CurtisEcology

PRELIMINARY ECOLOGICAL APPRASIAL REPORT

At

Land West of Church Lane

Keyingham

East Riding of Yorkshire

HU11 4UL

For

Mr K. Thompson

Date: 17th November 2023

Reference no: CE1258

Curtis Ecology

Nova Scotia Farm, The Valley, Rimswell, Withernsea, East Yorkshire HU19 2BZ

T 01964 614295

M 07716260006

E roger@curtisecology.co.uk

www.curtisecology.co.uk

DOCUMENT CONTROL

Client: Mr K. Thompson

Project: Land West of Church Lane, Keyingham,

Title: Preliminary Ecological Appraisal Report

REPORT CONTROL SHEET

Date of site assessment	30th November 2022
Lead ecologist signature	
Date report issued	17th November 2023
Report approved by	Roger Curtis FdSc

REPORT VERSION CONTROL

Version	Date	Author	Description
1.0	23rd December 2022	Roger Curtis	Original Version
1.1	3rd January 2023	Roger Curtis	Updated with the revised (03B) Indicative Block Plan Proposed
1.2	17th November 2023	Roger Curtis	Updated with revised number of dwellings

CONTENTS

EXECUTIVE SUMMARY. 1
1.0 INTRODUCTION. 2
1.1 Site Description 2
1.2 Proposed Works 3
1.3 Survey Objectives. 3
2.0 SURVEY METHODOLOGY 3
2.1 Desk Study. 3
2.2 Field Survey. 4
2.3 Protected/ Notable Species 5
2.4 Survey Limitations. 7
2.5 Weather conditions. 7
2.6 Survey Personnel 8
3.0 SURVEY RESULTS. 9
3.1 Desk Study. 9
3.2 Habitats 11
3.3 Protected and Notable Species 13
4.0 ASSESSMENT AND RECOMMEDATIONS 21
4.1 Designated Sites 21
4.2 Habitats 21
4.3 Protected and Notable Species. 22
4.4 Metric 3.1 25
5.0 LEGISLATION 26
6.0 PLANNING POLICY 29
7.0 REFERENCES AND BIBLIOGRAPHY 32
8.0 APPENDICES 33
8.1 Appendix 1. Species List 33
8.2 Appendix 2. Nationally Designated Sites Map 2km 35
8.3 Appendix 3. Locally Designated Sites Map 2km 36
8.4 Appendix 4. Priority Habitats Map 2km 37
8.5 Appendix 5. Phase 1 Habitats Map 38

EXECUTIVE SUMMARY.

Curtis Ecology was instructed by CCFD (Hull) Limited on behalf of their client, Mr K. Thompson, to undertake a Preliminary Ecological Appraisal on a parcel of land found on Land West of Church Lane, Keyingham, East Riding of Yorkshire, HU12 9SX. The survey is required to inform a proposed planning application which is to be lodged with the local planning authority, in this case the East Riding of Yorkshire Council, for the erection of 16 dwellings, along with associated infrastructure.

Electronic instructions were given with a copy of the Location Plan, & Topographical Survey Map provided.

The Preliminary Ecological Appraisal was undertaken on the 30th November 2022. A desk study was undertaken with records being obtained from the following third-party repositories from the North & East Yorkshire Ecological Data Centre, East Yorkshire Bat Group, with a review of Multi-Agency Geographical Information of Conservation (MAGIC) and Google Earth.

The following species were considered within this Preliminary Ecological Appraisal:

- Badgers
- Bats
- Great Crested Newts
- Hedgehogs
- Nesting birds
- Reptiles

Recommendations include:

- Badgers: - No further survey work or mitigation required.
- Bats: – No further survey work required
  Mitigation and Enhancement measures proposed.
- Great crested newts: – No further survey or mitigation work required.
- Hedgehogs: - No further survey work required
  Mitigation and Enhancement measures proposed.
- Nesting birds: – No further survey work required.
  Mitigation and Enhancement measures proposed.
- Reptiles: - No further survey or mitigation works required

All the results and full recommendations can be found within Sections 3.0 and 4.0 of this report

1.0 INTRODUCTION.

Curtis Ecology was instructed by CCFD (Hull) Limited on behalf of their client, Mr K. Thompson, to undertake a Preliminary Ecological Appraisal on a parcel of land found on Land West of Church Lane, Keyingham, East Riding of Yorkshire, HU12 9SX. The survey is required to inform a proposed planning application which is to be lodged with the local planning authority, in this case the East Riding of Yorkshire Council, for the erection of 16 dwellings, along with associated infrastructure.

1.1 Site Description

The application site is found on the western periphery of Keyingham village. The survey site extends to approximately 0.65 ha in area, has a relatively level topography and is centred on Grid reference TA244 253.

Habitat composition within the study site is dominated by grazed neutral grassland and three small timber sheds/shelters. The boundaries are defined by 1.5m high post and wire fencing. The immediate surrounding habitat to the west is intensively farmed arable land, with residential properties to the north, east and south.

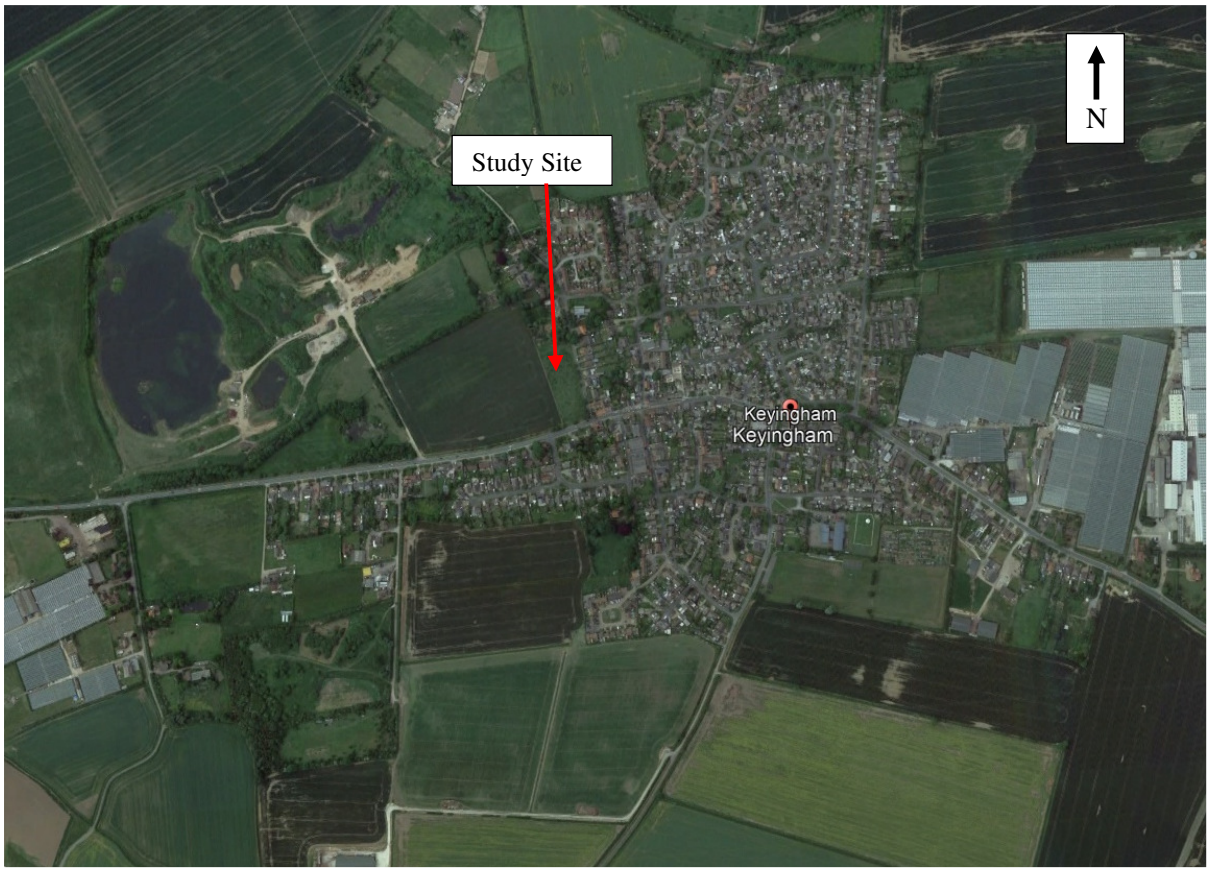


Figure 1. Arial view of the study site location within the wider landscape

© Google Earth.

1.2 Proposed Works

It is understood that the development proposal relates to the Erection of 16 dwellings along with associated infrastructure.

1.3 Survey Objectives.

The aim of the Preliminary Ecological Appraisal was to:

- Perform a desk study and records searches from a number of sources including third party repositories to enable the identification of any designated sites, along with existing records for any protected and notable species within and around the study site.

- Examine the potential for protected and notable species within the application site and the immediate surrounding area during the field survey and discuss the current legislation relevant to these species.

- Produce a map to identify, classify existing habitats and features within the site

- Prepare a report on the findings from information collated from the data/records searches and the field survey to identify any potential constraints and opportunities for the site, including the need for further surveys if required.

2.0 SURVEY METHODOLOGY.

2.1 Desk Study.

A desk study was undertaken with records being obtained from the following third-party repositories, the North & East Yorkshire Ecological Data Centre with reference to the East Yorkshire Bat Group and a review of the Multi-Agency Geographical Information of Conservation (MAGIC) and Google Earth. The search area is a 2km radius from the centre of the application site located at Grid reference TA244 253.

2.2 Field Survey.

2.2.1 Ecological Appraisal Survey

The survey was undertaken on the 30th November 2022 with the weather conditions at the time of the survey being illustrated below in Table 2. The application site is walked over to identify, classify, and map the habitat types, present marking any features on a base field map.

Target notes (T) where applicable will be used to identify any potential for protected / notable species or habitats present and to give more detail on any points of interest. Within each habitat parcel the main plant species are recorded and photographed to reference the general aspect of the identified habitat parcel.

The coding of the Habitat parcels is completed using the UK Habitat Classification (UKHab Field_Key_V2.1_Sep2020), these Classifications are directly compatible with Natural England Biodiversity Metrics 3.1 tool for auditing and accounting for biodiversity.

The Biodiversity Metrics 3.1 Auditing tool uses habitat as a proxy for wider biodiversity with different habitat types scored according to their relative biodiversity value. This value is then adjusted, depending on the condition and location of the habitat based on criteria set out as part of the audit tool. The Biodiversity Metrics 3.1 outputs a calculated number of 'biodiversity units' for a specific site. This includes Broad and linear habitats.

Habitat Units are mapped on QGIS, using Google Satellite Data/ aerial photography/Client Supplied site information (eg- Topography drawings), this data then forms the export for use within the Biodiversity Metrics 3.1 Auditing tool. This use of this software allows a series of layers and states to be recorded (Baseline, Proposed and Master).

2.2.2 UKHab Metadata

- UK Habitat Classification Edition Used: Professional
- Minimum monitoring unit (MMU): 5m (linear feature) 25m² (Polygon Feature)
- The highest UKHab level that the survey will record to (1-5): Level 4
- Map projection and Units: QGIS Hannover 3.16 using Google Satellite ©2020Google. Map projection used is EPSG:3857 - WGS 84 / Pseudo-Mercator. Units in M.
- Year of Survey: 2022
- Organisation undertaking the survey: Curtis Ecology
- References for datasets used: Multi-Agency Geographical Information of Conservation (MAGIC), North & East Yorkshire Ecological Data Centre.

2.3 Protected/ Notable Species.

During the survey observations are made for any field signs or suitable habitats for any protected/notable species.

An assessment was made for the suitability of the site for the following protected/notable species:

- Badgers
- Bats
- Great Crested Newts
- Hedgehogs
- Nesting Birds
- Reptiles

2.3.1 Badgers

All areas of potential for badgers were surveyed, which includes woodland, small copses, hedgerows, embankments and well-worn paths within the study site and up to 50m from the application site red line boundary where access was granted.

Field signs of Badgers would include the following:

- Sightings, main and annex setts, well-worn tracks, footprints, latrines and dung pits, snuffle holes, hair remains on barbed wire fencing.

2.3.2 Bats

Assessments are made during the initial field survey for potential roosting features and foraging areas within the site footprint and immediate surrounding area. These will include buildings, woodland, individual trees, hedgerows and any aquatic features.

Visual assessments for trees would include the following signs: trunk diameter, rot holes, splits, loose bark, staining of the bark below or around a feature and a covering of ivy.

2.3.3 Great Crested Newts

Although Great Crested Newts are terrestrial for most of the year they do require standing water for breeding purposes. Therefore, the study site was assessed for the suitability and potential to support the species together with the surrounding habitat within 500m of the study site itself.

Water bodies within a 500 m radius of the application site, where permission had been granted from the landowner at the time of this field survey were assessed utilising the Great Crested

Newt Habitat Suitability Index (HSI) (Oldham et al 2000). The HSI is a numerical index between 0 and 1, where a score of 1 represents optimal habitat for great crested newts. The HSI score is used to define the suitability of a pond on a categorical scale (Table 1).

Table 1. Great Crested Newt HSI Score Index.

HSI Score	Pond Suitability
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

The HSI score is achieved by assigning a quantities figure to each of the following 10 variables:-

SI 1 - Map location,

SI 2 - Pond area

SI 3 - Number of years in ten pond dries up

SI 4 - Water quality

SI 5 - Percentage of perimeter shade

SI 6 - Waterfowl impact

SI 7 - Fish impact

SI 8 - Number of ponds within 1km not separated by barriers to dispersal

SI 9 - Terrestrial habitat

SI10 - Percentage of pond surface occupied by aquatic vegetation

The tenth root of the product of the variables is then calculated to give the figure for habitat suitability.

HSI = (SI1 x SI2 x SI3 x SI4 x SI5 x SI6 x SI7 x SI8 x SI9 x SI10)1/10

The HSI calculation for each pond was derived at, using the automated formula found within the Natural England Mitigation Licence Application Form, Section C3.5 Waterbodies: quantitative assessment.

Terrestrial habitat suitable for Great Crested Newts would include woodland, scrub and tussocky grassland, although they can be found in a broad range of sub- optimal habitats.

2.3.4 Hedgehogs

All areas that could provide potential features for hedgehogs are assessed and would include outbuildings, dense vegetation, grassland, hedgerows, woodland and lawns. The following field signs would indicate the presence of hedgehogs: - existing nests, footprints and droppings.

2.3.5 Nesting Birds

Birds may use a variety of features for nesting both natural and artificial. Typical features would include buildings, hedgerows, trees, scrub and grassland. During the field survey observations are made for sightings and calls of birds, evidence of previous and active nesting and evidence of roosting places.

2.3.6 Reptiles.

The study site was assessed for any potential to support reptiles with particular attention being paid to the following features, quiet south facing slopes used as basking areas, walls, banks, log piles, compost heaps, refugia and opportunities for foraging e.g. moderately sized area of rough grassland and scrub.

2.4 Survey Limitations.

The application site was fully accessible on the day of the field survey. However, it should be noted that whilst the survey was appropriately intensive and we feel that no significant matters have been overlooked there is always potential for some species to be overlooked due to the time of year and mobility of these species.

2.5 Weather conditions.

Table 2. Weather conditions at the time of the survey.

Survey date	30th November 2022
Wind speed	4mph west
Cloud cover	100%
Rainfall	None
Temperature	6°C
Humidity	91%

2.6 Survey Personnel

The field survey was undertaken in suitable weather conditions and at an appropriate time of year on the 30th November 2022 by the following personnel:

Roger Curtis FdSc who has 12 years survey experience and holds the follow Natural England licences; -

Bats – WML-CL18 class licence 2015-12148-CLS-CLS

Great crested newts – WML-CL08 class licence, 2015-17362-CLS-CLS

Roger is also a committee member of the East Yorkshire Bat Group and County Bat Recorder.

3.0 SURVEY RESULTS.

3.1 Desk Study.

Figure 2. Pre-existing Site Designations

North & East Yorkshire NEYEDC ecological data centre

Our Ref:	E06922
Your Ref:	CE1258
On behalf of:	Curtis Ecology
Date:	24/11/2022
Search area:	2km from TA244253

NEYEDC Site Data Search

Internationally Designated Sites

The following internationally designated site boundaries were searched:

- Ramsar sites — published May 2017, revised October 2020
- Special Areas of Conservation — published July 2017, revised May 2021
- Special Protection Areas — published January 2019, revised June 2021

There are no internationally designated sites in or partly within the search area.

Nationally Designated Sites

The following nationally designated site boundaries were searched:

- Areas of Outstanding Natural Beauty — published January 2017, revised August 2020
- National Nature Reserves — published April 2017, revised June 2021
- National Parks — published August 2016, revised February 2019
- Sites of Special Scientific Interest — published January 2019, revised June 2021

The following nationally designated sites are in or partly within the search area, and are shown on the accompanying map.

Designation	Name or location of site	Grid reference in relation to the search area
SSSI	Kelsey Hill Gravel Pits	TA238266

We do not hold full details or citations of national designated sites. For further information please see the relevant section of the .gov.uk website https://www.gov.uk/topic/planning-development/protected-sites-species

or go to JNCC's UK Protected Areas webpage: https://jncc.gov.uk/our-work/uk-protected-areas/

Locally Designated Sites

The following locally designated site boundaries were searched:

Local Nature Reserves

published April 2017, revised June 2021

There are no Local Nature Reserves in or partly within the search area.

East Yorkshire LWS (Local Wildlife Site)

Version: East Yorkshire LWS v8.2, February 2022

North & East Yorkshire NEYEDC ecological data centre

Our Ref: E06922
Your Ref: CE1258
On behalf of: Curtis Ecology
Date: 24/11/2022
Search area: 2km from TA244253

The following East Yorkshire LWS are in or partly within the search area, and are shown on the accompanying map.

Site Name	Site Ref	Grid Reference	Status
Hedon – Winestead Disused Railway Line	TA2025-03	TA158296 – TA341276	Designated LWS
Kelsey Hill Gravel Pits	TA2025-02	TA243273	Historic LWS

Priority Habitats

The following site-based habitat boundaries were searched:

Ancient Woodland Inventory

published July 2013, revised January 2020

There are no woodlands identified on the Ancient Woodland Inventory in or partly within the search area.

Priority Habitat Inventory

published August 2017

The following areas of priority habitat are in or partly within the search area and are shown on the accompanying map

Habitat type	Location description
Coastal and floodplain grazing marsh	One small polygon at central Keyingham and one at Ryehill.
Deciduous woodland	A few scattered polygons around Keyingham and some small groups of polygons north of the disused railway line, including at Kelsey Hill Gravel Pits.

The relevant 2km Designation & Priority Habitat Maps are illustrated in Appendices 2,3 and 4 of this report.

3.1.1 Species Records

Species records were obtained from the North & East Yorkshire Ecological Data Centre and East Yorkshire Bat Group.

In total 39 historical records for protected or notable species were obtained from the third-party repositories, with no historical records relating to the application site itself.

Where relevant they are mentioned in Section 3.3 of this report and the full list can also be obtained from ourselves upon request.

3.2 Habitats

The following habitats were found within the study area:

Modified grassland (g3)

Generally, the sward was generally in moderate condition with few herb species, due to intensive grazing over the years. Ryegrass *Lolium sp* dominated the site, along with Red fescue *Festuca rubra* and Yorkshire fog *Holcus lanatus.* Forbes were generally sparce and included Broad-leaved dock *Rumex obtusifolius,* Common chickweed *Stellaria media*, Common nettle *Urtica dioica*, Creeping buttercup *Ranunculus repens,* Creeping thistle *Cirsium arvense,* Dandelion *Taraxacum officinale,* Groundsel *Senecio vulgaris* Mallow *Malva spp* (rare), Ribwort plantain *Plantago lanceolata* (rare) and White clover *Trifolium repens.*

Fence (u1e 69)

A 1.5m high post and wire fence defines all the site boundary. a short length of 1.5m high timber boarded fencing is found in the northwest corner of the site.

Bare ground (u1) Timber sheds

Descriptions of the buildings on site can be found within the Bat Section 3.3.1 of this report.

Urban trees Existing Large and Medium Trees

All trees are found outside the application site boundaries, within the roadside verges, however due to their close proximity, it was considered prudent to mention them, as part of this ecological appraisal.

A mix of Crab apple *Malus sylvestris,* Elder *Sambucus nigra*, European ash *Fraxinus excelsior*, Hawthorn *Crataegus monogyna,* Leylandii *Cupressus × leylandii*, Salix spp are found in the neighbouring garden to the north but outside the application sites boundary.

Along Church Lane outside the application sites eastern boundary are several semi mature Red Chestnut *Aesculus x carnea,* along with a mature Horse Chestnut *Aesculus hippocastanum* standing at the southern end of the lane.

Along the southern roadside verge again outside the application sites boundary are a young Red chestnut *Aesculus x carnea,* a young Weeping willow *Salix babylonica* and a semi-mature Horse chestnut *Aesculus hippocastanum*

Plate 1. Looking south from the northern boundary.

Plate 2. Looking north from the southern boundary.

3.3 Protected and Notable Species

3.3.1 Badgers

The application site and immediate surrounding habitat were accessible was searched for evidence of Badger habitation and foraging using the criteria set out in Section 2.0 of this report.

No main or annex setts, tracks on well-worn paths or any foraging activities were identified within the application site or within the immediate surrounding habitat for approximately 50 metres where accessible.

There were no historical records obtained from the third-party repository searches for the Badger within the 2km search area.

3.3.2 Bats

There was 1 historical bat record returned from the third-party repositories, for a grounded Common pipistrelle *Pipistrellus pipistrellus* located approximately 1.1km northwest of the study site in 2007.

As part of this Preliminary Ecological Appraisal a Preliminary Roost Assessment was undertaken upon all the buildings found within the application site.

Daytime Building Survey.

Building 1.

Building 1 is a small animal shelter, constructed with a timber frame which is timber boarded on the north elevation, along with a mix of timber planking between the timber uprights which are covered externally with profiled metal sheeting. The east elevation is open and the roof structure is a series of timber beams covered externally with box profile metal sheeting with no form of under drawing being present.

There was historical evidence of bat habitation and from the observations made Building 1 has been assessed as having Negligible potential for bat habitation.

Plate 3. The exterior of Building 1.

Plate 4. The interior of Building 1.

Building 2.

Building 2 is an ex-rail carriage which has had the roof lifted slightly. Built with an angle iron frame, to which the heavy-duty plywood sheets are bolted to form the walls. These were in reasonable condition with no holes noted. The roof has been modified slightly and is lined internally with plywood sheeting and clad externally with metal roofing sheets. A door opening is found centrally in the east elevation of the rail carriage.

There was no historical evidence of bat habitation and negligible opportunities for roosting within the structure itself. Therefore, from the observations made this building has been assessed as having Negligible potential for bat habitation.

A third timber shed is located in the top northwest corner of the site, however it is understood that this shed will be retained so no assessment was undertaken upon it.

Plate 5. The east elevation of Building 2.

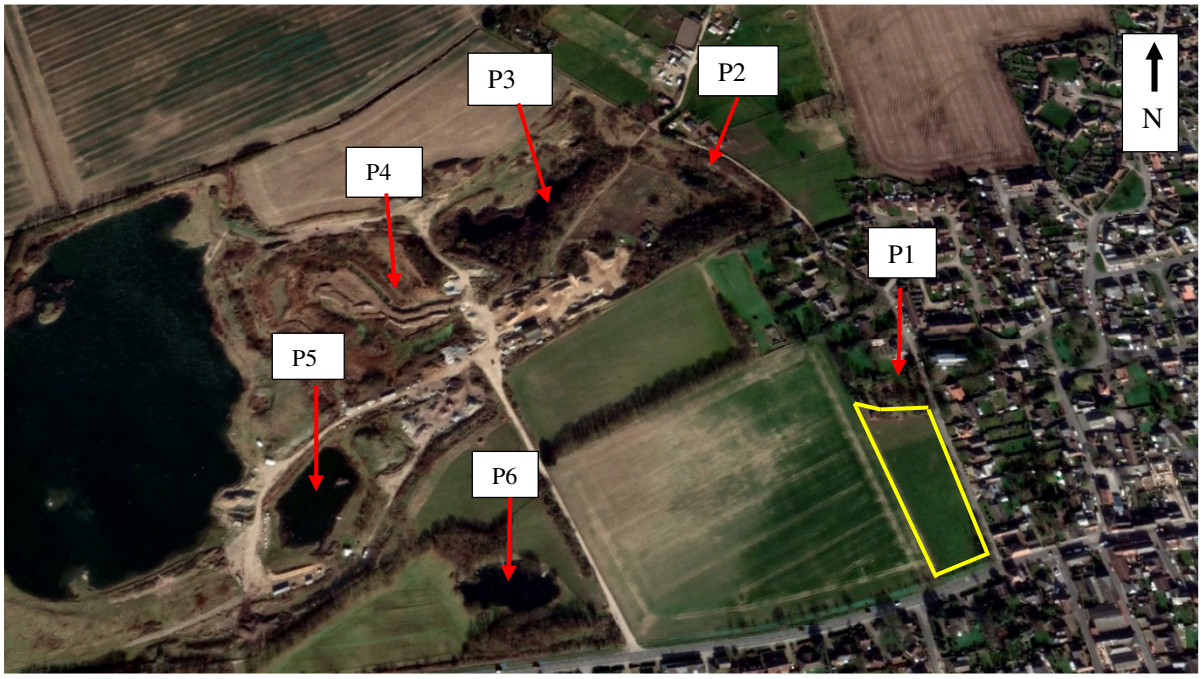
Plate 6. The interior of Building 2.

3.3.3 Great Crested Newt

There were no historical records returned from the third-party repository searches relating to Great crested newts within the 2km search area.

During the desk top study six waterbodies was identified from both Arial photographs and Ordnance survey maps, within 500m of the application site,

Figure 3. Arial view with the ponds locations indicated and the application site outlined in yellow.



Pond 1 no longer exists

Ponds 2 - 6 are all located within Holderness Sand & Gravel Company workings and not accessed during the field survey as permission from the third-party landowner had not been obtained by the client. However, these waterbodies were assessed during May 2015, by Curtis Ecology as part of another project which was located to the north of the study site and bordered the gravel pits boundaries. As this is a working quarry, obviously habitat and the individual pits may change, due to reworking of individual pits and the opening up of new ones, which from arial photography appears to the case to a certain degree.

The original pond descriptions for Ponds 2 – 6 (Figure 3), have been compared against, recent updated arial photography, as well as from local knowledge and are discussed below:

Pond 2.

Located approximately 270m north of the current application site. This pond had thick dense willow and Bramble scrub around the whole of the bank margins. Water quality appeared to be moderate with virtually no submerged aquatic vegetation. The marginal vegetation was dominated by a narrow band of Common Reed *(Phragmites australis)* in places with bankside vegetation consisting of dense Bramble, *(Rubus fructus)* Goat willow saplings Crack willow and Alder. Habitat Suitability Index score 0.78 – Good (May 2015). From recent arial photography it now appears that successional expansion of the original the scrub areas have extended and are covering more of the surface area of the pond. There also still appears to be a lack of any submerged aquatic vegetation within this waterbody.

Pond 3.

Located approximately 340m northwest of the application site. This pond was again very steep sided, with only a narrow marginal shelf supporting Common reed *(Phragmites australis*). Submerged aquatic vegetation was non-existent as it is understood the depth of this waterbody is around 10 metres. Marginal, vegetation was limited to Common Reed *(Phragmites australis*) with Goat willow *(Salix caprea)* and Hawthorne *(Crataegus monogyna)* scrub starting to encroach the bank sides. Habitat Suitability Index score 0.71 – Good (May 2015). From recent arial photography , the is still lack of any submerged aquatic vegetation within this waterbody and marginal vegetation appears to be the same due to the depth of the waterbody. A small fish population was present during the 2015 assessment as it appears this waterbody has not had any further reworking on it, then the original fish population, will have increase during the past 7 years. Waterfowl will likely frequent this waterbody as was the case in 2015.

Pond 4.

This waterbody lies approximately 370 m west of the application site. The water from the southern end was being pumped and was used for washing the extracted gravel with the wastewater being piped back into the northern part of the water body, which still appears to be the same type of setup. The northern end was becoming silted up with some dredging being evident. Water quality is poor with no submerged aquatic vegetation evident. Again, any marginal vegetation was dominated by Common Reed *(Phragmites australis)* due to the shallow water. Suitability Index score 0.52 – Below average (May 2015). From recent arial photography, it appears that siltation of sections of this waterbody has increased reducing the overall original surface area. Marginal vegetation predominantly Common Reed *(Phragmites australis)* also appears to have extended into the silted up areas which would be expected. Submerged vegetation is still appears to be none-existent.

Pond 5.

This pond lies approximately 420 m to the west of the application site. A large aquatic body with gently shelving margins present, then a sudden drop-off and is understood to go down to a depth of around 15 metres. Aquatic vegetation consisted of Broad-leaved pondweed and Spiked milfoil within the shallows. Marginal vegetation comprised Common reed around the marginal shelfs, along with stands of Bulrush with small amounts of Hard Rush.

Fish were present, as were a number water fowl during the field survey in 2015. The only good quality terrestrial habitat was limited to the eastern bank with the remainder not yet being encroached by suitable vegetation. Habitat Suitability Index score 0.51 – below average (May 2015). From recent arial photography, submerged aquatic vegetation appears to be more established in the shallow areas, with marginal vegetation appearing to be the same due to the depth of the waterbody. A well-established course fish population was present in 2015, which appears to be the same as in recent arial photography fishing platforms can be seen along with a number of cars parked around the water body banks. Waterfowl will likely frequent this waterbody as was the case in 2015.

Pond 6.

This pond lies approximately 290 m to the west of the application site. Again, this was a large water body which is stocked with course fish and used on a regular basis for angling. Aquatic vegetation was dominated by Spiked milfoil *Myriophyllum spicatum)* with Broad- leaved pondweed in the shallower margins. Marginal vegetation was extensive with Common Reed *(Phragmites australis)* Yellow Flag Iris *Iris pseudacorus,,* Bulrush *(Typha latifolia),* Fools Water Cress and Willowherb *(Epilobium hirsutum)* present. Terrestrial habitat around this waterbody was excellent with tussock grass species, scrub and a small, wooded area along the northern bank Habitat Suitability Index score 0.58 - Below average (May 2015). This waterbody is still used as a course fishery and surrounding habitat does not appear to have expanded. Waterfowl will still likely frequent this waterbody as was the case in 2015.

3.3.4 Hedgehogs.

There was one historical record for Hedgehogs within the search area, which was located approximately 170m south west of the study site and recoded in 2001.

During the field survey there was no historical evidence of Hedgehogs within the application site, although this would be expected as hedgehogs would be commencing their hibernation period.

The mosaic of habitats present within the application site at the time of this field survey, are considered to offer some foraging opportunities in associating surrounding habitat, but minimal resting and hibernating opportunities.

3.3.5 Nesting Birds

There were 17 historical bird records within the 2km search area, all of which related to the Swift *Apus apus,* with none of these records relating to the application site itself.

The following bird species were observed just passing through, these consisted Feral pigeon *Columba livia domestica,* Jackdaw *Corvus monedula,* Woodpigeon *Columba palumbus.* No birds were seen foraging within the application site and no historical nests were observed.

There no was evidence of the site supporting bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

3.3.6 Reptiles

There is one historical reptile record, which is located approximately 1.0km north of the study site, for a Grass snake *Natrix Helvetica* recorded in 1977.

The application site as a whole is considered to offer limited opportunities for reptile species. There are no significant areas of soil or compost heaps which could provide suitable resting /hibernation opportunities. There are no significant quiet south facing slopes with suitable vegetative cover for basking. There is no moderately sized rough tussocky grassland or scrub areas which would provide suitable foraging areas.

4.0 ASSESSMENT AND RECOMMEDATIONS

4.1 Designated Sites.

There is one Nationally Designated Sites found within the 2km search area. Kelsey Hill, a Site of Special Scientific Interest is located approximately 0.95km to the northwest of the study site.

There are no Local Nature Reserves found within the 2 km search area.

There are two Local Wildlife Sites within the search area, the nearest of which is Cowden Range a Designated Local Wildlife Site, found approximately 0.79 km to the south of the study site.

Given the nature of the development proposal and its location, it is not anticipated that any negative impacts would be likely to occur upon either of the Non – statutory sites found within the 2km search radius, as illustrated in Section 3.1.1 and Appendix 3 of this report.

4.2 Habitats

There was no evidence notable/protected plant species or non-native invasive species listed as Schedule 9 plant species within the application site.

The study site is not located within, or in close proximity to any Priority Habitat.

Recommendations:

- No further survey work is required.

- Recommendations have been made within the Arboricultural Survey report, January 2023 regarding tree protection measures are to be undertaken during the construction phase of the proposed development.

- During the soft landscaping phase of the development, in the first instance consideration should be given to the planting of native trees, shrubs and nectar rich plant species, originating from the local province to increase the ecological diversity of the application site. This can be incorporated into an Ecological Enhancement and Management Plan.

4.3 Protected and Notable Species.

4.3.1 Badgers

There was no evidence of Badger habitation or foraging activity within the application site or within the immediate surrounding 50 metres, where accessible. There were no historical records for the species within the 2km search area. Therefore, it can be concluded that the likelihood of the species inhabiting the application site would be considered to be extremely low.

Recommendations: No further survey work or mitigation is required

4.3.2 Bats

There was 1 historical bat record returned from the third-party repositories, for a grounded Common pipistrelle *Pipistrellus pipistrellus* located approximately 1.1km northwest of the study site in 2007.

There was no historical evidence of bat habitation within the study buildings during the daytime buildings assessment, and from the observations made the study buildings have been assessed as follow: -

- Building 1: Negligible potential
- Building 2: Negligible potential

Recommendations:

- No further survey work required.

- During the demolition of the study buildings, in the unlikely event that bats are encountered by an unlicensed person, then they **MUST** withdraw immediately, and all work must stop. A licensed bat ecologist/worker will be called in to enable further investigation and before any work recommences.

- A mix of bat box types are recommended, at a rate of not less than 25% bat box to dwelling ratio, which can be incorporated into an Ecological Enhancement and Management Plan.

4.3.3 Great Crested Newts

There are no historical record returned from the third party repository searches relating to Great crested newts within the 2km search area.

During the desktop study 6 water body were identified within 500 metres of the application site, which is located within the application site.

As discussed in section 3.3.3 of this report Curtis Ecology undertook an assessment of waterbodies 2 – 6 during May 2015. The results of this assessment indicate Habitat Suitability Index scores on waterbodies 2 & 3 as being Good, with the remainder being Below average. However, this was not followed up with Great crested newt, presence and absence surveys as it was deemed too dangerous to undertake such surveys, due to the steepness of the banks, narrow marginal shelf and depth of water. Therefore, following discussion with the council ecologist, it was considered prudent that a robust Method Statement would be sufficient to mitigate any potential short- or long-term impacts for the proposed development to which the original assessments related to in 2015, bearing in mind that the original application site in 2015 was bounded on two sides by the quarry.

The current application site to which this report relates, is further southeast of the waterbodies with none of the waterbodies found within 250m of the current application site. Also, the habitat between the application site and the gravel pits is intensively farmed arable and grassland, both of which represent sub optimal habitat for Great crested newts. The habitat within the application site itself, being grazed grassland is also considered to be sub optimal habitat for Great crested newts. There is also no direct connectivity between the waterbodies and the application site.

Given the fact that waterbodies 2 - 6 are all over 250m from the application site ,with no direct connectivity between them and the application site, it is considered that the lack of access to these waterbodies would not represent a constraint. In addition to justify this conclusion the Natural England Rapid Risk Assessment tool was used to demonstrate this, with the results illustrate below in Table 3 below.

Table 3. Rapid Risk Assessment Tool.

Component	**Likely effect** (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	**Notional offence probability score**
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	0.5 - 1 ha lost or damaged	0.03
Individual great crested newts	No effect	0
	Maximum:	0.03
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

From all the evidence collated to date, it is our considered opinion that the likelihood of Great crested newts being present within the application site would be Highly Unlikely for the following reasons: -

1. There are no historical records for Great crested newts within the 2km search area.
2. Water bodies 2 – 6 are all over 250m from the application site
3. There is no direct connectivity between waterbodies 2 – 6 and the application site.
4. Habitat within the application site is sub optimal for GCN.

5. Habitat between the gravel pits and application site is considered to be sub optimal for GCN in comparison with habitat around the waterbodies.
6. The Rapid Risk Assessment Tool result is Green: Offence Highly Unlikely

Recommendations: - No further survey or mitigation work required.

4.3.4 Hedgehogs

Hedgehogs have had a drastic declined in numbers over in recent years and are now listed as a Biodiversity Action Plan Priory species both at a UK and local level (See Legislation Section 5.4 of this report).

However, as this species is highly mobile, then consideration should be given during both the initial site clearance, as well as during the construction phase of the development to the possible presences of the species and that any contractors should be made aware of this possibility.

Recommendations.

- All contractors working on the project should be made aware of the possible presence of the species.

- Any trenching works which are left open overnight or over a weekend should have a 45° slope made from compacted earth or a wide wooden plank incorporated at one end of the trench, thus providing an effective escape route.

- 3 hedgehog houses are be installed, within the application site, again this recommendation can be incorporated into an Ecological Enhancement and Management Plan.

4.3.5 Nesting Birds

There were 17 historical bird records within the 2km search area, all of which related to the Swift *Apus apus,* with none of these records relating to the application site itself.

During the site survey three bird species were seen either within or passing over the application site and the immediate surrounding area.

No historical nests were observed during the field survey, as the habitat present, being grazed grassland offered limited opportunities for ground nesting birds. The buildings offer limited opportunities for nest building and no historical nests were seen during the buildings assessment.

Mitigation Strategy for Nesting Birds

1. No further Breeding bird survey work is required.

2. Demolition works on the existing sheds should preferably be undertaken outside the bird nesting period 1st March – 31st August inclusive. However, if this is unavoidable then all the buildings will need to be checked by a suitably qualified ecologist just prior to any demolition works being undertaken. If any active nests are identified, then they will remain untouched until the nest has been naturally abandoned or the young have fledged.

3. In addition to item 2 above. If the initial vegetation/ground clearance works are to be undertaken during the bird nesting period 1st March – 31st August inclusive, then the site will require an initial walk over and where deemed necessary a fingertip search by a suitably qualified ecologist prior to any clearance works being undertaken.
   If any active nests are identified then they will be marked by a small red flag, with a 10m buffer zone and will remain untouched until the nest has been naturally abandoned or the young have fledged.

4. A mix of bird box types are recommended, at a 25% bird box to dwelling ratio, which can be incorporated into an Ecological Enhancement and Management Plan once the final site layout has been produced.

4.3.6 Reptiles.

There are no historical record returned from the third-party repository searches relating to reptile species within the 2km search area.

The application site as a whole is considered to offer limited opportunities for reptile species, as discussed in section 3.3.6 of this report. Therefore, from all the information obtained to date, it is considered that the likelihood of reptile being present within the study would be minimal.

Recommendations: No further survey work or mitigation required

4.4 Metric 3.1

A Baseline Metric 3.1 calculation has been undertaken on existing habitats found within the application sites red line boundary, which can be found in a separate document accompanying this report.

5.0 LEGISLATION

5.1 Badgers

Badgers are protected under the Protection of Badger Act (1992) which makes it an offence to:

- Kill or injure a Badger
- Damage or destroy a sett
- Disturb a Badger whilst it occupies a setts

5.2 Bats

All species of UK bats are statutorily protected under The Conservation of Habitats and Species Regulations 2017 (as amended), and under further UK legislation through Schedule 5 (Section 9) of the Wildlife and Countryside Act 1981. This combined legislation makes it an offence to:

- Deliberately kill, injure or capture bats
- Deliberately disturb bats in such a way as to significantly effect:
    a) the ability of that species to survive, breed, rear or nurture their young
    b) the local distribution on the species
- Intentionally or recklessly disturb or obstruct access to the resting place of bats
- Damage or destroy breeding sites and resting places of bats even if bats are not occupying the roost at the time.
- Possess, transport, sell, barter or exchange any part of, or derived from a bat whether dead or alive.

5.3 Great Crested Newts

The Great Crested Newt is statutorily protected under The Conservation of Habitats and Species Regulations 2017 (as amended), and under further UK legislation through Schedule 5 (Section 9) of the Wildlife and Countryside Act 1981. This combined legislation makes it an offence to

- deliberately kill, injure or capture a great crested newt
- deliberately disturb a great crested newt in such a way as to significantly effect:
- the ability of that species to survive, breed, rear or nurture their young
- recklessly disturb or obstruct access to the resting place of a great crested newt
- damage or destroy breeding sites and resting places of great crested newts
- deliberately take or destroy eggs of the great crested newt
- possess, transport, sell, barter or exchange any part of a great crested newt whether dead or alive.

The Great crested newt *(Triturus cristatus)* is listed as a priority species on the UK Biodiversity Action Plan (BAP) and in Section41 of the Natural Environment and Rural Communities (NERC) Act 2006.

5.4 Hedgehogs

- Hedgehogs only receive partial protection under the Wildlife and Countryside Act 1981 (as amended) in Section 6, this section of the Act lists animals which may not be taken or killed by; nets, trapping, poisons electric devices, gas/smoke and automatic weapons and some others.
- Hedgehogs are a UK Biodiversity Action Plan Priority Species and are listed under The Natural Environment and Rural Communities (NERC) Act 2006.

5.5 Nesting birds

All wild birds are protected under Section1 of the Wildlife and Countryside Act 1981 (as amended), it is an offence to:-

- Deliberately kill, injure or take any wild bird
- Take, damage or destroy the nest of any wild bird whilst in use or being built
- Take or destroy an egg or eggs of any such wild bird.

Certain bird species which includes the Barn owl *Typo alba* are listed under Schedule 1 of the Wildlife and Countryside Act receive special additional protection and as such it is an offence to intentionally or recklessly disturb them when nesting or rearing young.

A number of bird species are also listed under The Natural Environment and Rural Communities (NERC) Act 2006

5.6 Reptiles

Common lizard, slow worm, grass snake and adder are all protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) against

- Killing, intentional injury and selling
- Sand lizard and Smooth snake are fully protected by the Conservation of Habitats and Species (as amended) and the Wildlife and Countryside Act 1981 Section 9 both pieces of legislation make it an offence to:

- Kill, injure or capture
- Damage or destroy a breeding or resting place
- Intentionally obstruct access to a resting place used for shelter
- Keep, transport or sell.

All native species of reptiles are included in the NERC Act 2006

5.7 Plant species

Certain plant species in the UK are protected under the following legislation:

- Wildlife and Countryside Act 1981 (as amended) under Section 8
- Conservation of Habitats and Species Regulations 2010 and are listed under Schedule 4

Both pieces of legislation make it an offence to.

- Intentionally pick, uproot or destroy certain plants
- Possess, sell or exchange them.

Certain plant species UK Biodiversity Action Plan Priority Species and are listed under The Natural Environment and Rural Communities (NERC) Act 2006.

In addition to the above legislation there are injurious weeds and invasive species which are subject to the following legislation:

The Weed Act 1959 covers injurious weeds

> The five species listed under this legislation are; Common Ragwort *(Senecio jacobea),* Creeping or field thistle *(Cirsium arvense),* Spear thistle *(Cristium vulgare),* Broad-leaved dock *(Rumex obtusifolius)* and Curled dock *(Rumex crispus).*

It is not an offence to have these plant species on your land but it is an offence to allow them to spread to agricultural land.

Invasive species are under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)

The following are possibly the most common invasive species encountered:

- Japanese knotweed *(Fallopia japonica),* Giant hogweed *Heracleum mantegazzianum)*, Himalayan balsam *(Impatiens glandulifera),* Rhododendron spp, New Zealand Pigmyweed *(Crassula helmsii),*

It is not an offence to have these plants growing on your land, but it is an offence to allow them to spread into the wild.

6.0 PLANNING POLICY.

The National Planning Policy Framework (2021):

179. To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity61; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

180. When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons63 and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

181. The following should be given the same protection as habitats sites:

a) potential Special Protection Areas and possible Special Areas of Conservation.

b) listed or proposed Ramsar sites ; and

c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

182. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plan or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

ODMP Circular 06/2005 Biodiversity and Geological Conservation

- The presence of a protected species is a 'material consideration' when a local planning authority is considering a development proposal. *(Paragraph 98 Circular 06/2005),* when a planning authority is considering a development proposal and as such where impacts upon a protected species are likely to occur from a proposed development, surveys must be undertaken and provided to support a planning application.
- Paragraph 99 Circular 06/2005 states;

  'It is essential that the presence or otherwise of protected species and the extent that they may be affected by the proposed development, is established before making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted'.

- Where there is a reasonable likelihood of protected species being present and affected by a development the surveys should be completed and any necessary measure put in place, through conditions and / or planning obligations, before the permission is granted.

The Natural Environment and Rural Communities Act 2006 (NERC)

The Natural Environment and Rural Communities Act 2006 (NERC) also lists the Bat as a species of principal importance under Section41 and Section 40 requires every public body in the exercising of its functions (in relation to Section 41 species) to 'have regard, so far as is consistent with the proper exercise of those functions, to the propose of conserving biodiversity'; therefore making the Bat a material consideration in the planning process and requiring a detailed survey before planning permission can be granted.

UK Biodiversity Action Plan

This action plan is a government initiative and contains a list of priority habitats and species of conservation concern in the UK which are the same as those listed within Section 41 of The Natural Environment and Rural Communities (NERC) Act 2006. The plan also outlines biodiversity initiatives designed to enhance their conservation status.

The UKBAP requires conservation of biodiversity to be addressed at a county level via a Local BAP and are usually targeted towards species of conservation concern within each separate area.

7.0 REFERENCES AND BIBLIOGRAPHY

- Bat Conservation Trust – Species data sheet (2012)
- Bat Conservation Trust – Places that Bats May Use in Buildings - https://www.bats.org.uk/our-work/buildings-planning-and-development/industry-advice/construction-industry
- Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London
- Countryside and Rights of Way Act 2000 – HMSO
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- English Nature (2001). *Great Crested Newt Mitigation Guidelines.* English Nature. Peterborough.
- Gent.A. & Gibson. S., (1998). *Herpetofauna Worker's Manual.* Joint Nature Conservation Committee. Peterborough.
- JNCC (2010). *Handbook for Phase 1 Habitat Surveys.* Joint Nature Conservation Committee
- East Yorkshire Bat Group
- English Nature (2002). *Bats in roofs: a guide for surveyors*. English Nature, Peterborough, UK
- Google Earth - https://www.google.co.uk/intl/en_uk/earth/
- Michell-Jones, A.J. and McLeish A.P. (Eds). (2004). *Bat Worker's Manual (3rd Edition).* Joint Nature Conservation Committee, Peterborough, UK
- Michell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough, UK
- National Planning Policy Framework 2021 Department of Communities and Local Government
- UK Habitat Classification (UKHab Field_Key_V2.1_Sep2020),
- UK Post -2010 Biodiversity Framework (2012) http://www.jncc.defra.gov.uk
- Natural England Standing Advice Sheet: *Bats* (April 2012)
- North & East Yorkshire Ecological Data Centre
- ODMP Circular 06/2005 Biodiversity and Geological Conservation
- Wildlife and Countryside Act 1981 -HMSO

8.0 APPENDICES

8.1 Appendix 1. Species List

Plants.

Annual meadow grass *Poa annua*

Broad-leaved dock *Rumex obtusifolius*

Common chickweed *Stellaria media*

Common nettle *Urtica dioica*

Creeping buttercup *Ranunculus repens*,

Creeping thistle *Cirsium arvense*

Dandelion *Taraxacum officinale*

Groundsel *Senecio vulgaris*

Mallow *Malva spp*

Ryegrass *Lolium sp*

Red fescue *Festuca rubra*

Ribwort plantain *Plantago lanceolate*

Ryegrass *Lolium sp*

White clover *Trifolium repens*

Yorkshire fog *Holcus lanatus*

Trees outside the red line boundary.

Crab apple *Malus sylvestris*
Elder *Sambucus nigra*
European ash *Fraxinus excelsior*
Hawthorn *Crataegus monogyna*
Horse Chestnut *Aesculus hippocastanum*

Leylandii *Cupressus × leylandii*
Red chestnut *Aesculus x carnea*
Salix spp
Weeping willow *Salix babylonica*

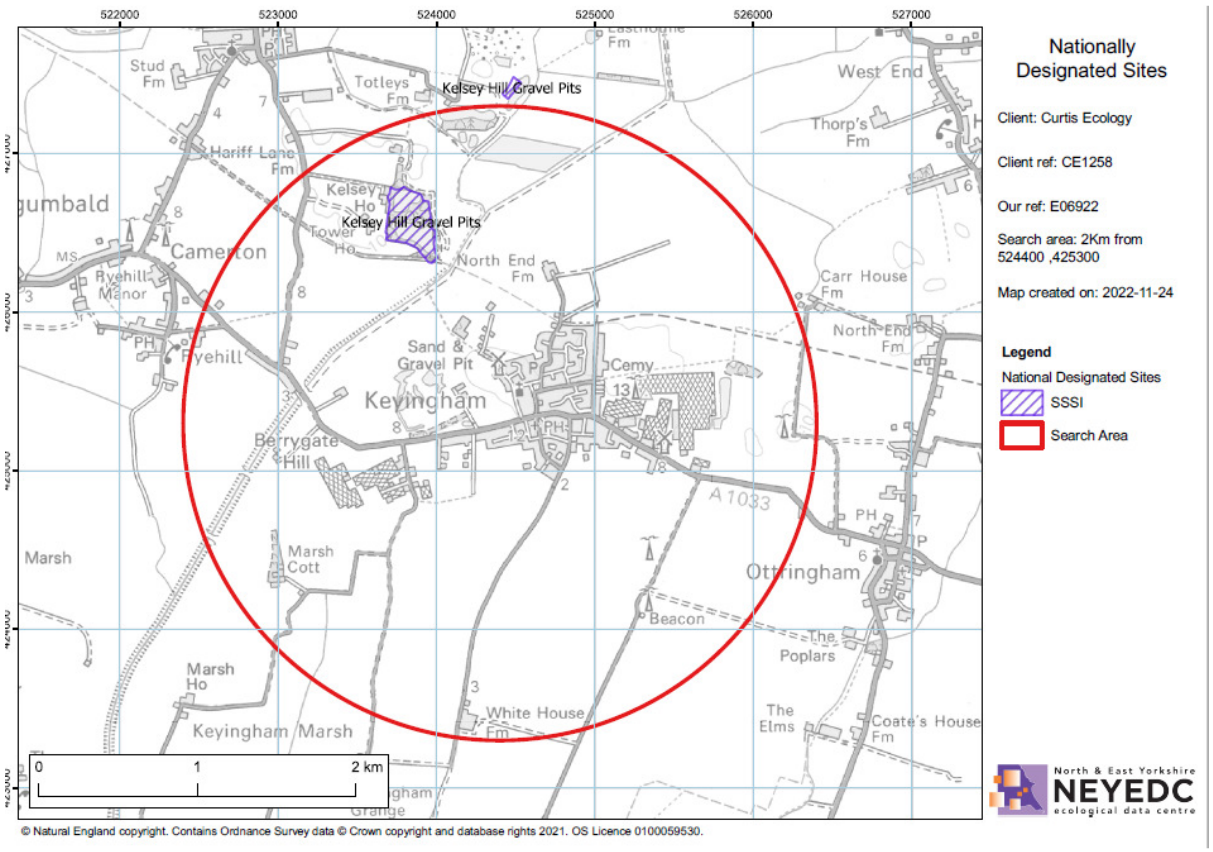
Birds.

Feral pigeon *Columba livia domestica*

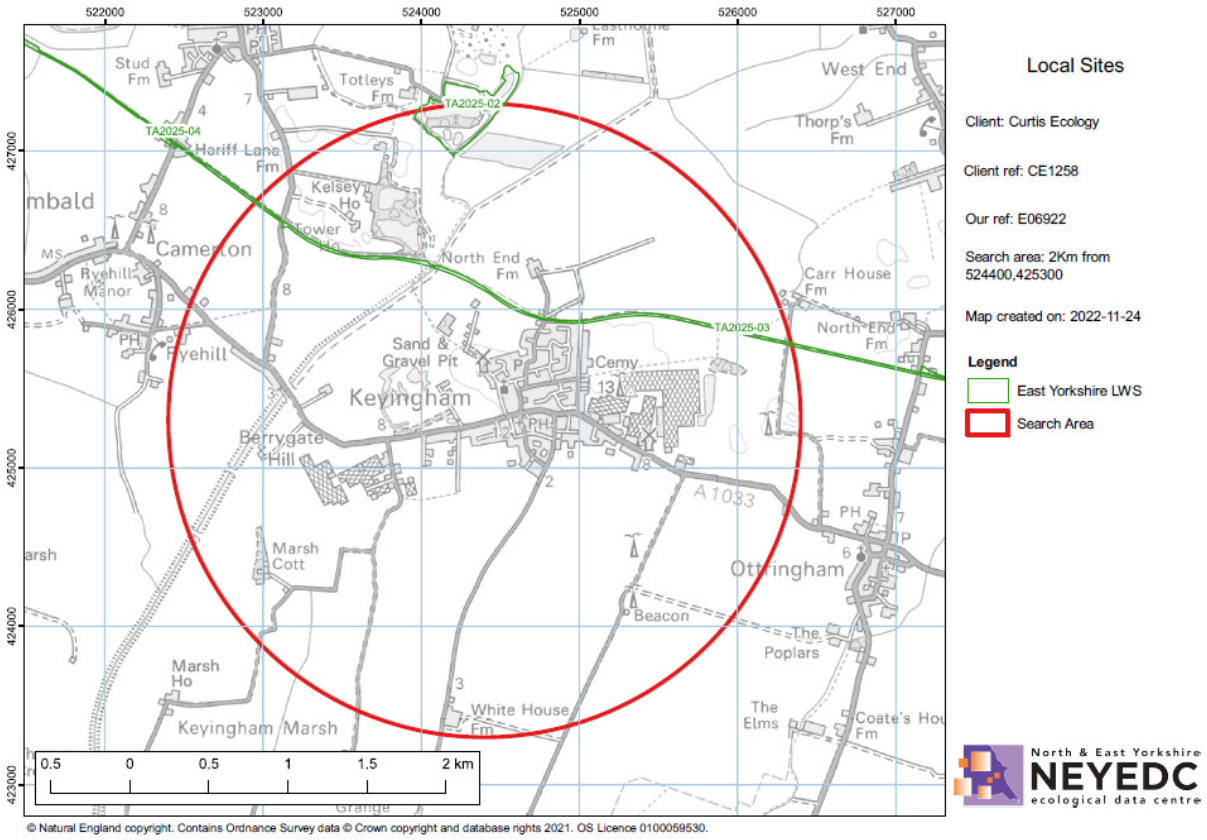
Jackdaw *Corvus monedula*

Woodpigeon *Columba palumbus*

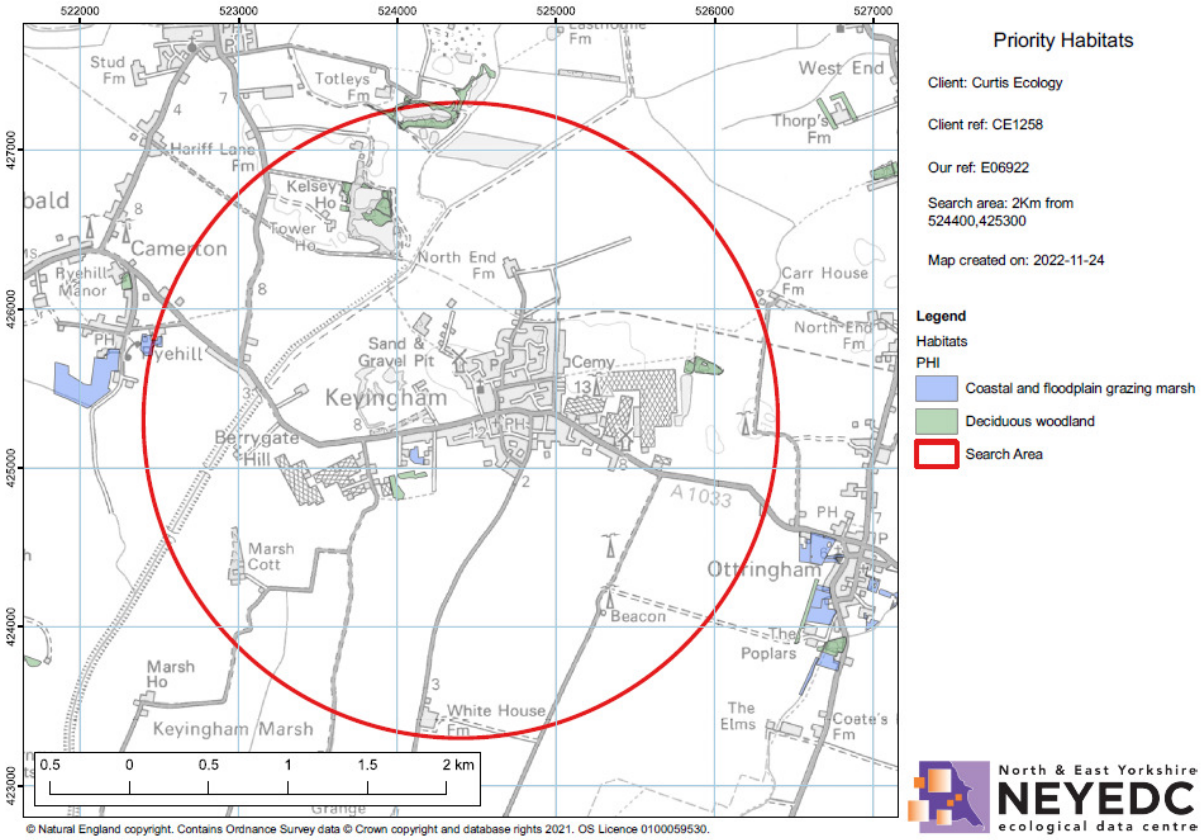
8.2 Appendix 2. Nationally Designated Sites Map 2km



8.3 Appendix 3. Locally Designated Sites Map 2km.



8.4 Appendix 4. Priority Habitats Map 2km



8.5 Appendix 5. Phase 1 Habitats Map