

Providing Ecological Solutions



Bolton Upon Dearne STW, Barnsley
Preliminary Ecological Appraisal



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Declaration of Compliance

This Preliminary Ecological Appraisal has been undertaken in accordance with British Standard 42020:2013 "Biodiversity: Code of practice for planning and development" (BSI 2013), the CIEEM Guidelines for Preliminary Ecological Appraisal (CIEEM 2017a) and Ecological Impact Assessment (CIEEM 2016). The information has been prepared and provided in compliance with the CIEEM's Code of Professional Conduct (CIEEM 2019) and Guidelines for Ecological Report Writing (CIEEM 2017b).

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KEY FINDINGS

This report assesses the ecological baseline conditions at Bolton upon Dearne STW and identifies any potential ecological constraints to the proposed development. A desktop study of site attributes and an 'Extended' habitat survey (using UK Habitat Classifications) identified features of apparent or potential ecological significance. Potential ecological impact of the proposed development is assessed, and recommendations are detailed to limit impact on biodiversity and ecological features.

Designated Sites

Designated sites are unlikely to be impacted by the development due to the distance from site and scale of the development.

Habitats & Species

Habitats present include modified grassland (g4), other neutral grassland (g3c), arrhenatherum grassland (g3c5), bramble scrub (h3d), mixed scrub (h3h), developed land sealed surface (u1b), and built linear features (u1e). Several bird species were observed on site including pheasant *Phasianus colchicus*, dunnock *Prunella modularis*, Chroicocephalus *ridibundus*, robin *Erithacus rubecula*, long-tailed tit *Aegithalos caesus*, moorhen *Gallinula chloropus*, and magpie *Pica pica*.

Great crested newts (GCN) *Triturus cristatus* have been recorded within 0.6 km of the site and the site is within a GCN Green risk zone, therefore GCN may be present in the surrounding area including the site.

Recommendations

- Vegetation clearance works should be timed to avoid the nesting bird season which runs from March to August inclusive.
- GCN eDNA survey should be completed on ponds immediately east of the site.
- Further protected species surveys will be required to ensure no protected species are present within the scrub if the vegetation requires removal.
- Strict biosecurity measures should be adhered to including the washing of all equipment (boots, machinery etc) on arrival to, and removal from, site.
- Opportunities for biodiversity enhancement should be incorporated into a Biodiversity Net Gain Assessment and Biodiversity Enhancement Plan.

1. INTRODUCTION

1.1. TERMS OF REFERENCE

PBA Applied Ecology Ltd (PBA) was commissioned by Yorkshire Water Services (YWS) to undertake a Preliminary Ecological Appraisal (PEA) and protected species tree scoping at Bolton Upon Dearne STW, Barnsley, South Yorkshire. This report assesses the ecological baseline conditions at the site and identifies any potential ecological constraints to the proposed development. The objectives of the ecological appraisal were to:

- determine the habitats present on site;
- determine the protected/notable species evident or potentially present on site;
- identify likely constraints and assess potential impacts of the proposed development;
- highlight further survey work which may be required;
- provide recommendations for mitigation/avoidance measures.

The level of detail in this appraisal and report is intended to be proportionate to the scale of development and complexity of its potential impacts.

Unless stated otherwise, the information provided within this report is valid for a maximum period of 24 months from the date of survey. If works at the site have not progressed by this time an updated site visit may be required in order to determine any changes in site composition and ecological constraints.

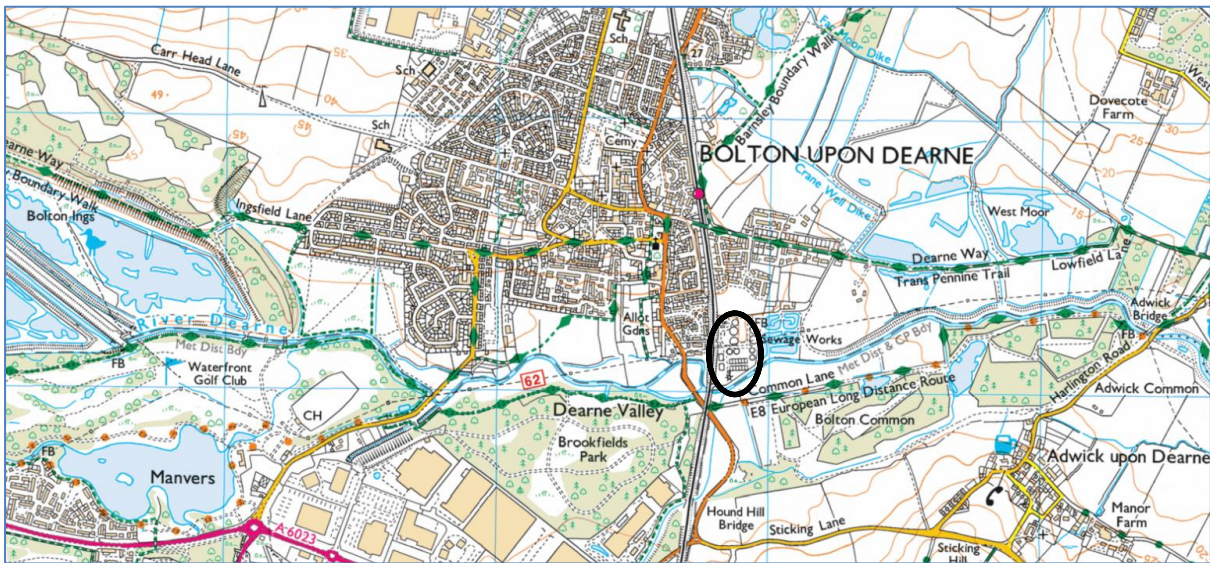


Figure 1: Site location (Bing Maps, 2023)

1.2. ADDITIONAL SURVEYS & REPORTS

PBA will produce a separate report that details a Biodiversity Net Gain Assessment that will be undertaken for the site (PBA, 2023a). In addition, a Biodiversity Enhancement Plan will be produced which details how the works can be undertaken in an ecologically sensitive way and to provide as much gain for biodiversity as is possible on site (PBA, 2023b).

1.3. SITE DESCRIPTION AND CONTEXT

The survey site is located southeast of Bolton Upon Dearne and adjacent to the River Dearne (SE 45889 02224, Figures 1 & 2). The site comprises a sewage treatment works and associated infrastructure.

The wider landscape is dominated by arable farming, nearby settlements, and nature reserves along the River Dearne corridor. (Figures 1 & 2).



Figure 2: Site context (Google Maps, 2023)

1.4. DESCRIPTION OF WORKS

The proposed development is expected to include the installation of two new kiosks (Appendix E).

1.5. WILDLIFE LEGISLATION AND PLANNING POLICY

This PEA has been undertaken with reference to relevant environmental and wildlife legislation and planning policy. Key international and national legislation considered within the scope of this document includes:

- EC Habitats Directive 1992 (Council Directive 92/43/EEC)
- Wildlife and Countryside Act 1981 (as amended)
- Countryside and Rights of Way Act 2000
- Natural Environment and Rural Communities Act 2006
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Protection of Badgers Act 1992
- Hedgerow Regulations 1997
- Environmental Protection Act 1990
- Salmon and Freshwater Fisheries Act 1975
- National Parks and Access to the Countryside Act 1949

The most recent amendments to the Conservation of Habitats and Species Regulations 2017 take account of the UK's exit from the European Union. These amendments are found in the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019.

In addition to obligations under wildlife legislation, Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services sets the Government's main objective for protecting UK biodiversity as "*to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.*" (DEFRA 2011). The National Planning Policy Framework 2012 promotes decision-making with a presumption in favour of sustainable development and requires planning decisions to "*contribute to and enhance the natural*

environment”, including “*minimising impacts on biodiversity and providing net gains in biodiversity where possible*” (Appendix A). Biodiversity is therefore a material consideration in planning decisions.

Further information on legislation and policy is provided later in this report (5. Evaluation) and in Appendix A, including levels of protection granted to the species and habitats identified at this site.

2. APPROACH

This PEA is based on a desktop study of site attributes and an ‘Extended’ habitat survey. The standard habitat mapping survey (using UK Habitat Classifications (UK HCWG 2018)) is ‘Extended’ to highlight features of apparent or potential ecological significance, in relation to habitats present that have the potential to support notable or protected species (CIEEM 2017a). The fieldwork to support this PEA was undertaken on 7th March 2023 by Andrew Macaulay BSc & Joel Emerson BSc.

2.1. DESKTOP STUDY

Information on local, national, and international designations, including statutory wildlife sites (e.g., SSSI, SAC), within a 2 km radius of the site were identified using the Natural England online facility ‘Magic Map’.

Records of rare and protected species, and non-statutory wildlife sites within a 2 km radius of the site were provided under the agreement between YWS and the record centres, dated May 2022. Data provided by the YWS was interpreted to determine the presence of protected and notable species and habitats. Although biological records are rarely comprehensive, they may provide valuable information on the presence of species not recorded during field surveys. Such records are generally collected through *ad hoc* surveys; therefore, the absence of records does not demonstrate the absence of species.

To identify habitat suitability for amphibians, especially great crested newts *Triturus cristatus* (GCN); aerial photographs and OS maps were used to identify any waterbodies within 500 m of the survey site. The site was also identified as a GCN risk zone using data provided by Natural England (NE, 2023).

2.2. HABITAT SURVEY

The habitat survey consisted in mapping the vegetation communities present on-site. The survey area covered the STW and associated infrastructure. The habitats immediately surrounding these features were also surveyed and covered an area of approximately 3.2 ha. The habitat survey was conducted in accordance with standard UK Habitat Classification habitats definitions, condition assessments and mapping methodology (UK HCWG 2018). Each habitat type is recorded by way of colour or code, allowing simple display and interpretation on the resulting habitat map. Dominant and indicator plant species within each habitat type were observed and recorded. Additional description is provided as supplementary information relating to species composition, habitat structure, management and features of local ecological interest or potential significance.

2.3. SPECIES SCOPING SURVEY

In line with standard practice (JNCC 2010, CIEEM 2017a), an assessment of the potential for the habitats on site to support protected or notable species was made. Notable species are those which are legally protected, are nationally or locally rare or endangered, or are identified as a ‘priority’ species in the UK or locally. The likelihood of presence at the site of each notable species was determined; the assessment was based on the results of the desktop study, visual evidence of animal activity on site, and the quality and extent of suitable habitats. Impact of the proposed development on notable species and supporting habitats was determined. An impact assessment was conducted to the extent that can be supported by the completed surveys; in cases where further surveys are recommended, more specific impact assessment can be developed subsequently.

In addition, any invasive non-native species (INNS) and/or controlled species present on site were recorded.

2.4. SURVEY CONDITIONS AND CONSTRAINTS

Weather conditions at the time of survey were sunny and dry with low wind and an ambient temperature of ~ 5 °C.

In accordance with Clause 6.7 of BS 42020:2013, any limitations to the survey and ecological assessment are detailed below and within the results.

The species scoping survey does not constitute a full survey for each taxon and cannot categorically ascertain the presence or absence of any species. Where there is potential for protected species of florally rich communities, additional survey work may be required to confirm and detail their presence.

Whilst a representation of the habitat types is achievable, some plant species are likely to have been missed due to the timing of survey.

Where impact could not be confidently ascertained, checks by an ecologist are recommended immediately prior to works starting.

3. DESKTOP STUDY RESULTS

The following chapter has been produced based upon information gathered from the desk study.

3.1. DESIGNATED SITES

Records show one statutory site within 2 km radius of the survey area (Table 1; Appendix B). This is Dearne Valley Wetlands Site of Special Scientific Interest (SSSI), approximately 0.4 km east of the site.

There are no non-statutory designated sites within 2 km of the survey area.

Table 1: Designated sites within 2 km of Bolton Upon Dearne STW.

Statutory designated sites		
Dearne Valley Wetlands	SSSI	0.4 km east
<p>Designated for the presence of wetland, open water, and lowland mixed deciduous woodland.</p> <p>The site also provides suitable habitat for breeding bittern <i>Botaurus stellaris</i>, black-headed gull <i>Chroicocephalus ridibundus</i>, gadwall <i>Mareca strepera</i>, garganey <i>Spatula querquedula</i>, pochard <i>Aythya ferina</i>, shoveler <i>Spatula clypeata</i>, and willow tit <i>Poecile montanus</i>. As well as large winter roosts of gadwall and shoveller</p>		

3.2. SPECIES RECORDS

The data records provided by YWS (Appendix C) show that a range of nationally and internationally protected species are present within 2 km of the site. Detailed below is a summary of the most significant results of relevance to the survey area and proposed works. Distances are taken from a central grid reference.

A total of thirty-one species of bird have been recorded within 2 km of the site, this includes the Schedule 1 kingfisher *Alcedo atthis*, avocet *Recurvirostra avosetta*, and osprey *Pandion haliaetus*. Other bird species include redwing *Turdus iliacus*, fieldfare *T. pilaris*, whooper swan *Cygnus cygnus*, and greylag goose *Anser anser*.

Amphibian and reptile records include GCN which have been recorded approximately 1.7 km north as recently as 2018. Grass snake *Natrix helvetica* have been recorded approximately 1.6 km north in 2013.

Mammal records within 2 km of the site include the bat species common pipistrelle *Pipistrellus pipistrellus*, Daubenton's bat *Myotis daubentonii*, and noctule *Nyctalus noctula*. Other mammalian species include otter *Lutra lutra* that has been recorded less than 0.1 km south of site of the River Dearne in 2001, water vole *Arvicola amphibius* has also been recorded 0.6 km east of the River Dearne as recently as 2013.

INNS records within 2 km of the site include Japanese knotweed *Fallopia japonica*, Himalayan balsam *impatiens glandulifera*, American skunk-cabbage *Lysichiton americanus*, giant hogweed *Heracleum mantegazzianum*, Japanese rose *Rosa rugosa*, Canadian pondweed *Elodea canadensis*, and New Zealand pigmyweed *Crassula helmsii*.

4. FIELD SURVEY RESULTS

The following provides an assessment of the habitat categories identified within the survey area, and any notable species observed or potentially present. Habitats present include: modified grassland (g4), other neutral grassland (g3c), Arrhenatherum grassland (g3c5), bramble scrub (h3d), mixed scrub (h3h), developed land sealed surface (u1b), and built linear features (u1e) (Appendix D). Pheasant *Phasianus colchicus*, dunnoek *Prunella modularis*, black-headed gull *Chroicocephalus ridibundus*, robin *Erithacus rubecula*, long-tailed tit *Aegithalos caesus*, moorhen *Gallinula chloropus*, and magpie *Pica pica* were observed whilst conducting the survey, and surrogate signs of rabbit *Oryctolagus cuniculus* were recorded (Table 2). The site is within the Green Risk Zone for GCN, thus GCN may be present in the surrounding habitat.

Habitat distribution and location of target notes are recorded on the UK Habitat Classifications Map (Appendix D) and photographs are provided in Appendix F.

4.1. MODIFIED GRASSLAND (G4)

The largest habitat on site, dominated by perennial ryegrass *Lolium perenne* and meadow grass *Poa* spp. Other species include cow parsley *Anthriscus sylvestris*, thistle *Cirsium* spp., and moss *Bryophyta* spp. Sward height was low at approximately 4 cm, and there were signs of rabbit scattered across the habitat. The habitat is assessed in poor condition, five criteria were passed but the essential criteria 1 was failed.

4.2. ARRHENATHERUM GRASSLAND (G3C5)

Located in the northern half of the site on an area of unmanaged grassland, this habitat was dominated by false oat grass *Arrhenatherum elatius*. Other species included bedstraw *Galium* spp., mugwort *Artemisia vulgaris*, burdock *Arctium* sp., dock *Rumex* spp., hemlock *Conium maculatum*, and red fescue *Festuca rubra*. Sward height was approximately 70 cm. Moderate condition based on passing 3 criteria including the essential criteria.

4.3. OTHER NEUTRAL GRASSLAND (G3C)

This area is a section of an unmanaged sludge bed that has been colonised by plant species and is now recognised as other neutral grassland. This habitat is dominated by nettle *Urtica dioica*, other species included hemlock, and common reed *Phragmites australis*. Sward height was approximately

50 cm, and one third of the sludge bed was being used as a spoil heap for waste produced by the STW. Poor condition, only passing 1 criterion and failing the essential criteria.

4.4. BRAMBLE SCRUB (H3D)

This habitat borders the entire site and is dominated by bramble *Rubus fruticosus* agg. Other species include dogwood *Cornus sanguinea*, elder *Sambucus nigra*, ash *Fraxinus excelsior*, hogweed *Heracleum sphondylium*, dead nettle *Lamium* sp., and nettle. Moderate condition passing 3 criteria.

4.5. MIXED SCRUB (H3H)

Located at the southern tip of the site, this area of the site was inaccessible due to safety concerns outlined by Tilbury Douglas. Some habitat classification was possible from outside the habitat however condition assessments were not possible. The habitat was dominated by willow *Salix* spp. and bramble, other species included ash and hawthorn *Crataegus monogyna*.

4.6. DEVELOPED LAND SEALED SURFACE (U1B)

Hardstanding, buildings, and sewage treatment infrastructure. Some areas of hard standing were colonised by buddleia *Buddleja davidii* and will likely become scrub without management (TN1).

4.7. BUILT LINEAR FEATURES (U1E)

Roads and tracks on site.

Table 2: Summary of desktop study and field survey results.

Taxa	Previous Records	Observations and likelihood of presence on site
Birds	Yes – Several records of birds within 2 km of the site.	High – Several species of birds observed and heard singing on site including robin, long tailed tit, moorhen, and magpie.
Bats	Yes – Multiple bat records within 2 km of the site.	Low – Transient bats are likely to forage and pass over site however the site has negligible potential for roosting bat species.
Mammals	Yes – Otter and water vole have been recorded within 0.6 km of the site along the River Dearne.	Low – Otter and water vole are present along the River Dearne but are unlikely to be present on site due to the lack of suitable habitat. Common mammal species such as rabbit are confirmed to be present on site.
Amphibians and reptiles	Yes – GCN and grass snake have been recorded within 2 km of the site.	Moderate – Habitats on site have negligible potential for grass snake and the site is a Green Risk Zone for GCN.
INNS	Yes – INNS have been recorded within 2 km of the site, this includes Japanese knotweed, Himalayan balsam, giant hogweed, and New Zealand pigmyweed.	Low – The site walkover found no evidence of INNS on site.

5. EVALUATION AND RECOMMENDATIONS

No designated sites are likely to be impacted by the works. Species of bird were confirmed to use habitats on and near the site. There is potential for other protected and notable species to use habitats on site. In addition, it is likely that transient mammals and birds will use the habitats on site. Significant ecological features of interest are marked on the UK Habitat Classifications Map in Appendix D and photographs provided in Appendix F.

Below is an evaluation of the ecological features found on site, and the potential impact and effect of the proposed development in the absence of any mitigation. Recommendations are made to avoid the potential risk of short- or long-term adverse impacts on local biodiversity due to the proposed development, and to prevent contravention of environmental and wildlife law (Table 3).

Table 3: Ecological features – evaluation and recommendations

Ecological Feature	Potential impact of proposed development	Recommendations for mitigation and/or further surveys
Modified grassland, other neutral grassland, arrhenatherum grassland, bramble scrub, and mixed scrub.	Some areas of these habitats will be lost due to the development with no current plans to replace them within the development.	As part of the BNG assessment (PBA, 2022a) it is likely to be necessary to retain some of these habitats or compensate for their loss.
Birds	High – suitable nesting bird habitat present on site.	All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), as such it is a criminal offence to intentionally or recklessly kill or injure any wild bird, damage, or destroy the nest of any wild bird while it is in use or under construction, or take or destroy the egg of any wild bird. Vegetation clearance works should be timed to avoid the nesting bird season which runs from March to August inclusive.
Mammals	Moderate – Badger setts may be present in dense area of scrub in the south of the site	Further protected species surveys will be required to ensure no protected species are present within the scrub if the vegetation requires removal.
GCN	Moderate – The site may provide terrestrial habitat for GCN, there are suitable breeding ponds for GCN immediately east of the site.	GCN eDNA survey should be completed on ponds immediately east of the site.
INNS	High – INNS could be introduced to the site by the development.	Strict biosecurity measures should be adhered to including the washing of all equipment (boots, machinery etc) on arrival to, and removal from, site.
- Any excavations created during the development should be left covered overnight or fitted with a ramp to allow any entrapped animals to escape.		

The National Planning Policy Framework 2012 requires planning decisions to “*enhance the natural environment*” and provide “*net gains in biodiversity where possible*” (Appendix A). At Bolton Upon Dearne STW there are several **biodiversity enhancement opportunities** that can be implemented with the proposed development. These are listed below and discussed further within the BNG assessment (PBA, 2023a) and Biodiversity Enhancement Plan (PBA, 2023b):

- Creation of a wildflower meadow to compensate for any lost areas of grassland.
- Compensation for loss of nesting bird habitat through integrated bird boxes within the fabric of new buildings.
- Creation of bat roosting habitat through integrated bat boxes within the fabric of new buildings.

6. CONCLUSION

If the recommendations detailed above (Chapter 5/Table 3) and good working practices are implemented, no ecological features are expected to be adversely impacted by the proposed development/works (Appendix E).

REFERENCES

- BSI. 2013. Biodiversity - Code of practice for planning and development (BS 42020:2013). British Standards Institution.
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- Natural England. 2023. GCN Risk Zones. Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::gcn-risk-zones-cumbria/explore?location=54.623752%2C-2.912210%2C10.23>.
- PBA Applied Ecology. 2023a. Biodiversity Net Gain Assessment - Bolton Upon Dearne STW
- PBA Applied Ecology. 2023b. Biodiversity Enhancement Plan - Bolton Upon Dearne STW
- UK Habitat Classification Working Group. 2018. UK Habitat Classification - Habitat Definitions V1.0 at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>

APPENDICES

Appendix A – Policy and Legislation

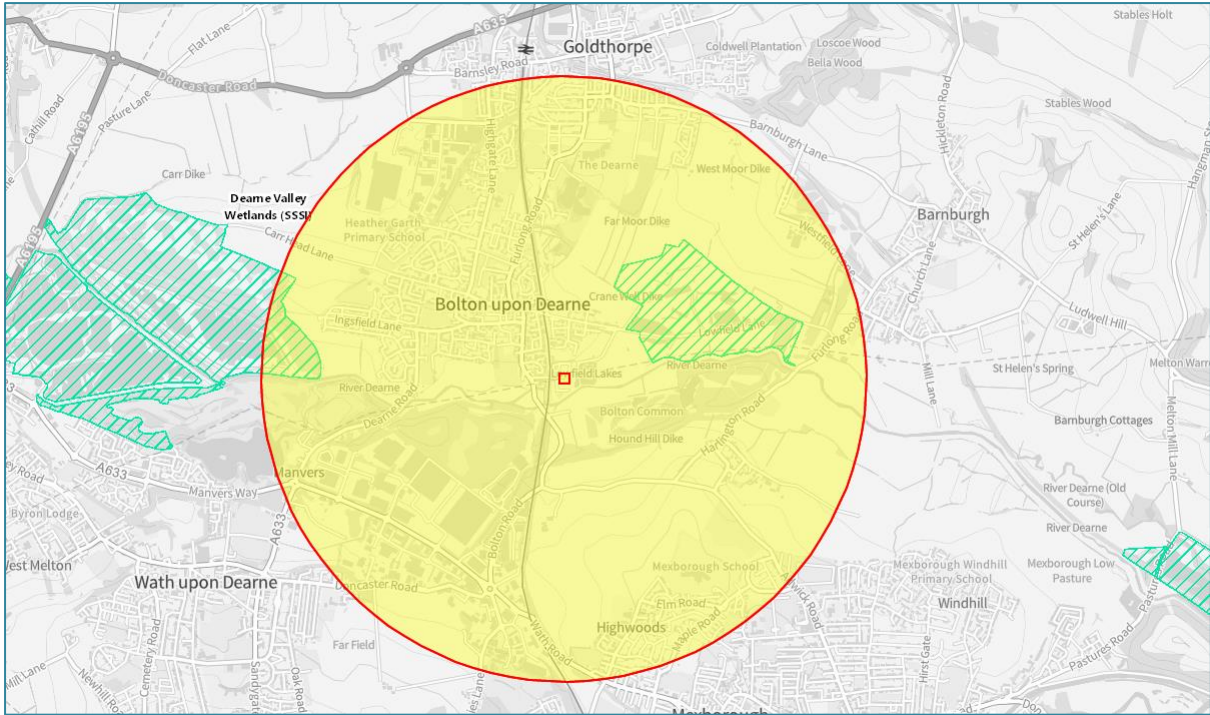
Statutory measures are in place to protect habitats and wildlife; these measures range from the global to the local, and variously give protection to whole ecosystems or single species. Included is a brief summary of legislation and planning policy, this is not an exhaustive list. The original texts of the relevant legislation should be consulted for further details.

Legislation		Description
INTERNATIONAL	Convention on the Conservation of European Wildlife and Natural Habitats 1979 (Bern Convention)	Parties are required to protect all wild plant and animal species and their natural habitats; and to afford special protection to the most vulnerable or threatened species.
	Convention on Biological Diversity 1992	Parties are required to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity. In the UK, this is implemented through the UK Post-2010 Biodiversity Framework.
	Habitats Directive 1992/43/EEC	European member states are required to implement legislation to designate a network of protected sites and maintain their ecological integrity. Certain species are also strictly protected through this Directive. In England, this is implemented through the Conservation of Habitats & Species Regulations 2010.
	Water Framework Directive 2000/60/EC	European member states must implement legislation to designate, monitor and maintain or improve the ecological status of river basins and coastal waters. In England, this is implemented through the Water Environment Regulations 2003.
	Birds Directive 2009/147/EC	European member states are required to provide general protection to all wild birds and to designate protected sites for rare or vulnerable species. In the UK, this is implemented through the Wildlife and Countryside Act 1981.
NATIONAL	National Parks and Access to the Countryside Act 1949 (as amended)	Provides the protection of National Parks and is still the primary legislation under which some local sites for nature conservation are designated.
	Wildlife and Countryside Act 1981 (as amended)	Provides for the protection of sites and species of national importance for nature conservation. The level of protection depends on which Schedule of the Act the species is listed on. Species protection includes prohibition of some or all of: killing, injuring, disturbing or taking, and also protection of breeding and sheltering places. Schedule 9 (with 2010 amendments) lists invasive non-native species, for which it is an offence to not adequately control and thus cause to grow in the wild.
	Countryside and Rights of Way Act 2000	Amends and strengthens existing legislation for protection of threatened species and SSSIs. For example, some offences under the Wildlife and Countryside Act can now result in imprisonment.

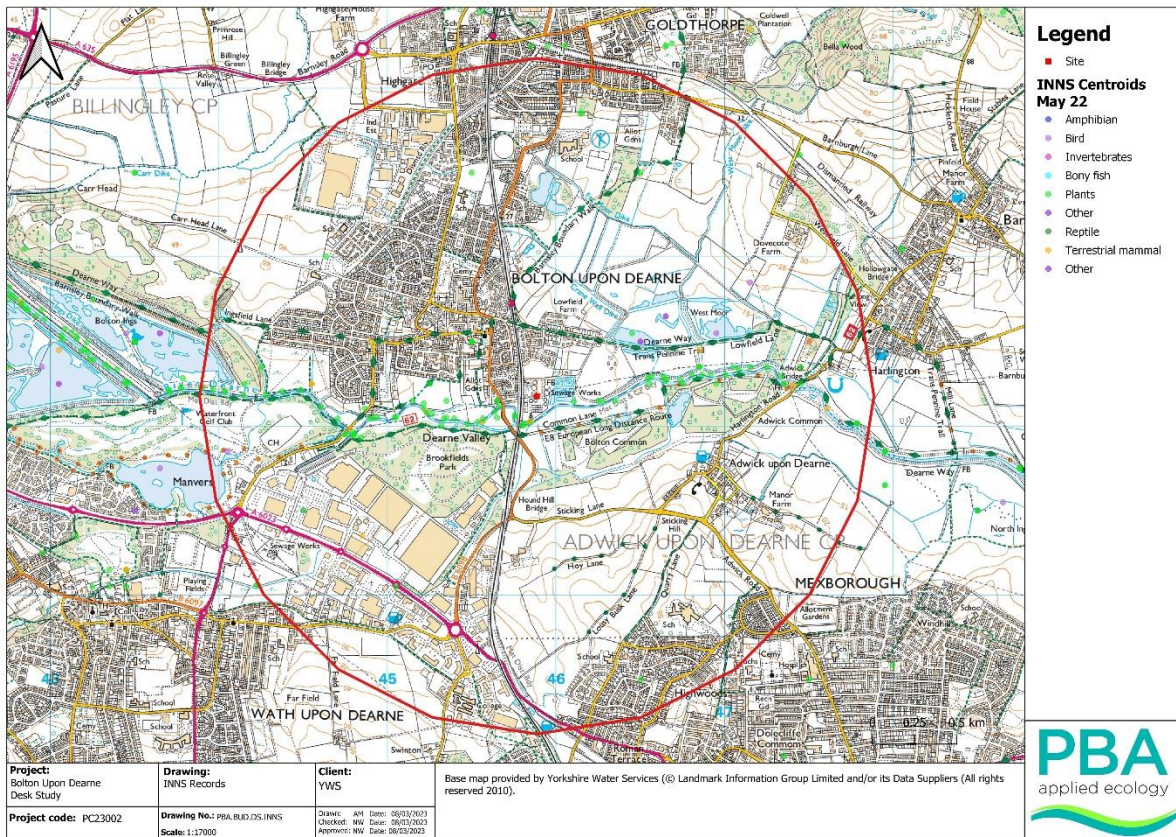
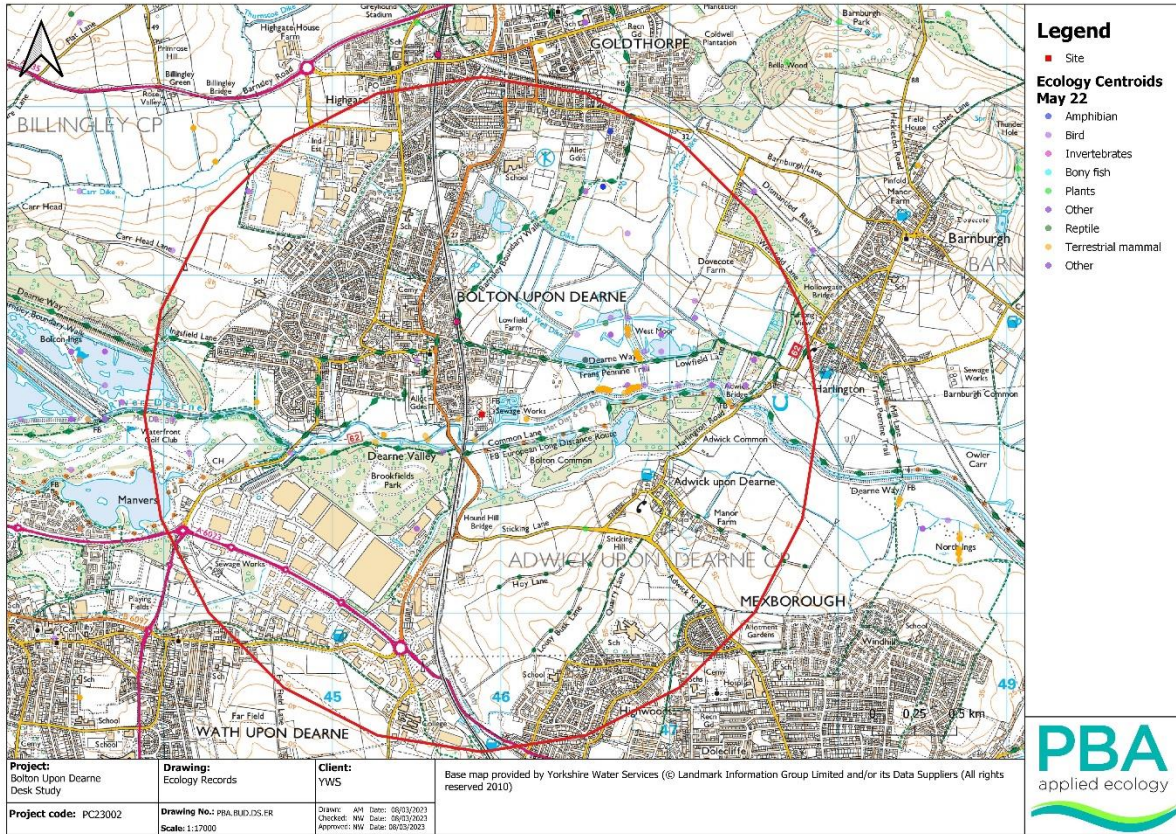
Legislation		Description
NATIONAL	Natural Environment and Rural Communities Act 2006	Places a duty on all public authorities to consider biodiversity in their work. The duty extends beyond just conserving what is already there to carrying out, supporting, and requiring actions that may also restore or enhance biodiversity. Requires the Secretary of State to produce a list of species and habitats of principal importance for the conservation of biodiversity; this list is used to guide authorities when implementing their duty.
	The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	An amendment to the Conservation of Habitats and Species Regulations 2017 to transpose these EU regulations to UK law post-Brexit. Provides for the protection of sites in the UK that support habitats and species in need of conservation across Europe (SPAs/SACs). Provides full protection of species of European importance. The Regulations also set out how licensing for European protected species should work and makes breaching the conditions of a licence an offence.
	Environmental Sanctions Regulations 2010	Under these Regulations, Natural England and the Environment Agency can halt illegal activities, to order the restoration of environmental damage and to impose fines (up to £250,000) where legislation has been breached.
	National Planning Policy Framework 2012	States that the planning system should help minimise the impacts that development can have on biodiversity and provide net gains in biodiversity where possible.
	Hedgerows Regulations 1997	Allow the identification of important hedgerows which are protected under the Regulations. Permission to remove important hedgerows must be obtained from the local planning authority.
	Infrastructure Act 2015	Contains amendments to the Wildlife and Countryside Act in relation to non-native invasive species. Enables an environmental authority to issue a species control order requiring a landowner to undertake control measures or the authority to do so, at the landowner's expense.
	Protection of Badgers Act 1992	Provides strict protection for badgers and their setts. Offences under the act include killing or injuring a badger, disturbance, or to damage or interfere with a sett unless a licence is obtained.

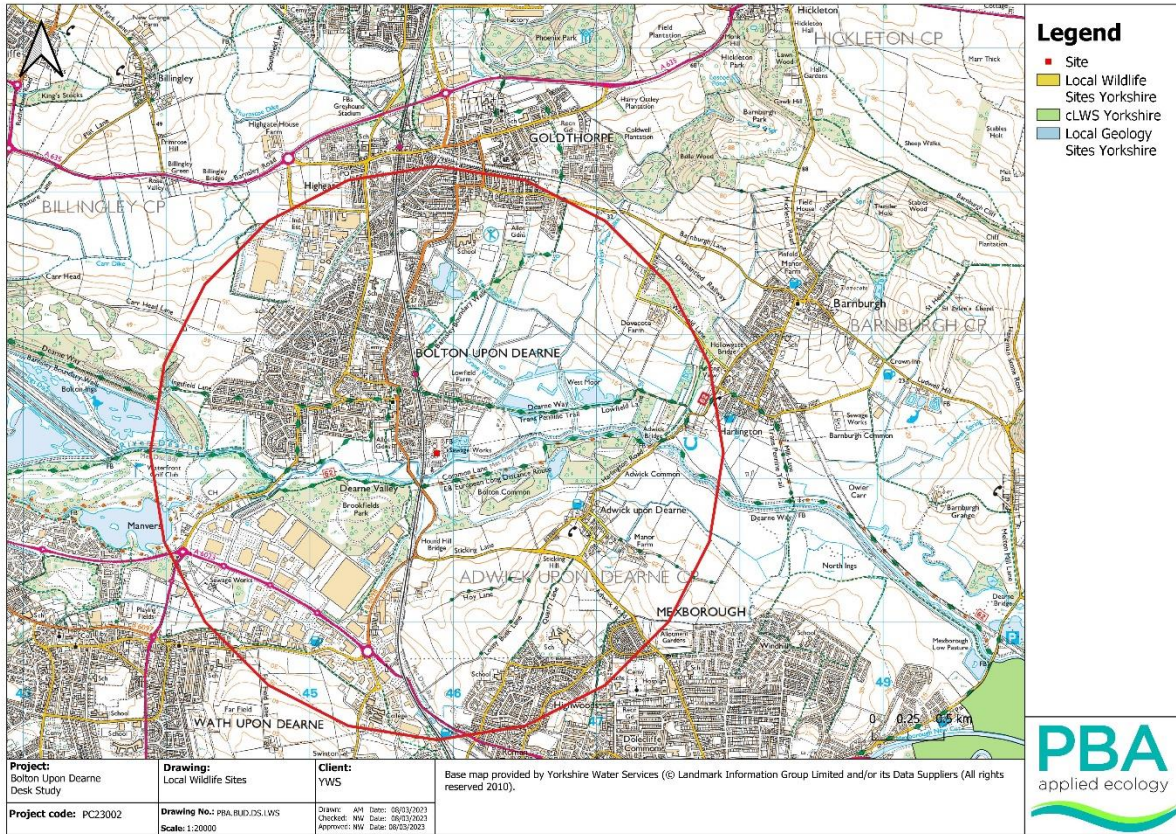
Legislation		Description
	Environmental Protection Act 1990	This Act makes provision for the improved control of pollution to the air, water, and land by regulating the management of waste and the control of emissions. Key provisions of the Act impose a duty of care on any business or person who produces, carries, keeps, treats, disposes of or import controlled waste to do so safely.
	Salmon and Freshwater Fisheries Act 1975	Legislation to protect freshwater fish, with a particularly strong focus on salmonids. Activities that constitute an offence include causing direct mortality of fish, creating barriers to migration, and causing degradation of habitats. It is also an offence to discharge poisonous matter into waters containing fish or spawn.

Appendix B – Designated Sites



Statutory designated sites within 2 km of works site (MAGIC, 2023).





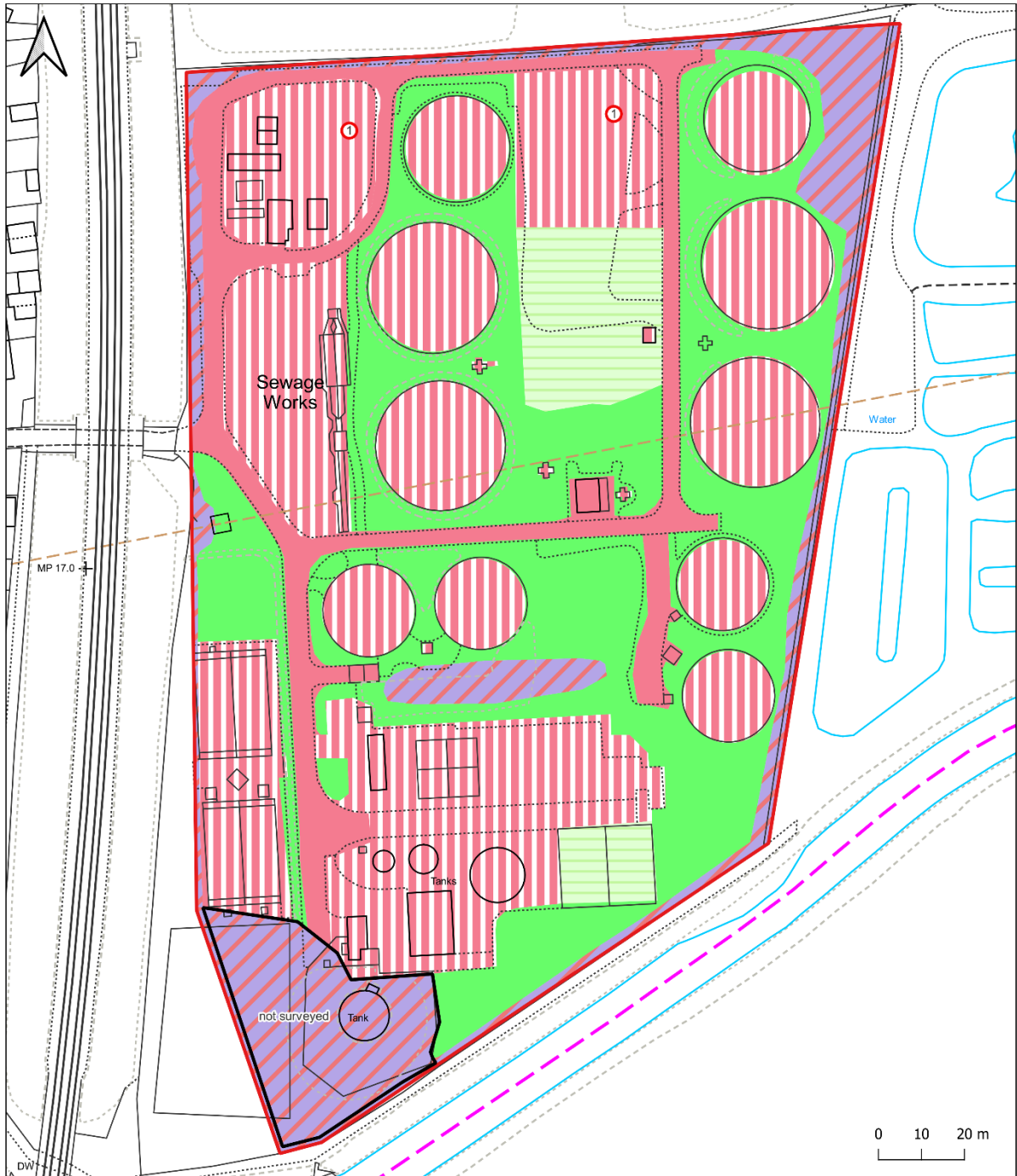
Non-statutory designated sites within 2 km of works site.


Appendix C – Species Records

Taxon group	Latin name	Common name	Most recent record	Grid Reference
amphibian	<i>Triturus cristatus</i>	Great Crested Newt	11/03/2018	SE4664703854
bird	<i>Alcedo atthis</i>	Kingfisher	05/04/2018	SE4602
bird	<i>Anser anser</i>	Greylag Goose	12/03/2022	SE4702
bird	<i>Charadrius dubius</i>	Little Ringed Plover	17/04/2018	SE4602
bird	<i>Coturnix coturnix</i>	Quail	18/05/2012	SE472023
bird	<i>Limosa limosa</i>	Black-tailed Godwit	05/08/2018	SE4602
bird	<i>Recurvirostra avosetta</i>	Avocet	12/03/2022	SE4702
bird	<i>Spatula querquedula</i>	Garganey	10/05/2012	SE472023
bird	<i>Turdus iliacus</i>	Redwing	18/11/2018	SE4602
bird	<i>Turdus pilaris</i>	Fieldfare	14/11/2018	SE4602
bird	<i>Anser anser</i>	Greylag Goose	11/04/2016	SE441019
bird	<i>Tyto alba</i>	Barn Owl	19/06/2008	SE4403
bird	<i>Charadrius dubius</i>	Little Ringed Plover	15/05/2009 - 18/05/2009	SE4501
bird	<i>Anas acuta</i>	Pintail	07/12/2018	SE4602
bird	<i>Calidris pugnax</i>	Ruff	04/07/2018	SE4602
bird	<i>Charadrius dubius</i>	Little Ringed Plover	05/08/2018	SE4602
bird	<i>Circus aeruginosus</i>	Marsh Harrier	31/07/2018	SE4602
bird	<i>Cygnus cygnus</i>	Whooper Swan	08/12/2018	SE4602
bird	<i>Falco peregrinus</i>	Peregrine	27/10/2018	SE4602
bird	<i>Falco subbuteo</i>	Hobby	17/06/2018	SE4602
bird	<i>Larus melanocephalus</i>	Mediterranean Gull	09/04/2018	SE4602
bird	<i>Limosa limosa</i>	Black-tailed Godwit	10/12/2018	SE4602
bird	<i>Milvus milvus</i>	Red Kite	29/07/2017	SE4602
bird	<i>Numenius phaeopus</i>	Whimbrel	11/04/2018	SE4602
bird	<i>Pandion haliaetus</i>	Osprey	02/07/2018	SE4602
bird	<i>Tringa glareola</i>	Wood Sandpiper	04/08/2018	SE4602
bird	<i>Tringa nebularia</i>	Greenshank	27/08/2017	SE4602
bird	<i>Tringa ochropus</i>	Green Sandpiper	18/04/2017	SE4602
bird	<i>Jynx torquilla</i>	Wryneck	26/09/2017	SE467026
bird	<i>Platalea leucorodia</i>	Spoonbill	25/06/2013	SE469026
flowering plant	<i>Hyacinthoides non-scripta</i>	Bluebell	18/08/2007	SE4601
reptile	<i>Natrix helvetica</i>	Grass Snake	03/09/2013	SE4661902718
terrestrial mammal	<i>Lutra lutra</i>	European Otter	05/01/2007	SE455020
terrestrial mammal	<i>Myotis daubentonii</i>	Daubenton's Bat	22/09/2012	SE457021
terrestrial mammal	<i>Nyctalus noctula</i>	Noctule Bat	03/06/2011	SE45300205

Taxon group	Latin name	Common name	Most recent record	Grid Reference
terrestrial mammal	<i>Pipistrellus pipistrellus</i>	Pipistrelle	03/06/2011	SE45300205
terrestrial mammal	<i>Lutra lutra</i>	European Otter	05/01/2007	SE45840202
terrestrial mammal	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	20/09/2016	SE47060164
terrestrial mammal	<i>Arvicola amphibius</i>	European Water Vole	03/09/2013	SE4662502323
bird	<i>Branta canadensis</i>	Canada Goose	25/03/2016	SE440018
bird	<i>Alopochen aegyptiacus</i>	Egyptian Goose	20/01/2017	SE4602
flowering plant	<i>Fallopia japonica</i>	Japanese Knotweed	18/08/2007	SE4600
flowering plant	<i>Heracleum mantegazzianum</i>	Giant Hogweed	05/01/2007	SE47780201
flowering plant	<i>Impatiens glandulifera</i>	Himalayan Balsam	16/03/2005	SE45840202
flowering plant	<i>Lysichiton americanus</i>	American Skunk-cabbage	09/04/2009	SE4401
flowering plant	<i>Quercus cerris</i>	Turkey Oak	23/10/2008	SE4502
flowering plant	<i>Robinia pseudoacacia</i>	False-acacia	16/05/2008	SE4502
flowering plant	<i>Rosa rugosa</i>	Japanese Rose	16/05/2008	SE4502
flowering plant	<i>Elodea canadensis</i>	Canadian Waterweed	02/03/2006	SE4503
flowering plant	<i>Fallopia baldschuanica</i>	Russian-vine	27/08/2013	SE461038
flowering plant	<i>Crassula helmsii</i>	New Zealand Pigmyweed	01/03/2015	SE464025
terrestrial mammal	<i>Neovison vison</i>	American Mink	16/03/2005	SE47600210
terrestrial mammal	<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	18/02/2016	SE4702

Appendix D – UK Habitat Classifications Map



<p>Legend</p> <ul style="list-style-type: none"> ○ Target note Not surveyed Red Line Boundary <p>Habitats</p> <ul style="list-style-type: none"> Bramble scrub Built linear features Developed land; sealed surface Mixed scrub Modified grassland Other neutral grassland 	<p>Target Notes:</p> <p>1. Hardstanding colonised by bramble scrub</p> <p>Area to south not surveyed due to scrub preventing access, condition assessments not possible.</p>	<p>Project: Bolton upon Dearne STW Preliminary Ecological Appraisal</p> <p>Drawing: UK Habitat Classification</p> <p>Client: YWS</p> <p>Scale: 1:800</p> <p>Drawing no.: PC23002.BUD,PEA</p> <p>Project code: PC23002</p>	<div style="text-align: right;">  </div> <p>Drawn: AM 08/03/2023 Checked: NW 08/03/2023 Approved: NW 08/03/2023</p> <p><small>Base map provided by Yorkshire Water Services (© Landmark Information Group Limited and/or its Data Suppliers (All rights reserved 2010))</small></p>
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Appendix E – Proposed Site Plan

**NEC4 Engineering and Construction Short
Subcontract for use under a main contract
NEC4 Engineering and Construction**



Schedule 6 – Site Information

Address – Bolton on Dearne/STW/STF

Mexborough Road (Off)




Rotherham

South Yorkshire

S63 8NX



Appendix F – Photographs and Target Notes

TN ref	Photograph	Notes
1		Hard standing colonised by buddleia.
		Bramble scrub bordering the site.
		Inaccessible mixed scrub.
		Other neutral grassland on sludge bed with spoil heaps.



Modified grassland.