

Land off Keresforth Road,
Dodworth, Barnsley

Preliminary Ecological Appraisal

April 2022

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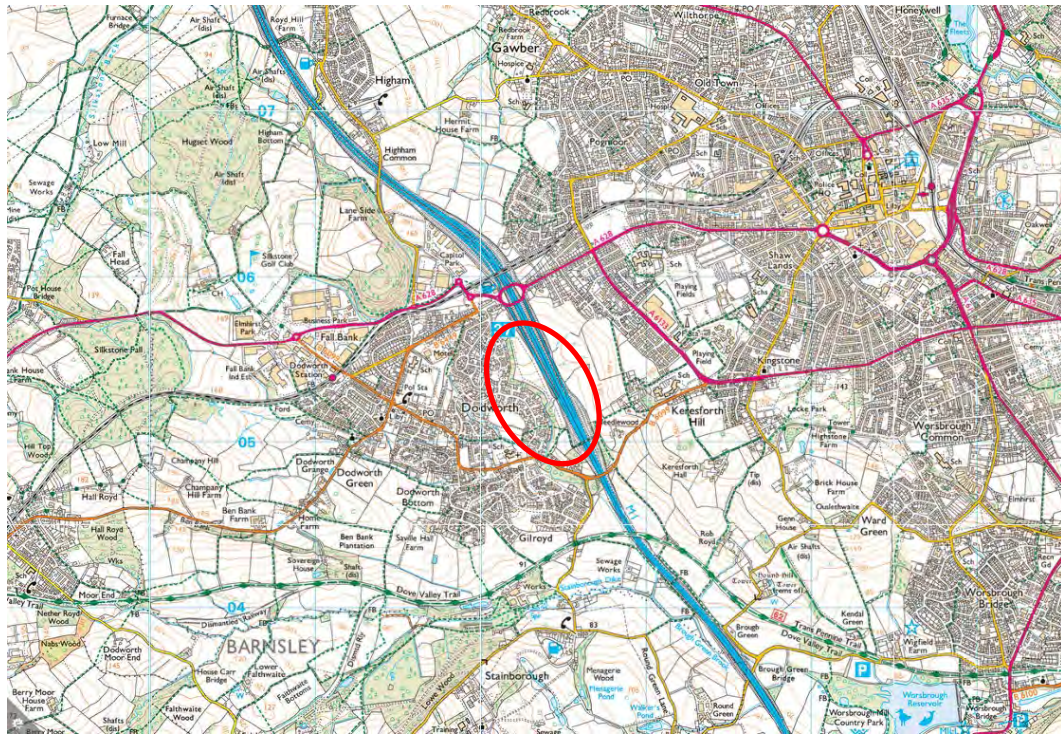
1 Introduction

- 1.1.1.1 This report presents the results of a Preliminary Ecological Appraisal undertaken on land off Keresforth Road, Dodworth, Barnsley. The study area (see Figure 1) extends to approximately 7.4 hectares and is centred at approximate grid reference SE324052, approximately 2 km west-south-west of Barnsley town centre.
- 1.1.1.2 The aims of this assessment were to identify the habitat types present on the site, to assess the potential for protected / notable species to occur and to make any recommendations for further surveys or assessments which may be required in relation to a proposed development at the site.
- 1.1.1.3 A preliminary ecological appraisal survey was conducted on 13th December 2021 by Toby Fisher MCIEEM CEnv and Morgane Accault ACIEEM. Data searches for the site plus 2 km radius have been requested from Barnsley Biological Records Centre (BBRC), South Yorkshire Bat Group and South Yorkshire Badger Group.
- 1.1.1.4 This report includes a review of previous ecological reports covering parts of the site undertaken by Barnsley Metropolitan Borough Council (BMBC) in 2010 and 2013.

Figure 1. Site Area (aerial imagery dated 2021)



Figure 2. Site Location



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2 Methodology

2.1 Desk Study

2.1.1.1 The following organisations were contacted for searches of protected sites and records of protected species within a 2 km radius of the site centre:

- Barnsley Biological Records Centre (BBRC).
- South Yorkshire Bat Group.
- South Yorkshire Badger Group.

2.1.1.2 The following previous ecological reports provided by BMBC have been reviewed as part of this assessment:

- Site Title: Land East of Water Royd Drive, Dodworth. Field Survey Sheet Survey Ref No. BAR34. Date 29/11/2010
- Site Name: Land Adjoining Junction 37 M1. Site Ref Number BAR86. Date 12/08/2013.

2.1.1.3 In addition, the following data sources were searched for statutorily protected sites and additional ecological data of relevance to the assessment such as off-site waterbodies:

- Multi Agency Geographic Information for the Countryside (MAGIC).
- Ordnance Survey 1:10,000 mapping.
- Aerial imagery (dated 2021).

2.2 Personnel

2.2.1.1 The Preliminary Ecological Appraisal survey was undertaken by Toby Fisher CEnv MCIEEM^{1 2}.

2.3 Preliminary Ecological Field Survey

2.3.1.1 A Preliminary Ecological Appraisal of the site was conducted on 13th December 2021 by Toby Fisher CEnv MCIEEM in accordance with the standard survey methodology^{3 4}.

2.3.1.2 The habitats on the site were assessed and categorised in order to provide baseline information and subsequent interpretation of the ecological value of the site. In addition, the site was searched for evidence of protected / notable species and assessed in terms of its potential to support protected / notable species such as badger, great crested newt, water vole, reptiles and bat species. The trees were inspected from ground level for evidence of bats and for potential bat roost features, using close-focussing binoculars.

2.4 Limitations

2.4.1.1 The survey was undertaken outside the optimum season for Phase 1 habitat surveys (May to September/October). During the survey it was possible to identify a significant proportion of the plant species present and to categorise the habitat types although a survey during the optimal survey would likely reveal a greater number of plant species potentially including invasive weeds listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). There were no access restrictions. Overall, there were no significant limitations.

¹ Natural England Class Licence Registration No. 2015-10756-CLS-CLS - CL18 Level 2 (Bats).

² Natural England Class Licence Registration No. WML- CL08:2015-16681-CLS-CLS (Great Crested Newts).

³ JNCC, (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit, ISBN 0 86139 636 7.

⁴ Chartered Institute of Ecology and Environmental Management (CIEEM). (2017). Guidelines for Preliminary Ecological Appraisal, Second Edition. December 2017. CIEEM, Winchester.

- 2.4.1.2 At the time of writing, detailed surveys for breeding habitats, birds, bats, reptiles, Water Vole and Otter have not been completed. However, this appraisal presents sufficient ecological information for an understanding of likely ecological impacts resulting from the proposed development.

3 Results

3.1 Review of Previous Ecology Reports

3.1.1.1 A report prepared by BMBC in 2010⁵ covers part of the current site area including most of the south-western parts of the current site. The survey identified the following habitats at the site: woodland, scrub, trees, hedgerows, grassland, tall herb, flowing watercourses, cultivated farmland and pasture with horse grazing. The survey identified moderate quality habitat for plants, birds and mammals and low quality habitat for invertebrates, amphibians, reptiles and fish. The report noted 'watercourse links to Dodworth Dike' and 'woodland provides wildlife corridor adjacent to residential housing'. The report also stated "*development of the site for housing would result in some adverse local ecological impact but there is scope for mitigation. The area of woodland on the site provides a wildlife corridor of moderate to high ecological value to birds and mammals as well as providing a buffer between residential housing of Dodworth and the motorway. This woodland should be retained with appropriate buffer habitats. The area to the south of the site is of lower ecological value and could be considered for development.*"

3.1.1.2 A report prepared by BMBC in 2013⁶ covers part of the current site area including most of the northern part of the current site and an area outside the current site's northern boundary. The survey identified the following habitats at the site: woodland, species poor or defunct hedgerows, amenity or improved grassland and arable / cultivated farmland. The survey identified moderate quality habitat for plants and birds and low quality habitat for invertebrates, amphibians, reptiles and mammals. The report also stated "*development of the site would result in some adverse local ecological impact but there is scope for mitigation. The majority of the site (the arable field and amenity grassland) could be developed without major impact. The plantation woodland on the periphery of the amenity grassland is part of an established, more extensive woodland which forms a buffer zone and wildlife corridor; this should be excluded from development. A hawthorn hedge runs along the west and south boundary; behind this is a wide band of woodland and shrubs forming part of the wildlife corridor. The hedge and adjacent woodland should be retained in any development plans; if partial removal is necessary (e.g. for access) the remainder of the hedge should be replanted with a mixture of native species.*"

3.2 Desk Study

3.2.1.1 Information provided by BBRC is included at Appendix 4.

3.2.2 Internationally / Nationally Protected Sites

3.2.2.1 One nationally designated nature conservation site has been identified within 2 km of the site boundary:

- Dearne Valley Wetlands SSSI is located approximately 1.78 km south-east of the site. At the time of writing, this SSSI was subject to a current notification process. The SSSI Notification Document issued by Natural England on 13th May 2021⁷ states: "Reasons for notification. Dearne Valley Wetlands SSSI is of special interest for the following nationally important features:
 - Numbers of non-breeding birds: The site's range of open water sizes, depths, aquatic life and marginal vegetation supports nationally important numbers of non-breeding gadwall *Mareca strepera* and shoveler *Spatula clypeata*.
 - Numbers of breeding birds: The open water, reedbed, fen, grassland and scrub habitats at the site support nationally important numbers of breeding gadwall,

⁵ Site Title: Land East of Water Royd Drive, Dodworth. Field Survey Sheet Survey Ref No. BAR34. Date 29/11/2010.

⁶ Site Name: Land Adjoining Junction 37 M1. Site Ref Number BAR86. Date 12/08/2013.

⁷ https://consult.defra.gov.uk/natural-england/dearne-valley-wetlands-sssi/supporting_documents/Dearne%20Valley%20Wetlands%20SSSI%20Notification%20document%2013%20May%202021.pdf

shoveler, bittern *Botaurus stellaris*, garganey *Spatula querquedula*, pochard *Aythya ferina* and black-headed gull *Chroicocephalus ridibundus*.

- Assemblages of breeding birds: The site supports nationally important breeding bird assemblages associated with Lowland damp grassland, Lowland scrub and a mixed assemblage of Lowland open waters and their margins and Lowland fen.
- Breeding willow tit: The site supports important numbers of the rare breeding bird willow tit *Poecile montanus klienschmidtii*. The willow tit is included in the Government's list of species of principal importance for the conservation of biodiversity in England¹ and is classed as Red-listed (i.e. of the highest conservation concern) in the UK Birds of Conservation Concern². During the five-year period 2014 to 2018 the SSSI supported territories for an estimated 18-20 breeding pairs of willow tit."

3.2.2.2 A search on MAGIC confirmed that there are no internationally protected sites within 10 km of the site.

3.2.3 *Locally Designated Sites*

3.2.3.1 BBRC confirmed that there are five Local Wildlife Sites (LWS) and one Local Nature Reserve (LNR) within 2 km of the site:

- Faithwaite and Lowe Wood (LWS) is located approximately 790 metres south-south-west of the site.
- Stainbrough Park LWS located approximately 1.24 km south of the site.
- Redbrook Pastures LWS located approximately 1.35 km north of the site.
- Kendal Green Scrub LWS located approximately 1.74 km south-east of the site.
- Silkstone Fall Wood LWS located approximately 1.76 km west of the site.
- Worsbrough Reservoir LNR and LWS located approximately 1.86 km south-east of the site.

3.2.4 *Other Non-Statutory Designations*

3.2.4.1 BBRC confirmed the presence of four areas of Ancient Woodland within 2 km of the site; the nearest such area is approximately 1.09 km south-south-west of the site.

3.2.5 *Species Records*

Amphibians

3.2.5.1 BBRC provided 20 records of Great Crested Newt within 2 km of the site; the nearest records are approximately 1.3 km south-south-west of the site at the Serpentine Lake (grid ref. SE325036) dated 1978 to 1984.

3.2.5.2 BBRC also provided records of Smooth Newt, Palmate Newt, Common Toad and Common Frog within 2 km of the site but none from the site itself.

3.2.5.3 A search on the MAGIC website revealed no granted EPSM licences for Great Crested Newt within 1 km of the site

Reptiles

3.2.5.4 BBRC provided 14 records of reptiles: two records of Adder, two of Viviparous Lizard, two of Common Lizard and eight of Grass Snake. None of these records are within 1 km of the site.

Birds

3.2.5.5 BBRC provided 2582 bird records within 2 km of the site. None of the records appear to be from grid references comprising of the site itself. Bird species recorded within 2 km of the site included a number of uncommon and notable species. There is one record of Barn Owl within 2 km of the site: approximately 1 km south-east of the site.

Invertebrates

3.2.5.6 BBRC provided 1684 records within 2 km of the site; none within 250 metres of the site.

Crustaceans

3.2.5.7 BBRC provided 31 records of crustaceans; none within 250 metres of the site. BBRC provided no records of White-Clawed Crayfish.

Water Vole

3.2.5.8 BBRC provided three records of Water Vole within 2 km of the site. These records are approximately 1 km south-east of the site, dated 1985 and 1991.

Otter

3.2.5.9 BBRC provided no records of European Otter within 2 km of the site.

Brown Hare

3.2.5.10 BBRC provided 8 records of Brown Hare within 2 km of the site; none of these records are within 1km of the site.

Hedgehog

3.2.5.11 BBRC provided 17 records of European Hedgehog within 2 km of the site; none of these records are within 500 metres of the site.

Bats

3.2.5.12 BBRC provided 46 records of bats comprising the following species: Common Pipistrelle, 45kHz Pipistrelle, Pipistrelle, Pipistrelle bat species, Noctule, Leisler's bat, Lesser Noctule, *Nyctalus* bat species, Brown Long-eared bat, Natterer's bat, bat and unidentified bats. Eleven of the records are within 1 km of the site:

- One record of several 45 kHz Pipistrelle bats seen and one record of bat droppings, at Needlewood, Barnsley, at grid ref SE328051 approximately 300 metres east of the site, dated 04/07/2008 and 31/10/2007.
- Two records of bats emerging at 3 Ratton Row, Dodworth, Barnsley, at grid ref SE313049 approximately 900 metres west of the site, dated 24/06/1994 and 25/06/1994.
- Two records of bats emerging at 41 Strafford Walk, Dodworth, Barnsley, at grid ref SE314048 approximately 870 metres south-west of the site, dated 30/05/1997 and 31/05/1997.
- One record of Pipistrelle maternity roost at 41 Strafford Walk, Dodworth, Barnsley, at grid ref SE314048 approximately 870 metres south-west of the site, dated 13/07/1997.
- One record of Pipistrelle roost at 23 Strafford Walk, Dodworth, Barnsley, at grid ref SE314048 approximately 870 metres south-west of the site, dated 13/07/2006.
- Two records of Pipistrelle roost at 24 Strafford Walk, Dodworth, Barnsley, at grid ref SE314048 approximately 870 metres south-west of the site, dated 14/07/1999 and 12/07/2006.
- One record of Noctule at Dodworth Road, at grid ref SE3206 at least 415 metres north of the site, dated 30/05/1981.

3.2.5.13 South Yorkshire Bat Group provided 296 records of bats comprising the following species: Common Pipistrelle, Soprano Pipistrelle, Pipistrellus sp., Noctule, *Nyctalus* sp., Leisler's, Noctule / Leisler's / Serotine, Brown Long-Eared, Daubenton's, Natterer's, Whiskered, Whiskered / Brandt's / Alcthoë, *Myotis* sp and unidentified bat species. Twelve of the records are within 500 metres of the site:

- One record of unidentified bat species at Farrow Close, Dodworth, Barnsley, at grid ref SE322052 approximately 70 metres west of the site, dated 26/10/2004.
- One record of unidentified bat species and one record of Common Pipistrelle at Keresforth Hill Road, Dodworth, Barnsley, at grid ref SE328051 approximately 270 metres east of the site, dated 31/10/2007 and 04/07/2008.

- One record of unidentified bat species flying at Northfield House, Barnsley Road, Dodworth, at grid ref SE318057 approximately 380 metres west-north-west of the site, dated 26/10/2006.
- One record of unidentified bat species at Farrow Close, Dodworth, Barnsley, at grid ref SE320050 approximately 390 metres west of the site, dated 26/10/2004.
- One record of Noctule at Dodworth Road, Pogmoor, Barnsley at grid ref SE320060 approximately 400 metres north of the site, dated 30/05/1981.
- One record of Nyctalus sp. and one record of Pipistrellus sp. at Locke Park and Keresforth Hall Road, Kingstone, Barnsley, at grid ref SE330050 approximately 435 metres east of the site, dated 27/07/1988 and 19/04/1993.
- One record of *Pipistrellus* sp. droppings and one record of Brown Long-Eared at Barnsley, at grid ref SE319049 approximately 480 metres west of the site, dated 25/02/2014 and 22/02/2016.
- One record of Common Pipistrelle emerging and one record of Noctule / Leisler's / Serotine commuting at Bowden Grove, Dodworth, Barnsley, at grid ref SE319050 approximately 490 metres west of the site, dated 21/07/2013.

3.2.5.14 A search on the MAGIC website revealed no granted EPSM licences for bats within 1 km of the site.

Badger

3.2.5.15 BBRC provided 7 records of Badgers within 2 km of the site. The nearest of these records is located approximately 560 metres south of the site, dated 24/06/2018.

3.2.5.16 A request for Badger records within 2 km of the site was submitted to South Yorkshire Bat Group on 11th April 2022; at the time of writing, no response had been received.

3.3 Preliminary Ecological Field Survey

3.3.1.1 Please also refer to the Phase 1 Habitat Map at Appendix 2 and photos included in Appendix 3. The site extends to approximately 7.4 hectares. The landform of the site slopes from approximately 128 metres above sea level in the northern part to approximately 106 metres above sea level in the southern part. The site is bordered to the east by the M1 motorway with arable beyond; to the north by arable with Junction 37 of the M1 motorway beyond; to the west by a belt of broad-leaved plantation woodland with housing beyond; and to the south by housing and broad-leaved woodland

3.3.2 Habitats

Amenity Grassland

3.3.2.1 A small area of mown amenity grassland in the southern part of the site comprises a typical suite of species including Perennial Rye-Grass *Lolium perenne*, Red Fescue *Festuca rubra*, Yorkshire Fog *Holcus lanatus*, Dandelion *Taraxacum officinale* agg., Creeping Buttercup *Ranunculus repens* and White Clover *Trifolium repens*.

Hard Standing and Buildings

3.3.2.2 A small section of road in the southern part of the site was devoid of vegetation at the time of the survey. Three horse shelters within a horse-grazed field of semi-improved neutral grassland in the southern part of the site were also devoid of vegetation at the time of the survey.

Semi-Improved Neutral Grassland

3.3.2.3 Semi-improved neutral grassland at the site appears to be of different origins.

3.3.2.4 In the southern part of the site, a horse-grazed field (Target Note 11, Appendix 2) appears to have been pasture for a number of years. Species present here include Common Bent, Perennial Rye-Grass, Red Fescue, Yorkshire Fog, Smooth Meadow-Grass *Poa pratensis*, Ribwort Plantain *Plantago lanceolata*, Meadow Buttercup *Ranunculus acris*, Creeping Buttercup, Self-heal *Prunella vulgaris*, Sorrel *Rumex acetosa*, Dandelion, Ragwort *Senecio jacobaea*, Lesser Trefoil *Trifolium dubium*, Broad-leaved Dock *Rumex obtusifolius*, Common Nettle *Urtica dioica* and Common Mouse-ear *Cerastium fontanum*. The southernmost field at the site (Target Note 10, Appendix 2) appears to

have been pasture since 2008 but aerial imagery suggests that it was bare ground in 2002; the sward within this field appears to be similar to that in the adjacent field (Target Note 11, Appendix 2).

- 3.3.2.5 The other grassland in the northern and central parts of the site appear to have developed in land which was previously under arable cultivation. Species present here include Cock's-foot *Dactylis glomerata*, Common Bent, Red Fescue, Yorkshire Fog, Tufted Hair-grass *Deschampsia cespitosa*, Soft Rush *Juncus effusus*, False Oat-Grass *Arrhenatherum elatius*, Broad-Leaved Dock, Hardheads *Centaurea nigra*, Ragwort, Bramble *Rubus fruticosus* agg., Creeping Thistle *Cirsium arvense*, Creeping Buttercup, Greater Willowherb *Epilobium hirsutum*, Spear Thistle *Cirsium vulgare* and Broad-Leaved Willowherb *Epilobium montanum*.

Marshy Grassland

- 3.3.2.6 An area of former arable in the northern part of the site has developed a sward dominated by Soft Rush. Additional species present here include Tufted Hair-grass, Yorkshire Fog, Common Bent, Broad-leaved Dock, Creeping Thistle, Creeping Buttercup, Ragwort, Greater Willowherb, Bramble, Alder *Alnus glutinosa*, Goat Willow *Salix caprea* and Silver Birch *Betula pendula*.

Tall Ruderal

- 3.3.2.7 An area of the former arable in the central part of the site is categorised as tall ruderal vegetation as it is dominated by Broad-leaved Dock, Creeping Thistle, Greater Willowherb and Common Nettle with Creeping Buttercup and Yorkshire Fog.

Scrub

- 3.3.2.8 Scattered scrub on former arable in the northern part of the site comprises Alder, Silver Birch, Goat Willow, Grey Willow *Salix cinerea*, Ash *Fraxinus excelsior*, Pedunculate Oak *Quercus robur*, Bramble and Dog Rose *Rosa canina*.
- 3.3.2.9 Continuous scrub has become established in the central and south-western parts of the site. Species present here include Bramble, Hawthorn *Crataegus monogyna*, Ash, Gorse *Ulex europaea*, Pedunculate Oak, Sycamore *Acer pseudoplatanus*, Grey Willow, Blackthorn *Prunus spinosa*, Cherry *Prunus avium*. Additional species present within the establishing scrub vegetation includes Cock's-foot, Yorkshire Fog, Common Nettle, Greater Willowherb, Broad-leaved Dock, Rosebay Willowherb *Chamerion angustifolium* and Hedge Bindweed *Calystegia sepium*.

Broad-Leaved Semi-Natural Woodland and Trees

- 3.3.2.10 In the south-western part of the site (Target Note 2, Appendix 2), a belt of broad-leaved semi-natural woodland comprises a canopy of Pedunculate Oak, Ash, Horse Chestnut *Aesculus hippocastanum*, and Sycamore. Additional species present include Lawson's Cypress *Chamaecyparis lawsoniana*, Wych Elm *Ulmus glabra*, Hawthorn, Ivy, *Hedera helix*, Bramble, Male Fern *Dryopteris filix-mas*, Common Nettle, Cock's-Foot, Yorkshire Fog, Greater Willowherb, Gorse, Cow Parsley *Anthriscus sylvestris*, Wood Avens *Geum urbanum*, Creeping Thistle and Hogweed.
- 3.3.2.11 In the south-eastern part of the site (Target Note 7, Appendix 2), a belt of broad-leaved semi-natural woodland comprises a canopy of Pedunculate Oak, Ash and Field Maple with additional species including Hawthorn, Elder *Sambucus nigra*, Field Maple *Acer campestre*, Dog Rose, Bramble, Male Fern, Common Nettle, Cock's-Foot, Wood Avens *Geum urbanum* and Common Nettle. Immediately south-west of this woodland lies a row of mature Ash and Hawthorn trees that have become established along with Bramble along an old dry stone wall (Target Note 6, Appendix 2).
- 3.3.2.12 In the central part of the site (Target Note 9, Appendix 2), an area of broad-leaved semi-natural woodland comprises a canopy of Crack Willow *Salix fragilis*, Pedunculate Oak, Sycamore, Field Maple and Ash along with understorey species including Hazel *Corylus avellana*, Hawthorn, Elder, Dog Rose, Bramble, Cherry and Blackthorn and ground flora species including Bramble, Herb Robert *Geranium robertianum*, Male Fern, Common Nettle, Wood Avens *Geum urbanum*, Creeping Thistle, Common Nettle and Pendulous Sedge *Carex pendula*.

- 3.3.2.13 Two trees in the southern part of the site appear to meet the requirements for 'veteran' trees⁸; a Pedunculate Oak (Target Note 2, Appendix 2) and an Ash (Target Note 4, Appendix 2).

Introduced Shrubs

- 3.3.2.14 In the south-western part of the site, introduced shrubs include Box-leaved Honeysuckle *Lonicera pileata*, Cherry Laurel *Prunus laurocerasus*, Ivy *Hedera* sp., *Daphne* sp. and Cherry.

Watercourse

- 3.3.2.15 An unnamed watercourse flows broadly south-south-westwards across the central part of the site (Target Note 9, Appendix 2) before continuing southwards outside the site's western boundary and forming part of the site's western boundary in the extreme south-western part of the site.
- 3.3.2.16 At the time of the survey, the watercourse held flowing water approximately 1 metre across and upto approximately 15 cm deep. No submerged, emergent or marginal aquatic vegetation was noted at the time of the survey. The watercourse is rather overshadowed within and adjacent to the site.

Hedgerow, Walls and Fences

- 3.3.2.17 One mature species-rich hedgerow with trees is present in the southern part of the site (Target Note 3, Appendix 2). The hedgerow is situated along an old bank. Several mature trees are present but no veteran or ancient trees were identified. Woody species present include Hawthorn, Pedunculate Oak, Elder, Dog Rose, Sycamore and ground flora includes Broad-leaved Dock, Foxglove *Digitalis purpureum* and Ivy. This hedgerow could potentially qualify as Important under Hedgerows Regulations 1997.
- 3.3.2.18 The walls and fences supported limited vegetation at the time of the survey including Bramble, Common Nettle and Ash.

Invasive Weeds

- 3.3.2.19 One non-native invasive weed listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) has been identified at the site: a patch of Wall Cotoneaster *Cotoneaster horizontalis* extending to approximately 4 x 2 metres in the southern part of the site (Target Note 12, Appendix 2).

3.3.3 Birds

- 3.3.3.1 A limited range of birds was observed during the survey. Species observed within and adjacent to the site included Blackbird, Robin, Goldfinch, Magpie, Bullfinch, Blue Tit, Carrion Crow, Coal Tit, Long-tailed Tit, Grey Wagtail, Common Buzzard and Common Pheasant along with Feral Pigeon and Black-headed Gull overhead.
- 3.3.3.2 One Species of Principal Importance for the conservation of biodiversity in England⁹ was recorded at the site: Bullfinch. The site could support a notable assemblage of birds during the breeding period including Species of Principal Importance for the conservation of biodiversity in England such as Bullfinch, Song Thrush, Skylark, Lapwing, Reed Bunting and Grasshopper Warbler.
- 3.3.3.3 Based on the nature of the habitats within and adjacent to the site (including housing and motorway), the site is not likely to support notable assemblages of birds during the winter or passage periods.

⁸ Lonsdale, D. (ed.) (2013). Ancient and other veteran trees: further guidance on management. The Tree Council, London 212pp. ISBN: 978-0-904853-09-4

⁹ Species and Habitats listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as Species of Principal Importance for the conservation of biodiversity in England.

3.3.3.4 A range of birds are likely to nest in woodland, scrub, shrubs, trees, walls, tall ruderal, watercourse, semi-improved neutral grassland, marshy grassland and possibly in buildings at the site.

3.3.4 *Bats*

3.3.4.1 Ten trees at the site have been assessed as having genuine potential to support bat roosts due to the presence of features such as cracks, splits, rot holes and poorly occluded wounds:

- Two Ash trees with mature bat roost potential; a young-mature Ash with linear cavities at low level adjacent to Keresforth Road and a mature ivy-covered Ash adjacent to minor watercourse (Target Note 1, Appendix 2).
- A veteran Pedunculate Oak with several cracks and splits in southern part of the site (Target Note 2, Appendix 2).
- Two trees (a veteran Ash and a mature Horse Chestnut) with rot holes in southern part of the site (Target Note 4, Appendix 2).
- Two mature Pedunculate Oaks with several cracks and splits in south-eastern part of the site (Target Note 7, Appendix 2).
- Three mature Crack Willows with several cracks and rot holes in central part of the site (Target Note 9, Appendix 2).

3.3.4.2 Three horse shelters of constructed of timber and corrugated materials in the southern part of the site (Target Note 10, Appendix 2) were each assessed as having negligible bat roost potential due to the absence of suitable roosting features.

3.3.4.3 In terms of foraging and commuting habitats, the areas of woodland, trees, hedgerow and scrub at the site are assessed as providing moderate quality habitats for bats. The areas of grassland, tall ruderal, hard standing and introduced shrubs are assessed as providing low quality habitats for bats. It is noted that the proximity of the M1 motorway is likely to limit bat activity levels at the site¹⁰.

3.3.5 *Great Crested Newt*

3.3.5.1 Analysis of aerial imagery and Ordnance Survey mapping has identified one potential waterbody within 500 metres of the site boundary; a possible wildlife pond within the grounds of Keresforth Primary School at grid reference SE32100489 approximately 280 metres west of the site at its nearest point. This possible pond is shown on Ordnance Survey 1:10,000 mapping but is situated within the school grounds and was not accessible for survey. Aerial imagery suggests that there may be a small pond approximately 1-2 metres across in this location.

3.3.5.2 Given the distance of 280 metres between the site and this possible pond, its small size and the presence of significant barriers to dispersal (including roads, hard standing playground, buildings and several solid walls) it is considered very unlikely that Great Crested Newts would occur at the site.

3.3.6 *Invertebrates*

3.3.6.1 Based on the nature of the habitats present, the site is not likely to support a notable assemblage of invertebrates. Based on the nature of the watercourse, it is very unlikely that White-Clawed Crayfish will occur at the site.

3.3.7 *Reptiles*

3.3.7.1 BBRC provided 14 previous records of reptiles within 2 km of the site comprising four species: Adder, Viviparous Lizard, Common Lizard and Grass Snake. Based on the nature of the habitats within and adjacent to the site, it is considered that reptiles could potentially occur within the marshy grassland, semi-improved neutral grassland, tall ruderal, watercourse, woodland and scrub habitats at the site.

¹⁰ Berthinussen, A. and Altringham, J. (2011). Journal of Applied Ecology. The effect of a major road on bat activity and diversity.

3.3.8 *Water Vole and Otter*

3.3.8.1 No evidence of Water Vole or Otter was identified during the survey. Based on the nature of the watercourse and the absence of aquatic vegetation, it is considered very unlikely that Water Vole will occur at the site. Based on the nature of the habitats and barriers to dispersal adjacent to the site, it is considered that there is low potential for Otter to use the watercourse at the site for occasional passage.

3.3.9 *Badger and Other Fauna*

3.3.9.1 No evidence of Badger was observed at the site.

3.3.9.2 Hedgehog and Brown Hare (both Species of Principal Importance in England) could potentially occur within the site.

4 Conclusions and Recommendations

4.1.1.1 At the time of writing, detailed surveys for breeding habitats, birds, bats, reptiles, Water Vole and Otter have not been completed. However, this appraisal presents sufficient ecological information for an understanding of likely ecological impacts resulting from the proposed development.

4.2 Protected Sites

4.2.1.1 One nationally designated nature conservation site has been identified within 2 km of the site boundary: Dearne Valley Wetlands SSSI located approximately 1.78 km south-east of the site. Based on the distance between the development site and the SSSI plus the presence of a significant barrier presented by the M1 motorway, no significant impacts on Dearne Valley Wetlands SSSI are predicted.

4.2.1.2 Based on the distance between the development site and locally designated sites, no significant impacts on these sites are considered likely to occur.

4.3 Habitats

4.3.1.1 The woodland and hedgerow at site may qualify as the Habitats of Principal Importance in England “lowland mixed deciduous woodland” and “hedgerows”⁹. No other Habitats of Principal Importance for the conservation of biodiversity in England have been identified at the site. The continuous scrub in the southern part of the site is assessed as potentially being of value at the local level.

4.3.1.2 Two veteran trees have been identified at the site (Target Notes 2 and 4).

4.3.1.3 The hedgerow in the southern part of the site (Target Note 3) could potentially qualify as Important under Hedgerows Regulations 1997.

Recommendations

4.3.1.4 Given the sub-optimal seasonal timing of the survey, it is recommended that a habitat survey should be undertaken during the optimal period of May-September inclusive.

4.3.1.5 As far as possible, the woodland, hedgerow and scrub at the site should be retained in situ. The site could potentially be enhanced through the provision of additional planting / habitat creation.

4.3.1.6 Paragraph 174 of the latest version of the National Planning Policy Framework (NPPF, published July 2021) states: “*Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;... d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;...*”

4.3.1.7 It is recommended that local planning policy should be reviewed in relation to the latest Biodiversity Net Gain requirements. It is recommended that the latest version of The DEFRA Biodiversity Metric should be used to calculate the Biodiversity Net Gain for the proposed development. Adopting the mitigation hierarchy; if possible, Biodiversity Net Gain should be provided within the site boundary.

4.3.1.8 Paragraph 180 of the latest version of the National Planning Policy Framework (NPPF, published July 2021) states: “*When determining planning applications, local planning authorities should apply the following principles: development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists...*”

- 4.3.1.9 It is recommended that the two veteran trees identified at the site (Target Notes 2 and 4) should be retained in situ.
- 4.3.1.10 If there are any potential impacts on the hedgerow in the southern part of the site (Target Note 3) it will be necessary to undertake a Hedgerow Regulations survey during the optimal period of May-July.

4.4 Invasive Weeds

- 4.4.1.1 One non-native invasive weed listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) has been identified at the site: a patch of Wall Cotoneaster *Cotoneaster horizontalis* extending to approximately 4 x 2 metres in the southern part of the site (Target Note 12, Appendix 2).

Recommendations

- 4.4.1.2 It is recommended that an Invasive Weeds Management Plan should be prepared and implemented in order to prevent the inadvertent spread of Wall Cotoneaster and ensure legal compliance.

4.5 Birds

- 4.5.1.1 One Species of Principal Importance for the conservation of biodiversity in England was recorded at the site: Bullfinch. The site could support a notable assemblage of birds during the breeding period including Species of Principal Importance for the conservation of biodiversity in England such as Bullfinch, Song Thrush, Skylark, Lapwing, Reed Bunting and Grasshopper Warbler.
- 4.5.1.2 Based on the nature of the habitats within and adjacent to the site (including housing and motorway), the site is not likely to support notable assemblages of birds during the winter or passage periods.
- 4.5.1.3 A range of birds are likely to nest in woodland, scrub, shrubs, trees, walls, tall ruderal, watercourse, semi-improved neutral grassland, marshy grassland and possibly in buildings at the site.

Recommendations

- 4.5.1.4 It is recommended that breeding bird surveys should be undertaken at the site during the optimal season of April to July. The survey results would be used to inform a detailed impact assessment and any necessary mitigation measures. Such measures may involve the provision of tree/shrub planting and bird nesting boxes.
- 4.5.1.5 Where possible, any works affecting potential bird nesting areas should be undertaken outside the main bird nesting period of March to August (inclusive). If this is not possible, any such works undertaken within the bird nesting period (March to August inclusive) should be supervised by a suitably qualified ecologist. The supervising ecologist should advise all site personnel of the potential presence of nesting birds, their legal protection and the need to minimise disturbance of nesting birds. If active nests are present, they must be retained in situ undisturbed until the nests are no longer active. A nest is classed as active when it contains eggs or chicks and whilst being built.

4.6 Bats

- 4.6.1.1 Ten trees at the site have been assessed as having genuine potential to support bat roosts due to the presence of features such as cracks, splits, rot holes and poorly occluded wounds. The horse shelters were each assessed as having negligible bat roost potential.
- 4.6.1.2 In terms of foraging and commuting habitats, the areas of woodland, trees, hedgerow and scrub at the site are assessed as providing moderate quality habitats for bats. The areas of grassland, tall ruderal, hard standing and introduced shrubs are assessed as providing low quality habitats for bats. It is noted that the proximity of the M1 motorway is likely to limit bat activity levels at the site.

Recommendations

- 4.6.1.3 If any of the trees with bat roost potential are to be affected by the proposed development, it is recommended that bat roost characterisation surveys should be undertaken, e.g. climb-and-inspect and dusk/dawn surveys between May and August.
- 4.6.1.4 As far as possible, all mature trees, scrub and woodland should be retained in situ. It is recommended that these retained habitat features should be protected from artificial light spill as 'dark corridors'. If it is not possible to retain these habitat features within 'dark corridors' it would be necessary to undertake bat activity surveys between April to October to inform a detailed impact assessment and any necessary mitigation measures.
- 4.6.1.5 As a biodiversity enhancement, it is recommended that bat boxes should be provided as part of the proposed development. It will also be necessary to devise a sensitive lighting strategy including the provision of 'dark corridors' as bat habitat areas, particularly in and around areas of woodland.

4.7 Great Crested Newt

- 4.7.1.1 Given the distance of 280 metres between the site and the only identified possible pond within 500 metres of the site along with the small size of the possible pond and the presence of significant barriers to dispersal (including roads, hard standing playground, buildings and several solid walls) it is considered very unlikely that Great Crested Newts would occur at the site. No further surveys or mitigation measures are considered necessary.

4.8 Invertebrates

- 4.8.1.1 Based on the nature of the habitats present, the site is not likely to support a notable assemblage of invertebrates. Based on the nature of the watercourse, it is very unlikely that White-Clawed Crayfish will occur at the site. No further surveys or mitigation measures are considered necessary.

4.9 Reptiles

- 4.9.1.1 BBRC provided 14 previous records of reptiles within 2 km of the site comprising four species: Adder, Viviparous Lizard, Common Lizard and Grass Snake. Based on the nature of the habitats within and adjacent to the site, it is considered that reptiles could potentially occur within the marshy grassland, semi-improved neutral grassland, tall ruderal, watercourse, woodland and scrub habitats at the site.

Recommendations

- 4.9.1.2 It is recommended that reptile surveys should be undertaken at the site during the optimal season of April to October. The survey results would be used to inform a detailed impact assessment and any necessary mitigation measures. Such measures may involve the provision of suitable retained habitat and exclusion of reptiles from the development footprint.

4.10 Water Vole and Otter

- 4.10.1.1 No evidence of Water Vole or Otter was identified during the survey. Based on the nature of the watercourse and the absence of aquatic vegetation, it is considered very unlikely that Water Vole will occur at the site. Based on the nature of the habitats and barriers to dispersal adjacent to the site, it is considered that there is low potential for Otter to use the watercourse at the site for occasional passage

Recommendations

- 4.10.1.2 As a precautionary measure, it is recommended that an Otter survey should be undertaken on the watercourse at the site (no seasonal restrictions) using static motion-sensitive cameras.

4.11 *Badger and Other Fauna*

4.11.1.1 No evidence of Badger was observed at the site. Hedgehog and Brown Hare (both Species of Principal Importance in England) could potentially occur within the site.

Recommendations

4.11.1.2 No further surveys are considered necessary. It is recommended that any new fences/walls should be fitted with permanent Hedgehog gaps (each 13 x 13 cm) at their bases in order to allow Hedgehogs to maintain viable territories by effectively linking multiple gardens and other habitats.

Appendix 1. Legislation and Conservation Context

European Protected Species (Great Crested Newt, Otter, all Bats)

Great Crested Newt (GCN), otter and all British bat species are fully protected through The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 as European Protected Species (EPS). They also receive some protection through inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Under the legislation, it is an offence to deliberately capture, injure or kill a GCN, otter or bat. It is an offence to damage or destroy a breeding site or resting place of a GCN, otter or bat. It is also an offence to intentionally or recklessly disturb a GCN, otter or bat while it is occupying a structure or place which it uses for shelter or protection; or obstruct access to any structure or place which it uses for that purpose.

It is also an offence to deliberately disturb a GCN, otter or bat; in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or (b) to affect significantly the local distribution or abundance of the species to which they belong.

The 'appropriate authority' (Natural England in England) has powers to issue licences for various purposes including - (a) scientific or educational purposes... and (e) preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment. The appropriate authority shall not grant a licence under this regulation unless they are satisfied - (a) that there is no satisfactory alternative, and (b) that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range. It is an offence for any person authorised by virtue of a licence to which this paragraph applies to contravene or fail to comply with any condition which the licence requires him to comply with.

Nesting Birds

All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Bird species listed in Schedule 1 of the 1981 Act, e.g. barn owl, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

Appendix 2. Phase 1 Habitat Map and Target Notes

Target note	Description
1	Two Ash trees with mature bat roost potential; a young-mature Ash with linear cavities at low level adjacent to Keresforth Road and a mature ivy-covered Ash adjacent to minor watercourse.
2	A belt of broad-leaved semi-natural woodland comprises a canopy of Pedunculate Oak, Ash, Horse Chestnut and Sycamore. Additional species present include Lawson's Cypress, Wych Elm, Hawthorn, Ivy, Bramble, Male Fern, Common Nettle, Cock's-Foot, Yorkshire Fog, Greater Willowherb, Gorse, Cow Parsley, Wood Avens, Creeping Thistle and Hogweed. Includes a Pedunculate Oak tree which appears to meet the requirements for 'veteran' trees; high bat roost potential.
3	Mature species-rich hedgerow with trees situated along an old bank. Several mature trees are present but no veteran or ancient trees were identified. Woody species present include Hawthorn, Pedunculate Oak, Elder, Dog Rose, Sycamore and ground flora includes Broad-leaved Dock, Foxglove and Ivy. Potentially qualifies as Important under Hedgerows Regulations 1997.
4	Ash tree which appears to meet the requirements for 'veteran' trees plus a mature Horse Chestnut; both with high bat roost potential.
5	An unnamed watercourse just outside site boundary; approximately 1 metre wide and heavily shaded with no aquatic vegetation identified.
6	A row of mature Ash and Hawthorn trees that have become established along with Bramble along an old dry stone wall.
7	A belt of broad-leaved semi-natural woodland comprises a canopy of Pedunculate Oak, Ash and Field Maple with additional species including Hawthorn, Elder, Field Maple, Dog Rose, Bramble, Male Fern, Common Nettle, Cock's-Foot, Wood Avens and Common Nettle. Contains two mature Pedunculate Oak trees with moderate bat roost potential.
8	Area of dense scrub dominated by Blackthorn.
9	An area of broad-leaved semi-natural woodland comprises a canopy of Crack Willow, Pedunculate Oak, Sycamore, Field Maple and Ash along with understorey species including Hazel, Hawthorn, Elder, Dog Rose, Bramble, Cherry and Blackthorn and ground flora species including Bramble, Herb Robert, Male Fern, Common Nettle, Wood Avens, Creeping Thistle, Common Nettle and Pendulous Sedge. Contains three mature Crack Willow trees with moderate bat roost potential An unnamed watercourse flows south-westwards through the woodland; approximately 1 metre wide and heavily shaded with no aquatic vegetation present.
10	Horse-grazed semi-improved neutral grassland. Three horse shelters constructed of timber and corrugated materials each with negligible bat roost potential.
11	Horse-grazed semi-improved neutral grassland.
12	Patch of Wall Cotoneaster <i>Cotoneaster horizontalis</i> (non-native invasive weed listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)) extending to approximately 4 x 2 metres.



- | | |
|--|---|
|  Site |  Introduced shrub |
|  Broadleaved semi-natural woodland |  Species-rich hedge with trees |
|  Continuous scrub |  Buildings |
|  Scattered scrub |  Hard Standing |
|  Neutral semi-improved grassland |  Running water |
|  Marshy grassland |  Fence |
|  Tall ruderal / tall herb |  Target Notes |
|  Amenity grassland | |

Appendix 3. Photographs

Photo 1. Looking north-east along proposed access route



Photo 2. Looking south-west towards Keresforth Road



Young-mature Ash
with bat roost potential
(Target Note 1).

Young-mature Ash
with bat roost potential
(Target Note 1).

Minor watercourse.

Photo 3. Looking south-west towards Keresforth Road along proposed access route



Photo 4. Wall Cotoneaster (invasive weed listed on Sch 9 WCA)



Photo 5. Scrub in south-western part of the site



Photo 6. Woodland in south-eastern part of the site (Target Note 7)



Photo 7. Looking north across grassland (Target Note 11) towards woodland (Target Note 7)



Photo 8. Looking south-west to hedgerow (Target Note 3) with horse shelters beyond



Photo 9. Ash tree with high bat roost potential (Target Note 4)



Photo 10. Looking north-north-west across grassland north of Target Note 7



Photo 11. south-east across horse-grazed pasture in south-east of the site (Target Note 10)



Photo 12. Minor watercourse within woodland (Target Note 9)



Photo 13. Looking north-west across scattered scrub to north of Target Note 9

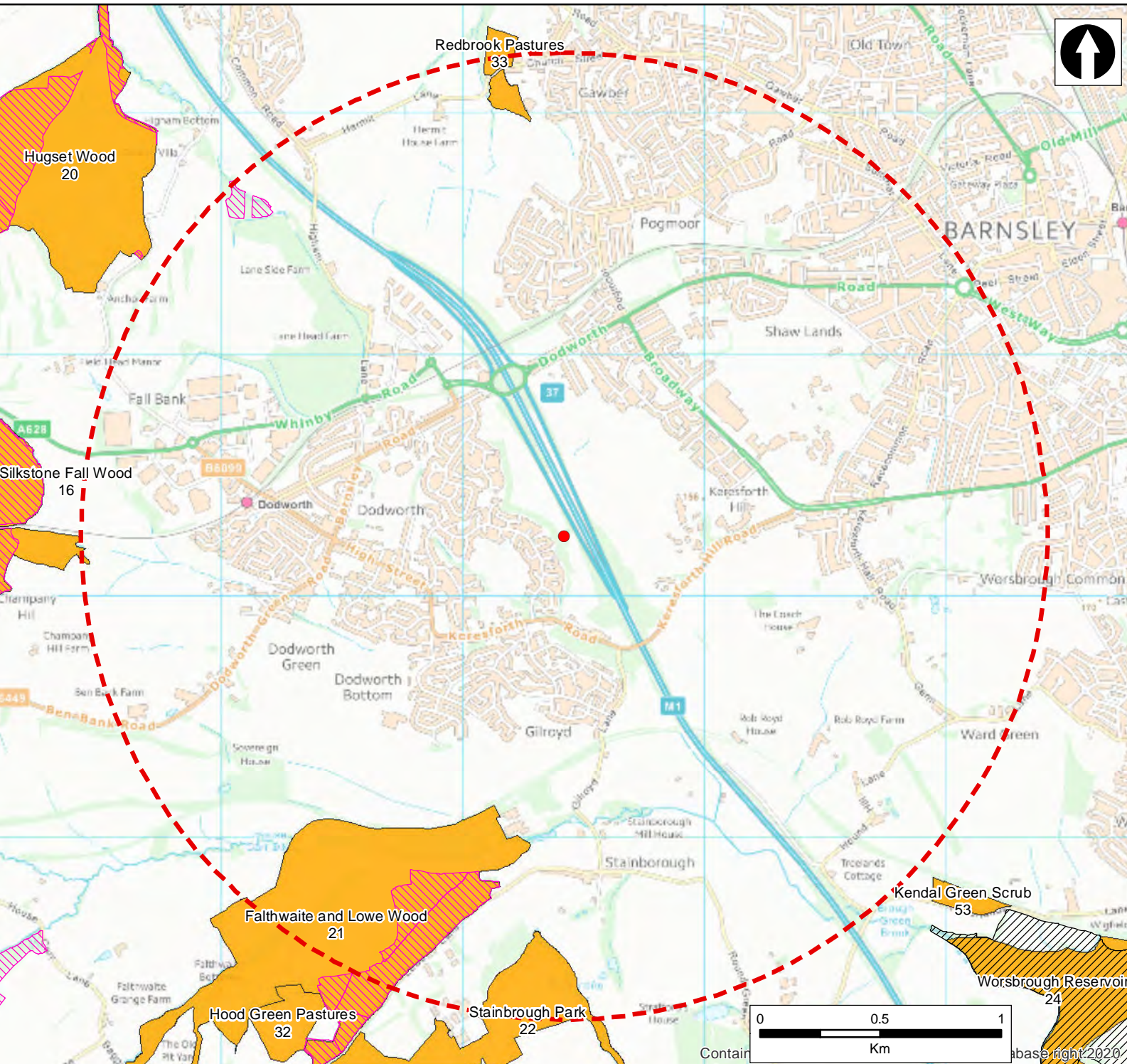


Photo 14. Looking east across marshy grassland in northern part of the site



Appendix 4. Information provided by BBRC

Boundaries of Statutory and Local Wildlife Sites (non-statutory) Within the Search Area



Keresforth Road, Dodworth

- Centre of search area
- 2km radius
- Ancient Woodland
- LNR_NE
- Barnsley LWS
- Barnsley Boundary

