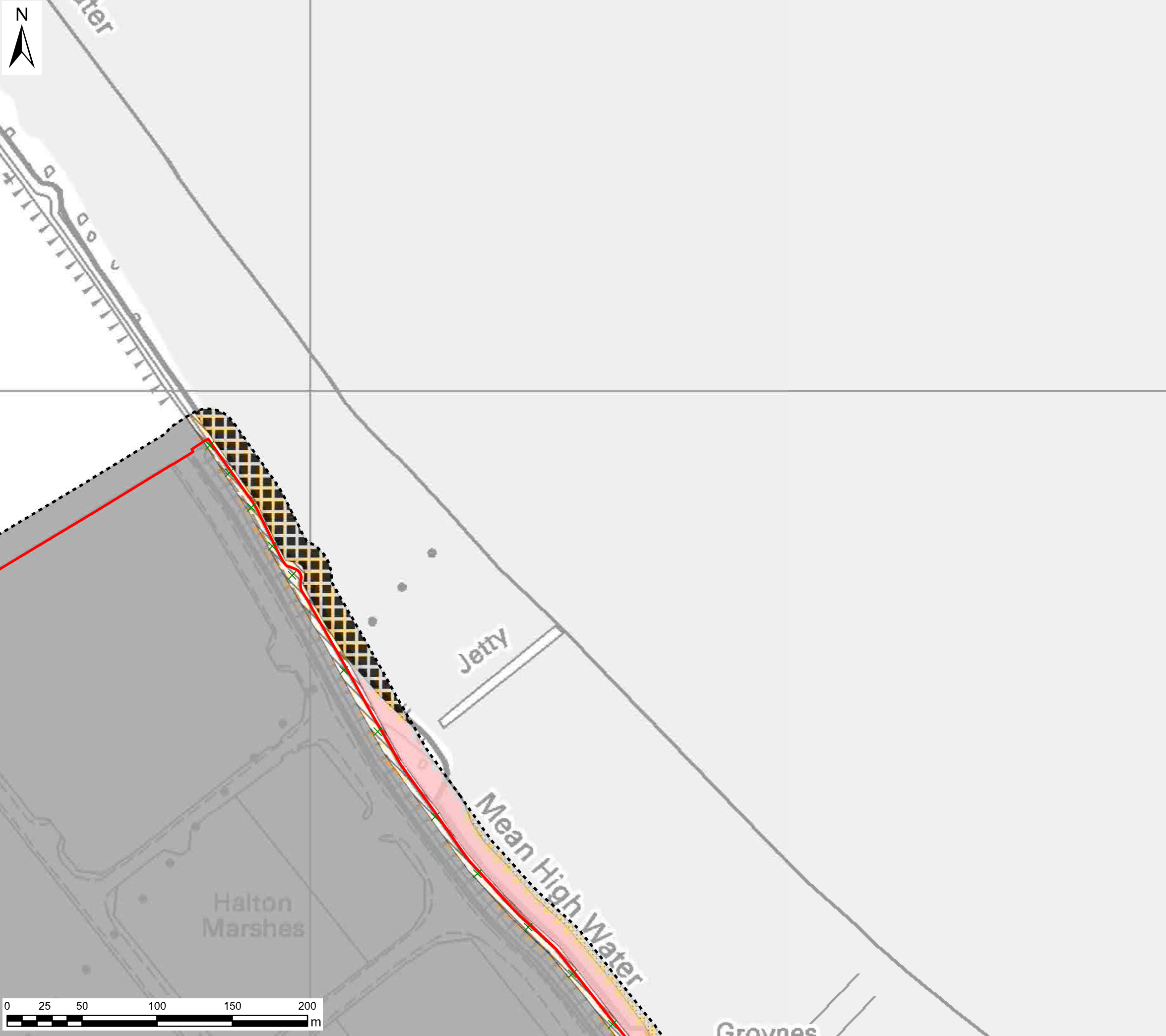
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**Figure 4
 Extended Phase 1 Habitat Survey
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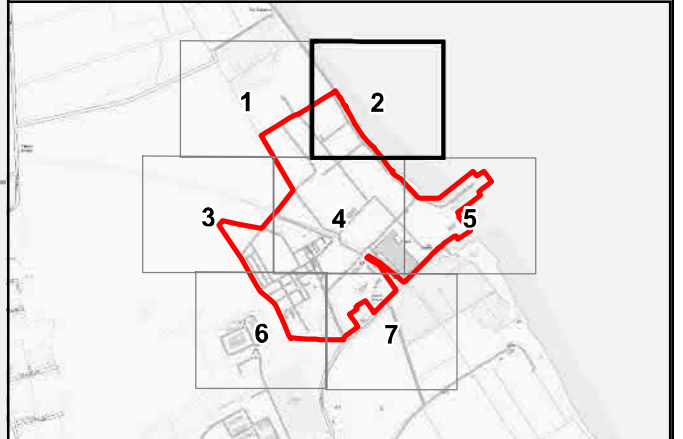
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- Principal Project
- 20m Survey area

Phase 1 habitats

- Hard standing
- Intertidal - boulders/rocks
- Intertidal - mud/sand
- Other tall herb and fern - ruderal
- Saltmarsh - dense/continuous
- Scattered scrub

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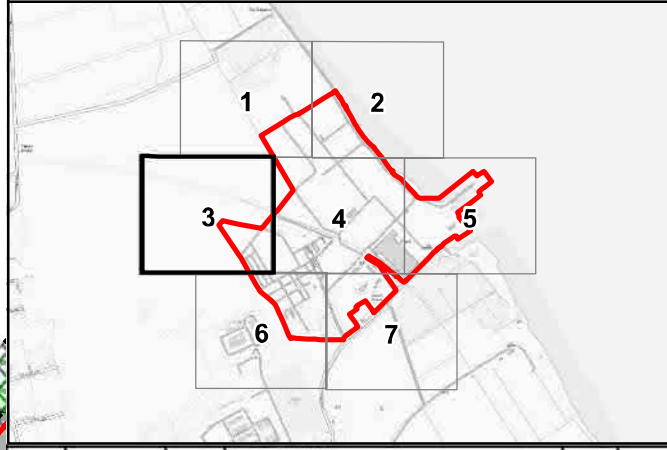
Key

- Principal Project Area
- 20m Survey area
- Target note

Phase 1 habitats

- Hard standing
- Buildings
- Cultivated/disturbed land - arable
- Fence
- Improved grassland
- Marginal and inundation - marginal vegetation
- Not accessed land
- Other tall herb and fern - ruderal
- Scrub - dense/continuous
- Scrub - scattered
- Standing water
- Scattered scrub

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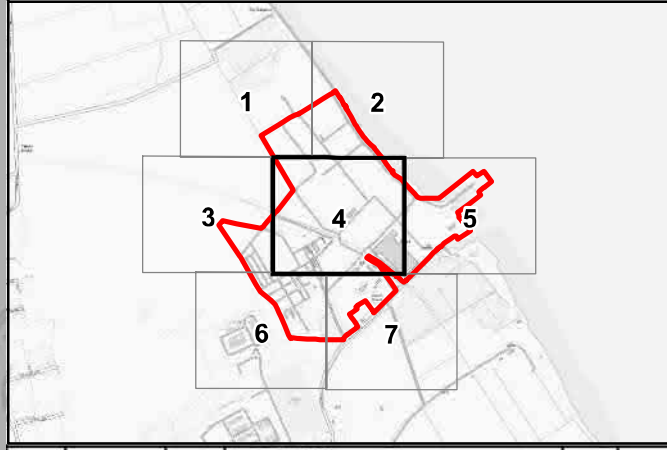
Key

- Principal Project Area
- 20m Survey area
- Target note

Phase 1 habitats

- Hard standing
- Broadleaved Parkland/scattered trees
- Buildings
- Cultivated/disturbed land - amenity grassland
- Cultivated/disturbed land - arable
- Improved grassland
- Intertidal - mud/sand
- Marginal and inundation - marginal vegetation
- Other habitat
- Other tall herb and fern - ruderal
- Saltmarsh - dense/continuous
- Scrub - dense/continuous
- Standing water
- Scattered scrub

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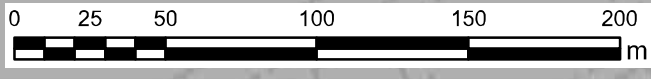
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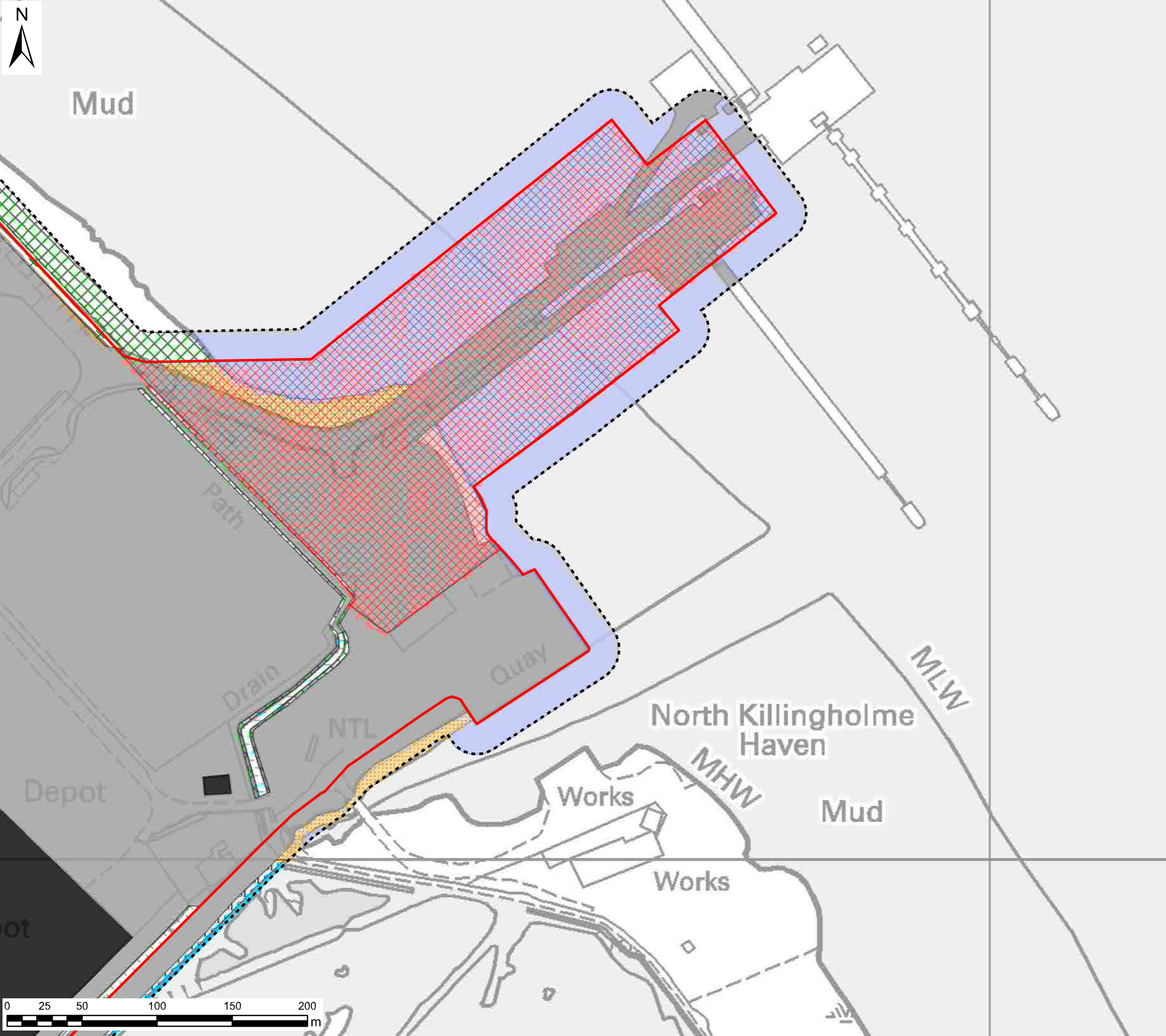
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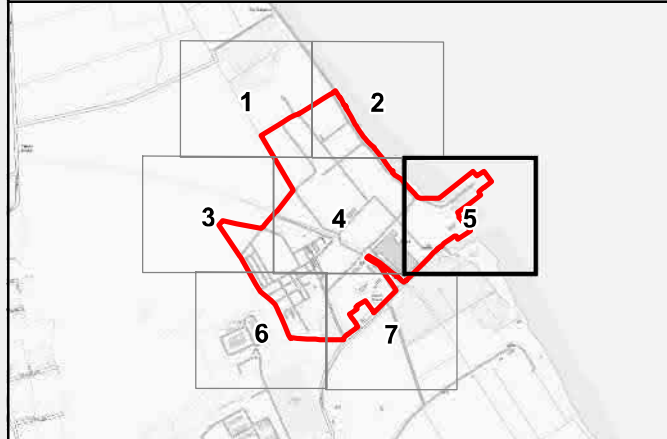
Key

- Principal Project
- 20m Survey area

Phase 1 habitats

- Running/Brackish water
- Hard standing
- Buildings
- Dry ditch
- Intertidal - mud/sand
- Not accessed land
- Other tall herb and fern - ruderal
- Semi-improved grassland
- Saltmarsh - dense/continuous
- Scrub - dense/continuous
- Scrub - scattered
- Standing water
- x Scattered scrub

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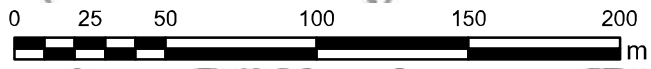
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**Figure 4
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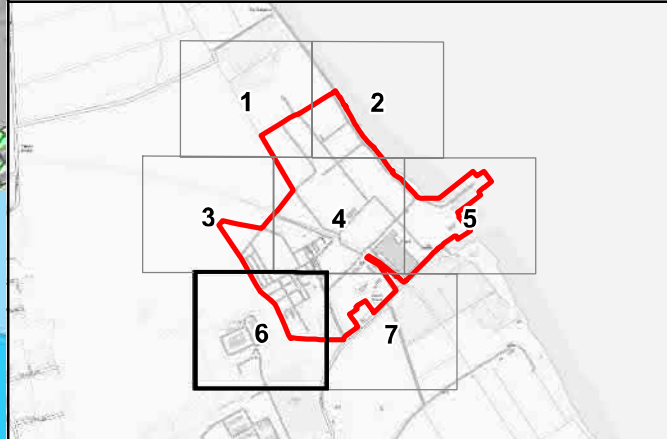
Key

- Principal Project Area
- 20m Survey area
- Target note

Phase 1 habitats

- Hard standing
- Bare ground
- Buildings
- Dry ditch
- Earth bank
- Fence
- Improved grassland
- Marginal and inundation - marginal vegetation
- Other tall herb and fern - ruderal
- Scrub - dense/continuous
- Standing water
- Swamp
- x Scattered scrub

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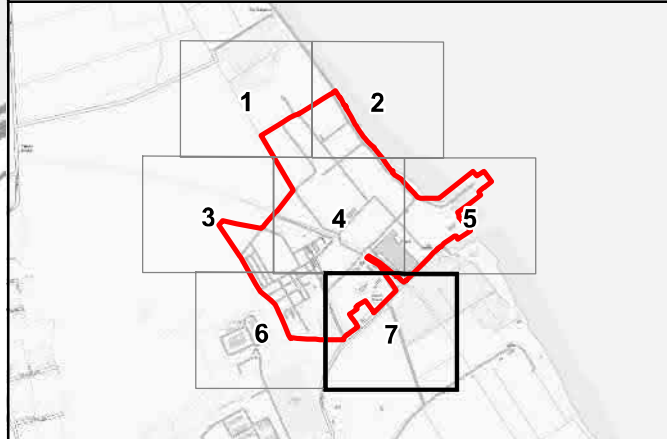
Key

- Principal Project
- 20m Survey area
- Target note

Phase 1 habitats

- Hard standing
- Bare ground
- Broadleaved Parkland/scattered trees
- Buildings
- Cultivated/disturbed land - amenity grassland
- Fence
- Improved grassland
- Marginal and inundation - marginal vegetation
- Semi-improved grassland
- Scrub - dense/continuous
- Scrub - scattered
- Standing water
- Swamp

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A	07/06/2019	RM	FIRST DRAFT	PD	CT
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS:
FINAL

Three White Rose Office Park, Millshaw Park Lane, Leeds, LS11 0DL, UK
 Tel: +44 113 395 6200 Fax: +44 113 395 6201
 wsp.com

CLIENT:

PROJECT:
North Killingholme DCO Amendments

TITLE:
Figure 4
 Extended Phase 1 Habitat Survey
 Page 7 of 7

SCALE @ A3: 2,500 @ A3	CHECKED: PD	APPROVED: CT	
PROJECT No: 70055743	DESIGNED: RM	DRAWN: RM	DATE: 07/06/2019
DRAWING No: 70055743-PEA-04			REV: A

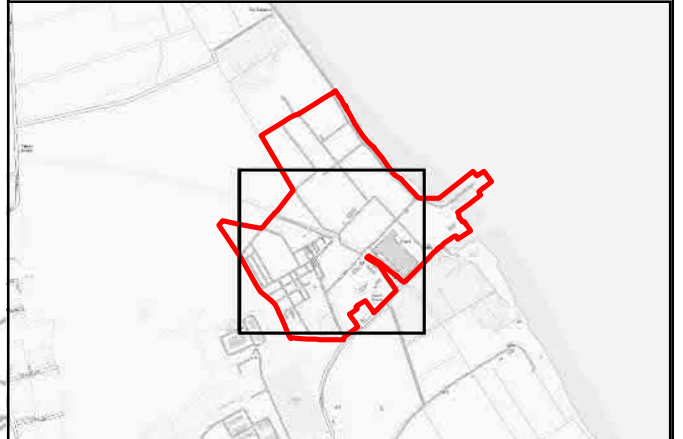
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Key


- Principal Project Area
- Low roosting suitability
- Moderate roosting suitability
- Negligible roosting suitability

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	11/06/2019	RM	FIRST DRAFT	PD	CT

DRAWING STATUS: **FINAL**



Three White Rose Office Park, Millshaw Park Lane, Leeds, LS11 0DL, UK
 Tel: +44 113 395 6200 Fax: +44 113 395 6201
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CLIENT: **C.GEN**

PROJECT: North Killingholme DCO Amendments

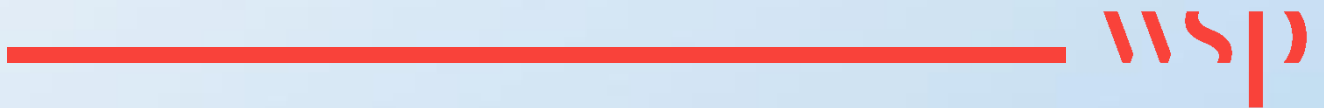
TITLE: **Figure 5
 External Building Inspection for Bats**

SCALE @ A3: 3,500 @ A3	CHECKED: PD	APPROVED: CT
PROJECT No: 70055743	DESIGNED: RM	DRAWN: RM
DRAWING No: 70055743-PEA-05		DATE: 11/06/2019
		REV: A

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Appendix A

RELEVANT LEGISLATION AND PLANNING POLICY





ENGLAND & WALES LEGISLATION AND POLICY CONTEXT

This report has been compiled with reference to relevant wildlife legislation, planning policy and the UK Biodiversity Framework. An overview and context of relevant legislation is provided, with the relevant protection each species group or species receives summarised in Table 1.

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

Protected birds, animals and plants are listed under Schedules 1, 5, 8 and 9 respectively of the WCA, a description of these Schedules and their meaning is provided below.

Under the WCA (England and Wales) all birds, their nests and eggs (with exception of species listed under Schedule 2) are protected by the WCA. It is an offence to:

- Intentionally kill, injure, or take any wild bird,
- Take or destroy an egg of any wild bird.
- Damage or destroy the nest of any wild bird (whilst being built, or in use). Under the WCA the clearance of vegetation within the survey area boundary, or immediately adjacent to the survey area during the bird nesting season could result in an offence occurring by the disruption or destruction of nest sites. The bird breeding season can be taken to occur between March - August inclusive, although is subject to variations based on species, geographical and seasonal factors.

Schedule 1

Birds listed under Schedule 1 of the WCA¹⁰ are afforded additional protection with regard to intentional or reckless disturbance whilst nest-building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Schedule 5

Species listed in Schedule 5 can either be fully protected or be partially protected under Section 9, which makes it unlawful to intentionally:

- Part 1: kill, injure or take;
- Part 2: possess or control (live or dead animal, part or derivative);
- Part 4 (a): damage or destruct any structure used for shelter or protection;
- Part 4 (b): disturb them in a place of shelter or protection;
- Part 4 (c): obstruct access to place of shelter or protection;
- Part 5 (a): sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative);
- Part 5 (b): advertise for buying or selling.

Schedule 8

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

Schedule 9

Invasive species listed under Schedule 9 are prohibited from release into the wild and the Act prohibits planting or “causing to grow” in the wild of any plant species listed in Schedule 9. It should be noted that certain bird species listed on Schedule 1 of the WCA are also listed on Schedule 9 to prevent release of non-native and captive individuals, this includes barn owl, red kite, goshawk and corncrake.

Countryside Rights of Way Act 2000 (CRoW Act)

The CRoW Act has amended the WCA in England and Wales strengthening the protection afforded to Sites of Special Scientific Interest (SSSI) and the legal protection for threatened species. It adds the word ‘reckless’ to the wording of the offences listed under Section 9(4) of the WCA. This alteration makes it an offence to recklessly commit an offence, where previously an offence had to be intentional to result in a breach of legislation.

¹⁰ To view the current list of Schedule 1 listed birds visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/1> [Accessed 09/06/2019].



Natural Environment and Rural Communities (NERC) Act 2006

Species and Habitats of Principal Importance in England are listed under Section 41 and Section 42 respectively of the NERC Act. The Section 41 and 42 lists detail species that are of principal importance for the conservation of biodiversity in England and should be used to guide decision-makers such as local and regional authorities when implementing their duty to have regard for the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006.

The Protection of Badgers Act (1992)

It is an offence to wilfully take, kill, injure, possess or ill-treat a badger. Under the Act their setts are protected against intentional or reckless interference. Sett interference includes damaging or destroying a sett, obstructing access to any part of the sett, or disturbance of a badger whilst it is occupying a sett. The Act defines a badger sett as ‘any structure or place, which displays signs indicating the current use by a badger’ and Natural England (NE) takes this definition to include seasonally used setts that are not occupied but that show sign of recent use by badgers (Natural England, 2009¹¹).

If impacts to badgers or their setts are unavoidable then authorised sett disturbance requires a licence.

The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012)

This Framework lists the UK’s most threatened species and habitats and sets out targets and objectives for their management and recovery. The UK Biodiversity Action Plan (BAP) process is delivered nationally, regionally and locally and should be used as a guide for decision-makers to have regards for the targets set by the framework and the goals they aim to achieve. The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant (UK Post-2010 Biodiversity Framework, 2012¹²).

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations came into force on 30th November 2017 and extend to England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters). In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

All species listed under Annex IV of the Habitats Directive require strict protection and are known as European Protected Species (EPS). Under Regulation 42 of the Habitats Regulations it is unlawful to:

- Deliberately kill, capture or disturb;
- Deliberately take or destroy the eggs of; and
- Damage or destroy the breeding site/resting place of any species protected under this legislation.

If the Ecologist determines that impacts to an EPS are unavoidable then the works may need to be carried out under a site specific mitigation licence from Natural England (NE). Low Impact Class licences are also available in both England and Wales for bats and great crested newts. This enables Registered Low Impact Consultants to undertake certain low impact activities reducing the EPS application paperwork and process length.

Certain EPS are also listed under Annex II of the Habitats Directive and are afforded protection by the establishment of core areas of habitat known as Special Areas of Conservation. This means these species are a relevant consideration in a Habitats Regulations Assessment (HRA).

The Birds Directive seeks to maintain populations of all wild bird species across their natural range (Article 2). All bird species listed under Annex I¹³ of the Birds Directive are rare or vulnerable and afforded protection by the classification of Special Protection Areas (SPAs), these are also designated under all regularly occurring migratory species, with regard to the protection of wetlands of international importance (Article 4). This means these bird species and communities are a relevant consideration in HRA.

¹¹ Natural England, June 2009, Protection of Badgers Act 1992 (as amended), Guidance on ‘Current Use’ in the definition of a Badger Sett WMLG17, Natural England, Peterborough.

¹² JNCC and Defra (on behalf of the Four Countries’ Biodiversity Group), July 2012, UK Post-2010 Biodiversity Framework, Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf [Accessed 09/06/2019].

¹³ To view birds listed under Annex I visit: http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm [Accessed 09/06/2019]

Table A:1: Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales

Species	Legislation, Planning Policy and UK Biodiversity Framework								
	Wildlife and Countryside Act 1981 (as amended), (WCA)				The Conservation of /Habitats and Species Regulations 2010 (as amended) (Habitats Regulations) - Regulation 41	Natural Environment and Rural Communities (NERC) Act 2006 / The Environment (Wales) Act (2016)	The Protection of Badgers Act 1992	The UK Post-2010 Biodiversity Framework 2011-2020 (JNCC and DEFRA, 2012)	
	Schedule 1	Schedule 5	Schedule 8	Schedule 9	European Protected Species (Annex IV of the EC Habitats Directive),				
Badger							✓		
Bats		✓ ¹⁴ (part)			✓ ¹⁵	✓ ¹⁶			✓ ¹⁷
Hazel Dormouse		✓ 5(part)			✓	✓			✓
Otter		✓ 5(part)			✓	✓			✓
Water vole		✓ ¹⁸ (full)				✓			✓
Birds	✓			✓ ¹⁹		✓ ²⁰			✓ ²¹

¹⁴ These species are partially protected under section 9(4)(b), (4)(c) and (5).

¹⁵ Only Barbastelle (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteini*), greater horseshoe bat (*Rhinolophus ferrumequinum*) and lesser horseshoe bat (*Rhinolophus hipposideros*) are listed on Annex II of the Habitats Directive.

¹⁶ Greater horseshoe bat, lesser horseshoe bat, Bechstein's bat, noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*) and barbastelle are listed as Species of Principal Importance in England with the addition of common pipistrelle (*Pipistrellus pipistrellus*) in Wales listed under

Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

¹⁷ Barbastelle bat, Bechstein's bat, noctule, soprano pipistrelle, brown long-eared bat, greater horseshoe bat, lesser horseshoe bat are listed as UK BAP species of bat.

¹⁸ Class Licences are available to Registered Consultants to intentionally disturb, damage or destroy water vole burrows or to displace water voles from their burrows in relation to a development proposal where the licensed action provides a conservation benefit for water voles. Certain displacement operations may be carried out under a Class licence by a registered person in England, however in Wales all displacement operations must be carried out under a site specific licence.

¹⁹ To view plants and animals listed on Schedule 9 Part 1 visit <http://www.legislation.gov.uk/ukpga/1981/69/schedule/9> [accessed 6 April 2017]

²⁰ There are 49 species of birds listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

²¹ To view the current list of UK BAP priority birds visit: <http://jncc.defra.gov.uk/page-5163> [Accessed 09/06/2019].

Reptiles		✓ ²² (part)□		✓ ⁹	✓ ²³	✓ ²⁴		✓ ²⁵
Amphibians		✓ ²⁶ (part)		✓ 27	✓ ^{28, 29}	✓ ³⁰		
White-clawed Crayfish		✓ ³¹ (partial)			✓ ³²	✓		✓
Invertebrates		✓ ³³ (full/part)		✓	✓ ^{34, 35}	✓ ³⁶		✓ ³⁷

²² The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

²³ Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*) are the only reptiles to be designated as European Protected Species.

²⁴ All 6 reptile species are listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

²⁵ To view the current list of UK BAP priority herptile species visit: <http://jncc.defra.gov.uk/page-5166> [Accessed 09/06/2019].

²⁶ The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

²⁷ Common frog (*Rana temporaria*), Common toad (*Bufo bufo*), Smooth newt (*Lissotriton vulgaris*) and Palmate newt (*Lissotriton helveticus*) are offered partial protection under section 9(5). Great crested newt (*Triturus cristatus*) and Natterjack toad (*Epidalea calamita*) are offered partial protection under section 9(4)(b) and (c) and (5). Pool frog (*Pelophylax lessonae*) is offered partial protection under section 9(4)(b) and (c)(1) only and with respect to England only.

²⁸ Great crested newt, Natterjack toad and Pool frog are the only amphibians to be designated European Protected Species.

²⁹ Great crested newt is the only amphibian listed on Annex II of the Habitats Directive.

³⁰ Great crested newt, Natterjack toad and Common toad are listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

³¹ Under the Wildlife and Countryside Act it is illegal to take or sell white clawed crayfish under the WCA. A licence is required to survey (hand net or trap) for the species. To undertake work within WCC inhabited rivers a Class Licence maybe issued by the relevant authority to move WCC away from harm prior to works. Although WCC are not protected from killing or injury Natural England state in their Class licence that due to declining numbers all efforts should be made to conserve the species.

³² White clawed crayfish are listed under Annex II and V of the Habitats Directive.

³³ To view the current list of invertebrates that are protected under this Act either in part or full visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed 09/06/2019].

³⁴ The Large blue butterfly (*Maculinea arion*), Fisher's estuarine moth (*Gortyna borelii lunata*) and Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) are the only invertebrates to be designated European Protected Species.

³⁵ There are currently twelve invertebrates listed in Annex II of the Habitats Directive; White-clawed crayfish (*Austropotamobius pallipes*), Southern damselfly (**Coenagrion mercuriale**), Marsh fritillary butterfly (**Eurodryas aurinia**), Violet click beetle (**Limonicus violaceus**), Stag beetle (**Lucanus cervus**), Freshwater pearl mussel (**Margaritifera margaritifera**), Narrow-mouthed whorl snail (**Vertigo angustior**), Round-mouthed whorl snail (**Vertigo genesii**), Geyer's whorl snail (**Vertigo geyeri**), Desmoulin's whorl snail (**Vertigo moulinsiana**), Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) and Fisher's estuarine moth (*Gortyna borelii lunata*).

³⁶ There are currently 379 invertebrate species (not including marine species) listed as Species of Principal Importance in England http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKEwivvu7J9trSAhXiCsAKHX4TBGcQFggvMAM&url=http%3A%2F%2Fpublications.naturalengland.org.uk%2Ffile%2F6518755878240256&usq=AFQjCNEpiUWYuOqhVcfSDvi_3iK2TJytfQ and listed under Section 41 of the NERC Act 2006 [Accessed 09/06/2019]

³⁷ To view the current list of UK BAP priority invertebrates visit: <http://jncc.defra.gov.uk/page-5169> [Accessed 09/06/2019].

Fish		✓ ³⁸ (full/part)		✓ ⁹	✓ ^{39, 40}	✓ ⁴¹		✓ ⁴²
Plants			✓ ⁴³	✓ ⁹	✓ ^{44, 45}	✓ ⁴⁶		✓ ⁴⁷

³⁸ To view the current list of fish either part or fully protected under the Act visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed 09/06/2019].

³⁹ Sturgeon (*Acipenser sturio*) is the only fish to be designated a European Protected Species.

⁴⁰ There are eight fish species listed on Annex II of the Habitats Directive. To view the current list visit: <http://jncc.defra.gov.uk/page-1523> [Accessed 09/06/2019].

⁴¹ There are 35 species of fish listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006

⁴² To view the current list of UK BAP priority fish visit: <http://jncc.defra.gov.uk/page-5164> [Accessed 09/06/2019].

⁴³ To view the current list of Schedule 8 listed plants visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/8> [Accessed 09/06/2019].

⁴⁴ There are nine plant species designated as European Protected Species. To view the current list visit: <http://www.legislation.gov.uk/ukxi/2010/490/schedule/5/made> [Accessed 09/06/2019].

⁴⁵ To view the current list of plant species on Annex II of the Habitats Directive visit: <http://jncc.defra.gov.uk/page-1523> [Accessed 09/06/2019].

⁴⁶ There are currently 152 vascular plants listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006.³¹ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed 09/06/2019].

⁴⁷ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed 09/06/2019].

Appendix B

SUMMARY OF ECOLOGICAL DESK STUDY DATA

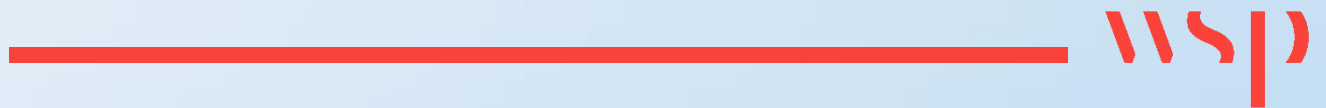


Table B1 - Protected and Notable Species (excluding birds) for which Records have been Identified within 5 km

Species Common Name	Species Latin Name	No. of Records	Distance and Orientation from Site	Legal / Conservation Status ⁴⁸
European water vole	<i>Arvicola amphibius</i>	3	260m	WCA, SPI, LBAP
Bean seed beetle	<i>Bruchus rufimanus</i>	1	1,101m	Non-native
Bat	<i>Chiroptera</i>	2	1,074m	WCA, HabReg, SPI, LBAP
Irish cellar slug	<i>Limacus flavus</i>	1	1,101m	Non-native
Smooth newt	<i>Lissotriton vulgaris</i>	1	1,470m	WCA, SPI, LBAP
European otter	<i>Lutra lutra</i>	4	580m	WCA, HabReg, SPI
Eurasian badger	<i>Meles meles</i>	19	70m	Protection of Badgers Act 1992
Chinese muntjac	<i>Muntiacus reevesi</i>	2	1,964m	Non-native
Noctule bat	<i>Nyctalus noctula</i>	4	269m	WCA, HabReg, SPI, LBAP
European rabbit	<i>Oryctolagus cuniculus</i>	4	260m	N/A
Pipistrelle bat	<i>Pipistrellus</i>	3	997m	WCA, HabReg, SPI, LBAP
Common pipistrelle bat	<i>Pipistrellus pipistrellus</i>	3	267m	WCA, HabRes, SPI, LBAP
Soprano pipistrelle bat	<i>Pipistrellus pygmaeus</i>	2	269m	WCA, HabReg, SPI, LBAP

⁴⁸ HabReg = Conservation of Habitats and Species Regulations (2017), W&CA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce).

Species Common Name	Species Latin Name	No. of Records	Distance and Orientation from Site	Legal / Conservation Status 48
Brown long-eared bat	<i>Plecotus auritus</i>	3	950m	WCA, HabReg, SPI, LBAP
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	5	1,964m	SPI
Blood-vein	<i>Timandra comae</i>	1	1,964m	SPI
Great crested newt	<i>Triturus cristatus</i>	53	894m	WCA, HabReg, SPI, LBAP
Cinnibar	<i>Tyria jacobaeae</i>	15	1,964m	SPI

Table B2 - Protected and Notable Birds for which Records have been Identified within 5 km

Species Common Name	Species Latin Name	No. of Records	Legal / Conservation Status 49
Red-legged partridge	<i>Alectoris rufa</i>	2	WCA, SPI, LBAP
Gadwall	<i>Anas strepera</i>	2	WCA, BoCC4 Amber
Pochard	<i>Aythya ferina</i>	10	WCA, BoCC4 Red
Little Ringed Plover	<i>Charadrius dubius</i>	1	WCA Sch1
Marsh Harrier	<i>Circus aeruginosus</i>	2	WCA Sch1, SPI
Cuckoo	<i>Cuculus canorus</i>	1	WCA, SPI
Mute Swan	<i>Cygnus olor</i>	4	WCA, BoCC4 Amber
Merlin	<i>Falco columbarius</i>	1	WCA Sch1
Snipe	<i>Gallinago gallinago</i>	1	WCA, BoCC4 Amber

⁴⁹ HabReg = Conservation of Habitats and Species Regulations (2017), WCA = Wildlife and Countryside Act (1981), WCA Sch1 = Schedule 1 of WCA, Sch9 = Schedule 9 of WCA, SPI = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce), BoCC4 Red = Bird of Conservation Concern 4 Red List, BoCC4 Amber = Birds of Conservation Concern 4 Amber List.

Species Common Name	Species Latin Name	No. of Records	Legal / Conservation Status 49
Black-tailed godwit	<i>Limosa limosa</i>	4001	WCA Sch1, SPI, BoCC4 Red,
Grasshopper warbler	<i>Locustella naevia</i>	1	WCA, SPI, BoCC4 Red
Curlew	<i>Numenius arquata</i>	5	WCA, SPI, BoCC4 Red, LBAP
Yellowhammer	<i>Emberiza citronella</i>	20	WCA, SPI, BoCC4 Red, LBAP
Redshank	<i>Tringa totanus</i>	80	WCA, BoCC4 Amber
Yellow wagtail	<i>Motacilla flava</i>	22	WCA, SPI, BoCC4 Red, LBAP
Starling	<i>Sturnus vulgaris</i>	35	WCA, SPI, BoCC4 Red, LBAP
Barn owl	<i>Tyto alba</i>	41	WCA Sch1 & Sch 9
Bullfinch	<i>Pyrrhula pyrrhula</i>	9	WCA, SPI, BoCC4 Amber, LBAP
Skylark	<i>Alauda arvensis</i>	35	WCA, SPI, BoCC4 Red
Linnet	<i>Linaria cannabina</i>	31	WCA, SPI, BoCC4 Red, LBAP
Grey Partridge	<i>Perdix perdix</i>	9	WCA, SPI, BoCC4 Red, LBAP
Swift	<i>Apus apus</i>	17	WCA, BoCC4 Amber
Fieldfare	<i>Turdus pilaris</i>	11	WCA Sch1, BoCC4 Red
Turtle dove	<i>Streptopelia turtur</i>	16	WCA, SPI, BoCC4 Red, LBAP
Mute swan	<i>Cygnus olor</i>	20	WCA
Spotted flycatcher	<i>Muscicapa striata</i>	2	WCA, SPI, BoCC4 Red
Pochard	<i>Aythya ferina</i>	8	WCA, BoCC4 Red
Pink-footed goose	<i>Anser brachyrhynchus</i>	29	WCA, BoCC4 Amber
Merlin	<i>Falco columbarius</i>	11	WCA, BoCC4 Red
Kingfisher	<i>Alcedo atthis</i>	23	WCA Sch1, BoCC4 Amber
Cetti's warbler	<i>Cettia cetti</i>	13	WCA Sch1
Common scoter	<i>Melanitta nigra</i>	7	WCA Sch1, SPI, BoCC4 Red
Mediterranean gull	<i>Larus melanocephalus</i>	11	WCA Sch1, BoCC4 Amber

Species Common Name	Species Latin Name	No. of Records	Legal / Conservation Status 49
Barnacle goose	<i>Branta leucopsis</i>	10	WCA Sch9, BoCC4 Amber
Greenshank	<i>Tringa nebularia</i>	6	WCA, BoCC4 Amber
Wood sandpiper	<i>Tringa glareola</i>	8	WCA Sch1, BoCC4 Amber
Green sandpiper	<i>Tringa ochropus</i>	8	WCA Sch1, BoCC4 Amber
Whooper swan	<i>Cygnus cygnus</i>	6	WCA, BoCC4 Amber
Dark bellied Brent goose	<i>Branta bernicla subsp. bernicla</i>	3	WCA, SPI
Tundra bean goose	<i>Anser fabalis subsp. rossicus</i>	5	WCA
Montagu's harrier	<i>Circus pygargus</i>	1	WCA Sch1
Ruddy duck	<i>Oxyura jamaicensis</i>	8	WCA Sch9
Peregrine	<i>Falco peregrinus</i>	46	WCA Sch1
Hobby	<i>Falco subbuteo</i>	14	WCA Sch1
Whimbrel	<i>Numenius phaeopus</i>	3	WCA Sch1, BoCC4 Red
Hen harrier	<i>Circus cyaneus</i>	9	WCA Sch1, SPI, BoCC4 Red
Ruff	<i>Calidris pugnax</i>	27	WCA Sch1, BoCC4 Red
Bittern	<i>Botaurus stellaris</i>	9	WCA Sch1, BoCC4 Amber
House sparrow	<i>Passer domesticus</i>	1	WCA, SPI, BoCC4 Red
Tree sparrow	<i>Passer montanus</i>	10	WCA, SPI, BoCC4 Red, LBAP
Pheasant	<i>Phasianus colchicus</i>	5	WCA
Avocet	<i>Recurvirostra avosetta</i>	2	WCA Sch1, BoCC4 Amber
Redshank	<i>Tringa totanus</i>	51	WCA, BoCC4 Amber
Song thrush	<i>Tudus philomelos</i>	1	WCA, SPI, BoCC4 Red
Lapwing	<i>Vanellus vanellus</i>	1	WCA, SPI, BoCC4 Red

Appendix C

PLANT SPECIES RECORDED

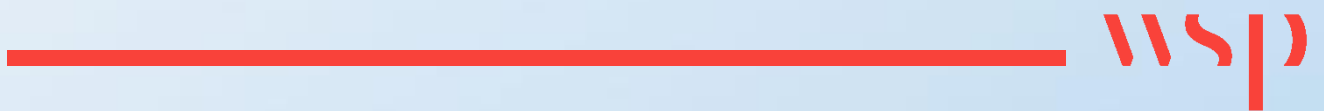


Table C1 - Dense Scrub (linear strip along Northern Site boundary and East of Waterbody to North of Site)

Common Name	Latin Name	Frequency (DAFOR)
Ash	<i>Fraxinus excelsior</i>	D
Hawthorn	<i>Crataegus monogyna</i>	D
Sycamore	<i>Acer pseudoplatanus</i>	A
Goat willow	<i>Salix caprea</i>	A
Dog rose	<i>Rosa canina</i>	D
Bird's-foot trefoil	<i>Lotus corniculatus</i>	F
Coltsfoot	<i>Tussilago farfara</i>	O
Tufted vetch	<i>Vicia cracca</i>	A
Common teasel	<i>Dipsacus fullonum</i>	F
Brome	<i>Bromus vulgaris</i>	R
Weld	<i>Reseda luteola</i>	O
Yarrow	<i>Achillea millefolium</i>	A

Table C2 – Dense Scrub (triangular habitat adjacent to B6)

Common Name	Latin Name	Frequency (DAFOR)
Hawthorn	<i>Crataegus monogyna</i>	D
Ash	<i>Fraxinus excelsior</i>	D
Sycamore	<i>Acer pseudoplatanus</i>	F
Common elder	<i>Sambucus nigra</i>	R
Bramble	<i>Rubus fruticosus</i>	O
Tufted vetch	<i>Vicia cracca</i>	O
Common vetch	<i>Vicia sativa</i>	O
Horsetail	<i>Equisetum arvense</i>	A
Red fescue	<i>Festuca rubra</i>	F

Common Name	Latin Name	Frequency (DAFOR)
Cock's-foot	<i>Dactylis glomerata</i>	F

Table C3 – Dense Scrub (around perimeter of waterbody to north of site and along northern boundary)

Common Name	Latin Name	Frequency (DAFOR)
Hawthorn	<i>Crataegus monogyna</i>	D
Blackthorn	<i>Prunus spinosa</i>	A
Ash	<i>Fraxinus excelsior</i>	A
Goat willow	<i>Salix caprea</i>	F
Bristly oxtongue	<i>Helminthotheca echioides</i>	F
Yarrow	<i>Achillea millefolium</i>	O
Dove's foot cranesbill	<i>Geranium molle</i>	O
Common vetch	<i>Vicia sativa</i>	R

Table C4 – Dense Scrub/Scattered Broadleaved Trees (along Clough Lane, to the west of the Site)

Common Name	Latin Name	Frequency (DAFOR)
Ash	<i>Fraxinus excelsior</i>	D
Sycamore	<i>Acer pseudoplatanus</i>	A
Hawthorn	<i>Crataegus monogyna</i>	F
Elder	<i>Sambucus nigra</i>	O
Lime sp.	<i>Tilia sp.</i>	R
Pedunculate oak	<i>Quercus robur</i>	R