

PRELIMINARY ECOLOGICAL APPRASIAL REPORT

At

Land at 49 Front Street,
Middleton on the Wolds
YO25 6AU

For

Mr J. Eastwood

Date: 23rd May 2022

Reference no: CE1183

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Project: Land at 49 Front Street, Middleton on the Wolds

Title: Preliminary Ecological Appraisal Report

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EXECUTIVE SUMMARY.

Curtis Ecology was instructed by Mike Jones Design Services Ltd, on behalf of their client, Mr J. Eastwood to undertake a Preliminary Ecological Appraisal at a parcel of land to the south and west, 49 Front Street, Middleton on the Wolds, YO25 9UA. The survey is required to inform a proposed Outline Planning Application (all matters reserved), which is to be lodged with the local planning authority, in this case the East Riding of Yorkshire Council, for the erection of five dwellings on previously developed land to the south and west of 49 Front Street. Both verbal and electronic instructions were given with a copy of the Design and Access Statement provided.

The Preliminary Ecological Appraisal was undertaken on the 29th April 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
- Plants
- Other Species (Red Fox)

Recommendations include:

- Badgers: - No further survey work or mitigation required.
- Bats: – No further survey work or mitigation required
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
- Plants: - Mitigation and Enhancement measures proposed
- Other species: - Mitigation measures proposed

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

The application site as a whole was considered to be of Medium Ecological Value.

1.0 INTRODUCTION.

Curtis Ecology was instructed by Mike Jones Design Services Ltd, on behalf of their client, Mr J. Eastwood to undertake a Preliminary Ecological Appraisal on a parcel of land to the south and west 49 Front Street, Middleton on the Wolds, YO25 9UA. The survey is required to inform a proposed Outline Planning Application (all matters reserved), which is to be lodged with the local planning authority, in this case the East Riding of Yorkshire Council, for the erection of five dwellings on previously developed land to the south and west of 49 Front Street. Both verbal and electronic instructions were given with a copy of the location provided.

1.1 Site Description.

The application site extends to approximately 0.4ha, is centred on grid reference SE9429 4931, which is found to the western periphery of Middleton on the Wolds.

Habitat composition is comprise of broad leaved and coniferous scattered trees, semi-improved, poor semi-improved and amenity grassland, along with tall ruderal vegetation. The site boundaries are defined species poor hedging and a mix of fencing types. The immediate surrounding habitat to the west and south is dominated by intensive farmed arable and grassland, with residential properties to the north and east.

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



© Google Earth.

1.2 Proposed Works

It is understood that the development proposal relates to the erection of five dwellings on previously developed land to the south and west of 49 Front Street, along with associated works

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 SE9429 4931

2.2 Field Survey.

2.2.1 Ecological Appraisal Survey

The survey was undertaken on the 29th April 2022 with the weather conditions at the time of the survey being illustrated below in Table 2. The study site was walked over, with habitats identify using the UK Habitat Classification (UKHab Field_Key_V2.1_Sep2020), 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.

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
- Plants

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.

$$HSI = (SI1 \times SI2 \times SI3 \times SI4 \times SI5 \times SI6 \times SI7 \times SI8 \times SI9 \times SI10)^{1/10}$$

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 Plant Species

The site was surveyed for any protected/notable plant species as well as for the presence of invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981. (as amended)

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	29 th April 2022
Wind speed	Calm
Cloud cover	40%
Rainfall	None
Temperature	15°C
Humidity	67%

2.6 Survey Personnel.

The field survey was undertaken in suitable weather conditions and at an appropriate time of year on the 29th April 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.

Elisabeth Bell FdBm who has over 4 years survey Experience and holds the following Natural England Licence: -

Bats-WML-A34- Level 2 (Class Licence), survey Licence 2021-53846-CLS-CLS

3.0 SURVEY RESULTS.

3.1 Desk Study.

Figure 2. Pre-existing Site Designations



Our Ref: E06386
Your Ref: CE1183
On behalf of: Curtis Ecology
Date: 14/04/2022
Search area: 2km from SE94294931

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 March 2016, revised July 2019

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

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

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

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
Middleton Chalk Pits	SE9050-02	SE945499	Deleted LWS
Middleton Verge	SE9045-01	SE915495 – SE927495	Deleted LWS
Prickett's Hollow and Adjoining Woods	SE9045-02	SE946489	Deleted LWS



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Candidate LWS

These sites have either not been surveyed, or no East Riding of Yorkshire LWS Panel decision has been reached on their status. This designation is only be applied where there is evidence to support the site having substantive ecological value and includes, but is not limited to; anecdotal species records, aerial photography, historic maps and application of the Radcliff criteria, especially with regard to size and position within an ecological unit.

Historic LWS

Historic LWS have not been surveyed under the current local wildlife sites system (i.e. since 2007), but unlike a Candidate LWS these sites lack evidence that the site is of any substantive value, but equally lack compelling evidence to support their deletion. These sites will stay at this status until such a time that a survey can be completed.

Deleted LWS

The decision to delete LWS by the East Riding of Yorkshire LWS Panel is made based on one of the following situations;

- The site overlaps with a statutory designated site;
- The site overlaps with another LWS, or has been merged with another;
- The site no longer exists e.g. through changes in land use or management; or
- The site has been surveyed and does not meet the robust LWS Guidelines for designation on habitat grounds.

In many cases just because a site has not met the high criteria for designation as a LWS it does not mean that it has no added value for wildlife. The LWS assessment is usually based on a botanical survey of the habitat and does rarely includes surveys for other taxa, including protected species, which the site may support. It may also be important for connectivity or as part of a wider habitat network. It may be possible to enhance the value of the site for wildlife with certain types of management, which could bring the site up to the standard required for designation as a LWS.

Citations

Citations, where available, are at an additional cost of £25 per site and include a habitat map, site description, botanical species list and scores/evaluation against the LWS criteria. The additional cost for citations is passed back to and used by the East Riding of Yorkshire LWS Panel to maintain the LWS system, including the survey and re-survey of sites. If citations are required, please email info@neyedc.co.uk and list the sites using the reference and name listed above.

Yorkshire Wildlife Trust Reserves published January 2019

There are no Yorkshire Wildlife Trust Reserves in or partly within the search area.

Priority Habitats

The following site-based habitat boundaries were searched:



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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
Deciduous woodland	Several polygons throughout the search area, mostly located around Middleton-on-the-Wolds.
Traditional orchard	One small polygon located near Lairhill Farm, SE932477.

The relevant 2km Designation & Habitat maps are illustrated in Appendices 2 & 3 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 29 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:

Broad-leaved scattered trees (11)

Two mature Flowering Cherry *Prunus serrulata* stand on the open boundary to the immediate south of the site entrance.

Two mature Horse chestnut *Aesculus hippocastanum* along with two young Cherry *Prunus sp* are found scattered towards the western section of the site.

Four mature domestic Apple trees *Mallus spp* are in the north-western corner of the eastern area of amenity grassland.

Coniferous scattered trees (11)

A mature Cherry laurel *Prunus laurocerasus* stands on the open boundary to the south of the site entrance. Three mature Scots pine *Pinus sylvestris* are located on the open boundary adjacent to the neighbouring dwelling. Two mature *Pinus spp* is also found adjacent to the western boundary, with one of the trees having a Tawny owl box installed high up on the main trunk.

Semi-improved neutral grassland (g3c).

This form of habitat is found in both the central and northern sections of the site.

The northern section appears to have previously been a lawn with vegetable and fruit garden, which has been unmanaged for a number of years, with species noted such as Annual meadow grass *Poa annua*, Cock's-foot *Dactylis glomerata*, Red fescue *Festuca rubra*, Ryegrass *Lolium spp*, Sweet vernal grass *Anthoxanthum odoratum* and Yorkshire fog *Holcus lanatus*. Forbs present include Black medic *Medicago lupulina*, Common vetch *Vicia sativa*, Daisy *Bellis perennis*, Dandelion *Taraxacum officinale*, Field bindweed *Convolvulus arvensis*, Ground elder *Aegopodium podagraria*, Greater knapweed *Centaurea scabiosa*, Lesser celandine *Ficaria verna*, Selfheal *Prunella vulgaris*, White clover *Trifolium repens*, White dead nettle *Lamium album*, Yarrow *Achillea millefolium*, Yellow rattle *Rhinanthus minor*.

The sward height in the central area was extremely short so grass species were difficult to identify but are presumed to be similar to the northern section grass species. Forbs were less frequent with Black medic *Medicago lupulina*, Dandelion *Taraxacum officinale*, Field woodrush *Luzula campestris*, Greater knapweed *Centaurea scabiosa*, Ribwort plantain *Plantago lanceolata*, Yarrow *Achillea millefolium*,

Poor semi-improved grassland (g4).

This type of habitat is located at the southern end of the site, The grass has previously been mown regularly resulting in few herb species being present. Species include Annual meadow grass *Poa annua*, Ryegrass *Lolium spp*, Sweet vernal grass *Anthoxanthum odoratum* and, Yorkshire fog *Holcus lanatus*. Forbs include Creeping thistle *Cirsium arvense*,

Daisy *Bellis perennis*, Dandelion *Taraxacum officinale*, Field speedwell *Veronica persica*
White clover *Trifolium repen* (*rare*).

Tall ruderal (g3c17)

Species found along the northern boundary bank which had been flailed and the former vegetable garden area, include Bramble *Rubus fructus*, Cleavers *Galium aparine*, Common nettle *Urtica dioica*, Cow parsley *Anthriscus sylvestris*, Field bindweed *Convolvulus arvenses*, Field dock *Rumex pseudonatronatus*, Forget me knot *Myosotis spp*, Hogweed *Heracleum sphondylium*, Primrose *Primula vulgaris*, Raspberry *Rubus idaeus*.

The understory below the mature Horse Chestnuts at the western side of the site are comprised of Bramble *Rubus fructus* (*rare*), Cleavers *Galium aparine*, Common chickweed *Stellaria media*, Common nettle *Urtica dioica*, Cow parsley *Anthriscus sylvestris*, Dandelion *Taraxacum officinale*, Garlic mustard *Alliaria petiolate*, Green alkanet *Pentaglottis sempervirens*, Ground ivy *Glechoma hederacea* and grass species associated with the semi-improved grassland.

Along the southern section of the western side of the site, as well as over the face of the earth banks are predominantly Bramble *Rubus fructus*, Common nettle *Urtica dioica*, Rosebay willowherb *Chamaenerion angustifolium*.

The former garden terrace area to the east side of the central pit area, due to neglect has now been succeeded by species to include Bramble *Rubus fructus*, Broad leaved dock *Rumex obtusifolius*, Cleavers *Galium aparine*, Common chickweed *Stellaria media*, Common nettle *Urtica dioica*, Cow parsley *Anthriscus sylvestris*, Hemlock *Conium maculatum*, Herb Robert *Geranium robertianum*, Periwinkle *Vinca minor*, White dead nettle *Lamium album*

Amenity grassland (g4)

A well-maintained area is located on the eastern side of the site. Species include Annual meadow grass *Poa annua*, Cock's-foot *Dactylis glomerata*, Meadow foxtail *Alopecurus pratensis*, Ryegrass *Lolium spp*, Sweet vernal grass *Anthoxanthum odoratum*, Yorkshire fog *Holcus lanatus*. Forbes include Daisy *Bellis perennis*, Dandelion *Taraxacum officinale*, Field woodrush *Luzula campestris*, Ground ivy *Glechoma hederacea*, Ragwort *Jacobaea vulgaris*.

Intact hedge species poor (h2)

An unmanaged hedgerow, approximately 5m high forms the eastern boundary, along the amenity grassland. Species are comprised of Hawthorn *Crataegus monogyna* with occasional Lilac *Syringa spp*.

A managed hedgerow approximately 1.5m high forms both the northern, western site boundaries, as well as continuing along western section of the southern boundary. Species are dominated by Blackthorn *Prunus spinosa* and Hawthorn *Crataegus monogyna* with occasional Elder *Sambucus nigra*. The understory is species associated with the bankside tall ruderal vegetation.

A managed Wilson's honeysuckle *Lonicera nitida* hedge approximately 1.2m high forms the southwest corner boundary of the neighbouring garden at no 49.

Fence (ule 69)

Several short lengths of 1.2m high post and rail, timber board and post and wire fencing are found in several locations defining the site boundaries.

Wall (ule)

A mix of stone walling forms a series of terraces of a former garden along the eastern side of the central pit. Tall ruderal vegetation has now successionaly spread over the terracing.

Earth bank (g3 71).

This type of habitat forms the periphery of the central former pit. The banks are relatively steep, between 60 – 70 degrees and are covered extensively in tall ruderal vegetation.

Bare ground (ulc 73)

A small, paved area is found in the south east corner, adjacent to the neighbouring dwelling.

Plate 1. Looking east over the semi -improved grassland found to the north of the site.



Plate 2. Looking south down into the pit area from the northern semi-improved grassland



Plate 3. Looking north from the central pit area



Plate 4. Looking north over the site from the southern semi improved grassland area.



Plate 5. Looking towards the former eastern terraced area.



Plate 6. Looking east over the amenity grassland.



Plate 7. Looking west over the poor semi-improved grassland



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

Bat records were obtained from North & East Yorkshire Ecological Data Centre (NEYEDC) with reference to the East Yorkshire Bat Group.

There was a total of 11 historical bat records returned from the third-party repositories. The nearest historical record is approximately 150m to the east of the site, for a Grounded Common Pipistrelle *Pipistrellus pipistrellus* in 1998. The nearest confirmed roost record is found approximately 1.7km southwest of the study site for 10 Common pipistrelle *Pipistrellus pipistrellus* in 2007.

There are no buildings found within the application site.

Several mature trees are scattered around the site periphery, all were assessed from ground level for roosting potential. The results of the assessments indicated no roosting potential observed, as the trees appear to be in good condition, or these size/ structure did not provide roosting opportunities.

Foraging capacity is considered to be limited, given the size of the study site, even with taking into account the gardens to the east of the site. The primary foraging habitat for a large number of bats, is expected to be associated with the large block of woodland to the south and south east of the study site.

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 one waterbody was identified from both Arial photographs and Ordnance survey maps, within 500m of the application site.

Figure 3. Arial view with the waterbody locations shown and the approximate outline of the application site indicated.



A Habitat Suitability Index (HSI) score was undertaken on Pond 1 with the tabulated results presented below.

Pond Description.

Plate 8. Pond 1. Village Pond Grid reference SE9455 4955.



A village pond is located approximately 0.28km to the northeast of the study site. There was no submerged aquatic vegetation, with only several small stands of Greater Pond sedge *Carex riparia* and Yellow flag iris *Iris pseudacorus* scattered around the pond margins. The south, west and north banks are the surrounding gardens, most of which are walled and paved, with the eastern bank being predominantly mown amenity grassland, with occasional stands of Common ivy *Hedera helix*, Greater willowherb *Epilobium hirsutum*, Ground elder *Aegopodium podagraria* at the pond margin. A moderate wildfowl population was present and breeding on the pond with numerous ducking's present. Water quality was poor due to the waterfowl population.

Table 3. Pond 1 - HSI assessment table

Category	Result	Score	Description
Location		1.0	Located in central England
Pond area	800 sq m	1.0	
Pond drying	Never	0.9	Never dries
Water quality	Poor	0.33	Low invertebrate numbers
Shading	20%	1.0	
Fowl	Major	0.01	Resident wildfowl population
Fish	Possible	0.67	No evidence of fish but may be present
Other ponds	3 ponds	0.60	0.95 ponds /sq km
Terrestrial Habitat		0.33	Paved gardens and mown amenity grass
Macrophytes	10%	0.4	Occasional marginal plants only
Habitat Suitability Score		0.41	Poor

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3.3.4 Hedgehogs.

During the field survey there was no historical evidence of Hedgehogs within the application site.

The mosaic of habitats present within the application site at the time of this field survey, are considered to offer some foraging opportunities in conjunction with adjacent land, although provision for resting and possibly hibernation for the species.

There were no historical records for Hedgehogs within the 2km search area returned from the third party repository searches.

3.3.5 Nesting Birds

There were 14 historical bird records within the 2km search area, with none attributed to the study site itself.

The following bird species were observed either visually or by sound and were noted either within the site boundaries or just passing through, these consisted of Blackbird *Turdus merula*, Common woodpigeon *Columba palumbus* (passing over), Jackdaw *Corvus monedula*, (passing over), Red kite *Milvus milvus*, (passing over), Robin *Erithacus rubecula*, Tree Sparrow *Passer domesticus*.

The Tawny owl box located on a tree on the western side of the site appeared not be in use.

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 Plants

There was no evidence of any Invasive plant species, as listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) found within the application site at the time of the field survey.

The were 5 historical plant records within the 2km search area returned from the third-party repository searches, none of which related to the study site.

3.3.7 Other Species

An active Red Fox *Vulpes vulpes* earth was present in the earth bank of the pit area, with several cubs been observed during the field survey.

4.0 ASSESSMENT AND RECOMMENDATIONS

4.1 Designated Sites.

There are no Internationally Designated Sites found within the 2km search area.

There are no Nationally Designated Sites found within the 2km search area

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

There are three Non-Statutory sites within the search area the nearest of which is Prickett's Hollow and Adjoining Woods, a Deleted Local Wildlife Site, which is located approximately 0.48km to the south east 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 any of the statutory or Non – statutory sites found within the 2km search radius.

4.2 Habitats

There was no evidence of non-native invasive species listed as Schedule 9 plant species within the application site at the time of the field survey.

The application site does not lie within or in close proximity to any Priority Habitats

In its present condition the application site as a whole has been assessed as having Medium Ecological Value.

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. 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 a total of 11 historical bat records returned from the third-party repositories. The nearest historical record is approximately 0.15km to the east of the site, for a grounded Common Pipistrelle *Pipistrellus pipistrellus* in 1998. The nearest confirmed roost record is found approximately 1.7km southwest of the study site, for a small nursery roost of 10 Common pipistrelle *Pipistrellus pipistrellus* in 2007.

There are no buildings on site and the scattered trees offer Negligible roosting opportunities.

Recommendations: -

- No further survey or mitigation work required.
- External lighting can have an adverse effect on bat foraging activity. Therefore, any new external lighting will be fitted with a downward facing hood at an angle of less than 70 degrees to reduce light spillage. Light sources should also be fitted with a ultra-violet filter or the use of high or low pressure sodium lamps should be considered. All lamps should be fitted with a time adjustable motion sensor to reduce the period any lighting is on for.
- To meet obligations under the NPPF 2019 relating to biodiversity enhancement, 1 x Habitat 03 build-in bat box or equivalent build in bat box, are to be installed into two of the new dwellings during the construction phase of the development. The bat boxes are to be installed at least 3m above ground level, in either the southern or western elevations during the construction works.

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 desk top study one water body was identified within 500 metres of the application site, which is located within the application site.

A Habitat Suitability Index score was undertaken on Pond 1 with the results obtained for this pond, along with the associated distances of the pond from the study site, being presented in Table 4 below: -

Table 4.

Pond number	HSI score	Pond suitability	Approximated Distance from site
Pond 1	0.43	Poor	0.28km northeast

The HSI score would indicate that it would be highly unlikely that Great crested newts would be present within Pond 1 as assessed by the criteria set out within this report. (Oldham *et al* 2000).

Recommendations: - No further survey or mitigation work required.

4.3.4 Hedgehogs.

Hedgehogs have had a drastic decline in numbers over in recent years and are now listed as a Biodiversity Action Plan Priority species both at a UK and local level. 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.
- A hand search of the development footprint should be undertaken by a suitably qualified ecologist for evidence of their presence, especially evidence of nest building in the spring/summer or hibernation nests during the late autumn and winter.
- 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.
- Any boundary fencing or boarded fencing between plots will either be installed a minimum of 100mm above ground level, or if this cannot be achieved then a 125mm x 125mm gap will be left at the bottom of one of the timber boards in several locations to allow any Hedgehogs free passage between the individual plots, as well as between the application site boundaries and the neighbouring gardens. Advice on the type of piping and exact locations of this access pipework will be advised either by ourselves or another Suitable Qualified Ecologist.
- One hedgehog house is to be installed, for example under the eastern boundary hedgerow following the completion of all the construction and landscaping works.

4.3.5 Nesting birds

There were 14 historical bird records within the 2km search area, with none attributed to the study site itself.

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

No birds were seen foraging within the application site during the field survey.

The mature hedgerows to the south, west and eastern boundaries have potential for nesting birds, as do the small areas of denser Bramble stands, although there was no indication of active nests within the study site during the field survey.

Recommendations: -

Mitigation Strategy for Nesting Birds

1. No further Breeding bird survey work is required.
2. 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 were 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.
3. The Tawny owl box is to preferably remain in situ.
4. Within 4 weeks of the completion of all the construction and soft landscaping works the following nest boxes will be installed in suitable locations within the application site and remain in -situ thereafter.
 - 2 x Vivara Pro Woodstone Oval Open Nest Box or woodcrete equivalents.
 - 2 x Vivara Pro Seville 32mm Woodstone Nest Box or woodcrete equivalents.
 - 2 x Vivara Pro Woodstone House Sparrow Nest Box or woodcrete equivalents.

4.3.6 Plants

There was no evidence of any Invasive plant species, as listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) found within the application site at the time of the field survey.

Recommendations:-

- It is preferable that the mature Cherry Horse Chestnut and Pinus sp trees found within the application site are retained and incorporated into the final landscaping scheme. To mitigate any potential damage to these trees, it is recommended that any construction works in close proximity to them is undertaken in relation to Root Protection Zones to BS5837:2012 *Trees in Relation to Construction*.

- It is understood that the majority of the existing boundary hedgerows are to be retained and incorporated into the final landscaping scheme. To mitigate any potential damage to these hedgerows, it is recommended that any construction works in close proximity to them is undertaken in relation to Root Protection Zones to BS5837:2012 *Trees in Relation to Construction*.
- 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

4.3.7 Other Species.

An active Red Fox *Vulpes vulpes* earth was present in the earth bank of the pit area, with several cubs been observed during the field survey.

Red foxes are protected under a series of wildlife protection laws against poisoning, gassing, asphyxiating, maiming, stabbing, impaling, drowning, clubbing and most forms of snaring.

Recommendations: -

Prior to the initial ground clearance works being undertaken, the advice of a reputable pest control consultant will be required.

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 regulation 41 of The Conservation of Habitats and Species Regulations 2017 (formerly The Conservation (Natural Habitats, Etc.) Regulations 1994 (as amended), which implements the requirements of the EC Habitats Directive, plus under 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 regulation 41 of The Conservation of Habitats and Species Regulations 2017 (formerly The Conservation (Natural Habitats, Etc.) Regulations 1994 (as amended), which implements the requirements of the EC Habitats Directive, plus under 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 Section 41 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 & Local 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 Section 1 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 *Tyto 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 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 (*Cirsium 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.

5.7 Red Fox

The Red fox is protected to varying degrees under the following legislation

Protection of Animals Act (1911)

Wildlife & Countryside Act (1981) as amended

Control of Pesticide Regulations (1986)

Wild Mammals Protection Act (1996)

The Hunting Act (2004).

6.0 PLANNING POLICY.

The National Planning Policy Framework (2019):

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

- 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 biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery 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

175. When determining planning applications, local authorities should aim to conserve and enhance biodiversity by applying the following principles:

- 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.
- 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 specific scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest.
- 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 reasons and a suitable compensation strategy exists; and
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can be secured measurable net gains for biodiversity.

176. The following should be given the same protection as habitat sites:

- Potential Special Protection Areas and possible Special Sites of Conservation;
- listed or proposed Ramsar sites; and
- Sites identified, or required, as compensatory measures for adverse effects on habitat sites, potential Special Protected Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

177. 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 Section 41 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

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- 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)
- Natural England Standing Advice – Planning and Development

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- 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.

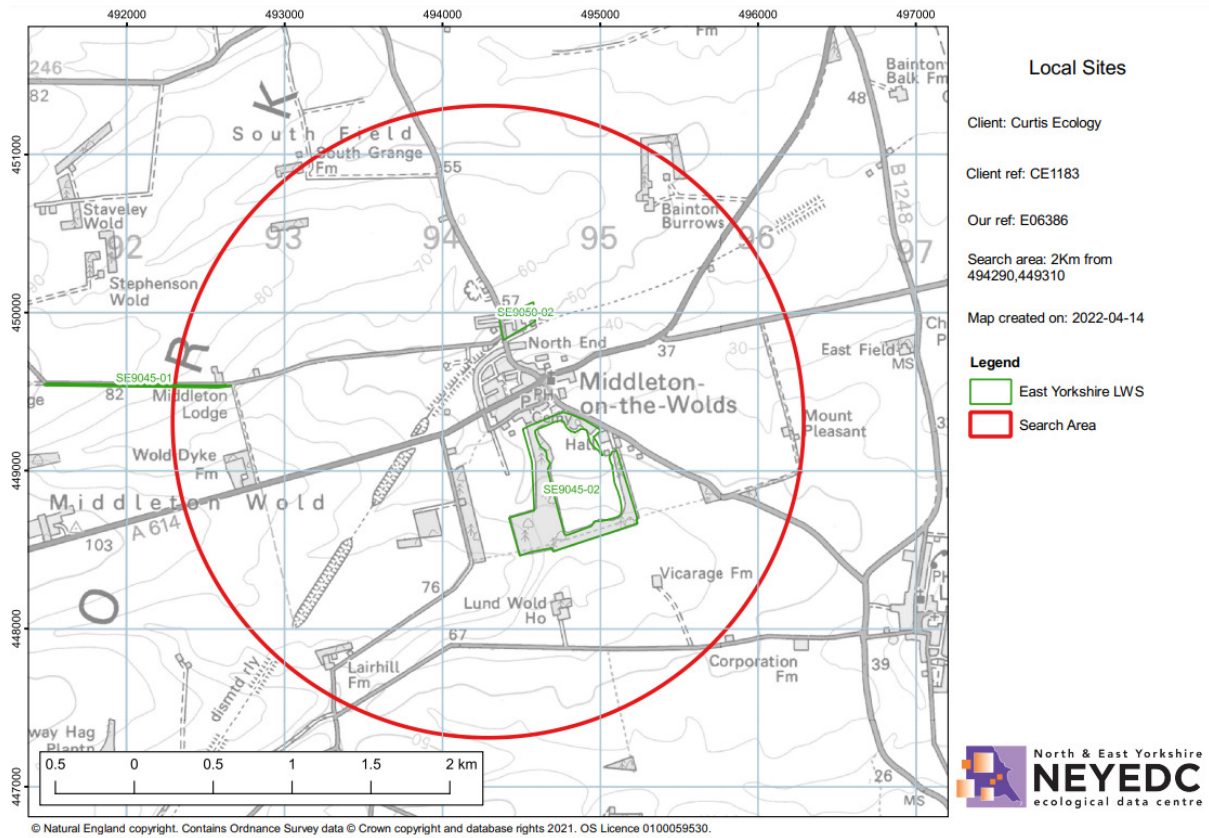
Annual meadow grass *Poa annua*
Apple *Mallus spp*
Black medic *Medicago lupulina*
Blackthorn *Prunus spinosa*,
Bramble *Rubus fructus*
Broad-leaved dock *Rumex obtusifolius*
Cherry *Prunus sp*
Cherry laurel *Prunus laurocerasus*
Cock's-foot *Dactylis glomerata*
Common chickweed *Stellaria media*
Common field speedwell *Veronica persica*,
Common ragwort *Jacobaea vulgari*
Common vetch *Vicia sativa*
Cow parsley *Anthriscus sylvestris*
Creeping buttercup *Ranunculus repens*
Daisy *Bellis perennis*
Dandelion *Taraxacum officinale*
False oat grass *Arrhenatherum elatius*
Field bindweed *Convolvulus arvensis*
Field dock *Rumex pseudonatronatus*
Flowering Cherry *Prunus serrulate*
Elder *Sambucus nigra*
Garlic mustard *Alliaria petiolate*
Green alkanet *Pentaglottis sempervirens*,
Ground ivy *Glechoma hederacea*

Greater knapweed *Centaurea scabiosa*
Hawthorn *Crataegus monogyna*
Hemlock *Conium maculatum*,
Herb Robert *Geranium robertianum*,
Hogweed *Heracleum sphondylium*
Horse chestnut *Aesculus hippocastanum*
Lesser celandine *Ficaria verna*
Periwinkle *Vinca minor*
Ryegrass *Lolium sp*
Red fescue *Festuca rubra*
Ribwort plantain *Plantago lanceolate*
Rosebay willowherb *Chamaenerion angustifolium*.
Scentless mayweed *Tripleurospermum inodorum*
Scots pine *Pinus sylvestris*
Selfheal *Prunella vulgaris*
Sweet vernal grass *Anthoxanthum odoratum*
Wilson's honeysuckle *Lonicera nitida*
White clover *Trifolium repens*
White dead nettle *Lamium album*
Yarrow *Achillea millefolium*
Yellow rattle *Rhinanthus minor*.
Yorkshire fog *Holcus lanatus*

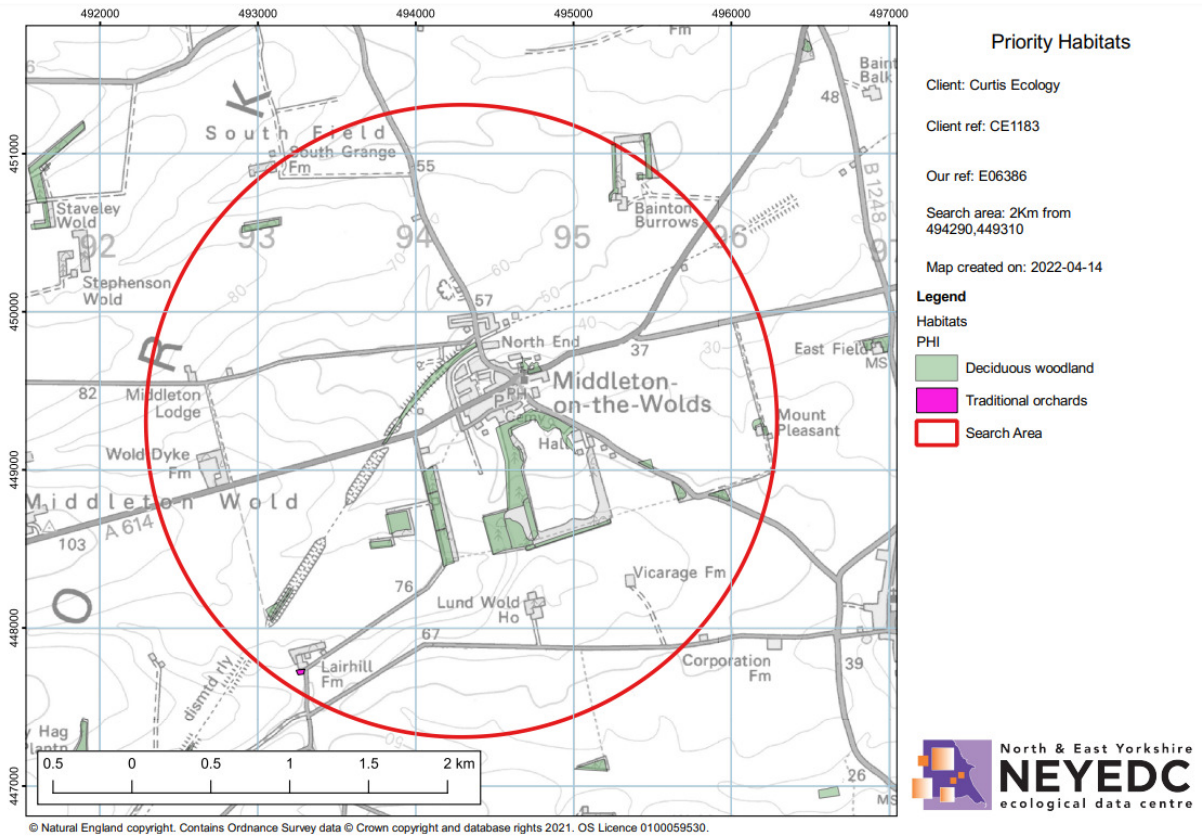
Birds.

Blackbird *Turdus merula*
Common woodpigeon *Columba palumbus* (passing over)
Jackdaw *Corvus monedula*, (passing over)
Red kite *Milvus milvus*, (passing over)
Robin *Erithacus rubecula*
Tree Sparrow *Passer domesticus*

8.2 Appendix 2. Locally Designated Sites Map 2km



8.3 Appendix 3. Priority Habitats Sites Map 2km



8.4 Appendix 4. Phase 1 Habitats Map



Legend

Trees

- Scattered Broad leaved trees (11)
- Scattered Broad leaved trees (11)

Linear Features

- Open Site Boundary
- Intact Hedge Species Poor (h2)
- Fence (u1e 69)
- Wall (u1e)
- Earth Bank (g3 71)

Habitats

- Semi Improved Neutral Grassland (g3c)
- Ruderal/Ephemeral (g3c 17)
- Amenity Grassland (g4)
- Bare Ground (u1c 73)
- Poor semi-improved grassland (g4)

Google Satellite

0 10 20 m