

EXTENDED PHASE 1 HABITAT SURVEY REPORT

Site: Lumley Fields, Skegness.

Reference: Eco/PH1/GBD/0922

Date: 29th September 2022

Prepared For:

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1. INTRODUCTION

1.1 Terms of Instruction

1.1.1 This report has been commissioned by Manor Crest Homes in relation to a planning application that includes proposals for a housing development.

1.1.2 The report provides an ecological assessment of land at Skegness, Lincolnshire.

1.2 Personnel

1.2.1 The author of this report is detailed below:

- Jonathan Tye BSc (Hons) ACIEEM – Surveyor and Author

1.3 The Site

1.3.1 The site is located at Belton Park Rd, Skegness, Lincolnshire. The central National Grid Reference for the site is TF 55554 65202.

1.3.2 At the time of survey the site consisted of a mixture of habitats including grassland, arable land, wet and dry ditches, hedgerows and grassland strips at field margins. The survey area was determined by the area where ground preparation and earthworks are proposed. The areas where earthworks are proposed include a single grassland field and arable fields.

1.3.3 The surrounding landscape consists of residential buildings to the east, west and south and grassland and arable to the north. A narrow woodland strip is present at the sites north eastern boundary. A public footpath is present at the sites north eastern and eastern boundary and a grassland field adjoins eastern boundary of the site.

1.3.4 The site is situated adjacent to arable land to the north and east, and comprises four separate fields divided by wet and dry ditches, fences and boundary hedgerows. The site is accessed at its southern boundary adjacent to a public footpath.

1.3.5 Figure 1 provides a location plan of the site.



2. METHODOLOGY

2.1 Desk Study

2.1.1 The purpose of the desk study was to collect baseline data held by statutory and non-statutory consultees and to obtain any views they may have about the proposals. A secondary purpose of the desk study was to collect records of species that may not be present at the time of survey and identify any protected species or habitats which may not be present at the time of survey and identify any protected species or habitats which may be affected by the proposals.

2.1.2 Information was requested for the site as well as a 2km search radius around the site in line with IEEM Guidelines for Preliminary Ecological Appraisal (2012). This information was gathered from the following organisations (with the full information presented in Appendix II):

- National Biodiversity Network (NBN 2022)
- Lincolnshire Biological Records Centre (LBRC 2022)

2.2 Extended Phase 1 Habitat Survey

2.2.1 The aim of the Extended Phase 1 Survey was to provide information to establish the ecological value of the site and to determine any further assessments.

2.2.2 During the Phase 1 Habitat Survey the dominant plant species present were recorded and the habitats classified according to their vegetation types.

2.2.3 This information is presented in accordance with the standard Phase 1 Habitat Survey format with habitat descriptions and a habitat map (Joint Nature Conservation Committee, 2010), presented in Appendix III. In addition Target Notes providing supplementary information, for example relating to species, composition, structure and management are also presented on the Habitat map.

2.2.4 In addition invasive weeds were also searched for during the Phase 1 Habitat survey.

2.2.5 This assessment has followed the current baseline ecological survey guidance as set out in the Institute of Ecology and Environmental Management's guidelines for Preliminary Ecological Appraisal (2012).

2.3 Habitat Assessment Evaluation Criteria

2.3.1 A five point evaluation scale has been applied to assist with the identification of key features of ecological significance in relation to the proposed development, following guidance outlined in IEEM (2006) guidelines.

2.3.2 The five point scale is the following:

- Low value;
- Intermediate value;
- High value (Local/District importance e.g. Local Wildlife site);
- Very high value (County Importance e.g. Local nature Reserve); and

- Exceptional value (National importance e.g. Site of Special Scientific Interest (SSSI)).

2.4 Protected Species

Badger

A walkover survey of the site was conducted to identify any signs of the presence of or activity of badgers, the following signs were searched for:

- presence of holes with evidence of badger activity such as claw marks, footprints, discarded hair etc
- presence of dung pits, latrines
- presence of well used runs and pathways with subsidiary evidence of badger activity
- Presence of any other field signs (i.e. snuffle holes, excavated insect nests, scratching on posts and trees etc).
- Presence of sets both active and inactive.

Reptiles

During the site walkover survey any signs of reptiles and actual reptiles were searched for particularly in any areas of shade, and throughout grassland field margins. Any areas or features offering suitable foraging or sheltering opportunities for reptile species were recorded.

Amphibians

A desk based search was carried out using maps and aerial photographs to identify the presence of any water bodies within the study area and within 500m of the survey sites boundaries to confirm if there any potential breeding sites for amphibian species within the local area.

Breeding Birds

During the site walkover survey any signs of breeding bird activity in the form of active and inactive nests or actual sightings of birds were also noted and recorded.

Bats

During the survey any suitable features for bat roosting sites was searched for along with any suitable habitats suitable for feeding and foraging routes.

Water Voles

During the survey any signs of water vole activity were searched for including active paths, burrowing or any signs of feeding.

3. RESULTS

3.1 Desk Study Results

- 3.1.1 The full information collected during the desk study is presented in Appendix 1 and summarised below.

- **Lincolnshire Biological Records Centre (LBRC 2022)**

Ecological Designations

3.1.2 The records search identified 0no statutory protected sites and no non – statutory sites within 2klm of the survey area. These sites are summarised in **Table 1**.

Table1. Summary of ecological designations

Site Name	Designation	Proximity to project	Description
Greater Wash	SPA	1klm	Appendix 1
Key:			
SPA – Special Protection Area			

Protected Species

3.1.3 Table 2 summarises the protected species which were found within 2km of the study site. It should be noted that the absence of species records should not be taken as confirmation that a species is absent from the search area.

Species/Group	No of records	Date of latest record	Location of record
Mammals			
Hare	21	25/01/2021	TF548634
Badger	7	2006	TF5364
Otter	3	2015	TF543645
Muntjac	2	2012	TF5663
Rabbit	15	2018	TF569662
Water Vole	269	2020	TF55565

House Mouse	2	1977	TF56T
Hedgehog	22	2021	TF5665
Reptiles			
Grass Snake	2	21/08/2015	TF550637
Amphibians			
Great Crested Newt	4	2005	TF554654
Smooth Newt	3	2005	TF562660
Common Frog	9	2009	TF559651
Common Toad	1	1995	TF5663
Natterjack Toad	2	1997	TF5663
Bats			
Pipistrelle	57	2019	TF5563
Common Pipistrelle	5	2018	TF558658

3.1.4 In addition to the above records, there were numerous bird records including wetland and farmland species as well as birds of prey. More notable species

include Barn Owl *Tyto alba* and (both Schedule 1 protected species of the Wildlife and Countryside Act 1981).

3.1.5 The protected bird species are presented within Table 3 below:

Table 3.

Species/Group	No of records	Date of latest record	Location of record
Arctic Skua	17	26/07/2019	TF56S
Avocet	286	25/04/2020	TF5565
Balearic Shearwater	1	09/11/2010	TF5565
Bar-headed Goose	8	06/02/2020	TF56G
Barn Owl	55	03/05/2020	TF56G
Barnacle Goose	3	21/09/2020	TF56G
Black Redstart	8	28/01/2021	TF56G
Black Swan	6	13/06/2009	TF56G

Black Tern	4	03/05/2020	TF56G
Black-tailed Godwit	281	24/04/2020	TF5565
Black-throated Diver	2	16/09/2011	TF56G
Bluethroat	1	16/10/2005	TF56G
Blue-winged Teal	2	02/07/2014	TF56G
Brambling	8	10/02/2013	TF56G
Bullfinch	8	28/11/2020	TF56G
Canada Goose	422	03/05/2020	TF5565
Cattle Egret	4	25/08/2020	TF56G
Collared Dove	145	09/11/2020	TF5565

Columba livia 'feral'	28	19/12/2020	TF56
Common Scoter	26	16/01/2020	TF5765
Corn Bunting	4	02/07/2018	TF56G
Corncrake	1	1963	TF565635
Crossbill	3	27/09/2020	TF565635
Cuckoo	40	24/05/2020	TF56G
Curlew	278	27/07/2020	TF56G
Dark-bellied Brent Goose	6	19/11/2020	TF56
Dotterel	1	2003	TF5675
Egyptian Goose	95	08/09/2020	TF56G
Fieldfare	91	21/10/2020	TF56G
Firecrest	4	09/05/2020	TF56G

Gadwall	508	15/08/2020	TF56G
Garganey	41	17/08/2020	TF56G
Glossy Ibis	6	14/09/2020	Tf56G
Goldeneye	8	11/11/2020	TF5675
Great Northern Diver	2	17/01/2016	TF56S
Green Sandpiper	169	18/10/2020	TF56G
Greenshank	85	19/08/2020	TF56G
Grey Partridge	11	19/12/2020	TF56
Greylag Goose	414	19/11/2020	TF56
Hen Harrier	6	30/11/2020	TF56G
Hobby	25	03/09/2020	TF56G

Hoopoe	6	04/10/2013	TF5675
House Sparrow	549	11/11/2020	TF56
Kingfisher	37	17/12/2020	TF56G
Lapland Bunting	4	19/09/2019	TF56G
Lapwing	527	26/07/2020	TF56G
Lesser Redpoll	7	28/10/2020	Tf56G
Linnet	529	24/04/2020	Tf5565
Little Egret	436	09/11/2020	TF5565
Little Gull	18	15/04/2018	TF
Little Ringed Plover	231	27/07/2020	TF56G
Marsh Harrier	150	31/08/2020	TF56G

Mediterranean Gull	88	14/09/2020	TF56G
Merlin	15	09/11/2020	TF56G
Montagu's Harrier	3	27/05/2011	TF56G
Mute Swan	510	25/04/2020	TF5565
Osprey	3	15/09/2018	TF
Peregrine	136	11/12/2020	TF56G
Pheasant	456	03/02/2020	TF56G
Pink-footed Goose	133	06/11/2020	TF56G
Pintail	43	23/09/2020	TF56G
Pochard	104	24/02/2020	TF56G
Red Kite	9	06/08/2020	TF56G
Red-backed Shrike	3	03/08/2018	TF56G
Red-legged Partridge	57	18/12/2020	Tf56G
Redshank	417	29/12/2020	TF56G

Red-throated Diver	18	19/09/2020	TF
Redwing	53	17/12/2020	TF56G
Reed Bunting	475	18/10/2020	TF56G
Ring Ouzel	8	13/04/2020	TF56G
Rock Dove	5	30/01/2015	TF
Ruff	180	08/07/2020	TF56G
Scaup	11	13/03/2018	TF56G
Skylark	393	24/04/2020	TF5565
Snipe	235	11/11/2020	TF56
Snow Bunting	23	16/01/2020	TF5765
Song Thrush	177	05/05/2018	TF56G
Spoonbill	52	10/07/2020	TF56G
Spotted Flycatcher	3	05/09/2020	TF

Starling	640	06/08/2020	TF56G
Swift	153	23/05/2020	TF56G
Temminck's Stint	8	01/08/2019	TF56G
Tree Pipit	2	28/09/2020	TF56G
Tree Sparrow	25	08/11/2020	TF56G
Velvet Scoter	6	04/10/2012	TF
Whimbrel	46	10/05/2020	TF56G
White-fronted Goose	7	20/01/2018	TF
Whooper Swan	34	19/11/2020	TF56
Wigeon	391	30/11/2020	TF56G
Wood Sandpiper	98	28/08/2020	TF56G
Yellow Wagtail	164	19/09/2020	TF56G
Yellowhammer	63	16/08/2020	TF56G

3.2 Phase 1 Survey

3.2.1 The field survey for the Phase 1 survey was conducted on 10th September 2022, in suitable conditions, the weather was recorded as dry bright and sunny with low cloud cover, warm temperature (20°C) and slight breeze.

3.3 Field Survey Limitations

3.3.1 During the site survey all areas within the sites boundaries were accessible on foot.

3.4 Habitats Identified

3.4.1 Habitats identified during the Phase 1 habitat survey are detailed below:

- Arable land
- Unimproved grassland
- Fence
- Hedgerow – defunct species poor
- Wet ditches

3.4.2 The full phase 1 Habitat Survey Map detailing the location of the above habitats and other features of ecological interest is presented at Appendix 2. The habitat descriptions below should be read in conjunction with this plan and a photographic record is displayed at Appendix 3.

Arable Land - Intermediate

3.4.3 This forms the majority of the sites habitat and includes three fields currently used for arable crop production. These fields are similar in area and are divided by wide dykes and grassland field margins.

3.4.4 Unimproved Grassland – *Intermediate ecological value*

3.4.5 An unimproved grassland field is present at the west of the study area and is currently used for livestock grazing. The grassland field comprises common agricultural grass species such as cocksfoot grass *Dactylis glomerata*, sweet vernal grass *Anthoxanthum odoratum*, timothy *Phleum pratense*, common couch *Elytrigia repens* and fescue *Festuca ovina*.

3.4.6 A grassland field is present at the east of the site and is divided from the arable fields by a wide dyke and grassland field margins. The field is bordered by a wide dyke to west, north and east boundaries and is bordered by a public footpath. The

3.4.7 Unimproved grassland is present at the sites field margins in narrow strips that vary in width and are immediately adjacent to dry and wet ditches. Common agricultural weed and plant species are present within the grassland field margins and include species such as cows parsley *Conium maculatum*, hogweed *Heracleum sphondylium*, nettle *Urtica dioica*, white clover *Trifolium repens*, thistle *Cirsium palustre*, sheeps sorrel *Rumex acetosella* and ragwort *Senecio jacobea*. Common agricultural grass species within the field margins include sheeps fescue *Festuca ovina*, cocksfoot *Dactylis glomerata* and sweet vernal grass *Anthoxanthum flavescens*.

Fence - low ecological value

3.4.8 A fence is located at the boundary of the grassland and arable field.

Hedge defunct – Species poor - Intermediate ecological value

3.4.9 A mature hedgerow comprising common hedgerow species such as hawthorn *Crataegus monogyna* is present along the eastern boundary of the grassland field. The hedgerow is actively managed and is fragmented along the field boundary.

Wet and dry ditches – Intermediate ecological value

3.4.10 Wet and dry ditches are present throughout the study area in the form of dykes with gradually sloping sides comprising common grass and common agricultural plant and weed species, dense patches of common reed are present throughout the majority of the dykes located throughout the centre and boundaries of the study area.

3.5 Habitat Descriptions

The site comprises of a mixture of low to intermediate habitats. The majority of the sites habitat is formed by arable and grassland comprising common agricultural grass, plant and weed species. Occasional shrubs are present within the study area.

The arable and grassland habitat located towards the centre of the site is the main area of habitat to be lost through stripping and earthworks. Proposals include the removal of section of species poor defunct hedgerow and fence. The grassland field margins are to be retained at their full extent along with the dyke network. A photographic record of the onsite habitats and features is presented at Appendix 3.

4. LEGISLATION

4.1.1 Based on actual sightings, signs of and the presence of potentially suitable habitats for protected species noted during the survey, the following legislation may apply to the all proposed earthworks and associated operations on the site.

Breeding Birds

4.1.2 The primary legislation affecting wild birds in England, Scotland and Wales is the Wildlife and Countryside Act 1981 (as amended). In January 2001 the Countryside and Rights of Way Act 2000 (CROW) included amendments, which strengthened the law in England and Wales.

4.1.3 All birds, their nests and eggs, are protected by law and it is therefore an offence, with certain exemptions to;

- Intentionally kill, injure or take any wild bird.
- Intentionally take damage or destroy the nest of any wild bird whilst in use or being built.
- Intentionally take or destroy the egg of any wild bird.
- Have in one's possession or control an egg or part of an egg which has been taken in contravention of the Act.

4.1.4 In addition to the general protection afforded to birds, some rare breeding birds are further protected by special penalties. These birds are listed in Schedule 1 of the Act and are usually referred to generically as Schedule 1 species.

4.1.5 It is an offence to;

- Intentionally (or recklessly (CRoW Act 2000) disturb any Schedule 1 species while it is nest building or is at, or near, a nest with eggs or young; or
- To intentionally disturb the dependant young of such a bird.

Bats

4.1.6 All species of Bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and the Conservation of habitats and species regulations 2020 (as amended).

4.1.7 This legislation makes it illegal to kill, injure and disturb bats and also destroy active bat roosts (even if bats are not present).

Badger

4.1.8 Badgers are protected specifically by the Protection of Badgers Act 1992. Although aimed primarily to protect badgers against baiting, of relevance to ongoing woodland management is that under the Act it is an offence to wilfully kill, injure or take a badger, or attempt to do so.

4.1.9 Furthermore, it is an offence to damage, destroy or obstruct a badger sett, or disturb an animal whilst it is occupying a sett.

4.1.10 An offence is committed if such damage, destruction or disturbance arises from either a reckless or deliberate act.

Reptile

4.1.11 The legislation relating to the protection of the commoner reptiles (adder, grass snake, common lizard and slowworm) in Britain is contained mainly within the Wildlife and Countryside Act (1981) as amended by the Countryside and Rights of Way Act (2000). Under the act it is an offence to;

- Intentionally (or recklessly) kill or injure commoner reptile species

Amphibians

4.1.12 The legislation relating to the protection of great crested newts *Triturus cristatus* in Britain is contained within the Wildlife and Countryside Act (1981) and the Conservation of Species and Habitats Regulations 2017 (as amended).

4.1.13 It is illegal to deliberately kill, injure, capture or disturb them or to obstruct their access to areas where they live and breed. These areas are also protected against damage or destruction. The law applies to all life stages of the species and therefore includes both the terrestrial and aquatic components of the species' habitat.

Water Voles

- 4.1.14 The water vole is fully protected under schedule 5 of the Wildlife and Countryside Act 1981 and is a priority conservation species.
- 4.1.15 It is illegal to intentionally capture, kill or injure water voles or damage, destroy or block access to their resting or sheltering places.
- 4.1.16 It is illegal to disturb them in a place of shelter or protection (on purpose or by not taking enough care).

5. EVALUATION

5.1 Habitats

- 5.1.1 Generally the site comprises of a mixture of low to intermediate value habitats. The areas where any habitat will be lost loss will occur is the grassland and arable fields located towards the centre of the site.
- 5.1.2 The mature broadleaved trees at the site are of intermediate value although none of the proposed earthworks, construction, vegetation reduction and removal will impact, affect or encroach on these habitat features.
- 5.1.3 The single habitat considered to be of local, regional or national ecological value is the Potential Wildlife site namely the Great Wash and is located approximately 500m East of the proposed works area, due to this distance no adverse effects or impacts will be likely on the habitat.
- 5.1.4 The remaining intermediate habitats identified during the survey were grassland field margins, dry and wet ditches, boundary hedgerows and freestanding shrubs. Both of these habitats provide suitable opportunities for nesting birds for feeding, foraging, sheltering, breeding and nesting. These habitats will be retained and protected during the operational phase of the proposed works.
- 5.1.5 Should any of the scrub patches, tall agricultural grasses, trees and shrubs require reduction or removal then these operations will be subject to pre works inspections by a suitably qualified ecologist to ensure no wildlife is disturbed or any impacts are caused.

5.2 Ecological Designations

- 5.2.1 The desk study revealed 1no statutory designated sites within 2klm of the study area and 0no records for non - statutory designated sites within 2klm of the study area. Due to this distance there will be no negative impacts on any designated sites.

5.3 Species

- 5.3.1 The desk study identified a range of protected species records within the 2klm search area including badger, grass snake and great crested newt. It should be noted that absence of records certainly does not equate to absence of species in a study area. The site has been assessed on the suitability of the habitats to support such protected species and the likelihood of those species being present.

Bird Species

- 5.3.2 The site provides suitable foraging and nesting features in the form of freestanding shrubs that provide nesting opportunities for both breeding songbird and farmland

bird species, at the time of survey the shrub and grassland areas offered suitable nesting opportunities for farmland and ground nesting bird species.

- 5.3.3 At the time of survey bird species such as woodpigeon *Columba livia*, crow *corvus*, rook *corvus frugilegus*, and greylag geese *Anser anser* were observed and recorded within the arable fields of the study area.
- 5.3.4 The hedgerows provide limited suitable nesting habitats for birds as they are actively managed.
- 5.3.5 No active or disused birds or waterfowl nests were observed within the arable or grassland fields during the assessment.

Badger

- 5.3.6 No field signs of the presence of badgers, badger pathways or active and disused setts were noted throughout the area included within this study.

Bat Species

- 5.3.7 The survey area offered foraging opportunities for bats particularly at the wide dykes located along the field margins. No features such as mature trees are present that offer any potential roosting sites for bat species. The mature broadleaf trees situated at the east and bordering the sites northern boundary could provide suitable roosting features. The wet ditches and narrow grassland strips areas within the site offer suitable commuting and feeding opportunities for a variety of bat species.

Amphibians

- 5.3.8 As no suitable aquatic habitats for amphibians for breeding, sheltering and foraging are present within the 500m of the study area no further recommendations are made for any amphibian species.

Reptile Species

- 5.3.9 No signs of reptiles were noted during the survey. The survey area offered limited suitable foraging habitat for reptiles.

6. IMPACTS ON HABITATS AND SPECIES

6.1 Ecological Designations

- 6.1.1 Due to the distance between the proposed development area and statutory designated nature conservation sites in the local area it is considered highly unlikely that there will be any adverse effects on any designated sites, therefore no recommendations in relation to statutory designated sites are made.
- 6.1.2 The closest statutory wildlife site is namely the greater wash which is located approximately 0.5km east of the study area.
- 6.1.3 In terms of the wider landscape and habitats immediately adjacent to the study site, these comprise of arable and grassland to the north, a woodland shelter belt to the north east, a grassland field to the east adjoining housing to its eastern boundary, wide dykes, a residential housing at the south and west field edges.

6.2 Further Surveys and Inspections - Protected Species

Amphibians

- 6.2.1 No water bodies are present within a 500m search area of the study area, therefore there are no habitats suitable for amphibian species within the search area displayed on the plan at Appendix 4, therefore no further recommendations are made for amphibians.

Badgers

- 6.2.2 No field signs of badger activity were present or observed throughout the study area or the surrounding habitats. The study area offers limited suitable foraging, feeding and resting areas for badgers. No further recommendations for badgers are given.

Nesting Birds

- 6.2.3 Should it occur that any of the grassland field margins are of a suitable sward height that offers nesting opportunities for birds then nesting bird inspections will be required if vegetation is to be cleared or maintained during the bird nesting season (March – August inclusive).
- 6.2.4 Should the proposal include the removal of shrubs at field margins then these habitat features will be subject to a nesting bird inspection prior to removal or reduction of the vegetation.
- 6.2.5 A suitably qualified ecologist is to inspect the vegetation and any adjacent shrubs and trees within at least 24hrs in advance of the ground vegetations removal. If nesting birds are discovered during these inspections a 20m buffer zone will be produced which will remain until all nesting activity is complete.

Reptiles

- 6.2.6 As there were no field signs or actual sightings of reptiles or natural refugia suitable for resting, sheltering or basking was observed or recorded it is unlikely that reptiles will be present within the areas for earthworks located towards the centre of the site therefore no further recommendations are included for any reptiles.

Badgers

- 6.2.7 As no evidence of badger activity was recorded during the survey then no long term mitigation is required for this species. It is recommended that the site is subject to a pre works walkover survey to identify any signs of badger activity prior to the commencement of any vegetation clearance, habitat creation or minor earthworks.

Bats

- 6.2.8 Due to the openness of the bare ground habitat which is the only habitat to be removed, it is considered that any impacts on bats for foraging and commuting will be minimal as the suitable habitats will be retained and enhanced and will continue to provide suitable habitats for a variety of bat species.

Water Voles

- 6.2.9 As no evidence of water vole activity or any other field signs were recorded during the survey then no long term mitigation is required for this species. It is recommended that the site is subject to a pre works walkover survey to identify any signs of badger activity prior to the commencement of any vegetation clearance, habitat creation or earthworks.

6.3 Restoration and mitigation for loss of habitat

- 6.3.1 On completion of the ground preparation works any proposals for restoration in the form of a landscaping scheme should include provisions for enhancement of the grassland areas to improve connectivity of habitats and increase foraging, sheltering, feeding and movement opportunities for wildlife species.

7. BIODIVERSITY GAIN

7.1 Existing Habitats Assessment

The study area comprises the following habitats and features:

- Arable
- Species Poor Defunct hedgerow
- Unimproved grassland
- Ditches

The habitats and features were assessed for their suitability and contributions to the biodiversity within the study area.

7.2 Biodiversity Gain

- 7.2.1 The proposed scheme will result in the loss of arable land that amounts to 20.6ha and loss of grassland habitat that amounts to a total of 5.6ha and will include the loss of 350m of hedgerow therefore the total habitat to be lost amounts to ha.
- 7.2.2 As the total habitat within the study area measures 26.6ha which includes the arable land, grassland, dykes, grassland field margins and hedgerows, therefore 3.13ha of habitat will be retained.
- 7.2.3 As proposals for habitat creation enhancement include planting of shrubs and trees and establishment of hedgerows at the sites boundaries the scheme will benefit from a gain in biodiversity. The areas to be restored to grassland amount to 3.79ha; the area for establishment of native broadleaf shrubs and trees is 1.8ha and the length of the hedgerow to be formed by native shrub species measures 500m.
- 7.2.4 A plan displaying the proposals for and suitable is presented at Appendix 6. The surrounding habitat comprising mixed scrub introduced shrub and scattered trees will be retained within the proposals.
- 7.2.5 To provide further benefits for the sites wildlife and to increase the gain in biodiversity it is recommended that bat and bird boxes are to be installed at the locations displayed on the plan at Appendix 5.

7.3 Ecological and habitat enhancements

- 7.3.1 The dykes and bordering grassland field margins habitats are to be retained within the proposals. The shrubs and trees are to be planted throughout the bordering and internal grassland habitats at the north and throughout the site. Suggested planting locations for shrubs and trees are presented on the landscape and ecological enhancement plan at Appendix 5.
- 7.3.2 The planted rows and groups of shrubs and trees will provide sheltering and movement opportunities for wildlife species through connectivity of open space habitats around the sites boundaries and internal open space habitats.

- 7.3.3 A hedgerow is to be established along the sites northern boundary and is to extend approximately 500m in length. The hedgerow is to comprise native woody shrubs of local provenance; the hedgerow will provide suitable nesting, sheltering and movement opportunities for a variety of birds and other wildlife species.
- 7.3.4 Amenity grassland areas are to be created throughout the open space areas of the site. The wildflower meadow will be formed by common meadow grassland wildflower species; this wildflower meadow habitat will attract farmland and songbirds, invertebrates and will provide sheltering and foraging opportunities for a variety of wildlife species.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

- 8.1.1 The provisions for mitigation have been set out with regards to the key ecological issues identified during the initial assessment.
- 8.1.2 By implementation of the proposed mitigation measures including habitat enhancement and creation it is considered that the proposed development could proceed with minimal indirect, direct or cumulative impacts on the sites habitats and biodiversity.
- 8.1.3 The habitat creation works will greatly enhance the biodiversity value of the site and provide a range of structural habitats within an area of former grassland and arable land comprising common agricultural plant and grass species.
- 8.1.4 The mitigation outlined provides recommendations for habitat creation in regards to the requirements of wildlife species. The new habitats to be created will offer a range of opportunities for numerous species including invertebrates, birds, bats, mammals and reptiles.

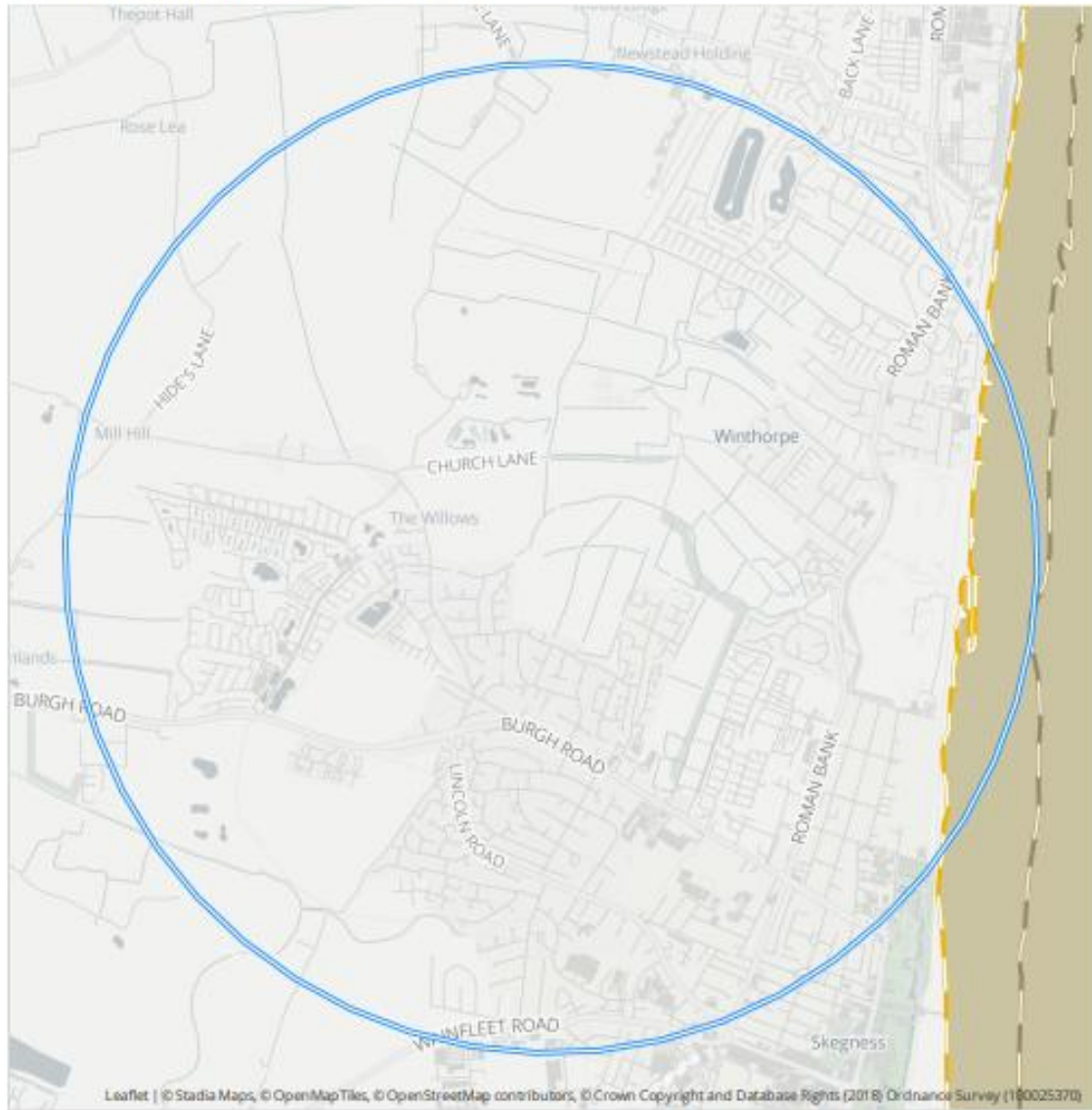
8.2 Recommendations

- 8.2.1 The bird boxes are to be of a suitable specification for bird species to provide suitable nesting places. Suggested bird box designs are displayed at Appendix 6.
- 8.2.2 The bat boxes are to be of a suitable specification for bat species typical of open grassland and woodland habitats to provide suitable roosting opportunities and resting places for bat species. Suggested bat box designs are displayed at Appendix 6.
- 8.2.3 A working design method statement for the installation of the bird and bat boxes is presented at Appendix 7.
- 8.2.4 Pre - works inspections for nesting birds are to be undertaken prior to any removal of shrubs and other ground vegetation if works are to commence within the nesting bird season.
- 8.2.5 Pre works inspections and site walkover surveys are to be undertaken within the grassland and arable fields and along the sloping sides of the dykes to confirm the absence of any protected mammal species including water voles and badgers.



APPENDIX 1: DESK STUDY RESULTS

LBRC (2022) - 2km Search Lincolnshire Record

Statutory Sites within the search area

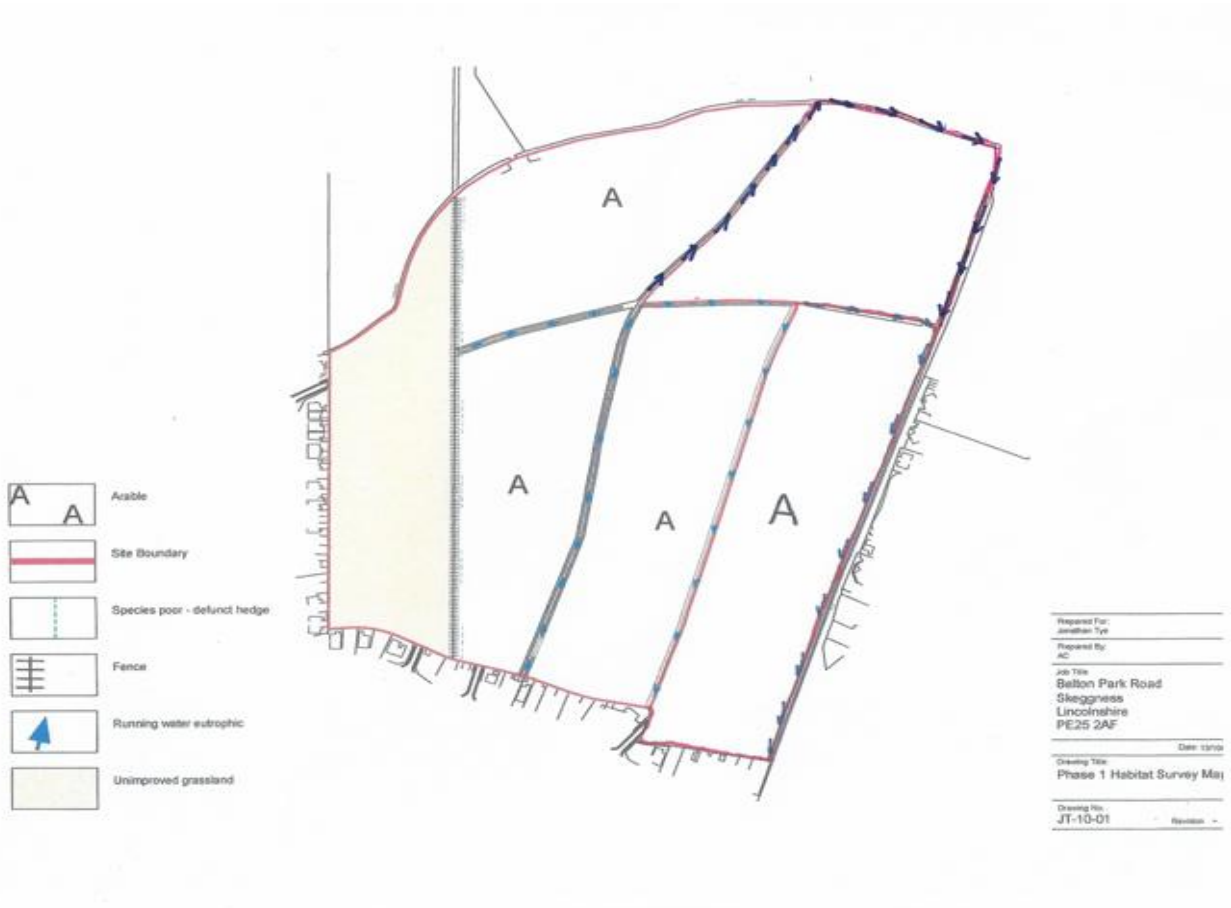


Space restrictions on the map may result in some sites not being labelled.

-  Special Protection Area
-  Search area

-  LERC boundary

APPENDIX 2: PHASE 1 HABITAT SURVEY PLAN



APPENDIX 3: PHOTOGRAPHIC RECORD



Arable field for cereal crop production.



Arable field for cereal crop production.



Arable field comprising bare soil adjoining narrow grassland field margins.



Arable field for cereal crop production.



Arable field for cereal crop production.



Arable field for cereal crop production.



Arable fields.



Arable field comprising bare soil and narrow grassland field margins.



Wet ditch comprising dense patches of common reed.



Wet ditch with marginal, vegetation.



Grassland field currently used by grazing by livestock.



Grassland field currently used by grazing by livestock.



Unimproved grassland.



Recently cultivated arable land.



Unimproved grassland field bordered by stock fence.



Dry ditch comprising common aquatic plant species adjoined by a narrow grassland strip comprising common grass and plant species.



Mature freestanding shrubs within field margins adjacent to wet ditch.



Centrally located dyke at field margins.



Grassland field margin comprising common agricultural weed and plant species.



Arable land.



Defunct hedgerows at grassland and narrow grassland strips at arable field margins.



Defunct hedgerows at grassland and arable field margins with narrow grassland strips at field margins.



Unimproved grassland field comprising common grass species.



Arable field comprising bare soil adjoining narrow grassland field margins.



Recently cultivated arable land



Grassland field margin adjacent to vegetated dyke with scattered shrubs.



Wide dyke with water and vegetated sides at north and east boundary of study area.





Mature scattered shrubs present within wide dykes.

APPENDIX 4: POND SEARCH PLAN



0 ponds within 500m search radius of application area.

APPENDIX 5: ECOLOGICAL ENHANCEMENT PLAN

Installation of bat box – x 2	
Installation of bat bird nesting box - x 3	



Areas for wildflower seed mix for habitat creation and enhancement.

APPENDIX 6: SUGGESTED BIRD BOX DESIGNS

Bird Box Specifications	Bird Box Design
<p>Schwegler 32mm nest box</p> <p>Height:23cms</p> <p>Diameter: 16cms</p> <p>Weight:3.6kg</p> <p>Material: Schwegler Woodcrete</p> <p>These nest boxes are suitable for many different species of common and woodland bird species. They are made of woodcrete construction which is durable and long lasting, requiring significantly less cleaning than traditional nest boxes.</p>	
<p>Traditional open fronted bird box</p>	

SUGGESTED BIRD BOX DESIGNS

Bat Box Specifications	Bat Box Design
<p>Schwegler 1FF Bat Boxes with Built in Wooden rear Panel</p> <ul style="list-style-type: none"> • Height: 43.0cm • Width:27.0cm • Depth:14.0cm • Entrance hole:12.0cm x 24.0cm • Weight:9.5kg 	
<p>Traditional Bat box</p> <ul style="list-style-type: none"> • Traditional open fronted bat box • Designed for small crevice dwelling bats • 20mm entrance slot to deter birds but suits small bats. 	

APPENDIX 7:

METHOD STATEMENT FOR INSTALLATION OF BAT AND BIRD BOXES

Bird nest box installation

Bird Nest boxes are to be placed on scattered trees that are to be retained along the boundaries of the site to provide additional nesting habitats for breeding birds.

Nest boxes are to be secured to mature trees between 2m and 4m above the ground. Where possible the entrance hole should be directed between north and east so that it is out of the prevailing wind and direct sunlight.

The nest boxes are to be installed during the autumn to ensure birds have time to find the nest box and investigate it prior to the following springs breeding season.

The nest boxes should be cleaned and checked annually between October and January. Any previous nests should be removed and the boxes should be checked to ensure they remain in a serviceable condition.

All nests boxes are to remain untreated with any preservatives. The use of insecticidal spray is to be avoided as it could be toxic to birds.

Bat box installation

All bat boxes are to be installed by a suitably qualified ecologist.

The boxes will be installed on suitable trees at a minimum height of 4m above the ground within tree lines that are suitable for provision forging and commuting opportunities.

The ecologist will ensure that the boxes are installed at correct locations on trees that are to be retained and away from artificial light sources, sheltered from winds and at a south westerly aspect to increase exposure to sunlight.

APPENDIX 8: APPLICATION AREA PLAN



 - Application area boundary