

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Preliminary Ecological Appraisal

Castleton Sidings, Rochdale

Ref: P.1733.22

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EXECUTIVE SUMMARY

Ascerta has been instructed by **Kellen Homes** to carry out a Preliminary Ecological Appraisal of the site Castleton Sidings, Rochdale (hereafter referred to as **the site**).

The client's proposals for the site are for the construction of residential dwellings, areas of Public Open Space (POS) and associated access roads.

The Preliminary Ecological Appraisal comprised of a desk study and biological records search, as well as a site walkover survey in order to map habitat types. The survey was extended to assess the potential for protected species to use the site. The assessment provides baseline data regarding the current site conditions and where appropriate allows recommendations to be made in respect of further potential work in order to satisfy current UK wildlife legislation.

The site comprises a disused railway sidings with areas of hardstanding and bare ground that have been encroached with grassland species, strands of ruderal/ephemeral vegetation and scrub throughout. Semi-natural broadleaved woodland, species poor hedgerow and wet ditch (D1) border the northern site boundary and scattered trees are present throughout. Castle Hawk Golf Course lies immediately north of the site and Rochdale Canal Special Scientific Interest (SSSI)/Special Area of Conservation (SAC) approximately 200m east.

A previous Preliminary Ecological Appraisal of the site was carried out in 2021 by E3P (E3P Report *80-464-R2-1 Preliminary Ecological Appraisal, Castleton, Rochdale*). Previous surveys for breeding birds (E3P report, *80-464-R6-1 Breeding Bird Survey Report*, reptiles (E3P report, *80-464-R4-1 Reptile Survey Report, Castleton, Rochdale*) and Great Crested Newt eDNA surveys (E3P report, *Great Crested Newt Surveys, Castleton Sidings, Rochdale*) were also carried out in 2021 by E3P.

Bat activity transect surveys were carried out in 2021 by Rachel Hacking (Rachel Hacking report, *Bat Transect Surveys, Castleton Sidings, Castleton, Rochdale, June 2021*).

Assessed against the '*Guidelines for Ecological Impact Assessment in the UK and Ireland*' 2nd edition (2018), the sites habitats range in ecological value from negligible to within the zone of influence.

The site provides habitat for nesting birds, badger, hedgehog, amphibians and bats. The habitats to be lost to the proposals are small in area and not of high ecological value, it is considered that their loss can be mitigated for, and the proposals will not adversely affect the ecological value of the wider area, provided the recommendations detailed below are followed.

- If works have not begun by March 2024, an updated site visit will be required to assess the habitats within the site;
- Updated nocturnal bat activity surveys and the deployment of static bat detectors (between April and October in suitable weather conditions) to assess the level of bat activity throughout the site;
- Updated breeding bird surveys (a minimum of three surveys to be carried out between March and June inclusive) to further inform recommendations;
- Updated reptile surveys (a minimum of seven visits to be carried out between March and September inclusive) to further inform recommendations;
- Sensitive lighting to be used to meet Bat Conservation Trust lighting guidance so not to cause detrimental effect to light sensitive species;
- Production and implementation of a Construction Environmental Management Plan (CEMP) to protect statutory site Rochdale Canal SSSI/SAC, that lies 150m east of the site and the area of Deciduous Woodland Priority Habitat that lies 10m south;
- A site visit to carry out an updated Habitat Suitability Index (HSI) assessment of the eight waterbodies within 500m of the site to assess their suitability for great crested newt;
- Production and implementation of a hedgehog RAMS to avoid any harm to this species during the proposed works;
- Production and implementation of a badger RAMS to avoid any harm to this species during the proposed works;
- Production and implementation of an amphibian RAMS to avoid any harm to this species during the proposed works;
- Precautionary check for badger prior to works commencing to assess if badgers are using the habitats within the site for shelter;
- Production of an invasive species method statement to avoid the spread of cotoneaster (TN1) into the wider landscape during the proposed works;
- Precautionary check for invasive prior to works commencing;
- Enhancing the site for species through appropriate landscape planting that includes native, species rich hedgerows, trees and areas of wildflowers plus provision of integrated bat and bird features within newly constructed buildings;
- Defra Metric Biodiversity Net Gain Calculations to minimise impacts on biodiversity and provide net gains in biodiversity to be completed by Ascerta;
- Implementation of a Management Plan to be produced by Ascerta to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site; and
- Vegetation clearance or pruning should be undertaken outside of the nesting bird season (1st March to 31st August Inclusive) to avoid any impact on breeding birds. Or a nesting bird check undertaken by a suitably experienced ecologist should be undertaken immediately prior to works commencing.

1.0 Introduction

Ascerta has been instructed by **Kellen Homes** to carry out a Preliminary Ecological Appraisal of the site at Castleton Sidings, Rochdale (hereafter referred to as **the site**). The site OS grid reference is SD 876 101 and the What3Words reference is plan.tips.worry. The extent of the site is displayed in photograph 1.1 below.



Photograph 1.1: Extent of the site.

Our client seeks Hybrid planning application comprising:

Full planning application for residential development, including access, car parking, landscaping, open space and associated engineering and infrastructure including an electric substation and foul water pump station.

Outline planning permission with all matters reserved for the principle of development to facilitate the East Lancashire Railway (ELR) extension.

The site was visited on 16th March 2023 by Liz Kenyon and Lizzie Atkinson, when a Preliminary Ecological Appraisal, which includes an assessment of the potential for protected species to be using the site or surroundings, was carried out in accordance with the *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit* (JNCC, 2010). The report was prepared following methods detailed in the CIEEM 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018) and 'Guidelines for Ecological Report Writing' (2017).

The site comprises a disused railway sidings with areas of hardstanding and bare ground that have been encroached with grassland species, strands of ruderal/ephemeral vegetation and scrub throughout. Semi-natural broadleaved woodland, species poor hedgerow and wet ditch (D1) border the northern site boundary and scattered trees are present throughout. Castle Hawk Golf Course lies immediately north of the site and Rochdale Canal SSSI/SAC approximately 150m east.

This report presents the results of the survey including evaluation of habitats on site and potential for protected species to be using the site. The report includes recommendations for further actions where applicable, in order to satisfy current UK wildlife legislation and to achieve our client's objectives. Relevant legislation is detailed within Appendix 4.

2.0 Objectives

Our client's objectives are to assess the potential ecological constraints of the proposed development site.

Our objectives are as follows:

- Identify and evaluate any features of ecological value and the potential of the site to support protected species based on the walkover survey and biological records search;
- Identify designated sites within 2km of the site;
- Review protected species records within 2km of the site;
- Map the habitats within the site using JNCC (2010) methods;
- Provide recommendations for further species-specific surveys and mitigation measures where current legislation requires;
- Provide recommendations that seek to enhance the ecological value of the site;
- Provide recommendations to assist our clients in achieving their objectives whilst satisfying current UK wildlife legislation.

3.0 Survey Methods

The Preliminary Ecological Appraisal involved the collection and review of data from a desk study and field survey, along with assessment of the value of the habitats following CIEEM guidelines.

3.1 Desk Study

A review of the designated sites and habitats within 2km of the site has been undertaken in March 2023 using the Multi-Agency Geographic Information for the Countryside (MAGIC) and the Natural England websites.

A review of UK and Local priority species and habitats known to occur within 2km of the site has been undertaken in March 2023; using the Joint Nature Conservation Committee website, Multi-Agency Geographic Information for the Countryside (MAGIC) and local records from Greater Manchester Ecology Unit (GMEU) (Appendix 5).

3.2 Field Survey

A walkover survey of the site was conducted on 16th March 2023 by Liz Kenyon and Lizzie Atkinson. The habitat types and features of ecological interest were identified and mapped in compliance with *the Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit* (JNCC, 2010). During the survey, weather conditions were recorded to ensure optimal surveying conditions according to guidelines. Any sub-optimal conditions will be discussed in the limitations.

This includes the identification of the main species present and examination of the potential for any protected species. Habitats were mapped (Appendix 1) and target notes (Appendix 2) made for any interesting features.

The surveys particularly focused on the following species and habitat features:

- Mammals (badgers, bats and water vole);
- Birds (including species potentially associated with 'European Sites');
- Amphibians and reptiles;
- Invertebrates;
- Hedgerows and boundaries;
- Invasive plant species; and
- Plant communities and trees.

3.3 Bat Survey Methods

The survey methods followed the guidelines set out by the Bat Conservation Trust's *Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition* (2016). Habitats, buildings and trees were assessed for suitability for use by bats and categorised independently using table 4.1 page 35 within the Bat Conservation Trust Guidelines (Collins, 2016).

Preliminary Ecological Appraisal for Bats

Habitats on site were assessed for their suitability for bats to use them for roosting, commuting and foraging both on the site and surrounding area. Commuting and foraging habitat suitability was categorised **low** to **high**. Any commuting and foraging habitat valued as **moderate** or above may need further survey effort if lost to the proposals.

Preliminary Roost Assessment Trees

All trees were inspected for Potential Roost Features (PRFs). Features searched for included: Natural or woodpecker holes, cracks/splits in major limbs, loose bark, hollows/cavities, dense epicormic growth, bird and bat boxes. Where such features were found they were investigated for scratches or staining, bat droppings and smoothing of surfaces around entry points. Trees assigned a suitability of **moderate** or above may require further inspection if they are to be lost to the development.

Table 3.1: Guidelines for assessing Potential Roost Features (PRFs), commuting and foraging habitat within a proposed development site. Guidelines taken from table 4.1 page 35 of the Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016).

Suitability	Roosting Habitats	Commuting and Foraging Habitats
Negligible	<i>Negligible habitat features on site likely to be used by roosting bats.</i>	<i>Negligible habitat features on site likely to be used by commuting or foraging bats.</i>
Low	<i>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation ^b).</i> <i>A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c</i>	<i>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</i> <i>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</i>
Moderate	<i>A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).</i>	<i>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</i> <i>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</i>
High	<i>A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^a and surrounding habitat.</i>	<i>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</i> <i>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</i> <i>Site is close to and connected to known roosts.</i>

^a For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^b Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI,2015).

3.4 Badger Survey Methods

The site was searched for setts and badger field signs including foraging areas, latrines and tracks. Attention was paid to the presence of the following field signs:

- Setts: single holes or a series of holes likely to be interconnected underground;
- Latrines: badgers usually deposit faeces in excavated pits;
- Paths and footprints;
- Scratching posts: at the base of trees;
- Snuffle holes: areas where badgers have searched for insects;
- Day nest: bundles of vegetation where badgers may sleep above ground; and
- Traces of hair.

3.5 Great Crested Newt Habitat Suitability Index (HSI)

The onsite ditch (D1) was assessed for suitability as great crested newt breeding habitat. The HSI assessment followed the method described by Oldham *et al.* (2000) as updated by ARG UK (2010), involving an assessment of each water body against ten suitability indices:

- Location of the pond within the context of Britain;
- Total surface area of the pond;
- Pond drying (based on both local knowledge and field evidence);
- Water quality;
- Percentage perimeter shaded;
- Presence or absence of waterfowl;
- Presence or absence of fish;
- Number of water bodies situated within 1km;
- Suitability of terrestrial habitat; and
- Percentage macrophyte cover.

The HSI is calculated using an equation producing a single number between 0 and 1. The value provides an indication of whether the water body is likely to support a population of great crested newts. The lower the Index the less likely the location is to support a breeding population. Ponds are classed as Poor, Below Average, Average, Good or Excellent habitat suitability based on this value.

3.6 Water vole and Otter

The onsite ditch (D1) was briefly assessed for use by otters and water vole from the southern bank following methods outlined in Chanin, P. (2003). *Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough* and Strachan, R., Moorhouse, T., Gelling, M. (2011) *Water Vole Conservation Handbook, 3rd Edition. Wildlife Conservation Research Unit: Abingdon.*

Signs of otter use include footprints, spraints, couches or holts were searched for by wading downstream checking exposed rocks, mud and sand patches, under tree roots and steep banks and within bankside vegetation. Signs of water vole use; including latrines, footprints, 'mown lawns', feeding remains, runs and burrows.

3.7 Evaluation

Habitats and species on the site were evaluated following the 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018). A geographical frame of reference is assigned to each habitat and species, with **International Value** being most important, then **National, Regional, County, District, Local** and lastly, within the immediate **Zone of Influence (Zoi)** of the proposals only.

Value judgements are based on characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations such as SSSIs. For undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource are considered. Ecological resource quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

The recommendations detailed within this report aim to meet requirements of the Environment Act and Biodiversity Metric 3.1 as far as possible at this stage.

3.8 Limitations

The site visit was undertaken in March. Although this within the sub-optimal time of year for phase 1 habitat surveys, sufficient vegetation was present to enable habitat identification. It is not considered a limit to the conclusions of the report based on the habitats found within the site and the works proposed.

A Great Crested Newt (GCN) Habitat Suitability Index (HSI) Assessment of the ponds located within Castle Hawk Golf Course could not be carried out due to land ownership and the ponds located within the fields south of the site could not be assessed due to health and safety with the presence of an active railway line between the site and the ponds.

The absence of biological records does not necessarily mean the absence of species. This has been considered within the report conclusions.

4.0 Survey Results

4.1 Desk Study

Statutory sites

The following two statutory sites were identified within a 2km radius of the proposals (with approximate distance and direction from the site):

- Rochdale Canal SSSI/SAC, 150m east at closest point; and
- Hopwood Woods Local Nature Reserve (LNR), 1.3km south.

Non-statutory sites

The following six non-statutory sites were identified within 2km the proposals (with distance and direction from the site):

- Meadow By Heywood Cemetery Site of Biological Importance (SBI), 1.8km north-west;
- Rochdale Canal (Scowcroft to Warland) SBI, 150m east;
- Glade & Oaken Bank Woods SBI, 1.6km south;
- Hopwood Clough SBI, 1.3km south;
- Lords Wood SBI, 1.7km south; and
- A627M By Tandle Hill SBI, 1.5km east.

The full designations for each site are listed within Appendix 5.

The site lies within a Natural England SSSI Impact Risk Zone for Rochdale Canal SSSI/SAC.

Priority Habitats

Three areas of ancient woodland have been returned within 2km of the site (with distance and direction from the site):

- Glade Wood, 1.6km south;
- Oaken Bank Wood; 1.6km south; and
- Lords Wood, 1.7km south.

Numerous areas of Deciduous Woodland Priority Habitat have been returned within 2km of the site. The closest area lies approximately 10m south of the site.

Priority Species

The site lies within a Conservation Target Area for the following Priority Species:

- Curlew
- Lapwing

The site lies within a Breeding Area for the following Grassland Assemblage Farmland Birds:

- Grey partridge
- Lapwing
- Redshank
- Snipe
- Tree sparrow

Following a review of records held by GMEU, several priority species that have the potential to occur within the vicinity of the proposed development have been identified. These include birds, bats, badger, hedgehog and amphibians. The species records are summarised below, and the detailed records held by GMEU within 2km of the site are displayed within Appendix 5. Protected species legislation can be found within Appendix 4.

Records for linnet, little ringed plover, lapwing and wall have been returned within the site boundary.

Birds

Two hundred and thirty-two records were returned for bird species within 2km of the site. Species returned include barn owl, hobby, kingfisher, little ringed plover, peregrine, bullfinch, cuckoo, dunnoek, herring gull, house sparrow, lapwing, lesser redpoll, linnet, reed bunting, skylark, song thrush, starling and willow tit. All species recorded within 2km are displayed within Appendix 5. Table 4.1 below shows a summary of the closest and most recent bird records and related distance to the site.

Table 4.1. Summary of the closest and most recent bird species records and related distance to site.

Bird Species	Distance of record to site (approx.)	Record date
Linnet (<i>Linaria cannabina</i>)	Within site boundary	2020-2021
Little ringed plover (<i>Charadrius dubuis</i>)	Within site boundary	2020-2021
Lapwing (<i>Vanellus vanellus</i>)	Within site boundary	2018-2021
Barn owl (<i>Tyto alba</i>)	1.15km south-east	2022

Bats

GMEU returned one hundred and eight records for bats within the search area, including forty-two roost records. Bat species include common pipistrelle, soprano pipistrelle, pipistrelle species, noctule,

daubenton's bat, myotis species and unidentified bat species. Below is a summary of the most recent and closest bat records and related distance to the site (see Table 4.2). All species recorded within 2km are displayed within Appendix 5.

Table 4.2. Summary of closest and most recent bat records, record type and related distance to site.

Bat Species	Record type	Distance of record to site (approx.)	Record date
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	Bat sign	250m east	2010
Noctule (<i>Nyctalus noctula</i>)	Bat sign	250m east	2010
Daubenton's bat (<i>Myotis daubentonii</i>)	Bat sign	250m east	2010
Pipistrelle species (<i>Pipistrellus pipistrellus</i> sp.)	Roost	880m north	1999
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	Roost	1.8km north-west	2017

Amphibians

Twenty-three records for amphibians, including common toad and great crested newt were returned within 2km of the site. All species recorded within 2km are displayed within Appendix 5. Below (Table 4.3) is a summary of the closest and most recent amphibian records and related distance to the site.

Table 4.3. Summary of most recent and closest amphibian records to and related distance to site.

Notable and Protected Species	Distance of record to site (approx.)	Record date
Common Toad (<i>Bufo bufo</i>)	300m south-east	2020
Great crested newt (<i>Triturus cristatus</i>)	1.5km south-west	2022

Terrestrial mammals

Fifty-three records for terrestrial mammals were returned within 2km of the site. Species present include badger, hedgehog, water vole, brown hare and otter. All species recorded within 2km are displayed within Appendix 5. Below (Table 4.4) is a summary of Summary of most notable and/or protected species and related distance to site.

Table 4.4. Summary of most notable mammal species and related distance to site.

Notable and Protected Species	Distance of record to site (approx.)	Record date
European Hedgehog (<i>Erinaceus europaeus</i>)	325m north	2020
European Otter (<i>Lutra lutra</i>)	740m north-east	2014
Water vole (<i>Arvicola amphibius</i>)	1.65km south-east	2000
Brown hare (<i>Lepus europaeus</i>)	1.15km south-east	2022

There was one European Protected Species Licence (EPSL) applications within 2km of the site since 2017. The ESPL application was identified using Magic Maps and is detailed below (distance and direction from site):

- 2017-31535-EPS-MIT for the damage and destruction of a resting and breeding place for Great Crested Newt. Start date: 31/10/2017, end date: 31/12/2017 (1.8km south-west)

4.2 Habitat Survey

A habitat survey was conducted on 16th March 2023 by Liz Kenyon and Lizzie Atkinson for the site. The habitat types and features of ecological interest were identified and mapped in compliance with *The Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit* (JNCC, 2010). A list and a summary description of key habitats identified within the site is tabled below (see Table 4.5). Notes on the presence or potential presence of protected species are provided in Section 4.6. The Phase 1 Habitat map can be found in P.1733.22.05 *Phase One Habitat Survey*, Appendix 1 and photographs within Appendix 3. The Target Notes (TN) and lists of species recorded during survey are presented in Appendix 2.

Weather conditions during the survey were mild (6°C), dry and overcast (8/8 cloud cover) with a F2 (Beaufort Scale) light breeze, therefore appropriate for this type of survey.

The site comprises a disused railway sidings with areas of hardstanding and bare ground that have been encroached with grassland species, strands of ruderal/ephemeral vegetation and scrub throughout. Semi-natural broadleaved woodland, species poor hedgerow and wet ditch (D1) border the northern site boundary and scattered trees are present throughout. Castle Hawk Golf Course lies immediately north of the site and Rochdale Canal SSSI/SAC approximately 150m east. The wider landscape is predominately agricultural land and residential.

Table 4.5. Habitats present on site including habitat alphanumeric code references from JNCC (2010).

Habitat Description and JNCC Codes	Site Description
<i>Hardstanding/Bare ground (J4)</i>	Areas of bare ground and hardstanding, comprising a mixture of tarmac, railway tracks and crushed stone, are present within the site and have been encroached with grassland species, strands of ruderal/ephemeral vegetation and scrub throughout. This habitat is displayed in photographs 1-2 and 10 within Appendix 3.
<i>Dense/continuous scrub (A2.1)</i>	The site is largely encroached with mixed species scrub. Species present include buddleja, bramble, hawthorn, dog-rose, salix and birch species. This habitat is displayed in photograph 6 within Appendix 3.
<i>Semi natural broadleaved woodland (A1.1.1)</i>	Semi-natural broadleaved woodland borders the northern site boundary. Species present within woodland include predominately silver birch and goat willow, with scattered scrub and ivy dominating the ground flora and a layer of leaf litter present. This habitat is displayed in photographs 3-4 within Appendix 3.
<i>Semi-improved grassland (B6)</i>	Areas of the site have been colonised by grassland species with strands of ruderal/ephemeral vegetation. Species present include perennial rye-grass, Yorkshire fog, false oat grass, creeping buttercup, clover, moss, creeping thistle, willowherb, nettle, curled dock and broadleaved dock. This habitat is displayed in photograph 5 within Appendix 3.
<i>Species poor hedge (J2.1.2)</i>	Species poor hedgerow lines the northern site boundary. Leyland cypress dominates within silver birch and goat willow also present. The habitat is unmanaged within fallen trees noted. This habitat is displayed in photograph 7 within Appendix 3.
<i>Scattered trees (A3.1)</i>	Scattered trees and self-seed saplings are present throughout the site and species include silver birch, goat willow, cherry, cypress, black pine, maple, horse chestnut and beech. This habitat is displayed in photograph 8 within Appendix 3.
<i>Wet ditch (G2)</i>	A wet ditch (D1) lies north of the species poor hedgerow. The ditch (D1) is approximately 1m in width and was holding water approximately <10cm deep during the inspection with dry sections noted throughout. The banks of the ditch are shallow (<45°) and are surrounded by scrub and scattered trees. This habitat is displayed in photograph 9 within Appendix 3.

4.3 Preliminary Bat Roost Assessment of Trees

Preliminary Roost Assessment Trees

All trees were inspected for Potential Roost Features (PRFs). Two goat willow trees within the semi-natural broadleaved woodland that borders the northern site boundary possessed PRF including broken branches, rot holes and crevices and these trees were assessed to provide **low** bat roost potential. The approximate location of these trees can be viewed in drawing P.1733.22.05 in Appendix 1. The remaining trees within the site were assessed to provide **negligible** bat roost potential.

4.4 Great Crested Newt Habitat Suitability Index (GCN HSI)

Table 4.6: Standing Water Description and GCN HSI with full details in Appendix 6.

Standing water description	Photograph
Ditch 1 (D1): runs adjacent to the northern site boundary. The ditch is approximately 1m in width, with shallow banks (<45°) and is surrounded by scrub and scattered trees. Ditch D1 was holding water approximately <10cm deep during the inspection with dry sections noted throughout. The HSI score was 0.48 meaning it has Poor suitability for use by great crested newt for breeding.	

4.5 Protected and Notable Species

Table 4.7: Habitat suitability for protected and notable species, including evidence, further survey information and reference to photographs/drawings where applicable.

Birds	Habitat suitability
	Scrub, semi natural broadleaved woodland, semi-improved grassland with ruderal/ephemeral and scattered trees. These provide suitable foraging and nesting opportunities for bird species.
	The site lies within a Conservation Target Area for the Priority Species curlew and lapwing and records for lapwing have been returned within the site boundary. The site does not provide suitable habitat for curlew as it is predominately hardstanding with self-seeded scrub and scattered trees throughout.
	The site lies within a Breeding Area for Grassland Assemblage Farmland Birds including grey partridge, lapwing, redshank, snipe and tree sparrow. The site provides limited habitat for grey partridge, redshank and snipe as the site is predominately hardstanding and scrub, unfavourable for these species. The tree provides suitable habitat for tree sparrow within the semi-natural broadleaved woodland and species poor hedgerow within the site.
	Records for little ringed plover and linnet have been returned within the site. The areas of gravel within the site provide breeding habitat for little ringed plover and the semi-natural broadleaved woodland and scrub provide breeding and foraging habitat for linnet.
	Species seen / Evidence of presence / Features identified
	During the survey, wren, long-tailed tit, blue tit and robin were identified within the site. Canadian geese and mallard ducks were also noted within an offsite pond, south of the site.
	Further survey required
	For any vegetation removal is to be undertaken, a nesting bird survey will be required (section 5.2).
	Breeding bird surveys has previously been carried out by E3P in 2021 (E3P report, <i>80-464-R6-1 Breeding Bird Survey Report</i>). The site falls within a Breeding Area for Grassland Assemblage Farmland Birds and a Conservation Target Area for two priority species. Records for little ringed plover and lapwing have been returned within the site boundary and it is likely that updated breeding bird surveys will be required.

Bats	Habitat suitability
	Two goat willow trees within the semi-natural broadleaved woodland that borders the northern site boundary possessed PRF including broken branches, rot holes and crevices. These trees were assessed to provide low bat roost potential. The remaining trees within the site were assessed to provide negligible bat roost potential.
	The scrub, species poor hedgerow, semi-natural broadleaved woodland, wet ditch (D1), semi-improved grassland with ruderal/ephemeral vegetation and scattered trees within the site provide good suitability for commuting and foraging bats, with good connectivity to the surrounding land use.
	Species seen / Evidence of presence / Features identified
	Evidence of bats was not identified within the site during the survey.
Badger and other small mammals	Further survey required
	Bat activity transect surveys have previously been carried out in 2021 by Rachel Hacking (Rachel Hacking report, <i>Bat Transect Surveys, Castleton Sidings, Castleton, Rochdale, June 2021</i>). Updated bat activity surveys may be required.
	Habitat suitability
	Semi-natural broadleaved woodland, semi-improved grassland with ruderal/ephemeral and scrub habitats within the site provide foraging and shelter habitat for badger and other small mammal species such as hedgehog.
	Records for brown hare have been returned within 2km of the proposals, however the site does not provide suitable habitat for brown hare as the site is predominately hardstanding and self-seeded scrub and trees. Due to the lack of suitable habitat, brown hare do not require further consideration within this report and will not be discussed further.
Water vole and otter	Species seen / Evidence of presence / Features identified
	Multiple mammal paths were identified throughout the site and snuffle holes (SN on P.1733.22.05, Appendix 1) and badger tracks (TN3) were also noted.
	Further survey required
	An updated survey for badger prior to works is recommended. Reasonable Avoidance Measures (RAMS) for badger and hedgehog should be implemented (see section 5.2).
	Habitat suitability
Water vole and otter	The wet ditch (D1) within the site provides very limited habitat for water vole and otter. The wet ditch (D1) was dry in sections throughout, with shallow banks (<45°) and limited connectivity to watercourses in the wider area where records have for otter and water vole have been returned.
	Species seen / Evidence of presence / Features identified
	Evidence of water vole or otter was not identified within the site during the survey.

	Further survey required It is considered that water vole and otter will not be adversely impacted by the proposals within the site and do not require further consideration within this planning application and will not be discussed further within this report.
Amphibians	Habitat suitability One wet ditch (D1) is present within the site and a further eight waterbodies are present within 500m of the site as mapped on Magic Maps. The scrub, semi-natural broadleaved woodland, semi-improved grassland with ruderal/ephemeral vegetation provide terrestrial habitats for amphibians and the wet ditch (D1) will provide some limited aquatic habitat for amphibians. Amphibians may use water bodies that score an average or below HSI assessment. Species seen / Evidence of presence / Features identified No evidence of amphibians was identified within the site during the survey. Further survey required The HSI assessment of the onsite ditch D1 returned a score of poor for GCN breeding, therefore no further survey for GCN will be required at the ditch. GCN eDNA surveys at five ponds within 250m of the site have been carried out by E3P in 2021 (E3P report, <i>Great Crested Newt Surveys, Castleton Sidings, Rochdale</i>) which confirmed GCN as absent from the waterbodies assessed. An updated HSI assessment of all waterbodies within 500m of the site is recommended to further inform proposals. Updated eDNA surveys may also be required dependent on results of updated assessments.
Reptiles	Habitat suitability The habitats within the site offer suitability to support reptiles with the piles of stones and rubble (TN2) offering areas of refuge and areas of bare ground offering basking opportunities. The site is also well connected to the wider landscape. Species seen / Evidence of presence / Features identified No evidence of reptiles was identified within the site during the survey. Further survey required Reptile surveys were carried out by E3P in 2021 (E3P report, <i>80-464-R4-1 Reptile Survey Report, Castleton, Rochdale</i>). No reptiles were recorded during the surveys carried out by E3P in 2021. Suitable terrestrial habitat still remains within the site and updated surveys for reptiles may be required. A RAMS should be produced and implemented (see section 5.2)

Invasive species

Cotoneaster (TN1) was identified within the centre of the site. The location of the cotoneaster (TN1) can be viewed on drawing P.1733.22.05 in Appendix 1. No other invasive non-native species were identified during the site walkover.

5.0 Evaluation and Recommendations

5.1 Designated Sites and Habitats

Statutory site Rochdale Canal SSSI/SAC lies within 150m of the site. The Rochdale Canal SSSI/SAC contains vitally important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of the nationally scarce floating water-plantain *Luronium Natans*, which Rochdale Canal SSSI/SAC is designated for. Due to the proximity and lack of physical barrier between the site and the designated site, it is recommended that a Construction Environment Management Plan (CEMP) is produced and implemented to protect the site during the works.

A Habitat Regulation Assessment (HRA) has been prepared by E3P (E3P Report, *80-464-R5-1 E3P Habitat Regulation Assessment – Screening Report, Castleton Sidings, Rochdale*) to assess whether the proposed development will have any likely significant effects on the designated site Rochdale Canal SSSI/SAC.

The remaining statutory and non-statutory protected sites within the vicinity of the proposals lie over 1km from the proposals, therefore will not be directly impacted by the proposals during the construction phase due to the separation distance. It is likely that designated sites will receive and increase in recreational pressure, however this will be mitigated by the local residents frequenting non-designated sites such as Castle Hawk Golf Course, which lies directly north of the proposals, on a more regular basis due to proximity and existing public footpaths.

The site lies within a Natural England SSSI Impact Risk Zone for Rochdale Canal SSSI/SAC and further consultation with Natural England will likely be required to proceed.

Three areas of ancient woodland have been returned within 2km of the site, however all lie over 1.6km from the site and it is considered that there will be adverse impact on these priority habitats as a result of the proposals.

Mitigation

The habitats on site comprise hardstanding, bare ground, species poor hedgerow, wet ditch, scrub, semi-natural broadleaved woodland, scattered trees and semi-improved grassland with ruderal/ephemeral vegetation. These habitats are considered to have an ecological value of **within the zone of influence** of the site or lower. The site contains no designated or priority habitats, however an area of Deciduous Woodland Priority Habitat lies approximately 10m south of the site. It is recommended that a CEMP is implemented during the works to protect this priority habitat.

The production of the Defra Metric Biodiversity Net Gain Calculations to be completed by Ascerta to minimise impacts of biodiversity and provide net gains in biodiversity. A Management Plan to be produced by Ascerta and implemented to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around the new development site.

5.2 Protected and Notable Species Recommendations

Birds

The semi-natural broadleaved woodland, semi-improved grassland with ephemeral/ruderal vegetation, scattered trees, scrub and species poor hedgerow provide suitable habitat for nesting and foraging bird species. It is recommended that vegetation clearance should be undertaken outside of the nesting bird season (**1st March to 31st August Inclusive**) to avoid any impact on breeding birds. If vegetation clearance cannot be undertaken outside of the breeding bird season, a nesting bird check undertaken by a suitably experienced ecologist should be undertaken immediately prior to works commencing. If an active birds' nest is identified a suitable buffer zone should be implemented where no works are to occur within until the young have fledged the nest.

Records for lapwing, linnet and breeding little ringed plover have been returned within the site boundary. Breeding bird surveys have been carried out by E3P in 2021 (E3P report, *80-464-R6-1 E3P Breeding Bird Survey Report, Castleton Sidings, Rochdale*). It is likely that updated breeding bird surveys will be required to further inform proposals.

Bats

The habitats on site provide **low** suitability for commuting and foraging bats, apart from the semi-natural woodland which lines the northern site boundary, which is of **moderate** value.

Bat activity transect surveys have previously been carried out in 2021 by Rachel Hacking (Rachel Hacking report, *Bat Transect Surveys, Castleton Sidings, Castleton, Rochdale, June 2021*). Updated bat activity

surveys may be required, and the survey effort will be dependent on the habitats to be lost to the proposals.

Two goat willow trees within the semi-natural broadleaved woodland that borders the northern site boundary possessed PRF including broken branches, rot holes and crevices. These trees were assessed to provide **low** bat roost potential. The remaining trees within the site were assessed to provide **negligible** bat roost potential. No further survey effort for bats in relation to the trees within the site will be required at this stage. If trees assessed to provide **low** bat roost potential are to be removed or pruned to accommodate proposals, they will require soft felling in the presence of a licenced ecologist.

Badger and other small mammals

The site provides habitat for badger and hedgehog within the bare ground, scrub, ruderal/ephemeral and semi-natural broadleaved woodland habitats.

These habitats are likely to be impacted by the proposals and therefore, it is recommended that a **Hedgehog Reasonable Avoidance Measures (RAMS) Method Statement** is produced and implemented during the works to avoid harm to this species. The RAMS should include:

- Construction materials stored on pallets so as not to create a hedgehog refuge area; and
- Existing refuge areas should be removed by hand so hedgehogs within are not harmed during their removal.

To enable hedgehog continued use of the site it is advised that gaps of at least 13cm by 13cm are left under any new garden fences to enable hedgehog to roam freely within the area following development.

As badgers are a mobile species and signs of badger (mammal paths, tracks and snuffle holes) have been identified within the site, it is recommended an **updated badger check of suitable habitats** is undertaken prior to works commencing within the site to avoid harm to badger that may have moved into the habitats within the site. It is recommended that a **Badger Reasonable Avoidance Measures (RAMS) Method Statement** is produced and implemented during the works to avoid harm to this species. The RAMS should include:

- Construction materials stored on pallets so as not to create a badger refuge area; and
- Existing refuge areas should be removed by hand so badgers within are not harmed during their removal.

Invasive species

Cotoneaster (TN1) has been identified during the site walkover and the locations of the invasive non-native species can be viewed on drawing P.1733.22.05 in Appendix 1. To avoid the spread (complying with the Wildlife and Countryside Act 1981, see Appendix 4) of these species within the site during site clearance, it is recommended that an **invasive species management plan** is produced and adhered to during the works. It is recommended that the management plan details suitable management of these species, biosecurity measures and avoidance measures where possible.

As the survey was undertaken outside the optimal survey period and invasive species can colonise very quickly, it is recommended that an **updated invasive species check** is undertaken prior to the start of works.

Amphibians

Following a Habitat Suitability Index (HSI) assessment during the site walkover survey, the ditch D1 within the site returned a score of **poor** for GCN breeding, therefore no further survey for GCN will be required at the ditch. A further eight waterbodies have been identified within 500m of the site and it is recommended that an updated HSI assessment of all waterbodies within 500m of the site is carried out to further inform proposals. Updated eDNA surveys may also be required dependent on results of updated assessments.

GCN eDNA surveys at five ponds within 250m of the site have been carried out by E3P in 2021 (E3P report, *Great Crested Newt Surveys, Castleton Sidings, Rochdale*) which previously confirmed GCN as absent from the waterbodies assessed.

The site provides terrestrial habitat within the scrub, ruderal/ephemeral and semi-natural broadleaved woodland areas. Amphibians may also use water bodies that have scored below average or below. The terrestrial habitats do provide refuge areas and connectivity corridors for amphibians. These habitats are likely to be impacted by the proposals and therefore, it is recommended as the areas to be lost and are small in size that an **Amphibian Reasonable Avoidance Measures (RAMS) Method Statement** is produced and implemented during the works to avoid harm to this species.

Reptiles

The terrestrial habitats within the site offer areas of refuge and basking opportunities for reptiles and the site is well connected to the surrounding landscape. Updated surveys may be required to assess the presence of reptiles within the site. **Reptile surveys can be undertaken between March and September inclusive, during suitable weather conditions. A minimum of seven surveys will be required.**

It is also recommended that a **Reptile Reasonable Avoidance Measures (RAMS) Method Statement** is produced and implemented during the works to avoid harm to these species.

5.3 Enhancements

In order to meet requirements for biodiversity protection and enhancement outlined within the NPPF, it is recommended that ecological enhancements are included. These could include:

1. Provision of 25 bird boxes (25mm and 32mm entrance hole box, house sparrow terrace, swift box, 28mm tree sparrow boxes), attached to or integrated within new buildings or retained trees on site;
2. Provision of 25 bat features (e.g. Vivara Pro WoodStone Bat box or similar) attached to a retained tree on site or provision of a bat box (e.g. Vivara bat bricks or '*bird brick houses*' bat boxes) integrated within new buildings; and
3. Retain and enhance semi-natural broadleaved woodland habitat along the northern site boundary within suitable landscaping incorporating species that provide a food or shelter resource to wildlife to include hawthorn, hazel, holly, blackthorn, field maple, dog rose and honeysuckle as hedgerow species and oak, alder, field maple, silver birch, crab apple, rowan and bird cherry as tree species together with implementing a relaxed mowing regime and establishing wildflowers in these areas.

6.0 Conclusions

The site was subject to an extended phase one habitat survey. During the survey and following review of historical species records, it is considered that an impact on birds, bats, badger, amphibians, reptiles and hedgehog are likely to occur in relation to the proposals for the site. The following recommendations have been made to avoid an impact on these species:

- If works have not begun by March 2024, an updated site visit will be required to assess the habitats within the site;
- Updated nocturnal bat activity surveys and the deployment of static bat detectors (between April and October in suitable weather conditions) to assess the level of bat activity throughout the site;
- Updated breeding bird surveys (a minimum of three surveys to be carried out between March and June inclusive) to further inform recommendations;
- Updated reptile surveys (a minimum of seven visits to be carried out between March and September inclusive) to further inform recommendations;
- Sensitive lighting to be used to meet Bat Conservation Trust lighting guidance so not to cause detrimental effect to light sensitive species;
- Production and implementation of a Construction Environmental Management Plan (CEMP) to protect statutory site Rochdale Canal SSSI/SAC, that lies 150m east of the site and the area of Deciduous Woodland Priority Habitat that lies 10m south;
- A site visit to carry out an updated Habitat Suitability Index (HSI) assessment of the eight waterbodies within 500m of the site to assess their suitability for great crested newt;
- Production and implementation of a hedgehog RAMS to avoid any harm to this species during the proposed works;
- Production and implementation of a badger RAMS to avoid any harm to this species during the proposed works;
- Production and implementation of an amphibian RAMS to avoid any harm to this species during the proposed works;
- Precautionary check for badger prior to works commencing to assess if badgers are using the habitats within the site for shelter;
- Production of an invasive species method statement to avoid the spread of cotoneaster (TN1) into the wider landscape during the proposed works;
- Precautionary check for invasive prior to works commencing;
- Enhancing the site for species through appropriate landscape planting that includes native, species rich hedgerows, trees and areas of wildflowers plus provision of integrated bat and bird features within newly constructed buildings;
- Defra Metric Biodiversity Net Gain Calculations to minimise impacts on biodiversity and provide net gains in biodiversity to be completed by Ascerta;
- Implementation of a Management Plan to be produced by Ascerta to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site; and
- Vegetation clearance or pruning should be undertaken outside of the nesting bird season (1st March to 31st August Inclusive) to avoid any impact on breeding birds. Or a nesting bird check undertaken by a suitably experienced ecologist should be undertaken immediately prior to works commencing.

It is considered that there would be very limited impacts on the local ecology as a result of the proposals, provided the recommendations detailed within section 5.0 above are followed.

Appendix 1



Hybrid application survey boundary
Site boundary

- A2.1 - Scrub - dense/continuous
- Wet ditch
- Species poor hedge
- J4 - Bare ground
- A1.1.1 - Broadleaved woodland - semi-natural
- B6 - Poor semi-improved grassland
- Target note
- Mammal path
- Snuffle hole (SH)
- Low BRP



Target notes

- TN1 - Cotoneaster
- TN2 - Stone and rubble piles
- TN3 - Badger track
- TN4 - Horsetail

BRP- Bat roost potential

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CLIENT: Kellen Homes		
PROJECT: Castleton Sidings		
DRAWING TITLE: Phase One Habitat Survey		
SCALE: NTS@A3	DRAWN BY: LA	DRAWING No: P.1733.22.05
DATE: 30/03/2023	CHKD BY: LK	REV: A

Appendix 2

Appendix 2: Species Lists and Target Notes

Table 1: Flora Species

English Name	Scientific Name
Alder	<i>Alnus glutinosa</i>
Beech	<i>Fagus sylvatica</i>
Bracken	<i>Pteridium aquilinum</i>
Black medic	<i>Medicago lupulina</i>
Black pine	<i>Pinus nigra</i>
Bramble	<i>Rubus fruticosus agg</i>
Broadleaved dock	<i>Rumex obtusifolius</i>
Broadleaved plantain	<i>Plantago major</i>
Buddleja	<i>Buddleja</i>
Cherry	<i>Prunus sp.</i>
Clover	<i>Trifolium repens</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common daisy	<i>Bellis perennis</i>
Common field speedwell	<i>Veronica persica</i>
Compact rush	<i>Juncus conglomeratus</i>
Cotoneaster *	<i>Cotoneaster sp.</i>
Creeping bent-grass	<i>Agrostis stolonifera</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping thistle	<i>Cirsium arvense</i>
Curled dock	<i>Rumex crispus</i>
Cypress	<i>Cupressus sp.</i>
Dandelion	<i>Taraxacum officinale</i>
False oat grass	<i>Arrhenatherum elatius</i>
Field horsetail	<i>Equisetum arvense</i>
Field maple	<i>Acer campestre</i>
Goat willow	<i>Salix caprea</i>
Greater willowherb	<i>Epilobium hirsutum</i>
Hawthorn	<i>Crataegus monogyna</i>
Herb robert	<i>Geranium robertianum</i>
Holly	<i>Ilex aquifolium</i>
Horse chestnut	<i>Aesculus hippocastanum</i>
Ivy	<i>Hedera helix</i>
Leyland cyprus	<i>Cupressus × leylandii</i>
Maple	<i>Acer sp.</i>
Meadow grass	<i>Poa sp.</i>
Moss	<i>Bryophyta sp.</i>
Perennial ryegrass	<i>Lolium perenne</i>
Red fescue	<i>Festuca rubra</i>
Reed canary grass	<i>Phalaris arundinacea</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rose	<i>Rosa sp.</i>
Silver birch	<i>Betula pendula</i>
Soft rush	<i>Juncus effusus</i>
Stinging nettle	<i>Urtica dioica</i>
Sycamore	<i>Acer pseudoplatanus</i>
Willowherb	<i>Epilobium sp.</i>
Yorkshire fog	<i>Holcus lanatus</i>

* invasive species

Table 2: Target Notes

Target Note Number	Description
TN1	Cotoneaster
TN2	Stone and rubble piles
TN3	Badger track
TN4	Horsetail

Appendix 3

Appendix 3: Photographs

Table 3: Photographs of the site

	
Photograph 1: Hardstanding	Photograph 2: Railway tracks and gravel areas
	
Photograph 3: Semi-natural broadleaved woodland	Photograph 4: Goat willow tree in semi-natural broadleaved woodland with large crevice in trunk



Photograph 5: Semi-improved grassland with strands of ruderal/ephemeral vegetation



Photograph 6: Mixed species scrub which dominates the site



Photograph 7: Species poor hedgerow



Photograph 8: Self-seeded scattered trees



Photograph 9: Wet ditch (D1)



Photograph 10: Areas of bare ground within the site



Photograph 11: Southern site boundary



Photograph 12: Self-seeded scattered trees

Appendix 4

7.0 References

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Appendix 4: Relevant Legislation

European Legislation

The following Directives have been adopted by the European Union and provide protection for fauna and flora species of European importance and the habitats which support them:

- Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive);
- Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

UK Legislation

The Habitats Directive has been transposed into national legislation through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (The Habitats Regulations). This provides for the designation and protection of 'European Sites' (SPAs, SACs and Ramsar Sites, including proposed or potential European Sites) and the protection of 'European Protected Species'.

The key UK legislation relating to nature conservation is the Wildlife and Countryside Act 1981 (as amended) (W&C Act). This Act is supplemented, *inter alia*, by provision in the Countryside and Rights of Way (CROW) Act 2000, and the Natural Environment and Rural Communities Act 2006 (NERC Act). Additional species and habitat specific UK legislation includes the Protection of Badgers Act 1992 and the Hedgerow Regulations 1997.

The Environment Act sets out how the UK will maintain environmental standards following leaving of the EU. The Bill builds on the vision of the 25 Year Environment Plan, with the ambition from the government to leave the environment in a better state than it was when inherited.

The Defra Biodiversity Metric is being implemented to work alongside the Environment Act. This tool calculates potential biodiversity impacts as a result of development and identifies mitigation and compensation requirements to ensure no net loss of biodiversity. In addition, it identifies measures that can be implemented in order to meet Biodiversity gain as a result of development. Defra released a beta version of the biodiversity metric in July 2019, with the most recent revision in April 2022. This metric is likely to be the default metric used by councils, with the most recent version to be submitted to support a planning application.

The National Planning Policy Framework (NPPF) 2021 has been published to provide further planning guidance. Wildlife, biodiversity and ecological networks are referred to in Section 15 '*Conserving and enhancing the natural environment*'. The NPPF states that the planning system should contribute to and enhance the natural and local environment by: recognising the wider benefits of ecosystem services, minimising impacts on biodiversity and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. Further guidance is provided within Government Circular 06/05: *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System*.

Species and Habitats of Principal Importance

Species and Habitats of Principal Importance are listed under section 41 of the NERC Act and are a material consideration in planning decisions. Planners require relevant, up to date information from ecological surveys in order to assess the effects of a proposed development on biodiversity as Councils have a statutory obligation under section 40 of the NERC Act to consider biodiversity conservation in the determination of planning applications.

Background information about the lists of priority habitats and species (Species and Habitats of Principal Importance) can be found within the UK Biodiversity Action Plan (UK BAP). Although this has been succeeded by the '*UK Post-2010 Biodiversity Framework*', many of UK BAP tools are still relevant. BAPs identify habitats and species of nature conservation priority on a UK (UK BAP) and Local (LBAP) scale. Most BAP priority habitats and species have Habitat Action Plans (HAP) and Species Action Plans (SAP) and there are also "grouped action plans" for groups of related species with similar conservation requirements. The LBAP relating to this Site is the Greater Manchester Biodiversity Action Plan.

Badgers

The legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992.

Under the Protection of Badgers Act 1992 it is an offence *inter alia* to:

- Wilfully kill, injure or take a badger, or to attempt to do so;
- Cruelly ill-treat a badger; or
- Intentionally or recklessly interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

The Badger Act 1992 defines a badger's sett as *"any structure or place which displays signs indicating current use by a badger"*

Natural England can issue licences to enable works to continue that may affect a protected species. In relation to disturbance of badgers, Natural England (2009) gives guidelines on disturbance which will require a licence. These includes: *"using very heavy machinery (generally tracked vehicles) within 30 metres of any entrance to an active sett; using lighter machinery (generally wheeled vehicles), particularly for any digging operation, within 20 metres; light work such as hand digging or scrub clearance within 10 metres. There are some activities which may cause disturbance at greater distances (such as using explosives or pile driving) and these should be given individual consideration."*

Bats

In England, all bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife & Countryside Act 1981 (as amended). Several species of bat are also highlighted as Priority Species under the UK Biodiversity Action Plan and within the Local BAP.

Under the current legislation as summarised on pages 8 and 9 of the Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016) it is a criminal offence to:

"To kill, capture, injure or take a wild bat;

- *To damage or destroy a place used by a bat for breeding or resting. All offences of this nature are identified within the Habitats Regulations. This offence is unique in that it can be committed accidentally. No element of intentional, reckless or deliberate action needs to be evidenced;*
- *To disturb bats anywhere (roosts, flight lines or foraging areas) if levels of disturbance can be shown to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate or to affect significantly local distribution or abundance;*
- *To intentionally or recklessly disturb a bat, whilst it is occupying a place of shelter or protection;*
- *To intentionally or recklessly obstruct access to any place used by a bat for shelter or protection; and*
- *To be in possession or control of a bat alive or dead (or any part of a bat or anything derived from a bat, although bat droppings are generally considered to be acceptable), or to*

transport a bat, to sell or exchange a bat or to offer to sell or exchange a bat taken from the wild."

Breeding Birds

Breeding Birds are protected under the Wildlife and Countryside Act which make it an offence to:

- *intentionally kill, injure or take any wild bird or take, damage or destroy the nest of any wild bird whilst it is in use or being built;*
- *intentionally take or destroy the egg of any wild bird;*
- *have in one's possession or control any wild bird, dead or alive, or any part of a wild bird (including eggs), which has been taken in contravention of the Act or the Protection of Birds Act 1954;*
- *intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.*

Great Crested Newt

The great crested newt (*Triturus cristatus*) is fully protected under the Wildlife and Countryside Act, 1981 (as amended) and the Habitats Regulations, 2017. It is also a Species of Principal Importance. The legislation makes it an offence to:

- *Deliberately (or intentionally) kill, injure or capture (or take) a great crested newt, or great crested newt egg or eft;*
- *Deliberately (intentionally) damage or destroy any breeding site or resting place (i.e. pond, refuge, hibernaculum);*
- *Deliberately or recklessly obstruct access to any breeding site or resting place;*
- *Deliberately, intentionally or recklessly disturb a great crested newt, in particular disturbance which is likely to:*
 - *impair the ability of the great crested newt to survive, breed, reproduce, or to rear or nurture young;*
 - *impair the ability of the great crested newt to hibernate or migrate; or significantly affect the local distribution or abundance of great crested newts*

Invasive Species

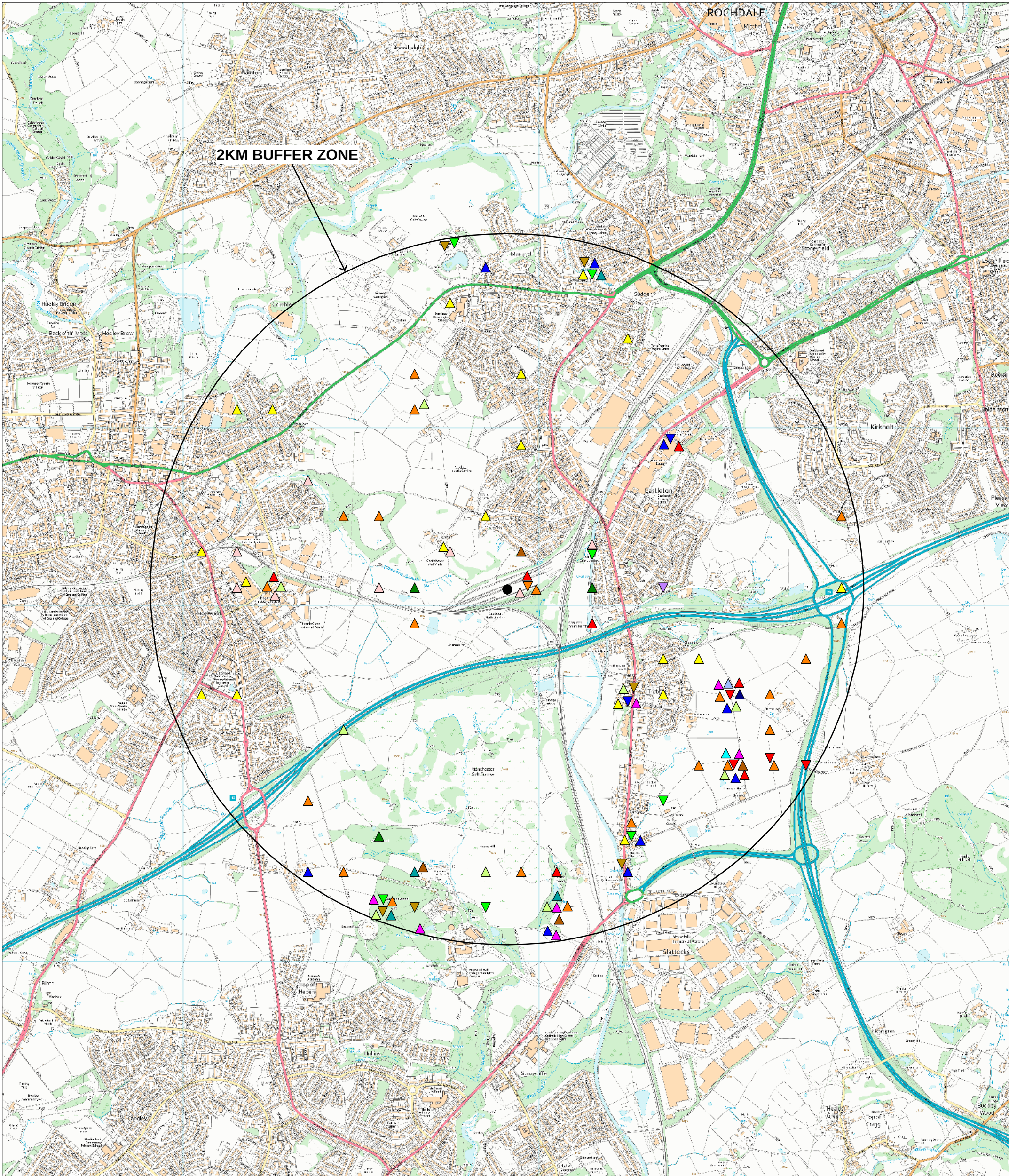
It is an offence under Section 14(2) of the Wildlife and Countryside Act 1981 to 'plant or otherwise cause to grow' in the wild any plant in Schedule 9 Part II.

It is a criminal offence to intentionally, wilfully kill, injure or take any of the aforementioned protected species or to destroy or disturb its habitat.

Local Policy

The site lies within Rochdale and is covered by Rochdale Metropolitan Borough Council Unitary Development Plan (Adopted June 2006) and the Rochdale Core Strategy (Adopted October 2016 and updated February 2017). The policies of relevance here are policies NE3, NE4, NE5, NE8 and NE9 and policy G7 respectively and these policies have been taken into account when preparing this report.

Appendix 5



KEY
SECTION 41 SPECIES

- | | |
|------------------|-----------------|
| ▲ BULLFINCH | ▲ LINNET |
| ▲ COMMON TOAD | ▲ REED BUNTING |
| ▲ CUCKOO | ▲ S41 MOTH |
| ▲ CURLEW | ▲ SKYLARK |
| ▲ DUNNOCK | ▲ SONG THRUSH |
| ▲ HEDGEHOG | ▲ STARLING |
| ▲ HERRING GULL | ▲ WALL |
| ▲ HOUSE SPARROW | ▲ WL HAIRSTREAK |
| ▲ LAPWING | ▲ WILLOW TIT |
| ▲ LESSER REDPOLL | |

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SD 8782 1009
CASTLETON SIDINGS - MAP 5

SCALE 1:20,000

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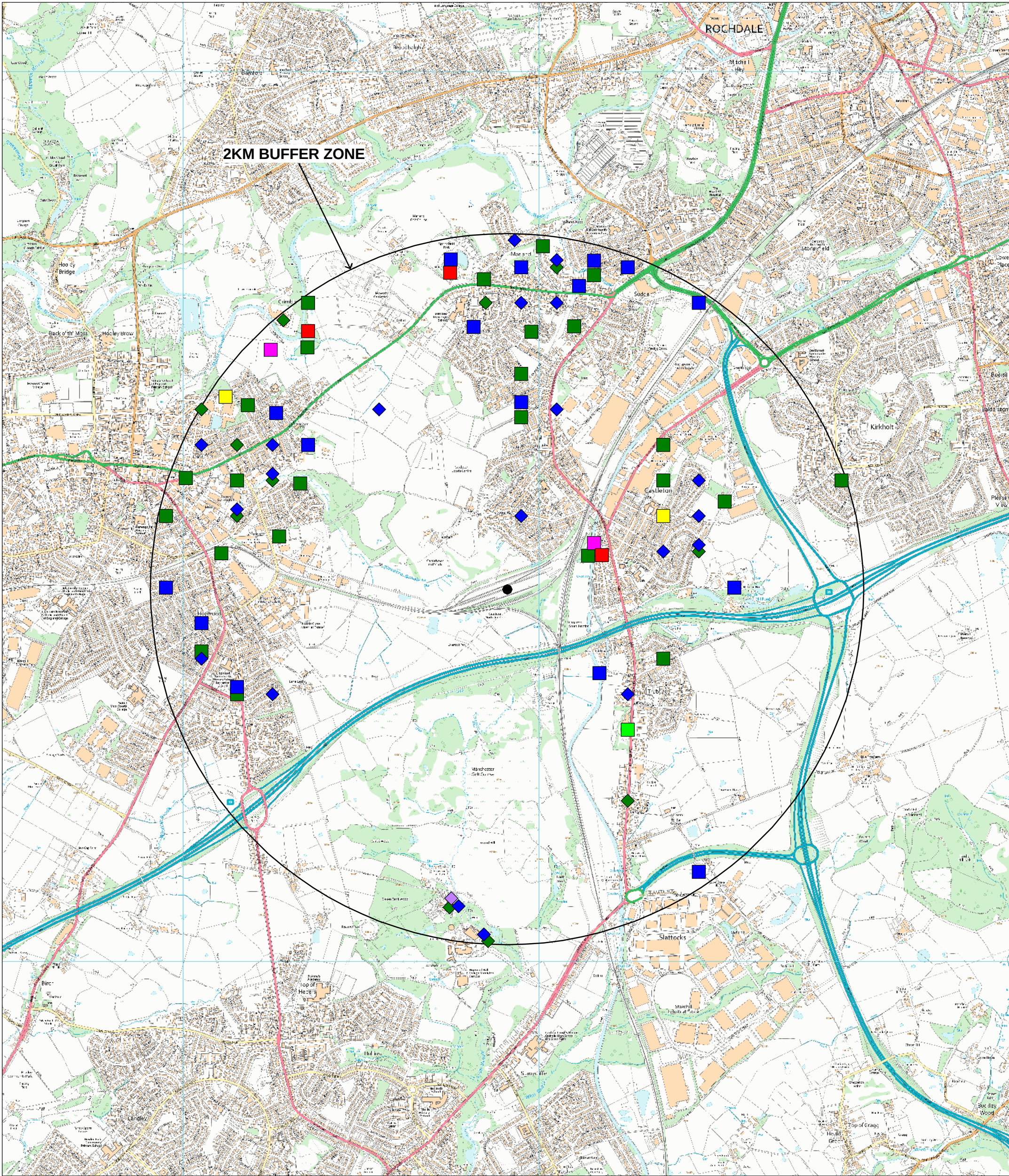
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Greater Manchester
Ecology Unit

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Date Produced: 17/03/2023



KEY
BAT ROOSTS

- ◆ COMMON PIPISTRELLE
- ◆ MYOTIS SP
- ◆ PIPISTRELLE SP

BATS OTHER SIGNS

- BAT SP
- COMMON PIPISTRELLE
- DAUBENTON'S BAT
- NOCTULE BAT
- PIPISTRELLE SP
- SOPRANO PIPISTRELLE

GREATER MANCHESTER ECOLOGY UNIT
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CASTLETON SIDINGS - MAP 4

SCALE 1:20,000

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

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NOT TO BE PLACED ON THE PUBLIC RECORD

2KM BUFFER ZONE

HOPWOOD
WOODS

**KEY
SITES**

LOCAL NATURE RESERVES

PROTECTED SPECIES

- GREAT CRESTED NEWT
- WATER VOLE
- WATER VOLE SIGNS
- BROWN HARE
- BARN OWL
- BEE ORCHID

- FLOATING WATER-PLTN
- HOBBY
- KINGFISHER
- LITTLE RINGED PLOVER
- OTTER
- PEREGRINE

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CASTLETON SIDINGS - MAP 2**

SCALE 1:20,000

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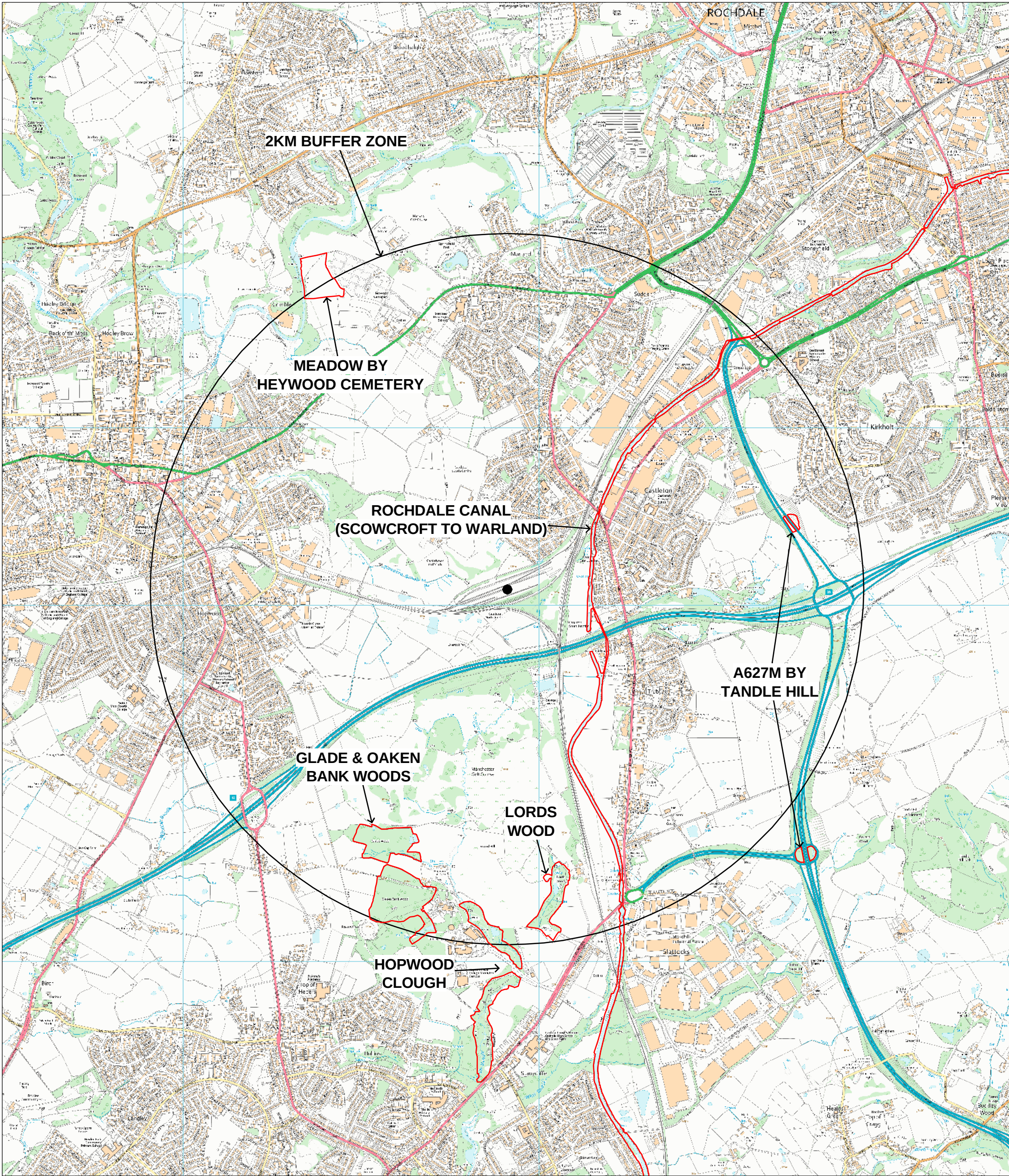
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**GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SD 8782 1009
CASTLETON SIDINGS - MAP 1**

KEY

SITE OF BIOLOGICAL IMPORTANCE

 **SBI BOUNDARY**

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Date Produced: 16/03/2023

SITES OF BIOLOGICAL IMPORTANCE IN GREATER MANCHESTER
Greater Manchester Ecology Unit
Council Offices, Wellington Road, Ashton-under-Lyne OL6 6DL
(Private & Confidential)



SITE NAME : Rochdale Canal, Scowcroft Farm - Warland

District : Rochdale

LOCATION : Rochdale

GRID REF : SD887065 – SD945201

GRADE : A

SITE DESCRIPTION

The Rochdale Canal runs through Manchester, Oldham and Rochdale and passes out of the county of Greater Manchester over the Pennines. The site was restored to a navigable waterway which opened in summer 2002. The canal which supports important populations of floating water plantain (*Luronium natans*) and is designated a European Special Area for Conservation (SAC). The national importance of this species and the canal's assemblage of pondweed species (*Potamogeton spp*) were recognised by the designation of a SSSI in August 2000. The statutory designations are applied to the Oldham and Rochdale sections of the canal with the SBI continuing in to Manchester. Canals are a Greater Manchester Biodiversity Habitat.

Floating water plantain is regularly recorded south of Littleborough, near Gorrells Way, upstream of Manchester Rd and downstream of the M62 and has been recorded in other sections of the canal. The species has rarely been recorded flowering, although the floating leaves are observed occasionally.

Nine species of pondweed (*Potamogeton*) have been recorded and/or reported in the past. Of these, five have been recorded in recent surveys by the Canal & River Trust. American pondweed (*P. epihydrus*), a Red Data Book species, is recorded at high density along the canal. The populations of this species are considered the best in Great Britain. Other pondweeds regularly recorded are slender (*P. berchtoldii*), curled (*P. crispus*), blunt-leaved (*P. obtusifolius*) and broad-leaved (*P. natans*).

The aquatic flora also includes frequent ivy-leaved duckweed, stonewort (*Nitella sp.*) and willow moss (*Fontinalis sp.*). Ridged hornwort, alternate-leaved water-milfoil, common water-starwort, intermediate water-starwort and the rare liverwort (*Riccia fluitans*) have been recorded. The invasive Nuttall's waterweed also occurs.

Floating, emergent and marginal flora is well developed along the canal. The canal supports colonies of unbranched bur-reed and arrowhead. Water violet and water soldier are recorded in scattered locations along the canal. Fringing marginal vegetation is dominated by reed sweet-grass although, stands of bulrush and purple loosestrife also occur and towards Littleborough soft rush becomes more dominant particularly on the off-side. Other marginal species include yellow flag iris, water mint, gypsywort, water forget-me-not, meadowsweet and water-cress. Bottle sedge, brooklime, marsh bedstraw and branched bur-reed have been recorded. To the north of the site, adjacent to the canal and the canal drainer at SD943184 the marginal vegetation becomes more acidic in character. Species recorded include marsh pennywort, marsh violet, bog pondweed, round-leaved water crowfoot and *Polytrichum* moss.

Fringed water-lily is now dominant along sections of the canal and subject to management where it impedes navigation and competes with floating water-plantain. The invasive New Zealand pigmyweed (*Crassula helmsii*) is also recorded in several locations and is currently subject to management.

SITES OF BIOLOGICAL IMPORTANCE IN GREATER MANCHESTER
Greater Manchester Ecology Unit
Ryecroft Hall, Manchester Road, Audenshaw, Manchester M34 5ZJ
(Private & Confidential)



SITE NAME : Rochdale Canal, Scowcroft Farm - Warland		DISTRICT : Rochdale
LOCATION : Rochdale	GRID REF : SD887065 – SD945201	GRADE : A

SITE DESCRIPTION CONTINUED

The stonework along the canal provides a substrate for submerged colonies of fresh water sponge. Crevices in the stonework support populations of white-clawed crayfish (UK Biodiversity Priority Species). This species was confirmed as still present in 2011 near Trub Farm and has an extremely limited distribution in Greater Manchester, currently only known from three locations. Terrestrial stonework supports abundant lady fern and occasional skullcap and wild angelica. Royal fern, which has a limited distribution in Greater Manchester, has been recorded in both the Rochdale and Oldham sections of the canal and there are historical records for the Manchester section. Towards Warland heather becomes frequent with crowberry also recorded.

The bankside vegetation provides suitable habitat for water voles (UK Biodiversity Priority Species) and good populations of this species have been recorded in Rochdale in the past. Evidence of the species was observed on the northern section of the canal during the 2008 survey. Five species of course fish have also been recorded.

The Site of Biological Importance includes additional woodland and grassland habitats associated with canal embankments, as well as the bankside vegetation along the towpath. In many places the towpath is bounded by hedgerows and scrub. Hawthorn is the predominant hedgerow species, but elder, ash and sycamore are also present. Scrub includes grey and goat willow and young alder. Bankside grassland is generally species-poor neutral grassland dominated by Yorkshire fog. However, smaller areas of both richer neutral grassland and acidic grassland also occur. At the northern end of the site the acid grassland supports purple moor-grass, wavy hair-grass, heath bedstraw and lemon-scented fern. Stands of bilberry and heather occur rarely within the grassland.

Breeding birds include moorhen, coot, mallard and Canada goose, grey wagtail and mute swan. Other species breeding in or adjacent to the canal corridor and using it for feeding include the UK Biodiversity Species spotted flycatcher and song thrush in addition to swallow and kingfisher. Grey heron regularly visit the canal to feed.

The invasive Himalayan balsam and Japanese knotweed occur occasionally along the canal.

The towpath is used frequently by pedestrians, cyclists and fishermen.

Note: This SBI review is based on information is supplied by The Canal and River Trust, site visits from Punch Bowl Bridge to Warland and Manchester Rd, Castleton to Ben Healey Bridge and from a survey by PAA commissioned in 1999 for the Canal Restoration Group. The habitat figures given are an approximation and are only intended to give an indication of the relative proportions of each habitat.

SITES OF BIOLOGICAL IMPORTANCE IN GREATER MANCHESTER
Greater Manchester Ecology Unit
Council Offices, Wellington Road, Ashton-under-Lyne OL6 6DL
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SITE NAME : Rochdale Canal, Scowcroft Farm - Warland			District : Rochdale		
LOCATION : Rochdale			GRID REF : SD887065 – SD945201		
GRADE : A	AREA (HA) : 35.3 (17 km)	ALTITUDE (M) : 108 - 179	DATE : 8.7.14		
STATUS : SAC, SSSI, BAP		SURVEYOR : D Dutton		INITIAL SURVEY DATE : 1982	
NO OF REVISIONS : 5		OWNER : Canal & River Trust		District REF : D25	
HABITATS PRESENT	Area (ha)	HABITATS PRESENT	Area (ha)		
Woodland broadleaved (semi-nat)	1.0	Woodland plantation			
Scrub	1.1	Acid grassland	0.4		
Neutral grassland – species rich		Neutral grassland – species poor	2.4		
Marshy grassland/flush	1.0	Calcareous grassland			
Tall ruderal		Ericaceous heath lowland/upland			
Bog		Swamp/Fen/Reedbed	1.3		
Pond/small lodge		Large area of open water			
Canal	21.3	Running water - River/stream/ditch	0.2		
Quarry/cliff/rock/wall	0.1	Other – Bare Ground/short perennial/amenity grassland	6.5		
Areas of habitat covering less than 0.1ha. recorded as 0.01					
Qualifying Features Code (taken from Part 2 or Part 3 of the Greater Manchester SBI Selection Guidelines 2008). Fw3 – Large Areas of Standing Water GSG1 – General Species Guideline (Floating Water Plantain)					
Supplementary Features Code - for other features that are not the primary reason for SBI selection, but are identified either as a supplementary attribute (taken from Part 1) and/or by almost reaching the Guideline threshold (Parts 2 & 3). Mm2 – Mammals Intrinsic Appeal – Accessibility & Usage					
COMPLETE FOR GAINS AND PARTIAL LOSSES ONLY					
Loss since Last Survey : 0.7			Loss since First Survey : 14.7		
Primary cause : Technical Loss - more accurate mapping (0.7)			Secondary cause : Technical Loss - Split site (14.0)		
Gain since Last Survey : 1.2			Gain since First Survey : 17.8		
Primary cause: Assessment of additional habitat (6.7ha)			Secondary cause: Technical gain - more accurate mapping (11.1ha).		
Net change since Last Survey : +0.5			Net change since First Survey : +3.1		

Appendix 6

Great Crested Newt (GCN) Habitat Suitability Index Assessment

Ditch D1

SI ₁		SI ₂		SI ₃		SI ₄		SI ₅		SI ₆		SI ₇		SI ₈		SI ₉		SI ₁₀		Product	HSI	Suitability
Location		Pond Area		Pond Drying		Water Quality		Shade		Fowl		Fish		Ponds		Terrestrial Habitat		Macrophytes				
Zone A	1	50-100m2	0.1	Dries Annually	0.1	Poor	0.33	0-60%	1	Absent	1	Absent	1	8	0.89	Moderate	0.67	1-5%	0.35	0.00069	0.4828	Poor

Appendix 7



e3p

Preliminary Ecological Appraisal Report
Castleton, Rochdale

Reference:80-464-R2-1
Date: February 2021



PRELIMINARY ECOLOGICAL APPRAISAL REPORT

Castleton
Rochdale

Prepared for:
Kellen Homes

Report Ref: 80-464-R2-1
Date Issued: 22/02/2021

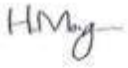
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Registered in England
CRN: 807255262

QUALITY ASSURANCE

PROJECT NUMBER	80-464		
VERSION	Version 1		
REMARKS	Final		
DATE	February 2021		
PREPARED BY	H. Morgan		
QUALIFICATIONS	BSc (Hons), ACIEEM, Senior Ecologist		
SIGNATURE			
CHECKED BY	C. Barlow		
QUALIFICATIONS	BSc (Hons), MSc, MEnvSc, CEnv, MCIEEM, Principal Ecologist		
SIGNATURE			
AUTHORISED BY	S. Cox		
QUALIFICATIONS	BSc (Hons), FGS, AIEEMA, MEnvSc, CEnv, Director		
SIGNATURE			



EXECUTIVE SUMMARY

Site Address	Land south of Fairway, Castleton, Rochdale, OL11 3BZ
Coordinates	E 387909, N 410131
Site Area	Approximately 12 ha
Current Site Use and Adjacent Site Use	The site comprised a disused railway siding associated with Castleton North, East and South Junction. An area of woodland is located along the northern and southern boundary. Castleton Hawk Golf Club defines the north west boundary of the site, with residential housing associated with Fairway defining the north east of the site. An active railway is located adjacent to the south of the site. Arable fields lined by hedgerows with associated ponds extend further south of the site. The M62 is located approximately 270 m south of the site, at its closest point.
Designated Sites	The site lies within the Impact Risk Zone of Rochdale Canal, Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI), located approximately 65 m east of the site. HRA screening, to assess any potential impacts of the development on the designated site is required.
Survey Results	The site was found to comprise large areas of hardstanding, bare ground and scattered scrub with smaller areas of broadleaved woodland located along the boundary of the site. The site was found to have the following potential ecological constraints: ✿ Potential presence of great crested newts on-site, with seven waterbodies location within 250 m of the site. ✿ Potential presence of nesting birds within the scattered scrub and broadleaved woodland. ✿ Records of little ringed plover within the site boundary and potential presence of nesting. ✿ Potential presence of reptiles within the site. ✿ Potential presence of badgers within the local area. ✿ Potential presence of hedgehogs within the broadleaved woodland and scattered scrub. ✿ Invasive plant species; wall cotoneaster present on-site.



Conclusions

The following further surveys are recommended:

- ✿ Great Crested Newt eDNA surveys on all seven ponds within 250 m of the boundary.
- ✿ Reptile surveys with seven visits between March and September (inclusive).
- ✿ Breeding bird surveys and checking for presence of little ringed plover with three surveys between March and June (inclusive).
- ✿ Bat activity and static detector surveys if the woodland areas are to be removed.

The following mitigation is recommended:

- ✿ Updated badger walkover prior to the start of works.
- ✿ Precautionary Working Methods for badger.
- ✿ Common amphibians are to be removed by hand from the working area during the clearance phase.
- ✿ Lighting strategy produced and areas identified as being suitable for foraging and commuting bats maintained as dark areas.
- ✿ If any vegetation requires removal, it should be removed outside of the breeding bird season (March to September inclusive). If this is not possible, a nesting bird check should be undertaken by a suitably qualified ecologist up to 24 hrs before works commence. If a nest, or nest in construction, is located, then a stand-off distance should be maintained until the young have fledged.
- ✿ During site clearance, any scrub or associated debris piles, that require removal, should be demolished by hand to ensure no sheltering hedgehogs are impacted by the works. It is recommended that vegetation clearance takes place outside of December-March to avoid impacting hibernating hedgehogs.
- ✿ Eradication of invasive species prior to works commencing on-site.

A gain in biodiversity will likely be required on-site. If this cannot be achieved on-site, a conservation offset payment, or off-site compensation may be required.



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1. INTRODUCTION

1.1. BACKGROUND

E3P were commissioned by Kellen Homes to undertake a Preliminary Ecological Appraisal at Castleton, Rochdale, hereafter referred to as “the site”.

This report has been prepared by Huw Morgan, BSc (Hons), ACIEEM, Senior Ecologist at E3P, who has seven years professional experience as an ecological consultant. Huw has undertaken multiple Preliminary Ecological Appraisals for various projects across the UK. Huw holds a class 2 great crested newt Natural England licence, a Natural England barn owl survey class licence and has key experience with birds and plants.

1.2. PROPOSED DEVELOPMENT

Detailed proposals include the development of large residential scheme with an ecological park situated within the south west section of the site.

1.3. SITE LOCATION

The site is located south of the residential area of Castleton Moor. Castleton Hawk Golf Club is located adjacent to the north west of the site, with residential housing associated with Fairway defining the north east of the site. An active railway is located adjacent to the south of the site which extends further north, south and west of the site. The site is accessed via Heywood Road, north east of the site. The M62 is located approximately 270 m south of the site, at its closest point. Please refer to Figure 1.1 for the approximate site location.

FIGURE 1.1 APPROXIMATE SITE LOCATION



1.4. OBJECTIVES

The objectives of the Preliminary Ecological Appraisal are as follows:

- ✿ Identify the major habitats present.
- ✿ Ascertain the presence or potential presence of any legally protected species and habitats.
- ✿ Recommend any further surveys or mitigation that may be required.

The Preliminary Ecological Appraisal comprises a desk study and site walkover. This survey has been completed as a baseline assessment of the site, and as such please see the end of the report for further surveys and mitigation proposed.



2. METHODOLOGY

2.1. DESKTOP STUDY

The following sources of information and ecological records were consulted:

- ✿ MAGIC – A web-based interactive mapping system, on which geographic information regarding key environmental schemes and designations are collated, including details of statutory conservation sites accessed February 2021.
- ✿ Aerial mapping and ordinance survey maps.
- ✿ Local data records, including Greater Manchester Ecology Unit (GMEU) – The Biodiversity Information System for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan received on 15th February 2021.

A 2 km search area was utilised for the data search, with this being deemed an appropriate distance for the zone of influence of the site.

The data search included the request for details of protected and notable species of flora and fauna within 2 km of the central grid reference of the site. In addition, a request was made for any non-statutory designated sites within 2 km of the site boundary.

Please note that a lack of up-to-date records does not confirm absence of a species from the area. Lack of records may simply be a result of a lack of protected species surveys being undertaken within the local area.

2.2. VEGETATION AND HABITATS

A Preliminary Ecological Appraisal of the proposed development site was undertaken by Huw Morgan BSc (Hons), ACIEEM on 11th February 2021. The weather was overcast with no precipitation.

The walkover survey was undertaken to the standard methodology as detailed by the *JNCC Handbook for Phase 1 Habitat Survey, 2010*. The assessment follows the methodology as per “Guidelines for Preliminary Ecological Appraisal” (CIEEM, 2017).

A vegetation and habitat plan has been produced for the proposed development site and the immediate surrounding area (please refer to Appendix I). The mapping is based on the *Joint Nature Conservation Committee Phase 1 Habitat Survey Methodology* (JNCC 2010).

Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and uncommon plant communities. All plant nomenclature follows Stace (2019).

Searches were carried out for the presence of invasive species, including those listed on the revised (April 2010) Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) including but not limited to Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*).



2.3. FAUNA

A thorough search of the site for signs of protected species of fauna was undertaken during the site walkover. These searches considered the following:

- ✿ Suitability of any ponds to support notable amphibians, and the suitability of the site's terrestrial habitats to support amphibians.
- ✿ Suitability of the site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
- ✿ Signs of badgers, by way of setts, mammal paths, foraging signs or latrines to indicate usage of the site by the species.
- ✿ Search of any watercourses for signs or suitability for water vole and otter by way of burrows, resting places, holts and foraging signs.
- ✿ Suitability of the site to support roosting, foraging and commuting bats.
- ✿ Suitability of the site to support notable bird species.
- ✿ Suitability of the site to support notable invertebrates.
- ✿ Search of the site for any invasive species.

2.4. PRELIMINARY ROOST ASSESSMENT

The Preliminary Roost Assessment (PRA) was undertaken by Huw Morgan on 11th February 2021. Huw has undertaken multiple PRA's on trees and buildings across the UK.

The survey involved undertaking a systematic search of the trees, searching for signs of bats, or spaces where bats would be able to access. The methodology followed that described in *Bat Surveys for Professional Ecologists, 3rd Edition* (Collins, 2016).

The trees were categorised for their bat roosting potential as described in Table 2.1 in accordance with Collins (2016).

TABLE 2.1 BAT ROOSTING POTENTIAL CLASSIFICATION OF TREES

CATEGORY	DESCRIPTION
NEGLIGIBLE	A tree with no roosting features present or of an age/species that would not support roosting bats.
LOW	A tree with one or more potential roost site. However, the potential roost sites do not provide suitability for large numbers of bats (i.e. for maternity or hibernation) and would only be used on an occasional basis.
MODERATE	A tree with one or more potential roosting feature which could support bats but is of a suitability meaning that it would be unlikely to support a roost of high conservation status.
HIGH	A tree with several potential roosting features which would be able to support large number of bats on a regular basis and for longer periods of time. The tree or buildings would have suitability to support maternity or hibernation roosts.



The survey was undertaken utilising suitable binoculars and ladders to access all areas where safe to do so.

2.5. HABITAT SUITABILITY INDEX

All ponds within a 250m radius of the site boundary were evaluated using the *Habitat Suitability Index (HSI)* (Oldham et al., 2000).

The ponds were examined with reference to the ten HSI scoring criteria, which are as follows:

- ✿ SI1: Geographical location.
- ✿ SI2: Pond area.
- ✿ SI3: Pond drying.
- ✿ SI4: Water quality (as indicated by the diversity of aquatic plants and invertebrates).
- ✿ SI5: Shade.
- ✿ SI6: Waterfowl.
- ✿ SI7: Fish.
- ✿ SI8: Abundance of other ponds within 1 km radius.
- ✿ SI9: Quality of terrestrial habitat.
- ✿ SI10 Macrophyte cover (i.e. aquatic and emergent plants).

A score is given according to the most appropriate criteria level set within each attribute and a total score is calculated between 0 and 1. Pond suitability is assessed according to the following scale:

- ✿ < 0.50 = Poor.
- ✿ 0.50–0.59 = Below average.
- ✿ 0.60–0.69 = Average.
- ✿ 0.70–0.79 = Good.
- ✿ > 0.80 = Excellent.

2.6. SURVEY LIMITATIONS

A Preliminary Ecological Appraisal does not constitute a full botanical survey. Instead, key species are identified to give a representative description of each habitat type.



This survey was undertaken in February, which is an appropriate time of year to undertake ecological surveys. However, due to vegetation die back and lack of flowering, it is possible that some species of flora may have been missed or misidentified. It is possible that some invasive/non-native species could have been missed during the survey. Due to the habitats present on-site, this is not considered to be a major constraint.

A full survey within 30 m of the site for evidence of badger (*Meles meles*) was unable to be carried out as residential properties were located adjacent to the north west and an active railway was located to the south. This constraint has been taken into consideration during the assessment.

Access to Waterbody 3 (WB3) to WB7 to the south of the site was not possible during the survey, therefore, they couldn't be assessed for great crested newts. This has been taken into considering during the assessment.



3. SURVEY RESULTS

3.1. SITE CONTEXT

The site includes a former railway sidings comprising several disused railway lines with associated areas of railway ballast, hardstanding and bare ground. An area of woodland defines the north and south of the site. The trees within the woodland are anticipated to act as nesting and roosting opportunities for species such as birds and bats. The disused railway lines are expected to function as a commuting feature for local wildlife, as they provide connectivity to an active railway which leads north, south and west of the site. These features will allow fauna such as bats, reptiles and badger to commute to higher value habitat, including Hopwood Woodlands, Local Nature Reserve (LNR) located approximately 1.1 km south of the site.

Agricultural fields lined by hedgerows with associated ponds are located adjacent to the south of the active railway line. The hedgerows within the arable land are anticipated to act as wildlife corridors for fauna within the local area, whilst the ponds are expected to support a range of birds and common invertebrates.

The habitat adjacent to the north west of the site includes Castleton Hawk Golf Club comprising Roeacre Brook, a pond, grassland and scattered trees. The brook and scattered trees are expected to provide key foraging opportunities for local wildlife such as bats, while the ponds may support a variety of invertebrates and amphibians. Rochdale Canal, Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI) is located approximately 65 m east of the site, at its closest point. This watercourse is likely to offer a range of species with foraging and commuting opportunities, especially wildlife that specialise feeding along watercourses, such as Daubenton's bat (*Myotis daubentonii*) and water vole (*Arvicola amphibius*).

Seven waterbodies were identified within 250 m of the site, located approximately 20 m north, 20 m south, 20 m south, 30 m south, 40 m south, 50 m south and 85 m north. No waterbodies were located within the site boundary.

3.2. DESIGNATED SITES

The site is located within the Impact Risk Zone of Rochdale Canal, SAC, SSSI, located approximately 65 m east of the site boundary. The site is designated as a SAC under Article 4(4) of the Directive (92/43/EEC) as it supports Annex II species floating water-plantain (*Luronium natans*). The site is designated as an SSSI as it contains important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of floating water-plantain and a diverse assemblage of aquatic flora, notably its assemblage of pondweeds (*Potamogeton spp*).

Hopwood Woodlands, LNR, is located approximately 1.1 km south of the site, at its closest point. The reserve comprises a number of smaller woodland areas surrounding the grounds of Hopwood Hall. The woodland habitats vary, which support a range of species including common toads (*Bufo bufo*) and birds.

3.3. HABITATS

The main habitats encountered during the survey are described in the following subsections. Please refer to Appendix I for the Phase 1 Habitat Plan.



3.3.1. BUILDING AND HARDSTANDING

A single building is located within the north-east corner of the site, and is used as a signal box for the adjacent railway. It is understood that this building is to be retained and therefore no further assessment is required.

PLATE 1 SHOWING SIGNAL BOX BUILDING



Large areas of hardstanding are present across the site formerly used as access road, loading bays and storage areas for the former railway sidings.

PLATE 2 SHOWING AREA OF HARDSTANDING



3.3.2. SEMI-IMPROVED GRASSLAND

Small areas of semi-improved grassland were present within the site. The grassland areas were located in open areas in close proximity with scattered scrub and was largely associated with areas of railway ballast which has been colonised by grassland species. The species present comprised Canadian



fleabane (*Erigeron canadensis*), perennial rye-grass (*Lolium perenne*), cock's foot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus*), great mullein (*Verbascum Thapsus*), bramble (*Rubus fruticosus* agg.), dandelion (*Taraxacum officinale* agg.), rosebay willowherb (*Chamaenerion angustifolium*), soft-rush (*Juncus effusus*), hogweed (*Heracleum sphondylium*), creeping thistle (*Cirsium arvense*) and curled dock (*Rumex crispus*). A small area of wall cotoneaster (*Cotoneaster horizontalis*) was also present within the grassland.

PLATE 3 SHOWING AN AREA OF SEMI-IMPROVED GRASSLAND



3.3.3. BROADLEAVED WOODLAND

Areas of broadleaved woodland were present along the northern and southern site boundaries. The woodland along the northern boundary formed the boundary between the site and the adjacent golf course and comprised largely semi-mature to mature trees. Species present comprised alder (*Alnus glutinosa*), silver birch (*Betula pendula*), grey willow (*Salix cinerea*), goat willow (*Salix caprea*), pedunculate oak (*Quercus robur*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), dogwood (*Cornus sanguinea*), Leyland cypress (*Cupressus leylandii*) and bramble.

The woodland along the southern boundary of the site comprised young trees and appears to be self-seeded. The species present comprised almost entirely of silver birch, grey willow and crack willow (*Salix euxina*).



PLATE 4 SHOWING AN AREA OF BROADLEAVED WOODLAND



3.3.4. SCATTERED SCRUB

Large areas of scattered scrub were present across the site largely associated with the former railway tracks and areas of ballast and bare ground. The species present were dominated by silver birch and grey willow, with smaller areas of bramble, crack willow, oak, hawthorn, alder, ash (*Fraxinus excelsior*), broom (*Cytisus scoparius*), dog-rose (*Rosa canina*), butterfly-bush (*Buddleja davidii*) and firethorn (*Pyracanthus* sp.).

PLATE 5 SHOWING AN AREA OF SCATTERED SCRUB



3.3.5. BARE GROUND

Areas of bare ground are present across the site associated with the former railway lines and ballast. A large area of bare ground is present in the eastern area of the site, currently used as a storage area associated with the adjacent active railway line.



PLATE 6 SHOWING AREA OF BARE GROUND



3.3.6. WATERBODIES

No waterbodies were located within the site boundary, however, seven waterbodies were identified within 250 m of the site boundary. Two of the waterbodies were located within the golf course to the north of the site, with the remaining five waterbodies located in improved grassland fields to the south of the site.

Please see Appendix II for a detailed list of ponds and associated HSI assessments.

3.4. PROTECTED AND NOTABLE SPECIES

3.5. SPECIES DISCOUNTED FROM ASSESSMENT

White-clawed crayfish (*Austropotamobius pallipes*) and notable fish have been discounted from assessment as no suitable aquatic habitats were located on-site or within proximity to the site.

Hazel dormouse (*Muscardinus avellanarius*) mainly occur in southern counties, especially in Devon, Somerset, Sussex and Kent. There are few recorded localities north of the Midlands, though they are present in parts of the Lake District and in scattered Welsh localities (Matthews et al, 2018). The species are not generally known to be present within the area of Rochdale and as such, the species are reasonably discounted from further assessment.

3.5.1. AMPHIBIANS

Consultation with GMEU identified five records of great crested newt (*Triturus cristatus*) within the 2 km search area. All the records were located to the south-west of the site with the nearest record located approximately 930 m away, associated with ponds adjacent to Manchester Golf Club.



Consultation with MAGIC identified one great crested newt European Protected Species Licence within the 2 km search area. The licence was located approximately 1.7 km south-west of the site effective in 2017 for the damage and destruction of a great crested newt resting and breeding place. The licence appears to be associated with a pond adjacent to the M62. A Great Crested Newt Licence Return was located approximately 1.4 km south-west of the site associated with a pond west of Hopwood Woodland, LNR, confirming the presence of the species in 2014.

A total of seven waterbodies were identified within 250 m of the site. Two of the waterbodies were located within Castle Hawk Golf Course with the remaining five waterbodies located within improved grassland fields to the south of the site. During the survey, only the two waterbodies north of the site could be accessed. The two waterbodies that were accessed identified had the following suitability regarding great crested newts:

-  Waterbody 1 – Excellent
-  Waterbody 2 – Average

Please refer to Appendix II for full waterbody descriptions.

Three records of common toad (*Bufo bufo*) were identified within the 2 km search area, the closest of which is located approximately 1.5 km south of the site.

The habitats on site are considered to have excellent suitability to support amphibians due to the large areas of ballast, scattered scrub and broadleaved woodland on-site which provide suitable foraging, commuting and hibernacula habitat.

Overall, it is assessed that the site has the potential presence of great crested newts and common amphibians.

3.5.2. BATS

Numerous records of bats were located within 2 km of the site boundary during the data search. Records included common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auratus*), Daubenton's bat (*Myotis daubentonii*), noctule bat (*Nyctalus noctula*), myotis species (*Myotis sp.*) and pipistrelle species (*Pipistrellus sp.*) Records of common pipistrelle, myotis species and pipistrelle species roosts were also returned within the 2 km search area, with the nearest record being a common pipistrelle roost located approximately 430 m north of the site.

Consultation with MAGIC identified the presence of three Natural England Bat Mitigation Licences within the 2 km search area. The closest licence was located approximately 1.5 km north east of the site, effective in 2012-2013 for the destruction of a common pipistrelle non-breeding roost. A second licence was located approximately 1.6 km east of the site active between 2016-2021 for the destruction of a common pipistrelle non-breeding roost. A third licence was located approximately 1.9 km south of the site, which allowed for the destruction of a common pipistrelle breeding roost between 2011-2013.

During the site survey, an inspection of trees was undertaken as per guidance set out in Collins (2016), to assess the features for suitability for roosting bats. No trees were assessed as having bat roosting potential.

The large areas of bare ground and hardstanding are anticipated to have limited foraging value for bats. However, the scattered scrub and broadleaved woodland may attract invertebrate prey for bats, whilst acting as a commuting feature for bats across the wider landscape. The habitats within the site are generally common within the local area but could have value for foraging and commuting bats. The railway line to the south of the site is considered to be a key foraging and commuting for bats providing connectivity to the wider area.



3.5.3. BADGERS

No badger setts were located on site or within 30 m of the site boundary.

The wider landscape was assessed as having suitability for the species based on the agricultural fields and golf course bound by trees and hedgerows surrounding the site. The site provides potential sett-building opportunities within the broadleaved woodland along the boundaries of the site.

3.5.4. OTHER TERRESTRIAL MAMMALS

Three records of European hedgehog (*Erinaceus europaeus*) were located within 2 km of the site boundary, the closest of which is located approximately 900 m north-west of the site. The site was considered to have suitability for hedgehog within the broadleaved woodland scattered scrub which will provide suitable cover and foraging habitats for the species. Hedgehog are potentially present within the site.

Nine records of brown hare (*Lepus europaeus*) were recorded within the 2 km search area, the closest of which was located approximately 830 m south west of the site boundary. The site is not considered to be suitable for brown hare due to the lack of open grassland habitat.

3.5.5. OTTER AND WATER VOLE

Consultation with GMEU identified one record of otter (*Lutra lutra*) within the 2 km search area, located approximately 430 m north-east of the site, associated with Rochdale Canal.

One record of water vole was returned within 2 km of the site, located approximately 1.6 km south-east of the site.

There are no watercourses within or adjacent to the site, and the site isn't connected to any watercourses within the wider area, therefore, otter and water vole can be reasonable discounted from further assessment.

3.5.6. BREEDING BIRDS

Consultation with GMEU identified numerous records for notable birds within the search area and the wider area, including barn owl (*Tyto alba*), hobby (*Falco subbuteo*), kingfisher (*Alcedo atthis*), little ringed plover (*Charadrius dubius*), peregrine (*Falco peregrinus*), bullfinch (*Pyrrhula pyrrhula*), cuckoo (*Cuculus canorus*), curlew (*Numenius arquata*), dunnoek (*Prunella modularis*), grey partridge (*Perdix perdix*), herring gull (*Larus argentatus*), house sparrow (*Passer domesticus*), lapwing (*Vanellus vanellus*), lesser redpoll (*Carduelis cabaret*), linnet (*Carduelis cannabina*), reed bunting (*Emberiza schoeniclus*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), starling (*Sturnus vulgaris*) and willow tit (*Poecile montanus*).

During the site walkover, the following species were identified within the site and were mainly concentrated within the broadleaved woodland and scattered scrub: carrion crow (*Corvus corone*), collared dove (*Streptopelia decaocto*), woodpigeon (*Columba palumbus*), house sparrow (*Passer domesticus*), blackbird (*Turdus merula*), magpie (*Pica pica*), blue tit (*Cyanistes caeruleus*), great tit (*Parus major*), robin (*Erithacus rubecula*), jackdaw (*Corvus monedula*), goldfinch (*Carduelis carduelis*), chaffinch (*Fringilla coelebs*), bullfinch, buzzard (*Buteo buteo*) and wren (*Troglodytes troglodytes*).

The habitats within the site are generally common within the local area and are assessed as providing value for passerine bird species.



The site is assessed as having limited value for ground-nesting birds due to the site largely being made up of hardstanding, bare ground and scattered scrub which isn't favourable habitat for the majority of ground nesting bird species. However, records of little ringed plover a Schedule 1 bird species have been identified within the site boundary. Little ringed plover nest in open habitats including bare ground and the open areas of ballast provide nesting habitat for this species.

3.5.7. REPTILES

Consultation with GMEU identified no records of reptiles within the 2 km search area.

The site was found to provide optimal habitat for reptiles due to the diversity of habitats present and suitable hibernacula and resting/basking sites within rubble piles, disused railway lines and ballast present across the site. The railway to the south of the site provides optimal connectivity to the wider area and is likely to be a key corridor for this species group.

PLATE 7 SUITABLE HIBERNACULA AND BASKING HABITAT WITHIN THE SITE



3.5.8. INVERTEBRATES

The data search identified single records of a S41 moth species and white-letter hairstreak (*Satyrrium w-album*) within the 2 km search area.

Overall, the presence of notable invertebrates within the site is reasonably discounted due to the lack of habitat diversity that could support notable invertebrates.

3.6. INVASIVE PLANT SPECIES

No records of invasive plant species were returned by GMEU within the 2 km search area.

Stands of wall cotoneaster were identified within the centre of the site, associated with small areas of semi-improved grassland.



4. ECOLOGICAL CONSTRAINTS AND MITIGATION

4.1. DEVELOPMENT PROPOSALS

Detailed proposals include the development of large residential scheme with an ecological park situated within the south west section of the site.

4.2. DESIGNATED SITES

The site is located within the Impact Risk Zone of Rochdale Canal, SAC, SSSI, located approximately 65 m east of the site. The site is designated as a SAC as it supports Annex II species floating water-plantain. The site is designated a SSSI as it contains important habitats for submerged aquatic plants and emergent vegetation. As per the criteria listed on MAGIC (accessed February 2021), the proposed site will require further consultation with Natural England to proceed. A Habitat Regulations Assessment (HRA) screening assessment will be required to assess whether the proposed development will have any 'likely significant effects' on the designated site.

As the site is within proximity of Rochdale Canal, SAC, SSSI it is also recommended that information is provided within sales packs, informing residents of the importance of the European sites, the responsible user code and the location of Suitable Alternative Natural Green Spaces (SANGS). This measure is anticipated to mitigate for potential increased visitor pressure on the site.

Hopwood Woodland, LNR, is located approximately 1.1 km south of the site, comprising pockets of woodland which support a variety of wildlife. No impact on the Local Nature Reserve is anticipated due to the distance between the site and as the M62 lies between the sites, anticipated to act as a dispersal barrier.

4.3. HABITATS

The site comprises habitats that were found to be widespread within the local area; however, they did contain value for wildlife such as bats, birds, reptiles, amphibians and terrestrial mammals. The bare ground and hardstanding are of lowest value for wildlife, with the broadleaved woodland and scattered scrub comprising the areas of highest value.

4.3.1. BROADLEAVED WOODLAND

It is recommended that, where possible, the broadleaved woodland areas listed as a BAP priority habitat are retained and protected through development. It is anticipated that some areas may require removal, and where this is needed, the trees should be replaced as soon as practicable. Any replacement planting should endeavour to be on the same aspect as that to be lost.

It is recommended that the landscape planting comprises native species and species known to be of value for the attraction of wildlife. This will include fruiting and flowering species. Species deemed suitable for this development could include berry-bearing native species such as:

- ✿ Hawthorn;
- ✿ Rowan (*Sorbus aucuparia*);
- ✿ Holly;



- ✿ Whitebeam (*Sorbus aria*);
- ✿ Spindle (*Euonymus europaea*);
- ✿ Dog rose;
- ✿ Guelder rose (*Viburnum opulus*); and
- ✿ Elder (*Sambucus nigra*).

All planting should be from a trusted pest-free source and, where possible, be of local provenance.

Any trees or shrubs within the site or boundary, to be retained, are to be appropriately protected during the construction phase. Temporary protective demarcation fencing will be used to protect the trees and shrubs. The fencing must extend outside the canopy of the retained trees and must remain in position until all plots have been developed to ensure protection is provided throughout the construction phase.

The fencing will be in accordance with BS 5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations*.

4.4. PROTECTED AND NOTABLE SPECIES

4.4.1. AMPHIBIANS

The site may support small numbers of common amphibians within the scattered scrub, broadleaved woodland and areas of ballast on-site. It is recommended that during the clearance phase of works, any common amphibians encountered be moved by hand, away from construction activities.

4.4.2. BREEDING BIRDS

The site was assessed as having value for passerine species within the broadleaved woodland and scattered scrub. The broadleaved woodland is of highest value for the species group and it is recommended that these areas are retained and enhanced where possible.

It is recommended that should any vegetation require removal within the breeding bird season (March–September inclusive), that a suitably qualified ecologist inspect the area no more than 24 hours prior to the removal. Should any nests, or nests in construction be located, a suitable stand-off distance should be maintained until the young have fledged. The ecologist will advise on suitable stand off and provide a toolbox talk to all site contractors regarding their working limits and legal implications.

Post-development, bird boxes should be installed throughout the development to enhance the site's value for the species group.

Records of little ringed plover, a Schedule 1 species have been identified within the site boundary. Little ringed plover favour brownfield sites and nest on areas of bare ground comprising loose substrate such as rubble or gravel. If the vegetation on-site is cleared well in advance of construction works starting, the large areas of exposed bare ground would make the site much more suitable for nesting little ringed plover.

It is recommended that prior to any works commencing on-site, a walkover is undertaken to check for nesting little ringed plover within the site. Should a nest be found, a buffer of at least 50 m (depending on the type of works are to be undertaken) will need to be implemented and maintained until the young have fledged.



4.4.3. BATS

The site was found to have limited value for foraging and commuting bats due to the large areas of hardstanding and bare ground that make up most of the site. However, the scattered scrub and broadleaved woodland provide foraging and commuting habitat within the site. The railway line to the south of the site is likely to act as an important commuting and foraging route for bats in the local area.

Therefore, it is recommended that the proposed lighting plan considers the habitats of highest importance and maintains the broadleaved woodland, scattered scrub and adjacent railway as dark areas. It is recommended that any security lighting during construction is appropriately placed to avoid being directed at retained habitats.

It is recommended that lighting is to be pre-fixed on the proposed buildings, located near retained habitats or proposed habitats, to minimise the impact of lighting. Lighting should follow the protocols outlined in the Institute for Lighting Engineers document "Guidance for the Reduction of Obtrusive Lighting" (2005) and BCT's "Bats and Artificial Lighting in the UK" (2018) to minimise disturbance and sky-glow off site.

It is recommended that any planting within the site be of native fruiting/flowering species in order to enhance the site for foraging bats post-completion. Bat boxes could be installed throughout the site post-construction to enhance the site for the species.

4.4.4. BADGERS

No badger setts were located during the survey, though the habitats were identified as being suitable for the species within the broadleaved woodland. Badgers are highly mobile and can create new setts in a short period of time. It is recommended that an updated site walkover prior to the development is carried out to identify any new badger setts.

If a badger sett is located, a stand-off distance may be required as well as precautionary working methods. If the sett requires closure, a Natural England Badger Licence would be required. Please note that badger licences can only be obtained between July and November each year to avoid potential impact on pregnant females.

The following precautionary working methods will be adhered to during construction phase to ensure that no badgers within the local area are impacted by the proposed development:

- ✿ All site operatives will be inducted to the presence of the species and their working limits and legal responsibilities.
- ✿ All site operatives will be inducted as to identifying potential badger setts, and should be vigilant if they suspect they locate a new sett during works and inform the project ecologist immediately.
- ✿ All excavations will be battened at a 45 degree angle to allow escape should animals become trapped.
- ✿ All site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November each year when extra care is needed to avoid potential impacts on pregnant females.

It is not anticipated that the development will have a significant negative impact on badgers within the local area.



4.4.5. HEDGEHOGS

The areas of broadleaved woodland scattered scrub on-site have the potential to support hedgehog and this species is anticipated to be present within the local area.

During site clearance, the scrub and debris should be demolished by hand to ensure no sheltering hedgehogs are impacted by the works. If hedgehogs are located, they should be carefully moved by hand to an area outside of construction workings.

Post-development, a series of hedgehog houses could be installed throughout the site to enhance the site's value for the species group. In addition, gaps in residential fences could be provided to allow the species to commute through the site.

4.5. INVASIVE PLANT SPECIES

Wall cotoneaster was identified during the site walkover. As such, it is recommended, prior to the development, that the species should be eradicated following the most current guidance set out by the Environment Agency by a qualified contractor.



5. FURTHER SURVEYS

5.1. AMPHIBIANS

Seven waterbodies were identified within 250 m of the site and the site was assessed as having suitable terrestrial habitat for this species for foraging, commuting and hibernating.

Therefore, Great Crested Newt eDNA surveys will be required between mid-April to June (inclusive) to determine whether the species is present or absent in the waterbodies. If the eDNA surveys return positive results for great crested newts, further surveys will be required to determine the population size present in the waterbodies as detailed in English Nature (2001). Should population surveys be required, six surveys would need to be undertaken between mid-April and the end of June, with at least three of the surveys taking place between mid-April and mid-May. A European Protected Species Licence (EPSL) will then be required for development to proceed and would require up to date surveys from two years prior to the application submission. An EPSL can only be applied for when planning permission has been obtained and all wildlife conditions discharged.

5.2. REPTILES

The site was assessed as having suitability for common species of reptile due to the habitat structure on-site providing optimal hibernacula and resting/basking sites and the connectivity of suitable habitat from the site to the wider area. It is therefore recommended that further reptile surveys be undertaken to confirm absence or presence of the species and if present, it will provide data on the species assemblage and numbers which will inform the relevant mitigation procedures.

Reptile surveys can be undertaken between March – September (inclusive) during suitable weather conditions and should follow guidance as set out in Froglife (2015). A series of Artificial Cover Objects (ACOs) will be distributed throughout the site, and then left to “bed in” for a minimum period of seven days. Following this, a minimum of seven survey visits will be undertaken checking the ACOs for presence of the species. The results would inform any mitigation, or species enhancements required.

5.3. BREEDING BIRDS

The site was assessed as having value for passerine bird species within the scattered scrub and broadleaved woodland on-site in which large areas are anticipated to be removed. It is therefore recommended that breeding bird surveys are undertaken to determine the assemblage of bird species using the site to help inform the relevant mitigation procedures. It is also recommended that due to records of little ringed plover within the site boundary, the surveys are undertaken to determine the status of this species within the site and whether further mitigation is required.

Breeding bird surveys can be undertaken between March and June (inclusive) during suitable weather conditions and should follow guidance set out by British Trust for Ornithology (BTO). Surveyors will walk a fixed transect of the site, recording and mapping signs of all bird species within and adjacent to the site. A maximum of three visits will be undertaken.



5.4. BATS

The broadleaved woodland along the northern and southern boundaries of the site were assessed as providing Low suitability for foraging and commuting bats (Collins, 2016). It is anticipated that these areas are to be retained during the works, however, in the event that they are to be removed, three bat activity surveys should be undertaken, with one survey taking place in spring (April/May), one in summer (June/July/August) and one in autumn (September/October).

Static bat detector surveys should also be undertaken during the same time periods as the bat activity surveys. The static detectors would be put out for five consecutive night per time period to collect data to determine the activity of bats using the site.

5.5. TABLE OF FURTHER SURVEYS

Please refer to Table 5.1 for a summary of further surveys required to inform a planning application.

TABLE 5.1 FURTHER SURVEYS RECOMMENDED

SURVEY TYPE	TIMESCALES
Great Crested Newt eDNA Surveys	One survey between mid-April and June (inclusive).
Reptile Surveys	March to September (inclusive).
Breeding Bird Surveys	March to June (inclusive)
Bats Activity and Static Detector Surveys (if the woodlands are to be removed)	Three surveys with one survey taking place in spring (April/May), one in summer (June/July/August) and one in autumn (September/October).



6. OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

As detailed development proposals were unknown at the time of writing, the following suggestions regarding habitat creation are made:

- ✿ Creation of wildflower meadows, intersected by mown amenity paths or boarded pathways.
- ✿ Creation of hibernacula (following guidance set out within Froglife, 2001) for common amphibians.
- ✿ Hedgehog houses may be installed to enhance the site for hedgehogs which may be present locally.
- ✿ Installation of hedgehog highways to allow the species to commute through the site.
- ✿ Installation of a series of bat boxes on-site post development.
- ✿ Installation of a series of bird boxes, such as swift boxes, on-site post development.
- ✿ Creation of waterbodies and allowing any SUDS ponds to be colonised by wildlife.
- ✿ Planting of broadleaved woodland copses if space allows for this habitat type.
- ✿ Allowing some scrub habitat to develop; however, this is to be carefully managed to control coverage.
- ✿ Planting of species-rich native hedgerows or tree lines to create a distinctive linear feature across the site.
- ✿ Landscape planting comprising native species and species known to be of value for the attraction of wildlife. This will include fruiting and flowering species.

6.1. DESIGN ADVICE FOR BIODIVERSITY NET GAIN

The scheme should strive to achieve biodiversity net gain, as per “Biodiversity Net Gain; Good Practice Principles for Development” CIEEM, CIRIA, IEMA (2016). Full details of development proposals have been confirmed and therefore a calculation of net gain can be completed based on the detailed landscape plans. It is likely that a 10% gain in habitats will be a mandatory requirement in the near future. To aid in the achievement of 10% net gain, it is recommended that the trees and scrub on-site are retained where possible.



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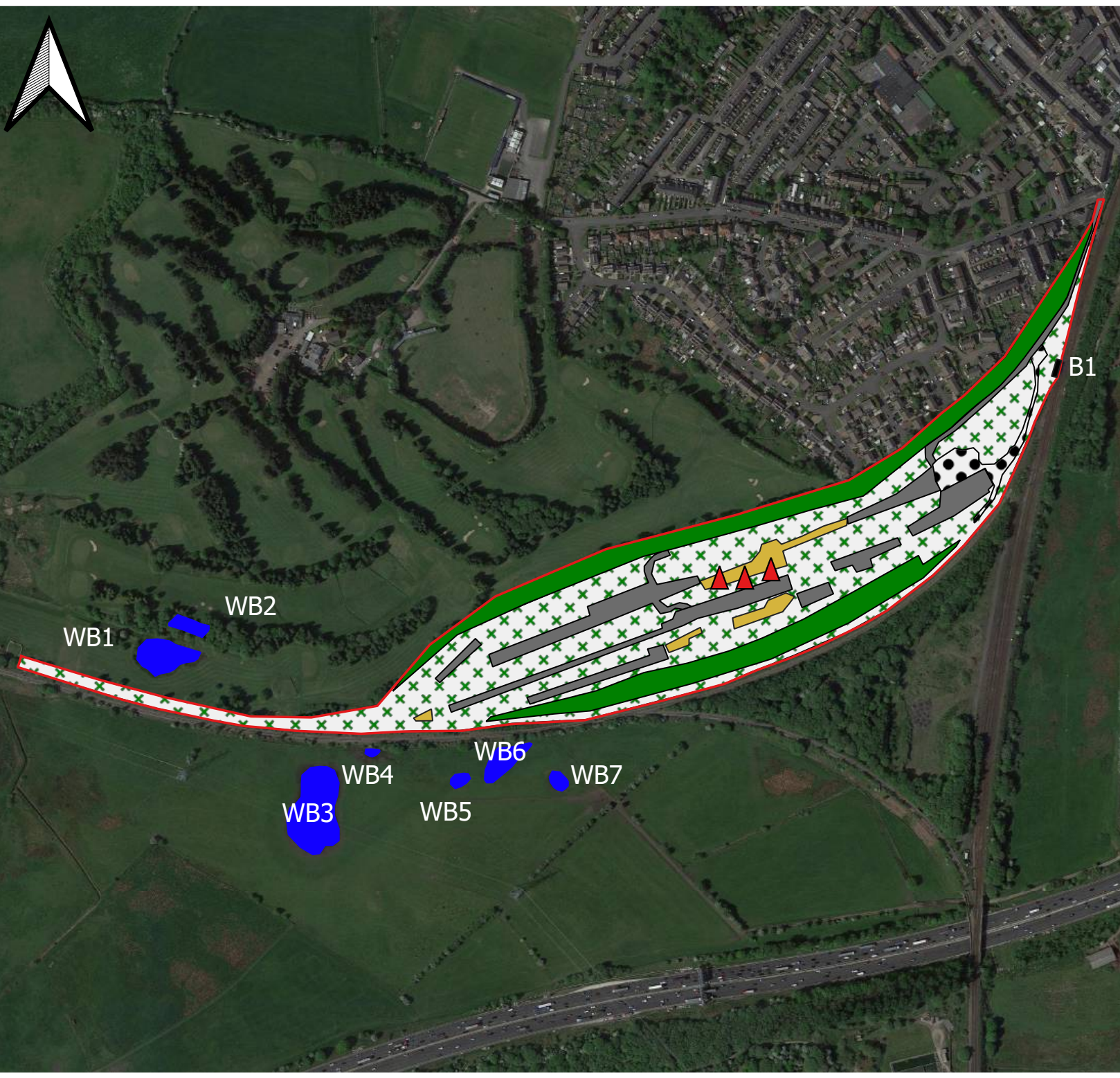
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END OF REPORT



APPENDIX I

PHASE I HABITAT PLAN



- Site Boundary
- Broadleaved Woodland
- Semi-Improved Grassland
- Scattered Scrub
- Bare Ground
- Hardstanding
- Building
- Waterbody

Notes

▲ Wall Cotoneaster

Issue 1	Revision 1	Date 18/02/2021	Drawn LT	Authorised HM
Client: Kellen Homes			Job No. RN-464	Date 18/02/2021
			Drawing No. 1	Scale 1:9800
Job title: Castleton, Rochdale			Drawing title: Phase 1 Habitat Plan	



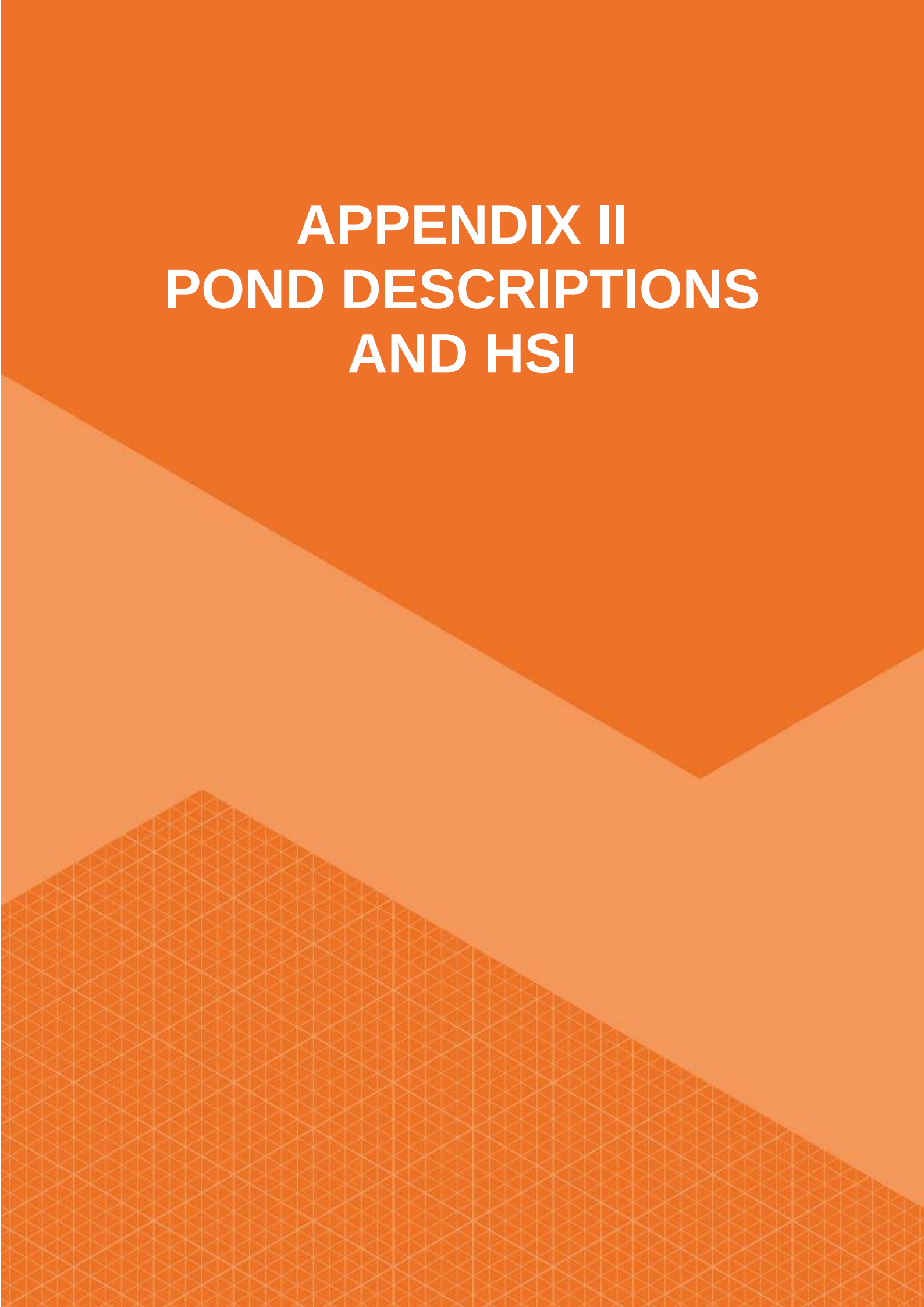
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APPENDIX II

POND DESCRIPTIONS

AND HSI

The background of the page is composed of several geometric shapes. The top half is a solid orange trapezoid. Below it is a light orange trapezoid. The bottom left corner features a light orange triangle with a fine white grid pattern. The right side of the page is a solid light orange shape.

DISTANCE FROM SITE	DESCRIPTION	HSI CALCULATION											PHOTOGRAPH
		SI1	SI2	SI3	SI4	SI5	SI6	SI7	SI8	SI9	SI10	S	
Waterbody 1													
Approximately 20 m north of the site	The waterbody was located within the golf course to the north of the site. The waterbody was largely surrounded by amenity grassland with a small area of broadleaved woodland along the northern side. The margins of the pond were made up of bulrush (<i>Typha latifolia</i>), common reed (<i>Phragmites australis</i>) and soft-rush. HSI score = EXCELLENT	1	0.85	1	1	1	0.67	1	1	0.67	0.7	0.88	
Waterbody 2													
Approximately 85 m north of the site	Small waterbody located adjacent to waterbody 1, within a flooded depression. The waterbody is located within a small area of broadleaved woodland with the banks being completely made up of scrub. HSI score = AVERAGE	1	0.8	0.5	0.67	0.4	1	1	1	0.67	0.3	0.68	

NOTES:

HSI calculation components are detailed below:

- SI1 Location
- SI2 Pond area
- SI3 Pond drying
- SI4 Water quality



SI5	Shade
SI6	Fowl
SI7	Fish
SI8	Pond
SI9	Terrestrial habitat
SI10	Macrophytes
S	Score





Breeding Bird Survey Report
Castleton Sidings, Rochdale

Reference:80-464-R6-1
Date: June 2021



BREEDING BIRD SURVEY REPORT

Castleton Sidings
Rochdale

Prepared for:
Kellen Homes

Report Ref: 80-464-R6-1
Date Issued: 22/06/2021

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QUALITY ASSURANCE

PROJECT NUMBER	80-464		
VERSION	Version 1		
REMARKS	Final		
DATE	June 2021		
PREPARED BY	H. Morgan		
QUALIFICATIONS	BSc (Hons) ACIEEM, Senior Ecologist		
SIGNATURE			
CHECKED BY	C. Barlow		
QUALIFICATIONS	BSc (Hons), MSc, MEnvSc, CEnv, MCIEEM, Principal Ecologist		
SIGNATURE			
AUTHORISED BY	A. Edgar		
QUALIFICATIONS	BSc, MSc, PIEMA, MEnvSc, CEnv		
SIGNATURE			



Certificate Number 11890



EXECUTIVE SUMMARY

Site Address	Land south of Fairway, Castleton, Rochdale, OL11 3BZ
Coordinates	E 387909, N 410131
Site Area	Approximately 12 ha
Current Site Use and Adjacent Site Use	The site comprised a disused railway siding associated with Castleton North, East and South Junction. An area of woodland is located along the northern and southern boundary. Castleton Hawk Golf Club defines the north west boundary of the site, with residential housing associated with Fairway defining the north east of the site. An active railway line is located adjacent to the south of the site. Arable fields lined by hedgerows with associated ponds extend further south of the site. The M62 is located approximately 270 m south of the site, at its closest point.
Survey Results	A total of 36 bird species were recorded on-site including one Schedule 1 species (little ringed plover) and 13 BoCC. Four territories of BoCC species were recorded on-site (bullfinch, dunnock, song thrush and willow warbler).
Mitigation	Based on the current site layout, it is not anticipated that the habitats supporting bird territories will be lost to development. However, should they require removal, mitigation, and compensation measures in the form of replacement habitat creation and installation of bird boxes should be undertaken along with enhancements to retained habitat to increase their value for bird species on-site.



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1. INTRODUCTION

1.1. BACKGROUND

E3P was commissioned by Kellen Homes to undertake Breeding Bird Surveys at Castleton, Rochdale, hereafter referred to as “the site”.

This report has been prepared by Huw Morgan, BSc (Hons), ACIEEM, Senior Ecologist at E3P, who has seven years of professional experience as an ecological consultant and over 15 years of experience working with birds. Huw has undertaken multiple bird surveys across the UK in a variety of habitats. Huw holds a Natural England barn owl survey class licence and a class 2 great crested newt Natural England licence.

A Preliminary Ecological Appraisal was undertaken in February 2021 (Report Reference: 80-464-R2-1) identified that the site had the potential to support an assemblage of notable bird species, and further surveys were required to establish the potential impacts of the proposed development.

1.2. PROPOSED DEVELOPMENT

Detailed proposals include the development of a large residential scheme with an ecological park situated within the south west section of the site.

1.3. SITE LOCATION

The site is located south of the residential area of Castleton Moor. Castleton Hawk Golf Club is located adjacent to the north west of the site, with residential housing associated with Fairway defining the north east of the site. An active railway is located adjacent to the south of the site which extends further north, south and west of the site. The site is accessed via Heywood Road, north east of the site. The M62 is located approximately 270 m south of the site, at its closest point. Please refer to Figure 1.1 for the approximate site location.

FIGURE 1.1 APPROXIMATE SITE LOCATION



1.4. OBJECTIVES

The objectives of the Breeding Bird Survey are as follows:

- ✿ Characterise the breeding bird communities within the site.
- ✿ Determine the species assemblage, habitat use, distribution and breeding status of birds within the site.
- ✿ Provide an evaluation of the breeding bird species and communities.
- ✿ To inform the mitigation strategy (if required).



2. METHODOLOGY

2.1. DESKTOP STUDY

The following sources of information and ecological records were consulted:

- ✿ MAGIC – A web-based interactive mapping system, on which geographic information regarding key environmental schemes and designations are collated, including details of statutory conservation sites, consulted in June 2021.
- ✿ Aerial mapping and ordinance survey maps.
- ✿ Local data records, including Greater Manchester Ecology Unit (GMEU) – The Biodiversity Information System for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan received on 15th February 2021.

2.2. FIELD SURVEY

A total of three breeding bird surveys were undertaken between April and June 2021. The survey method was based on a combination of the Common Bird Census (CBC) method (Marchant, 1983) and the Breeding Bird Survey (BBS) method (Gilbert et al, 1998) devised jointly by the British Trust for Ornithology (BTO), the Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservancy Council (JNCC). The survey methods and number of surveys were considered suitable for the habitats located on-site and the bird species considered to be potentially present within these habitats.

Surveys took place during the optimal time of day for bird activity, beginning within an hour of sunrise and finishing by late morning. Each survey visit was planned to avoid adverse weather conditions such as strong wind and heavy rain, as this can reduce bird activity and detectability. Please see Table 2.1 for a summary of the survey dates and weather conditions.

TABLE 2.1 SURVEY DETAILS

SURVEY	DATE	SUNRISE	SURVEY TIMINGS	WEATHER CONDITIONS	SURVEYOR
1	19/04/2021	06:04	06:24-09:40	4°C, clear skies, light winds, no precipitation	Huw Morgan
2	04/05/2021	05:35	06:02-09:00	8°C, light rain, moderate wind	Huw Morgan
3	03/06/2021	04:56	05:15-08:30	9°C, overcast, moderate winds, no precipitation	Huw Morgan

All surveys were undertaken by Huw Morgan, a competent ornithologist with over 15 years of experience working with birds. A pre-determined transect route was followed at a slow walking pace on each survey with the starting point and route direction varied throughout each visit to reduce survey bias.

All birds which were heard or seen, with the aid of binoculars, were recorded and registered on a plan using standard BTO codes. Birds heard and seen outside the site boundary were also recorded.



On each survey visit the following details were recorded:

- ✿ The location of all birds, including the species and number of birds, and, where applicable, the age and sex.
- ✿ Bird behaviour, e.g. singing, feeding, calling, alarm calling etc and paying particular attention to evidence of breeding.

Bird registrations on field plans from the three survey visits were analysed to determine which species were breeding at the site. Species were classified as either 'possible', 'probable' or 'confirmed' breeding, or non-breeding birds using the site for other activities such as foraging as per the guidelines set out by Bibby *et al* (2000). Please see Table 2.2 for the full breeding criteria definitions.

TABLE 2.2 DEFINITION OF BREEDING CRITERIA

CATEGORY	CRITERIA
CONFIRMED BREEDING	✿ Adults observed at nest. ✿ Nest with eggs. ✿ Unfledged young. ✿ Carrying nest material, food or faecal sac. ✿ Present within one location (within normal territory range) on at least two occasions and displaying behaviour indicative of breeding on at least two occasions.
PROBABLE BREEDING	✿ Present in suitable habitat in the same location (within normal territory range) on two occasions. ✿ Displaying breeding behaviour on one occasion only.
POSSIBLE BREEDING	✿ Present in suitable habitat on one occasion only.
NON-BREEDING	✿ Present in non-suitable habitat for breeding. ✿ Immature birds.

2.3. SURVEY LIMITATIONS

The surveys were undertaken at the optimum time of year, during optimum weather conditions. No limitations were encountered during the surveys.



3. SURVEY RESULTS

3.1. DESKTOP STUDIES

Consultation with GMEU identified numerous records for notable birds within the search area and the wider area, including barn owl (*Tyto alba*), hobby (*Falco subbuteo*), kingfisher (*Alcedo atthis*), little ringed plover (*Charadrius dubius*), peregrine (*Falco peregrinus*), bullfinch (*Pyrrhula pyrrhula*), cuckoo (*Cuculus canorus*), curlew (*Numenius arquata*), dunnoek (*Prunella modularis*), grey partridge (*Perdix perdix*), herring gull (*Larus argentatus*), house sparrow (*Passer domesticus*), lapwing (*Vanellus vanellus*), lesser redpoll (*Carduelis cabaret*), linnet (*Carduelis cannabina*), reed bunting (*Emberiza schoeniclus*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), starling (*Sturnus vulgaris*) and willow tit (*Poecile montanus*).

During the site walkover undertaken during the Preliminary Ecological Appraisal in February 2021, the following species were identified within the site and were mainly concentrated within the broadleaved woodland and scattered scrub: carrion crow (*Corvus corone*), collared dove (*Streptopelia decaocto*), woodpigeon (*Columba palumbus*), house sparrow (*Passer domesticus*), blackbird (*Turdus merula*), magpie (*Pica pica*), blue tit (*Cyanistes caeruleus*), great tit (*Parus major*), robin (*Erithacus rubecula*), jackdaw (*Corvus monedula*), goldfinch (*Carduelis carduelis*), chaffinch (*Fringilla coelebs*), bullfinch, buzzard (*Buteo buteo*) and wren (*Troglodytes troglodytes*).

3.2. SURVEY RESULTS

A total of 36 bird species were recorded on-site including one Schedule 1 species and 13 Birds of Conservation Concern (BoCC) with four red listed species and nine amber listed species. Of these notable species, four were considered to be breeding (confirmed, probable or possible) within the site. The territory locations for notable species are shown in Appendix I and all the notable and non-notable species are provided in Appendix II.

The status and distribution of the 13 notable bird species recorded is evaluated below.

BLACK-HEADED GULL (UK AMBER LISTED SPECIES)

Black-headed gulls were recorded during each survey with birds noted flying over the site or feeding in the fields to the south of the site. A peak count of 20 birds was recorded during Visit 2 with birds feeding in the fields and within a waterbody to the south of the site. No suitable breeding habitat for the species is present on-site. **Non-breeding.**

BULLFINCH (UK AMBER LISTED SPECIES)

Bullfinch were recorded during each survey with one confirmed territory being located along the northern site boundary within suitable nesting habitat. **Confirmed breeding.**

DUNNOCK (UK AMBER LISTED SPECIES)

Dunnocks were recorded during each survey, with two probable territories being located along the southern site boundary and in the centre of the site. Suitable nesting habitat is present across the site. **Probable breeding.**

LAPWING (UK RED LISTED SPECIES)

Two lapwings were recorded during Visit 3 feeding in the fields south of the site. No lapwings were recorded within the site boundary and no suitable feeding or nesting habitat is present within the site. **Non-breeding.**



LESSER BLACK-BACKED GULL (UK AMBER LISTED SPECIES)

Lesser black-backed gulls were recorded during each visit, with birds recorded flying over the site and feeding in the fields to the south of the site. A peak count of seven birds during Visit 3 was recorded, with birds feeding in the fields to the south. No suitable nesting habitat is present within the site. **Non-breeding.**

LITTLE RINGED PLOVER (SCHEDULE 1 SPECIES)

Two little ringed plovers were recorded during Visit 1, feeding in a pool to the south of the site. The birds were considered to be vagrants, stopping to feed en route to their breeding grounds. No birds were recorded within the site boundary during any visits. **Non-breeding.**

MALLARD (UK AMBER LISTED SPECIES)

A single mallard was recorded in a pool to the south of the site during Visit 3. No suitable nesting habitat is present within the site for the species. **Non-breeding.**

OYSTERCATCHER (UK AMBER LISTED SPECIES)

Two oystercatchers were recorded feeding in a pool to the south of the site during Visit 2. No suitable feeding or nesting habitat is present within the site. **Non-breeding.**

REED BUNTING (UK AMBER LISTED SPECIES)

A single reed bunting was recorded along the north-western boundary of the site during Visit 1. No suitable breeding habitat is present within the site. **Non-breeding.**

RINGED PLOVER (UK RED LISTED SPECIES)

A ringed plover was present in a pool to the south of the site during Visit 2. The bird was likely a vagrant, stopping to feed at the pool on route to its breeding grounds. No suitable breeding habitat is present within the site. **Non-breeding.**

SONG THRUSH (UK RED LISTED SPECIES)

Song thrushes were recorded during Visit 1 and Visit 3. Two birds were recorded flying across the site during Visit 1 and a singing bird was recorded along the southern site boundary during Visit 3. Suitable nesting habitat is present on-site. **Possible breeding.**

STARLING (UK RED LISTED SPECIES)

Starlings were recorded during each survey with recorded flying over the site on each visit. No territories were identified on-site and suitable nesting habitat is limited. It is likely starlings are nesting within or close to the residential properties to the north of the site. **Non-breeding.**

STOCK DOVE (UK AMBER LISTED SPECIES)

A single stock dove was recorded along the northern site boundary during Visit 2. No suitable nesting habitat is present on-site for the species. **Non-breeding.**

WILLOW WARBLER (UK AMBER LISTED SPECIES)

Large numbers of willow warbler were recorded across the site during each survey visit mostly associated with the areas of broadleaved woodland along the northern and southern site boundaries. Eleven confirmed territories and a single probable territory were recorded on-site. **Confirmed breeding.**

Please see Table 3.1 for a summary of the notable bird species territories on-site.



TABLE 3.1 NOTABLE BIRD SPECIES TERRITORIES SUMMARY

SPECIES	NUMBER OF TERRITORIES	BREEDING STATUS
BULLFINCH	1	Confirmed
DUNNOCK	2	Probable
SONG THRUSH	1	Possible
WILLOW WARBLER	12	Confirmed



4. CONCLUSION AND RECOMMENDATIONS

An assemblage of bird species typically found within lowland habitats including a number of UK Red and Amber listed species was found across the site. The bird territories recorded were mainly associated with the woodland along the northern and southern site boundaries. In total, 36 species were recorded on-site, including one Schedule 1 species (little ringed plover) and 13 Birds of Conservation Concern. Of these notable species, confirmed bullfinch and willow warbler territories, probable dunnock territories and possible song thrush territories were recorded on-site.

Given the site comprised an assemblage of common bird species, low numbers of notable bird territories and no Schedule 1 birds recorded nesting on-site, it is considered that the breeding bird assemblage is of **Local Importance**.

It is not anticipated that the habitats supporting bird territories will be lost to development, notably the areas of broadleaved woodland along the northern and southern site boundaries. However, should they require removal, it is proposed that landscape planting should be introduced to mitigate the loss of these habitats that are removed to facilitate the development.

The landscape planting should also comprise native tree species known to be of value for the attraction of birds including fruiting and flowering species. Such species include hawthorn (*Crataegus monogyna*), rowan (*Sorbus aucuparia*), holly (*Ilex aquifolium*), whitebeam (*Sorbus aria*), spindle (*Euonymus europaea*), dog-rose (*Rosa canina*), guelder rose (*Viburnum opulus*) and elder (*Sambucus nigra*).

In addition, it is recommended that bird boxes are installed across the site with standard multispecies boxes and open fronted boxes installed within the retained woodland and treelines across the site. Bird boxes specifically designed for house sparrows, starling, swallows, swifts and house martins could also be installed on the development itself to increase the value of the site for these species.



5. REFERENCES

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END OF REPORT



APPENDIX I BREEDING BIRD TERRITORY MAP

Key:

BF - Bullfinch
D. - Dunnock
ST - Song Thrush
WW - Willow Warbler

Notes

Issue 1	Revision 1	Date 21/06/2021	Drawn HM	Authorised CB
Client: Kellen Homes			Job No. 80-464	Date 21/06/2021
			Drawing No. 001	Scale 1:9500
Job title: Castleton Sidings			Drawing title: Breeding Bird Territory Map	



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APPENDIX II

BREEDING BIRD SURVEY

RESULTS

BTO CODE	SPECIES	LATIN NAME	CONSERVATION STATUS	NUMBER OF TERRITORIES	HIGHEST BREEDING STATUS
B.	Blackbird	<i>Turdus merula</i>	N/A	6	Confirmed
BC	Blackcap	<i>Sylvia atricapilla</i>	N/A	1	Possible
BH	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Amber List BoCC	0	N/A
BT	Blue Tit	<i>Cyanistes caeruleus</i>	N/A	3	Confirmed
BF	Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC	1	Confirmed
CG	Canada Goose	<i>Branta canadensis</i>	N/A	0	N/A
C.	Carrion Crow	<i>Corvus corone</i>	N/A	0	N/A
CH	Chaffinch	<i>Fringilla coelebs</i>	N/A	7	Confirmed
CC	Chiffchaff	<i>Phylloscopus collybita</i>	N/A	1	Possible
CD	Collared Dove	<i>Streptopelia decaocto</i>	N/A	1	Confirmed
D.	Dunnock	<i>Prunella modularis</i>	Amber List BoCC	2	Probable
GO	Goldfinch	<i>Carduelis carduelis</i>	N/A	3	Confirmed
GT	Great Tit	<i>Parus major</i>	N/A	4	Confirmed
H	Grey Heron	<i>Ardea cinerea</i>	N/A	0	N/A
JD	Jackdaw	<i>Corvus monedula</i>	N/A	0	N/A
J.	Jay	<i>Garrulus glandarius</i>	N/A	0	N/A
L.	Lapwing	<i>Vanellus vanellus</i>	Red List BoCC	0	N/A
LB	Lesser Black-backed Gull	<i>Larus fuscus</i>	Amber List BoCC	0	N/A
LP	Little Ringed Plover	<i>Charadrius dubius</i>	Schedule 1	0	N/A
LT	Long-tailed Tit	<i>Aegithalos caudatus</i>	N/A	3	Confirmed
MG	Magpie	<i>Pica pica</i>	N/A	0	N/A
MA	Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	0	N/A



BTO CODE	SPECIES	LATIN NAME	CONSERVATION STATUS	NUMBER OF TERRITORIES	HIGHEST BREEDING STATUS
MH	Moorhen	<i>Gallinula chloropus</i>	N/A	0	N/A
OC	Oystercatcher	<i>Haematopus ostralegus</i>	Amber List BoCC	0	N/A
PW	Pied Wagtail	<i>Montacilla alba</i>	N/A	0	N/A
RB	Reed Bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC	0	N/A
RP	Ringed Plover	<i>Charadrius hiaticula</i>	Red List BoCC	0	N/A
R.	Robin	<i>Erithacus rubecula</i>	N/A	10	Confirmed
ST	Song Thrush	<i>Turdus philomelos</i>	Red List BoCC	1	Possible
SH	Sparrowhawk	<i>Accipiter nisus</i>	N/A	0	N/A
SG	Starling	<i>Sturnus vulgaris</i>	Red List BoCC	0	N/A
SD	Stock Dove	<i>Columba oenas</i>	Amber List BoCC	0	N/A
SL	Swallow	<i>Hirunda rustica</i>	N/A	0	N/A
WW	Willow Warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	12	Confirmed
WP	Woodpigeon	<i>Columba palumbus</i>	N/A	2	Confirmed
WR	Wren	<i>Troglodytes troglodytes</i>	N/A	10	Confirmed





Reptile Survey Report
Castleton, Rochdale

Reference:80-464-R4-1
Date: June 2021



REPTILE SURVEY REPORT

Castleton
Rochdale

Prepared for:
Kellen Homes

Report Ref: 80-464-R4-1
Date Issued: 04/06/2021

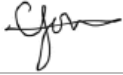
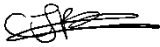
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QUALITY ASSURANCE

PROJECT NUMBER	80-464		
VERSION	Version 1		
REMARKS	Final		
DATE	June 2021		
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Certificate Number 11890



EXECUTIVE SUMMARY

Site Address	Land south of Fairway, Castleton, Rochdale, OL11 3BZ
Coordinates	E 387909, N 410131
Site Area	Approximately 12 ha
Current Site Use	The site comprised a disused railway siding associated with Castleton north, east and south junctions. The eastern aspect of the site had recently undergone vegetation clearance. The habitats within this section include areas of hardstanding with associated rubble piles, and retained broadleaved woodland defining the north and southern boundary. Habitats within the west of the site include dense scrub, hardstanding and broadleaved woodland.
Proposed Development	Proposals include a large residential development with associated gardens and infrastructure. An area of retained green space will be maintained within the western section of the site.
Results	No reptiles were identified during the seven surveys. In total two common toads were recorded during the surveys.
Conclusions and Recommendations	No further mitigation with regards to reptiles is deemed necessary for the proposed development to proceed. It is recommended that common amphibians are moved away from the construction area if encountered during vegetation clearance and subsequent groundworks.



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1. INTRODUCTION

1.1. BACKGROUND

E3P Ltd were instructed by Kellen Homes to undertake Reptile Surveys at Castleton, Rochdale hereafter referred to as “the site”.

This report has been prepared by Carlin Jones BSc (Hons), qualifying CIEEM membership, Graduate Ecological Consultant at E3P. Carlin has experience undertaking European Protected Species Surveys across the UK.

A Preliminary Ecological Appraisal was carried out in February 2021 (Ref. 80-464-R2-1). The site was found to provide optimal habitat for reptiles including suitable hibernacula which included a large quantity of rubble piles and basking opportunities along the disused railway lines and ballast present across the site. The railway to the south of the site provides connectivity to the wider area and could be used as a key corridor for this species group.

1.2. PROPOSED DEVELOPMENT

Proposals include a large residential development with associated gardens and infrastructure. An area of retained open space will be maintained within the western section of the site.

1.3. OBJECTIVES

The objectives of the reptile surveys were to:

- ✿ Identify whether there is a presence of reptiles within the site;
- ✿ Assess the species present within the site;
- ✿ Recommend further survey requirements, if deemed appropriate, to obtain an estimate of the population size(s) for the species identified; and
- ✿ Provide preliminary recommendations in light of the survey findings and the need for mitigation.

This report presents the findings of the surveys and whether there are any implications of developing the site with regards to reptiles.



2. METHODOLOGY

2.1. DESK STUDY

Greater Manchester Ecology Unit (GMEU) were contacted on the 15th February 2021 to obtain any records of reptiles within 2 km of the site boundary.

2.2. REPTILE SURVEY

The site was subjected to a presence/absence survey using artificial refugia, or "tins", in accordance with Froglife guidelines (1999).

Artificial Cover Objects (ACOs) or refugia were constructed of 0.5 m × 0.5 m sheeting using roofing felt as recommended by Froglife (1999) and the HGBI (1998) for reptile surveys. A total of 100 ACOs were placed across the site, locally sited in the most appropriate position for use by basking/sheltering reptiles.

The ACOs were left for approximately one week to bed in. They were dispersed across the site on 19th April 2021 by Carlin Jones assisted by Huw Morgan Bsc (Hons), Senior Ecologist, ACIEEM. A total of seven non-consecutive survey visits were carried out to assess the presence/absence of reptile species on site. During each visit, the ACOs were checked visually from a distance to determine whether reptiles were basking on their surface. The ACOs were carefully approached and lifted to check for reptiles sheltering beneath them.

ACOs were checked during recommended ideal temperatures for survey, between 9°C and 18°C (Froglife, 1999) The weather conditions and timings per survey are detailed within Table 2.1 and Appendix I.

TABLE 2.1 SURVEY DETAILS

SURVEY	DATE	SURVEY TIMINGS	WEATHER CONDITIONS	SURVEYORS
1	26/04/2021	14:21-15:25	13°C, 5% cloud cover, light breeze, sunny	Carlin Jones
2	29/04/2021	13:15-14:07	9°C, 90% cloud cover, light breeze, sunny spells	Carlin Jones
3	05/05/2021	14:30-15:33	9°C, 60% cloud cover, light breeze, sunny spells	Carlin Jones
4	11/05/2021	11:50-13:00	12°C, 70% cloud cover, light breeze, sunny spells	Carlin Jones
5	13/05/2021	11:54-13:08	15°C, 70% cloud cover, light breeze, sunny spells	Carlin Jones
6	24/05/2021	09:35-10:50	11°C, 70% cloud cover, light breeze, sunny spells	Carlin Jones



SURVEY	DATE	SURVEY TIMINGS	WEATHER CONDITIONS	SURVEYORS
7	26/05/2021	12:35-03:00	11°C , 10% cloud cover, light breeze, sunny spells	Carlin Jones

2.3. LIMITATIONS

Generally, reptiles are reclusive animals and are often difficult to locate by virtue of their behaviour, cryptic colouration, and habitat selection. It is therefore often difficult to prove absence (Froglife, 1999). Binoculars were used in combination with the artificial refugia to search for basking animals at these areas to increase confidence in the survey.



3. RESULTS

3.1. DESK STUDY

During consultation with GMEU, no records of reptiles were located within the 2 km search area. However, a lack of records does not necessarily mean a lack of the species, as some areas have simply been under-surveyed. Equally, reptiles are highly mobile animals and may therefore colonise new sites in short periods of time.

3.2. SURVEY RESULTS

No reptiles were identified during the seven surveys. In total two common toads (*Bufo bufo*) were noted during two of the site visits. No other notable fauna was recorded during the surveys.

3.3. INTERPRETATION

The railway sidings, scrub and scattered debris provided the potential to support the species. Due to the negative results during the survey, it can be concluded that no reptiles are currently present on site.



4. RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

No evidence of reptiles was identified during the surveys. Therefore, no further surveys or reptile mitigation are deemed necessary for the development to proceed.

As toads were identified during the survey, It is recommended that common amphibians are moved away from the construction area if encountered during vegetation clearance and subsequent groundworks.



REFERENCES

- ✿ E3P (2021). Preliminary Ecological Appraisal. Report reference:80-464-R2-1.
- ✿ Froglife (1999). Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
- ✿ Froglife (2015). Surveying for Reptiles. Tips, techniques and skills to help you survey for reptiles.
- ✿ Herpetofauna Groups of Britain and Ireland (1998). Evaluating local mitigation/translocation programmes: Maintaining best practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth. Unpublished.

END OF REPORT



APPENDIX I

SURVEY RESULTS

SURVEY FORMS

SURVEY 1

Surveyor: Carlin Jones

Date: 26/04/2021
Start time: 14:21
End time: 15:25

Weather conditions: 13°C–14°C, 5% cloud cover, light breeze, sunny, dry.

SPECIES	SLOW WORM	COMMON LIZARD	GRASS SNAKE	ADDER	OTHER SPECIES
MALE	–	–	–	–	–
FEMALE	–	–	–	–	–
ADULT (SEX UNKNOWN)	–	–	–	–	–
SUB	–	–	–	–	–
JUVENILE	–	–	–	–	–
TOTAL	–	–	–	–	–

SURVEY 2

Surveyor: Carlin Jones

Date: 29/04/2021
Start time: 13:15
End time: 14:07

Weather conditions: 9°C-9°C, 90% cloud cover, 7mph winds, sunny, dry.

SPECIES	SLOW WORM	COMMON LIZARD	GRASS SNAKE	ADDER	OTHER SPECIES
MALE	–	–	–	–	–
FEMALE	–	–	–	–	–
ADULT (SEX UNKNOWN)	–	–	–	–	–
SUB	–	–	–	–	–
JUVENILE	–	–	–	–	–
TOTAL	–	–	–	–	–



SURVEY 3

Surveyor: Carlin Jones

Date: 05/05/2021
Start time: 14:30
End time: 15:33

Weather conditions: 9°C–9°C, 60% cloud cover, 13mph winds, sunny, dry.

SPECIES	SLOW WORM	COMMON LIZARD	GRASS SNAKE	ADDER	OTHER SPECIES
MALE	–	–	–	–	–
FEMALE	–	–	–	–	–
ADULT (SEX UNKNOWN)	–	–	–	–	–
SUB	–	–	–	–	–
JUVENILE	–	–	–	–	–
TOTAL	–	–	–	–	–

SURVEY 4

Surveyor: Carlin Jones

Date: 11/05/2021
Start time: 11:50
End time: 13:00

Weather conditions: 12°C–12°C, 70% cloud cover, 13mph winds, sunny, dry.

SPECIES	SLOW WORM	COMMON LIZARD	GRASS SNAKE	ADDER	OTHER SPECIES
MALE	–	–	–	–	–
FEMALE	–	–	–	–	–
ADULT (SEX UNKNOWN)	–	–	–	–	–
SUB	–	–	–	–	–
JUVENILE	–	–	–	–	–
TOTAL	–	–	–	–	–



SURVEY 5

Surveyor: Carlin Jones

Date: 13/05/2021
 Start time: 11:54
 End time: 13:08

Weather conditions: 14°C–15°C, 70% cloud cover, 15mph winds, sunny, dry.

SPECIES	SLOW WORM	COMMON LIZARD	GRASS SNAKE	ADDER	OTHER SPECIES
MALE	–	–	–	–	–
FEMALE	–	–	–	–	–
ADULT (SEX UNKNOWN)	–	–	–	–	–
SUB	–	–	–	–	–
JUVENILE	–	–	–	–	–
TOTAL	–	–	–	–	–

SURVEY 6

Surveyor: Carlin Jones

Date: 24/05/2021
 Start time: 09:35
 End time: 10:50

Weather conditions: 9°C–11°C, 70% cloud cover, 4mph winds, sunny, dry.

SPECIES	SLOW WORM	COMMON LIZARD	GRASS SNAKE	ADDER	OTHER SPECIES
MALE	–	–	–	–	–
FEMALE	–	–	–	–	–
ADULT (SEX UNKNOWN)	–	–	–	–	Common Toad (1)
SUB	–	–	–	–	–
JUVENILE	–	–	–	–	–
TOTAL	–	–	–	–	1



SURVEY 7

Surveyor: Carlin Jones

Date: 26/05/2021
Start time: 12:35
End time: 03:00

Weather conditions: 11°C-13°C, 10% cloud cover, 6mph winds, sunny, dry.

SPECIES	SLOW WORM	COMMON LIZARD	GRASS SNAKE	ADDER	OTHER SPECIES
MALE	-	-	-	-	-
FEMALE	-	-	-	-	-
ADULT (SEX UNKNOWN)	-	-	-	-	Common Toad (1)
SUB	-	-	-	-	-
JUVENILE	-	-	-	-	-
TOTAL	-	-	-	-	1





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Ref: 80-464-L1-2
Date: 20th July 2021

Kellen Homes

BY Email

GREAT CRESTED NEWT SURVEYS CASTLETON SIDINGS, ROCHDALE

BACKGROUND

E3P were instructed to undertake great crested newt (*Triturus cristatus*) eDNA surveys at Castleton Sidings, Rochdale, hereafter referred to as "the site".

A Preliminary Ecological Appraisal was undertaken by E3P in February 2021. During the survey, seven waterbodies were identified within 250 m of the site. Access was refused on Waterbodies 3 to 7 (WB3 to WB7). Please see the appended plan detailing pond numbers.

GREAT CRESTED NEWT EDNA SURVEYS

The eDNA survey was undertaken on 19th April 2021 Huw Morgan BSc (Hons), ACIEEM who holds a Natural England Great Crested Newt Licence (2015-10183-CLS-CLS) with assistance from Graduate Ecologist Carlin Jones BSc (Hons) Qualifying CIEEM member. The survey comprised a water sample extraction and lab analysis for GCN eDNA following protocol set out in Appendix 5 of the DEFRA WC1067 Technical Advice Note.

Waterbody 2 (WB2) was dry at the time of the survey and was therefore assessed as unsuitable to support breeding populations of great crested newts. Water samples could only be retrieved from Waterbody 1 (WB1).

RESULTS

The results of the survey were received on 02nd May 2021. WB1 tested **NEGATIVE** for the presence of great crested newts. Please see Figure 1 detailing the results.



FIGURE 1 EDNA RESULTS

Date sample received at Laboratory: 21/04/2021
Date Reported: 02/05/2021
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
0166	Castleton Golf Course Pond	SD87235 10050	Pass	Pass	Pass	Negative	0

LIMITATIONS

The eDNA surveys were undertaken on 19th April which is within the guidance as outlined in Appendix 5 of the DEFRA WC1067 Technical Advice Note. During the surveys, the weather was below 5 degrees, however this is not thought to be a constraint as the weather in late March and Early April was consistently above 5 degrees, which would facilitate the movement of Great Crested Newts to breeding ponds. In addition, other site surveyed by E3P in the northwest in late March and early April, using traditional torching and bottle trapping methods, detected the presence of great crested newts showing they were present in breeding ponds at the expected time of year. Furthermore, research undertaken to date has shown that great crested newt eDNA can be effective outside of the timings outlined by Natural England and there would be cause to extend the survey period to March (Rees, H. C., Baker, C. A., Gardner, D. S., Maddison, B. C., & Gough, K. C. (2017). The detection of great crested newts year-round via environmental DNA analysis. BMC Research Notes, 10(1), 1-4.). As such, despite the cold spell, undertaking the surveys on 19th April in line with guidance is not thought to invalidate the survey results.

CONCLUSIONS AND RECOMMENDATIONS

Great crested newts have been confirmed as absent from the waterbody located within 250 m of the site. Should access be gained to the waterbodies south of the site boundary, additional eDNA surveys should be undertaken to confirm absence of the species on site.

Reptile surveys are currently being undertaken on site, with artificial refugia being deployed across the site. If any great crested newts are present within the site, it is likely they will be recorded during these surveys. As such, the lack of surveys on the ponds to the south of the site is not deemed to be a major constraint.

Yours sincerely,
For and on behalf of E3P Ltd



Celia Barlow
Principal Ecologist



BAT TRANSECT SURVEYS

CASTLETON SIDINGS, CASTLEON,
ROCHDALE

JUNE 2021



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1.0 INTRODUCTION

Site Information

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2021 by Kellen Homes to undertake dusk bat transect surveys at Castleton Sidings, Castleton, Rochdale, Greater Manchester (O.S. grid reference: SD 87902 10135). The proposed development site comprises former railway sidings, with bare ground, scattered scrub and rank grassland. Two woodland belts occur along the northern and southern boundaries.
- 1.2 A Preliminary Ecological Appraisal has been undertaken on this site (E3P, 2021). The report recommended bat transect surveys on the woodland belts if they are to be affected and assessed the woodland belts as having low bat foraging suitability. The proposed development abuts the woodland belts and the proposed access points off Fairway involve losing two sections of the northern woodland belt.

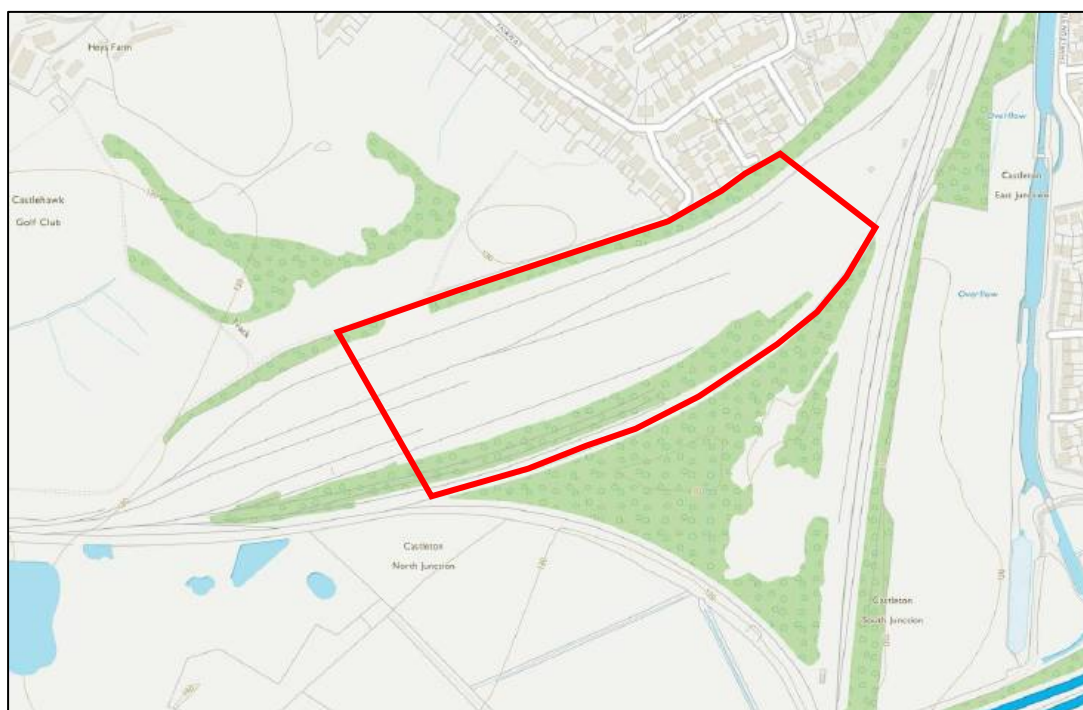


Figure 1 showing the location of the proposed development

Description of Development

- 1.3 The site will be the subject of a planning application for the construction of 196no. dwellings, with access and parking.

Biodiversity in Planning

- 1.4 Biodiversity is a material consideration, and Local Planning Authorities (LPAs) have a requirement to consider biodiversity and protected species when determining planning applications. Section 15 of the National Planning Policy Framework (February 2019) gives specific reference to minimising the impacts of development on biodiversity. Local and Neighbourhood plans also provide guidance towards protecting and enhancing biodiversity, including priority habitats and notable species.



Legal Context

- 1.5 All bat species are protected under the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit), which make it an offence to:
- Deliberately kill, injure or capture a bat;
 - Deliberately disturb bats;
 - Damage or destroy a breeding site or resting place of a bat.
- 1.6 The Wildlife & Countryside Act 1981 (as amended) contains further provisions making it an offence to intentionally or recklessly:
- Obstruct access to any structure or place which any bat uses for shelter or protection; or
 - Disturb any bat while occupying a structure or place which it uses for that purpose.
- 1.7 Proposed development works that are likely to disturb or destroy bats or their roosts will need to obtain a licence from the relevant Statutory Nature Conservation Organisation (e.g., Natural England) prior to work commencing.

2.0 METHODOLOGY

Bat Transect Surveys

- 2.1 Two bat activity transect surveys were undertaken in accordance with the Bat Conservation Trusts 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' 2016 (3rd Edition).
- 2.2 The bat transect surveys were carried out on the site to ascertain important bat commuting and foraging habitat on the proposed development site. The surveys aim to determine where the key parts of the site are in terms of importance to bats, and to inform construction and post-construction mitigation plans, including the provision of a sensitive lighting scheme
- 2.3 On each transect survey, two surveyors walked a circular route along the woodland belts and back, stopping every 20-30metres (approx.) recording bat passes (waypoints). The transects had seventeen waypoints, at which the surveyors paused and recorded bat passes. The same waypoints were used on each transect. For the first survey visit, the surveyors walked clockwise around the site. For the second survey visit, the surveyors walked anti-clockwise around the site.
- 2.4 The transects began just after sunset and continued for two hours after sunset. The surveyors used Echometer Touch bat detectors to record the echolocation calls of foraging bats.
- 2.5 A static bat detector was fixed onto a tree at Waypoint 13 on the first visit and collected on the second visit. On the second visit, a static bat detector was fixed onto a tree at Waypoint 4 and collected two weeks later. Anabat Walkabout bat detectors were used for this.

Personnel and Seasonal Timing

- 2.6 Kate Reed (Senior Ecologist), Megan Fowler and Holly Ainsley (Ecologists) carried out the bat transect surveys on the 2nd June 2021 and 14th June 2021. All surveyors are trained in nocturnal bat surveys. The weather at the time of the surveys was optimum and is detailed within the results section. June is an optimum month to undertake bat transect surveys.

Survey Constraints

- 2.7 The site and routes were fully accessible. The initial transect survey was booked for May 2021 but unseasonally cold and wet weather meant the survey was pushed into early June. However, the two visits enabled the bat usage of the site to be characterised. There were no constraints to the survey.

3.0 RESULTS

Surveyor Positions

- 3.1 Figure 2 shows the bat transect route and locations of the seventeen waypoints.

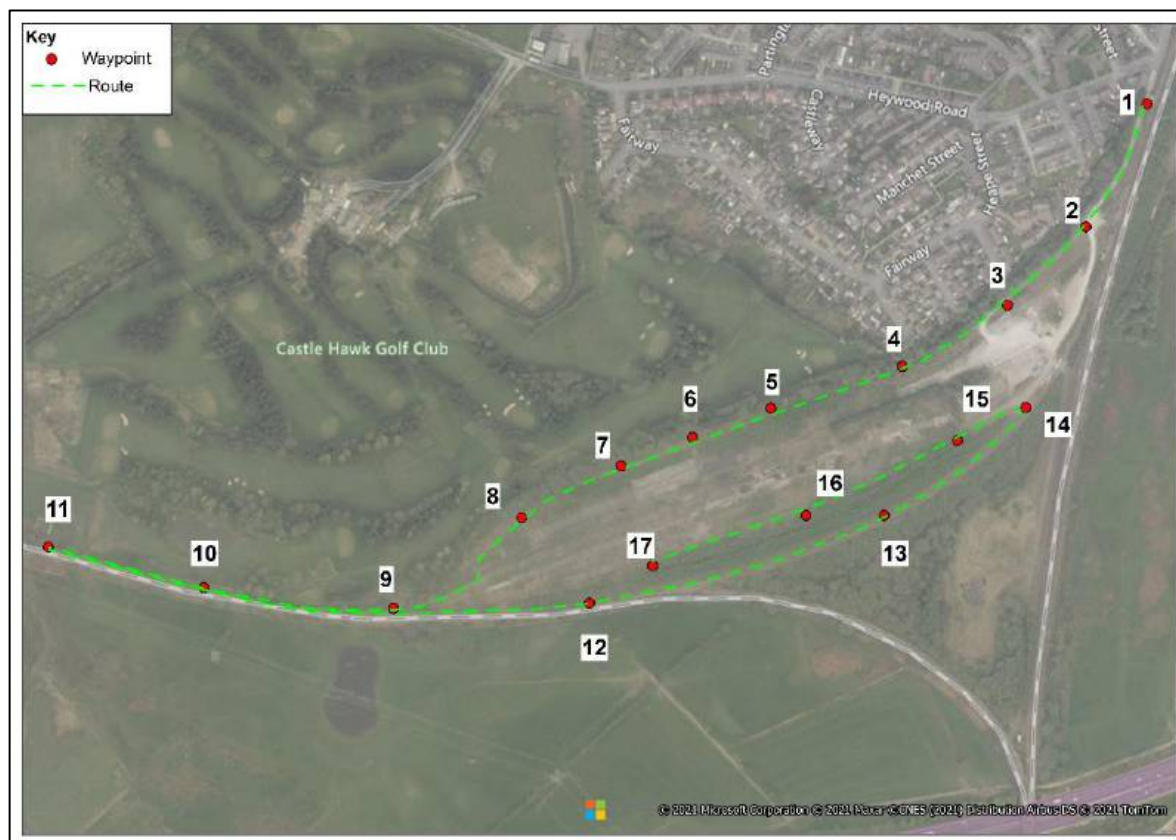


Figure 2 showing the bat transect routes and waypoint locations

Survey Results

- 3.2 Low levels of bat activity was recorded during the transect surveys and on the static bat detector per period of use. The majority of bat foraging and commuting was found along the northern woodland belt, particularly Waypoints 6, 7 and 8, with a number of Common Pipistrelle *Pipistrellus pipistrellus* bats recorded and observed passing these locations on both survey visits. Activity was also observed at Waypoints 9, 10 and 11 off-site to the west.
- 3.3 Waypoint 12 was the location with the most passes of Common Pipistrelle across both visits. The remaining southern waypoints supported very little, or no, bat activity. The northern woodland belt adjacent to the existing dwellings (Waypoints 1-4) also supported little or no bat activity.
- 3.4 The species recorded were Common Pipistrelle with Noctule *Nyctalus noctula* recorded but not seen overhead once on each survey visit.
- 3.5 Full results of the transect surveys are shown in Tables 1 and 2 below.

Table 1. Results from Transect Visit 1				
Survey Castleton Sidings		Date	Average Temp (°C)	Sunset
		02/06/2021	17°C	21:29
		Weather Dry, slight breeze, overcast,		
Waypoint	Time	Results		
1	21:18– 21:21	No bats observed.		
2	21:23– 21:27	No bats observed.		
3	21:29– 21:32	No bats observed.		
4	21:34– 21:38	No bats observed.		
5	21:39– 21:43	No bats observed.		
6	21:44– 21:57	Common Pipistrelle bat commuted past four times at 21:26		
7	21:59– 22:04	3 x Common Pipistrelle bats foraged past five times at 21:59 (Common Pipistrelle recorded but not seen between waypoints at 22:05)		
8	22:06– 22:10	2 x Common Pipistrelle bats commuted past twice at 22:07		
9	22:12– 22:16	Common Pipistrelle bat commuted past twice at 22:12 & 22:16		
10	22:18– 22:23	2 x Common Pipistrelle bats commuted past twice at 22:18		
11	22:26– 22:31	Common Pipistrelle bat commuted past at 22:26 (not seen). Noctule recorded overhead at 22:30		
12	22:40– 22:44	2 x Common Pipistrelle bats commuted past six times at 22:40– 22:41		
13	22:47– 22:51	No bats observed.		
14	22:53– 22:59	Common Pipistrelle bat commuted past at 22:54 (not seen).		
15	23:01– 23:06	No bats observed.		
16	23:10– 23:15	No bats observed.		
17	23:18– 23:28	No bats observed.		



Table 2. Results from Transect Visit 2				
Survey Castleton Sidings		Date	Average Temp (°C)	Sunset
		14/06/2021	12°C	21:40
		Weather		
		Dry, slight breeze, scattered cloud,		
Waypoint	Time	Results		
17	21:54–21:57	No bats observed.		
16	22:00–22:03	No bats observed. (Common Pipistrelle recorded but not seen between waypoints at 22:04)		
15	22:05–22:08	No bats observed. (Common Pipistrelle recorded but not seen between waypoints at 22:09)		
14	22:10–22:13	No bats observed.		
13	22:15–22:18	Common Pipistrelle bat commuted past twice at 22:16 & 22:17		
12	22:21–22:24	Common Pipistrelle bats foraged past five times at 22:21–22:22 (Noctule recorded overhead at 22:25 between waypoints)		
11	22:29–22:32	2 x Common Pipistrelle bats foraged past four times between 22:29–22:32		
10	22:06–22:10	2 x Common Pipistrelle bats commuted past twice at 22:07		
9	22:34–22:37	2 x Common Pipistrelle bats foraged past nine times between 22:34–22:36		
8	22:44–22:47	Common Pipistrelle bat commuted past twice at 22:46		
7	22:51–22:54	Common Pipistrelle bat commuted past once at 22:52		
6	22:56–22:59	Common Pipistrelle bat commuted past once at 22:58		
5	23:01–23:04	Common Pipistrelle bat commuted past once at 23:01		
4	23:05–23:08	Common Pipistrelle bat commuted past once at 23:07		
3	23:09–23:13	Common Pipistrelle bat commuted past twice at 23:06		
2	23:14–23:18	No bats observed.		
1	23:20–23:25	No bats observed.		

- 3.6 The static bat detectors picked up the same amount of activity as the activity transects at Waypoints 4 and 13, with infrequent passes by Common Pipistrelle throughout the deployment period. The static detectors also recorded Noctule on some evenings. Faint Soprano Pipistrelle *Pipistrellus pygmaeus* foraging was also recorded at Waypoint 4.

4.0 SUMMARY AND RECOMMENDATIONS

- 4.1 Bat transects surveys were undertaken in 2021 on a proposed development site at Castleton Sidings, Rochdale. Two bat transect surveys of the site were conducted and static bat detectors were left on the site to assess the general levels of bat activity across the site and to determine if any habitat on site is of particular importance for bat foraging.
- 4.2 Low levels of bat activity were recorded during the surveys, predominantly on the northern woodland belt (Waypoints 6, 7 and 8). Common Pipistrelle bats were observed and recorded using the northern woodland belt for foraging and commuting, including the woodland belt to the west, off-site. The southern woodland belt supported little bat activity. Noctule bats were recorded foraging over the site. The static bat detector picked up the same species diversity and frequency as the activity transects. The site is considered to be of local value as bat foraging and commuting habitat.
- 4.3 The surveys were undertaken during optimum weather conditions with no impediment to the visit. The temperatures were optimum prior to and during the surveys. No further bat transects are considered necessary to characterise the bat usage of the site.
- 4.4 The part of the northern woodland belt, where bat activity was mostly recorded, is to be retained and protected. Where the two access points will be created, through the northern woodland belt, very minimal bat activity was recorded. There will be minimal loss of bat foraging and commuting habitat from the development due to the retention of the majority of the woodland belts.
- 4.5 Artificial lighting can negatively impact existing flight paths of bats and affect their feeding behaviour. Artificial lighting schemes should be designed in a way that does not produce excessive lighting or directly illuminate existing and retained vegetation on the site. Lighting should be directed away from the trees along the northern woodland belt as well as the southern woodland belt, to retain dark corridors.

6.0 REFERENCES

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