LAND OF LOWFIELD ROAD, BOLTON UPON DEARNE

Ecological Impact Assessment (EcIA)

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1.0 Introduction

SLR Consulting Ltd was commissioned by Gleeson Homes to undertake an Ecological Impact Assessment (EcIA) for three areas of land to the south of Lowfield Road, Bolton upon Dearne, Rotherham (central OS grid reference SE461024).

This assessment was undertaken in order to inform a planning application for a proposed residential development and associated ecological mitigation, which would form the third phase of an existing housing scheme, in this area.

1.1 Site Description and Context

One of the three areas surveyed as part of this assessment comprises a site earmarked for development (hereafter referred to as the 'Development Site') along with two adjacent areas of land, one to the south-west and the other to the east, that are proposed for ecological enhancement (refer to Drawing 1 of this report).

The Development Site, which has a footprint of approximately 2.6 hectares, consists almost entirely of a single field of horse-grazed pasture, divided into compartments by internal ropes and wire fencing. The northern boundary abuts the rear gardens of properties along Lowfield Grove and, further east, Crane Well View, whilst the western boundary abuts newly built properties, which formed an earlier phase of this development. The extreme north-western corner abuts a small area known as Lowfield Meadows. The southern boundary lies adjacent to Lowfield Lakes, a commercial coarse fishery, and, further east, a property known as Lowfield Lodge, and its associated gardens, and stables, the latter used by horses grazing the main part of Development Site itself. The eastern boundary is formed by a track which extends along the length of the Development Site, and alongside Crane Well View, before reaching Lowfield Road to the north; this track divides the Development Site from arable land further east, part of which is proposed for ecological enhancement.

The land located to the south-west of the Development Site, which has a footprint of approximately 1.4 hectares, is a roughly rectangular area of mostly disturbed open habitat, currently supporting rough grassland and early successional vegetation with stands of ruderals; it is surrounded to the south and west by overgrown scrub and hedgerow. A small children's playground is located in the northern part of this rectangular piece of land.

The area of land proposed for ecological enhancement located to the east of the Development Site (on the east side of the track that leads to Lowfield Lodge), which is *circa* 0.2 hectares in extent, is currently under arable cultivation.

1.2 Details of the Proposed Development

Proposals for the Development Site involve the construction of 97 dwellings, roads and other associated infrastructure, as well as the creation of a small area of Public Open Space, in the south-western corner[1].

The small (c0.2ha) area of land to the east is due to support a 1m deep detention basin, with gently sloping (1:5) banks[2], which shall form part of the ecological enhancement scheme for the Development Site.

Both drawings are provided in Appendix 1 of this report

[1] Richard Ward Design Layout Plan 449/3G revision G, dated 1st March 2019
[2] James Eaton Design Drawing 16/664/7913C, dated August 2016

1.3 Purpose of this Report

The purpose of this EcIA report is to:

- Describe the baseline data collection and assessment methodologies used;
- Summarise the baseline ecological conditions and identified important ecological receptors;
- Identify and describes any potentially significant ecological effects upon important ecological receptors;
- Set out the mitigation and/ or compensation measures required to comply with nature conservation legislation, and (where relevant) to address potentially significant ecological effects;
- Provide an assessment of the significance of any residual effects (i.e. once mitigation and/ or compensation measures have been taken into account) upon important ecological receptors; and
- Identify ecological enhancement measures, where appropriate.

1.4 Evidence of Technical Competence and Experience

All fieldwork was undertaken by Mr Jim Flanagan, Senior Field Ecologist with SLR Consulting and Associate member of the Chartered Institute of Ecology and Environmental Management (ACIEEM).

Mr Flanagan has over 17 years' relevant experience within ecological consultancy, is a competent botanist and ornithologist and holds the following licenses:-

- Bat survey Level 1 (licence number 2016-21937-CLS-CLS);
- Great crested newt survey (licence number 2015-19274-CLS-CLS)
- White-clawed crayfish survey (licence number 2016-21108-CLS-CLS)
- Barn owl survey (licence number CI29/00238)

The report was peer reviewed by Mr Gary Oliver, MCIEEM, Principal Ecologist with SLR Consulting. Mr Oliver has over 23 years' relevant experience within ecological consultancy, is a competent ornithologist and botanist, and holds Class 2 survey licences for bats, barn owl and great crested newt.

1.5 Relevant Legislation and Policy

A summary of relevant wildlife legislation and national planning policy is provided in Appendix 2.

Planning applications for sites within Bolton upon Dearne are determined by Barnsley Metropolitan Borough Council, and therefore a summary of the relevant local planning policy is described overleaf.

1.5.1 Local Planning Policy

Barnsley Local Plan (2019)

The Barnsley Local Plan, which was adopted in January 2019[3], provides local planning policy (including the consideration of planning applications) shaping development in Barnsley up to the year 2033.

Policy CSP 3 (Sustainable Drainage Systems) states:

"*All developments will be expected to use Sustainable Drainage Systems (SuDS). Only in exceptional circumstances, where it can be demonstrated that all types of SuDS are impractical, will other drainage management systems be permitted*".

Policy GI 1 (Green Infrastructure) states:

"*We will protect, maintain, enhance and create an integrated network of connected and multi-functional Green Infrastructure assets that:*

- *Provides attractive environments where people want to live, work, learn, play, visit and invest;*
- *Meets the environmental, social and economic needs of communities across the borough and the wider City Regions;*
- *Enhances the quality of life for present and future residents and visitors;*
- *Helps to meet the challenge of climate change;*
- *Enhances biodiversity and landscape character;*
- *Improves opportunities for recreation and tourism;*
- *Respects local distinctiveness and historical and cultural heritage;*
- *Maximises potential economic and social benefits; and*
- *Secures and improves linkages between green and blue spaces;"*

"At a strategic level Barnsley's Green Infrastructure network includes the following corridors which are show on the Green Infrastructure Diagram 5 (refer to Appendix 1):

- *River Dearne Valley Corridor;*
- *River Dove Valley Corridor;*
- *River Don Valley Corridor;*
- *Dearne Valley Green Heart Corridor; and*
- *Historic Landscape Corridor.*

Diagram 5 confirms that the Site lies within the River Dearne Green Infrastructure Area.

Policy GI 1 goes on to state:

"The network of Green Infrastructure will be secured by protecting open space, creating new open spaces as part of new development, and by using developer contributions to create and improve Green Infrastructure."

Paragraph 17.1 states "*Green Infrastructure (GI) can be described as including strategic networks of accessible, multifunctional sites (including playing fields, parks, woodland, informal open spaces, nature reserves and historic*

[3] https://www.barnsley.gov.uk/services/planning-and-buildings/local-planning-and-development/our-new-local-plan/barnsleys-local-plan/

sites) as well as linkages (such as principal transport corridors, river corridors and floodplains, wildlife corridors and greenways). These contribute to maintaining the region's biodiversity and environmental quality as well as peoples' well-being. GI networks should consist of a series of features (both existing and new), appropriate at various spatial scales, preferably with links connecting smaller, more local sites with larger, more strategic ones, including the region's National Parks and key nationally and internationally important habitats".

Policy BIO 1 (Biodiversity and Geodiversity) states:

"*Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:*

Protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national and local significance, ancient woodland and species and habitats of principal importance identified via Section 41 of the Natural Environment & Rural Communities Act 2006 (for list of the species and habitats of principal importance) and in the Barnsley Biodiversity Action Plan;

Maximising biodiversity and geodiversity opportunities in and around new developments;

Conserving and enhancing the form, local character and distinctiveness of the boroughs natural assets such as the river corridors of the Don, the Dearne and Dove as natural floodplains and important strategic wildlife corridors;

Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest;

Protecting ancient and veteran trees where identified; and

Encouraging provision of biodiversity enhancements."

"*Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.*

Development which adversely effects a European Site will not be permitted unless there is no alternative option and there are imperative reasons of overriding public interest (IROPI)."

Barnsley Biodiversity Action Plan (2008-12)

The Barnsley Biodiversity Action Plan (BAP)[4] sets out the habitats and wildlife species that are a priority for conservation. The current Plan includes some updates made in 2016 but is now the subject of a major review which is expected to include more habitats and species within its scope.

Dearne Valley Nature Improvement Area (NIA)

The Development Site lies within the Dearne Valley Nature Improvement Area, which is designed to help restore and enhance the ecological networks of the River Dearne, its floodplain, and its link to habitats on surrounding slopes and hills. The vision for the Dearne Valley Heart NIA is ambitious; at its core will be a 1300ha reedbed, wet grassland, wet woodland and woodland, with a 2690ha buffer area of farmland, amenity grasslands, and reclaimed industrial areas who biodiversity value will be enhanced.

[4] www.barnsleybiodiversity.org.uk/BarnsleyBAP.html

2.0 Methodology

2.1 Baseline Data Collection

2.1.1 Desk Study

Whilst the Development Site itself is located within the district of Barnsley (on land covered by the Barnsley Biological Records Centre), land within a 2km radius of its boundary also lies on land covered by the Rotherham Biological Records Centre, and the Doncaster Local Records Centre. The proportion land covered by Rotherham BRC within the search area is small, however, and the other records centres are considered likely to overlap with this area in records coverage. Data was, therefore, obtained from the Barnsley and Doncaster records centres. Relevant information was supplied by the Doncaster Local Records Centre on the 4th of September 2019 and by the Barnsley Biological Records Centre on the 1st October 2019.

Information on statutory designated sites for nature conservation and geological interest for the Site itself and land within a 2km radius of the Site (5km for Natura 2000 Sites) was also obtained from the MAGIC website[5].

2.1.2 Extended Phase I Habitat Survey

An Extended Phase 1 Habitat Survey and mapping exercise of the Development Site and proposed ecological enhancement areas to the south-west and east, was carried out by Mr Jim Flanagan of SLR Consulting on the 16th of September 2019, using standard Phase 1 Habitat survey methodology[6].

- A search for badger (*Meles meles*) setts and field signs within the Site and 30m radius (where accessible);
- An assessment of the Site's potential to support breeding birds/ an important breeding bird assemblage;
- An assessment of the Site's potential to support great crested newt and other amphibians;
- An assessment of the potential of the Site to support an important assemblage of foraging and/ or commuting bats; and
- An assessment of the potential of the Site to support reptiles.

Searches were also made for invasive species, including those listed on Schedule 9 of the Wildlife and Countryside Act 1981, which includes Japanese knotweed (*Fallopia japonica*), giant hogweed (*Heracleum mantegazzianum*) and Himalayan balsam (*Impatiens glandulifera*).

Habitats were mapped and features of interest were recorded using Target Notes (see Drawing 1).

[5] www.magic.gov.uk
[6] Joint Nature Conservation Committee (2010) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (Revised reprint). Joint Nature Conservancy Council, Peterborough.

2.1.3 Limitations

2.2.6.1 Desk Study

Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that important habitats or protected species not identified during the data search do in fact occur within the vicinity of the Site. Interpretation of maps and aerial photography has been conducted in good faith, using recent imagery, but it has not been possible to verify the accuracy of any statements relating to land use and habitat context outside of the field study area.

2.2.6.2 Fieldwork

The Development Site and immediate surrounding areas were fully accessible, and the fieldwork was carried out at a suitable time of year, by an experienced and highly qualified Ecologist. Therefore no major survey constraints apply.

2.2 Assessment Approach

The ecological evaluation and impact assessment approach used in this report is based on Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland ("CIEEM guidelines", CIEEM, 2018[7]).

2.2.1 Important Ecological Receptors

Ecological receptors can be important for a variety of reasons and the rationale used to identify them is explained here. Importance may relate, for example, to the quality or extent of the Site or habitats therein; habitat and/ or species rarity; the extent to which such habitats and/ or species are threatened throughout their range, or to their rate of decline.

2.3.1.1 Determining Importance

Importance should be considered within a defined geographical context. The following frame of reference has been used in this case, relying on known/ published accounts of distribution and rarity where available, and professional experience:

- International;
- National (i.e. UK/ England etc.);
- Regional (i.e. Yorkshire and the Humber);
- County (i.e. South Yorkshire); and
- Local (i.e. within 2km).

The importance of the various habitats has been measured against published selection criteria where available and relevant. Examples of relevant criteria include: descriptions of habitats listed on Annex 1 of the Habitats Directive; descriptions of habitats of principal importance for biodiversity under Section 41 of Natural Environment and Rural

[7] Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland, September 2018.

Communities (NERC) Act 2006; Local Wildlife Site Selection Criteria; and Habitat Action Plans (HAPs) contained within Local Biodiversity Action Plans.

In assigning a level of importance to a species, it is necessary to consider their distribution and status, including a consideration of trends where relevant. Reference has therefore been made to published lists and criteria where appropriate. Examples of relevant lists and criteria include: species of European conservation importance (as listed on Annexes II, IV and V of the Habitats Directive or Annex 1 of the Birds Directive); species of principal importance for biodiversity under Section 41 of the NERC Act 2006 and Birds of Conservation Concern[8].

For the purposes of this report ecological features of local importance or greater and/ or subject to legal protection have been subject to detailed assessment. Effects on other ecological features are considered unlikely to be significant in legal or policy terms and have therefore been omitted from the assessment process.

2.2.2 Impact Assessment

The impact assessment process involves the following steps:

- identifying and characterising potential impacts;
- incorporating measures to avoid and mitigate these impacts;
- assessing the significance of any residual effects after mitigation;
- identifying appropriate compensation measures to offset significant residual effects (if required); and
- identifying opportunities for ecological enhancement.

When describing impacts, consideration has been given to the following, as appropriate:

- Positive or negative;
- Extent;
- Magnitude;
- Duration;
- Timing;
- Frequency; and
- Reversibility.

The impact assessment process considers both direct and indirect impacts: direct ecological impacts are changes that are directly attributable to a defined action, e.g. the physical loss of habitat occupied by a species during the construction process. Indirect ecological impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process or feature, e.g. the creation of roads which cause hydrological changes, which, in the absence of mitigation, could lead to the drying out of wet grassland.

[8] Eaton, M.A., Aebischer, N.J., Brown, A., Hearn, R.D., Lock, L., Musgrove, A.J., Noble, D.G., Stroud, D.A., & Gregory, R.D. (2015). Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. *British Birds*, 108: 708-746.

Consideration of conservation status is important for evaluating the effects of impacts on individual habitats and species and assessing their significance:

- Habitats – conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions, as well as its distribution and its typical species within a given geographical area; and
- Species – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

2.2.3 Significant Effects

The concept of ecological significance is addressed in paragraphs 5.24 through to 5.28 of the CIEEM guidelines (2018). Significance is a concept related to the weight that should be attached to effects when decisions are made.

For the purpose of EcIA a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/ local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local and the scale of significance of an effect may or may not be the same as the geographic context in which the feature is considered important.

2.2.4 Cumulative Effects

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

2.2.5 Avoidance, Mitigation, Compensation and Enhancement

When seeking mitigation or compensation solutions, efforts should be consistent with the geographical scale at which an effect is significant. For example, mitigation and compensation for effects on a species population that is significant at a county scale should ensure no net loss of the population at a county scale.

The relative geographical scale at which the effect is significant will have a bearing on the required outcome which must be achieved.

Where potentially significant effects have been identified, the mitigation hierarchy should be applied, as recommended in the CIEEM guidelines (2018). The mitigation hierarchy sets out a sequential approach beginning with the avoidance of impacts where possible, the application of mitigation measures to minimise unavoidable impacts and then compensation for any remaining impacts. Efforts should then be made to explore opportunities for ecological enhancement.

It is important for the EcIA to clearly differentiate between avoidance mitigation, compensation and enhancement and these terms are defined here as follows:

- Avoidance is used where an impact has been avoided, e.g. through changes in scheme design;

- Mitigation is used to refer to measures to reduce or remedy a specific negative impact *in situ*;
- Compensation describes measures taken to offset residual effects, i.e. where mitigation *in situ* is not possible; and
- Enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

3.0 Baseline Ecological Conditions

3.1 Designated Sites

3.1.1 Statutory Designated Sites

The Development Site, and the two areas of land proposed for ecological enhancement, do not contain or are any part of a statutory designated site. The nearest is the Denaby Ings Site of Special Scientific Interest (SSSI), which lies 3.6km to the south-east. No Natura 2000 Sites lie within 5km. Statutory projected areas have therefore been excluded from further assessment.

3.1.2 Non-Statutory Designated Sites

The Development Site lies in close proximity to an RSPB reserve known as Adwick Washlands. This is situated approximately 50 metres to the east of the Development Site at its closest point, from which it is accessible by Lowfield Lane, which extends eastwards to form the Dearne Way.

The potential impact upon Adwick Washlands is therefore considered further in this assessment.

The Development Site also lies approximately 1.8km to the east of another RSPB reserve, known as Old Moor, however this lies a sufficient distance from the Development Site not to be impacted and therefore has not been discussed further.

The Development Site also lies approximately 530 metres to the south-east of a Local Wildlife Site known as Bolton upon Dearne Wetlands (LWS reference 642). This 2.52ha LWS comprises marshy grassland, swamp and semi-improved grassland, however, its distance from Site indicates that it will not be adversely affected and it has therefore been excluded from further assessment.

No other non-statutory sites occur within close proximity to the Development Site.

No ancient woodlands are reported to occur within a 2km radius of the Development Site, the nearest being Bella Wood which lies approximately 2.1km to the north-east.

3.2 Species

A total of 964 species records was provided by the Barnsley Biological Records Centre. The Doncaster Local Records Centre provided a total of 881 records. Bird records make up the great majority of the records and both datasets appear to overlap with some records duplicated. These have, therefore, been 'amalgamated' and the relevant records detailed below.

3.2.1 Bats

Noctule (*Nyctalus noctula*), Daubenton's (*Myotis daubentonii*) and common pipistrelle (*Pipistrellus pipistrellus*) bat records were provided for the River Dearne, 740 metres to the south-west of the Site, dating from June 2011. A further Daubenton's bat record was provided for the River Dearne (B6098 road bridge) 345 metres to the south-west of the Site, dating from September 2012. An old (1992) record was also supplied for a grounded whiskered bat (*Myotis mystacinus*) from the Goldthorpe area, along with a 1993 record of a common pipistrelle maternity roost (supporting over one hundred bats) within a modern house at Farmore Close, Harlington, 1.9km to the east of the Development Site.

Badger

No badger records were provided for the Development Site or 2km search radius by either record centre.

Riparian Mammals

The two datasets provided over 250 records for water vole (*Arvicola amphibius*), the majority of which relate to the River Dearne and Adwick Washlands, which lie approximately 150 metres and 50 metres from the Development Site at their nearest point, respectively. Several records were also provided for otter (*Lutra lutra*), all relating to the River Dearne, which lies 150 metres to the south of the Development Site, at its nearest point.

Other mammals

A number of records were also provided for brown hare (*Lepus europaeus*) and harvest mouse (*Micromys minutus*), mostly from Adwick Washlands, which lies 50 metres from the Development Site at its nearest point. One record was provided for hedgehog (*Erinaceus europaeus*) for a location on the south-west fringe of Bolton upon Dearne, some 1.5km west of the Development Site.

Amphibians

A relatively small number of amphibian records were provided. These included three records of great crested newt (*Triturus cristatus*) including an historic (1970) record of from Barnburgh Hall Pond (SE4803), approximately 1.3km north of the Development Site. The two more recent records of great crested newt were both for locations on the south-eastern edge of Goldthorpe, some 1.4km from the Development Site, one dating from April 2011 and the other from March 2018. Records were also provided for common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*) and common toad (*Bufo bufo*).

Reptiles

This comprised three records of grass snake (*Natrix helvetica*), two of which were old (pre-1980) for the Barnburgh area (both SE4803) with a more recent record from 2013 for a part of the Adwick Washlands, located 420 metres to the north-east of the Development Site.

Birds

A large number of bird records were provided, including many records of waterbirds (waders, waterfowl and gulls) from the nearby Adwick Washlands RSPB reserve; this included a record of 8 pairs of redshank (*Tringa totanus*) dating from April 2013, and a count of 500 golden plover (*Pluvialis apricaria*) dating from December 2011. There are a number of records of avocet (*Recurvirostra avosetta*) dating between 2013-2018 from the Adwick Washlands, some of which include records of breeding.

Records of farmland and urban/ urban fringe bird species were also provided, including grey partridge (*Perdix perdix*), yellowhammer (*Emberiza citronella*), reed bunting (*Emberiza schoeniclus*), lapwing (*Vanellus vanellus*), yellow wagtail (*Motacilla flava*), linnet (*Carduelis cannabina*), and house sparrow (*Passer domesticus*)

An historical (1961 – 1965) record was also provided for hawfinch (*Coccothraustes coccothraustes*) for the Harlington area (SE4802), with a more recent record for the same species being provided for Wath Ings (SE4501) dating from 1990.

Invertebrates

A number of invertebrate records were provided, including a record of the Nationally Notable B beetle *Magdalis cerasi,* collected from Bella Wood (an Ancient Woodland which lies 2.1km to the north-east of the Development

Site) in 2003.

Further beetle records (dating from between 1992 and 2002) were provided for a location between Wath Manvers Colliery and the River Dearne, including records for the Nationally Notable B species: *Curculio betulae, Microplontus campestris*, *Oxypoda spectabilis; Bembidion obliquum*, and the Nationally Notable A species *Calathus ambiguous* with a record for another Nationally Notable A beetle species, *Chrysolina marginata*, being provided for the River Dearne (however, this is an historical record, reportedly dating from 1880).

The area between the Wath Manvers Colliery and the River Dearne was also reported to support a large number of Nationally Notable B wasp, bee and true fly (Diptera) records, along with a small number of moth records, dating from between 1992 and 2002.

Several records of the Priority Species such as dingy skipper butterfly (*Erynnis tages*), the Doncaster LBAP green-veined white butterfly (*Pieris napi*) and the Priority species small heath (*Coenonympha pamphilus*) were also provided, none of which appear to relate to the Development Site or its immediate environs.

Plants

A large number of plant records were provided by the Doncaster Local Records Centre, the majority of which relate to common species of tree, shrub and flowering plant. Relatively old (1978) records were provided for stinking chamomile (*Anthemis cotula*), a Doncaster LBAP species, and the Red Listed crosswort (*Cruciata laevipes*) both from the Mexborough Town area (SE4601), as well as 1981 records of corn spurrey (*Spergula arvensis*) again from the Mexborough area (SE4600).

Schedule 9 Species

Records of Japanese knotweed were provided for the Mexborough area, dating from 1978, and 2007 (SE4600 and SE4700).

3.3 Results of Field Survey

The results of the Phase 1 Habitat Survey, for the (central) Development Site and two proposed ecological enhancement areas, are illustrated in Drawing 1.

3.3.1 Habitats within the Development Site

Horse Grazed Pasture

The Development Site, which was formerly arable land, now consists almost entirely of horse-grazed pasture, which is divided into compartments by temporary barriers (Plate 1). The sward is subject to heavy grazing and is, therefore, very short, with a sward largely dominated by perennial ryegrass (*Lolium perenne*). Occasional creeping thistle (*Cirsium arvense*), daisy (*Bellis perennis*), common ragwort (*Jacobaea vulgaris*), broad-leaved dock (*Rumex obtusifolius*), and dandelion (*Taraxacum officinale* agg.) also occur within these heavily-grazed compartments.

Compartments located towards the western end of the Site are more heavily disturbed, and support a greater number of herbs/ tall ruderal vegetation (Plate 2), including the species listed above, along with common nettle (*Urtica dioica*); fat hen (*Chenopodium album*), mugwort (*Artemisia vulgaris*),common field speedwell (*Veronica persica*), knotgrass (*Polygonum aviculare*), autumn hawkbit (*Leontodon autumnalis*), great willowherb (*Epilobium hirsutum*), and rosebay willowherb (*Chamaenerion angustifolium*).

Plate 1: View (to south-west) of the main area of the Development Site comprising horse-grazed compartments of short-cropped improved grassland

Plate 2: View (eastwards) of the western side of the Development Site from the adjacent Phase 2 area of development

Furthermore, walkways, fenced off from grazing horses and used by riders to access some of the eastern compartments, and thin strips of vegetation along fence lines also support a greater diversity of herbs, including many of the species listed above, along with occasional black medick (*Medicago lupulina*), wild parsnip (*Pastinaca*

sativa), ribwort plantain (*Plantago lanceolata*), greater plantain (*Plantago major*), daisy, creeping buttercup (*Ranunulus repens*), common poppy (*Papaver rhooeas*), common field pansy (*Viola arvensis*), scentless mayweed (*Tripleurospermum maritimum*), white clover (*Trifolium repens*), and common mouse-ear (*Cerastium fontanum*).

Un-grazed Grassland and Tall Ruderal Vegetation

A small strip of land located at the south-eastern end of the Development Site (north of Lowfield Lodge) forms a permanently fenced off enclosure and within this there has developed rank poor semi-improved grassland, tall ruderal vegetation and scrub (Plate 3). The grassland is dominated by false oat grass (*Arrhenatherum elatius*) and cock's-foot (*Dactylis glomerata*), and ruderal herbs feature mostly common ragwort, great willowherb, rosebay willowherb, common nettle along with bramble (*Rubus fruticosus* agg.), creeping buttercup, creeping thistle, mugwort and creeping cinquefoil (*Potentilla reptans*). The scrub comprises occasional hawthorn (*Crataegus monogyna*) and grey willow (*Salix cinerea*) shrubs.

Plate 3: View (to west) of the small enclosure of scrub and poor semi-improved grassland forming a part of the southern boundary of the Development Site (taken from the access track to Lowfield Lodge)

A spur of tall ruderal vegetation, mostly common nettle, occurs in the extreme north-east of the Development Site, between the access track and properties along Crane Well View (Plate 4). Small areas of short-cut and taller poor semi-improved grassland, tall ruderal habitats and some scrub lie in the smaller compartments located south of the

horse-grazed compartments (Plate 5). The sward in the taller grassland contains a mix of cock's-foot, smooth meadow-grass (*Poa pratensis*) and perennial ryegrass along with a small range of herbs indicative of disturbance including great plantain, ribwort plantain, creeping buttercup, creeping thistle, spear thistle (*Cirsium vulgaris*), scentless mayweed, white clover, red clover (*Trifolium pratense*), dandelion, and small patches of bramble and butterfly bush. This area also includes a small paddock used for exercising horses comprising a rectangular area of bare ground and is fenced off from surrounding tall ruderal vegetation (Plate 6 and Target Note 2).

Plate 4: View (looking north) of the spur of land comprising mostly tall ruderals, mostly common nettle and some scrub at and near to the junction with Lowfield Road

3.3.2 Development Site Boundaries

The northern Development Site boundary abuts the rear gardens of properties along Crane Well View and Lowfield Grove, and a part of the access road into Lowfield Meadows, in the extreme north-western corner. These are separated from the Development Site by wire fencing and wooden garden fences, with a 2-metre wide strip of tall ruderal vegetation often sandwiched between the two (Plate 7).

The western Development Site boundary mostly abuts rear garden fences of properties constructed during the earlier phases of the development and some open space recently planted up with tree saplings (Plate 8 and Target Note 2).

The eastern Development Site boundary is formed by a private drive which leads to Lowfield Lodge and Lowfield Lakes (Plate 9).

The southern edge of the Development Site is formed partly by the boundary with Lowfield Lodge, and a line of hawthorn, grey willow and butterfly bushes along the northern side of the rear garden of this property, and further

west, by a tall mature hawthorn-dominated hedgerow of between 4-6m in height (Plate 10), with occasional elder bushes (*Sambucus nigra*).

The habitats within the Development Site have less than local importance ecologically.

Plate 5: View (looking south-east) of the small compartment north of the exercise pen for horses. Here the vegetation is a mix of poor semi-improved grassland, tall ruderals and bramble, willow and butterfly bush scrub

Plate 6: View (looking east) of the fenced exercise pen for horses largely consisting of bare ground

Plate 7: View of the northern boundary of the Development Site (from the access track to Lowfield Lodge)

Plate 8: View (to the south-west) of the western boundary of the Development Site (from the northern boundary)

Plate 9: View (looking south) of the access track to Lowfield Lodge (Development Site on the right of the track)

Plate 10: View (looking south-east) of part of the southern boundary of the Development Site

3.3.3 Land Proposed for Ecological Enhancements

Western Area (i.e. land to west of Development Site itself)

This un-developed area of land, approximately 1.4 hectares in extent, lies immediately to the south-west of the Development Site and mostly contains recently disturbed ground conditions that has seen the establishment of a range of vegetation types.

Topographically this land comprises two different levels. The eastern part is at the same level as developed land to the north, and the western part consists of a plateau that is around 2.5m higher. A formal playground with play facilities has been installed within this area adjacent to the northern boundary at the same level as the lower eastern area (Plate 11 and Target Note 3).

The eastern area comprises a mix of roughs semi-improved neutral-type grassland, parts of which are flower and/ or herb-rich, extensive tall ruderal stands and partially vegetated to sparsely vegetated bare ground (Plate 12). Scrub is beginning to develop locally in some areas with saplings of willow and butterfly bush locally frequent.

There is a slope up to the higher western plateau on which much tall ruderal stands and rough grassland dominates. The central area is mostly formed of partly or sparsely vegetated ground with ruderals (Plate 13).

Some areas near to the boundary with the playground also feature locally flower-rich rough semi-improved neutral grassland. Further west and south ruderal stands dominate before dense scrub and young trees are met with.

Plate 11: View (looking north-east) of the formal playground area located within the area of potential ecological enhancements to the west of the Development Site

Over 40 species of plant were recorded during the walkover of this area, including many indicators of disturbed conditions associated with typical brownfield sites. The main grass species of the semi-improved neutral grassland sward include false oat-grass, cock's-foot, common couch (*Elymus repens*), creeping bent (*Agrostis stolonifera*) and red fescue (*Festuca rubra*).

Plate 12: View (to the west) of the eastern part of the un-developed land west of the Development Site. Areas of neutral semi-improved grassland and stands of tall ruderals (broad-leaved dock and mugwort) dominate

Plate 13: View to the west) of the western part of the undeveloped land west of the Development Site, supporting a mix of bare ground, pioneer vegetation including tall ruderal such as weld and frequent colt's-foot

The herb element is diverse and includes bush vetch (*Vicia sepium*), red clover, white clover (*Trifolium repens*), alsike clover (*Trifolium hybridum*), common ragwort, black medick and creeping cinquefoil. Within the stands of tall ruderals and early successional habitat species include teasel (*Dipsacus fullonum*), Canadian fleabane (*Conyza canadensis*), broad-leaved dock, hogweed (*Heracleum sphondylium*), common nettle, scentless mayweed, chamomile, weld (*Reseda luteola*), ribwort plantain, spear thistle, common poppy, black medick, hedge mustard (*Sisymbrium officinale*), field bindweed (*Convolvulus arvensis*), creeping buttercup, melilots (*Melilotus* sp.), perforate St John's-wort (*Hypericum preforatum*), mugwort, colt's-foot (*Tussilago farfara*), smooth sow-thistle (*Sonchus oleraceus*) and prickly oxtongue (*Helminthotheca echioides*). Less frequently found were Canadian goldenrod (*Solidago canadensis*) and lesser swine-cress (*Didymus coronopus*).

The southern boundary of both eastern and western halves of the land is adjacent to a sewage works (Plate 14 and Target Note 4) which consists of several settlement and treatment tanks and other infrastructure. A very overgrown and largely intact species-poor hedgerow (mostly of hawthorn) separates this land from the adjacent sewage works. The western boundary is also scrub-dominated with hawthorn and goat willow forming most of the canopy with some young/semi-mature wild cherry (*Prunus avium*) with some of this extending out from an old overgrown hedge line. Within this there is a dry ditch running parallel with a robust fence-line which forms the red-line boundary of the study area and the edge land within which there is a live railway line. The eastern boundary overlooks some of the smaller compartments of the Development Site and a view of Lowfields Lakes can be obtained from this standpoint.

Plate 14: View (looking south) of the sewage works from land to west of Development Site

Eastern Area (i.e. land to east of Development Site itself)

This is currently a small area of arable (cereal) cultivation, some 0.2 hectares in extent, lying on the east side of the track to Lowfield Lodge (Plate 15).

Plate 15: View (to north-east) of the area of land currently under arable cultivation east of the Development Site

3.3.4 Wider Area Context (including Adwick Washlands RSPB Nature Reserve)

The Development Site is situated immediately to the north of Lowfield Lakes, a commercial coarse fishery comprising three lakes reportedly stocked with bream, tench, ide (aka orfe), roach, perch and carp. It is reported that 4000lb of carp formed the last major release of stock in 2011[9] (Plate 16 and Target Note 5).

The Adwick Washlands RSPB reserve, a series of pools and wet grassland created from arable land from 2012, lie a short distance to the east of the Site. This reserve was established and is being managed mainly to create breeding habitat for waders such as snipe (*Gallingo gallingo*), lapwing and redshank, along with farmland birds such as reed bunting, yellowhammer and skylark (*Alauda arvensis*)[10].

The reserve is accessible from the Dearne Way, which extends eastwards from Lowfield Road, and by a number of interconnected pathways (Plate 17). It also contains a number of raised vantage points, and a central observation area. Many of the pathways are separated from more sensitive parts of the reserve by a ditch and/or low post and rail fence, and a substantial electric fence (Plate 18).

[9] http://www.fisharound.net/location/public/3783/Lowfield-Lakes

[10] www.rspb.org.uk/community/placestovisit/dearnevalley/b/dearnevalley-blog/archive/2012/02/17/adwick-washland-the-dearne-valley-s-newest-nature-reserve.aspx

Plate 16: View (looking south-east) of Lowfield Lakes from south-west corner of the Development Site

Plate 17: A view (looking west) of one of the interconnecting paths linking the Dearne Way to the wider area of countryside on the east side of Bolton upon Dearne

Plate 18: View (looking north-west with a part of Bolton upon Dearne in the far distance) of one of the shallow scrapes of the Adwick Washlands RSPB reserve. In the foreground is well vegetated a deep ditch and electric fence which is aimed at restricting access to the open areas by predators and the Public

It is understood that the electric fence is designed ostensibly to prevent access by foxes (which may predate upon the young and/ or eggs of ground-nesting birds), but is also contains livestock, which are grazing a number of the compartments within the reserve, and acts as a highly effective barrier to the public and/ or their dogs/ pets. Farm gates and other potential access points support 'Wildlife Only' signs, stating that it is a criminal offence to disturb certain species of breeding bird and stating that people should stick to the paths. The reserve is therefore very robustly designed to restrict the movements of people to areas where they will not cause disturbance to ground-nesting birds, and other wildlife.

Land to the north and west of the Site is built up, essentially forming part of the settlement of Bolton upon Dearne.

3.4 Results of Field Survey: Protected and Notable Species

3.4.1 Breeding Birds

A limited range of birds were recorded during the site visit, but among those was a single male yellow wagtail on the western side of the horse-grazed compartments. This was accompanied by around a dozen or more pied wagtails (*Motacilla alba*) in the wider area along with small numbers of blackbird (Turdus merula), goldfinch (*Carduelis carduelis*), starling (*Sturnus vulgaris*), house sparrow and linnet.

As the Development Site contains no buildings (apart from an incomplete construction of a wood shed in one of the small compartments at the southern end) and a very limited amount of scrub, it is considered to have relatively low potential for breeding birds. The vegetation, especially across the grazed compartments, is too short and/ or

too disturbed for ground-nesting species such as skylark or lapwing to breed. However, Priority Species [11]such as starling (*Sturnus vulgaris*) and linnet (*Linaria cannabina*) were observed using the Development Site for foraging in small numbers. Other priority species such as grey partridge, lapwing and bullfinch (*Pyrrhula pyrrhula*) may also use the Development Site for the same purpose. All these species can also be potentially found foraging in small numbers in the areas of land offered for ecological enhancement.

3.4.2 Bats

As the Development Site does not contain any buildings (apart from a small incomplete construction of a wooden shed at the southern end) or trees, it does not have potential to support roosting bats. Furthermore, as the majority of the Development Site is open and devoid of tree or shrub cover, it is generally unsuitable for foraging bats.

The majority of the bat activity is likely to be restricted to the southern Development Site boundary, as the adjacent Lowfield Lakes is likely to support high levels of bat foraging activity. This level of bat activity is also considered to extend to the un-developed land on the west side of the Development Site due to the extent of scrub and tree cover and adjacent tall ruderal vegetation, and to the open arable land immediately east of the Site.

3.4.3 Reptiles

No reptiles were recorded on the Development Site during the survey, and the horse-grazed pasture which forms the bulk of the Development Site lacks the shelter/ cover required by reptiles. The un-developed land being offered for ecological enhancement on the western side of the Development Site has some potential to support reptiles due to the mix of open and rough/ coarse vegetation on varied topography and sunny aspects. Lowfield Lakes (located a short distance to the south of the Development Site) and Adwick Washlands (located a short distance to the east) also both have potential to support reptiles such as grass snake, and it is therefore possible that this species occurs occasionally within the longer vegetation found in the southern (Target Note 2), and south-western (Target Notes 3 and 4) parts of the Development Site, in low numbers on a transitory/ infrequent basis.

3.4.4 Amphibians

The Development Site itself does not contain any water bodies and is therefore unsuitable for breeding amphibians. The nearest known great crested newt records date from 1970, for Barnburgh Hall Pond (SE4803), which lies approximately 1.3km north of the Development Site; and two more recent records (2011 and 2018) for the south-east margins of Goldthorpe, some 1.4km to the north-west.

Lowfield Lakes is a commercial coarse fishery, and therefore generally unsuitable for most species of amphibian, however coarse fish often co-exist with common toads (which are unpalatable) and it is therefore considered likely that southern and south-western parts of the Development Site, supporting longer vegetation (Target Notes 2 – 4) support toad, whereas the majority of the Development Site, including the horse-grazed pasture, is generally too short and therefore unsuitable.

3.4.5 Invasive Species

No Schedule species, including Japanese knotweed and Himalayan balsam, were recorded on or immediately adjacent to, the Development Site or on the two areas of land offered for ecological enhancement.

[11] Priority habitats and species as listed in the UK and devolved administrations, as listed: http://jncc.defra.gov.uk/page-5705

3.5 Summary of Important Ecological Receptors

Statutory and non-Statutory protected areas, along with habitats and species which are present on Site, or occur locally, which have been assessed as having Local importance or greater, and which could potentially be affected by an unmitigated scheme are summarised in Table 1. Some receptors assessed as having Less Than Local value have also been included.

Table 1:
Summary of Important Ecological Receptors

Ecological Receptor	Scale at which Ecological Receptor is Important	Rationale/ Further Information
Adwick Washlands RSPB Reserve	Regional	Recently-created reserve, designed to support breeding snipe, lapwing and redshank, and reported to support breeding avocet. The reserve has also been designed to provide suitable habitat for a range of declining farmland birds, and flocks of wintering waders and wildfowl.
River Dearne Green Infrastructure Area River Dearn Nature Improvement Area	Local	The Development Site is located close to the Dearne Way, which passes through the nearby Adwick Washlands, and connects up with the Trans Pennine Trail beyond. It forms part of the River Dearne GIA and NIA.
Bats	Less Than Local	The Development Site does not contain trees or buildings, and therefore does not have potential to support roosting bats. Furthermore, the bulk of the Development Site is sub-optimal for foraging and/ or commuting bats. The majority of the bat activity occurring on, and adjacent to, the Development Site, is likely to occur along the southern boundary.
Birds	Less Than Local	The Development Site supports low numbers of breeding and/ or feeding Priority Bird Species. However, native birds, and the nests, eggs and young of native birds, are protected against killing and injury/ damage and destruction under the Wildlife and Countryside Act 1981 (as amended).
Reptiles	Less Than Local	Grass snake may occur, in small numbers and potentially on a transitory basis, within the southern and south-western parts of the Development Site.
Amphibians	Less Than Local	Common toad may occur, in small numbers, within the southern and south-western parts of the Development Site.

4.0 ASSESSMENT OF NET IMPACTS INCLUDING ENHANCEMENT

Where relevant, this section includes details of mitigation and proposed ecological enhancement measures, both within the Development Site, and areas located to the west and east.

4.1 Adwick Washslands RSPB Reserve

The recently-created Adwick Washlands RSPB reserve lies 50 metres to the east of the Development Site, at its closest point, and is readily accessible by Lowfield Road, which leads onto Dearne Way. The Dearne way passes through the centre of the reserve, before connecting up with the Trans Pennine Trail, a short distance beyond the eastern boundary of the reserve. As such, the Dearne Way and other footpaths throughout the reserve, receive frequent recreational use by existing local residents, visitors from further afield, and no doubt will be used by some of the new residents associated with this application.

Correspondence received from the RSPB, dated 14th June 2017 (Appendix 5) states that the RSPB objects to the application "*due to the potential for adverse impacts on Adwick Washlands and its biodiversity, such as breeding curlew, lapwing and snipe, which are vulnerable to disturbance by people and dogs*".

The RSPB is of the view that "*in order to comply with the Local Plan Policy[12], an ecological impact assessment of the development is needed, going on to state that this assessment should focus on identifying all potential ecological impacts on Adwick Washlands and its associated habitats and species. Potential mitigation measures, including development site design and site management measures, should then be identified to ensure that any adverse impacts on the site are avoided or mitigated*."

However as stated in Section 4.2.5, and illustrated in Plates 13-15 of this report, Adwick Washlands is robustly designed to accommodate large numbers of visitors by directing them along footpaths and other thoroughfares which are separated from lagoons and more sensitive parts of the reserve by ditches, wire fences and electric fences. As such, the modest increase in visitor numbers likely to arise from the proposed development is unlikely to impact upon the reserve, its breeding waders and the other wildlife that it supports.

Furthermore, the Site is screened from the reserve by scrub vegetation along the track to Lowfield Lakes, which extends southwards from Lowfield Road, and by scrub planting along Dearne Way itself; construction-related impacts are therefore unlikely to arise, and the houses, once built, will not result in visual disturbance.

In addition, the Development Site itself is not 'functionally linked' to the reserve, given that it consists of intensively used horse-grazed pasture which is unlikely to support feeding waders or other birds, with any regularity, or in appreciable numbers.

No appreciable impact upon Adwick Washlands RSPB Reserve is therefore predicted.

[12] Policy B101 of the Emerging Local Plan, which states that development to the south of Lowfield Road will be expected to be designed, managed and mitigated to ensure that there are no adverse impacts on the neighbouring Adwick Washlands nature reserve.

4.2 River Dearne Nature Improvement Area

The Development Site lies within the River Dearne Nature Improvement Area, but there is relatively little policy available to assess the implications of this. Discussions with Mr Trevor Mayne, the Biodiversity Officer of Barnsley Metropolitan Borough Council[13], indicates that in effect this means that the level of ecological mitigation/ site enhancement required is 'over and above the normal level'. This has been taken into account, and the scheme is proposed to incorporate a 'wildlife friendly' Sustainable Drainage System (SuDS) element located on an area currently used for arable cultivation on the east side of the access road to Lowfield Lodge. This shall consist of a single retention basin with sloping sides some 50m in length and 20 metres in width and with a depth of 1metre[14].

This SuDS will not only be of intrinsic nature conservation value, but shall provide potential breeding conditions for amphibians, and potential new habitat for grass snake (as detailed in Section 4.3).

The land to the south-west of the Development Site, currently developing a range of vegetation through natural succession shall be used to create a shallow, seasonally wet basin of similar dimensions to the SuDS basin described above (i.e. *circa* 50m x 20m). It is proposed that this shall be situated within the lower, eastern part of this area, where it is more likely to be seasonally wet/ damp. The increase in the variation of topography would provide good habitat for a range of ecological interests such as reptiles and invertebrates, as well as potential breeding sites for amphibians. Once created it is proposed that this area be left to colonise naturally.

It is also proposed that the higher, western plateau within this area to the west of the Development Site be planted with well-spaced pendulate oak (*Quercus robur*) oak trees, to provide enhanced habitat connectivity and better foraging opportunities for birds, bats and arboreal invertebrates. This area measures approximately 80m x 80m; the oaks will be spaced approximately ten metres apart in order to allow each tree to develop a large canopy spread, and to avoid over-shading of the ground flora, in the long-term. As such, in the order of 64 oak trees will be planted within this upper area. As with the eastern area is proposed that the oak trees, and the land on which they are planted, shall be left to undertake natural succession, without specific management.

4.3 Habitats within the Development Site

No habitats of Local importance, or above, occur within the Development Site, and as such habitats have not been considered further in this assessment.

4.4 Species within the Development Site

4.4.1 Foraging and Roosting Bats

In its current state the Development Site has less than Local Importance for foraging bats and does not have scope to support roosting bats.

In order to enhance the Site for roosting bats provision will be made within 10% of the new properties, via in-cavity bat boxes or 'bat tubes', which shall be built into the structure of the properties, as they are constructed, for

[13] Mr Trevor Mayne *Pers comm* 16th August 2017
[14] James Eaton Design Drawing 16/664/7913C, dated August 2016

example through the use of Ibstock Enclosed Bat Box C boxes[15]. Landscape planting around the Development Site boundaries including the western boundary, as shown in the site layout[16], will provide enhanced foraging opportunities for bats, as will the introduction of the SuDS basin on land to the east of the Development Site and the proposed tree planting and shallow scrape to the west of the Development Site. In addition, many of the gardens associated with the new properties will be planted with trees and shrubs and once these mature they will also provide suitable foraging conditions for bats.

Due to the enhancements in habitat quality, and connectivity arising from the proposed planting, and taking into account the increased provision for roosting bats on Site, the overall net impact upon bats is considered to be positive and significant.

4.4.2 Birds

The Development Site has been assessed as having little value for breeding birds, due to its heavily-grazed nature and lack of boundary features. However, as a precaution, should any scrub or tall grassland need to be removed during the main bird breeding season (which extends between March and August inclusive) a search for active nests shall first be made, and if any active nests are found these would be protected until the nesting attempt is complete, along with a suitable buffer.

In order to enhance the Development Site for several species of principal importance 10% of the new properties will have nesting features built in for house sparrow[17], starling[18], and swift[19].

Furthermore the SuDS feature to be created to the east of the Development Site and the shallow scrape and tree planting proposed on land to the west of the Development Site, will, in combination with the landscape planting proposed for the Development Site itself, and habitats that will develop in gardens, provide further nesting and/ or feeding opportunities for a range of bird species.

Furthermore some of the new residents may also erect bird nest boxes on their properties, or in their gardens, and/ or put out bird feeders, and this may also benefit certain species, albeit the majority of these are likely be common and widespread urban/ sub-urban species.

The overall net impact of the scheme upon birds is therefore likely to be positive and significant.

4.4.3 Reptiles

The majority of the Development Site is unlikely to support reptiles. However, it is considered likely that grass snake occurs locally, and that this species may occur, intermittently and in low numbers, within long grassland along the southern Development Site boundary. A search of these habitats will therefore be made, before potentially suitable habitat is removed.

The introduction of the proposed SuDS basin to the east of the Development Site and the shallow scrape to be created west of the Development Site will provide enhanced opportunities for grass snake which is likely to benefit from the scheme, albeit not significantly.

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[15] www.nhbs.com/browse/search?q=Ibstock+Enclosed+Bat+Box+C
[16] Richard Ward Design Layout Plan 449/3G revision G, dated 1st March 2019
[17] www.nhbs.com/woodstone-build-in-house-sparrow-nest-box, or similar
[18] www.nhbs.com/starling-box-smooth-brick, or similar
[19] www.nhbs.com/woodstone-build-in-swift-nest-box-a, or similar

4.4.4 Amphibians

Although the majority of the Development Site is unlikely to support amphibians, it is considered likely that common toad occurs within Lowfield Lakes, and that this species could occur in low numbers in the southern and south-western parts of the Development Site where longer vegetation is present. The introduction of the proposed SuDS basin to the east of the Development Site and the shallow scrape to be created west of the Site will provide enhanced opportunities for this species, albeit this is not predicted to result in a significant net gain.

4.5 Summary of Effects

A summary of the potential impacts, proposed mitigation and enhancement measures, and the overall net impact upon each of the listed receptors is provided in Table 2.

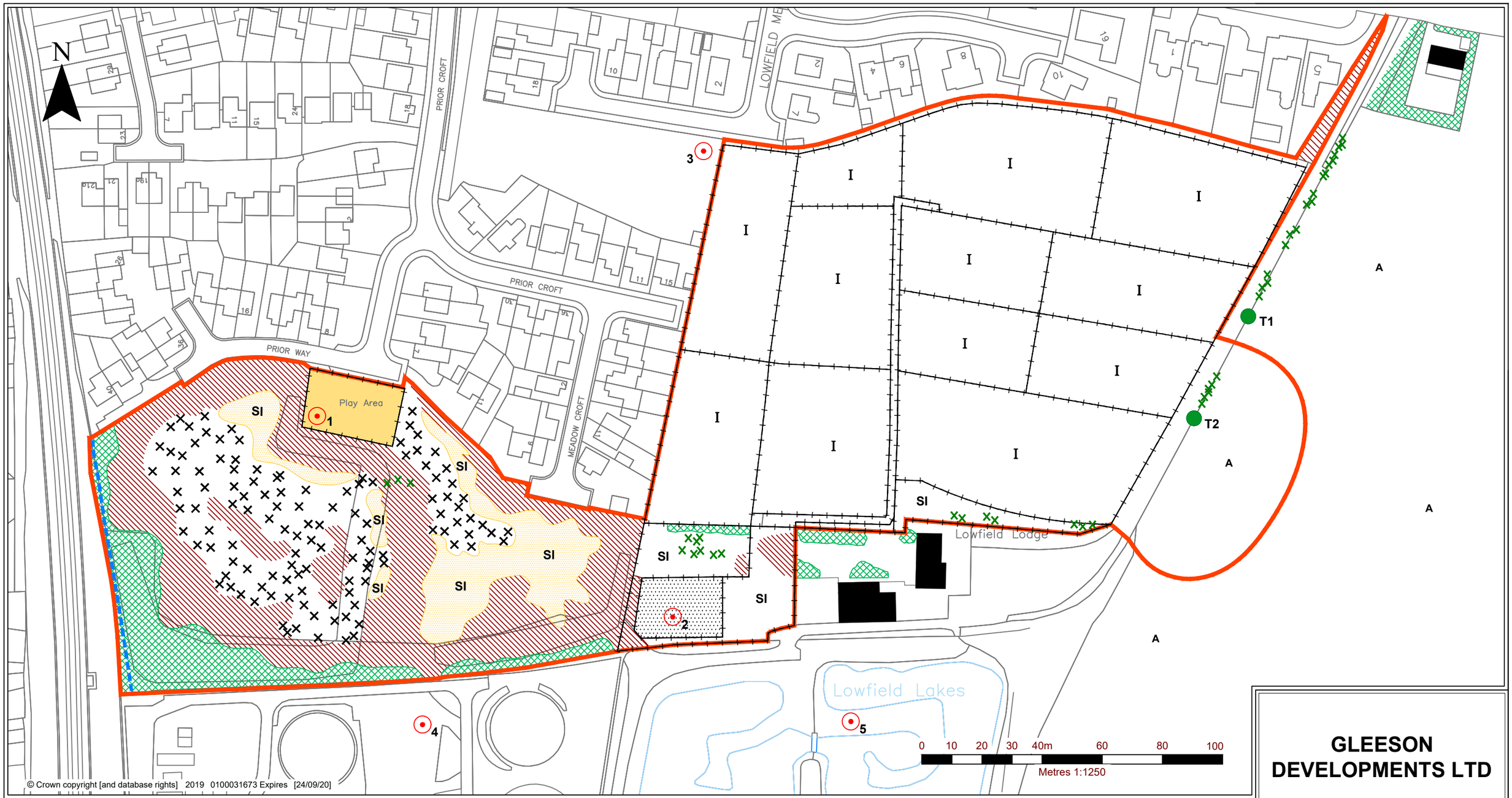
Table 2:
Summary of Potential Impacts, Proposed Mitigation/ Enhancement Measures and Predicted Impacts

Ecological Receptor	Importance	Mitigation, compensation and Enhancement	Anticipated Residual Impact
Adwick Washlands RSPB Reserve	Regional	Although Adwick Washlands is located in close proximity to the Development Site, it is robustly designed to accommodate high numbers of visitors, whose movements are restricted to less sensitive parts of the reserve by physical barriers and appropriate signage.	No net change
River Dearne Green Infrastructure Area and River Dearne Nature Improvement Area	Local	The Development Site will not have an adverse impact upon the GIA, and the introduction of a SuDS basin to the east of the Development Site and a shallow scrape with tree planting to the west of the Development Site will deliver ecological benefits in keeping with the NIA designation.	Positive Not Significant
Bats	Less Than Local	The creation of a SuDS basin to the east of the Development Site and a shallow scrape and tree planting to the west of the Development Site will benefit foraging and commuting bats, as will proposed landscaping within the Development Site itself. As new gardens mature they will also provide additional habitat for bats. Furthermore 10% of the new properties will have in-cavity bat boxes built in to provide new roosting opportunities.	Positive Significant

Ecological Receptor	Importance	Mitigation, compensation and Enhancement	Anticipated Residual Impact
Birds	Less Than Local	The creation of a SuDS basin to the east of the Development Site and a shallow scrape and tree planting to the west of the Development Site will benefit birds, as will proposed landscaping within the Development Site itself. As new gardens mature they will also provide additional habitat for bats; furthermore several of the new residents may establish wild bird feeding stations. 10% of the new properties will have nesting opportunities built in for house sparrow, starling and swift (priority species). Several of the new residents may also erect additional nest boxes on trees within their gardens (once they mature), or on their houses/ garages. Clearance of potential bird nesting habitat will be undertaken outside of the bird nesting season (March to August inclusive) if possible, or following a search for nests by an ecologist, as a precaution.	Positive Significant
Reptiles	Less Than Local	Reptiles have not been found on Development Site, and the habitat is sub-optimal, although it is considered that grass snake may occur occasionally and in low numbers. The provision of the SuDS scheme to the east of the Development Site and a shallow scrape to the west has potential to provide enhanced opportunities for this species.	Positive Not Significant
Amphibians	Less Than Local	Although the Development Site does not contain any water bodies, it is considered likely that common toads occur within Lowfield Lakes, and that this species could occur in the southern and south-eastern parts of the Development Site. The provision of the SuDS scheme to the east of the Development Site and a shallow scrape to the west has potential to provide enhanced opportunities for this species.	Positive Not Significant

DRAWINGS

DRAWING 1



SITE BOUNDARY

I — IMPROVED GRASSLAND

SI — POOR SEMI-IMPROVED GRASSLAND

SI — SEMI-IMPROVED NEUTRAL GRASSLAND

TALL HERB / RUDERAL

EARLY SUCCESSIONAL HABITAT WITH TALL RUDERALS

A — AMENITY GRASSLAND

A — ARABLE GRASSLAND

BARE GROUND

SCATTERED SCRUB

DENSE / CONTINUOUS SCRUB

FENCE

BUILDINGS

LOCATION OF INDIVIDUAL TREES AND REFERENCE NUMBER

2 — TARGET NOTE

DRY DITCH

GLEESON DEVELOPMENTS LTD

SLR global environmental solutions
UNIT 2, NEWTON BUSINESS CENTRE
THORNCLIFFE PARK ESTATE
NEWTON CHAMBERS ROAD
CHAPELTOWN
SHEFFIELD, S35 2PW
T:+44 (0)114 2455153
www.slrconsulting.com

BOLTON-UPON-DEANE
(PHASE 3)

ECOLOGY SURVEY

PHASE 1 HABITAT SURVEY

DRAWING 1

Scale: 1:2000 @ A3

Date: SEPTEMBER 2019

03044.00081.27.001.0_PHASE_1_HAB_PLAN.dwg

TARGET NOTES TO ACCOMPANY DRAWING 1

Target Note	Plate	Description
1		A small fenced-off (wood post and rail) area designed for the exercising of horses. This has a largely bare soil/ fine gravel substrate with some the margins of the fence supporting coarse grasses and tall herbs. A horse box is parked within the adjacent compartment to the east. This is also the location of an incompletely constructed wooden shed or stable block.
2		Location of a small area of open space between new and older development on the western boundary of the Development Site currently comprising open rough grassland but has recently seen the planting up sapling trees.
3		Location of a formal playground with several play facilities including swings and roundabouts with surrounding soft artificial surfaces, seating and amenity grassland.

Target Note	Plate	Description
4		Location of sewage works with several settlement and treatment tanks. Access to the works is on the east side of an active railway line running north south and which forms the western boundary of the un-developed land located to the south-west of the Development Site. The southern end of the sewage works meets the River Dearne.
5		Location of Lowfield Lakes coarse fishery. This comprises of lake facilities with fishing platforms. The lakes are well stocked with a range of coarse fish and is well known for the value of its carp fishing. The southern end of this site meets the north bank of the River Dearne.

APPENDIX 1

Development Site Plan

- NOT FOR USE ON SITE -
PROVISIONAL LAYOUT DRAWING, SUBJECT TO PLANNING APPROVAL

0m 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m

Existing tree to be removed

Existing tree to be retained and protected during construction to British Standard 5837:1991.

Indicative Areas of new tree planting see schedule for species

New hedge planting

New hedge planting & fence to detail

Grass to front garden

Paving slab access paths to level threshold for principle entrance. Gradient not to exceed 1in 12 for maximum 5.00m length

Private drives.

1.80m high screen wall

S.W. boarded vertical screen fence 1.80m high (100 x 22mm boards with 22mm gaps, 3No. 75 x 38mm rails, 100 x 100mm posts @ 1.875m centres).

Plot division fence, post & wire

(201) House type code reference number

10 Plot number

Garages location.

Parking bays

169.000 Proposed finished floor level + / - 0.5m

HOUSE TYPE

code	type	no
201	2 bed semi det/ terr	18
202	2 bed semi det	10
301	3 bed semi det	13
302	3 bed semi det	12
303	3 bed semi det	6
304	3 bed detached	7
307	3 bed detached	8
309	3 bed semi det	11
311	3 bed semi det	3
403	4 bed detached	1
404	4 bed detached	4
405	4 bed detached	4
TOTAL		**97**

gleeson

Richard Ward Design

Chartered Architectural Technologist
Architectural Design & Development Consultant

Richard S. Ward
M.C.I.A.T.
Telephone 01604 410943

2. Burtram Close
Weston Favell
Northampton NN3 3PH

LOWFIELD ROAD
BOLTON ON DEARNE 3

planning layout

GLEESON
HOMES & REGENERATION

G	P215 changed to 304 type.	01.03.19

A	Type 406 omitted, types 307 and 311 added, various plot substitutions.	19.12.14
B	AQ1-1 & AQ1-2 odour contours added.	12.10.15
C	Parking arrangements increased across the development, Plots 124, 130-159, 141, 146, 155-158, 170, 171, 174-176, 178-198, 203, 204, 207, 208, 213-219 revised. Road from P172-176 & p152-155 revised.	06.01.16
D	Drive spec to schedule revised.	25.08.16
E	Landscape buffer to open space added.	09.01.17
F	P120,125 & 146 type 307 substituted for original 310, driveway spec revised. Plot 121 type changed to 304. 122-124, 161-164, 165-167 revised to accommodate gap either side of type 405's	05.04.17

Scale
1:500 at A1

Date
28.11.14

Dwg No
449/3G

APPENDIX 2

Relevant Legislation and National Planning Policy

Relevant Legislation[20]

Conservation of Habitats and Species Regulations 2017[21]

The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb[22] wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

Wildlife & Countryside Act 1981[23]

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000[24] and the Natural Environment and Rural Communities Act (NERC) 2006[25], consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive)[26], making it an offence to:

- intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- pick or uproot any wild plant listed under Schedule 8 of the Act; or
- Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act.

Protection of Badgers Act 1992[27]

The Protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or

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[20] Please note that the summary of relevant legislation provided here is intended for general guidance only. The original legislation should be consulted for definitive information.

[21] http://www.legislation.gov.uk/uksi/2017/1012/contents/made

[22] Disturbance, as defined by the Conservation of Habitats and Species Regulations 2017, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

[23] www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810069_en_1

[24] www.legislation.hmso.gov.uk/acts/acts2000/20000037

[25] http://www.opsi.gov.uk/acts/acts2006/ukpga_20060016_en_1

[26] eur-lex.europa.eu/LexUriServ/site/en/consleg/1979/L/01979L0409-20070101-en

[27] http://www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1

obstructing access to it.

Natural Environment & Rural Communities (NERC) Act 2006[28]

The NERC Act 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

Section 41 of the Act requires the publication of a list of habitats and species which are of principal importance for the purpose of conserving biodiversity, which is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

Relevant Planning Policy

National Planning Policy Framework

The National Planning Policy Framework (NPPF, 2019)[29] sets out guidance for local planning authorities and decision-makers on how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/05[30], the broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out.

Paragraph 170 d of the NPPF states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

- *Minimising impacts on, and providing net gains for, biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."*

Furthermore, Paragraph 171 states that plans should:

".....take a strategic approach to minimising and enhancing networks of habitats and green infrastructure, and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries".

Paragraph 174 states that:

"To protect and enhance biodiveristy and geodiversity, plans should:

a) *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiveristy; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
b) *Promote the conservation, restoration and enhancement of priority habitats, ecology networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity".*

---

[28] http://www.opsi.gov.uk/acts/acts2006/ukpga_20060016_en_1

[29] Department for Communities and Local Government (February 2019) *National Planning Policy Framework*.

[30] Office of the Deputy Prime Minister. 2005. Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. ODPM Circular 06/2005.

Paragraph 175 goes on to state:

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

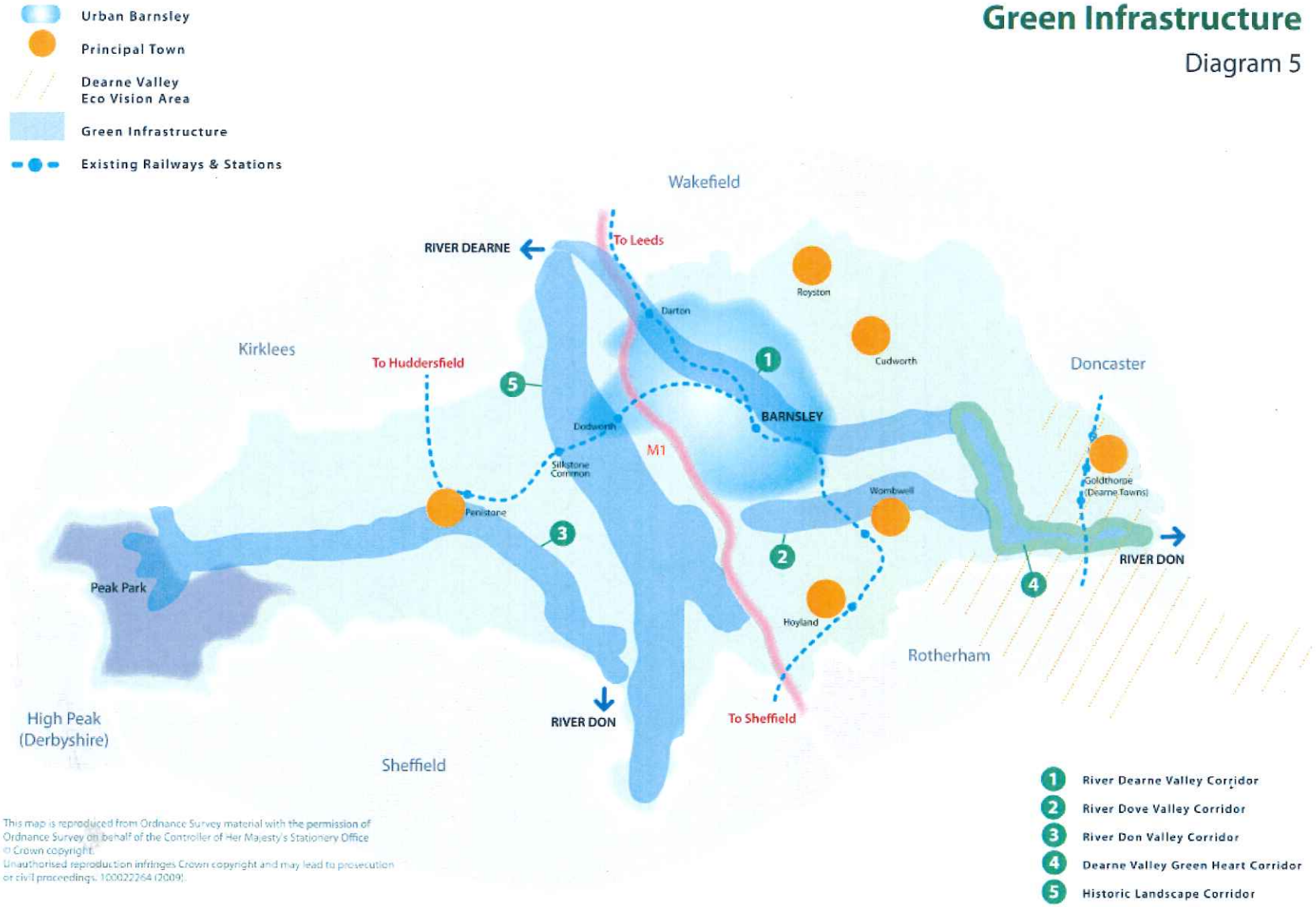
a) *If significant harm to biodiversity, resulting from a development cannot be avoided (through locating to an alternative site with less harmful impacts), adequately mitigated for, or, as a last resort, compensated for, then planning permission should be refused;*
b) *Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments) should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
c) *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensatory strategy exists; and*
d) *Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity".*

APPENDIX 3

Diagram 5 (Green Infrastructure) from the Barnsley Core Strategy

Green Infrastructure

Diagram 5

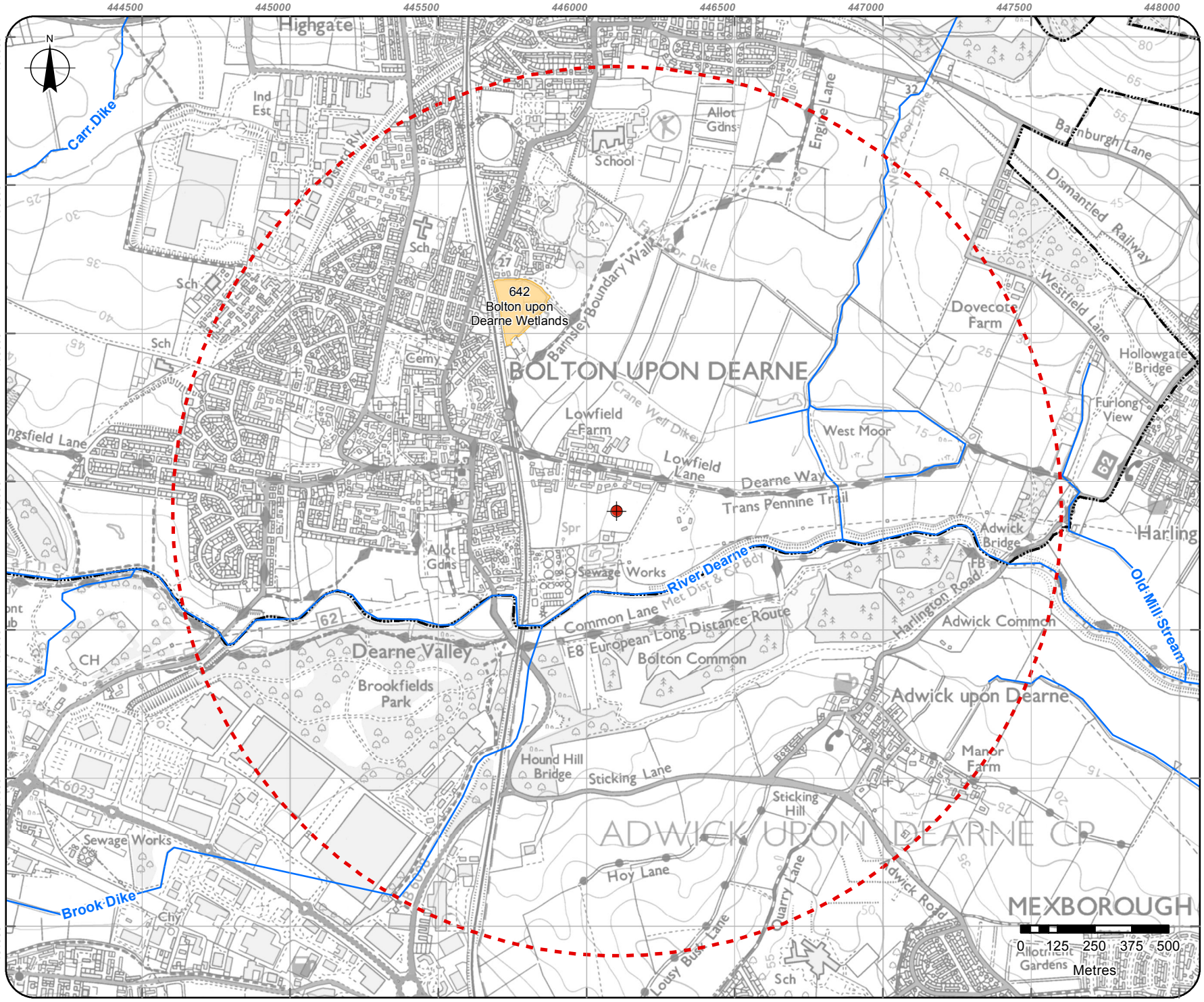


APPENDIX 4

Desk Study Data from the Local Environmental Records Centres

Statutory and Non Statutory Local Wildlife Sites Within the Search Area

Land off Lowfield Road, Bolton upon Dearne

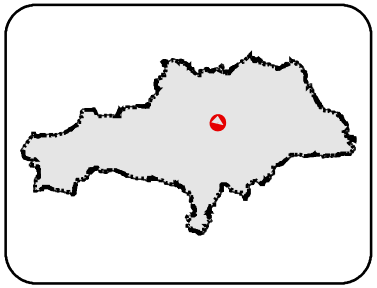


BARNSLEY
Metropolitan Borough Council

Key

- Centre of Search Area
- 1.5 km Radius
- Watercourse
- SWT Nature Reserve
- SSSI
- Local Nature Reserve
- Local Wildlife Sites
- Barnsley District Boundary

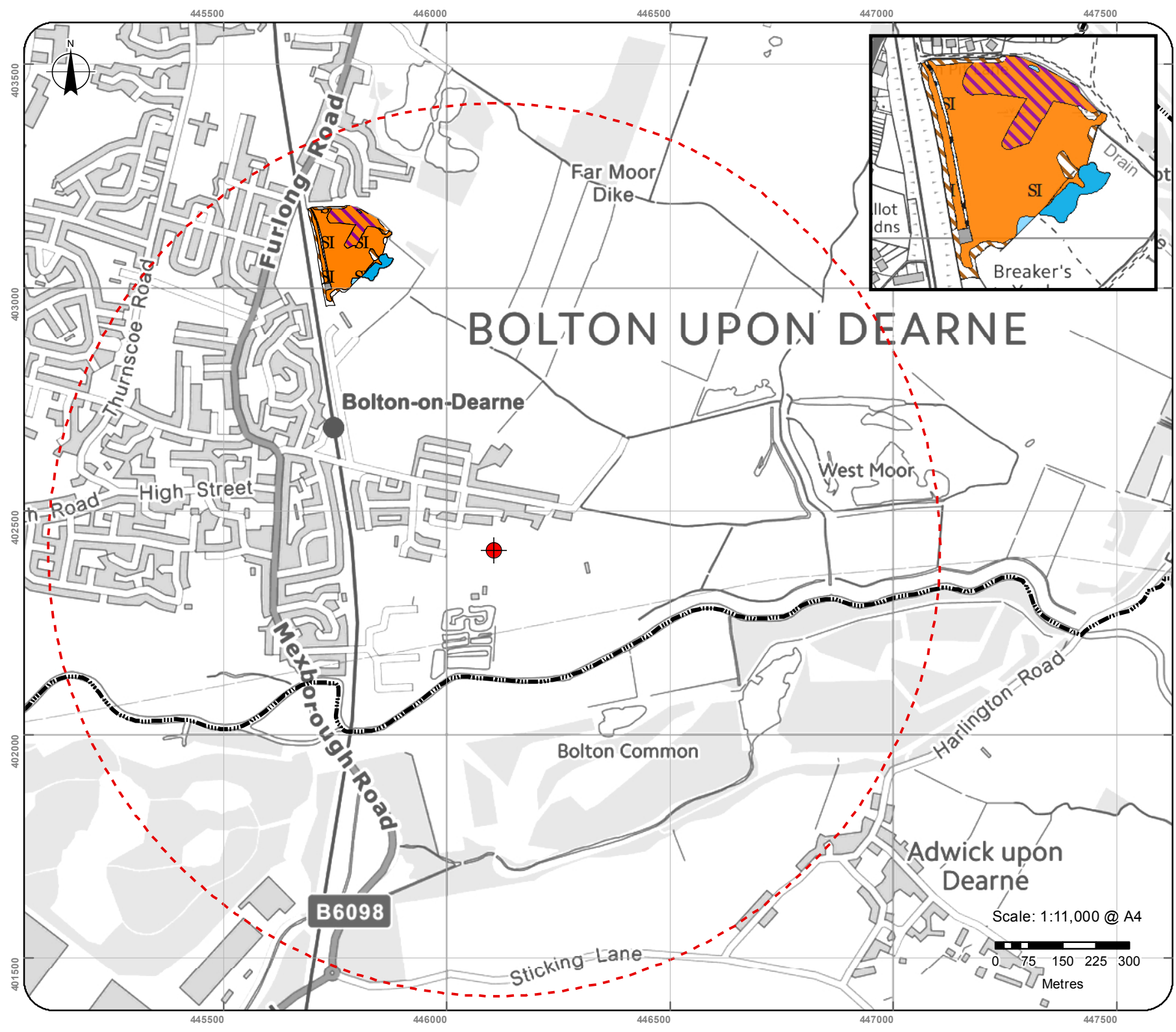
SHEFFIELD BIOLOGICAL RECORDS CENTRE



Map Created - 01 Oct 2019

Sheffield City Council

NATURAL ENGLAND

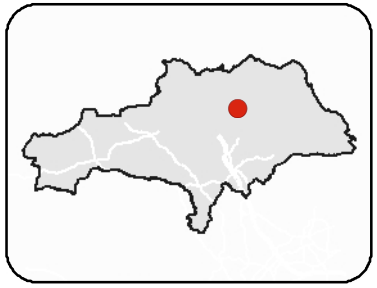


Barnsley Biological Records Centre

Areas of Interest from the National Habitat Inventories.

Phase 3
Bolton upon Dearne

- Bare Ground
- Gravelled Path
- Marshy Grassland
- Neutral Semi-Improved Grassland
- Standing Water
- Swamp
- Tall Herb Ruderal/Ephemeral
- Location
- 1km Radius
- Barnsley District Boundary



Map Created - 14 Aug 2017

NATURAL ENGLAND

BARNSLEY Metropolitan Borough Council

APPENDIX 5

Correspondence from the RSPB dated 14th June 2017

RSPB
c/o YWT
1 St George's Place
York
YO24 1GN

FAO Joe Jenkinson
Head of Planning and Building Control
Barnsley Metropolitan Council

By email only: developmentmanagement@barnsley.gov.uk

14 June, 2017

Dear Mr Jenkinson,

Re: Planning Application 2017/0638
Residential development of 97 no. dwellinghouses with garages, parking spaces and public open space and associated roads and sewers.
Land off Lowfield Road, Bolton Upon Dearne, Rotherham, S63 8JF

It has come to our attention that the above planning application was recently submitted to the Planning Authority for consideration. The proposed development site is less than 100 m from our reserve at Adwick Washlands. We therefore wish to submit the following comments on the application (please note that our comments are late because we were not consulted by the Council within the original timeframe of the consultation, and have since obtained an extension from the planning case officer).

The RSPB has a strong commitment to working in Barnsley, especially in the Dearne Valley, where we have been working closely with Barnsley MBC and other partners on the Dearne Valley Green Heart Partnership and the Dearne Valley Nature Improvement Area (NIA) for a number of years.

We have carefully considered the documents and information submitted by the applicant in support of the application, and based upon the information therein, **the RSPB objects to the above application on the basis due to the potential for adverse impacts on wildlife and habitats on Adwick Washlands,** which have not been considered or assessed by the applicant.

Please find the reasons for our position detailed in the attached Annex.

I look forward to hearing from you soon.

Yours sincerely,

Dr Michelle D. Lindsay
Conservation Officer (Uplands) Yorkshire, Humber & Peak District

michelle.lindsay@rspb.org.uk
01904 623151
07736 722183

Annex 1: The RSPB's response to Barnsley Council re: Planning Application 2017/0638. Land off Lowfield Road, Bolton Upon Dearne, Rotherham, S63 8JF

The RSPB has a strong commitment to working in Barnsley, especially in the Dearne Valley, where we have been working closely with Barnsley MBC and other partners on the Dearne Valley Green Heart Partnership and the Dearne Valley Nature Improvement Area (NIA) for a number of years.

The proposed development site is less than 100 m from the RSPB's reserve at Adwick Washlands. We have carefully considered the documents and information submitted by the applicant in support of the application, and based upon the information therein, **the RSPB objects to the above application on the basis due to the potential for adverse impacts on wildlife and habitats on Adwick Washland,** which have not been considered or assessed by the applicant. Please find the reasons for our position detailed below:

The Dearne Valley's importance for Biodiversity and Nature Conservation
The Dearne Valley is a special area for wildlife. Its river corridors and wetland habitats support important populations of a number of rare and declining species. This was reflected in the Dearne Valley Green Heart being awarded Nature Improvement Area (NIA) status and its identification in the draft Barnsley Local Plan as a key ecological asset for the Borough.

The RSPB has various landholdings within the Valley. Data taken from the RSPB's reserves alone record 2061 species, including 3 Globally Red Listed species; 57 Nationally Rare & Scarce species; 12 GB red listed species, and numerous Species of Principal Importance (under the Natural Environment & Rural Communities Act 2006) and Barnsley Biodiversity Action Plan species. These records indicate that the Dearne Valley's suite of wetland sites are likely to be of national importance for a number of species and habitats, including:

- Breeding bittern
- Breeding waterbirds
- Wintering waterfowl
- Invertebrates
- Vascular plants
- Freshwater reedbed, fen and wet grassland
- Standing open waters

Biodiversity and the conservation importance of Adwick Washlands
The application site lies in close proximity to Adwick Washlands – a valuable component of the wetland habitat network described above and a key site in the Dearne Valley Green Heart NIA. The Adwick Washlands support several of the species and habitats of high conservation value listed above. It is one of the most important sites in the valley for its wetland habitats, including wet grassland, and it supports a number of priority conservation species including a breeding wader population.

The RSPB's concerns in relation to Adwick Washlands
The RSPB is concerned that the applicant has not identified or assessed the potential for adverse impacts on Adwick Washlands and its biodiversity. For example, breeding waders are of high

conservation importance as they have suffered major declines across England in recent decades. Waders such as Curlew, Lapwing and Snipe are ground nesting species which are potentially vulnerable to disturbance by people and dogs.

As such, and in order to demonstrate compliance with Policy BIO1 of the emerging Local Plan[1], it is important that all measures necessary to protect and enhance Adwick Washland's valuable wildlife are secured through this application. This will ensure that Adwick Washlands continues to contribute to the rich biodiversity of the Dearne Valley and that the Local Plan objective of a net gain in biodiversity is achieved.

The RSPB is of the view that in order to comply with the Local Plan policy, an ecological impact assessment of the development is needed. The assessment should focus on identifying all potential ecological impacts on Adwick Washlands and its associated habitats and species. Potential mitigation measures, including development site design and site management measures should then be identified to ensure that any adverse impacts on the site are avoided or mitigated. We would welcome further discussions with the Planning Authority and the Developer on this matter.

Michelle Lindsay, 14 June 2017

[1] We note that in light of the inspector's comments on the Local Plan, the amended policy for site AC26 land South of Lowfield Road, Bolton upon Dearne has been modified to read:
"The development will be expected to:
Be designed, managed and mitigated to ensure that there are no adverse impacts on the neighbouring Adwick Washlands nature reserve (to the east of the site) which is of significant ecological interest."
https://www.barnsley.gov.uk/media/5871/sd30-policy-revisions-in-light-of-inspector-comments-may-2017-final.pdf

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