

Green Hill Solar Farm

EN010170

Environmental Statement

Appendix 9.3: Desk Study

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APFP Regulation 5(2)(I)



Appendix 9.3 – Desk Study

1.1 Introduction

- 1.1.1 This appendix provides a summary of the desk study information gathered to inform the ecological assessment of the Scheme. Data sources and parameters are set out in the Methodology section.
- 1.1.2 A summary of pertinent data is provided for each individual Site within the Scheme, including proximate designated sites species records and priority habitats; this is set out within the Results section.
- 1.1.3 The following figures have been produced to accompany the desk study, which are included at the end of this appendix:
- Figure 9.3.1: International Statutory Designated Sites within 10km of the Order Limits
 - Figure 9.3.2: National and Local Statutory Designated Sites within 5km of the Order Limits (1 of 2)
 - Figure 9.3.3: National and Local Statutory Designated Sites within 5km of the Order Limits (2 of 2)
 - Figure 9.3.4: Non-Statutory Designated Sites within 2km of the Order Limits (1 of 2)
 - Figure 9.3.5: Non-Statutory Designated Sites within 2km of the Order Limits (2 of 2)
 - Figure 9.3.6: Priority Habitats within 2km of the Order Limits (1 of 2)
 - Figure 9.3.7: Priority Habitats within 2km of the Order Limits (2 of 2)
- 1.1.4 This appendix is supported by the following tables:
- Table 1: Key to Legislation References
 - Table 2: BCTP Areas in Relation to the Sites
 - Table 3: Designated Sites Within Study Area of Green Hill A
 - Table 4: Species Records Within Study Area (2km) of Green Hill A
 - Table 5: Designated Sites Within Study Area of Green Hill A.2
 - Table 6: Species Records Within Study Area (2km) of Green Hill A.2
 - Table 7: Designated Sites Within Study Area of Green Hill B
 - Table 8: Species Records Within Study Area (2km) of Green Hill B
 - Table 9: Designated Sites Within Study Area of Green Hill C
 - Table 10: Species Records Within Study Area (2km) of Green Hill C
 - Table 11: Designated Sites Within Study Area of Green Hill D



- Table 12: Species Records Within Study Area (2km) of Green Hill D
- Table 13: Designated Sites Within Study Area of Green Hill E
- Table 14: Species Records Within Study Area (2km) of Green Hill E
- Table 15: Designated Sites Within Study Area of Green Hill BESS
- Table 16: Species Records Within Study Area (2km) of Green Hill BESS
- Table 17: Designated Sites Within Study Area of Green Hill F
- Table 18: Species Records Within Study Area (2km) of Green Hill F
- Table 19: Designated Sites Within Study Area of Green Hill G
- Table 20: Species Records Within Study Area (2km) of Green Hill G
- Table 21: Designated Sites within Study Area (500m) of Cable Route Corridor
- Table 22: Species Records Within Study Area (500m) of Cable Route Corridor

1.2 Methodology

Green Hill A to G and Green Hill BESS

- 1.2.1 A desk study exercise was completed for the Scheme in June 2024. This developed on the exercise completed as part of the Preliminary Ecological Appraisal (PEA), accounting for additional sites subsequently brought into the Scheme.
- 1.2.2 Statutory designated sites for nature conservation and granted European Protected Species licences were identified using the Natural England/DEFRA web-based MAGIC map database (www.MAGIC.gov.uk).
- 1.2.3 Several Local Environmental Records Centres (LERCs) were consulted for details of locally-designated and non-statutory sites for nature conservation, as well as records of protected and notable species and habitats. LERCs from which data were gathered comprised: Northamptonshire Biodiversity Records Centre (NBRC); Bedfordshire and Luton Biodiversity Recording and Monitoring Centre; and Buckinghamshire and Milton Keynes Environmental Records Centre. North Northamptonshire's Biodiversity Opportunity Mapping was also obtained.
- 1.2.4 The following search criteria were used for designated sites, which formed the Study Area for each Site:
- 'International' designated sites (e.g. Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites) were searched for within 10km from each Site. This was extended to 30km for any such sites for which migratory birds or bats are listed as a qualifying feature.
 - 'National' sites (e.g. Sites of Special Scientific Interest (SSSIs) and Local Nature Reserves (LNRs) were searched for within 5km from each Site.



- ‘Local’ sites such as Local Wildlife Sites (LWSs), County Wildlife Sites (CWSs), Protected Wildflower Verges (PWVs), Wildlife Trust Reserves (WTRs) and Biodiversity Notification Sites were searched for within 2km from each Site.

1.2.5 These search radii are typical distances used in ecological impact assessment for projects of this nature and scale and have been selected following the CIEEM guidelines on Ecological Impact Assessment (Ref.1). It is considered unlikely that the proposed development would give rise to impacts on designated sites beyond these ranges.

1.2.6 Figures showing the relationship between the designated sites and the Sites are provided in this Appendix.

1.2.7 A search for Habitats of Principal Importance (also known as Priority Habitats) within 2km of the Scheme boundary was undertaken using the list of Habitats of Principal Importance in England (Ref.2) and Ancient Woodland Inventory (Ref.3) datasets.

1.2.8 For protected and notable species and Priority Habitats, as well as habitat opportunity areas, data were gathered from within 2km of the Sites. Species records data were filtered to exclude records from pre-year 2000, to ensure relevance. The ‘Count’ column in the below data tables refers to the number of records pertaining to that species within the relevant Study Area. The table columns citing relevant legislative protections for each species were defined as per Table 1, below.

Table 1: Key to Legislation References

Key	Status	Assumptions Made
EU Protected	Protected under European legislation	Includes: Berne Convention Appendix 1 & 2 Bonn Convention Appendix 1 & 2 Habitats and Species Directive Annex 4
EU Priority		Includes: Birds Directive Annex Habitats and Species Directive Annex 2 Priority Species
WACA 1981	Legally protected under the Wildlife and Countryside Act 1981	Includes: Schedule 1 Part 1, Part 2 WCA: Schedule 5 Section 9.1 (killing/injuring)



Key	Status	Assumptions Made
		Schedule 5 Section 9.1 (taking) Schedule 5 Section 9.2 Schedule 5 Section 9.4a Schedule 5 Section 9.4b & Schedule 8
NERC Act 2006	Legally protected under the Natural Environment and Rural Communities Act 2006	List of habitats and species of principal importance for the conservation of biodiversity in England. The list includes 56 habitats and 943 species, and draws upon the UK BAP.
Amber birds	Birds listed on the amber list of the BTO Birds of Conservation Concern 5 (Ref.4)	Medium conservation concern.
Red birds	Birds listed on the red list of the BTO Birds of Conservation Concern 5 (Ref.4)	High conservation concern.

- 1.2.9 Information pertaining to existing records of bats within 2km of the Sites was obtained from the Northants Bat Group and Local Environmental Records Centres (LERCs), including: Northamptonshire Biodiversity Records Centre (NBRC); Bedfordshire and Luton Biodiversity Recording and Monitoring Centre; and Buckinghamshire and Milton Keynes Environmental Records Centre.
- 1.2.10 Data search records for bats obtained from Northamptonshire Bat Group were only provided with four-figure OS grid references, and therefore only identified a 1km square within which the record was obtained. As a result, an accurate location that these records pertained to could not be identified. These records have therefore been presented in the 'All Sites' section of this report under the 'Low Resolution Bat Records' heading, as it was not possible to accurately determine the locations of these records in relation to the Study Areas of each of the Sites. Where more accurate bat records were supplied by the Local Environmental Records Centres, these have been included within the data tables for each of the Sites.
- 1.2.11 The National Fish Populations Database, held by the Environment Agency (EA) and accessed through the EA's Ecology and Fish Data Explorer, was consulted for freshwater fish monitoring data within 2km of the Sites.



- 1.2.12 BTO Priority Areas for Countryside Stewardship Measures for Priority Species under their Bird Conservation Targeting Project (BCTP) were consulted in relation to the Scheme Boundary using the MAGIC website.
- 1.2.13 The Northamptonshire Biodiversity Action Plan (BAP) (Ref.5) was consulted for priority species and information relating to local conservation strategies.

Cable Route Corridor

- 1.2.14 Data pertaining to designated sites, protected and notable species and habitats, and Habitat Opportunity Areas within the wider Cable Route Search Area (primarily used at PEIR stage) were assessed during the desk study exercise using the same sources. Given the temporary and limited nature of impacts associated with the construction of the cable route, and that the entirety of the Cable Route Corridor lies within the wide Cable Route Search Area, acquiring data pertaining to a search radius around the Cable Route Search Area itself was not considered relevant or proportionate. This desk study exercise was completed in June 2024.
- 1.2.15 Given that the wider Cable Route Search Area (primarily used at PEIR stage) has been narrowed down to a proposed Cable Route Corridor, desk study results provided in this chapter have been filtered to only include those that lie 500m of the Cable Route Corridor, rather than those that lie within the now superseded Cable Route Search Area, to ensure relevance. This 500m buffer comprises the Study Area of the Cable Route Corridor. Information on desk study results pertaining to the wider Cable Route Search Area can be found in the PEIR (Chapter 8: Ecology and Biodiversity).

1.3 Results

All Sites

Legislation and Policy

- 1.3.1 Relevant legislation and policy, with respect to Ecology and Biodiversity, is set out in **Chapter 9: Ecology and Biodiversity [EN010170/APP/GH6.2.9]** of the Environmental Statement.

Designated Sites

- 1.3.2 The Upper Nene Valley Gravel Pits Special Protection Area (Upper Nene Valley GP SPA) comprises a network of exhausted sand and gravel pits extending across approximately 35km of alluvial deposits of the River Nene floodplain. It supports major overwintering bird assemblages with over 20,000 wildfowl and wading birds, including bittern *Botaurus stellaris*, coot *Fulica atra*, several duck species, great crested grebe *Podiceps cristatus*, golden plover *Pluvialis apricaria* and lapwing *Vanellus vanellus*. Annex 1 species (under Article 4.1 of Directive 2000/9/EC) include wintering bittern and golden plover. The presence and abundance of overwintering gadwall *Anas strepera* and mute swan *Cygnus olor* meet additional criteria supporting the identification of Wetlands of International Importance. A 10km consultation zone from the SPA has been defined (Ref.6), within which impacts must be considered.



- 1.3.3 All sites bar Green Hill A and A.2 fall within the SPA consultation zone. The SPA lies closest to Green Hill BESS (parts of the SPA lie adjacent to the Site boundary).

Northamptonshire Biodiversity Action Plan (BAP) Habitats & Species

- 1.3.4 The biodiversity priorities for Northamptonshire include the following habitats and species. Those considered potentially relevant to the Scheme are highlighted in **bold**.

- | | |
|--------------------------------|---|
| • Barn owl | • Lowland heathland |
| • Nightingale | • Lowland meadow |
| • Black hairstreak | • Lowland mixed deciduous woodland |
| • Palmate newt | |
| • Black poplar | • Open mosaic habitats on previously developed land |
| • Arable field margins | • Ponds |
| • Eutrophic standing waters | • Reedbed |
| • Floodplain grazing marsh | • Rivers |
| • Lowland calcareous grassland | • Traditional orchards |
| • Lowland dry acid grassland | • Wet woodland |
| • Lowland fen | • Wood-pasture and parkland |

Low Resolution Bat Records

- 1.3.5 Data search records for bats obtained from Northamptonshire Bat Group were only provided with four-figure OS grid references. This identified records to the level of a 1km x 1km square (i.e. a monad), and therefore it was not possible to accurately determine the locations of these records in relation to the Study Areas of each of the Sites.

- 1.3.6 Records of the following species were returned within 2km of at least one of the Sites since 2000:

- Barbastelle *Barbastella barbastellus*
- Brown long-eared *Plecotus auritus*
- Common pipistrelle *Pipistrellus pipistrellus*
- Noctule *Nyctalus noctula*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Whiskered bat *Myotis mystacinus*



- Unidentified *Pipistrellus* sp.
- Whiskered/Brandt's *Myotis brandtii* bats.

1.3.7 Records of Daubenton's bat *Myotis daubentonii*, Leisler's *Nyctalus leisleri*, Nathusius's pipistrelle *Pipistrellus nathusii*, Natterer's *Myotis nattereri* and unidentified *Myotis* sp. were gathered from the surrounding area beyond 2km.

1.3.8 Within 2km, three barbastelle records were returned, including one roost record, which related to OS Grid Reference SP8370, closest to Green Hill C. 17 brown long-eared records were returned, including 15 roost records. 14 common pipistrelle records were returned, including six roost records. Six soprano pipistrelle records were returned, including two roost records. A further 23 unidentified *Pipistrellus* sp. records were returned, including 21 roost records. One noctule and one whiskered bat record were returned, as well as a roost record of a whiskered/ Brandt's bat.

1.3.9 Two European Protected Species (EPS) licences relating to bats were identified during the desk study. Firstly, EPSM2013-5557, which relates to the destruction of a breeding site and resting place of common pipistrelle, soprano pipistrelle and brown long-eared bat, approx. 1.8km west of Green Hill B. Secondly, 2016-21753-EPS-MIT, relating to damage and destruction of resting place of common pipistrelle, within 2km of Green Hill C to E.

Bird Conservation Target Areas

1.3.10 **Table 2** below shows the proximity of Bird Conservation Targeting Project (BCTP) areas for particular species in relation to the Sites. BCTP areas with a distance of '0km' in **Table 2** below indicate that the BCTP area overlaps the relevant Site.

Table 2: BCTP Areas in Relation to the Sites

Species	Distance between nearest target bird conservation area and each Site								
	A	A.2	B	C	D	E	BESS	F	G
Corn bunting <i>Emberiza calandra</i>	>2km	>2km	>2km	>2km	>2km	>2km	>2km	>2km	>2km
Curlew <i>Numenius arquata</i>	>2km	>2km	>2km	>2km	>2km	>2km	>2km	>2km	>2km
Lapwing <i>Vanellus vanellus</i>	0km	0km	0km	1.2km	1.5km	2km	0.6km	0km	0km



Species	Distance between nearest target bird conservation area and each Site								
	A	A.2	B	C	D	E	BESS	F	G
Redshank <i>Tringa totanus</i>	>2km	>2km	0km	0km	0km	0km	0km	0.8km	>2km
Snipe <i>Gallinago gallinago</i>	>2km	>2km	>2km	>2km	>2km	>2km	>2km	>2km	>2km

The National Fish Populations Database

- 1.3.11 Open-source fish data from the Environment Agency were also gathered from the Study Area. These data revealed records of the following species, since 2000: barbel *Barbus barbus*, bleak *Alburnus alburnus*, common bream *Abramis brama*, brown / sea trout *Salmo trutta*, bullhead *Cottus gobio*, chub *Leuciscus cephalus*, dace *Leuciscus leuciscus*, European eel *Anguilla Anguilla*, gudgeon *Gobio gobio*, minnow *Phoxinus phoxinus*, nine-spined stickleback *Pungitius pungitius*, perch *Perca fluviatilis*, pike *Esox Lucius*, roach *Rutilus rutilus*, rudd *Scardinius erythrophthalmus*, ruffe *Gymnocephalus cernuus*, silver bream *Abramis bjoerkna*, spined loach *Cobitis taenia*, stone loach *Barbatula barbatula*, tench *Tinca tinca*, three-spined stickleback *Gasterosteus aculeatus* and several hybrids, plus unidentified fish in the following families/ genera: Cobitidae, Cottidae, Cyprinidae, Gasterosteidae, Noemacheilus and Phoxinus. Additional species highlighted as being known to be present in the wider River Nene by the Environment Agency include brook lamprey *Lampetra planeri*.

Green Hill A

- 1.3.12 The Upper Nene Valley GP SPA lies approximately 11.5km to the southeast of Green Hill A at its closest point.
- 1.3.13 Four SSSIs, four LWSs and one WTR were located within the Study Area of Green Hill A and are listed in **Table 3** below.
- 1.3.14 The SSSIs were designated for their habitats, including open water, diverse pasture, and woodland. Rare plants and invertebrates are known to be present.
- 1.3.15 The LWSs are similarly designated for grassland and woodland habitats; with a diverse range of plants and invertebrates.
- 1.3.16 The WTR encapsulates part of the Pitsford Water SSSI, with the chief interest being the wintering and passage waders it supports.
- 1.3.17 These sites are considered to be of **National Importance** (SSSIs) and **County Importance** (LWSs/ WTRs).


Table 3: Designated Sites Within Study Area of Green Hill A

Site Name	Area (ha)	Description	Proximity
Pitsford Reservoir SSSI	413.06	Pitsford Reservoir SSSI and surrounding habitats host large numbers of birds associated with open water, both throughout winter and breeding seasons. Botanical habitats are also very diverse, with many county rarities recorded.	1.33km southwest
Badsaddle, Withmale Park and Bush Walk Woods SSSI	25.18	This is ancient coppice woodland with oak and ash on wet calcareous soils. Ground flora include herb paris, goldilocks buttercup and four species of orchid.	1.83km southeast
Birch Spinney and Mawsley Marsh SSSI	12.26	A rare type of ash-maple woodland partly on peat, with flora including blunt-flowered rush, jointed rush and water horsetail. There is also a stretch of a dismantled railway line.	2km north
Hardwick Lodge Meadow SSSI	10	This is a large area of diverse permanent pasture with an exceptionally rich and varied grassland flora that, in turn, supports uncommon invertebrates.	3.61km southeast
Walgrave East Meadow LWS	6.11	A grassy meadow with a good selection of meadow plants and two streams fringed with rush pasture. The site qualifies as a LWS with ten neutral grassland indicator species recorded (one rare).	0.55km southeast
Broughton Green Lane LWS	2.85	This site comprises a green lane, which forms a good wildlife corridor, with ancient woodland indicators and diverse range of invertebrates recorded.	0.65km northeast
Old Poors Gorse LWS	9.65	A roughly square woodland which covers just over 9.5 hectares.	0.81km north
Highcroft Farm Meadow LWS	1.44	A neglected meadow which, although predominately species poor having declined due to lacking appropriate management, hosts an excellent invertebrate assemblage with supporting habitats considered likely to improve through restoration.	1.04km east



Site Name	Area (ha)	Description	Proximity
Pitsford Water Wildlife Trust Reserve (WTR)	181.25	Forms part of Pitsford Reservoir SSSI. Four main streams enter the reserve and form large bays of shallow water across connected valleys. During winter these provide excellent feeding and sheltering areas for wildfowl, whereas lowered water levels in summer expose stretches of mud and foraging areas for migrating waders.	1.33km southwest

Table 4 Species Records Within Study Area (2km) of Green Hill A

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Great crested newt	<i>Triturus cristatus</i>	6	*	*	*	*		
Smooth newt	<i>Lissotriton vulgaris</i>	1						
Birds								
Barn owl	<i>Tyto alba</i>	4	*		*			
Black-headed gull	<i>Chroicocephalus ridibundus</i>	2	*	*			*	
Collared dove	<i>Streptopelia decaocto</i>	2		*				
Common tern	<i>Sterna hirundo</i>	1	*	*			*	
Dunnock	<i>Prunella modularis</i>	5	*				*	
Fieldfare	<i>Turdus pilaris</i>	1		*	*			*
Golden plover	<i>Pluvialis apricaria</i>	3	*	*				
Greenfinch	<i>Chloris chloris</i>	2	*					*
Grey wagtail	<i>Motacilla cinerea</i>	1	*				*	
Hobby	<i>Falco subbuteo</i>	1	*		*			
Hoopoe	<i>Upupa epops</i>	2	*		*			
House sparrow	<i>Passer domesticus</i>	2				*		*
Kestrel	<i>Falco tinnunculus</i>	1	*				*	
Lapwing	<i>Vanellus vanellus</i>	1	*	*		*		*
Mallard	<i>Anas platyrhynchos</i>	1	*	*			*	



Meadow pipit	<i>Anthus pratensis</i>	1	*				*	
Mistle thrush	<i>Turdus viscivorus</i>	1		*				*
Red kite	<i>Milvus milvus</i>	2	*	*	*			
Redstart	<i>Phoenicurus phoenicurus</i>	1	*				*	
Redwing	<i>Turdus iliacus</i>	3		*	*		*	
Rook	<i>Corvus frugilegus</i>	1		*			*	
Skylark	<i>Alauda arvensis</i>	2		*		*		*
Snipe	<i>Gallinago gallinago</i>	1	*	*			*	
Song thrush	<i>Turdus philomelos</i>	3		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	1	*				*	
Spotted flycatcher	<i>Muscicapa striata</i>	1	*			*		*
Starling	<i>Sturnus vulgaris</i>	3		*				*
Tree sparrow	<i>Passer montanus</i>	1				*		*
Wheatear	<i>Oenanthe oenanthe</i>	1	*				*	
Willow warbler	<i>Phylloscopus trochilus</i>	2					*	
Woodcock	<i>Scolopax rusticola</i>	1	*	*				*
Woodpigeon	<i>Columba palumbus</i>	9		*			*	
Wren	<i>Troglodytes troglodytes</i>	4	*				*	
Yellowhammer	<i>Emberiza citrinella</i>	8	*			*		*
Invertebrates								
August thorn	<i>Ennomos quercinaria</i>	1				*		
Beaded chestnut	<i>Agrochola lychnidis</i>	1				*		
Blood-vein	<i>Timandra comae</i>	2				*		
Brindled beauty	<i>Lycia hirtaria</i>	4				*		
Brown-spot Pinion	<i>Anchoscelis litura</i>	1						
Buff Ermine	<i>Spilosoma lutea</i>	15				*		
Centre-barred swallow	<i>Atethmia centrargo</i>	2				*		
Cinnabar	<i>Tyria jacobaeae</i>	1				*		
Dark-barred twin-spot carpet	<i>Xanthorhoe ferrugata</i>	1				*		
Dusky brocade	<i>Apamea remissa</i>	1				*		
Dusky thorn	<i>Ennomos fuscantaria</i>	1				*		
Ghost moth	<i>Hepialus humuli</i>	1				*		
<i>Gorytes laticinctus</i>	<i>Gorytes laticinctus</i>	1						
Laburnum Leaf Miner	<i>Leucoptera laburnella</i>	1						



Large nutmeg	<i>Apamea anceps</i>	3				*		
Large wainscot	<i>Rhizedra lutosa</i>	1				*		
<i>Merzomyia westermanni</i>	<i>Merzomyia westermanni</i>	1						
<i>Mintho rufiventris</i>	<i>Mintho rufiventris</i>	1						
Mottled rustic	<i>Caradrina morpheus</i>	1				*		
<i>Orellia falcata</i>	<i>Orellia falcata</i>	1						
Powdered quaker	<i>Orthosia gracilis</i>	6				*		
<i>Rhantus frontalis</i>	<i>Rhantus frontalis</i>	1						
Rosy Conch	<i>Cochylis roseana</i>	1						
Rosy rustic	<i>Hydraecia micacea</i>	1				*		
Shoulder-striped Wainscot	<i>Leucania comma</i>	1				*		
Small heath	<i>Coenonympha pamphilus</i>	19				*		
Small phoenix	<i>Ecliptopera silaceata</i>	2				*		
Small square-spot	<i>Diarsia rubi</i>	3				*		
The rustic	<i>Hoplodrina blanda</i>	2				*		
The spinach	<i>Eulithis mellinata</i>	1				*		
White ermine	<i>Spilosoma lubricipeda</i>	10				*		
Mammals								
Badger	<i>Meles meles</i>	12						
Brown hare	<i>Lepus europaeus</i>	2				*		
Hedgehog	<i>Erinaceus europaeus</i>	12				*		
Plants								
Bluebell	<i>Hyacinthoides non-scripta</i>	3				*		
Box	<i>Buxus sempervirens</i>	1						
Corn mint	<i>Mentha arvensis</i>	1						
Corn spurrey	<i>Spergula arvensis</i>	1						
Hoary plantain	<i>Plantago media</i>	1						
Ragged-Robin	<i>Silene flos-cuculi</i>	2						
Shrubby cinquefoil	<i>Potentilla fruticosa</i>	1						

Green Hill A.2

- 1.3.18 The majority of Green Hill A.2 lies outside of 10km from the Upper Nene Valley Gravel Pits SPA, with only a very small section of the southernmost field lying just within the 10km consultation zone.



- 1.3.19 Four SSSIs and four LWSs were located within the Study Area of Green Hill A.2 and are listed in **Table 5** below.
- 1.3.20 The SSSIs were designated for their habitats, including open water, diverse pasture, and woodland. Rare plants and invertebrates are known to be present.
- 1.3.21 The LWSs are similarly designated for grassland and woodland habitats; with a diverse range of plants and invertebrates.
- 1.3.22 These sites are considered to be of National Importance (SSSIs) and County Importance (LWSs).

Table 5: Designated Sites Within Study Area of Green Hill A.2

Site Name	Area (ha)	Description	Proximity
Badsaddle, Withmale Park and Bush Walk Woods SSSI	25.18	This is ancient coppice woodland with oak and ash on wet calcareous soils. Ground flora include herb paris, goldilocks buttercup and four species of orchid.	0.31km east
Hardwick Lodge Meadow SSSI	10	This is a large area of diverse permanent pasture with an exceptionally rich and varied grassland flora that, in turn, supports uncommon invertebrates.	2.1km southeast
Pitsford Reservoir SSSI	413.06	Pitsford Reservoir SSSI and surrounding habitats host large numbers of birds associated with open water, both throughout winter and breeding seasons. Botanical habitats are also very diverse, with many county rarities recorded.	2.54km southwest
Birch Spinney and Mawsley Marsh SSSI	12.26	A rare type of ash-maple woodland partly on peat, with flora including blunt-flowered rush, jointed rush and water horsetail. There is also a stretch of a dismantled railway line.	3.52km northwest
Walgrave East Meadow LWS	6.11	A grassy meadow with a good selection of meadow plants and two streams fringed with rush pasture. The site qualifies as a LWS with ten neutral grassland indicator species recorded (one rare).	0.14km southwest
Broughton Green Lane LWS	2.85	This site comprises a green lane, which forms a good wildlife corridor, with ancient woodland indicators and diverse range of invertebrates recorded.	0.44km north



Site Name	Area (ha)	Description	Proximity
Highcroft Farm Meadow LWS	1.44	A neglected meadow which, although predominately species poor having declined due to lacking appropriate management, hosts an excellent invertebrate assemblage with supporting habitats considered likely to improve through restoration.	0.48km north
Hardwick Wood LWS	39.93	An ancient woodland site that has been mainly replanted with a mixture of oak and spruce. This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS as 20 ancient woodland indicators (alongside 21 neutral grassland indicators) were recorded.	1.45km southeast

Table 6: Species Records Within Study Area (2km) of Green Hill A.2

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Great crested newt	<i>Triturus cristatus</i>	5	*	*	*	*		
Birds								
Barn owl	<i>Tyto alba</i>	2	*		*			
Bullfinch	<i>Pyrrhula pyrrhula</i>	2					*	
Collared dove	<i>Streptopelia decaocto</i>	1		*				
Common tern	<i>Sterna hirundo</i>	1	*	*			*	
Cuckoo	<i>Cuculus canorus</i>	1				*		*
Dunnock	<i>Prunella modularis</i>	2	*				*	
Fieldfare	<i>Turdus pilaris</i>	1		*	*			*
Golden plover	<i>Pluvialis apricaria</i>	2	*	*				
Grasshopper warbler	<i>Locustella naevia</i>	1				*		*
Greenfinch	<i>Chloris chloris</i>	2	*					*
Grey wagtail	<i>Motacilla cinerea</i>	1	*				*	
Hobby	<i>Falco subbuteo</i>	2	*		*			



Hoopoe	<i>Upupa epops</i>	2	*		*			
House sparrow	<i>Passer domesticus</i>	1				*		*
Kestrel	<i>Falco tinnunculus</i>	1	*				*	
Mallard	<i>Anas platyrhynchos</i>	1	*	*			*	
Marsh tit	<i>Poecile palustris</i>	1	*					*
Meadow pipit	<i>Anthus pratensis</i>	1	*				*	
Red kite	<i>Milvus milvus</i>	3	*	*	*			
Redstart	<i>Phoenicurus phoenicurus</i>	1	*				*	
Redwing	<i>Turdus iliacus</i>	2		*	*		*	
Rook	<i>Corvus frugilegus</i>	1		*			*	
Skylark	<i>Alauda arvensis</i>	1		*		*		*
Snipe	<i>Gallinago gallinago</i>	1	*	*			*	
Song thrush	<i>Turdus philomelos</i>	3		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	1	*				*	
Spotted flycatcher	<i>Muscicapa striata</i>	1	*			*		*
Starling	<i>Sturnus vulgaris</i>	3		*				*
Wheatear	<i>Oenanthe oenanthe</i>	1	*				*	
Willow warbler	<i>Phylloscopus trochilus</i>	1					*	
Woodcock	<i>Scolopax rusticola</i>	1	*	*				*
Woodpigeon	<i>Columba palumbus</i>	7		*			*	
Wren	<i>Troglodytes troglodytes</i>	2	*				*	
Yellowhammer	<i>Emberiza citrinella</i>	4	*			*		*
Invertebrates								
Brown-spot Pinion	<i>Anchoscelis litura</i>	1						
Centre-barred sallow	<i>Atethmia centrigo</i>	1				*		
Dusky thorn	<i>Ennomos fuscantaria</i>	1				*		
<i>Gorytes laticinctus</i>	<i>Gorytes laticinctus</i>	1						
Laburnum Leaf Miner	<i>Leucoptera laburnella</i>	1						
<i>Merzomyia westermanni</i>	<i>Merzomyia westermanni</i>	1						
<i>Mintho rufiventris</i>	<i>Mintho rufiventris</i>	1						
<i>Orellia falcata</i>	<i>Orellia falcata</i>	1						
Purple emperor	<i>Apatura iris</i>	1						
Rosy Conch	<i>Cochylis roseana</i>	1						



Small heath	<i>Coenonympha pamphilus</i>	2				*		
Toadflax brocade	<i>Calophasia lunula</i>	2						
Wood white	<i>Leptidea sinapis</i>	10				*		
Mammals								
Badger	<i>Meles meles</i>	12						
Brown hare	<i>Lepus europaeus</i>	1				*		
Hedgehog	<i>Erinaceus europaeus</i>	4				*		
Plants								
Bluebell	<i>Hyacinthoides non-scripta</i>	2			*			
Box	<i>Buxus sempervirens</i>	1						
Corn mint	<i>Mentha arvensis</i>	1						
Corn spurrey	<i>Spergula arvensis</i>	1						
Hoary plantain	<i>Plantago media</i>	1						
Ragged-Robin	<i>Silene flos-cuculi</i>	2						
Shrubby cinquefoil	<i>Potentilla fruticosa</i>	1						

Green Hill B

- 1.3.23 The Upper Nene Valley Gravel Pits SPA lies approximately 7.39km to the south of Green Hill B at its closest point.
- 1.3.24 Three SSSIs, three LNRs, two LWSs and one WTR were located within the search radii of Green Hill B and are listed in **Table 7** below.
- 1.3.25 The SSSIs were designated for their habitats, including open water, diverse pasture and woodland. Rare plants and invertebrates are known to be present.
- 1.3.26 The LNRs were designated for their grassland, hedgerow and woodland habitats. Lings Wood LNR supports breeding amphibians in the ponds.
- 1.3.27 The LWSs are designated for their woodland habitats.
- 1.3.28 The WTR encapsulates part of the Pitsford Water SSSI, with the chief interest being the wintering and passage waders it supports.
- 1.3.29 These sites are considered to be of **National Importance** (SSSIs) and **County Importance** (LNRs/ LWSs/ WTRs).


Table 7: Designated Sites Within Study Area of Green Hill B

Site Name	Area (ha)	Description	Proximity
Pitsford Reservoir SSSI	413.06	Pitsford Reservoir SSSI and surrounding habitats host large numbers of birds associated with open water, both throughout winter and breeding seasons. Botanical habitats are also very diverse, with many county rarities recorded.	0.64km northwest
Hardwick Lodge Meadow SSSI	10	This is a large area of diverse permanent pasture with an exceptionally rich and varied grassland flora that, in turn, supports uncommon invertebrates.	3.375km north
Badsaddle, Withmale Park and Bush Walk Woods SSSI	25.18	This is ancient coppice woodland with oak and ash on wet calcareous soils. Ground flora include herb paris, goldilocks buttercup and four species of orchid.	3.83km northeast
Crowfields Common LNR	8.73	Three fields, adjacent to the village of Moulton. The fields are currently rough grassland, with well-established hedgerows, a few mature trees and it contains a fine example of ridge and furrow farming and a wildflower meadow.	1.86km south
Lings Wood LNR	20.06	This site features plantation and naturally regenerating woodland, along with scrub, ponds and acid grassland. Amphibians such as frogs and newts are also known to breed within the site.	3.9km south
Scrub Field LNR	5.05	This site forms part of the Bradlaugh Fields Park complex, and contains fine examples of unimproved, semi-natural limestone grassland and fragments of ancient hedgerow.	4.64km southwest
Hog Hole Spinney LWS	4.8	A largely broadleaved woodland on sandy soil. Trees include ash and oak, with a dense scrub layer below. This is a significant site, being the largest woodland for several kilometres around	1.09km southwest
Cowpasture Spinney LWS	9.09	A long, narrow shelterbelt spinney with a stream running through the centre and associated emergent vegetation. The tree cover is very varied and the ground cover contains a number of ancient woodland indicator species.	1.38km southeast



Site Name	Area (ha)	Description	Proximity
Pitsford Water Wildlife Trust Reserve (WTR)	181.25	Forms part of Pitsford Reservoir SSSI. Four main streams enter the reserve and form large bays of shallow water across connected valleys. During winter these provide excellent feeding and sheltering areas for wildfowl, whereas lowered water levels in summer expose stretches of mud and foraging areas for migrating waders.	0.76km north

Table 8: Species Records Within Study Area (2km) of Green Hill B

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Common frog	<i>Rana temporaria</i>	1						
Common toad	<i>Bufo bufo</i>	1				*		
Great crested newt	<i>Triturus cristatus</i>	14	*	*	*	*		
Smooth newt	<i>Lissotriton vulgaris</i>	4						
Birds								
Arctic tern	<i>Sterna paradisaea</i>	63	*	*			*	
Avocet	<i>Recurvirostra avosetta</i>	6	*	*	*		*	
Barn owl	<i>Tyto alba</i>	40	*		*			
Barnacle goose	<i>Branta leucopsis</i>	50	*	*			*	
Bar-tailed godwit	<i>Limosa lapponica</i>	5	*	*			*	
Bewick's swan	<i>Cygnus columbianus</i>	20	*	*	*			*
Bittern	<i>Botaurus stellaris</i>	1	*	*	*	*	*	
Black redstart	<i>Phoenicurus ochruros</i>	1	*		*		*	
Black tern	<i>Chlidonias niger</i>	75	*	*	*			
Black-headed gull	<i>Chroicocephalus ridibundus</i>	156	*	*			*	
Black-necked grebe	<i>Podiceps nigricollis</i>	57	*		*		*	
Black-tailed godwit	<i>Limosa limosa</i>	107	*	*	*			*
Brambling	<i>Fringilla montifringilla</i>	127			*			



Brent goose	<i>Branta bernicla</i>	19	*	*			*	
Bullfinch	<i>Pyrrhula pyrrhula</i>	4					*	
Caspian gull	<i>Larus cachinnans</i>	117					*	
Cattle egret	<i>Bubulcus ibis</i>	20	*				*	
Cetti's warbler	<i>Cettia cetti</i>	23			*			
Collared dove	<i>Streptopelia decaocto</i>	2		*				
Common gull	<i>Larus canus</i>	80	*	*			*	
Common sandpiper	<i>Actitis hypoleucos</i>	409	*				*	
Common scoter	<i>Melanitta nigra</i>	32	*	*	*	*		*
Common tern	<i>Sterna hirundo</i>	116	*	*			*	
Coot	<i>Fulica atra</i>	148	*	*				
Cormorant	<i>Phalacrocorax carbo</i>	166	*					
Crossbill	<i>Loxia curvirostra</i>	36	*		*			
Cuckoo	<i>Cuculus canorus</i>	22				*		*
Curlew	<i>Numenius arquata</i>	53	*	*		*		*
Curlew sandpiper	<i>Calidris ferruginea</i>	2	*				*	
Dotterel	<i>Charadrius morinellus</i>	1	*	*	*			*
Dunlin	<i>Calidris alpina</i>	203	*					*
Dunnock	<i>Prunella modularis</i>	79	*				*	
Fieldfare	<i>Turdus pilaris</i>	40		*	*			*
Firecrest	<i>Regulus ignicapilla</i>	4	*		*			
Fulmar	<i>Fulmarus glacialis</i>	3					*	
Gadwall	<i>Mareca strepera</i>	99					*	
Garganey	<i>Spatula querquedula</i>	117					*	
Glaucous gull	<i>Larus hyperboreus</i>	4	*				*	
Golden plover	<i>Pluvialis apricaria</i>	58	*	*				
Goldeneye	<i>Bucephala clangula</i>	212	*	*	*			*
Grasshopper warbler	<i>Locustella naevia</i>	7				*		*
Great black-backed gull	<i>Larus marinus</i>	96	*	*			*	
Great crested grebe	<i>Podiceps cristatus</i>	161	*					
Great northern diver	<i>Gavia immer</i>	191	*	*	*		*	
Great white egret	<i>Ardea alba</i>	112	*				*	
Green sandpiper	<i>Tringa ochropus</i>	563	*		*		*	
Greenfinch	<i>Chloris chloris</i>	24	*					*



Greenshank	<i>Tringa nebularia</i>	150	*	*	*		*	
Grey heron	<i>Ardea cinerea</i>	87	*					
Grey partridge	<i>Perdix perdix</i>	4		*		*		*
Grey plover	<i>Pluvialis squatarola</i>	9	*	*			*	
Grey wagtail	<i>Motacilla cinerea</i>	251	*				*	
Greylag goose	<i>Anser anser</i>	115	*	*	*		*	
Hawfinch	<i>Coccothraustes coccothraustes</i>	5	*			*		*
Hen harrier	<i>Circus cyaneus</i>	1	*	*	*	*		*
Herring gull	<i>Larus argentatus</i>	29	*	*				*
Hobby	<i>Falco subbuteo</i>	146	*		*			
Honey-buzzard	<i>Pernis apivorus</i>	1	*	*	*		*	
House martin	<i>Delichon urbicum</i>	36	*					*
House sparrow	<i>Passer domesticus</i>	7				*		*
Iceland gull	<i>Larus glaucooides</i>	1	*				*	
Kestrel	<i>Falco tinnunculus</i>	21	*				*	
Kingfisher	<i>Alcedo atthis</i>	214	*	*	*			
Kittiwake	<i>Rissa tridactyla</i>	13	*					*
Knot	<i>Calidris canutus</i>	1	*	*			*	
Lapwing	<i>Vanellus vanellus</i>	109	*	*		*		*
Leach's Petrel	<i>Hydrobates leucorhous</i>	2						*
Lesser black-backed gull	<i>Larus fuscus</i>	87	*	*			*	
Lesser redpoll	<i>Acanthis cabaret</i>	145				*		
Lesser spotted woodpecker	<i>Dryobates minor</i>	6	*					*
Linnet	<i>Linaria cannabina</i>	27	*					*
Little egret	<i>Egretta garzetta</i>	447	*	*				
Little gull	<i>Hydrocoloeus minutus</i>	39	*	*	*			
Little ringed plover	<i>Charadrius dubius</i>	80	*		*			
Little tern	<i>Sternula albifrons</i>	2	*	*	*		*	
Long-tailed duck	<i>Clangula hyemalis</i>	4	*	*	*			*
Mallard	<i>Anas platyrhynchos</i>	154	*	*			*	
Marsh harrier	<i>Circus aeruginosus</i>	62	*	*	*		*	
Marsh tit	<i>Poecile palustris</i>	119	*					*
Meadow pipit	<i>Anthus pratensis</i>	41	*				*	



Mediterranean gull	<i>Ichthyaetus melanocephalus</i>	144	*	*	*		*	
Merlin	<i>Falco columbarius</i>	16	*	*	*			*
Mistle thrush	<i>Turdus viscivorus</i>	9		*				*
Moorhen	<i>Gallinula chloropus</i>	140	*	*			*	
Osprey	<i>Pandion haliaetus</i>	204	*	*	*		*	
Oystercatcher	<i>Haematopus ostralegus</i>	233	*	*			*	
Peregrine	<i>Falco peregrinus</i>	103	*	*	*			
Pied flycatcher	<i>Ficedula hypoleuca</i>	2	*				*	
Pink-footed goose	<i>Anser brachyrhynchus</i>	17	*	*			*	
Pintail	<i>Anas acuta</i>	359	*	*	*		*	
Pochard	<i>Aythya ferina</i>	116	*	*				*
Red kite	<i>Milvus milvus</i>	76	*	*	*			
Red-breasted flycatcher	<i>Ficedula parva</i>	1		*				
Red-breasted merganser	<i>Mergus serrator</i>	3	*	*			*	
Red-necked grebe	<i>Podiceps grisegena</i>	61	*					*
Redshank	<i>Tringa totanus</i>	294	*	*			*	
Redstart	<i>Phoenicurus phoenicurus</i>	48	*				*	
Redwing	<i>Turdus iliacus</i>	49		*	*		*	
Reed bunting	<i>Emberiza schoeniclus</i>	39	*			*	*	
Ring ouzel	<i>Turdus torquatus</i>	1	*			*		*
Ringed plover	<i>Charadrius hiaticula</i>	137	*					*
Rook	<i>Corvus frugilegus</i>	28		*			*	
Ruddy shelduck	<i>Tadorna ferruginea</i>	234	*	*				
Ruff	<i>Calidris pugnax</i>	145	*	*	*			*
Sanderling	<i>Calidris alba</i>	22	*				*	
Sandwich tern	<i>Thalasseus sandvicensis</i>	4	*	*			*	
Scaup	<i>Aythya marila</i>	145	*	*	*	*		*
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	17					*	
Shag	<i>Gulosus aristotelis</i>	41						*
Shelduck	<i>Tadorna tadorna</i>	109	*				*	
Short-eared owl	<i>Asio flammeus</i>	10	*	*			*	
Shoveler	<i>Spatula clypeata</i>	52	*	*			*	
Skylark	<i>Alauda arvensis</i>	29		*		*		*



Slavonian grebe	<i>Podiceps auritus</i>	111	*	*	*			*
Smew	<i>Mergellus albellus</i>	144	*	*				*
Snipe	<i>Gallinago gallinago</i>	320	*	*			*	
Snow bunting	<i>Plectrophenax nivalis</i>	2	*		*		*	
Song thrush	<i>Turdus philomelos</i>	20		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	14	*				*	
Spotted flycatcher	<i>Muscicapa striata</i>	71	*			*		*
Spotted redshank	<i>Tringa erythropus</i>	18	*	*			*	
Starling	<i>Sturnus vulgaris</i>	52		*				*
Stock dove	<i>Columba oenas</i>	24		*			*	
Swift	<i>Apus apus</i>	39						*
Tawny owl	<i>Strix aluco</i>	26	*				*	
Teal	<i>Anas crecca</i>	96	*	*			*	
Temminck's stint	<i>Calidris temminckii</i>	2	*		*			
Tree pipit	<i>Anthus trivialis</i>	13	*			*		*
Tree sparrow	<i>Passer montanus</i>	119				*		*
Turnstone	<i>Arenaria interpres</i>	22	*				*	
Water pipit	<i>Anthus spinoletta</i>	9	*				*	
Wheatear	<i>Oenanthe oenanthe</i>	63	*				*	
Whimbrel	<i>Numenius phaeopus</i>	29	*	*	*			*
Whinchat	<i>Saxicola rubetra</i>	33	*					*
White-fronted goose	<i>Anser albifrons</i>	60	*	*				*
White-tailed eagle	<i>Haliaeetus albicilla</i>	1	*	*	*		*	
Whitethroat	<i>Curruca communis</i>	22					*	
Whooper swan	<i>Cygnus cygnus</i>	77	*	*	*		*	
Wigeon	<i>Mareca penelope</i>	135	*	*			*	
Willow tit	<i>Poecile montanus</i>	108	*					*
Willow warbler	<i>Phylloscopus trochilus</i>	30					*	
Wood sandpiper	<i>Tringa glareola</i>	73	*	*	*		*	
Wood warbler	<i>Phylloscopus sibilatrix</i>	5				*		*
Woodcock	<i>Scolopax rusticola</i>	46	*	*				*
Woodlark	<i>Lullula arborea</i>	2		*	*	*		
Woodpigeon	<i>Columba palumbus</i>	128		*			*	
Wren	<i>Troglodytes troglodytes</i>	79	*				*	



Yellow wagtail	<i>Motacilla flava</i>	123	*					*
Yellowhammer	<i>Emberiza citrinella</i>	41	*			*		*
Yellow-legged gull	<i>Larus michahellis</i>	822					*	
Invertebrates								
August thorn	<i>Ennomos quercinaria</i>	9				*		
Autumnal Moth	<i>Epirrita autumnata</i>	2						
Beaded chestnut	<i>Agrochola lychnidis</i>	794				*		
Beautiful Knot-horn	<i>Rhodophaea formosa</i>	2						
Birch Mocha	<i>Cyclophora albipunctata</i>	3						
Blood-vein	<i>Timandra comae</i>	404				*		
Blotched Marble	<i>Endothenia quadrimaculana</i>	5						
Blotched Piercer	<i>Pammene albuginana</i>	1						
Bright Four-spined Legionnaire	<i>Chorisops nagatomii</i>	1						
Brindled beauty	<i>Lycia hirtaria</i>	66				*		
Brindled Shoot	<i>Gypsonoma minutana</i>	1						
Broom Moth	<i>Ceramica pisi</i>	9				*		
Brown Ash Ermel	<i>Zelleria hepariella</i>	1						
Brown Pine Knot-horn	<i>Dioryctria simplicella</i>	1						
Brown-spot Pinion	<i>Anchoscelis litura</i>	181						
Brown-veined Wainscot	<i>Archanara dissoluta</i>	9						
Buff Ermine	<i>Spilosoma lutea</i>	870				*		
Buff Rush Case-bearer	<i>Coleophora caespitiella</i>	1						
Bulrush Veneer	<i>Calamotropha paludella</i>	5						
Centre-barred sallow	<i>Atethmia centrago</i>	369				*		
<i>Cercyon bifeneustratus</i>	<i>Cercyon bifeneustratus</i>	2						
Chalk Knot-horn	<i>Phycitodes maritima</i>	1						
Cinnabar	<i>Tyria jacobaeae</i>	360				*		
Clouded Magpie	<i>Abraxas sylvata</i>	5						
Cream-bordered Green Pea	<i>Earias clorana</i>	162						
Crescent	<i>Helotropha leucostigma leucostigma</i>	148						
Crescent	<i>Helotropha leucostigma</i>	41				*		



<i>Cymatophorina diluta diluta</i>	<i>Cymatophorina diluta diluta</i>	1						
Dark Brocade	<i>Mniotype adusta</i>	1				*		
Dark-barred twin-spot carpet	<i>Xanthorhoe ferrugata</i>	83				*		
<i>Dasytes plumbeus</i>	<i>Dasytes plumbeus</i>	1						
Deep-brown dart	<i>Aporophyla lutulenta</i>	97				*		
<i>Dicranomyia chorea</i>	<i>Dicranomyia chorea</i>	1						
Dingy Spruce Bell	<i>Epinotia pygmaeana</i>	1						
Dot moth	<i>Melanchra persicariae</i>	197				*		
Dotted Chestnut	<i>Conistra rubiginea</i>	20						
Dotted Ermel	<i>Ethmia dodecea</i>	1						
Double dart	<i>Graphiphora augur</i>	1				*		
Dover Shade	<i>Cnephasia genitalana</i>	1						
Drab Wood-soldierfly	<i>Solva marginata</i>	1						
Dusky brocade	<i>Apamea remissa</i>	55				*		
Dusky thorn	<i>Ennomos fuscantaria</i>	317				*		
Dusky-lemon Sallow	<i>Cirrhia gilvago</i>	4				*		
Dusty Apple Pigmy	<i>Bohemannia pulverosella</i>	1						
Ear moth	<i>Amphipoea oculea</i>	18				*		
<i>Enochrus quadripunctatus</i>	<i>Enochrus quadripunctatus</i>	3						
<i>Erioptera nielsenii</i>	<i>Erioptera nielsenii</i>	1						
<i>Eudorylas arcanus</i>	<i>Eudorylas arcanus</i>	1						
Feathered gothic	<i>Tholera decimalis</i>	76				*		
Figure of eight	<i>Diloba caeruleocephala</i>	1				*		
Forest Case-bearer	<i>Coleophora ibipennella</i>	1						
Four-spotted Footman	<i>Lithosia quadra</i>	1						
Galium carpet	<i>Epirrhoe galiata</i>	4				*		
Garden dart	<i>Euxoa nigricans</i>	5				*		
Garden tiger	<i>Arctia caja</i>	77				*		
Ghost moth	<i>Hepialus humuli</i>	251				*		
<i>Gnophomyia viridipennis</i>	<i>Gnophomyia viridipennis</i>	4						
Gold Pine Ermel	<i>Cedestis gysseleniella</i>	1						
Grass Rivulet	<i>Perizoma albulata albulata</i>	2				*		



Grass Rivulet	<i>Perizoma albulata</i>	1						
Great Brocade	<i>Eurois occulta</i>	6						
Green-brindled crescent	<i>Allophyes oxyacanthae</i>	371				*		
Grey Birch	<i>Aethalura punctulata</i>	1						
Grey Chi	<i>Antitype chi</i>	1						
Grey dagger	<i>Acronicta psi</i>	128				*		
Grey-streaked Smudge	<i>Plutella porrectella</i>	1						
Hedge Case-bearer	<i>Coleophora striatipennella</i>	1						
Hedge rustic	<i>Tholera cespitis</i>	1				*		
<i>Helius pallirostris</i>	<i>Helius pallirostris</i>	1						
<i>Helophorus dorsalis</i>	<i>Helophorus dorsalis</i>	1						
<i>Helophorus nanus</i>	<i>Helophorus nanus</i>	6						
<i>Helophorus strigifrons</i>	<i>Helophorus strigifrons</i>	38						
<i>Homoneura interstincta</i>	<i>Homoneura interstincta</i>	1						
Hornet Moth	<i>Sesia apiformis</i>	3						
<i>Hydrochus elongatus</i>	<i>Hydrochus elongatus</i>	21						
Juniper Carpet	<i>Thera juniperata juniperata</i>	18						
Kentish Cosmet	<i>Mompha sturnipennella</i>	2						
Knot grass	<i>Acronicta rumicis</i>	109				*		
L-album Wainscot	<i>Mythimna l-album</i>	2						
Larch Case-bearer	<i>Coleophora laricella</i>	2						
Larch Piercer	<i>Cydia illutana</i>	3						
Larch Twist	<i>Ptycholomoides aeriferana</i>	8						
Large Beech Piercer	<i>Cydia fagiglandana</i>	2						
Large nutmeg	<i>Apamea anceps</i>	476				*		
Large wainscot	<i>Rhizedra lutosa</i>	139				*		
Lathbury's Nomad Bee	<i>Nomada lathburiana</i>	1						
Latticed heath	<i>Chiasmia clathrata</i>	1				*		
Lemon Bell	<i>Thiodia citrana</i>	1						
<i>Leopoldius signatus</i>	<i>Leopoldius signatus</i>	1						
Light Grey Tortrix	<i>Cnephasia incertana</i>	2						
Little Beech Piercer	<i>Strophedra weirana</i>	1						
<i>Macrocera longibrachiata</i>	<i>Macrocera longibrachiata</i>	1						
Marsh Pug	<i>Eupithecia pygmaeata</i>	2						



Mere Wainscot	<i>Photedes fluxa</i>	7						
<i>Microvelia (Microvelia) pygmaea</i>	<i>Microvelia (Microvelia) pygmaea</i>	1						
Minor shoulder-knot	<i>Brachylomia viminalis</i>	9				*		
Mottled Marble	<i>Bactra furfurana</i>	2						
Mottled rustic	<i>Caradrina morpheus</i>	589				*		
Mouse moth	<i>Amphipyra tragopoginis</i>	281				*		
Mouse-ear Groundling	<i>Caryocolum fraternella</i>	1						
<i>Nicrophorus interruptus</i>	<i>Nicrophorus interruptus</i>	1						
<i>Norellia spinipes</i>	<i>Norellia spinipes</i>	1						
Northern Winter Moth	<i>Operophtera fagata</i>	1						
Oak hook-tip	<i>Watsonalla binaria</i>	23				*		
Obscure Wainscot	<i>Leucania obsoleta</i>	2						
Orange Footman	<i>Eilema sororcula</i>	133						
Orange-tailed Clearwing	<i>Synanthedon andrenaeformis</i>	2						
Pale eggar	<i>Trichiura crataegi</i>	25				*		
Pale Lettuce Bell	<i>Eucosma conterminana</i>	1						
Pale Orache Case-bearer	<i>Coleophora versurella</i>	1						
<i>Pilaria fuscipennis</i>	<i>Pilaria fuscipennis</i>	2						
<i>Pilaria scutellata</i>	<i>Pilaria scutellata</i>	1						
Pimpinel Pug	<i>Eupithecia pimpinellata</i>	2						
Pine Groundling	<i>Exoteleia dodecella</i>	2						
Pine-bark Piercer	<i>Cydia coniferana</i>	2						
Powdered Grass-veneer	<i>Thisanotia chrysonuchella</i>	1						
Powdered quaker	<i>Orthosia gracilis</i>	485				*		
Red Birch Slender	<i>Caloptilia betulicola</i>	1						
Red-clover Case-bearer	<i>Coleophora deauratella</i>	1						
Reddish Light Arches	<i>Apamea sublustis</i>	1						
Red-necked Footman	<i>Atolmis rubricollis</i>	11						
Red-tipped Clearwing	<i>Synanthedon formicaeformis</i>	2						
<i>Rhantus frontalis</i>	<i>Rhantus frontalis</i>	38						
Rose Tortrix	<i>Archips rosana</i>	1						
Rosy Minor	<i>Litoligia literosa</i>	16				*		



Rosy rustic	<i>Hydraecia micacea</i>	121 7				*		
<i>Saldula pallipes</i>	<i>Saldula pallipes</i>	1						
Sallow	<i>Cirrhia icteritia</i>	742				*		
Scarce Tissue	<i>Rheumaptera cervinalis</i>	1						
September thorn	<i>Ennomos erosaria</i>	1				*		
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	30				*		
Shoulder-striped Wainscot	<i>Leucania comma</i>	513				*		
Sloe Pug	<i>Pasiphila chloerata</i>	1						
Small emerald	<i>Hemistola chrysoprasaria</i>	2				*		
Small heath	<i>Coenonympha pamphilus</i>	8				*		
Small phoenix	<i>Ecliptopera silaceata</i>	272				*		
Small square-spot	<i>Diarsia rubi</i>	154 9				*		
Small Twitcher	<i>Prochoreutis myllerana</i>	1						
Spruce Bud Moth	<i>Zeiraphera ratzeburgiana</i>	1						
Strawberry Bright	<i>Incurvaria praelatella</i>	1						
<i>Subclytia rotundiventris</i>	<i>Subclytia rotundiventris</i>	1						
Swollen-thighed Blood Bee	<i>Sphecodes crassus</i>	1						
<i>Tachypeza fuscipennis</i>	<i>Tachypeza fuscipennis</i>	1						
The lackey	<i>Malacosoma neustria</i>	5				*		
The rustic	<i>Hoplodrina blanda</i>	428				*		
The spinach	<i>Eulithis mellinata</i>	6				*		
The sprawler	<i>Asteroscopus sphinx</i>	343				*		
The streak	<i>Chesias legatella</i>	6				*		
Valerian Pug	<i>Eupithecia valerianata</i>	1						
Water-plantain Conch	<i>Gynnidomorpha alismana</i>	1						
Waved Black	<i>Parascotia fuliginaria</i>	4						
Webb's Wainscot	<i>Globia sparganii</i>	12						
White Birch Case-bearer	<i>Coleophora betulella</i>	1						
White ermine	<i>Spilosoma lubricipeda</i>	104 4				*		
White letter hairstreak	<i>Satyrium w-album</i>	1				*		



White-legged Case-bearer	<i>Coleophora albitarsella</i>	2						
White-line dart	<i>Euxoa tritici</i>	2				*		
Willow Marble	<i>Apotomis lineana</i>	1						
Mammals								
Badger	<i>Meles meles</i>	64						
Brown hare	<i>Lepus europaeus</i>	3				*		
Hedgehog	<i>Erinaceus europaeus</i>	4				*		
Otter	<i>Lutra lutra</i>	2	*	*	*	*		
Polecat	<i>Mustela putorius</i>	1				*		
Plants								
Corn marigold	<i>Glebionis segetum</i>	1						
Mudwort	<i>Limosella aquatica</i>	1						
Navelwort	<i>Umbilicus rupestris</i>	1						
Stinking chamomile	<i>Anthemis cotula</i>	1						
Reptiles								
Grass snake	<i>Natrix helvetica</i>	1			*	*		

Green Hill C

- 1.3.30 The Upper Nene Valley Gravel Pits SPA lies approximately 5.83km to the southeast of Green Hill C at its closest point.
- 1.3.31 Three SSSIs, three LNRs and five LWSs were located within the search radii of Green Hill C and are listed in **Table 9** below.
- 1.3.32 The SSSIs were designated for their habitats, including open water, diverse pasture and woodland. Rare plants and invertebrates are known to be present.
- 1.3.33 The LNRs were designated for their woodland and grassland habitats. Lings Wood LNR supports breeding amphibians in the ponds.
- 1.3.34 The LWSs were designated chiefly for their woodland habitats. Sywell Reservoir and Country Park LWS also contains diverse grassland and swamp, whereas Hardwick Road Verge LWS comprises diverse grassland.
- 1.3.35 These sites are considered to be of **National Importance** (SSSIs) and **County Importance** (LNRs/ LWSs).


Table 9: Designated Sites Within Study Area of Green Hill C

Site Name	Area (ha)	Description	Proximity
Hardwick Lodge Meadow SSSI	10	This is a large area of diverse permanent pasture with an exceptionally rich and varied grassland flora that, in turn, supports uncommon invertebrates.	1.33km north
Badsaddle, Withmale Park and Bush Walk Woods SSSI	25.18	This is ancient coppice woodland with oak and ash on wet calcareous soils. Ground flora include herb paris, goldilocks buttercup and four species of orchid.	2.76km north
Pitsford Reservoir SSSI	413.06	Pitsford Reservoir SSSI and surrounding habitats host large numbers of birds associated with open water, both throughout winter and breeding seasons. Botanical habitats are also very diverse, with many county rarities recorded.	3.69km northwest
Glamis Meadow and Wood LNR	9.47	A stream runs through this site, which also features woodland and grassland.	4.06km east
Crowfields Common LNR	8.73	Three fields, adjacent to the village of Moulton. The fields are currently rough grassland, with well-established hedgerows, a few mature trees and it contains a fine example of ridge and furrow farming and a wildflower meadow.	4.52km southwest
Lings Wood LNR	20.06	This site features plantation and naturally regenerating woodland, along with scrub, ponds and acid grassland. Amphibians such as frogs and newts are also known to breed within the site.	4.67km southwest
Hardwick Wood LWS	39.93	An ancient woodland site that has been mainly replanted with a mixture of oak and spruce. This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS as 20 ancient woodland indicators (alongside 21 neutral grassland indicators) were recorded.	1.55km north



Site Name	Area (ha)	Description	Proximity
Sywell Reservoir and Country Park LWS	48	A country park consisting of a reservoir and a good mosaic of other habitats including neutral grassland, scrub woodland and swamp edge. This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS with 12 fen/swamp/marsh indicators and 13 neutral grassland indicators recorded.	1.84km south
Hardwick Road Verge LWS	0.19	Two sections of verge to the north and south of Hardwick Road. With nine neutral grassland indicators on the southern section (including three strong) and eight on the northern section (including three strong) these verges qualify as a Protected Wildflower Verge (PWV) and a LWS.	1.87km northeast
Vivians Covert LWS	4.64	This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS with seven ancient woodland indicators recorded and opportunity to improve.	1.88km east
Cowpasture Spinney LWS	9.09	A long, narrow shelterbelt spinney with a stream running through the centre and associated emergent vegetation. The tree cover is very varied and the ground cover contains a number of ancient woodland indicator species.	1.95km southwest

Table 10: Species Records Within Study Area (2km) of Green Hill C

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Great crested newt	<i>Triturus cristatus</i>	4	*	*	*	*		
Smooth newt	<i>Lissotriton vulgaris</i>	3						
Birds								
Black-headed gull	<i>Chroicocephalus ridibundus</i>	4	*	*			*	
Bullfinch	<i>Pyrrhula pyrrhula</i>	2					*	
Cuckoo	<i>Cuculus canorus</i>	1				*		*
Grasshopper warbler	<i>Locustella naevia</i>	1				*		*



Grey wagtail	<i>Motacilla cinerea</i>	1	*				*	
Hobby	<i>Falco subbuteo</i>	3	*		*			
Kestrel	<i>Falco tinnunculus</i>	3	*				*	
Lapwing	<i>Vanellus vanellus</i>	1	*	*		*		*
Lesser spotted woodpecker	<i>Dryobates minor</i>	1	*					*
Linnet	<i>Linaria cannabina</i>	1	*					*
Osprey	<i>Pandion haliaetus</i>	2	*	*	*		*	
Quail	<i>Coturnix coturnix</i>	1		*	*		*	
Red kite	<i>Milvus milvus</i>	4	*	*	*			
Rook	<i>Corvus frugilegus</i>	1		*			*	
Skylark	<i>Alauda arvensis</i>	1		*		*		*
Starling	<i>Sturnus vulgaris</i>	1		*				*
Wheatear	<i>Oenanthe oenanthe</i>	1	*				*	
Woodpigeon	<i>Columba palumbus</i>	5		*			*	
Invertebrates								
Chalk Hill Blue	<i>Polyommatus coridon</i>	1						
Cinnabar	<i>Tyria jacobaeae</i>	1				*		
Dotted Bee-fly	<i>Bombylius discolor</i>	1						
Great Brocade	<i>Eurois occulta</i>	1						
Purple emperor	<i>Apatura iris</i>	4						
Small heath	<i>Coenonympha pamphilus</i>	13				*		
Webb's Wainscot	<i>Globia sparganii</i>	1						
Wood white	<i>Leptidea sinapis</i>	85				*		
Mammals								
Badger	<i>Meles meles</i>	9						
Brown hare	<i>Lepus europaeus</i>	1				*		
Hedgehog	<i>Erinaceus europaeus</i>	2				*		
Otter	<i>Lutra lutra</i>	2	*	*	*	*		
Water vole	<i>Arvicola amphibius</i>	2			*	*		
Plants								
Bird's-nest orchid	<i>Neottia nidus-avis</i>	2						
<i>Dactylorhiza maculata</i> subsp. <i>ericetorum</i>	<i>Dactylorhiza maculata</i> subsp. <i>ericetorum</i>	1						
Field scabious	<i>Knautia arvensis</i>	2						



Hoary plantain	<i>Plantago media</i>	1							
Quaking-grass	<i>Briza media</i>	1							
Ragged-Robin	<i>Silene flos-cuculi</i>	1							
Tormentil	<i>Potentilla erecta</i>	1							
Reptiles									
Grass snake	<i>Natrix helvetica</i>	1				*	*		

Green Hill D

- 1.3.36 The Upper Nene Valley Gravel Pits SPA lies approximately 4.91km to the southeast of Green Hill D at its closest point. The Upper Nene Valley Gravel Pits SSSI is an overlapping designation with the SPA and lies the same distance away from Green Hill D at its closest point.
- 1.3.37 In total, four SSSIs, two LNRs and four LWSs were located within the search radii of Green Hill D and are listed in **Table 11** below.
- 1.3.38 The SSSIs were designated for their habitats, including open water, diverse pasture and woodland. Two SSSIs support large numbers of breeding/ wintering birds. Rare plants and invertebrates are also known to be present.
- 1.3.39 The LNRs were designated for their woodland and grassland habitats. Lings Wood LNR supports breeding amphibians in the ponds.
- 1.3.40 The LWSs were designated for a range of habitats.
- 1.3.41 These sites are considered to be of **National Importance** (SSSIs) and **County Importance** (LNRs/ LWSs).

Table 11: Designated Sites Within Study Area of Green Hill D

Site Name	Area (ha)	Description	Proximity
Hardwick Lodge Meadow SSSI	10	This is a large area of diverse permanent pasture with an exceptionally rich and varied grassland flora that, in turn, supports uncommon invertebrates.	1.72km northwest
Badsaddle, Withmale Park and Bush Walk Woods SSSI	25.18	This is ancient coppice woodland with oak and ash on wet calcareous soils. Ground flora include herb paris, goldilocks buttercup and four species of orchid.	3.12km north



Site Name	Area (ha)	Description	Proximity
Upper Nene Valley Gravel Pits SSSI	1,832	This SSSI is a nationally important site for its breeding bird assemblage of lowland open waters and their margins, wintering waterbird species, an assemblage of over 20,000 waterbirds in the non-breeding season and a rare example of wet floodplain woodland.	4.91km southeast
Pitsford Reservoir SSSI	413.06	Pitsford Reservoir SSSI and surrounding habitats host large numbers of birds associated with open water, both throughout winter and breeding seasons. Botanical habitats are also very diverse, with many county rarities recorded.	5km west
Glamis Meadow and Wood LNR	9.47	A stream runs through this site, which also features woodland and grassland.	3.52km east
Lings Wood LNR	20.06	This site features plantation and naturally regenerating woodland, along with scrub, ponds and acid grassland. Amphibians such as frogs and newts are also known to breed within the site.	4.46km southwest
Sywell Reservoir and Country Park LWS	48	A country park consisting of a reservoir and a good mosaic of other habitats including neutral grassland, scrub woodland and swamp edge. This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS with 12 fen/swamp/marsh indicators and 13 neutral grassland indicators recorded.	1.14km southwest
Vivians Covert LWS	4.64	This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS with seven ancient woodland indicators recorded and opportunity to improve.	1.41km east
Hardwick Road Verge LWS	0.19	Two sections of verge to the north and south of Hardwick Road. With nine neutral grassland indicators on the southern section (including three strong) and eight on the northern section (including three strong) these verges qualify as a Protected Wildflower Verge (PWV) and a LWS.	1.69km northeast
Park Farm Industrial Estate LWS	7.41	Park Farm Industrial Estate contains a matrix of grassland, scrub and woodland. The site does not meet the neutral grassland criteria with only seven species recorded. However, with management it is possible it could recover hence it is retained as LWS.	1.7km east


Table 12: Species Records Within Study Area (2km) of Green Hill D

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Great crested newt	<i>Triturus cristatus</i>	3	*	*	*	*		
Smooth newt	<i>Lissotriton vulgaris</i>	3						
Birds								
Arctic tern	<i>Sterna paradisaea</i>	2	*	*			*	
Barn owl	<i>Tyto alba</i>	1	*		*			
Barnacle goose	<i>Branta leucopsis</i>	1	*	*			*	
Bittern	<i>Botaurus stellaris</i>	2	*	*	*	*	*	
Black-headed gull	<i>Chroicocephalus ridibundus</i>	30	*	*			*	
Black-necked grebe	<i>Podiceps nigricollis</i>	1	*		*		*	
Brambling	<i>Fringilla montifringilla</i>	4			*			
Bullfinch	<i>Pyrrhula pyrrhula</i>	2					*	
Cetti's warbler	<i>Cettia cetti</i>	31			*			
Collared dove	<i>Streptopelia decaocto</i>	1		*				
Common gull	<i>Larus canus</i>	15	*	*			*	
Common redpoll	<i>Acanthis flammea</i>	1	*					*
Common sandpiper	<i>Actitis hypoleucos</i>	20	*				*	
Common tern	<i>Sterna hirundo</i>	27	*	*			*	
Coot	<i>Fulica atra</i>	33	*	*				
Cormorant	<i>Phalacrocorax carbo</i>	25	*					
Crossbill	<i>Loxia curvirostra</i>	2	*		*			
Cuckoo	<i>Cuculus canorus</i>	4				*		*
Curlew	<i>Numenius arquata</i>	1	*	*		*		*
Dipper	<i>Cinclus cinclus</i>	9	*				*	
Dunnock	<i>Prunella modularis</i>	9	*				*	
Fieldfare	<i>Turdus pilaris</i>	3		*	*			*
Gadwall	<i>Mareca strepera</i>	17					*	
Golden plover	<i>Pluvialis apricaria</i>	26	*	*				



Goldeneye	<i>Bucephala clangula</i>	10	*	*	*			*
Grasshopper warbler	<i>Locustella naevia</i>	6				*		*
Great crested grebe	<i>Podiceps cristatus</i>	39	*					
Great skua	<i>Stercorarius skua</i>	1	*				*	
Green sandpiper	<i>Tringa ochropus</i>	4	*		*		*	
Greenfinch	<i>Chloris chloris</i>	1	*					*
Greenshank	<i>Tringa nebularia</i>	2	*	*	*		*	
Grey heron	<i>Ardea cinerea</i>	6	*					
Grey wagtail	<i>Motacilla cinerea</i>	64	*				*	
Greylag goose	<i>Anser anser</i>	28	*	*	*		*	
Hawfinch	<i>Coccothraustes coccothraustes</i>	1	*			*		*
Herring gull	<i>Larus argentatus</i>	4	*	*				*
Hobby	<i>Falco subbuteo</i>	7	*		*			
House martin	<i>Delichon urbicum</i>	1	*					*
House sparrow	<i>Passer domesticus</i>	2				*		*
Kestrel	<i>Falco tinnunculus</i>	5	*				*	
Kingfisher	<i>Alcedo atthis</i>	13	*	*	*			
Lapwing	<i>Vanellus vanellus</i>	16	*	*		*		*
Lesser black-backed gull	<i>Larus fuscus</i>	4	*	*			*	
Lesser redpoll	<i>Acanthis cabaret</i>	35				*		
Lesser spotted woodpecker	<i>Dryobates minor</i>	1	*					*
Linnet	<i>Linaria cannabina</i>	2	*					*
Little egret	<i>Egretta garzetta</i>	8	*	*				
Little gull	<i>Hydrocoloeus minutus</i>	3	*	*	*			
Little ringed plover	<i>Charadrius dubius</i>	2	*		*			
Mallard	<i>Anas platyrhynchos</i>	31	*	*			*	
Marsh tit	<i>Poecile palustris</i>	10	*					*
Meadow pipit	<i>Anthus pratensis</i>	2	*				*	
Mistle thrush	<i>Turdus viscivorus</i>	1		*				*
Moorhen	<i>Gallinula chloropus</i>	22	*	*			*	
Osprey	<i>Pandion haliaetus</i>	4	*	*	*		*	
Oystercatcher	<i>Haematopus ostralegus</i>	2	*	*			*	



Peregrine	<i>Falco peregrinus</i>	1	*	*	*			
Pink-footed goose	<i>Anser brachyrhynchus</i>	1	*	*			*	
Pochard	<i>Aythya ferina</i>	21	*	*				*
Quail	<i>Coturnix coturnix</i>	1		*	*		*	
Red kite	<i>Milvus milvus</i>	7	*	*	*			
Redshank	<i>Tringa totanus</i>	2	*	*			*	
Redstart	<i>Phoenicurus phoenicurus</i>	4	*				*	
Redwing	<i>Turdus iliacus</i>	2		*	*		*	
Reed bunting	<i>Emberiza schoeniclus</i>	4	*			*	*	
Rook	<i>Corvus frugilegus</i>	3		*			*	
Scaup	<i>Aythya marila</i>	33	*	*	*	*		*
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	3					*	
Shelduck	<i>Tadorna tadorna</i>	1	*				*	
Shoveler	<i>Spatula clypeata</i>	2	*	*			*	
Skylark	<i>Alauda arvensis</i>	5		*		*		*
Smew	<i>Mergellus albellus</i>	10	*	*				*
Snipe	<i>Gallinago gallinago</i>	10	*	*			*	
Song thrush	<i>Turdus philomelos</i>	6		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	1	*				*	
Spotted flycatcher	<i>Muscicapa striata</i>	5	*			*		*
Spotted redshank	<i>Tringa erythropus</i>	1	*	*			*	
Starling	<i>Sturnus vulgaris</i>	4		*				*
Swift	<i>Apus apus</i>	1						*
Tawny owl	<i>Strix aluco</i>	3	*				*	
Teal	<i>Anas crecca</i>	13	*	*			*	
Wheatear	<i>Oenanthe oenanthe</i>	2	*				*	
Whinchat	<i>Saxicola rubetra</i>	20	*					*
White-fronted goose	<i>Anser albifrons</i>	12	*	*				*
Whitethroat	<i>Curruca communis</i>	1					*	
Whooper swan	<i>Cygnus cygnus</i>	36	*	*	*		*	
Wigeon	<i>Mareca penelope</i>	17	*	*			*	
Willow warbler	<i>Phylloscopus trochilus</i>	3					*	
Woodpigeon	<i>Columba palumbus</i>	20		*			*	
Wren	<i>Troglodytes troglodytes</i>	13	*				*	



Yellow wagtail	<i>Motacilla flava</i>	10	*					*
Yellowhammer	<i>Emberiza citrinella</i>	2	*			*		*
Invertebrates								
Alder Signal	<i>Stathmopoda pedella</i>	1						
Beaded chestnut	<i>Agrochola lychnidis</i>	37				*		
Birch Ermel	<i>Swammerdamia caesiella</i>	1						
Blood-vein	<i>Timandra comae</i>	32				*		
Bluebell Shade	<i>Eana incanana</i>	1						
Brindled beauty	<i>Lycia hirtaria</i>	1				*		
Broom Moth	<i>Ceramica pisi</i>	1				*		
Brown Ash Ermel	<i>Zelleria hepariella</i>	1						
Brown Rowan Argent	<i>Argyresthia semifusca</i>	1						
Brown-spot Pinion	<i>Anchoscelis litura</i>	15						
Buff Ermine	<i>Spilosoma lutea</i>	36				*		
Bulrush Veneer	<i>Calamotropha paludella</i>	11						
Centre-barred swallow	<i>Atethmia centrargo</i>	24				*		
Chalk Hill Blue	<i>Polyommatus coridon</i>	1						
Cinnabar	<i>Tyria jacobaeae</i>	15				*		
Crescent	<i>Helotropha leucostigma leucostigma</i>	8						
Deep-brown dart	<i>Aporophyla lutulenta</i>	1				*		
Dot moth	<i>Melanchra persicariae</i>	3				*		
Dotted Bee-fly	<i>Bombylius discolor</i>	1						
Dotted Chestnut	<i>Conistra rubiginea</i>	2						
Dotted Fan-foot	<i>Macrochilo cribrumalis</i>	1						
Dusky brocade	<i>Apamea remissa</i>	8				*		
Dusky thorn	<i>Ennomos fuscantaria</i>	12				*		
Dusky-lemon Sallow	<i>Cirrhia gilvago</i>	3				*		
Ear moth	<i>Amphipoea oculea</i>	3				*		
Feathered gothic	<i>Tholera decimalis</i>	1				*		
Garden tiger	<i>Arctia caja</i>	3				*		
Ghost moth	<i>Hepialus humuli</i>	8				*		
Giant Water-veneer	<i>Schoenobius gigantella</i>	3						
Gold-four Argent	<i>Argyresthia ivella</i>	1						



Gold-fringed Drill	<i>Dichrorampha vancouverana</i>	1						
Great Brocade	<i>Eurois occulta</i>	1						
Green-brindled crescent	<i>Allophyes oxyacanthae</i>	16				*		
Grey dagger	<i>Acronicta psi</i>	2				*		
Juniper Pug	<i>Eupithecia pusillata</i>	1						
Knot grass	<i>Acronicta rumicis</i>	12				*		
Large Beech Piercer	<i>Cydia fagiglandana</i>	3						
Large Black Slug	<i>Arion (Arion) ater</i>	1						
Large nutmeg	<i>Apamea anceps</i>	17				*		
Large wainscot	<i>Rhizedra lutosa</i>	6				*		
Lesser Wax Moth	<i>Achroia grisella</i>	1						
Light Grey Tortrix	<i>Cnephasia incertana</i>	1						
Meadow Shade	<i>Cnephasia pasiuana</i>	1						
Mere Wainscot	<i>Photodes fluxa</i>	4						
Mottled Marble	<i>Bactra furfurana</i>	2						
Mottled rustic	<i>Caradrina morpheus</i>	34				*		
Mouse moth	<i>Amphipyra tragopoginis</i>	18				*		
Mouse-ear Groundling	<i>Caryocolum fraternella</i>	3						
Oak hook-tip	<i>Watsonalla binaria</i>	3				*		
Orange Footman	<i>Eilema sororcula</i>	4						
Pale eggar	<i>Trichiura crataegi</i>	2				*		
Pale-backed Clothes	<i>Monopis crocicapitella</i>	1						
Perth Button	<i>Acleris abietana</i>	1						
Pine-blossom Knot-horn	<i>Vitula biviella</i>	3						
Pine-cone Piercer	<i>Cydia conicolana</i>	1						
Powdered quaker	<i>Orthosia gracilis</i>	10				*		
Purple emperor	<i>Apatura iris</i>	2						
Red-necked Footman	<i>Atolmis rubricollis</i>	1						
Rosy rustic	<i>Hydraecia micacea</i>	40				*		
Rowan Midget	<i>Phyllonorycter sorbi</i>	1						
Sallow	<i>Cirrhia icteritia</i>	11				*		
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	34				*		



Shoulder-striped Wainscot	<i>Leucania comma</i>	30				*		
Small heath	<i>Coenonympha pamphilus</i>	14				*		
Small phoenix	<i>Ecliptopera silaceata</i>	2				*		
Small Purple Flat-body	<i>Agonopterix purpurea</i>	1						
Small ranunculus	<i>Hecatera dysodea</i>	1						
Small square-spot	<i>Diarsia rubi</i>	42				*		
Spruce Bud Moth	<i>Zeiraphera ratzeburgiana</i>	2						
Square-spot Drill	<i>Dichrorampha sequana</i>	1						
The rustic	<i>Hoplodrina blanda</i>	44				*		
The sprawler	<i>Asteroscopus sphinx</i>	14				*		
Wainscot Neb	<i>Monochroa palustrellus</i>	1						
Water-mint Conch	<i>Phalonidia manniana</i>	1						
Webb's Wainscot	<i>Globia sparganii</i>	10						
White ermine	<i>Spilosoma lubricipeda</i>	38				*		
Wood white	<i>Leptidea sinapis</i>	74				*		
Mammals								
Badger	<i>Meles meles</i>	4						
Brown hare	<i>Lepus europaeus</i>	1				*		
Hedgehog	<i>Erinaceus europaeus</i>	4				*		
Otter	<i>Lutra lutra</i>	3	*	*	*	*		
Water vole	<i>Arvicola amphibius</i>	2			*	*		
Plants								
Bird's-nest orchid	<i>Neottia nidus-avis</i>	2						
Bluebell	<i>Hyacinthoides non-scripta</i>	1			*			
Field scabious	<i>Knautia arvensis</i>	2						
Fringed water-lily	<i>Nymphoides peltata</i>	1						
Green-winged orchid	<i>Anacamptis morio</i>	1						
Hoary plantain	<i>Plantago media</i>	1						
Scots pine	<i>Pinus sylvestris</i>	2						
Tormentil	<i>Potentilla erecta</i>	1						
Water-soldier	<i>Stratiotes aloides</i>	1						
Reptiles								
Adder	<i>Vipera berus</i>	1			*	*		



Grass snake	<i>Natrix helvetica</i>	1			*	*		
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Green Hill E

- 1.3.42 The Upper Nene Valley Gravel Pits SPA lies approximately 2.61km to the southeast of Green Hill E at its closest point. The Upper Nene Valley Gravel Pits SSSI is an overlapping designation with the SPA, but an additional area is designated as the SSSI and not the SPA, which lies slightly closer to Green Hill E: within 2.5km.
- 1.3.43 In total, four SSSIs, four LNRs and five LWSs were located within the search radii of Green Hill E and are listed in **Table 13** below.
- 1.3.44 The SSSIs were designated for their open water, woodland and diverse grassland habitats. The Upper Nene Valley Gravel Pits SSSI supports large numbers of breeding/ wintering birds and the other SSSIs support diverse flora, which in turn support uncommon invertebrates.
- 1.3.45 The LNRs were designated for their woodland, grassland and wetland habitats. Lings Wood LNR supports breeding amphibians in the ponds. Summer Leys LNR is an overlapping designation of the Upper Nene Valley Gravel Pits SSSI.
- 1.3.46 The LWSs were designated for a range of habitats. Wilby Meadows Stream LWS may support water voles.
- 1.3.47 These sites are considered to be of **National Importance** (SSSIs) and **County Importance** (LNRs/ LWSs).

Table 13: Designated Sites Within Study Area of Green Hill E

Site Name	Area (ha)	Description	Proximity
Upper Nene Valley Gravel Pits SSSI	1,832	This SSSI is a nationally important site for its breeding bird assemblage of lowland open waters and their margins, wintering waterbird species, an assemblage of over 20,000 waterbirds in the non-breeding season and a rare example of wet floodplain woodland.	2.5km southeast
Hardwick Lodge Meadow SSSI	10	This is a large area of diverse permanent pasture with an exceptionally rich and varied grassland flora that, in turn, supports uncommon invertebrates.	2.58km northwest
Wollaston Meadows SSSI	14.25	This site on the banks of the River Nene is composed of two species-rich hay fields. Flora includes meadow foxtail, crested dog's-tail and red fescue. Overgrown hedges and ditches provide habitats for birds, small mammals, and invertebrates.	3.89km southeast



Site Name	Area (ha)	Description	Proximity
Badsaddle, Withmale Park and Bush Walk Woods SSSI	25.18	This is ancient coppice woodland with oak and ash on wet calcareous soils. Ground flora include herb paris, goldilocks buttercup and four species of orchid.	4km north
Glamis Meadow and Wood LNR	9.47	A stream runs through this site, which also features woodland and grassland.	2.88km northeast
Summer Leys LNR, LWS	48	A component of the Upper Nene Valley Gravel Pits SSSI with extensive wetland habitat, including fen, swamp, marshland and neutral grassland	3.06km southeast
Lings Wood LNR	20.06	This site features plantation and naturally regenerating woodland, along with scrub, ponds and acid grassland. Amphibians such as frogs and newts are also known to breed within the site.	3.63km southwest
Crowfields Common LNR	8.73	Three fields, adjacent to the village of Moulton. The fields are currently rough grassland, with well-established hedgerows, a few mature trees and it contains a fine example of ridge and furrow farming and a wildflower meadow.	4.7km west
Sywell Reservoir and Country Park LWS	48	A country park consisting of a reservoir and a good mosaic of other habitats including neutral grassland, scrub woodland and swamp edge. This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS with 12 fen/swamp/marsh indicators and 13 neutral grassland indicators recorded.	0.37km west
Wilby Meadows Stream LWS	0.14	A section of the Wilby Brook that flows through farmland on the edge of the village and designated for its water vole colony. The site has been retained as a Wildlife Site as the most recent survey suggests water vole are still present.	0.68km east
Park Farm Industrial Estate LWS	7.41	Park Farm Industrial Estate contains a matrix of grassland, scrub and woodland. The site does not meet the neutral grassland criteria with only seven species recorded. However with management it is possible it could recover hence it is retained as LWS.	1.13km northeast



Site Name	Area (ha)	Description	Proximity
Vivians Covert LWS	4.64	This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS with seven ancient woodland indicators recorded and opportunity to improve.	1.3km northeast
Wilby Way Meadows LWS	5.61	A neutral grassland site that has suffered from poor management in recent years. Species-rich patches of MG5 grassland remain and the site qualifies as a LWS as it is a lowland meadow with areas of MG5 vegetation and 9 neutral indicator species recorded.	1.81km east

Table 14: Species Records Within Study Area (2km) of Green Hill E

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Common frog	<i>Rana temporaria</i>	3						
Common toad	<i>Bufo bufo</i>	7				*		
Great crested newt	<i>Triturus cristatus</i>	2	*	*	*	*		
Smooth newt	<i>Lissotriton vulgaris</i>	2						
Birds								
Arctic tern	<i>Sterna paradisaea</i>	3	*	*			*	
Barn owl	<i>Tyto alba</i>	2	*		*			
Barnacle goose	<i>Branta leucopsis</i>	1	*	*			*	
Bittern	<i>Botaurus stellaris</i>	2	*	*	*	*	*	
Black-headed gull	<i>Chroicocephalus ridibundus</i>	32	*	*			*	
Black-necked grebe	<i>Podiceps nigricollis</i>	1	*		*		*	
Brambling	<i>Fringilla montifringilla</i>	4			*			
Bullfinch	<i>Pyrrhula pyrrhula</i>	5					*	
Cetti's warbler	<i>Cettia cetti</i>	32			*			
Collared dove	<i>Streptopelia decaocto</i>	3		*				
Common gull	<i>Larus canus</i>	17	*	*			*	
Common redpoll	<i>Acanthis flammea</i>	1	*					*



Common sandpiper	<i>Actitis hypoleucos</i>	20	*				*	
Common tern	<i>Sterna hirundo</i>	28	*	*			*	
Coot	<i>Fulica atra</i>	35	*	*				
Cormorant	<i>Phalacrocorax carbo</i>	27	*					
Crossbill	<i>Loxia curvirostra</i>	2	*		*			
Cuckoo	<i>Cuculus canorus</i>	4				*		*
Curlew	<i>Numenius arquata</i>	1	*	*		*		*
Dipper	<i>Cinclus cinclus</i>	9	*				*	
Dunnock	<i>Prunella modularis</i>	16	*				*	
Fieldfare	<i>Turdus pilaris</i>	4		*	*			*
Gadwall	<i>Mareca strepera</i>	17					*	
Golden plover	<i>Pluvialis apricaria</i>	26	*	*				
Goldeneye	<i>Bucephala clangula</i>	10	*	*	*			*
Grasshopper warbler	<i>Locustella naevia</i>	6				*		*
Great crested grebe	<i>Podiceps cristatus</i>	41	*					
Great skua	<i>Stercorarius skua</i>	1	*				*	
Green sandpiper	<i>Tringa ochropus</i>	4	*		*		*	
Greenfinch	<i>Chloris chloris</i>	6	*					*
Greenshank	<i>Tringa nebularia</i>	2	*	*	*		*	
Grey heron	<i>Ardea cinerea</i>	6	*					
Grey wagtail	<i>Motacilla cinerea</i>	68	*				*	
Greylag goose	<i>Anser anser</i>	30	*	*	*		*	
Hawfinch	<i>Coccothraustes coccothraustes</i>	1	*			*		*
Herring gull	<i>Larus argentatus</i>	6	*	*				*
Hobby	<i>Falco subbuteo</i>	8	*		*			
House martin	<i>Delichon urbicum</i>	2	*					*
House sparrow	<i>Passer domesticus</i>	2				*		*
Kestrel	<i>Falco tinnunculus</i>	13	*				*	
Kingfisher	<i>Alcedo atthis</i>	13	*	*	*			
Lapwing	<i>Vanellus vanellus</i>	16	*	*		*		*
Lesser black-backed gull	<i>Larus fuscus</i>	4	*	*			*	
Lesser redpoll	<i>Acanthis cabaret</i>	35				*		



Lesser spotted woodpecker	<i>Dryobates minor</i>	1	*					*
Linnet	<i>Linaria cannabina</i>	3	*					*
Little egret	<i>Egretta garzetta</i>	8	*	*				
Little gull	<i>Hydrocoloeus minutus</i>	3	*	*	*			
Little ringed plover	<i>Charadrius dubius</i>	2	*		*			
Mallard	<i>Anas platyrhynchos</i>	35	*	*			*	
Marsh tit	<i>Poecile palustris</i>	11	*					*
Meadow pipit	<i>Anthus pratensis</i>	4	*				*	
Mistle thrush	<i>Turdus viscivorus</i>	2		*				*
Moorhen	<i>Gallinula chloropus</i>	24	*	*			*	
Osprey	<i>Pandion haliaetus</i>	4	*	*	*		*	
Oystercatcher	<i>Haematopus ostralegus</i>	2	*	*			*	
Peregrine	<i>Falco peregrinus</i>	1	*	*	*			
Pink-footed goose	<i>Anser brachyrhynchus</i>	1	*	*			*	
Pochard	<i>Aythya ferina</i>	21	*	*				*
Quail	<i>Coturnix coturnix</i>	1		*	*		*	
Red kite	<i>Milvus milvus</i>	16	*	*	*			
Redshank	<i>Tringa totanus</i>	2	*	*			*	
Redstart	<i>Phoenicurus phoenicurus</i>	4	*				*	
Redwing	<i>Turdus iliacus</i>	4		*	*		*	
Reed bunting	<i>Emberiza schoeniclus</i>	8	*			*	*	
Rook	<i>Corvus frugilegus</i>	3		*			*	
Scaup	<i>Aythya marila</i>	33	*	*	*	*		*
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	4					*	
Shelduck	<i>Tadorna tadorna</i>	1	*				*	
Shoveler	<i>Spatula clypeata</i>	2	*	*			*	
Skylark	<i>Alauda arvensis</i>	15		*		*		*
Smew	<i>Mergellus albellus</i>	10	*	*				*
Snipe	<i>Gallinago gallinago</i>	11	*	*			*	
Song thrush	<i>Turdus philomelos</i>	12		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	2	*				*	
Spotted flycatcher	<i>Muscicapa striata</i>	5	*			*		*
Spotted redshank	<i>Tringa erythropus</i>	1	*	*			*	



Starling	<i>Sturnus vulgaris</i>	8		*				*
Stock dove	<i>Columba oenas</i>	1		*			*	
Swift	<i>Apus apus</i>	1						*
Tawny owl	<i>Strix aluco</i>	6	*				*	
Teal	<i>Anas crecca</i>	13	*	*			*	
Wheatear	<i>Oenanthe oenanthe</i>	2	*				*	
Whinchat	<i>Saxicola rubetra</i>	20	*					*
White-fronted goose	<i>Anser albifrons</i>	12	*	*				*
Whitethroat	<i>Curruca communis</i>	2					*	
Whooper swan	<i>Cygnus cygnus</i>	36	*	*	*		*	
Wigeon	<i>Mareca penelope</i>	17	*	*			*	
Willow warbler	<i>Phylloscopus trochilus</i>	3					*	
Woodcock	<i>Scolopax rusticola</i>	1	*	*				*
Woodpigeon	<i>Columba palumbus</i>	29		*			*	
Wren	<i>Troglodytes troglodytes</i>	19	*				*	
Yellow wagtail	<i>Motacilla flava</i>	10	*					*
Yellowhammer	<i>Emberiza citrinella</i>	2	*			*		*
Invertebrates								
Alder Signal	<i>Stathmopoda pedella</i>	1						
Beaded chestnut	<i>Agrochola lychnidis</i>	39				*		
Beautiful Knot-horn	<i>Rhodophaea formosa</i>	3						
Birch Ermel	<i>Swammerdamia caesiella</i>	1						
Blood-vein	<i>Timandra comae</i>	37				*		
Blotched Marble	<i>Endothenia quadrimaculana</i>	1						
Bluebell Shade	<i>Eana incanana</i>	1						
Brindled beauty	<i>Lycia hirtaria</i>	1				*		
Broom Moth	<i>Ceramica pisi</i>	2				*		
Brown Ash Ermel	<i>Zelleria hepariella</i>	1						
Brown Rowan Argent	<i>Argyresthia semifusca</i>	1						
Brown-spot Pinion	<i>Anchoscelis litura</i>	16						
Buff Ermine	<i>Spilosoma lutea</i>	42				*		
Bulrush Veneer	<i>Calamotropha paludella</i>	12						
Centre-barred sallow	<i>Atethmia centrargo</i>	27				*		
Cinnabar	<i>Tyria jacobaeae</i>	23				*		



Cream-bordered Green Pea	<i>Earias clorana</i>	2						
Crescent	<i>Helotropha leucostigma leucostigma</i>	8						
Currant Clearwing	<i>Synanthedon tipuliformis</i>	2						
Deep Brown Shade	<i>Neosphaleroptera nubilana</i>	1						
Deep-brown dart	<i>Aporophyla lutulenta</i>	1				*		
Dot moth	<i>Melanchra persicariae</i>	7				*		
Dotted Bee-fly	<i>Bombylius discolor</i>	1						
Dotted Chestnut	<i>Conistra rubiginea</i>	2						
Dotted Fan-foot	<i>Macrochilo cribrumalis</i>	1						
Dotted-margin Smoke	<i>Diplodoma laichartingella</i>	1						
Double dart	<i>Graphiphora augur</i>	1				*		
Dusky brocade	<i>Apamea remissa</i>	8				*		
Dusky thorn	<i>Ennomos fuscantaria</i>	16				*		
Dusky-lemon Sallow	<i>Cirrhia gilvago</i>	3				*		
Ear moth	<i>Amphipoea oculatea</i>	3				*		
Elm Groundling	<i>Carpatolechia fugitivella</i>	2						
Feathered gothic	<i>Tholera decimalis</i>	1				*		
Garden tiger	<i>Arctia caja</i>	3				*		
Ghost moth	<i>Hepialus humuli</i>	11				*		
Giant Water-veneer	<i>Schoenobius gigantella</i>	3						
Gold-four Argent	<i>Argyresthia ivella</i>	1						
Gold-fringed Drill	<i>Dichrorampha vancouverana</i>	1						
Green-brindled crescent	<i>Allophytes oxyacanthae</i>	16				*		
Greenweed Groundling	<i>Mirificarma lentiginosella</i>	1						
Grey dagger	<i>Acronicta psi</i>	3				*		
Juniper Pug	<i>Eupithecia pusillata</i>	1						
Knot grass	<i>Acronicta rumicis</i>	17				*		
Large Beech Piercer	<i>Cydia fagiglandana</i>	3						
Large Black Slug	<i>Arion (Arion) ater</i>	1						
Large nutmeg	<i>Apamea anceps</i>	26				*		
Large wainscot	<i>Rhizedra lutosa</i>	6				*		
Lesser Wax Moth	<i>Achroia grisella</i>	1						



Light Grey Tortrix	<i>Cnephasia incertana</i>	1						
Lime Cosmet	<i>Chrysoclista linneella</i>	2						
Meadow Shade	<i>Cnephasia pasiuana</i>	1						
Mere Wainscot	<i>Photodes fluxa</i>	4						
Mottled Marble	<i>Bactra furfurana</i>	4						
Mottled rustic	<i>Caradrina morpheus</i>	48				*		
Mouse moth	<i>Amphipyra tragopoginis</i>	20				*		
Mouse-ear Groundling	<i>Caryocolum fraternella</i>	3						
Oak hook-tip	<i>Watsonalla binaria</i>	3				*		
Orange Footman	<i>Eilema sororcula</i>	4						
Pale eggar	<i>Trichiura crataegi</i>	2				*		
Pale Orache Case-bearer	<i>Coleophora versurella</i>	1						
Pale-backed Clothes	<i>Monopis crocicapitella</i>	1						
Perth Button	<i>Acleris abietana</i>	1						
Pine-blossom Knot-horn	<i>Vitula biviella</i>	3						
Pine-cone Piercer	<i>Cydia conicolana</i>	1						
Poplar Shoot	<i>Gypsonoma oppressana</i>	1						
Powdered quaker	<i>Orthosia gracilis</i>	10				*		
Red-clover Case-bearer	<i>Coleophora deauratella</i>	2						
Red-necked Footman	<i>Atolmis rubricollis</i>	1						
Rosy rustic	<i>Hydraecia micacea</i>	40				*		
Rowan Midget	<i>Phyllonorycter sorbi</i>	1						
Sallow	<i>Cirrhia icteritia</i>	12				*		
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	34				*		
Shoulder-striped Wainscot	<i>Leucania comma</i>	33				*		
Small emerald	<i>Hemistola chrysoprasaria</i>	1				*		
Small heath	<i>Coenonympha pamphilus</i>	8				*		
Small phoenix	<i>Ecliptopera silaceata</i>	2				*		
Small Purple Flat-body	<i>Agonopterix purpurea</i>	1						
Small ranunculus	<i>Hecatera dysodea</i>	1						
Small square-spot	<i>Diarsia rubi</i>	50				*		



Speckled Case-bearer	<i>Coleophora sternipennella</i>	1						
Spruce Bud Moth	<i>Zeiraphera ratzeburgiana</i>	2						
Square-spot Drill	<i>Dichrorampha sequana</i>	1						
The rustic	<i>Hoplodrina blanda</i>	51				*		
The sprawler	<i>Asteroscopus sphinx</i>	14				*		
Toadflax brocade	<i>Calophasia lunula</i>	3						
Wainscot Neb	<i>Monochroa palustrellus</i>	1						
Water-mint Conch	<i>Phalonidia manniana</i>	1						
Webb's Wainscot	<i>Globia sparganii</i>	10						
White ermine	<i>Spilosoma lubricipeda</i>	46				*		
Wood white	<i>Leptidea sinapis</i>	8				*		
Mammals								
Badger	<i>Meles meles</i>	56						
Brown hare	<i>Lepus europaeus</i>	1				*		
Hedgehog	<i>Erinaceus europaeus</i>	43				*		
Otter	<i>Lutra lutra</i>	4	*	*	*	*		
Polecat	<i>Mustela putorius</i>	2				*		
Water vole	<i>Arvicola amphibius</i>	11			*	*		
Plants								
Bluebell	<i>Hyacinthoides non-scripta</i>	2			*			
Fringed water-lily	<i>Nymphoides peltata</i>	1						
Green-winged orchid	<i>Anacamptis morio</i>	1						
Hoary plantain	<i>Plantago media</i>	1						
Scots pine	<i>Pinus sylvestris</i>	2						
Tormentil	<i>Potentilla erecta</i>	1						
Water-soldier	<i>Stratiotes aloides</i>	1						
Reptiles								
Adder	<i>Vipera berus</i>	1			*	*		
Grass snake	<i>Natrix helvetica</i>	1			*	*		

Green Hill BESS

- 1.3.48 The Upper Nene Valley Gravel Pits SPA and SSSI lie adjacent to the northeast of Green Hill BESS.



- 1.3.49 In total, three SSSIs, one LNR and sixteen LWSs were located within the search radii of Green Hill BESS and are listed in **Table 15** below.
- 1.3.50 The SSSIs were designated for their open water, diverse grassland, and woodland habitats. The Upper Nene Valley Gravel Pits SSSI supports large numbers of breeding/ wintering birds and the other SSSIs support diverse flora and invertebrates.
- 1.3.51 Summer Leys LNR (also designated as a LWS) is a component of the Upper Nene Valley Gravel Pits SSSI and contains a range of wetland and grassland habitats.
- 1.3.52 The LWSs were designated for a range of habitats, including a large number of waterbodies of importance to overwintering birds and amphibians; diverse grassland and woodland.
- 1.3.53 These sites are considered to be of **National Importance** (SSSIs) and **County Importance** (LNRs/ LWSs).

Table 15: Designated Sites Within Study Area of Green Hill BESS

Site Name	Area (ha)	Description	Proximity
Upper Nene Valley Gravel Pits SSSI	1,832	This SSSI is a nationally important site for its breeding bird assemblage of lowland open waters and their margins, wintering waterbird species, an assemblage of over 20,000 waterbirds in the non-breeding season and a rare example of wet floodplain woodland.	Adjacent
Bozeat Meadow SSSI	2.63	This is unimproved grassland on well drained clay and loam soils. It has medieval ridge and furrow and diverse flora, including crested dog's-tail, downy oat-grass, quaking grass and dwarf thistle. There are also mature hedgerows and a spring.	3.1km southeast
Wollaston Meadows SSSI	14.25	This site on the banks of the River Nene is composed of two species-rich hay fields. Flora includes meadow foxtail, crested dog's-tail and red fescue. Overgrown hedges and ditches provide habitats for birds, small mammals, and invertebrates.	3.61km northeast
Summer Leys LNR, LWS	48	A component of the Upper Nene Valley Gravel Pits SSSI with extensive wetland habitat, including fen, swamp, marshland and neutral grassland	1.96km northeast
Grendon Lakes LWS	126	A mosaic of wetland habitats and of huge importance to over-wintering birds this site qualifies as a LWS because it contains a variety of species of stonewort amongst other wetland vegetation.	Within red line



Site Name	Area (ha)	Description	Proximity
Grendon Lakes North LWS	33.97	A mosaic of wetland habitats including a number of small gravel pits, fragments of wet grassland and mire and good aquatic vegetation. The site qualifies as an LWS due to the presence of ten fen, swamp and marsh indicators within these wetland habitats.	0.13km north
Grendon Quarter Pond LWS	4.39	A large fishing lake that offers good cover, with a fringe of marginal vegetation and a surround of tall trees.	0.41km south
Earls Barton Lock Lake LWS	26	A Nene Valley gravel pit with abundant marginal vegetation. The site qualifies as a LWS as this marginal vegetation holds 13 fen, swamp and marsh indicator species.	0.44km north
Earls Barton Meadow LWS	6.09	A floodplain meadow site adjacent to the River Nene, near to gravel extraction. This site has been identified as a potential wildlife site and features six neutral grassland indicators, including one strong indicator and many of the elements of MG4 grassland. Therefore, the site is an out of condition Wildlife Site.	0.46km northwest
Earl's Barton Carr LWS	20	A large area of wet woodland on former gravel workings adjacent to the Nene. Although declining in quality the site easily qualifies as a LWS due to the presence of a large area of wet woodland habitat and the presence of ten fen, swamp, marsh indicator species.	0.47km northwest
Scotland Pond LWS	3.41	A large angling lake fringed with marginal and emergent vegetation.	0.76km south
The Basin LWS	2.53	A narrow lake within the Castle Ashby Estate, with a good cover of emergent and marginal vegetation providing habitat for birds and amphibians.	1.03km southwest
Castle Ashby Woodland LWS	2.47	A patch of old woodland that probably dates from the time of Castle Ashby parkland. There is a large amount of wych elm in the canopy, and a mixture of other broadleaved species, mainly ash and scrub such as elder, hawthorn, crab apple and willow. An oddly structured woodland, but well-established and probably of interest for invertebrates as well as the unusual plants.	1.33km southwest



Site Name	Area (ha)	Description	Proximity
Menagerie Pond LWS	2.09	A lake within the Castle Ashby parkland, with areas of thick fringing emergent vegetation and occasional aquatics. The invertebrate life is said to be of interest.	1.35km south
Ecton Gravel Pits LWS	50.25	Three gravel pits alongside the River Nene, the pits vary in size and shape and provide a mixture of wildlife habitats. The site qualifies as a LWS as 12 wetland indicators were recorded across the site.	1.5km northwest
Par Pond LWS	3.21	A long lake on the edge of Castle Ashby Park, well-vegetated with emergent and marginal vegetation and surrounded by parkland.	1.53km south
Castle Ashby Parkland LWS	4.47	This woodland is near the centre of Castle Ashby parkland and leads from the church to the ponds and boathouse. It contains a large variety of parkland and semi-natural species, and a largely semi-natural ground flora with several ancient woodland species and one or two odd parkland additions.	1.73km south
Engine Pond LWS	2.32	A well-established pond, with emergent vegetation and abundant dragonflies and damselflies.	1.89km southwest
Hardwater Meadows LWS	27.69	A series of fields adjacent to the Nene. The site retains its LWS status to the presence of species rich wetland vegetation around the pond and alongside the old course of the river. A total of 11 fen, swamp and marsh indicators were recorded.	1.95km northeast
Warren Ponds LWS	0.3	These ponds extend the habitat of Par Pond and provide cover for birds and amphibians, they are of some significance as an extension to the habitat corridor.	1.99km south

Table 16: Species Records Within Study Area (2km) of Green Hill BESS

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Common frog	<i>Rana temporaria</i>	6						



Common toad	<i>Bufo bufo</i>	3				*		
Great crested newt	<i>Triturus cristatus</i>	3	*	*	*	*		
Smooth newt	<i>Lissotriton vulgaris</i>	8						
Birds								
Arctic tern	<i>Sterna paradisaea</i>	44	*	*			*	
Avocet	<i>Recurvirostra avosetta</i>	16	*	*	*		*	
Barn owl	<i>Tyto alba</i>	14	*		*			
Barnacle goose	<i>Branta leucopsis</i>	14	*	*			*	
Bar-tailed godwit	<i>Limosa lapponica</i>	11	*	*			*	
Bearded tit	<i>Panurus biarmicus</i>	8	*		*			
Bewick's swan	<i>Cygnus columbianus</i>	2	*	*	*			*
Bittern	<i>Botaurus stellaris</i>	83	*	*	*	*	*	
Black tern	<i>Chlidonias niger</i>	30	*	*	*			
Black-headed gull	<i>Chroicocephalus ridibundus</i>	46 0	*	*			*	
Black-necked grebe	<i>Podiceps nigricollis</i>	61	*		*		*	
Black-tailed godwit	<i>Limosa limosa</i>	23 3	*	*	*			*
Blue-headed Wagtail	<i>Motacilla flava flava</i>	10						
Brambling	<i>Fringilla montifringilla</i>	71			*			
Brent goose	<i>Branta bernicla</i>	1	*	*			*	
Bullfinch	<i>Pyrrhula pyrrhula</i>	21 9					*	
Caspian gull	<i>Larus cachinnans</i>	1					*	
Caspian tern	<i>Hydroprogne caspia</i>	2	*	*				
Cattle egret	<i>Bubulcus ibis</i>	12	*				*	
Cetti's warbler	<i>Cettia cetti</i>	32 5			*			
Collared dove	<i>Streptopelia decaocto</i>	62		*				
Common gull	<i>Larus canus</i>	96	*	*			*	
Common sandpiper	<i>Actitis hypoleucos</i>	33 8	*				*	
Common scoter	<i>Melanitta nigra</i>	8	*	*	*	*		*
Common tern	<i>Sterna hirundo</i>	39 9	*	*			*	



Coot	<i>Fulica atra</i>	39 9	*	*				
Cormorant	<i>Phalacrocorax carbo</i>	42 9	*					
Corn bunting	<i>Emberiza calandra</i>	1						*
Crane	<i>Grus grus</i>	3	*	*			*	
Cuckoo	<i>Cuculus canorus</i>	16 0				*		*
Curlew	<i>Numenius arquata</i>	61	*	*		*		*
Curlew sandpiper	<i>Calidris ferruginea</i>	2	*				*	
Dunlin	<i>Calidris alpina</i>	29 8	*					*
Dunnock	<i>Prunella modularis</i>	25 7	*				*	
European White-fronted Goose	<i>Anser albifrons albifrons</i>	2						
Fieldfare	<i>Turdus pilaris</i>	52		*	*			*
Gadwall	<i>Mareca strepera</i>	36 1					*	
Gannet	<i>Morus bassanus</i>	2	*				*	
Garganey	<i>Spatula querquedula</i>	19 7					*	
Golden plover	<i>Pluvialis apricaria</i>	16 0	*	*				
Goldeneye	<i>Bucephala clangula</i>	16 9	*	*	*			*
Grasshopper warbler	<i>Locustella naevia</i>	31				*		*
Great black-backed gull	<i>Larus marinus</i>	11	*	*			*	
Great crested grebe	<i>Podiceps cristatus</i>	34 4	*					
Great white egret	<i>Ardea alba</i>	88 2	*				*	
Green sandpiper	<i>Tringa ochropus</i>	19 6	*		*		*	
Greenfinch	<i>Chloris chloris</i>	18 8	*					*
Greenland White-fronted Goose	<i>Anser albifrons flavirostris</i>	2						



Greenshank	<i>Tringa nebularia</i>	15 9	*	*	*		*	
Grey heron	<i>Ardea cinerea</i>	36 9	*					
Grey partridge	<i>Perdix perdix</i>	13		*		*		*
Grey plover	<i>Pluvialis squatarola</i>	18	*	*			*	
Grey wagtail	<i>Motacilla cinerea</i>	37	*				*	
Greylag goose	<i>Anser anser</i>	40 3	*	*	*		*	
Herring gull	<i>Larus argentatus</i>	52	*	*				*
Hobby	<i>Falco subbuteo</i>	17 5	*		*			
House martin	<i>Delichon urbicum</i>	45	*					*
House sparrow	<i>Passer domesticus</i>	14				*		*
Kestrel	<i>Falco tinnunculus</i>	61	*				*	
Kingfisher	<i>Alcedo atthis</i>	13 4	*	*	*			
Kittiwake	<i>Rissa tridactyla</i>	6	*					*
Knot	<i>Calidris canutus</i>	36	*	*			*	
Lapwing	<i>Vanellus vanellus</i>	47 3	*	*		*		*
Lesser black-backed gull	<i>Larus fuscus</i>	22 3	*	*			*	
Lesser redpoll	<i>Acanthis cabaret</i>	23				*		
Linnet	<i>Linaria cannabina</i>	90	*					*
Little egret	<i>Egretta garzetta</i>	57 7	*	*				
Little gull	<i>Hydrocoloeus minutus</i>	49	*	*	*			
Little ringed plover	<i>Charadrius dubius</i>	33 8	*		*			
Little tern	<i>Sternula albifrons</i>	4	*	*	*		*	
Long-tailed duck	<i>Clangula hyemalis</i>	1	*	*	*			*
Mallard	<i>Anas platyrhynchos</i>	42 7	*	*			*	
Marsh harrier	<i>Circus aeruginosus</i>	96	*	*	*		*	
Marsh tit	<i>Poecile palustris</i>	2	*					*
Meadow pipit	<i>Anthus pratensis</i>	51	*				*	



Mediterranean gull	<i>Ichthyaetus melanocephalus</i>	14 5	*	*	*		*	
Merlin	<i>Falco columbarius</i>	4	*	*	*			*
Mistle thrush	<i>Turdus viscivorus</i>	21		*				*
Moorhen	<i>Gallinula chloropus</i>	42 1	*	*			*	
Osprey	<i>Pandion haliaetus</i>	15	*	*	*		*	
Oystercatcher	<i>Haematopus ostralegus</i>	49 5	*	*			*	
Peregrine	<i>Falco peregrinus</i>	78	*	*	*			
Pink-footed goose	<i>Anser brachyrhynchus</i>	6	*	*			*	
Pintail	<i>Anas acuta</i>	81	*	*	*		*	
Pochard	<i>Aythya ferina</i>	16 3	*	*				*
Purple heron	<i>Ardea purpurea</i>	21	*	*	*			
Red kite	<i>Milvus milvus</i>	91	*	*	*			
Red-necked phalarope	<i>Phalaropus lobatus</i>	5	*	*	*			*
Redshank	<i>Tringa totanus</i>	58 3	*	*			*	
Redstart	<i>Phoenicurus phoenicurus</i>	9	*				*	
Redwing	<i>Turdus iliacus</i>	95		*	*		*	
Reed bunting	<i>Emberiza schoeniclus</i>	32 3	*			*	*	
Ring ouzel	<i>Turdus torquatus</i>	8	*			*		*
Ringed plover	<i>Charadrius hiaticula</i>	16 8	*					*
Rook	<i>Corvus frugilegus</i>	48		*			*	
Ruff	<i>Calidris pugnax</i>	27 0	*	*	*			*
Sanderling	<i>Calidris alba</i>	14	*				*	
Sandwich tern	<i>Thalasseus sandvicensis</i>	6	*	*			*	
Scaup	<i>Aythya marila</i>	51	*	*	*	*		*
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	10 3					*	
Shelduck	<i>Tadorna tadorna</i>	16 2	*				*	
Short-eared owl	<i>Asio flammeus</i>	3	*	*			*	



Shoveler	<i>Spatula clypeata</i>	32 2	*	*			*	
Skylark	<i>Alauda arvensis</i>	36		*		*		*
Smew	<i>Mergellus albellus</i>	1	*	*				*
Snipe	<i>Gallinago gallinago</i>	40 1	*	*			*	
Song thrush	<i>Turdus philomelos</i>	24 1		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	71	*				*	
Spoonbill	<i>Platalea leucorodia</i>	13	*	*	*		*	
Spotted flycatcher	<i>Muscicapa striata</i>	6	*			*		*
Spotted redshank	<i>Tringa erythropus</i>	82	*	*			*	
Starling	<i>Sturnus vulgaris</i>	24 2		*				*
Stock dove	<i>Columba oenas</i>	99		*			*	
Swift	<i>Apus apus</i>	14 1						*
Tawny owl	<i>Strix aluco</i>	11	*				*	
Teal	<i>Anas crecca</i>	31 8	*	*			*	
Tree sparrow	<i>Passer montanus</i>	19				*		*
Turnstone	<i>Arenaria interpres</i>	19	*				*	
Turtle dove	<i>Streptopelia turtur</i>	5		*		*		*
Water pipit	<i>Anthus spinoletta</i>	37	*				*	
Wheatear	<i>Oenanthe oenanthe</i>	33	*				*	
Whimbrel	<i>Numenius phaeopus</i>	49	*	*	*			*
Whinchat	<i>Saxicola rubetra</i>	6	*					*
White-fronted goose	<i>Anser albifrons</i>	15	*	*				*
Whitethroat	<i>Curruca communis</i>	74					*	
Whooper swan	<i>Cygnus cygnus</i>	7	*	*	*		*	
Wigeon	<i>Mareca penelope</i>	35 7	*	*			*	
Willow warbler	<i>Phylloscopus trochilus</i>	97					*	
Wood sandpiper	<i>Tringa glareola</i>	10 2	*	*	*		*	
Wood warbler	<i>Phylloscopus sibilatrix</i>	2				*		*
Woodcock	<i>Scolopax rusticola</i>	4	*	*				*



Woodpigeon	<i>Columba palumbus</i>	41 7		*			*	
Wren	<i>Troglodytes troglodytes</i>	40 0	*				*	
Yellow Wagtail	<i>Motacilla flava flavissima</i>	1						
Yellow wagtail	<i>Motacilla flava</i>	80	*					*
Yellowhammer	<i>Emberiza citrinella</i>	45	*			*		*
Yellow-legged gull	<i>Larus michahellis</i>	20					*	
Invertebrates								
Alder Lift	<i>Heliozela resplendella</i>	4						
Broad-barred Midget	<i>Phyllonorycter froelichiella</i>	1						
Brown Oak Slender	<i>Acrocercops brongniardella</i>	4						
Bulrush Veneer	<i>Calamotropha paludella</i>	1						
Cinnabar	<i>Tyria jacobaeae</i>	2				*		
Dark Hornbeam Midget	<i>Phyllonorycter esperella</i>	1						
Dusty Apple Pigmy	<i>Bohemannia pulverosella</i>	1						
Early Purple	<i>Eriocrania semipurpurella</i>	2						
Ghost moth	<i>Hepialus humuli</i>	1				*		
Grey-poplar Pigmy	<i>Ectoedemia turbidella</i>	12						
Grizzled skipper	<i>Pyrgus malvae</i>	1				*		
<i>Heleomyza captiosa</i>	<i>Heleomyza captiosa</i>	2						
Laburnum Leaf Miner	<i>Leucoptera laburnella</i>	4						
<i>Limosa limosa islandica</i>	<i>Limosa limosa islandica</i>	1						
London Midget	<i>Phyllonorycter platani</i>	23						
Mere Wainscot	<i>Photedes fluxa</i>	1						
<i>Mompha bradleyi</i>	<i>Mompha bradleyi</i>	1						
<i>Norellia spinipes</i>	<i>Norellia spinipes</i>	2						
Pale Birch Pigmy	<i>Stigmella confusella</i>	1						
Pear Leaf Blister Moth	<i>Leucoptera malifoliella</i>	1						
Plain Elm Pigmy	<i>Stigmella viscerella</i>	1						
Red-headed Pigmy	<i>Stigmella ruficapitella</i>	2						
Red-tipped Clearwing	<i>Synanthedon formicaeformis</i>	2						
Rowan Slender	<i>Parornix scoticella</i>	4						



Scarce Alder Slender	<i>Caloptilia falconipennella</i>	3						
Scarce Sloe Pigmy	<i>Stigmella prunetorum</i>	1						
September thorn	<i>Ennomos erosaria</i>	1				*		
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	1				*		
Silky Wainscot	<i>Chilodes maritima</i>	1						
Silver-barred Alder Pigmy	<i>Stigmella alnetella</i>	2						
Small Birch Purple	<i>Eriocrania salopiella</i>	2						
Small heath	<i>Coenonympha pamphilus</i>	7				*		
Viburnum Midget	<i>Phyllonorycter lantanella</i>	2						
White-barred Alder Pigmy	<i>Stigmella glutinosae</i>	1						
White-bodied Midget	<i>Phyllonorycter joannisi</i>	4						
White-clawed crayfish	<i>Austropotamobius pallipes</i>	1		*	*	*		
Willow Bent-wing	<i>Phyllocnistis saligna</i>	4						
Mammals								
Badger	<i>Meles meles</i>	11						
Brown hare	<i>Lepus europaeus</i>	2				*		
Hedgehog	<i>Erinaceus europaeus</i>	16				*		
Otter	<i>Lutra lutra</i>	2	*	*	*	*		
Plants								
Field scabious	<i>Knautia arvensis</i>	6						
Galingale	<i>Cyperus longus</i>	1						
Hoary plantain	<i>Plantago media</i>	2						
Hound's-tongue	<i>Cynoglossum officinale</i>	2						
Marsh Ragwort	<i>Jacobaea aquatica</i>	1						
Scots pine	<i>Pinus sylvestris</i>	1						
Wild strawberry	<i>Fragaria vesca</i>	2						
Wood horsetail	<i>Equisetum sylvaticum</i>	1						
Reptiles								
Grass snake	<i>Natrix helvetica</i>	6			*	*		

Green Hill F

- 1.3.54 The Upper Nene Valley Gravel Pits SPA lies approximately 1.98km to the northwest of Green Hill F at its closest point. The upper Nene Valley Gravel Pits



SSSI is an overlapping designation with the SPA, and lies the same distance away from Green Hill F at its closest point.

- 1.3.55 In total, six SSSIs, one LNR, seventeen LWSs and three CWSs were located within the search radii of Green Hill F and are listed in **Table 17** below.
- 1.3.56 The SSSIs were designated for their open water, grassland and woodland habitats, with value to wintering birds, plants and invertebrates.
- 1.3.57 The LWSs were designated for a range of habitats, including woodland, grassland, road verge, parkland and open water.
- 1.3.58 The CWSs are all designated for their broadleaved, semi-natural, ancient woodland.
- 1.3.59 These sites are considered to be of National Importance (SSSIs) and County Importance (LWSs/ CWSs).

Table 17: Designated Sites Within Study Area of Green Hill F

Site Name	Area (ha)	Description	Proximity
Bozeat Meadow SSSI	2.63	This is unimproved grassland on well drained clay and loam soils. It has medieval ridge and furrow and diverse flora, including crested dog's-tail, downy oat-grass, quaking grass and dwarf thistle. There are also mature hedgerows and a spring.	0.071km east
Upper Nene Valley Gravel Pits SSSI	1,832	This SSSI is a nationally important site for its breeding bird assemblage of lowland open waters and their margins, wintering waterbird species, an assemblage of over 20,000 waterbirds in the non-breeding season and a rare example of wet floodplain woodland.	1.98km northwest
Dungee Corner Meadow SSSI	5.12	This well drained hay meadow on boulder clay is traditionally managed, and no artificial fertilisers or herbicides have been used, so it has a diverse flora. More than twenty grass species have been recorded, including sweet vernal grass, Yorkshire fog, sheep's fescue, quaking grass, and crested dog's-tail. There is also a population of the locally rare green-winged orchid.	2.1km east
Yardley Chase SSSI	357.61	This chase has diverse semi-natural habitats, and its value for invertebrates has been enhanced by military use of the site, which has resulted in a long absence of intensive agriculture. There is woodland and unimproved grassland, and 30 breeding butterfly species have been recorded.	3.8km southwest



Site Name	Area (ha)	Description	Proximity
Wollaston Meadows SSSI	14.25	This site on the banks of the River Nene is composed of two species-rich hay fields. Flora includes meadow foxtail, crested dog's-tail and red fescue. Overgrown hedges and ditches provide habitats for birds, small mammals, and invertebrates.	3.86km north
Odell Great Wood SSSI	85.7	A large wet ash-maple woodland with exceptionally rich flora. The extensive and well-developed system of rides is another important feature, adding greatly to the value of the site for flowering plants, butterflies, and other invertebrates.	4.81km east
Horn Wood LWS	24.4	This site qualifies as a LWS with 14 ancient woodland indicators recorded.	Adjacent to southern site boundary
Summer Leys LNR, LWS	48	A component of the Upper Nene Valley Gravel Pits SSSI with extensive wetland habitat, including fen, swamp, marshland and neutral grassland	2.76km north
The Slipe CWS	5.4	Broadleaved, semi-natural, ancient woodland.	1.17km east
Nun Wood CWS	17.9	Broadleaved ancient woodland, neutral grassland and a pond. Directly connected to Threshire's Wood.	1.2km northwest
Templegrove Spinney CWS	1.7	Broadleaved, semi-natural, ancient woodland.	1.76km west
Horn Wood LWS	24.4	Ancient semi-natural woodland with 14 ancient woodland indicators and 13 neutral grassland indicators recorded.	Adjacent east
Bozeat Verge LWS	0.63	A species rich wildflower verge formed on the road cutting of the A509 to the west of Bozeat. The verge also had abundant insects with numerous butterflies and bees.	0.015km south
Bozeat Cemetery LWS	0.79	This cemetery contains areas of species rich meadow.	0.28km east
Cold Oak Copse LWS	43.4	This LWS is listed on the Northants Ancient Wood inventory, with six ancient woodland indicators recorded.	0.31km west



Site Name	Area (ha)	Description	Proximity
Long Furlong and Old Pastures LWS	69.9	A large area of replanted ancient woodland, with 16 ancient woodland indicators recorded.	0.49km southwest
Bozeat Glebe Meadow LWS	1.01	A former hay meadow that has still retained a decent meadow flora, in particular on the slopes.	0.51km east
Yardley Brook Field LWS	2.52	This field has areas of species rich calcareous grassland associated with the old earthworks, which qualify the site as a LWS with 12 calcareous indicators recorded.	0.59km west
Bozeat Wood LWS	3.7	A small oak-ash woodland, possibly ancient in origin, with an interesting ground flora.	0.62km southeast
Par Pond LWS	3.21	A long lake on the edge of Castle Ashby Park, well-vegetated with emergent and marginal vegetation and surrounded by parkland.	1.12km west
Menagerie Pond LWS	2.09	A lake within the Castle Ashby parkland, with areas of thick fringing emergent vegetation and occasional aquatics. The invertebrate life is said to be of interest.	1.23km west
Warren Ponds LWS	0.3	These ponds extend the habitat of Par Pond and provide cover for birds and amphibians, they are of some significance as an extension to the habitat corridor.	1.3km west
Castle Ashby Parkland LWS	4.47	This woodland is near the centre of Castle Ashby parkland and leads from the church to the ponds and boathouse. It contains a large variety of parkland and semi-natural species, and a largely semi-natural ground flora with several ancient woodland species and one or two odd parkland additions.	1.32km west
Grendon Quarter Pond LWS	4.39	A large fishing lake that offers good cover, with a fringe of marginal vegetation and a surround of tall trees.	1.48km northwest
Threeshire's Wood LWS	14.8	Ancient semi-natural woodland with a good range of ground flora species, as well as birds (notably tree sparrow) and other species.	1.59km southeast
Scotland Pond LWS	3.41	A large angling lake fringed with marginal and emergent vegetation.	1.71km west



Site Name	Area (ha)	Description	Proximity
The Basin LWS	2.53	A narrow lake within the Castle Ashby Estate, with a good cover of emergent and marginal vegetation providing habitat for birds and amphibians.	1.88km northwest
Castle Ashby Woodland LWS	2.47	A patch of old woodland that probably dates from the time of Castle Ashby parkland. There is a large amount of wych elm in the canopy, and a mixture of other broadleaved species, mainly ash and scrub such as elder, hawthorn, crab apple and willow. An oddly structured woodland, but well-established and probably of interest for invertebrates as well as the unusual plants.	1.97km northwest

Table 18: Species Records Within Study Area (2km) of Green Hill F

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Common frog	<i>Rana temporaria</i>	4						
Common toad	<i>Bufo bufo</i>	3				*		
Great crested newt	<i>Triturus cristatus</i>	14	*	*	*	*		
Bats								
Barbastelle	<i>Barbastella barbastellus</i>	3	*	*	*	*		
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	5	*		*			
Mouse-eared species	<i>Myotis</i>	1	*		*	*		
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	2	*		*	*		
Birds								
Barn owl	<i>Tyto alba</i>	13	*		*			
Black-headed gull	<i>Chroicocephalus ridibundus</i>	6	*	*			*	
Bullfinch	<i>Pyrrhula pyrrhula</i>	2					*	
Collared dove	<i>Streptopelia decaocto</i>	4		*				
Common gull	<i>Larus canus</i>	2	*	*			*	



Common tern	<i>Sterna hirundo</i>	2	*	*			*	
Cormorant	<i>Phalacrocorax carbo</i>	4	*					
Dunnoek	<i>Prunella modularis</i>	14	*				*	
Fieldfare	<i>Turdus pilaris</i>	4		*	*			*
Golden plover	<i>Pluvialis apricaria</i>	3	*	*				
Great crested grebe	<i>Podiceps cristatus</i>	4	*					
Green sandpiper	<i>Tringa ochropus</i>	6	*		*		*	
Greenfinch	<i>Chloris chloris</i>	6	*					*
Grey partridge	<i>Perdix perdix</i>	8		*		*		*
Grey wagtail	<i>Motacilla cinerea</i>	4	*				*	
Greylag goose	<i>Anser anser</i>	2	*	*	*		*	
House martin	<i>Delichon urbicum</i>	6	*					*
House sparrow	<i>Passer domesticus</i>	7				*		*
Kestrel	<i>Falco tinnunculus</i>	4	*				*	
Lapwing	<i>Vanellus vanellus</i>	3	*	*		*		*
Lesser black-backed gull	<i>Larus fuscus</i>	2	*	*			*	
Linnet	<i>Linaria cannabina</i>	8	*					*
Marsh tit	<i>Poecile palustris</i>	3	*					*
Meadow pipit	<i>Anthus pratensis</i>	4	*				*	
Mistle thrush	<i>Turdus viscivorus</i>	7		*				*
Moorhen	<i>Gallinula chloropus</i>	2	*	*			*	
Red kite	<i>Milvus milvus</i>	12	*	*	*			
Redstart	<i>Phoenicurus phoenicurus</i>	1	*				*	
Reed bunting	<i>Emberiza schoeniclus</i>	2	*			*	*	
Rook	<i>Corvus frugilegus</i>	25		*			*	
Skylark	<i>Alauda arvensis</i>	16		*		*		*
Snipe	<i>Gallinago gallinago</i>	4	*	*			*	
Song thrush	<i>Turdus philomelos</i>	6		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	1	*				*	
Starling	<i>Sturnus vulgaris</i>	6		*				*
Stock dove	<i>Columba oenas</i>	14		*			*	
Swift	<i>Apus apus</i>	2						*
Tawny owl	<i>Strix aluco</i>	9	*				*	
Teal	<i>Anas crecca</i>	6	*	*			*	



Whinchat	<i>Saxicola rubetra</i>	5	*					*
Whitethroat	<i>Curruca communis</i>	4					*	
Wigeon	<i>Mareca penelope</i>	2	*	*			*	
Woodcock	<i>Scolopax rusticola</i>	4	*	*				*
Woodpigeon	<i>Columba palumbus</i>	27		*			*	
Wren	<i>Troglodytes troglodytes</i>	22	*				*	
Yellow wagtail	<i>Motacilla flava</i>	1	*					*
Yellowhammer	<i>Emberiza citrinella</i>	13	*			*		*
Invertebrates								
Alder Lift	<i>Heliozela resplendella</i>	4						
<i>Anaglyptus mysticus</i>	<i>Anaglyptus mysticus</i>	1						
Apple Pygmy	<i>Stigmella malella</i>	4						
August thorn	<i>Ennomos quercinaria</i>	1				*		
<i>Axinotarsus ruficollis</i>	<i>Axinotarsus ruficollis</i>	2						
Beaded chestnut	<i>Agrochola lychnidis</i>	18				*		
Bindweed Bent-wing	<i>Bedellia somnulentella</i>	2						
Black-headed Pigmy	<i>Stigmella atricapitella</i>	4						
Blood-vein	<i>Timandra comae</i>	8				*		
Brindled beauty	<i>Lycia hirtaria</i>	2				*		
Brindled Plume	<i>Amblyptilia punctidactyla</i>	2						
Brown Oak Slender	<i>Acrocercops brongniardella</i>	4						
Brown-spot Pinion	<i>Anchoscelis litura</i>	6						
Buff Ermine	<i>Spilosoma lutea</i>	34				*		
Bulrush Veneer	<i>Calamotropha paludella</i>	1						
Centre-barred sallow	<i>Atethmia centrargo</i>	5				*		
Cinnabar	<i>Tyria jacobaeae</i>	11				*		
<i>Cistogaster globosa</i>	<i>Cistogaster globosa</i>	1						
Common Drill	<i>Dichrorampha petiverella</i>	2						
Common Oak Pigmy	<i>Stigmella roborella</i>	2						
Cream-bordered Green Pea	<i>Earias clorana</i>	1						
Currant Clearwing	<i>Synanthedon tipuliformis</i>	1						
Daisy Bent-wing	<i>Bucculatrix nigricomella</i>	1						



Dark-barred twin-spot carpet	<i>Xanthorhoe ferrugata</i>	1				*		
Deep-brown dart	<i>Aporophyla lutulenta</i>	1				*		
<i>Dicranomyia chorea</i>	<i>Dicranomyia chorea</i>	1						
<i>Diogma glabrata</i>	<i>Diogma glabrata</i>	1						
Dot moth	<i>Melanchra persicariae</i>	28				*		
Dowdy Plume	<i>Stenoptilia zophodactylus</i>	1						
Downland Conch	<i>Aethes tesserana</i>	2						
Dusky brocade	<i>Apamea remissa</i>	1				*		
Dusky thorn	<i>Ennomos fuscantaria</i>	1				*		
Early Purple	<i>Eriocrania semipurpurella</i>	2						
Elm Bent-wing	<i>Bucculatrix albedinella</i>	1						
<i>Ernoporicus caucasicus</i>	<i>Ernoporicus caucasicus</i>	1						
Essex Skipper	<i>Thymelicus lineola</i>	1						
Fiery Oak Midget	<i>Phyllonorycter lautella</i>	1						
Five-spot Pigmy	<i>Ectoedemia quinquella</i>	1						
Forest Case-bearer	<i>Coleophora ibipennella</i>	2						
Garden tiger	<i>Arctia caja</i>	3				*		
Golden-haired Robberfly	<i>Choerades marginatus</i>	1						
Green-brindled crescent	<i>Allophytes oxyacanthae</i>	13				*		
Grey Alder Case-bearer	<i>Coleophora binderella</i>	1						
Grey Apple Pigmy	<i>Stigmella incognitella</i>	1						
Grey Birch Case-bearer	<i>Coleophora siccifolia</i>	2						
Grey dagger	<i>Acronicta psi</i>	6				*		
Grey-poplar Pigmy	<i>Ectoedemia turbidella</i>	12						
Hedge Cosmet	<i>Cosmopterix zieglerella</i>	2						
<i>Heleomyza captiosa</i>	<i>Heleomyza captiosa</i>	2						
Hemp-agrimony Plume	<i>Adaina microdactyla</i>	1						
Honeysuckle Midget	<i>Phyllonorycter trifasciella</i>	2						
Juniper Carpet	<i>Thera juniperata</i>	2						
Knot grass	<i>Acronicta rumicis</i>	1				*		
Laburnum Leaf Miner	<i>Leucoptera laburnella</i>	4						
Larch Case-bearer	<i>Coleophora laricella</i>	1						
Large nutmeg	<i>Apamea anceps</i>	1				*		



Large wainscot	<i>Rhizedra lutosa</i>	1				*		
Latticed heath	<i>Chiasmia clathrata</i>	1				*		
<i>Limonia nigropunctata</i>	<i>Limonia nigropunctata</i>	1						
Liquorice piercer	<i>Grapholita pallifrontana</i>	2				*		
London Midget	<i>Phyllonorycter platani</i>	22						
<i>Lygus pratensis</i>	<i>Lygus pratensis</i>	1						
Meadow Dwarf	<i>Elachista triatomea</i>	2						
Minor shoulder-knot	<i>Brachylomia viminalis</i>	2				*		
Mottled rustic	<i>Caradrina morpheus</i>	5				*		
Mouse moth	<i>Amphipyra tragopoginis</i>	13				*		
<i>Norellia spinipes</i>	<i>Norellia spinipes</i>	2						
Oak-bark Argent	<i>Argyresthia glaucinella</i>	1						
Ochreous Case-bearer	<i>Coleophora solitariella</i>	1						
Ochreous Pearl	<i>Anania crocealis</i>	1						
<i>Ormosia bicornis</i>	<i>Ormosia bicornis</i>	1						
Pale eggar	<i>Trichiura crataegi</i>	1				*		
Pale Feathered Bright	<i>Incurvaria pectinea</i>	1						
Pear Leaf Blister Moth	<i>Leucoptera malifoliella</i>	2						
Powdered quaker	<i>Orthosia gracilis</i>	2				*		
<i>Psacadina verbekei</i>	<i>Psacadina verbekei</i>	1						
<i>Psammotettix albomarginatus</i>	<i>Psammotettix albomarginatus</i>	1						
Purple emperor	<i>Apatura iris</i>	11						
Ragwort Bell	<i>Epiblema costipunctana</i>	2						
Red-headed Pigmy	<i>Stigmella ruficapitella</i>	5						
Red-tipped Clearwing	<i>Synanthedon formicaeformis</i>	2						
Rose Carl	<i>Coptotriche angusticollis</i>	1						
Rosy Minor	<i>Litoligia literosa</i>	1				*		
Rosy rustic	<i>Hydraecia micacea</i>	4				*		
Rowan Slender	<i>Parornix scoticella</i>	4						
Sallow	<i>Cirrhia icteritia</i>	1				*		
Scarce Alder Slender	<i>Caloptilia falconipennella</i>	2						
Scarce Sloe Pigmy	<i>Stigmella prunetorum</i>	1						
Sedge Fanner	<i>Glyphipterix forsterella</i>	1						



Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	3				*		
Shaded Case-bearer	<i>Coleophora potentillae</i>	2						
Shoulder-striped Wainscot	<i>Leucania comma</i>	4				*		
Silver-barred Alder Pigmy	<i>Stigmella alnetella</i>	2						
Small Birch Purple	<i>Eriocrania salopiella</i>	3						
Small emerald	<i>Hemistola chrysoprasaria</i>	5				*		
Small heath	<i>Coenonympha pamphilus</i>	8				*		
Small square-spot	<i>Diarsia rubi</i>	18				*		
Sulphur Pearl	<i>Sitochroa palealis</i>	2						
The lackey	<i>Malacosoma neustria</i>	1				*		
The sprawler	<i>Asteroscopus sphinx</i>	1				*		
The streak	<i>Chesias legatella</i>	2				*		
Twin-spot Plume	<i>Stenoptilia bipunctidactyla</i>	2						
Viburnum Midget	<i>Phyllonorycter lantanella</i>	12						
Virgin Pigmy	<i>Ectoedemia argyropeza</i>	3						
White admiral	<i>Limenitis camilla</i>	36				*		
White ermine	<i>Spilosoma lubricipeda</i>	5				*		
White letter hairstreak	<i>Satyrrium w-album</i>	20				*		
White-bodied Midget	<i>Phyllonorycter joannisi</i>	4						
Willow Bent-wing	<i>Phyllocnistis saligna</i>	4						
Willow Tortrix	<i>Epinotia cruciana</i>	1						
Wood white	<i>Leptidea sinapis</i>	9				*		
Yarrow Case-bearer	<i>Coleophora argentula</i>	5						
Yellow-spot Lift	<i>Antispila petryi</i>	2						
Mammals								
Badger	<i>Meles meles</i>	8						
Brown hare	<i>Lepus europaeus</i>	3				*		
Hedgehog	<i>Erinaceus europaeus</i>	22				*		
Plants								
Bluebell	<i>Hyacinthoides non-scripta</i>	6			*			
Box	<i>Buxus sempervirens</i>	1						
Dwarf spurge	<i>Euphorbia exigua</i>	1						
Field scabious	<i>Knautia arvensis</i>	12						



Good-king-henry	<i>Chenopodium bonus-henricus</i>	1						
Hoary plantain	<i>Plantago media</i>	7						
Large-leaved lime	<i>Tilia platyphyllos</i>	1						
Quaking-grass	<i>Briza media</i>	2						
Ragged-Robin	<i>Silene flos-cuculi</i>	2						
Scarce Redshank	<i>Ceratodon conicus</i>	3				*		
Smooth brome	<i>Bromus racemosus</i>	1						
Stinking chamomile	<i>Anthemis cotula</i>	1						
Tormentil	<i>Potentilla erecta</i>	1						
Wavy hair-grass	<i>Deschampsia flexuosa</i>	1						
Wild strawberry	<i>Fragaria vesca</i>	3						
Wood-sorrel	<i>Oxalis acetosella</i>	1						
Reptiles								
Grass snake	<i>Natrix helvetica</i>	2			*	*		

Green Hill G

- 1.3.60 The Upper Nene Valley Gravel Pits SPA lies approximately 6.18km to the southeast of Green Hill G at its closest point.
- 1.3.61 In total, three SSSIs, one LNR, five LWSs and three CWSs were located within the search radii of Green Hill G and are listed in **Table 19** below.
- 1.3.62 The SSSIs were designated for their grassland and woodland habitats, with value to plants and invertebrates.
- 1.3.63 Harrold Odell Country Park LNR contains lakes, seasonally flooded woodland and meadows, supporting a diverse range of species.
- 1.3.64 The LWSs and CWSs are all designated for their broadleaved, semi-natural, ancient woodland. Tree sparrow are known to be present at two sites.
- 1.3.65 These sites are considered to be of **National Importance** (SSSIs) and **County Importance** (LWSs/ CWSs).


Table 19: Designated Sites Within Study Area of Green Hill G

Site Name	Area (ha)	Description	Proximity
Bozeat Meadow SSSI	2.63	This is unimproved grassland on well drained clay and loam soils. It has medieval ridge and furrow and diverse flora, including crested dog's-tail, downy oat-grass, quaking grass and dwarf thistle. There are also mature hedgerows and a spring.	2.85km north
Yardley Chase SSSI	357.61	This chase has diverse semi-natural habitats, and its value for invertebrates has been enhanced by military use of the site, which has resulted in a long absence of intensive agriculture. There is woodland and unimproved grassland, and 30 breeding butterfly species have been recorded.	3.75km west
Dungee Corner Meadow SSSI	5.12	This well drained hay meadow on boulder clay is traditionally managed, and no artificial fertilisers or herbicides have been used, so it has a diverse flora. More than twenty grass species have been recorded, including sweet vernal grass, Yorkshire fog, sheep's fescue, quaking grass, and crested dog's-tail. There is also a population of the locally rare green-winged orchid.	4.18km northeast
Harrold Odell Country Park LNR	59.31	The site is on the edge of the River Ouse. There are two lakes, seasonally flooded woodland, osier beds and water meadows. The site supports a range of birds, including several priority species. Otters, bats, amphibians, reptiles and a range of orchid species are also known to be present.	4.51km northeast
Threeshire's Wood LWS	14.8	Ancient semi-natural woodland with a good range of ground flora species, as well as birds (notably tree sparrow) and other species.	Adjacent
Nun Wood CWS	17.9	Broadleaved ancient woodland, neutral grassland and a pond. Directly connected to Threeshire's Wood.	Adjacent
Bozeat Wood LWS	3.7	A small oak-ash woodland, possibly ancient in origin, with an interesting ground flora.	0.32km north
The Slipe CWS	5.4	Broadleaved, semi-natural, ancient woodland.	0.5km northeast
Lavendon Wood LWS	20.7	Ancient semi-natural woodland with a good range of ground flora species, as well as fungi, birds (notably tree sparrow) and other species.	0.74km east



Site Name	Area (ha)	Description	Proximity
Long Furlong and Old Pastures LWS	69.9	A large area of replanted ancient woodland, with 16 ancient woodland indicators recorded.	0.85km west
Snip Wood Biological Notification Site (BNS)	11.0	Small narrow Oak/Ash/Hazel wood used for pheasant rearing. 2 broad permanent grass pheasant lawns. Much of interior dense & lightless, though some coppice blocks, leaving canopy stocked with large, spreading Oaks.	1.26km east
River Great Ouse Milton Keynes Wetland Wildlife Corridor (WWC)	142.8	A specific designation to Milton Keynes, representing linear pathways of habitats that encourage movement of plants and animals between other important habitats. These are treated in the same way as LWSs in Milton Keynes.	1.66km south-east
Horn Wood LWS	24.4	This site qualifies as a LWS with 14 ancient woodland indicators recorded.	1.39km northwest
Templegrove Spinney CWS	1.7	Broadleaved, semi-natural, ancient woodland.	1.56km northeast

Table 20: Species Records Within Study Area (2km) of Green Hill G

Common Name	Scientific Name	Count	EU protected	EU priority	WACA 1981	NERC Act 2006	Amber birds	Red birds
Amphibians								
Great crested newt	<i>Triturus cristatus</i>	2	*	*	*	*		
Bats								
Barbastelle	<i>Barbastella barbastellus</i>	3	*	*	*	*		
Brown long-eared bat	<i>Plecotus auritus</i>	1	*		*	*		
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	17	*		*			
Mouse-eared species	<i>Myotis</i>	1	*		*	*		
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	2	*		*	*		
Birds								



Barn owl	<i>Tyto alba</i>	2	*		*			
Blue tit	<i>Cyanistes caeruleus</i>	2	*					
Bullfinch	<i>Pyrrhula pyrrhula</i>	4					*	
Buzzard	<i>Buteo buteo</i>	3	*					
Canada goose	<i>Branta canadensis</i>	1	*	*				
Common tern	<i>Sterna hirundo</i>	1	*	*			*	
Cormorant	<i>Phalacrocorax carbo</i>	1	*					
Cuckoo	<i>Cuculus canorus</i>	1				*		*
Dunnock	<i>Prunella modularis</i>	3	*				*	
Fieldfare	<i>Turdus pilaris</i>	2		*	*			*
Goldfinch	<i>Carduelis carduelis</i>	2	*					
Great crested grebe	<i>Podiceps cristatus</i>	1	*					
Great spotted woodpecker	<i>Dendrocopos major</i>	1	*					
Great tit	<i>Parus major</i>	2	*					
Green woodpecker	<i>Picus viridis</i>	1	*					
Greenfinch	<i>Chloris chloris</i>	2	*					*
Grey partridge	<i>Perdix perdix</i>	1		*		*		*
Grey wagtail	<i>Motacilla cinerea</i>	1	*				*	
House sparrow	<i>Passer domesticus</i>	2				*		*
Kestrel	<i>Falco tinnunculus</i>	2	*				*	
Kingfisher	<i>Alcedo atthis</i>	1	*	*	*			
Lapwing	<i>Vanellus vanellus</i>	1	*	*		*		*
Linnet	<i>Linaria cannabina</i>	1	*					*
Mallard	<i>Anas platyrhynchos</i>	2	*	*			*	
Marsh tit	<i>Poecile palustris</i>	3	*					*
Meadow pipit	<i>Anthus pratensis</i>	1	*				*	
Mistle thrush	<i>Turdus viscivorus</i>	2		*				*
Moorhen	<i>Gallinula chloropus</i>	1	*	*			*	
Mute swan	<i>Cygnus olor</i>	1	*	*				
Redwing	<i>Turdus iliacus</i>	3		*	*		*	
Robin	<i>Erithacus rubecula</i>	2	*					
Rook	<i>Corvus frugilegus</i>	3		*			*	
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	1					*	



Skylark	<i>Alauda arvensis</i>	3		*		*		*
Song thrush	<i>Turdus philomelos</i>	3		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	1	*				*	
Starling	<i>Sturnus vulgaris</i>	1		*				*
Stock dove	<i>Columba oenas</i>	1		*			*	
Swift	<i>Apus apus</i>	2						*
Tawny owl	<i>Strix aluco</i>	1	*				*	
Tree sparrow	<i>Passer montanus</i>	1				*		*
Whitethroat	<i>Curruca communis</i>	2					*	
Willow warbler	<i>Phylloscopus trochilus</i>	1					*	
Woodcock	<i>Scolopax rusticola</i>	2	*	*				*
Woodpigeon	<i>Columba palumbus</i>	6		*			*	
Wren	<i>Troglodytes troglodytes</i>	3	*				*	
Yellow wagtail	<i>Motacilla flava</i>	2	*					*
Yellowhammer	<i>Emberiza citrinella</i>	3	*			*		*
Invertebrates								
<i>Anaglyptus mysticus</i>	<i>Anaglyptus mysticus</i>	1						
Beaded chestnut	<i>Agrochola lychnidis</i>	2				*		
Black-headed Pigmy	<i>Stigmella atricapitella</i>	3						
Black-spot Case-bearer	<i>Coleophora hemerobiella</i>	1						
Blood-vein	<i>Timandra comae</i>	2				*		
Brindled beauty	<i>Lycia hirtaria</i>	1				*		
Broom-tip	<i>Chesias rufata</i>	1				*		
Buff Ermine	<i>Spilosoma lutea</i>	1				*		
Bulrush Veneer	<i>Calamotropha paludella</i>	2						
Centre-barred sallow	<i>Atethmia centrigo</i>	1				*		
Common Oak Pigmy	<i>Stigmella roborella</i>	1						
Concolorous	<i>Photedes extrema</i>	1				*		
Deep-brown dart	<i>Aporophyla lutulenta</i>	1				*		
Diogma glabrata	<i>Diogma glabrata</i>	1						
Dotted Chestnut	<i>Conistra rubiginea</i>	1						
Dowdy Plume	<i>Stenoptilia zophodactylus</i>	1						
Dusky thorn	<i>Ennomos fuscantaria</i>	1				*		
Elm Bent-wing	<i>Bucculatrix albedinella</i>	1						



Essex Skipper	<i>Thymelicus lineola</i>	4						
Feathered gothic	<i>Tholera decimalis</i>	1				*		
Fiery Oak Midget	<i>Phyllonorycter lautella</i>	1						
Five-spot Pigmy	<i>Ectoedemia quinquella</i>	1						
Flounced Chestnut	<i>Anchoscelis helvola</i>	1						
Forest Case-bearer	<i>Coleophora ibipennella</i>	2						
Giant Water-veneer	<i>Schoenobius gigantella</i>	1						
Golden-haired Robberfly	<i>Choerades marginatus</i>	1						
Green-brindled crescent	<i>Allophytes oxyacanthae</i>	1				*		
Grey Alder Case-bearer	<i>Coleophora binderella</i>	1						
Hemp-agrimony Plume	<i>Adaina microdactyla</i>	1						
Honeysuckle Midget	<i>Phyllonorycter trifasciella</i>	2						
Jersey tiger moth	<i>Euplagia quadripunctaria</i>	1		*				
Kent Black Arches	<i>Meganola albula</i>	1						
Knot grass	<i>Acronicta rumicis</i>	1				*		
Larch Case-bearer	<i>Coleophora laricella</i>	1						
Large nutmeg	<i>Apamea anceps</i>	1				*		
Latticed heath	<i>Chiasmia clathrata</i>	1				*		
Least Carpet	<i>Idaea rusticata</i>	2						
<i>Limonia nigropunctata</i>	<i>Limonia nigropunctata</i>	1						
Mere Wainscot	<i>Photedes fluxa</i>	2						
Mottled rustic	<i>Caradrina morpheus</i>	1				*		
Mouse moth	<i>Amphipyra tragopoginis</i>	1				*		
Mullein wave	<i>Scopula marginepunctata</i>	1				*		
Ochreous Pearl	<i>Anania crocealis</i>	1						
Orange Footman	<i>Eilema sororcula</i>	1						
Pale eggar	<i>Trichiura crataegi</i>	1				*		
Pale Feathered Bright	<i>Incurvaria pectinea</i>	1						
Powdered quaker	<i>Orthosia gracilis</i>	1				*		
Purple emperor	<i>Apatura iris</i>	11						
Red-headed Pigmy	<i>Stigmella ruficapitella</i>	2						
Red-tipped Clearwing	<i>Synanthedon formicaeformis</i>	2						
Rolled Grass-moth	<i>Pediasia contaminella</i>	1						



Rose Carl	<i>Coptotriche angusticollis</i>	1						
Rosy Knot-horn	<i>Oncocera semirubella</i>	1						
Rosy rustic	<i>Hydraecia micacea</i>	1				*		
Ruddy Carpet	<i>Catarhoe rubidata</i>	1						
Sallow	<i>Cirrhia icteritia</i>	1				*		
Scarce Sloe Pigmy	<i>Stigmella prunetorum</i>	1						
Sedge Fanner	<i>Glyphipterix forsterella</i>	1						
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	2				*		
Shaded Case-bearer	<i>Coleophora potentillae</i>	2						
Shoulder-striped Wainscot	<i>Leucania comma</i>	1				*		
Small Birch Purple	<i>Eriocrania salopiella</i>	1						
Small eggar	<i>Eriogaster lanestris</i>	9						
Small heath	<i>Coenonympha pamphilus</i>	3				*		
Small square-spot	<i>Diarsia rubi</i>	1				*		
Spindle Knot-horn	<i>Nephopterix angustella</i>	1						
The lackey	<i>Malacosoma neustria</i>	1				*		
Tufted Blackthorn Moth	<i>Luquetia lobella</i>	1						
Viburnum Midget	<i>Phyllonorycter lantanelle</i>	7						
Virgin Pigmy	<i>Ectoedemia argyropeza</i>	1						
White admiral	<i>Limenitis camilla</i>	34				*		
White ermine	<i>Spilosoma lubricipeda</i>	1				*		
White letter hairstreak	<i>Satyrus w-album</i>	20				*		
Willow Tortrix	<i>Epinotia cruciana</i>	1						
Wood white	<i>Leptidea sinapis</i>	6				*		
Mammals								
Badger	<i>Meles meles</i>	4						
Brown hare	<i>Lepus europaeus</i>	3				*		
Chinese Water Deer	<i>Hydropotes inermis</i>	1						
Hedgehog	<i>Erinaceus europaeus</i>	14				*		
Otter	<i>Lutra lutra</i>	1	*	*	*	*		
Plants								
Bluebell	<i>Hyacinthoides non-scripta</i>	8			*			
Cat-mint	<i>Nepeta cataria</i>	1						



Dwarf spurge	<i>Euphorbia exigua</i>	1						
Field scabious	<i>Knautia arvensis</i>	3						
Hoary plantain	<i>Plantago media</i>	4						
Ragged-Robin	<i>Silene flos-cuculi</i>	1						
Wood-sorrel	<i>Oxalis acetosella</i>	1						

Cable Route Corridor

- 1.3.66 Part of the Upper Nene Valley Gravel Pits SPA lies within the 500m Study Area of the Cable Route Corridor, and the majority of the Cable Route Corridor lies within the 10km SPA Consultation Zone. Two parts of the Upper Nene Valley Gravel Pits SSSI designation also lies within the 500m Study Area of the Cable Route Corridor.
- 1.3.67 One non-statutory designated site (Earls Barton Meadow LWS) was partially located within the Cable Route Corridor. Ten further LWSs were recorded outside of the Cable Route Corridor itself, but within 500m of the Cable Route Corridor boundary. These are summarised in **Table 21** below. All LWSs are considered to be of **County Importance**.

Table 21: Designated Sites within Study Area (500m) of Cable Route Corridor

Site Name	Area (ha)	Description	Proximity
Earls Barton Meadow LWS	6.09	A floodplain meadow site adjacent to the River Nene, near to gravel extraction. This site has been identified as a potential wildlife site and features six neutral grassland indicators, including one strong indicator and many of the elements of MG4 grassland. Therefore, the site is an out of condition Wildlife Site.	Partially within Cable Route Corridor
Cold Oak Copse LWS	43.4	This LWS is listed on the Northants Ancient Wood inventory, with six ancient woodland indicators recorded.	350m south-west
Ecton Gravel Pits LWS	50.25	Three gravel pits alongside the River Nene, the pits vary in size and shape and provide a mixture of wildlife habitats. The site qualifies as a LWS as 12 wetland indicators were recorded across the site.	390m west
Grendon Lakes LWS	126	A mosaic of wetland habitats and of huge importance to over-wintering birds this site qualifies as a LWS because it contains a variety of species of stonewort amongst other wetland vegetation.	15m east



Site Name	Area (ha)	Description	Proximity
Grendon Lakes North LWS	33.97	A mosaic of wetland habitats including a number of small gravel pits, fragments of wet grassland and mire and good aquatic vegetation. The site qualifies as an LWS due to the presence of ten fen, swamp and marsh indicators within these wetland habitats.	390m south-west
Grendon Quarter Pond LWS	4.39	A large fishing lake that offers good cover, with a fringe of marginal vegetation and a surround of tall trees.	Adjacent to Cable Route Corridor
Wilby Meadows Stream LWS	0.14	A section of the Wilby Brook that flows through farmland on the edge of the village and designated for its water vole colony. The site has been retained as a Wildlife Site as the most recent survey suggests water vole are still present.	60m east
Walgrave East Meadow LWS	6.11	A grassy meadow with a good selection of meadow plants and two streams fringed with rush pasture. The site qualifies as a LWS with ten neutral grassland indicator species recorded (one rare).	135m west
Hardwick Wood LWS	39.93	An ancient woodland site that has been mainly replanted with a mixture of oak and spruce. This site was re-assessed using the new criteria in 2006. Based on previous surveys it qualifies as a LWS as 20 ancient woodland indicators (alongside 21 neutral grassland indicators) were recorded.	70m east
Earl's Barton Carr LWS	20	A large area of wet woodland on former gravel workings adjacent to the Nene. Although declining in quality the site easily qualifies as a LWS due to the presence of a large area of wet woodland habitat and the presence of ten fen, swamp, marsh indicator species.	200m east
Long Furlong and Old Pastures LWS	69.9	A large area of replanted ancient woodland, with 16 ancient woodland indicators recorded.	20m west

Table 22: Species Records Within Study Area (500m) of Cable Route Corridor

Common name	Scientific name	Co	unt	EU	pro	EU	nrio	WA	CA	NE	RC	Am	ber	Red	bird
-------------	-----------------	----	-----	----	-----	----	------	----	----	----	----	----	-----	-----	------



Amphibians								
Common toad	<i>Bufo bufo</i>	1				*		
Great crested newt	<i>Triturus cristatus</i>	3	*	*	*	*		
Bats								
Brown long-eared bat	<i>Plecotus auritus</i>	8	*		*	*		
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	10	*		*			
Noctule	<i>Nyctalus noctula</i>	1	*		*	*		
Pipistrelle species	<i>Pipistrellus sp.</i>	8	*		*	*		
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	3	*		*	*		
Birds								
Barn owl	<i>Tyto alba</i>	3	*		*			
Black-headed gull	<i>Chroicocephalus ridibundus</i>	8	*	*			*	
Bullfinch	<i>Pyrrhula pyrrhula</i>	5					*	
Cetti's warbler	<i>Cettia cetti</i>	14			*			
Common gull	<i>Larus canus</i>	2	*	*			*	
Common tern	<i>Sterna hirundo</i>	3	*	*			*	
Coot	<i>Fulica atra</i>	4	*	*				
Cormorant	<i>Phalacrocorax carbo</i>	4	*					
Cuckoo	<i>Cuculus canorus</i>	13				*		*
Dunnock	<i>Prunella modularis</i>	5	*				*	
Golden plover	<i>Pluvialis apricaria</i>	1	*	*				
Grasshopper warbler	<i>Locustella naevia</i>	1				*		*
Greenfinch	<i>Chloris chloris</i>	4	*					*
Grey heron	<i>Ardea cinerea</i>	2	*					
Grey partridge	<i>Perdix perdix</i>	3		*		*		*
Grey wagtail	<i>Motacilla cinerea</i>	3	*				*	
Hobby	<i>Falco subbuteo</i>	16	*		*			
House sparrow	<i>Passer domesticus</i>	6				*		*
Kestrel	<i>Falco tinnunculus</i>	2	*				*	
Kingfisher	<i>Alcedo atthis</i>	2	*	*	*			



Lapwing	<i>Vanellus vanellus</i>	1	*	*		*		*
Lesser black-backed gull	<i>Larus fuscus</i>	4	*	*			*	
Linnet	<i>Linaria cannabina</i>	4	*					*
Little egret	<i>Egretta garzetta</i>	2	*	*				
Mallard	<i>Anas platyrhynchos</i>	6	*	*			*	
Pochard	<i>Aythya ferina</i>	2	*	*				*
Red kite	<i>Milvus milvus</i>	9	*	*	*			
Reed bunting	<i>Emberiza schoeniclus</i>	4	*			*	*	
Rook	<i>Corvus frugilegus</i>	8		*			*	
Shelduck	<i>Tadorna tadorna</i>	2	*				*	
Skylark	<i>Alauda arvensis</i>	12		*		*		*
Snipe	<i>Gallinago gallinago</i>	1	*	*			*	
Song thrush	<i>Turdus philomelos</i>	2		*			*	
Sparrowhawk	<i>Accipiter nisus</i>	4	*				*	
Starling	<i>Sturnus vulgaris</i>	3		*				*
Stock dove	<i>Columba oenas</i>	3		*			*	
Swift	<i>Apus apus</i>	4						*
Tree sparrow	<i>Passer montanus</i>	1				*		*
Willow warbler	<i>Phylloscopus trochilus</i>	4					*	
Woodpigeon	<i>Columba palumbus</i>	16		*			*	
Wren	<i>Troglodytes troglodytes</i>	4	*				*	
Yellowhammer	<i>Emberiza citrinella</i>	8	*			*		*
Invertebrates								
Cinnabar	<i>Tyria jacobaeae</i>	5				*		
Grizzled skipper	<i>Pyrgus malvae</i>	1				*		
Small heath	<i>Coenonympha pamphilus</i>	12				*		
White-clawed crayfish	<i>Austropotamobius pallipes</i>	1		*	*	*		
Wood white	<i>Leptidea sinapis</i>	71				*		
Mammals								
Badger	<i>Meles meles</i>	23						
Brown hare	<i>Lepus europaeus</i>	2				*		
Hedgehog	<i>Erinaceus europaeus</i>	5				*		
Otter	<i>Lutra lutra</i>	2	*	*	*	*		

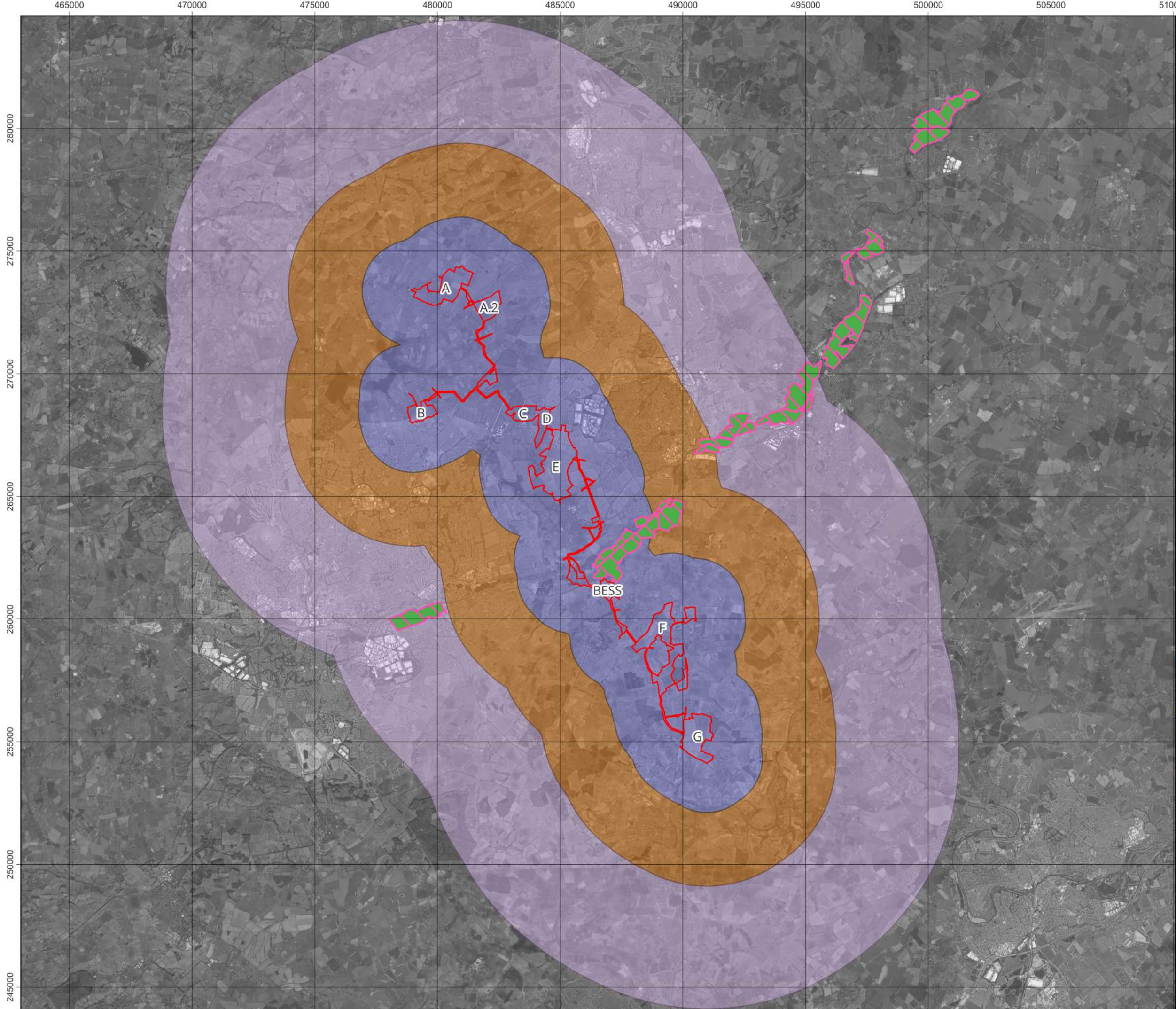


Polecat	<i>Mustela putorius</i>	1				*		
Water vole	<i>Arvicola amphibius</i>	6			*	*		



References

- Ref.1 CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.2 – Updated April 2022. CIEEM, Winchester.
- Ref.2 Available at: [REDACTED]
[REDACTED]
[REDACTED]
- Ref.3 Available at: [REDACTED]
[REDACTED]
- Ref.4 Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747. Available at: [REDACTED]
- Ref.5 Northamptonshire Biodiversity Action Plan (3rd edition, 2015-2020). Available at: <https://www.northnorthants.gov.uk/conservation-and-protection/biodiversity> [Accessed 15th April 2024].
- Ref.6 Upper Nene Valley Gravel Pits Special Protection Area Supplementary Planning Document - August 2015. Available at: <https://www.northampton.gov.uk/info/200205/planning-for-the-future/2105/upper-nene-valley-gravel-pits-spa-spd> [Accessed 28th Feb 2024]



Title: Figure 9.3.1 International Statutory Designated Sites within 10km of the Order Limits

Document: Volume 2
Appendix 9.3 - Desk Study
Environmental Statement (ES)

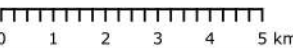
- Legend:
- Order Limits
 - Upper Nene Valley Gravel Pits Ramsar
 - Upper Nene Valley Gravel Pits Special Protection Area (SPA)
 - 2km Buffer
 - 5km Buffer
 - 10km Buffer

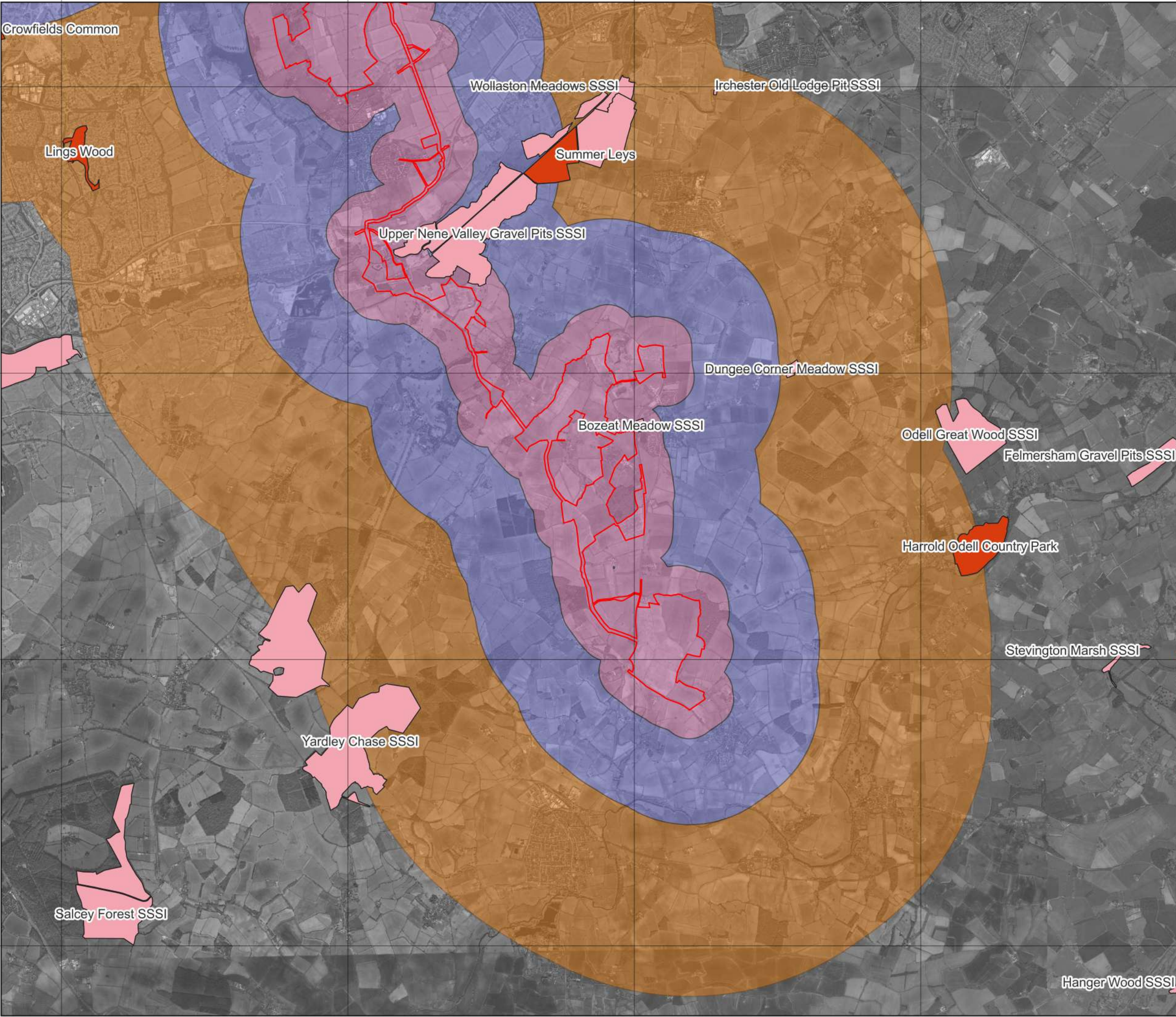
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Drawing no.: CW.ES.DS.1

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:144757 @ A3





Title: Figure 9.3.3 National and Local Statutory Designated Sites within 5km of the Order Limits (2 of 2)

Document: Volume 2
Appendix 9.3 - Desk Study
Environmental Statement (ES)

- Legend:
- Order Limits
 - Local Nature Reserves (LNRs)
 - Sites of Special Scientific Interest (SSSIs)
 - 500m Buffer
 - 2km Buffer
 - 5km Buffer

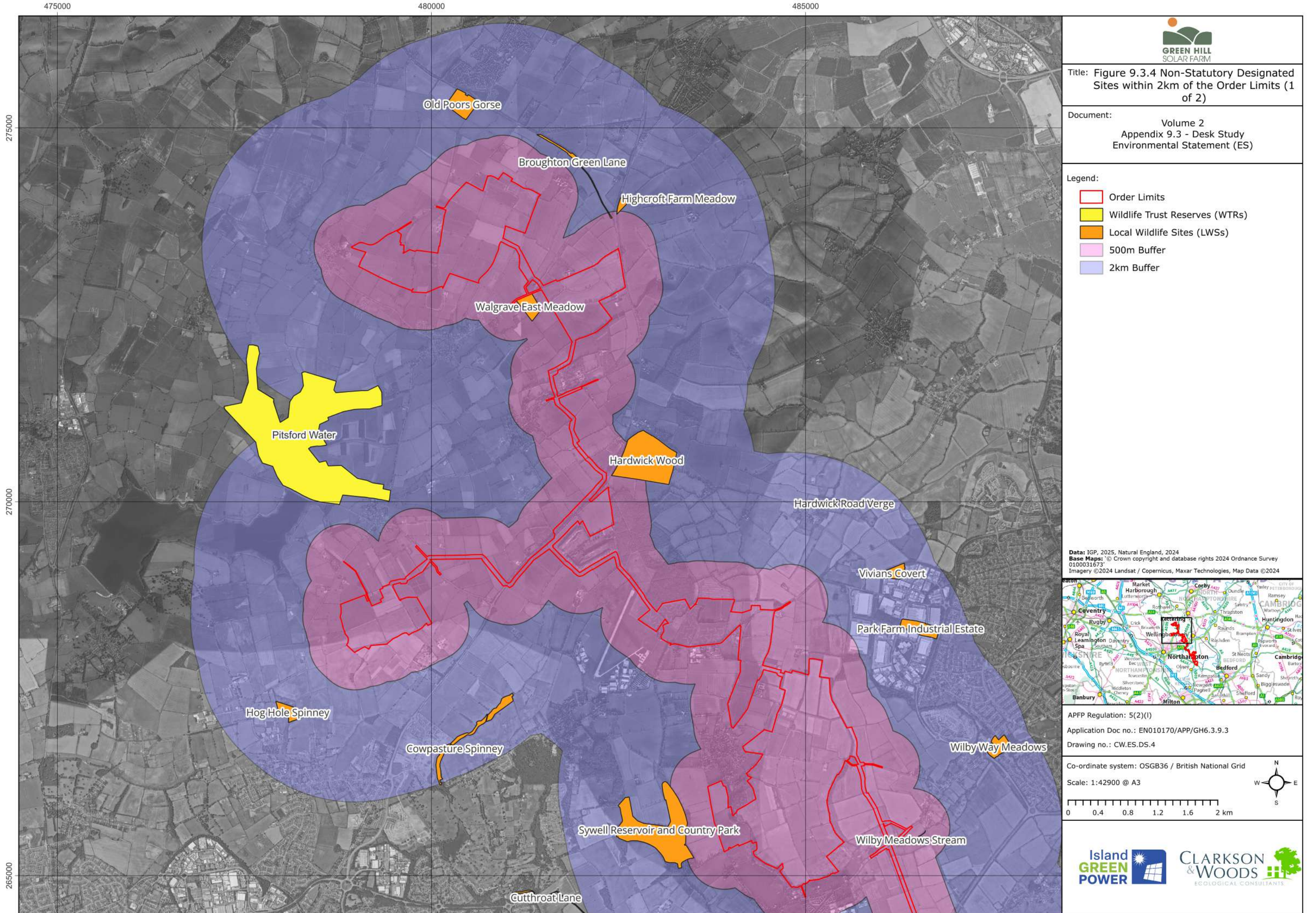
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APFP Regulation: 5(2)(l)
Application Doc no.: EN010170/APP/GH6.3.9.3
Drawing no.: CW.ES.DS.3

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:63210 @ A3





Title: Figure 9.3.4 Non-Statutory Designated Sites within 2km of the Order Limits (1 of 2)

Document: Volume 2
Appendix 9.3 - Desk Study
Environmental Statement (ES)

- Legend:
- Order Limits
 - Wildlife Trust Reserves (WTRs)
 - Local Wildlife Sites (LWSs)
 - 500m Buffer
 - 2km Buffer

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Application Doc no.: EN010170/APP/GH6.3.9.3
Drawing no.: CW.ES.DS.4

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:42900 @ A3



485000

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Cutthroat Lane

Hardwater Meadows

Summer Leys
Summer Leys

Earls Barton Lock Lake

Earl's Barton Carr

Grendon Lakes North

Grendon Lakes

Ecton Gravel Pits

Earls Barton Meadow

Grendon Quarter Pond

The Basin

Scotland Pond

Castle Ashby Woodland

Engine Pond

Menagerie Pond

Castle Ashby Parkland Par Pond

Warren Ponds

Yardley Brook Field

Bozeat Verge

Bozeat Glebe Meadow

Bozeat Cemetery

Cold Oak Copse

Horn Wood

Templegrove Spinney

Bozeat Wood

The Slipe

Long Furlong and Old Pastures

Nun Wood

Threshire's Wood

Lavendon Wood

Snip Wood



Title: Figure 9.3.5 Non-Statutory Designated Sites within 2km of the Order Limits (2 of 2)

Document:

Volume 2
Appendix 9.3 - Desk Study
Environmental Statement (ES)

Legend:

- Order Limits
- Biological Notification Sites (BNSs)
- Wildlife Trust Reserves (WTRs)
- Local Wildlife Sites (LWSs)
- County Wildlife Sites (CWSs)
- 500m Buffer
- 2km Buffer

Data: IGP, 2025, Natural England, 2024
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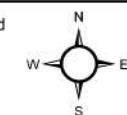
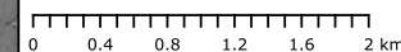
APFP Regulation: 5(2)(l)

Application Doc no.: EN010170/APP/GH6.3.9.3

Drawing no.: CW.ES.DS.5

Co-ordinate system: OSGB36 / British National Grid

Scale: 1:45045 @ A3



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485000

275000

270000

265000



Title:
Figure 9.3.6 Priority Habitats within 2km of
the Order Limits (1 of 2)

Document:
Volume 2
Appendix 9.3 - Desk Study
Environmental Statement (ES)

- Legend:
- Order Limits
 - Deciduous woodland
 - Good quality semi-improved grassland
 - Lowland fens
 - Lowland meadows
 - No main habitat but additional habitats present
 - Traditional orchard
 - 2km Buffer

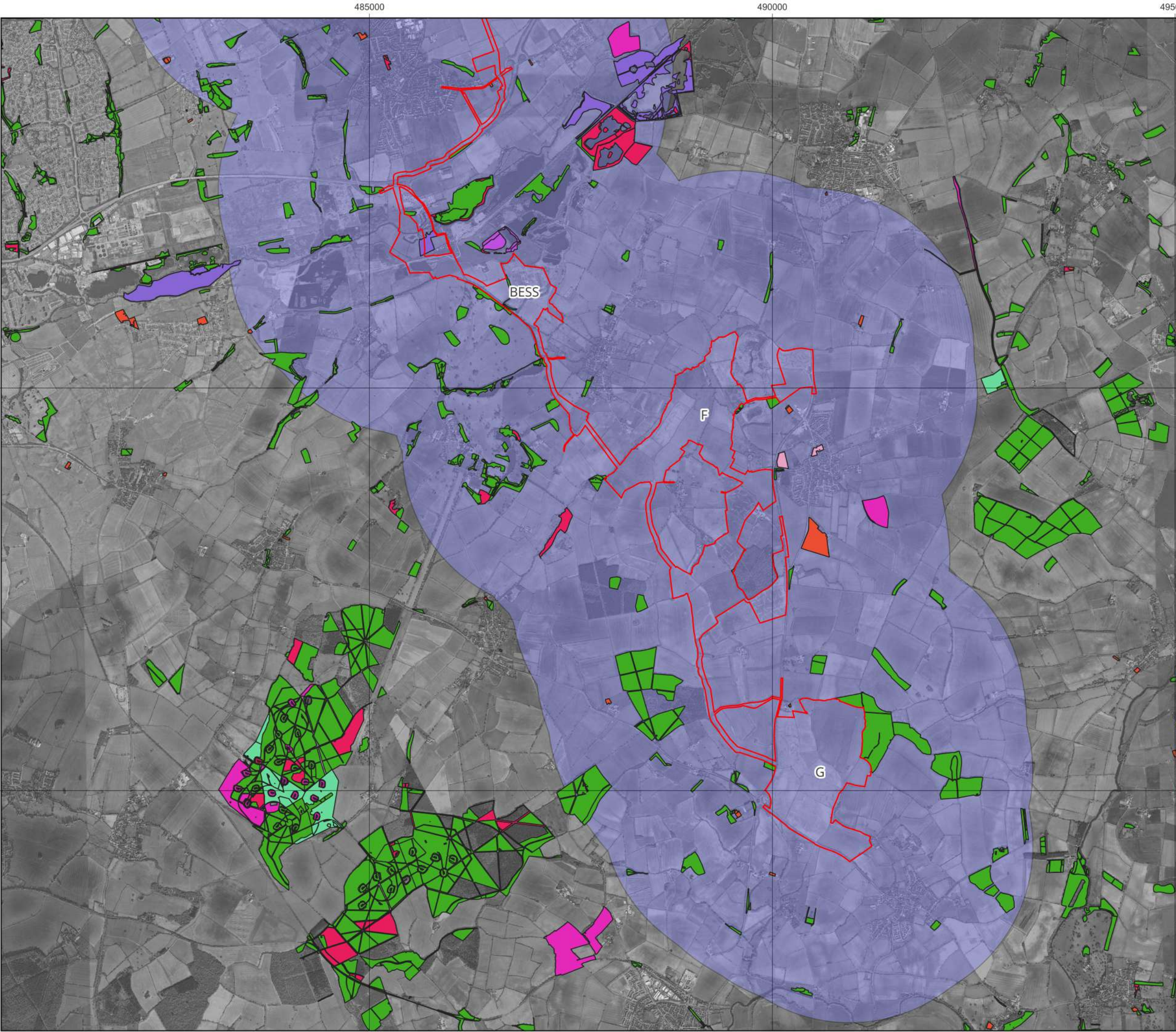
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Application Doc no.: EN010170/APP/GH6.3.9.3
Drawing no.: CW.ES.DS.6

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:42777 @ A3





Title:
Figure 9.3.7 Priority Habitats within 2km of
the Order Limits (2 of 2)

Document:
Volume 2
Appendix 9.3 - Desk Study
Environmental Statement (ES)

- Legend:
- Order Limits
 - Coastal and floodplain grazing marsh
 - Deciduous woodland
 - Good quality semi-improved grassland
 - Lowland calcareous grassland
 - Lowland meadows
 - No main habitat but additional habitats present
 - Reedbeds
 - Traditional orchard
 - 2km Buffer

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APFP Regulation: 5(2)(l)
Application Doc no.: EN010170/APP/GH6.3.9.3
Drawing no.: CW.ES.DS.7

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:44900 @ A3
0 0.4 0.8 1.2 1.6 2 km

