



Preliminary Ecological Appraisal

Bridge Farm Nurseries Ltd & Clay Lake Farm Ltd, Land off A16, Spalding
Presented to Bridge Farm Nurseries Ltd & Clay Lake Farm Ltd

Issued: October 2017

Delta-Simons Project No. 17-1096.01



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Report Details

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About us

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Executive Summary

Scope of Works	Delta-Simons Environmental Consultants Ltd was instructed by Robert Doughty Consultancy Ltd on behalf of Bridge Farm Nurseries Ltd & Clay Lake Farm Ltd ('the Client') to undertake a Preliminary Ecological Appraisal (PEA) of an area of land situated east of the A16 in Spalding, Lincolnshire (the Site'). The PEA comprised a Phase 1 Habitat Survey and protected species assessment, which was completed on 27 th September 2017. The survey was undertaken to inform a planning application.
Current Site Status	The Site comprises three arable fields with boundary ditches. Sections of hedgerow were present along the south-western and south-eastern boundaries with further hedgerows and trees across the Site centre.
Proposed Development	It is understood that the proposed development will comprise a new glasshouse facility and access from Clay Lake Bank.
Results:	
Habitats on-Site	The following habitats are found on the Site: ▲ Scattered Scrub; ▲ Broadleaved Scattered Trees; ▲ Arable; ▲ Intact Species-Poor Hedgerow; ▲ Defunct Species-Poor Hedgerow; ▲ Fence; ▲ Dry Ditch; and ▲ Hardstanding.
Habitats adjoining the Site	The Site is situated within a largely agricultural setting. The Site is bordered by Clay Lake Bank to the north, with ditches and arable land beyond, whilst further arable land extends to the south and east. An arable field and the A16 with adjacent ditches lie to the west and north-west of the Site boundary. Decoy Farm Pit Site of Nature Conservation Interest (SNCI) is situated approximately 350 m to the south of the Site.
Potential for Protected/ Notable Species	Suitable nesting bird habitat was found on Site within the scattered broadleaved trees, intact and defunct species-poor hedgerow and scrub. Dependent on the crop and future management, the arable habitat may provide suitable habitat for farmland ground nesting birds.
Requirement for Further Surveys	The findings of the initial Site assessment are considered sufficient to inform the development proposals and no further survey work regarding protected and priority species and habitats is deemed necessary at this time.
Construction and Operational Phase Recommendations and Enhancement Measures	The detailed recommendations set out within the Report are summarised below: <u>Nesting Birds</u> Any vegetation removal work, should be performed either before early March or after late August in order to avoid impacting any birds during the main period in which they are nesting. If, however, works are deemed necessary during the nesting period an

	experienced ecologist will be required to check the Site habitats to confirm that no nesting birds will be affected by the proposed works. <u>Bats</u> The detailed lighting design on-Site should be functional and directional and in line with current guidance. It should avoid excessive up-lighting and light spill. The vegetation retained or planted on-Site should be unlit, and lighting onto off-Site habitats should be prevented. <u>General</u> All works on-Site should follow an appropriate working methodology to avoid inadvertent damage to any habitats and associated fauna retained on, or surrounding, the Site. As such any retained trees both on-Site and adjacent to the Site, should be protected to BS5837 (2012) during the development works, through the use of protective barriers, and other means, where necessary. All works should be undertaken to current Pollution Prevention Guidance (PPG). Although formally withdrawn, the Environment Agency PPG 5 remains the industry best practice until replaced. <u>Enhancements</u> Following the issue of the National Planning Policy Framework (NPPF, 2012) and the National Planning Practice Guidance (NPPG, 2016), by the Department for Communities and Local Government (DCLG), <i>“The planning system should contribute to and enhance the natural and local environment by: Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity...”</i>; and, therefore, we recommend inclusion of the enhancements detailed in Section 6.0, Recommendations.
This Preliminary Ecological Appraisal Executive Summary is intended as a summary of the assessment of the Site based on information received by Delta-Simons at the time of production. This Executive Summary should be read in conjunction with the full Report.	

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1.0 Introduction

1.1 Purpose and Scope of the Survey

Delta-Simons Environmental Consultants Ltd was instructed by Robert Doughty Consultancy Ltd on behalf of Bridge Farm Nurseries Ltd & Clay Lake Farm Ltd ('the Client') to undertake a Preliminary Ecological Appraisal (PEA) of land east of the A16 to the south-east of Spalding in Lincolnshire (hereafter referred to as the "Site"). In addition, public land immediately surrounding the Site was surveyed, where access allowed. The survey was undertaken to inform a planning application for a new glasshouse facility at the Site.

The aims of the PEA were to:

- ▲ Identify habitat types on the Site using the standard methodology devised by the Joint Nature Conservation Committee (JNCC, 2010);
- ▲ Identify areas of potential for protected species/ species of conservation concern within the Site;
- ▲ Identify areas of potential for protected species/ species of conservation concern immediately outside the Site;
- ▲ Identify any invasive plant species included within Schedule 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended);
- ▲ Prepare a Phase 1 Habitat Plan of the Site; and
- ▲ Propose recommendations for further surveys, where appropriate.

The Site location and the survey area are shown in Figure 1.

1.2 Site Description

The Site is centred at Ordnance Survey (OS) grid reference TF 25833 20156, to the south-east of Spalding in Lincolnshire. The Site covers an area of 39.5 hectares (ha) and comprises three arable fields bordered by dry ditches, sections of hedgerow and scattered trees. An area of hardstanding access lies to the north, with a short section of grassland margin also present. The area surveyed included connected ditches up to 30 m from the Site boundary. The Site did not support standing water at the time of the survey.

The Site is situated within a largely agricultural setting. The Site is surrounded by Clay Lake Bank road to the north with ditches and arable land beyond, whilst further arable land extends to the south and east. An arable field and the A16 with adjacent ditches lie to the west and north-west of the boundary.

The Site layout is shown in Figure 2.

1.3 Proposed Development

It is understood that the Site is to be developed into a new glasshouse facility with access from Clay Lake Bank to the north (Figure 3). The facility will require the removal of the central vegetation including the hedgerow, scrub and trees with further loss possible around the field edges. A reed bed is to be incorporated into the north-eastern extent of the Site. .

2.0 Legislation & Policy Summary

Specific habitats and species of relevance to the Site receive legal protection in the United Kingdom under various pieces of legislation, including:

- ▲ National Planning Policy Framework (NPPF, 2012);
- ▲ The Conservation of Habitats and Species Regulations 2010 (as amended);
- ▲ The Wildlife and Countryside Act (WCA) 1981 (as amended);
- ▲ The Countryside and Rights of Way (CROW) Act 2000;
- ▲ The Natural Environment and Rural Communities Act (NERC) 2006;
- ▲ The Hedgerow Regulations 1997; and
- ▲ The Protection of Badgers Act 1992.

Where relevant, this appraisal takes account of the legislative protection afforded to specific habitats and species. The legislation surrounding each faunal or floral species or group is provided in Appendix A and references are included in Appendix B.

3.0 Methodology

The PEA has been undertaken to the following current guidance: CIEEM (2013), Guidelines for Preliminary Ecological Appraisal; and BS 42020: 2013 Biodiversity. Code of Practice for Planning and Development.

3.1 Desk Study

Data search

A data search was undertaken to identify statutory and non-statutory designated sites and records of protected and notable species.

In September 2017, available records of protected and notable species were collated from the local record centre, Lincolnshire Environmental Records Centre (LERC), along with the non-statutory designated sites within a 2 km radius of the Site centre. A search for international and European statutory designated sites for nature conservation within 6 km, and UK statutory designated sites for nature conservation within 2 km, of the Site centre was also undertaken using the Multi-Agency Geographic Information for the Countryside (MAGIC) website.

In addition, free and publicly accessible Ordnance survey maps and aerial photographs were searched for waterbodies on, or within, 500 m of the Site boundary. This information has been used to assess the Site for its potential for amphibians, the results of which are found in Section 4.1.

3.2 Survey

The habitats on the Site and on adjoining land to 30 m, were surveyed on 27th September 2017 by two Delta-Simons ecologists. Where access was not permitted to the surrounding land, it was visually assessed from the Site boundary.

The following was undertaken during the survey:

- ▲ Habitats were classified and mapped using the standard JNCC Phase 1 habitat classification and methodology (JNCC, 2010). Dominant plant species were recorded in each different habitat. The plant species nomenclature followed that of Stace (2010);
- ▲ Terrestrial habitats on-Site were surveyed for the presence of, or potential for the following protected or notable species:
 - Birds: All species with special reference to key species (such as those on Schedule 1 of the WCA, 1981 (as amended), England Biodiversity Priority Species (EBP) (previously UK Biodiversity Action Plan (UKBAP) species) and Birds of Conservation Concern (BoCC) (Eaton et al., 2015);
 - Amphibians: Great Crested Newt (GCN) *Triturus cristatus*;
 - Reptiles: common lizard *Zootoca vivipara*, adder *Vipera berus*, slow worm *Anguis fragilis* and barred grass snake *Natrix helvetica*
 - Mammals: bat (all species) and badger *Meles meles*.
- ▲ Aquatic habitats were assessed for their potential to support and any signs of otter *Lutra lutra*, water vole, *Arvicola amphibius* white clawed crayfish *Austropotamobius pallipes*, GCN, and grass snake.
- ▲ Widespread terrestrial and aquatic invasive species listed on Schedule 9 of the WCA 1981 (as amended) were recorded. These are Japanese knotweed, *Fallopia japonica* giant knotweed *Fallopia sachalinensis* hybrid knotweed, *Fallopia baldschuanica*, giant hogweed *Heracleum mantegazzianum*, and Himalayan balsam *Impatiens glandulifera*, and New Zealand pygmyweed *Crassula helmsii*.

3.2.1 Birds

Visual and/ or audible identification was made of any birds on the Site or flying over the Site during the survey period. Suitable habitat was, where possible, inspected and any evidence of nesting activity was recorded.

3.2.2 Amphibians

The terrestrial habitats at the Site were assessed for their potential to support amphibian species and a desk search was undertaken (see Section 3.1).

3.2.3 Reptiles

A cold-searching method was employed which involved identifying suitable habitats for reptiles within areas on-Site and immediately off-Site. Natural and artificial refugia (logs, large debris and so on) were lifted and examined for the presence of reptiles and their field signs (such as shed skins).

3.2.4 Bats

The Site was assessed for its suitability to support roosting and foraging bats (see Appendix C).

3.2.5 Badgers

The Site was inspected for signs of badger activity, including sett entrances, latrines, footprints, runs through vegetation, guard hairs caught on fences and snuffle holes, and its suitability to support this species assessed.

3.2.6 Otters

Suitable habitats for otter on-Site and immediately off-Site were identified and assessed.

3.2.7 Water Voles

Suitable habitats for water vole on-Site and immediately off-Site were identified and assessed.

3.2.8 Other Protected or Notable Species

Where applicable, during the survey, evidence was recorded of any other protected or notable species, including England Biodiversity Priority (EBP) species. Habitats with the potential to support additional protected or notable species were also recorded, if present, during the survey.

3.2.9 Invasive Species

The occurrence of any invasive plant species on the Site was identified in terms of species and stand size.

3.2.10 Hedgerows

An assessment of any hedgerows at the Site, which will be adversely affected by the proposed development, was undertaken using the standard hedgerow survey methodology outlined in the Hedgerow Regulations 1997. The purpose of the assessment was to ascertain whether the hedgerows are classified as 'nationally important' and, therefore, protected under the Hedgerow Regulations 1997. The assessment involves a scoring system which relies on particular features, number of woody and floral species present within the hedgerow habitat, and the age of the hedgerow.

3.2.11 Limitations to the Survey

There were no limitations to the survey in terms of access, timing and weather conditions.

The baseline conditions described in this report were accurate at the time at which the survey was undertaken. Should at least two years pass by, and/or conditions on-Site/ Site usage change prior to the commencement of works, an update survey should be undertaken.

4.0 Results

4.1 Desk Study

The pertinent information from the data search is set out below for designated sites, whilst species are discussed in the relevant species sections. Full results of the LERC data search are available to the Client on request.

Designated Sites

No internationally designated sites lie within 6 km of the Site. The results of the MAGIC data search and the LERC desk search indicate that there is one national statutory designated Site, Cowbit Wash Site of Special Scientific Interest (SSSI) located 1.43 km south-west, and six non-statutory designated sites within 2 km of the Site centre. The closest non-statutory Site is Decoy Farm Pit 350 m south of the Site. Tables 1 and 2 set out the designated sites identified.

Table 1: National Statutory Designated sites within 2 km of the Site centre

Site Name	Designation	Distance and Direction from Site Boundary	Designation Criteria Summary
Cowbit Wash	SSSI	1.43 km south-west of the Site.	Geological interest

Table 2: Non-Statutory Designated sites within 2 km of the Site centre

Site Name	Designation	Distance and Direction from Site Boundary	Designation Criteria Summary
Decoy Farm Pit	Site of Nature Conservation Interest (SNCI)	350 m south of the Site.	No information for this Site could be found.
Coronation Channel	Local Wildlife Site (LWS)	950 m north of the Site at its closest.	A 4 km man-made channel to reduce potential flooding around Spalding. It includes grassland, trees and scrub along the banks.
Arnolds Meadow	LWS and Lincolnshire Wildlife Trust Reserve (LWT)	1.15 km north of the Site.	The LWS features areas of native plantation woodland, hedgerows, grassland, marsh and open water.
New River	LWS	1.6 km west of the Site.	Covering over 16 km, the LWS includes the drain and bankside grassland and supports a high level of aquatic plant diversity.
River Welland in Spalding	LWS	1.6 km north-west of the Site.	The LWS includes 3.5 km of river and the adjacent habitats. It is known to support aquatic vegetation and waterside species.

River Corridor	Welland	LWS	1.65 km west of the Site.	Featuring the river, adjacent grassland and three ponds. The LWS supports diverse invertebrate populations and grass snake and frequent bird observations have been noted.
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The Site lies within the Impact Zone of Cowbit Wash SSSI which lists potential impacts from the following developments; cables, transport and aviation; quarries; landfill; and large infrastructure, such as warehousing and industry where internal floorspace in 1,000m² or more. Although plans have yet to be finalised, it is anticipated that any structure would be in excess of 1,000m², however, land use will remain agricultural.

4.2 Survey

4.2.1 Habitats on Site

The Site is characterised by three arable fields with boundary ditches, sections of hedgerow present along the south-western and south-eastern boundaries with further hedgerow and scattered scrub across the Site centre.

Figure 2 shows the extent of habitat types and boundary features. Descriptions of the habitat types and dominant plant species found at the Site are provided below. Habitat descriptions and codings are by broad habitat type, as listed in the Phase 1 Habitat Survey Manual (JNCC, 2010). Photographs of the Site survey are located in Appendix D.

Habitats recorded on Site are:

Scattered Scrub

Along the southern boundary was scattered hawthorn *Crataegus monogyna* and elder *Sambucus nigra* scrub with occasional dog rose *Rosa canina*, likely to be remnant of a hedgerow. Further scattered hawthorn and elder was present along the central dry ditch, with a further section of hawthorn present along the north-eastern Site boundary.

Scattered Broadleaved Trees

Along the central ditch running east to west were a small number of scattered broadleaved trees (Photograph 1) including semi-mature ash trees *Fraxinus excelsior*, a walnut *Juglans regia* and a crack willow *Salix fragilis* which are likely remnant of an outgrown hedgerow. A further overhanging immature cherry *Prunus* sp. tree was present just off-Site from the north-west boundary.

Poor Semi-Improved Grassland

Within the field edge to the north of the Site was a small area of grassland that had been recently cut to 15 cm with cow parsley *Anthriscus sylvestris*, cock's-foot grass *Dactylis glomerata*, false oat grass *Arrhenatherum elatius*, perennial rye grass *Lolium perenne* and bristly oxtongue *Helminthotheca echioides* all abundant and occasional field speedwell *Veronica persica*, spear thistle *Cirsium vulgare*, ribwort plantain *Plantago lanceolata*, hogweed *Heracleum sphondylium*, broadleaved dock *Rumex obtusifolius*, groundsel *Senecio vulgaris*, meadow cranesbill *Geranium pratense*, Yorkshire fog *Holcus lanatus*, common nettle *Urtica dioica* and oilseed rape *Brassica napus*.

Arable

The two northern fields had recently been harvested and contained stubble from a previous crop (Photograph 2) whilst the southern field contained a young winter crop.

Intact Species-Poor Hedgerow

Along the south-western boundary on the banks of the dry ditch was a hawthorn hedgerow with occasional elder and bramble *Rubus fruticosus* agg. (Photograph 3). It stood approximately 4 m high and 3 m wide. On the south-eastern boundary was a section of hedgerow approximately 4 m high located on the top of the eastern

bank of the ditch, it was dominated by hawthorn with occasional dog rose. North of this was additional hawthorn hedgerow with occasional elder and wych elm *Ulmus glabra*, and a further section comprising hawthorn with occasional elder.

Defunct Species-Poor Hedgerow

A short section of defunct hedgerow containing hawthorn was present towards the west on the banks of the central dry ditch.

Fence

A short section of wooden post and rail fencing extended along the north-western Site boundary.

Dry Ditch

Extending around the field boundaries were a series of dry ditches. Along the eastern boundary was a recently managed steep sided ditch, approximately 3 m from the shoulder to the toe of the banks. The base had been recently cleared and comprised exposed bare earth (Photograph 4). The northern ditches had grassed banks, of a similar species composition as the field edges, whilst the channel was choked with common reed *Phragmites australis* (Photograph 5). The ditch dividing the northern two fields had recently been cut and contained limited common reed within the base, as had the ditch to the north-west. The central ditch was shallow and contained common nettle in the east and patchy common reed towards the west. In the south-west was a 2 m deep dry ditch supporting occasional common nettle within it. The southern ditch on-Site was a 2 m wide dry ditch with v shaped banks dominated in places by common nettle (Photograph 6).

Hardstanding

In the north of the Site was a small area of hardstanding used for access from Clay Lake Bank road.

4.2.2 Habitats immediately surrounding the Site

The Site is situated within a largely agricultural setting. The Site is surrounded by Clay Lake Bank road to the north with ditches and arable land beyond, whilst further arable land extends to the south and east. An arable field and the A16 with adjacent ditches lie to the west and north-west of the Site boundary. The ditches were surveyed up to 30 m from the Site boundary and found to support habitat consistent to that on-Site.

4.3 Notable and Protected Species Assessment Relevant to the Site

Birds

The data centre provided extensive bird records within 2 km of the Site centre. Four birds listed on Schedule 1 of the WCA (1981, as amended) have been recorded within 2 km of the Site centre in the last 10 years which are considered potential receptors for the proposed development, these include:

- ▲ Two records of marsh harrier *Circus aeruginosus* with the closest 1.9 km south of the Site in 2014;
- ▲ One record of hobby *Falco Subbuteo* 1.2 km north of the Site in 2007;
- ▲ One record of red kite *Milvus milvus* 500 m north of the Site in 2015; and
- ▲ Eight records of barn owl *Tyto alba* with the closest and most recent four noted 500 m north of the Site in 2015.

Thirteen birds listed on the Red List of BoCC were recorded within 2 km of the Site centre in the last 10 years, those most likely to utilise the habitats at the Site include: Lesser redpoll *Carduelis cabaret*, skylark *Alauda arvensis*, corn bunting *Emberiza calandra*, yellowhammer *Emberiza citrinella*, linnet *Carduelis cannabina*, lapwing *Vanellus vanellus*, grey partridge *Perdix perdix*, redwing *Turdus iliacus* and fieldfare *Turdus pilaris*.

Habitats featured on the Site suitable for nesting birds, included scattered broadleaved trees, hedgerow and scrub. The arable land would provide opportunities for ground nesting species dependent on the crop planted, how much cover it offers and associated management.

Bird species recorded at the time of the survey were buzzard *Buteo buteo*, carrion crow *Corvus corone*, woodpigeon *Columba palumbus*, robin *Erithacus rubecula*, reed bunting *Emberiza schoeniclus*, yellowhammer, pheasant *Phasianus colchicus* and red legged partridge *Alectoris rufa*. No birds listed on Schedule 1 of the WCA (1981) as amended were recorded, however, yellowhammer is listed on the Red List of BoCC (Eaton et al., 2015). It should be noted that this is not a comprehensive inventory of the bird species which may be present at the Site.

Great Crested Newts

The data centre provided no records of GCN within 2 km of the Site from within the last 10 years. Other amphibians including the common frog *Rana temporaria*, common toad *Bufo bufo* and smooth newt *Lissotriton vulgaris* have been recorded 1.2 km north of the Site between 2008-2015.

The habitat on Site provided limited foraging habitat along the edges of the arable fields, and limited hibernation habitat in the form of sections of hedgerow and scrub, which overall provides low quality terrestrial habitat for GCNs. There are numerous ditches in the surrounding area, however all the ditches surveyed were dry at the time of survey and did not provide suitable breeding habitat for GCNs.

A review of OS maps revealed a pond 350 m east of the Site within an area of grassland, however, from aerial views the pond is not visible. The grassland containing the pond lies between two arable fields which are considered to be poor terrestrial habitat for GCN with limited connectivity to the Site via field edges. A second pond also appears on OS maps but not aerial views approximately 490 m east, in the grounds of a property offering suitable terrestrial habitat. A pond is visible on aerial views within the same grounds, however, this appears ornamental with fountains and lies approximately 520 m from the Site boundary, beyond the distance it is anticipated that GCN would disperse, with access to nearby suitable terrestrial habitat, should this species be present.

GCNs are not considered a constraint at this Site and are not considered further within this Report.

Reptiles

Two species of reptile have been recorded within 2 km of the Site in the last 10 years, these are:

- ▲ Two records of slow worm from the same location 430 m north of the Site in 2015; and
- ▲ Six records of grass snake from the same location 1.2 km north of the Site boundary in 2007 and 2008.

No evidence of reptiles was recorded on the Site. The Site provides limited opportunities for reptiles due to the narrow boundary vegetation, and the management of the grassland and ditch banks to a low sward height restricting cover and potential foraging opportunities. The Site lacks the mosaic of habitats needed to support reptiles with the surrounding arable land and roads also restricting the likely dispersal of reptiles onto the Site. Reptiles are not considered to be a constraint at this Site and are not considered further within this Report.

Bats

Eight bat species have been recorded within 2 km of the Site within the last 10 years, including:

- ▲ Ten records of unidentified bats with the closest 800 m south of the Site in 2016;
- ▲ Six records of Daubenton's bat *Myotis daubentonii* with the closest five 1.7 km west of the Site in 2010 and 2013;
- ▲ Six records of noctule bat *Nyctalus noctula* with the closest three 1.7 km west of the Site in 2013;
- ▲ Three records of pipistrelle bat species *Pipistrellus* sp with the closest and most recent 1.5 km south-east of Site in 2012;
- ▲ Four records of Nathusius' pipistrelle *P. nathusii* with the closet three 1.7 km west of Site in 2013;
- ▲ 11 records of common pipistrelle *P. pipistrellus* with the closest five field records 1.7 km west of Site in 2013 and the three closest roost records 800 m north-west of the Site in 2009 and 2010; and
- ▲ Six records of soprano pipistrelle *P. pygmaeus* with the closest three 1.6 km north-west of the Site in 2009 and 2014.

All of the trees at the Site and immediately adjacent to the Site boundaries were immature or semi-mature, and were not found to support any features suitable for roosting bats. No buildings were recorded on Site to offer any roosting potential for bats. In addition, the foraging habitat at the Site was limited to the boundary vegetation. The numerous drains in and around the Site could provide limited foraging and commuting habitat for bats, however they are currently dry and would, therefore, support a limited number of invertebrates for foraging bats. There is no lighting over the majority of the Site, and there is connectivity to the surrounding area via the hedgerows, however, foraging habitat in the surrounding area is similar to that on-Site and is considered generally to be of low quality, with better quality habitat anticipated to be found along the River Welland approximately 870 m to the north of the Site at its closest point.

Badgers

The data centre provided two records of badger, one 1 km from the Site and the second within a 1 km grid square a minimum of 970 m from the boundary (details are confidential due to welfare issues).

The Site did not support any evidence to indicate that badgers were using or inhabiting it. There were no sett entrances, latrines, snuffle holes, mammal runs or badger dung found within the survey area. Evidence of rabbit *Oryctolagus cuniculus* digging and burrows were recorded in the south-west beneath the hedgerow and beneath the south-eastern hedgerow.

The Site can be freely accessed by badger and would provide foraging opportunities for badgers should they be present in the local area.

Otters

A total of 12 records of European otter have been identified within 2 km of the Site, however, no suitable habitat was found for otter in and around the Site due to the lack of water for commuting and foraging. Otters are not considered to be a constraint at this Site and are, therefore, not considered further within this Report.

Water Voles

A total of 41 records of European water vole were provided with the closest from 600 m south-east of the Site in 2015.

Although the surrounding area holds numerous records of water voles, no evidence of water voles was recorded within any of the ditches. The ditches on-Site and connected to it did not hold water at the time of the survey and, in a few cases, appear to have been dry for a number of years given the encroaching grassland and ruderal vegetation. The presence of common reed indicates that the northern, north-western, north-eastern and part of the central ditch may be seasonally damp, however, the recent clearance of the eastern ditch prevented an assessment to be made. Although a number of the ditches were of the ideal 45° angle for burrowing and supported grassed banks for cover and foraging, it is unlikely that in winter when water levels will be at their highest that water vole will disperse onto the Site given the number of surrounding dry ditches. In addition, the ditch north-west of the Site that continues along the A16 supported a concrete base and banks which would prevent water vole burrowing within it.

The ditch north of Clay Lake Bank did hold water, however, this was no more than 5 cm deep which is too shallow for water vole to swim and did not appear to be connected to the on-Site ditches. Small mammal holes (Photograph 7) were recorded within the southern dry ditch, however, due to the large number of droppings recorded during the survey, these are likely to be brown rat *Rattus norvegicus*. Given the condition of the ditches on-Site and within the surrounding area, water voles are not considered a constraint at this Site and are not considered further within this Report.

Other Protected Species

A brown hare *Lepus europaeus* was recorded on-Site within the north-eastern field during the survey. The arable land and vegetation within the ditches provide suitable habitat for this species.

There was no habitat for or evidence of other protected species, or habitats that could support them, on the Site.

Invasive Species

No invasive species were recorded at the Site.

Hedgerows

Due to the lack of species diversity in the hedgerows at the Site, they do not qualify as 'important' in accordance with the Hedgerow Regulations (1997).

5.0 Evaluation

Designated sites-statutory sites/ non-statutory sites

The results of the MAGIC data search and the LERC desk search indicate that there is one national statutory designated site and seven non-statutory designated sites within 2 km of the Site centre. Cowbit Wash SSSI is located 1.43 km south-west of the Site, whilst the closest non-statutory site is Decoy Farm Pit SNCI 350 m south of the Site. The Site does fall within the Impact Zone of Cowbit Wash SSSI, however, the only relevant condition listed is in regards to the 1,000m² internal floorspace of any new warehousing or industry. Although plans have yet to be finalised it is understood the Site will comprise a glasshouse facility and will continue arable production such that the condition is not anticipated to be of relevance. Due to the nature of the development, distance to the designated sites and their conservation objectives, the proposed development is not anticipated to adversely impact on any designated sites.

Habitats

The arable land at the Site was considered to be of low ecological value, however, the hedgerow, scrub and scattered trees provide connectivity and shelter within a largely flat, open arable landscape. The hedgerow, trees and scrub within the centre of the Site are to be lost for the construction of the greenhouse facility, with further potential loss around the Site boundaries. Within the landscaping proposals there is potential to retain the biodiversity value of the Site through the planting of, shrubs and low-level hedgerow around the edge of the Site, creating links between existing sections. Through the utilisation of a range of appropriate shrub/ hedgerow species, it will be possible to enhance the value of the Site for wildlife and it will allow foraging and commuting corridors, and connectivity, to be retained at the Site. Any retained hedgerows will require adequate protection during the construction phase of the development to prevent damage or deterioration.

The proposals include a reed bed within the north-eastern extent of the Site. This will provide an area of aquatic habitat for birds and invertebrate species to colonise, thus enhancing the Site for wildlife.

Species

The scattered broadleaved trees, hedgerow and scrub provide suitable habitat for nesting birds, including the BoCC red listed yellowhammer which was identified on-Site during the survey. Foraging habitat on-Site is likely to be lost to the development however there is suitable foraging habitat adjacent to the Site and in the surrounding area. The arable habitat has potential to provide opportunities for ground nesting species depending on crop type and future management.

The Site did not provide any roosting opportunities for bats however, the scattered broadleaved trees, dry ditches and hedgerows provide suitable corridors for foraging and commuting. Increased lighting of the Site, particularly along the boundary habitat features could directly and adversely impact on bats using the Site and as such, a sensitive lighting plan must be put in place to ensure that there is no light spill onto boundary vegetation.

6.0 Recommendations

6.1 Further Survey Requirement

The findings of the initial Site assessment are considered sufficient to inform the development proposals and no further survey work regarding protected and priority species and habitats is deemed necessary at this time.

6.2 Construction and Operational Phase Protection/ Enhancement Measures

Species Protection

Nesting Bird:

Any vegetation removal work to the scattered broadleaved trees, hedgerows or scrub should be performed either before early March or after late August in order to avoid impacting any birds during the main period in which they are nesting. If, however, works are deemed necessary during the nesting period an experienced ecologist will be required to check the Site habitats to confirm that no nesting birds will be affected by the proposed works. In addition, if the arable land provides habitat for ground nesting species, ideally a patchy cereal crop, this would require a check within the nesting bird season before Site clearance can be undertaken.

Bats

A sensitive lighting plan for the Site should be designed to ensure that there is no light spill onto areas of scattered trees, hedgerows, and vegetation beyond the Site boundaries. The detailed lighting design on-Site should be functional and directional and in line with current guidance (BCT, 2009; BCT, 2014; Stone, E.L. (2013)). It should avoid excessive up-lighting and light spill.

Site Protection

All works on Site should follow an appropriate working methodology to avoid inadvertent damage to any habitats and associated fauna retained on, or surrounding, the Site. As such any retained trees and hedgerows, both on-Site and adjacent to the Site, should be protected to BS5837 (2012) during the development works, through the use of protective barriers, and other means, where necessary. All works should be undertaken to current Pollution Prevention Guidance (PPG). Although formally withdrawn, the Environment Agency PPG 5 remains the industry best practice until replaced.

General Site Enhancement

Following the issue of the NPPF (2012), by the Department for Communities and Local Government (DCLG), *"The planning system should contribute to and enhance the natural and local environment by: Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity..."*; and, therefore, we recommend the following principles of design should be followed:

- ▲ Planting should aim to enhance retained boundary features, and be of native species, or those of known value to wildlife, sourced from local nurseries to enhance foraging opportunities for local birds and bats, by increasing the invertebrate diversity around the Site.;
- ▲ A species rich mixture of low level hedgerow and/ or shrub planting should be incorporated into the boundaries of the development, in order to enhance any bat foraging and commuting corridors across the Site. A species list of recommended trees and shrubs is provided in Appendix E.
- ▲ Installation of four bird nest boxes (two suitable for small hole nesting birds such as blue tits and great tits and two open fronted boxes suitable for robins and wrens. They should be placed on suitable trees (retained or incorporated into the Site) or alternatively installed on a new external wall section not constructed of glass.. All boxes should be installed in a sheltered and undisturbed position at a height of at least 3 m, and avoiding a southerly aspect.

7.0 Disclaimer

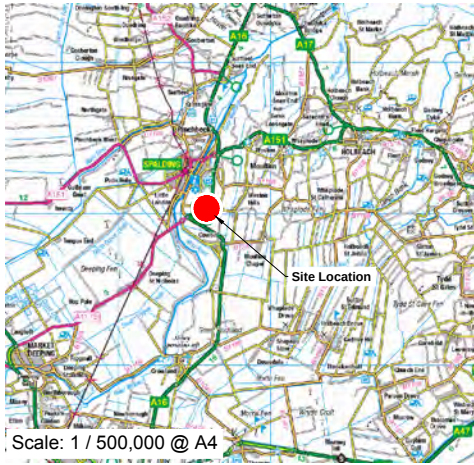
The recommendations contained in this Report represent Delta-Simons' professional opinions, based upon the information referred to in Section 1.0 of this Report, exercising the duty of care required of an experienced Ecology Consultant. Delta-Simons does not warrant or guarantee that the Site is free of Bats or other protected species.

The behaviour of animals can be unpredictable and may not conform to characteristics recorded in current scientific literature. This Report, therefore, cannot predict with absolute certainty that animal species will or will not occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.

No part of the survey included an assessment of the materials and conditions of any buildings. No part of the survey included an asbestos assessment, nor did it represent an appraisal of other deleterious materials or hazardous substances.

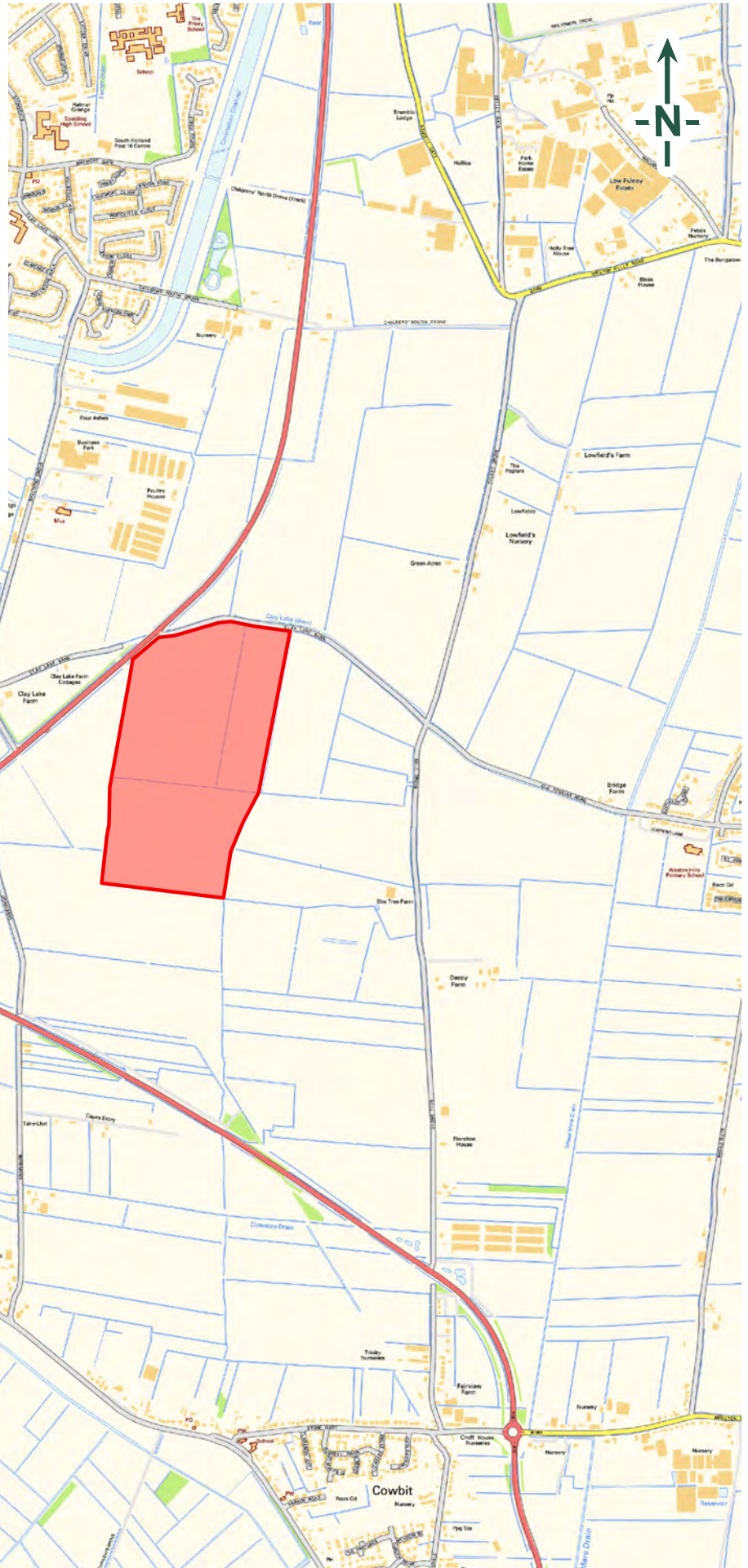
This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed as defined in Section 1.0 of this Report. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

Figure 1 – Site Location Map



LEGEND

Site Boundary



Scale: 1 / 20,000 @ A4

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TITLE:
 Site Location Map
 Bridge Farm Nurseries Ltd & Clay Lake Farm Ltd
 Land off A16, Spalding

DRAWN BY:	EN	SCALE:	To Scale@A4
CHECKED BY:	CS	REVISION:	1
DATE:	06 December 2017		

PROJECT NO:	17-1096.01
FIGURE NO:	1

Figure 2 – Phase I Habitat Survey Plan



LEGEND

Site Boundary

Scattered Scrub

Broadleaved Scattered Trees

SI

Semi-Improved Grassland

A

Arable

Intact Species - Poor Hedgerow

Defunct Species - Poor Hedgerow

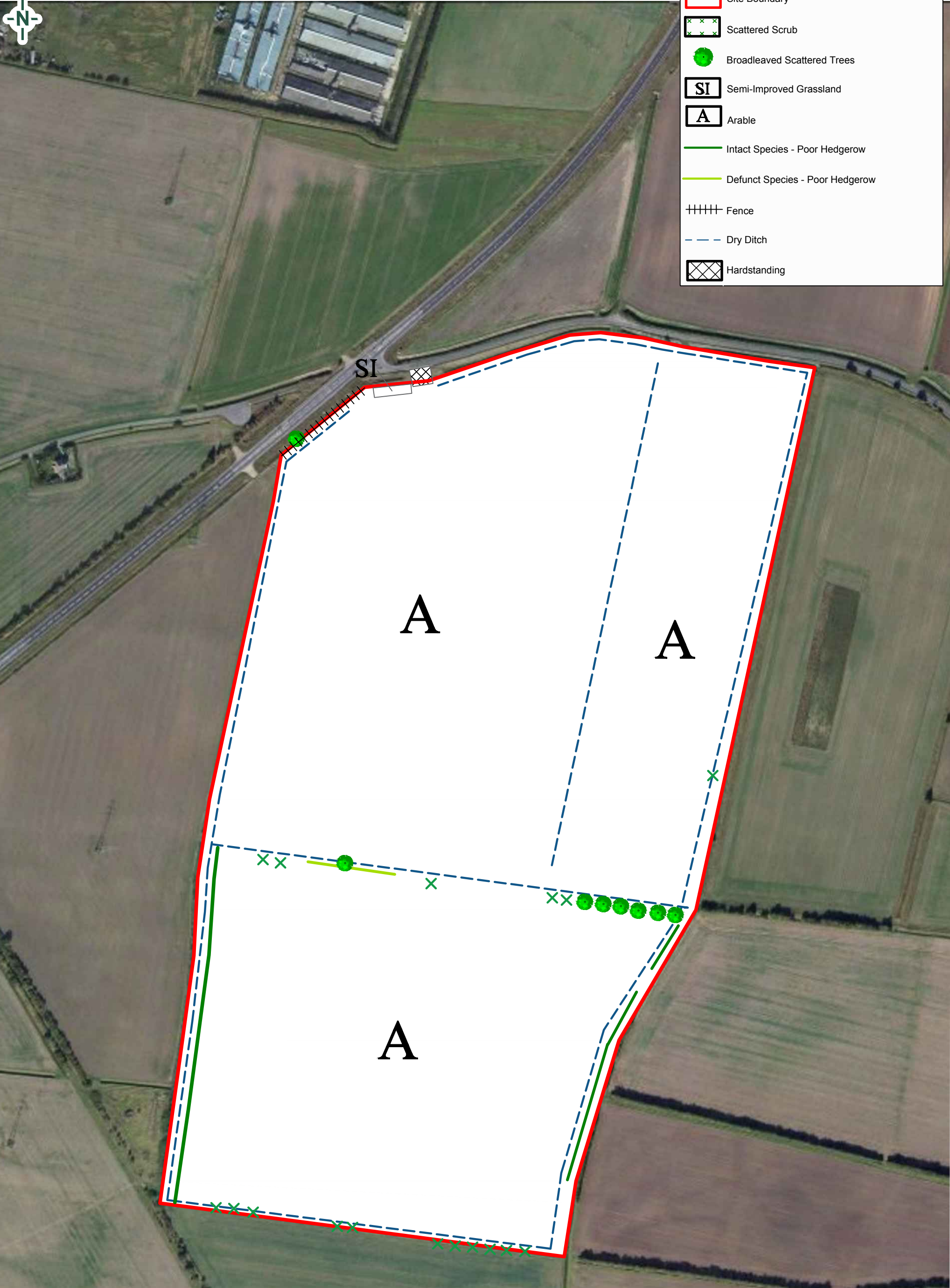
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Fence

- - - -

Dry Ditch

Hardstanding



Site Plan Provided by Client

Figure 3 – Proposed Development Plan

Appendix A – Relevant Legislation

Relevant Legislation

National Planning Policy Framework

The National Planning Policy Framework (NPPF), advises that ecological surveys are undertaken before planning permission is determined. It sets out, amongst other points, how at an overview level the '*planning system should contribute to and enhance the national and local environment by:*

...recognising the wider benefits of ecosystem services;

minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures...

The NPPF states that this should be achieved through local planning development frameworks and gives recommendations for criteria based policies which recognise the hierarchy of designated sites which range from internationally important habitat, to sites of importance at a local level and ensure that protection is '*commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.*'

A list of principles which local planning authorities should follow when determining planning applications is included in the NPPF which includes the following:

'if significant harm resulting from a development cannot be avoided...adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

...opportunities to incorporate biodiversity in and around developments should be encouraged;

planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland...unless the need for, and benefits of, the development in that location clearly outweighs the loss...

In addition, the Office of the Deputy Prime Minister circular 06/ 2005 remains current; this states that '*The presence of a protected species is a material consideration when a planning authority is considering a development proposal*'. The circular advises that local authorities should consult Natural England before granting planning permission if the proposals could adversely affect a protected species.'

The Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010 (as amended) are the British response to the Habitats & Species Directive 1992, and consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.

The Regulations for the protection of European Protected Species (EPS) have been amended and consolidated with key changes including the removal of most of the defences from Regulation 40 and Regulation 43 including the removal of the 'incidental result of an otherwise lawful operation' defence, and the increase in the threshold for the offence of deliberately disturbing a EPS. Proposals that will affect European protected species may require a licence from Natural England to allow an otherwise unlawful act. In the 2009 a new offence of 'breaching condition of an EPS licence' was added to the regulations. The licensing process is separate from and planning process. European protected species include all species of bats, great crested newt *Triturus cristatus*, dormouse *Muscardinus avellanarius*, and European otter *Lutra lutra*, amongst others.

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

This is the primary legislation covering endangered species in England and sets out the framework for the designation of Sites of Special Scientific Interest (SSSIs). It confers differing levels of protection on species themselves, their habitats or both depending on their conservation status. Species offered protection by the Act are listed in a series of schedules. These Schedules are subject to a rolling review every five years. Protected species are listed under Section 1 (birds), Schedule 5 (animals other than birds and invertebrates) and Schedule 8 (plants).

The Countryside and Rights of Way (CROW) Act 2000

The CROW Act, introduced in England and Wales in 2000, amends and strengthens existing wildlife legislation detailed in the WCA. It places a duty on government departments and the National Assembly for Wales to have regard for biodiversity, and provides increased powers for the protection and maintenance of SSSIs.

The Act also contains lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

The Natural Environment and Rural Communities (NERC) Act 2006

Section 40 of the NERC Act places a duty upon all local authorities and public bodies in England and Wales to promote and enhance biodiversity in all of their functions. Section 41 (England) list habitats and species of principal importance to the conservation of biodiversity in England. These species and habitats are a material consideration in the planning process.

The Hedgerow Regulations 1997

Under the Hedgerow Regulations 1997, it is against the law to remove or destroy certain hedgerows without permission from the local authority.

Local planning authority permission is required before removing hedges that are at least 20 metres (66 feet) in length more than 30 years old and contain certain species of plant. The authority will assess the importance of the hedgerow using criteria set out in the regulations.

Species

Birds

All wild birds are protected under Section 1 of the WCA 1981 (as amended). Subsection 1(1) makes it an offence to intentionally kill, injure, or take any wild bird; take, damage or destroy the nest of any such bird whilst it is in use or being built; or take or destroy an egg of any such wild bird. It is, furthermore, an offence to either intentionally, or recklessly, disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird. The law covers all species of wild birds including common, pest or opportunistic species.

Amphibians

All native amphibians are protected under the WCA 1981 (as amended), with some species also protected under the European Habitats Directive (92/43/EC), transposed in England and Wales through the Conservation of Habitats and Species Regulations 2010 (as amended). All amphibians are protected from keeping, transporting, selling or exchanging. This means that in practice reasonable measures must be taken to avoid their incidental mortality.

The Great Crested Newt (GCN) is protected under the Conservation of Habitats and Species Regulations 2010 and Schedule 5 / 9(4)(b) and (c) of the WCA 1981 (as amended). It is an offence to deliberately kill, injure, capture GCN or to deliberately disturb this species, or to intentionally or recklessly obstruct access to their places of shelter or protection, to damage or destroy their breeding sites or resting places, or to intentionally or recklessly disturb a GCN whilst in a place of shelter or protection. The legislation applies to all stages of the life cycle including eggs, larvae and juveniles. It should be noted that GCNs spend the majority of their lives on land, venturing up to 500 m (but more usually 250 m) from their breeding ponds and as such any ground works within 500 m of a breeding pond could potentially have an adverse effect on GCNs.

Reptiles

All six native species of reptiles are protected under the 1981 WCA (as amended), from intentional killing or injury. As such, all reasonable steps must be taken to avoid their incidental mortality when carrying out works.

Bats

All bats and their resting places are protected under Section 9(4)(b) and (c) of the WCA 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2010 (as amended).

It is an offence to destroy or damage a breeding site or resting place of a bat, to intentionally or recklessly obstruct access to any place of shelter or protection for bats, to deliberately disturb bat species, to intentionally or recklessly disturb a bat whilst in its place of shelter or protection, or deliberately capture, injure or kill a bat. It should be noted that a breeding site or resting place of a bat is protected whether or not bats are present, as long as it is likely that they will return, and any activity or works damaging or destroying such a breeding site or resting place are likely to require a Natural England European Protected Species Licence (EPSL).

Badgers

Badgers *Meles meles* and their setts are protected under the 1992 Protection of Badgers Act. Under this Act it is an offence to wilfully kill, injure, take, possess or cruelly ill-treat badgers, or to attempt to do so. It is also an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a sett, or to disturb an occupied sett, either by intent or negligence. When interpreting the Act, Natural England defines a sett as any structure within an area used by badgers that shows signs of having been occupied by badgers within the last 12 months.

Otters

Otter *Lutra lutra* is afforded strict protection under Section 9 of the WCA 1981 (as amended) on Schedule 5 of the WCA 1981 (as amended) and Annex IV of the Conservation of Habitats and Species Regulations (2010). They also receive protection through their inclusion in Schedule 5 of the WCA 1981 (as amended).

Under the legislation, it is an offence to intentionally capture; injure or kill an otter; intentionally or recklessly damage or destroy a breeding site or resting place of an otter; intentionally or recklessly disturb an otter while it is occupying a structure or place which it uses for shelter or protection; obstruct access to any structure or place which it uses for that purpose; possess or control a live or dead animal, or part of; sell, offer for sale, possess or transport for the purpose of sale, a live or dead animal or part of one.

Water Voles

The water vole *Arvicola amphibius* received limited legal protection up until April 1998 through its inclusion in Schedule 5 of the WCA 1981 (as amended) for some offences. This protection was extended on 6th April 2008, so the water vole is now fully protected under Section 9, which includes protection of their resting places.

Legal protection makes it an offence to:

- ▲ Intentionally kill, injure or take (capture) a water vole;
- ▲ Possess or control a live or dead water vole, or any part of a water vole;
- ▲ Intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection; or intentionally or recklessly disturb water voles while they are using such a place; and
- ▲ Sell, offer for sale or advertise for live or dead water voles.

Invasive Species

Invasive species are plant species which are prohibited from release into the wild. There is an extensive list (currently 42) which are set out in section 14(2) of the WCA 1981 (as amended) which states that 'if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence.'

The most widespread of these are Japanese knotweed *Fallopia japonica* and giant hogweed *Heracleum mantegazzianum* which are also covered by several pieces of legislation. The Environmental Protection Act 1990 (as amended) is a broad ranging piece of legislation that singles out Japanese knotweed and giant hogweed for special mention. The Act places a 'Duty of Care' on the producer and anyone they employ to dispose of soil or other material contaminated with Japanese knotweed or giant hogweed, such material becomes a controlled waste, which can only be taken to licensed landfill and must be dealt with in an appropriate way.

Appendix B – References

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The Protection of Badgers Act 1992. HMSO

Wildlife and Countryside Act 1981 (as amended). HMSO

Appendix C – Assessment of Structures, Trees and Habitats for Bats

Assessment of Structures, Trees and Habitats for Bats

Guidance on Assessing the Potential Suitability of Development Sites to Support Bats (adapted from Collins, J. (ed)).

Suitability	Description	
	Roosting	Commuting and Foraging
Negligible	An inspected structure or tree which is considered to have no features of importance for roosting bats. No further constraints apply to the method or timing of proposed works.	Negligible habitat features on-Site to support commuting or foraging bats.
Low	A structure with at least one or more features suitable to support opportunistic individual bats. However, inadequate space, shelter, protection and conditions, and the low suitability of surrounding habitats means that it is unlikely to be used as a maternity or hibernation roost site. A tree of adequate age and stature to support potential roosting features, however, either no features, or only features of limited potential recorded from the ground.	Habitat with potential to support low numbers of commuting bats due to its quality and connectivity. For example, a gappy hedgerow or unvegetated stream that is isolated from the surrounding landscape. Alternatively, suitable but isolated habitats suitable to support low numbers of foraging bats such as a lone tree or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that are of adequate size, shelter and protection, with suitable conditions and surrounding habitat to support a bat roost not of high conservation status (with respect to roost type not individual species conservation status).	Linear habitat continuity connecting to the wider landscape offering potential to support commuting bats, such as rows of trees and scrub or linked back gardens. Habitat such as trees, scrub, grassland or a waterbody with connectivity to the wider landscape offering foraging opportunities for bats.
High	A structure or tree with one or more potential roost sites that are suitable for use by large numbers of bats on a regular basis and for long periods of time due to their size, shelter, protection, conditions and the surrounding habitat.	Continuous high-quality habitat with strong connectivity to the wider landscape that is likely to be used by commuting bats on a regular basis, such as flowing waterbodies, hedgerows, rows of trees and woodland edges. High quality habitat with strong connectivity to the wider landscape that is likely to be regularly used by foraging bats, such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to, and connected to, known roost sites.

Appendix D – Photographs

Land off A16, Spalding

Delta-Simons Project No. 17-1096.01



Photograph 1 – Scattered broadleaved trees across the centre of the Site



Photograph 2 – Stubble within the northern fields

Land off A16, Spalding

Delta-Simons Project No. 17-1096.01



Photograph 3 – Hedgerow along the south-western field boundary



Photograph 4 – Recently managed dry ditch on the south-eastern boundary

Land off A16, Spalding

Delta-Simons Project No. 17-1096.01



Photograph 5 – Dry ditch around the north-eastern corner



Photograph 6 – Dry ditch along the southern boundary

Land off A16, Spalding

Delta-Simons Project No. 17-1096.01



Photograph 7 – Suspected brown rat burrow in the south of the Site

Appendix E – Native floral species to plant for wildlife enhancement on-Site

Native floral species to plant for wildlife enhancement on-Site

The following list gives good examples of plants for different conditions which have value for native fauna either as a food source or shelter. To maximise value for wildlife plants should ideally be native, not cultivars, and sourced locally where possible. Planting should look to provide food at all levels, with underplanting of trees with shrubs or species rich grassland to provide maximum value out of an area and add interest to planting schemes.

Note: it is currently generally not advised to plant ash because of ash die back. However, ash is a very valuable plant for wildlife especially as a semi-mature and mature tree. Therefore, if locally sourced trees or self-seeds known to be free of the fungus are available then these should be incorporated. Additionally, trees not showing signs of being affected should be retained where possible.

Trees and Shrubs

Large trees

- ▲ Ash *Fraxinus excelsior*;
- ▲ Beech *Fagus sylvatica*;
- ▲ Bird cherry *Prunus padus*;
- ▲ Elm *Ulmus procera*;
- ▲ Oaks *Quercus robur* and *Q. petraea*;
- ▲ Small-leaved lime *Tilia cordata*;
- ▲ White willow *Salix alba*;
- ▲ Field maple *Acer campestre*;
- ▲ Silver birch *Betula pendula*;
- ▲ Rowan *Sorbus aucuparia*;
- ▲ Small-leaved lime *Tilia cordata*; and
- ▲ Walnut *Juglans regia*.

Medium/ Small Trees

- ▲ Alder *Alnus glutinosa*;
- ▲ Apples *Malus* spp. (local varieties can be found);
- ▲ Field maple *Acer campestre*;
- ▲ Holly *Ilex aquifolium*;
- ▲ Pears *Pyrus* spp.;
- ▲ Rowan *Sorbus aucuparia*;
- ▲ Silver birch *Betula pendula*;
- ▲ Yew *Taxus baccata*;
- ▲ Elder *Sambucus nigra*;
- ▲ Hazel *Corylus avellana*;
- ▲ Hawthorn *Crataegus monogyna*;
- ▲ Honeysuckle *Lonicera periclymenum*;
- ▲ Wild privet *Ligustrum vulgare*;
- ▲ Blackthorn *Prunus spinosa*;
- ▲ Guelder-rose *Viburnum opulus*.

Plants for hedgerows and woodland understoreys

A combination of shrubs and climbers can make attractive hedges of great benefit for wildlife, as well as providing a functional boundary. Standard trees should be incorporated in hedgerows, with ash, oak and wayfarer tree three traditional choices, depending on the region. These should be marked so as not to be cut during management works. In addition, undersowing with a suitable shade tolerant wildflower mix is important to maximise value.

Trees and shrubs suitable for hedges and understorey planting

- ▲ Blackthorn *Prunus spinosa*;
- ▲ Buckthorn *Rhamnus catharticus*;
- ▲ Field maple *Acer campestre*;
- ▲ Holly *Ilex aquifolium*;
- ▲ Elder *Sambucus nigra*;
- ▲ Guelder rose *Viburnum opulus*;
- ▲ Hawthorn *Crataegus monogyna*;
- ▲ Hazel *Corylus avellana*;
- ▲ Privets, including wild privet *Ligustrum vulgare*; and
- ▲ Spindle *Euonymus europaeus*.

Climber and scramblers suitable for hedgerows and understorey planting

- ▲ Dog rose *Rosa canina*;
- ▲ Field rose *Rosa arvensis*;
- ▲ Ivy *Hedera helix*;
- ▲ Honeysuckle *Lonicera periclymenum*;
- ▲ Wild clematis/ old man's beard *Clematis vitalba*; and
- ▲ Hop *Humulus lupulus*.

Understorey flowering plants providing ground cover for shady areas

These species flower early before trees are in full leaf, and will do well in areas that become shady later in the year.

- ▲ Bluebell *Hyacinthoides non-scripta*;
- ▲ Bugle *Ajuga reptans*;
- ▲ Wild daffodil *Narcissus pseudonarcissus*;
- ▲ Foxglove *Digitalis purpurea*;
- ▲ Lords-and-ladies/ cuckoopint *Arum maculatum*;
- ▲ Primrose *Primula vulgaris*;
- ▲ Sweet violet *Viola odorata*; and
- ▲ Wood avens *Geum urbanum*; and
- ▲ Yellow archangel *Lamium galeobdolon*.