The Ecology Consultancy

Wordsworth Business Park, Whaley Road, Barugh Green, Barnsley/Preliminary Ecological Appraisal/Wordsworth Properties

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Preliminary Ecological Appraisal

Report for Wordsworth Properties

Job Number	6007			
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Executive Summary

The Ecology Consultancy was commissioned in July 2021 by Martin Walsh Architects on behalf of Wordsworth Properties Ltd. to carry out a Preliminary Ecological Appraisal (PEA), comprising a Phase 1 habitat survey, protected species assessment and ecological evaluation of land at Wordsworth Business Park, Whaley Road, Barugh Green, Barnsley. The PEA is required to inform the design proposals ahead of a planning application for development at the site. The main findings are as follows:

- The site was dominated by areas of hardstanding and bare ground. Other habitats present included tall ruderal, semi-natural broadleaved woodland, standing water, spoil piles and a building.
- It is anticipated that the tall ruderal and standing water habitats will be lost to facilitate the construction of a workshop however the broadleaved woodland will be unaffected.
- The site is not subject to any statutory or non-statutory nature conservation designations. There are four non-statutory designated sites within 2km of the site, the nearest is Barnsley Canal at Wilthorpe Local Wildlife Site (LWS) located 500m north-east.
- The habitats within the site are common and widespread and are likely to be of value within the immediate vicinity of the site only (although may assume higher value where they support protected and/or notable species).
- **Foraging Bats -** the broadleaved woodland located along the north-east section of the site has potential to be used by bats which may enter the site in small numbers for foraging and commuting. Although these habitats will be unaffected directly by the works, measures should be taken to avoid impacts from artificial lighting.
- **Invasive plants -** Invasive non-native species of plant, Himalayan balsam and Japanese knotweed, have been identified on site therefore measures must be taken for the safe removal of these species.
- Recommendations to enhance the importance of the site for biodiversity in accordance with national and local planning policies comprise the inclusion of wildflower and hedgerow planting and the provision of deadwood and nesting birds and roosting bat opportunities.

1 Introduction

BACKGROUND TO COMMISSION

1.1 The Ecology Consultancy was commissioned by Martin Walsh Architectural on behalf of Wordsworth Properties on the 21st July 2021, to carry out a Preliminary Ecological Appraisal (PEA) of land at Wordsworth Business Park, Whaley Road, Barugh Green, Barnsley. The appraisal was carried out in order to provide ecological information to inform design proposals ahead of a planning application for the construction of a new workshop. This appraisal considers land within the site boundary (hereon referred to as 'the site') as indicated on the plan provided on behalf of the client (Martin Walsh Architectural, 2021).

SCOPE OF THE REPORT

1.2 The aim of this appraisal is to provide baseline ecological information about the site. This will be used to identify any potential ecological constraints associated with the proposed development and/or to identify the need for additional survey work to further evaluate any impact that may risk contravention of legislation or policy relating to protected species and nature conservation. Where necessary, mitigation and/or enhancement measures have been recommended to ensure compliance. Although enhancement measures may be used to achieve a net gain in biodiversity in line with national and local planning policies, this does not comprise a formal Biodiversity Net Gain assessment and no formal metric calculations have been made.

1.3 This appraisal is based on the following information sources:

- a desk study of the site and land within a 2km surrounding radius;
- a search for international wildlife sites within a 15km surrounding radius;
- a Phase 1 habitat survey (JNCC, 2010) of the site to identify and map the habitats present;
- a protected species assessment of the site to identify features with potential to support legally protected species; and
- an evaluation of the site's importance for nature conservation.

1.4 This appraisal has been prepared with reference to best practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017) and

as detailed in British Standard 42020:2013 *Biodiversity - Code of Practice for Biodiversity and Development* (BSI, 2013).

1.5 The survey, assessment and report were conducted and written by Philip Pell BSc (Hons), a qualifying CIEEM member and experienced ecologist who is trained and competent in carrying out Phase 1 habitat surveys and protected species assessment.

SITE CONTEXT AND STATUS

1.6 The proposed development site is 0.96ha in size and is centred on Ordnance Survey National Grid reference SE 32201 08345. The site is bound by a railway line to the east and industrial properties to the north, south and west. The wider surroundings largely consist of residential and commercial properties to the south and west, and farmland, with several areas of woodland and open green space to the north and east, beyond the railway line.

DEVELOPMENT PROPOSALS

1.7 The development proposals for the site, based on current plans provided on behalf of the client (Martin Walsh Architectural, 2021), are for a commercial development comprising of a vehicle workshop.

RELEVANT LEGISLATION AND PLANNING POLICY

1.8 The following key pieces of nature conservation legislation are relevant to this appraisal. A more detailed description of legislation is provided in Appendix 5:

- The Conservation of Habitats and Species Regulations 2017 (as amended) (commonly referred to as the Habitats Regulations);
- Wildlife and Countryside Act 1981 (as amended);
- Natural Environment and Rural Communities Act 2006;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

1.9 The National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2019) requires local authorities to avoid and minimise impacts on biodiversity and to provide net gains in biodiversity when taking planning decisions.

1.10 Other planning policies at the local level which are of relevance to this development include the Barnsley Local Plan (Barnsley Metropolitan Borough Council, 2019). Further information is provided in Appendix 5.

NOMENCLATURE

1.11 Common names of botanical species are used throughout this report, with a species list, including scientific names in accordance with Stace (2019) provided in Appendix 3. All other species use commonly accepted names in accordance with the Natural History Museum Species Dictionary (Natural History Museum, 2021).

2 Methodology

DESK STUDY

2.1 The following data sources were reviewed to provide information on the location of statutory designated sites[1], non-statutory designated sites[2], legally protected species[3], Species and Habitats of Principal Importance[4] and other notable species[5] and notable habitats[6] that have been recorded within a 2-15km radius of the site:

- Sheffield Biological Records Centre, the local Biological Records Centre, principally for species records and information on non-statutory sites;
- MAGIC (http://www.magic.gov.uk/) - the Government's on-line mapping service; and
- Ordnance Survey mapping and publicly available aerial photography.

2.2 Records provided by the desk study are provided in Section 3 of this report. Records for relevant protected or noteworthy species have been used to inform the assessment of the potential for protected species at the site and to provide a preliminary view of the site's ecological importance but are not presented in full in the report.

HABITAT SURVEY

2.3 A habitat survey of the site was carried out on the 4th August 2021 in dry, calm and mild conditions. It covered the entire site including boundary features. Habitats were described and mapped following standard Phase 1 habitat survey methodology (JNCC, 2010) and marked on a paper base map and subsequently digitised using ESRI ArcGIS

1 **Statutory designations** include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR).

2 **Non-statutory sites** are designated by local authorities (e.g. Sites of Importance for Nature Conservation or Local Wildlife Sites).

3 **Legally protected species** include those listed in Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981; Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended); or in the Protection of Badgers Act 1992 (as amended).

4 **Species/Habitats of Principal Importance** are those listed on Section 41 of the Natural Environment and Rural Communities Act, 2006.

5 **Notable species** include Species of Principal Importance under the Natural Environment and Rural Communities Act 2006; Local Biodiversity Action Plan (LBAP) species; Birds of Conservation Concern (Eaton *et al*., 2015); and/or Red Data Book/nationally notable species (JNCC, undated).

6 **Notable habitats** include Habitats of Principal Importance under the Natural Environment and Rural Communities Act, 2006; those included in an LBAP; Ancient Woodland Inventory sites; and Important Hedgerows as defined by the Hedgerow Regulations 1997.

software. Habitats were also assessed against descriptions of Habitat of Principal Importance as set-out by the JNCC (BRIG, 2008)[7] where appropriate.

2.4 Records for dominant and notable plants are provided, as are incidental records of birds and other fauna noted during the course of the habitat survey. The latter have been used to justify the potential presence of important ecological features where applicable.

2.5 The site was also surveyed for the presence of invasive plant species as defined by Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, detailed mapping of such species is beyond the scope of this commission and locations on the habitat plan are indicative only.

2.6 Target notes are used to provide information on specific features of ecological interest (e.g. a badger sett) or habitat features that were too small to be mapped (refer to Appendix 2.

PROTECTED AND INVASIVE SPECIES ASSESSMENT

2.7 The suitability of the site for legally protected species was assessed on the basis of relevant desk study records[8] combined with field observations from the habitat survey. The likely importance of habitat for protected species occurrence was ranked on a scale from 'negligible' to 'present' as described in Table 2.1.

2.8 The assessment of habitat suitability for protected or notable species was based on professional judgement drawing on experience of carrying out surveys of a large number of urban and rural sites and best practice survey guidance on habitat suitability and identifying field signs.

Table 2.1: Protected species assessment categories

Category	Description
Present	Presence confirmed from the current survey or by recent, confirmed records.
High	Habitat present provides all of the known key requirements for a given species/species group. Local records are provided by desk study. The site is within or close to a national or regional stronghold for a particular species. Good quality surrounding habitat and good connectivity.

[7] Collection of data required to confirm that certain habitats (including rivers and ponds) meet criteria for Habitats of Principle Importance is beyond that obtained during a Phase 1 habitat survey. In these cases, the potential for such habitats to meet relevant criteria is noted but further surveys to confirm this assessment may be recommended

[8] Primarily dependent on the age of the records, distance from the site and types of habitats at the site.

Moderate	Habitat present provides some of the known key requirements for a given species/species group. Several desk study records and/or the site is within known national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, barriers to movement and disturbance.
Low	Habitat present is of relatively poor quality for a given species/species group. Few or no desk study records. Presence cannot be discounted on the basis of national distribution, nature of surrounding habitats or habitat fragmentation.
Negligible	Habitat is either absent or of very poor quality for a particular species or species group. No desk study records. Surrounding habitat unlikely to support wider populations of a species/species group. Outside or peripheral to the known range of a species.

2.9 The findings of this assessment establish the need for protected species surveys that are required to achieve compliance with relevant legislation.

2.10 Surveys may be required where a site is judged to be of low suitability for a particular species/ species group. However, in some cases there may be opportunities to comply with legislation, without further survey, through precautionary measures prior to and during construction.

SITE EVALUATION

2.11 Where sufficient baseline data are available, the site's ecological importance has been evaluated broadly following guidance issued by CIEEM (CIEEM, 2019a) which ranks the nature conservation importance of a site according to a geographic scale of reference: international, national, regional (South Yorkshire), metropolitan, county, vice-county or other local authority-wide area (Barnsley Metropolitan Borough Council); and of importance at the zone of influence of the site only. In evaluating the nature conservation importance of the site, the following factors were considered: nature conservation designations; species/habitat rarity; naturalness; fragility and connectivity to other habitats. Where no importance has been assigned this is due to insufficient information.

2.12 An assessment of likely ecological impacts has been undertaken in accordance with CIEEM guidelines (CIEEM, 2019a) only where clear evidence is available to substantiate and justify the findings. In the absence of such evidence, the ecological feature is merely identified as a potential constraint to development.

2.13 Where potential ecological constraints to development are identified, further survey requirements and/or mitigation measures that are proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development are described. In addition, in accordance with the NPPF and local/regional planning policies,

opportunities to enhance or create benefits for wildlife are provided. These measures may be appropriate for the attainment of net gains in biodiversity, although this assessment does not provide a formal measure of Biodiversity Net Gain.

DATA VALIDITY AND LIMITATIONS

2.14 Every effort has been made to provide a comprehensive description of the site; however, the following limitations apply to this assessment.

- The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. It should not be taken as providing a full and definitive survey of any protected species group. Additional surveys may be recommended if on the basis of the preliminary assessment or during subsequent surveys it is considered reasonably likely that protected species may be present.
- The ecological evaluation is preliminary and may change subject to the findings of further ecological surveys (should these be required).
- Even where data for a particular species group are provided in the desk study, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest, the area may simply be under-recorded.
- Where only four figure grid references are provided for protected species by third parties, the precise location of species records can be difficult to determine and they could potentially be present anywhere within the given 1km x 1km square. Equally, six figure grid references may be accurate to the nearest 100m only.
- The Phase 1 habitat survey does not constitute a full botanical survey or provide accurate mapping of invasive plant species.
- Ecological survey data are typically valid for 12-18 months unless otherwise specified (CIEEM, 2019b).

2.15 Despite these limitations, it is considered that this report accurately reflects the habitats present, their biodiversity importance and the potential of the site to support protected and notable species.

3 Results and Evaluation

DESIGNATED SITES

Statutory designated nature conservation sites

3.1 The proposed development site is not subject to any statutory nature conservation designations.

3.2 A number of internationally important sites are located within a 15km radius of the proposed development site, including South Pennine Moors SAC and Denby Grange Colliery Ponds SAC (see Table 3.1). Due to the size of the development and the distance from statutory designated sites, the works are unlikely to have any significant effects on these sites.

Table 3.1: Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
South Pennine Moors SAC	8.4km north-west	The site is representative of upland dry heath at the southern end of the Pennine range, the habitat's most south-easterly upland location in the UK. This site represents blanket bog in the south Pennines, the most south-easterly occurrence of the habitat in Europe. Around the fringes of the upland heath and bog of the south Pennines are blocks of old sessile oak woods.
Denby Grange Colliery Ponds SAC	13.2km south-west	This waterbody in north-east England, created by coal-mining activity, has consistently yielded high counts of great crested newt *Triturus cristatus* in recent years. The pond is surrounded by wooded slopes, with adjacent anthropogenic habitat associated with the previous mining activities. A large new pond was created recently to help support the population, which was previously reliant on a single breeding site.

3.3 There are no nationally important statutory sites located within 2km of the Site

Non-statutory designated nature conservation sites

3.4 The proposed development site is not subject to any non-statutory nature conservation designations. Four non-statutory sites designated as Local Wildlife Sites (LWS) are present within 2km of the site (see Table 3.2).

Table 3.2: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
Barnsley Canal at Wilthorpe LWS	500m east	Floodplain and Grazing Marsh, Ponds, Lowland Meadows/Neutral Grassland, Lowland Dry Acidic Grassland, Rivers, Wet woodland/willow carr
Redbrook Pastures LWS	1km south	Lowland Meadows / neutral grassland.
Mapplewell Tip LWS	1.25km north	Open Mosaic Habitats on Previously Developed Land
Hugset Wood LWS	1.9km south-west	Ancient replanted woodland and lowland mixed deciduous woodland

Habitat inventories and landscape-scale conservation initiatives

Ancient woodland

3.5 There are two areas of woodland within a 2km radius of the site which appear on the Ancient Woodland Inventory (Natural England, 2021). The closest of these is the Ancient Replanted Woodland, Hugset Wood, located 1.9km to the south-west of the site.

Habitats of Principal Importance

3.6 There are 33 areas of good quality Habitats of Principal Importance located within 2km of the site (Natural England, 2020). All 33 areas are Deciduous Woodland with the closest habitat located approximately 30m north of the site.

PHASE 1 HABITAT SURVEY

Overview

3.7 The site consists of a building with associated hardstanding, bare ground, standing water, tall ruderal vegetation, bounded by fencing to the south, north and west, with an area of semi-natural broadleaved woodland to the east.

3.8 Phase 1 habitat types are mapped in Appendix 1, Figure 1 and areas are given in Table 3.3 below. A description of dominant and notable species and the composition of each habitat is provided below, with a species list (including all scientific names) provided in Appendix 3. Target notes, which are used to provide information on specific features of ecological interest, are located in Appendix 2 and photographs are located in Appendix 4.

Table 3.3: Phase 1 Habitat Areas

Phase 1 Habitat	Extent (m^2)	%
J4 Bare ground	2662.81	26
I2.2 Spoil	1957.12	19
C3.1 Other tall herb and fern - ruderal	682.02	7
G1 Standing water	128.73	1
J3.6 Buildings	42.54	0
A1.1.1 Broadleaved woodland - semi-natural	432.84	4
M1 Hardstanding	4516.51	43

Habitat Description

Buildings

3.9 There was one building situated in the centre of the site. The building consisted of a steel shipping container used as a vehicle cleaning station. (Appendix 4, Photograph 1). The suitability of the building for bats and birds is discussed further in Table 3.4.

Hardstanding

3.10 Areas of hardstanding were associated with the building and several other buildings located immediately to the west of the site; this included a driveway from the main access point on the southern boundary of the site. These hardstanding areas were comprised of crushed stone. A tarmacked area of hardstanding was also located at the southern boundary of the site; this was being used as a lorry park (Appendix 4, Photograph 2 & 3).

Bare ground

3.11 Bare ground was present throughout the eastern part of the site. The bare ground has been caused by vehicles accessing spoil piles from the hardstanding (Appendix 4, Photograph 4).

Standing water

3.12 A small area of standing water was located centrally to the site, directly behind the vehicle cleaning station, this appeared to be a result of the wastewater runoff from the cleaning station. The water was of poor quality with high levels of pollution. An unconnected drainage ditch with standing water (<5cm deep) was located along the northern boundary. (Appendix 4, Photograph 5).

Tall ruderal

3.13 Areas of tall ruderal vegetation were located along the south-western boundary of the site. This followed the fence line that ran south to north across the site. Areas of tall ruderal were also recorded along the northern boundary and to the east of the spoil piles (Appendix 4, Photograph 6 & 7). Species found within this area included: frequent bramble; occasional common teasel, ragwort, creeping thistle, broad-leaved dock and charlock; rare hoary willowherb, common burdock, wormwood, large-flowered evening primrose, creeping buttercup, great willowherb, yarrow, lesser knapweed and Japanese knotweed (a non-native invasive species, discussed further in Table 3.4 below).

Semi-natural broadleaved woodland

3.14 A section of semi-natural broadleaved woodland bounded the site to the north-east, this had developed on the railway embankment both within and immediately adjacent to the site. Lowland mixed deciduous woodland is a Habitat of Principal Importance (HPI) however, due to the lack of mature trees and low species diversity, the woodland on site would not be considered as a good example of this habitat type. Species found within this area included: abundant pedunculate oak; occasional ash and dog rose; and rare gorse and goat willow (Appendix 4, Photograph 8).

Spoil

3.15 Three areas of spoil were found within the eastern section of the site. These were composed of quarried rock and some ruderal vegetation had established on the pile to the north. (Appendix 4, Photograph 9).

Invasive Non-Native Species (INNS)

3.16 A single stand of Japanese knotweed *Reynoutria japonica* was recorded at grid reference SE 32262 08367 and a number of Himalayan balsam *Impatiens glandulifera* plants were recorded in close proximity to grid reference SE 32156 08367, both are listed as invasive non-native species on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

PROTECTED AND INVASIVE SPECIES ASSESSMENT

3.17 The potential for the site to support protected species has been assessed using criteria provided in Table 2.1, based on the results of the desk study and observations made during the site survey of habitats at the site. Other legally protected species are not referred to as it is considered that the site does not contain habitats that would be suitable to support them.

3.18 The following species/species groups are potentially or confirmed as present at the site:

- bats;

- great crested newts; and
- Invasive Non-Native Species (INNS)

3.19 Key pieces of statute are summarised in Section 1 and set out in greater detail in Appendix 5.

Table 3.4: Protected and Invasive Species Assessment

Ecological Feature	Status [9, 10]	Likelihood of occurrence
Bats	HR WCA S5 SPI LBAP	**LOW:** The shipping container within the site was assessed as having negligible potential for roosting bats due to the lack of suitable roosting features, high level disturbance and lighting. The semi-natural broadleaved woodland within the site that runs parallel to the railway embankment forms a green corridor which offers good foraging and commuting opportunities for bats. The remainder of the site, being a mix of bare ground and tall ruderal, is unlikely to support the required insect species to support foraging by bats. There are desk study records of six species of bats within 2km of the site including Leisler's bat *Nyctalus leisleri*, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Daubenton's bat *Myotis daubentoniid* and brown long-eared bat *Plecotus auritus*. The nearest record was for a commuting noctule, observed 500m to the south of the site. The nearest recorded roost was a Daubenton's bat day roost located 1.96km west of site, recorded in 2019. There were no records of granted European Protected Species (EPS) mitigation licences for bats within 2km. **The site is considered to be of low suitability for foraging and communing bats, and as a result, bats are discussed further in Section 4 of this report.**
Great crested newt and other amphibians	HR WCA S5 SPI LBAP	**NEGLIGIBLE**: The area of standing water to the east of the building would not be suitable for breeding great crested newts, or any other amphibian species, due to the high levels of pollution and disturbance. The linear section of standing water along the northern boundary is bordered by tall ruderal and connects to the semi-natural broadleaved woodland and railway providing connectivity to other sites however the majority of the site is hardstanding/bare ground and does not provide suitable terrestrial habitat for great crested newts. Using OS maps and aerial imagery, one pond (400m north-east) was identified within 500m of the site. The pond appears to be within an arable field surrounded by good terrestrial habitat (scrub, grassland, and trees). However, this water body does not connect to any waterbodies to the south and the pond is separated from the site by the railway line that is likely to act as an obstacle for newts to move into the site, and prevented access to this pond to verify its presence at the time of survey.

[9] The following abbreviations have been used to signify the legislation regarding different species: HR = Conservation of Habitats and Species Regulations 2010 (as amended); WCA S1 = Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); WCA S5 = Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); WCA S9 = Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); PBA = Protection of Badgers Act, 1992.

[10] The following abbreviations have been used to signify the policy of conservation assessments applying to notable species: SPI = Species of Principal Importance under the NERC Act 2006; LBAP = Local Biodiversity Action Plan species; BoCC = Birds of Conservation Concern - amber list / red list (Eaton *et al*., 2015); and/or RD/NN = red data book/nationally notable species (JNCC, undated).

Table 3.4: Protected and Invasive Species Assessment

Ecological Feature	Status [9, 10]	Likelihood of occurrence
		There are desk study records for great crested newt within 2km of the site, the closest being an egg located 300m north of the site. A pond located 600m north-west of site returned results for multiple amphibian species (great crested newt, smooth newt, common frog, common toad). One European Protected Species Licence for GCN (2016-19796-EPS-MIT 1) was recorded 600m to the north-west of the site however there were no records of EPSM licences pertaining to great crested newts within 500m of the site. **As there is a negligible likelihood of presence, great crest newts and other amphibians are not considered further in this report.**
Reptiles	WCA S5	**NEGLIGIBLE**: The habitat on site comprises areas of tall ruderal with suitable areas for sheltering and foraging reptiles and the area of bare ground could provide suitable habitats for basking reptiles. The railway line to the north-east provides and linear corridor for dispersal however as most of the site has been heavily disturbed through machinery and vehicles tracking in and out, it is unlikely the site supports a viable population of reptiles. There are no desk study records for reptiles within 2km of the site. As there are no records of reptiles within 2km and the majority of the habitat on site is of poor quality for reptiles, it is therefore considered that reptiles may occasionally be present in low numbers only. **As there is a negligible likelihood of presence, reptiles are not considered further in this report.**
Badgers	PBA	**NEGLIGIBLE**: The site offers poor habitat for badger and no field signs were recorded during the survey. The wider area to the north is largely arable and does offer suitable habitat for badger with an area of woodland 230m to the north of the site that may be suitable for sett building. A single data study record for badger was recorded within 2km of the site, this was a latrine located 400m to the north-west of site. Given the size and nature of the site, with its lack of foraging opportunities and high levels of activity on the site combined with the lack of field signs, it is considered unlikely that badgers are using the site. **As there is a negligible likelihood of presence, badgers are not considered further in this report.**
Invasive species	WCA S9	**PRESENT**: Japanese knotweed and Himalayan balsam were discovered during the survey, both are listed as invasive non-native species on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). **Due to confirmed presence, invasive non-native species are therefore discussed further in Section 4 of this report.**

NATURE CONSERVATION EVALUATION

3.20 There are no statutory protected sites or non-statutory protected sites within 2km of the site. There are four non-statutory sites within 2km of the site, the closest is Barnsley Canal at Wilthorpe LWS located 500m north-east of the site. Due to the small scale of the proposed development, it is considered that there will be no impact on any statutory or non-statutory sites or HPIs in the vicinity as a result of the proposals.

3.21 The area of semi-natural broadleaved woodland is a Habitat of Principal Importance (HPI) approximately 30m north of the site is separated form the site by the railway line which runs adjacent to the site.

3.22 The semi-natural broadleaved woodland is a Habitat of Principal Importance (HPI) however, due to the lack of mature trees and low species diversity, the woodland on site would not be considered as a good example of this habitat type. Furthermore, the proposed development will not require the removal of these trees.

3.23 The proposed development site is not subject to any nature conservation designations. In addition, to the semi-natural broadleaved woodland, it contains common and widespread habitats including, tall ruderal, bare ground, hardstanding and a building. The site is situated within a predominantly urban landscape and is distant from any sites of nature conservation importance.

3.24 The habitats on site were suitable for a range of noteworthy species, including SPI and Barnsley BAP species, as reported in the desk study or recorded as having potential to be present following the survey, as follows:

- Bats species, such as brown long-eared bat, noctule and soprano pipistrelle.

4 Recommendations

4.1 This section summarises the potential impacts on habitats and notable species that may be present at this site. It also sets out the recommendations for further survey and mitigation where required.

FURTHER SURVEY AND MITIGATION

4.2 For each constraint identified, all mitigation options provided follow the established Mitigation Hierarchy as set out in Section 5.2 of BS42020:2013. This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. The measures set out below will address no net loss of biodiversity, although no formal calculation of losses and gains has been carried out.

4.3 The following key ecological issues have been identified:

- Habitat suitable for commuting bats is present therefore measures must be taken to avoid light spill onto these habitats;
- invasive non-native species of plant have been identified on site therefore measures must be taken to ensure the safe removal and contain the spread of these species; and
- a range of measures should be undertaken to satisfy the requirement for ecological enhancement included in planning policy.

Habitats

4.4 The proposals will require the removal of all of the tall ruderal vegetation for construction of the workshop. This habitat is common and widespread in the local area as well as nationally, and of importance within the immediate vicinity of the site only. No particular constraints were identified in relation to the intrinsic value of the habitats present.

Species

Bats

4.5 All British species of bat are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation it is an offence to deliberately capture, kill, disturb and damage or destroy a bat roost. Some species of bat are also Species of Principal Importance and Barnsley BAP species.

4.6 The semi-natural broadleaved woodland along the north-eastern boundary may be used by foraging and commuting bats and provide habitat connectivity from off-site onto the site itself. Given that the trees will be unaffected but the development, a sensitive lighting scheme should be adopted across the development site to avoid illuminating this potential foraging and commuting habitat.

4.7 The area of semi-natural broadleaved woodland is a Habitat of Principal Importance (HPI) approximately 30m north of the site may also be used for commuting bats. However, the trees will be unaffected by the development. The recommended sensitive lighting would also avoid illuminating this potential foraging and commuting habitat.

4.8 To minimise indirect impacts from lighting, it is recommended that artificial lighting is only utilised where necessary for health and safety reasons. Lighting should not illuminate any of the section of woodland along the north-eastern boundary. Lighting should only be used for the period of time for which it is required (Jones, 2000). This can be achieved by following accepted best practice (Fure, 2006; Institute of Lighting Engineers, 2009; Bat Conservation Trust 2011):

- The level of artificial lighting including flood lighting should be kept to an absolute minimum;
- Where this does not conflict with health and safety and/or security requirements, the site should be kept dark during peak bat activity periods (0 to 1.5 hours after sunset and 1.5 hours before sunrise);
- Lighting should be directed to where it is needed to minimise light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a shield/hood/cowl that directs the light below the horizontal plane and restricts the lit area; and
- Artificial lighting should not directly illuminate any confirmed or potential bat roosting features or habitats of value to commuting/foraging bats. Similarly, any newly planted linear features or compensatory bat roosting features should not be directly lit.

Breeding birds

4.9 All wild birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended). The scrub and trees within the Site have low potential to support common/widespread breeding bird species.

4.10 Where the proposed works require the removal of buildings, shrubs, and pruning of trees with potential to support breeding birds, this should be carried out September to February

inclusive, to avoid any potential offences relating to breeding birds during their main bird breeding season (Newton *et al.*, 2011).

If site clearance during the breeding season is unavoidable then potential nesting habitat must be inspected immediately before work commences to identify active birds' nests. Should they be present, the nest and a suitable buffer of habitat around it must be retained until the young have fledged the nest. *INNS*

4.11 The invasive plant species, Japanese knotweed and Himalayan balsam, were found within the northern and eastern sections of the site. These plants are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), making it an offence to plant these species or otherwise cause it to grow in the wild.

4.12 A 7m fenced buffer zone should be erected around the stand of Japanese knotweed to prevent any encroachment by vehicles or pedestrians which may result in further spread of this species within the site. In addition, all Himalayan balsam plants should be identified and a 1m buffer zone put in place to avoid any accidental spread, Himalayan balsam plants can be removed via hand-pulling during the spring prior to flowering.

4.13 Specialist licensed contractors should be consulted with regard to the Japanese knotweed and the extent to which this species is present within the site and the appropriate measures that should be undertaken, prior to its removal.

OTHER PROTECTED SPECIES

4.14 In the unlikely event that any protected species are found during site clearance or construction, works must stop immediately, and advice sought from a suitably qualified ecologist on how to proceed.

ENVIRONMENTAL BEST PRACTICE

4.15 Best environmental practice measures which should be implemented where appropriate to include the appropriate storage of fuels and chemicals to minimise the risk of accidental spillage. Sources of best construction practice and environmental management include CIRIA guidance (Connolly and Charles, 2005) and Pollution prevention for businesses guidelines (Defra/ Environment Agency, 2016).

4.16 Retained trees should be protected in accordance with BS 5837:2012- *Trees in relation to design, demolition and construction*. In conjunction with tree protection practices, Heras fencing should be installed around the development footprint boundary to protect habitats and restrict vehicle and pedestrian access. Furthermore, methods for ground protection should be considered and put in place to prevent damage to the root system

of any retained trees that may be caused by heavy machinery tracks pre-and post-development works.

4.17 Measures should be undertaken to avoid deterioration in air quality next to retained woodland. For example, limiting the effects of vehicle emissions by avoiding the idling of machinery within 10m of the woodland and reducing dust particle deposition on trees by damping down areas of bare ground during dust-generating activities.

OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

4.18 Planning policy at the national and local level and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects. Ecological enhancements can also contribute to green infrastructure and ecosystem services such as storm water attenuation and reducing the urban heat island effect. Measures set out below can be used to achieve a net gain in biodiversity. Please note, however, that no formal calculations have been provided in this instance.

4.19 The following measures would be suitable for integration into the site's design.

Wildlife planting

4.20 Wildlife planting should be integral to the soft landscape plans and should include native species and/or species of recognised wildlife value[11]. The use of nectar-rich and berry producing plants will attract a wider range of insects, birds and mammals and continue to accommodate those already recorded at the site. Trees should also be provided and can be under-planted to improve structure and cover for wildlife. Consideration should also be given to creation of species-rich native hedgerows.

4.21 Good horticultural practice should be utilised, including the use of peat-free composts, mulches and soil conditioners, native plants with local provenance and avoidance of the use of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

4.22 Landscaping should include the use of climbing plants growing on a support structure to provide vertical nesting habitat and foraging resources for birds and invertebrates. The support structure should ideally be placed 50-100mm off the façade. Plants should

[11] For example The Royal Horticultural Society (RHS) Perfect for Pollinators Scheme https://www.rhs.org.uk/science/conservation-biodiversity/wildlife/encourage-wildlife-to-your-garden/plants-for-pollinators and the joint RHS/Wildlife Trust's Gardening With Wildlife In Mind Database http://www.joyofplants.com/wildlife/home.php

comprise native species or non-native species of recognised wildlife value and either deciduous or evergreen species depending on the specification.

Native species-rich hedgerow

4.23 It is recommended that a native species-rich hedgerow is planted around the boundary of the site, particularly along the southern boundary. This this will create a wildlife corridor by creating connectivity to the existing corridor running parallel to the railway line. The native species-rich hedgerow should be composed of at least five native woody species such as hawthorn, blackthorn, hazel, field maple, holly, wild privet, guelder rose and dog rose. This will help provide nectar and berries for insects and birds throughout the season, provide cover for species traversing from the landscape. It is also recommended that climbers such as honeysuckle and traveller's joy are included.

4.24 Hedgerow should be planted using 60—90cm high 'whips' planted in a double row at a spacing of approximately 20-30cm to help establish a thick bushy hedge of benefit to wildlife[1213].

4.25 Hedgerows should be planted between November and March however planting when the ground is waterlogged or frozen should be avoided. The base of the hedge should be kept free from weeds with a thick mulch or matting until they have established.

Provision of bat and bird boxes

4.26 To enhance the site for nesting birds and roosting bats, it is recommended that bird boxes are erected on the new workshop building or suitably mature trees within the site or ownership boundary.

4.27 Woodcrete/woodstone bird and bat boxes (or equivalent sustainable material) are recommended as they are long lasting and a very low fire risk compared to wooden boxes, insulate occupants from extremes of temperature and condensation and are available in a broad range of designs.

[12] https://www.suffolkwildlifetrust.org/conservationadvice/woodlands-and-hedgerows/planting-hedgerow-wildlife
[13] https://www.habitataid.co.uk/products/hedge-mix-conservation-hedge

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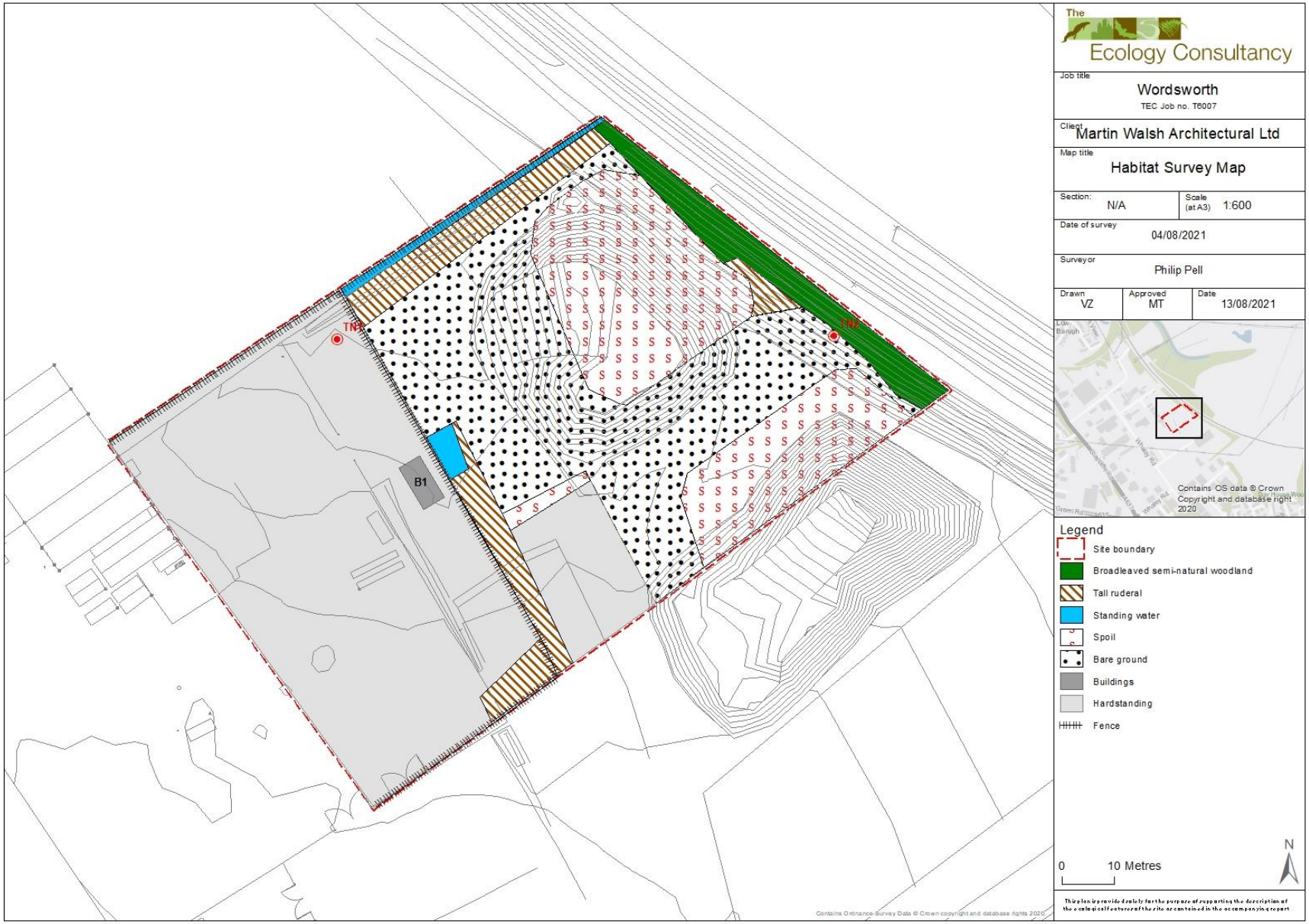
Appendix 1: Habitat Map

Figure 1: Habitat Survey Map



Appendix 2: Target Notes

Target Notes List for Wordsworth Excavations, Barnsley from the Phase 1 habitat survey and protected and notable species assessment carried out on the 4th August 2021.

Target note (TN)	Description
1	Multiple Himalayan balsam plants with central grid reference of SE 32156 08367
2	Single stand of Japanese knotweed, grid reference SE 32262 08367

Appendix 3: Species List

Plant Species List for Wordsworth Excavations, Barnsley compiled from Phase 1 habitat survey carried out on the 4th August 2021.

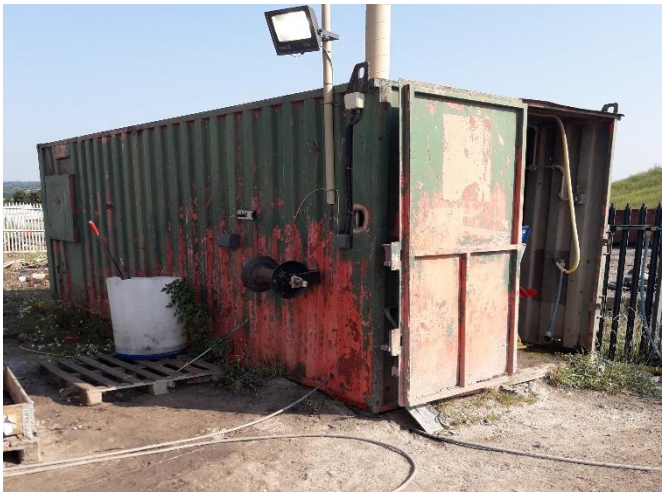
Scientific nomenclature and common names for vascular plants follow Stace (2019) and Blockeel and Long (1998) for bryophyte species. Please note that this plant species list was generated as part of a Phase 1 habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated results section of this PEA.

Abundance was estimated using the DAFOR scale and additional notes taken as follows:
D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally
c=clumped, e=edge only, g=garden origin, p=planted, y = young, s=seedling or sucker, t=tree, h=hedgerow, w=water

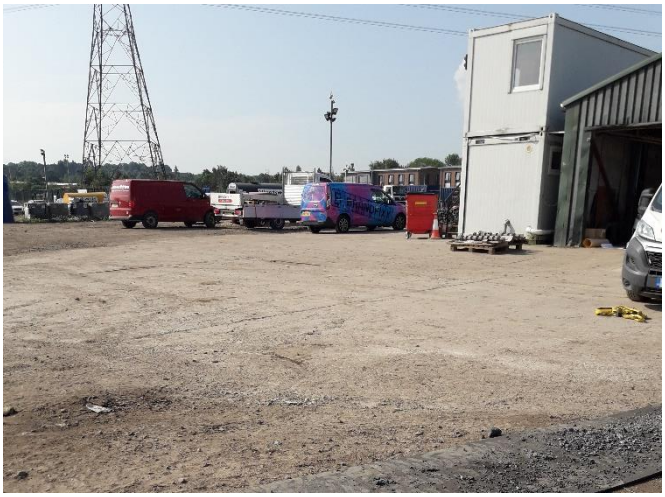
Scientific Name	Common Name	Abundance
Achillea millefolium	Yarrow	R
Agrostis capillaris	Common bent	R
Arctium minus	Common burdock	R
Artemisia absinthium	Wormwood	O
Carex pendula	Pendulous sedge	R
Centaurea nigra	Lesser knapweed	R
Chamerion angustifolium	Rosebay willowherb	R
Cirsium arvense	Creeping thistle	O
Crataegus monogyna	Hawthorn	O
Dactylis glomerata	Cock's-foot	R
Dipsacus fullonum	Common teasle	R
Epilobium hirsutum	Great willowherb	R
Epilobium parviflorum	Hoary Willowherb	R
Fraxinus excelsior	European ash	R
Helminthotheca echioides	Bristly ox-tongue	R
Impatiens glandulifera	Himalayan balsam	R
Jacobaea vulgaris	Common ragwort	R
Oenothera glazioviana	Large-flowered evening primrose	R
Plantago lanceolata	Ribwort plantain	R
Quercus robur	Pedunculate oak	F
Ranunculus repens	Creeping buttercup	R
Reynoutria japonica	Japanese knotweed	R
Rosa canina	Dog rose	O
Rubus fruticosus	Bramble	F
Rumex obtusifolius	Broad-leaved dock	O
Salix caprea	Goat willow	R
Scrophularia auriculata	Shoreline figwort	R
Sinapis arvensis	Charlock	F
Tripleurospermum inodorum	Scentless mayweed	R
Typha latifolia	Reedmace	R
Ulex europaeus	Gorse	O
Urtica dioica	Common nettle	R

Appendix 4: Photographs

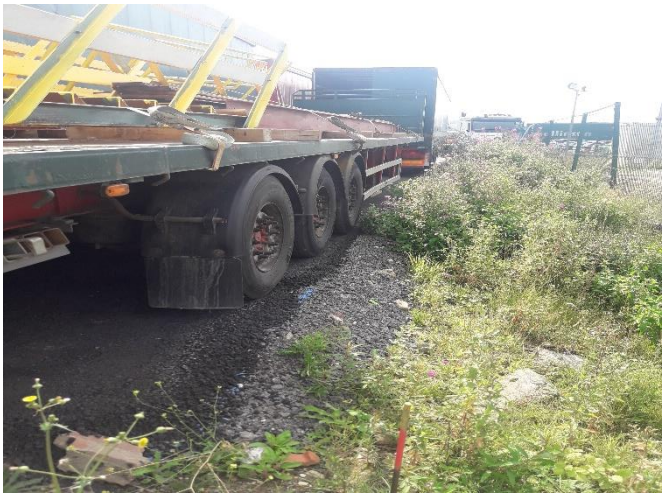
Photograph 1
Shipping container used as vehicle cleaning station



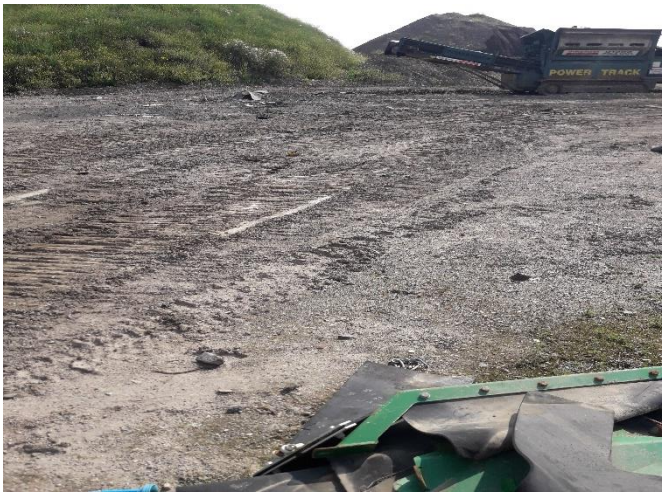
Photograph 2
Area of hardstanding in the western section of the site used as access to buildings not included within the development area



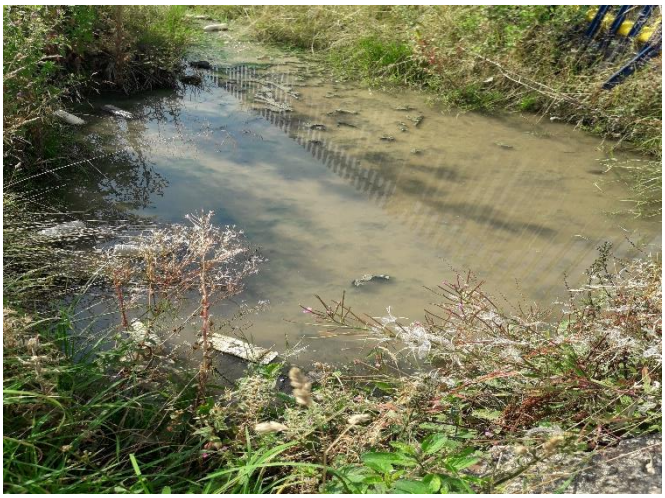
Photograph 3
Tarmacked area of hardstanding used as lorry park, located at the southern boundary of the site



Photograph 4
Area of bare ground in the eastern section of the site caused by vehicles accessing spoil piles



Photograph 5
Area of standing water location directly to the east of the vehicle cleaning station

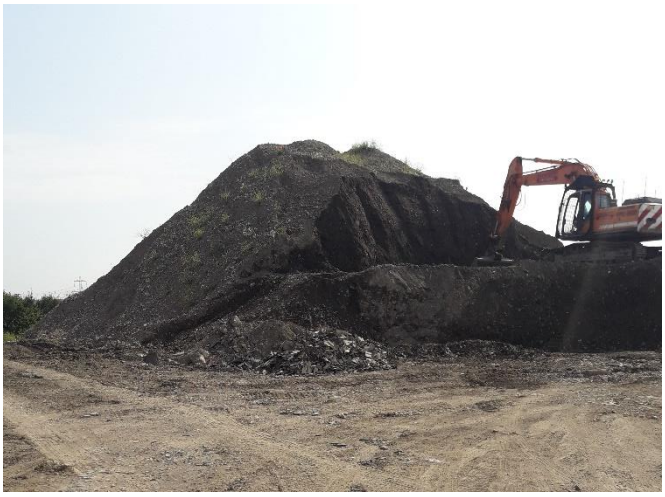


Photograph 6
Area of tall ruderal vegetation located along the northern boundary of the site.

Photograph 7
Single stand of Japanese knotweed located on the eastern boundary of the site.

Photograph 8
Area of semi-natural broadleaved woodland along railway embankment on the north eastern site boundary

Photograph 9
Spoil pile located on the eastern section of the site.



Appendix 5: Legislation and Planning Policy

Important Notice: This section contains details of legislation and planning policy applicable in England and Wales only (i.e. not including Scotland, the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

A EUROPEAN AND NATIONAL LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive[14] is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (as amended) (formerly The Conservation of Habitats and Species Regulations 2010 (as amended)) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000)

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996
- Countryside and Rights of Way (CRoW) Act 2000
- Natural Environment & Rural Communities (NERC) Act 2006
- Environment (Wales) Act 2016

Species and species groups that are protected or otherwise regulated under the aforementioned domestic and European legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds,

[14] Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

dormouse, invasive plant species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2017 (as amended), which includes smooth snake, sand lizard, great crested newt, natterjack toad, all bat species, otter, dormouse and some plant, invertebrate and fish species, are given below. **These should be read in conjunction with the relevant species sections that follow.**

- In the Habitats Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.
- The Conservation of Habitats and Species Regulations 2017 (as amended) does not define the act of 'migration' and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered where relevant.
- In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests': i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Herpetofauna (Amphibians and Reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita,* great crested newt *Triturus cristatus* and pool frog *Pelophylax lessonae* receive full protection under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of species listed on Schedule 2
- Deliberate disturbance of any Schedule 2 species as:
  - to impair their ability:
    - to survive, breed, or reproduce, or to rear or nurture young;
    - in the case of animals of a hibernating or migratory species, to hibernate or migrate
  - to affect significantly the local distribution or abundance of the species
- Deliberate taking or destroying of the eggs of a Schedule 2 species
- Damage or destruction of a breeding site or resting place

- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

With the exception of the pool frog, these species are also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5). The pool frog is afforded protection in respect of sub-sections 9(4) (b) and (c) for England only. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale (excluding pool frog).

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Species such as the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to sub-section 9 (1) & (5). For these species, it is prohibited to:

- Intentionally kill or injure these species
- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *L. helveticus* are listed in respect to sub-section 9 (5) only which affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale.

How is the legislation pertaining to herpetofauna liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect the breeding sites or resting places of those amphibian and reptile species protected under The Conservation of Habitats and Species Regulations 2017 (as amended). A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the Wildlife and Countryside Act 1981 (as amended).

Badger

Badgers *Meles meles* receive protection under The Protection of Badgers Act 1992 which consolidates the previous Badger Acts of 1973 and 1991. The Act makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett[15] or any part thereof
- Intentionally or recklessly disturb[16] a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

How is the legislation pertaining to badgers liable to affect development works?

The appropriate licence (e.g. a Development Licence[17]) will be required from the relevant countryside agency (e.g. Natural England, Natural Resources Wales) for any development works liable to affect an active badger sett, or to disturb badgers whilst in the sett. In Wales, the Welsh Government is responsible for issuing licences in relation to agricultural and forestry operations or works to maintain or improve any existing watercourse or drainage works, or to construct new works required for the drainage of land, including works of defence against seawater or tidal water.

[15] A badger sett is defined in the legislation as *"any structure or place which displays signs indicating current use by a badger"*. This includes seasonally used setts. Natural England (2009) has issued guidance on what is likely to constitute current use of a badger sett: https://webarchive.nationalarchives.gov.uk/20140605121602/http://www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf

[16] For guidance on what constitutes disturbance and other licensing queries, see Natural England (2006 revised 2011) Badgers & Development: A Guide to Best Practice and Licensing (IN75) https://webarchive.nationalarchives.gov.uk/20150303064749/http://publications.naturalengland.org.uk/publication/73034; Natural England (2009) Interpretation of 'Disturbance' in relation to badgers occupying a sett https://webarchive.nationalarchives.gov.uk/20150303064749/http://publications.naturalengland.org.uk/publication/73034; and Natural Resources Wales (2018) Badgers – A Guide for Developers https://cdn.naturalresources.wales/media/684003/badger-fact-sheet-for-developers-english.pdf?mode=pad&rnd=131620320080000000 and Guidance on working close to badger setts without a licence via https://naturalresourceswales.gov.uk/permits-and-permissions/species-licensing/uk-protected-species-licensing/badger-licences-issued-by-natural-resources-wales-and-the-welsh-government/?lang=en

[17] Natural England and Natural Resources Wales will only consider issuing a licence where detailed planning permission (if applicable to operation) has already been granted

Depending on the nature of the works and the specifics of the sett and its environs, badgers could be disturbed by work near the sett even if there is no direct interference or damage to the sett itself. The countryside agencies have issued guidelines on what constitutes a licensable activity. N.B. there is no provision in law for the capture of badgers for development purposes and therefore it is not possible to obtain a licence to translocate badgers from one area to another.

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
  a) to impair their ability:
    - to survive, breed, or reproduce, or to rear or nurture young;
    - to hibernate or migrate
  b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being

afforded protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost[18].

Wild Mammals (Protection) Act 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to:

- Mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Non-native species (fauna)

Under Section 14 (1) of the Wildlife and Countryside Act 1981 (as amended), it is an offence to release, or allow to escape into the wild, *any* animal that is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state, or is listed on Schedule 9 of the Act. Examples of species included on Schedule 9 are signal crayfish *Pacifastacus leniusculus,* American mink *Neovison vison,* grey squirrel *Sciurus carolinensis* and European pond terrapin *Emys orbicularis*. In the main, Schedule 9 species are those that are already established in the wild, but which continue to pose a threat to the conservation of native biodiversity and habitats, such that further releases should be regulated. The Schedule also includes some native species, such as barn owl *Tyto alba*, to ensure that any releases or re-introduction programmes are undertaken in consultation with the relevant authorities and in accordance with best practice guidelines.

How is the legislation pertaining to non-native faunal species liable to affect development works?

In most cases, development works are unlikely to infringe the legislation. This is because such operations are unlikely to result in the release or escape of non-native faunal species. However, there may be circumstances, particularly where works involve watercourses or water bodies, which have the potential to exacerbate the spread of e.g. signal crayfish or certain fish or amphibian species. If this is deemed a possibility, it will be necessary to ensure appropriate preventative measures are in place prior to and during the works.

[18] Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. **150**. The Mammal Society, Southampton.

Plants & Fungi

All wild plants are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence for an 'unauthorised' person to intentionally uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant and fungi, for example some species of orchid, red-tipped cudweed *Filago lutescens*, spiked speedwell *Veronica spicata*, holly-leaved naiad *Najas marina,* field cow wheat *Melampyrum arvense* and sandy stilt puffball *Battarraea phalloides* are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) in respect of Section 13. This prohibits any person:

- Intentionally picking, uprooting or destruction of any wild Schedule 8 species
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof.

In addition to the UK legislation outlined above, several plant species, such as slender naiad *Najas flexilis*, fen orchid *Liparis loeselii* and early gentian *Gentianella anglica*, are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2017 (as amended). These are species of European importance. Regulation 45 makes it an offence to:

- Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
- Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

How is the legislation pertaining to protected plants liable to affect development works?

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect species of plant listed under The Conservation of Habitats and Species Regulations 2017 (as amended). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Invasive Plant Species

Under Section 14 (2) of the Wildlife and Countryside Act 1981 (as amended), it is an offence to plant or otherwise cause to grow in the wild any species of plant listed on Part II of Schedule 9. Schedule 9 plant species include Japanese knotweed *Fallopia japonica,* giant hogweed

Heracleum mantegazzianum and Himalayan balsam *Impatiens glandulifera.* In the main, Schedule 9 species are those that are already established in the wild, but which continue to pose a threat to the conservation of native biodiversity and habitats, such that further releases should be regulated.

How is the legislation pertaining to invasive plants liable to affect development works?

Although it is not an offence to have these plants on your land *per se*, it is an offence to *cause* these species to grow in the wild. Therefore, if they are present on site and development activities (for example movement of spoil, disposal of cut waste or vehicular movements) have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this happening prior to the commencement of works.

As a rule, planting on managed land (private gardens, estates and amenity planting, for example), where it is expected that the spread of the plant will be kept under control, and where the plant will not have an adverse impact, is not regarded as planting in the wild and thus would not constitute an offence. However, where the plant is inadequately managed or contained and is likely to have an adverse effect, it may. Whether or not planting is an offence should therefore be judged on a case by case basis, taking into account the potential impacts on habitats and native flora and fauna, and the existence or extent of management practices to be employed[19].

Plants: Injurious Weeds

Under the Weeds Act 1959 any land owner or occupier may be required prevent the spread of certain 'injurious weeds' such as spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, and common ragwort *Senecio jacobaea* onto agricultural land, particularly grazing areas or land which is used to produce conserved forage. It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice[20] as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines on how to prevent the spread of this species but is not legally binding.

B EUROPEAN AND NATIONAL LEGISLATION AFFORDED TO HABITATS

[19] Defra (2010) Guidance on Section 14 of the Wildlife and Countryside Act, 1981. http://archive.defra.gov.uk/wildlife-pets/wildlife/management/non-native/documents/section-14-guidance.pdf

[20] Defra (2004) Code of Practice on How to Prevent the Spread of Ragwort: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69264/pb9840-cop-ragwort.pdf

Statutory Designations: National

Nationally important areas of special scientific interest, by reason of their flora, fauna, or geological or physiographical features, are notified by the countryside agencies as statutory **Sites of Special Scientific Interest** (SSSIs) under the National Parks and Access to the Countryside Act 1949 and latterly the Wildlife & Countryside Act 1981 (as amended). As well as underpinning other national designations (such as **National Nature Reserves** which are declared by the countryside agencies under the same legislation), the system also provides statutory protection for terrestrial and coastal sites which are important within a European context (Natura 2000 network) and globally (such as Wetlands of International Importance) - see subsequent sections for details of these designations. Improved provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000.

The Wildlife & Countryside Act 1981 (as amended) also provides for the making of **Limestone Pavement Orders**, which prohibit the disturbance and removal of limestone from such designated areas, and the designation of **Marine Nature Reserves**, for which byelaws must be made to protect them.

Statutory Designations: International

Special Protection Areas (SPAs), together with **Special Areas of Conservation** (SACs) form the **Natura 2000** network. The Government is obliged to identify and classify SPAs under the EC Birds Directive (Council Directive 2009/147/EC (formerly 79/409/EEC)) on the Conservation of Wild Birds). SPAs are areas of the most important habitat for rare (listed on Annex I of the Directive) and migratory birds within the European Union. Protection afforded SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles (nm) is given by The Conservation of Habitats & Species Regulations 2017 (as amended). The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of European offshore marine sites or EMS (SPAs and SACs) in UK offshore waters (from 12-200 nm).

The Government is obliged to identify and designate SACs under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora). These are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive within the European Union. SACs in terrestrial areas and territorial marine waters out to 12 nautical miles

are protected under The Conservation of Habitats & Species Regulations 2017 (as amended). The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of European offshore marine sites or EMS (SACs and SPAs) in UK offshore waters (from 12-200 nm).

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and wise use, in particular recognizing wetlands as ecosystems that are globally important for biodiversity conservation. Wetlands can include areas of marsh, fen, peatland or water and may be natural or artificial, permanent or temporary. Wetlands may also incorporate riparian and coastal zones adjacent to the wetlands. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CRoW) Act 2000. Policy statements have been issued by the Government highlighting the special status of Ramsar sites. This effectively extends the level of protection to that afforded to sites which have been designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs).

Statutory Designations: Local

Under the National Parks and Access to the Countryside Act 1949 **Local Nature Reserves** (LNRs) may be declared by local authorities after consultation with the relevant countryside agency. LNRs are declared for sites holding special wildlife or geological interest at a local level and are managed for nature conservation, and provide opportunities for research and education and enjoyment of nature.

Non-Statutory Designations

Areas considered to be of local conservation interest may be designated by local authorities as a **Wildlife Site**, under a variety of names such as **Local Wildlife Sites** (LWS), **County Wildlife Sites** (CWS), **Listed Wildlife Sites** (LWS), **Local Nature Conservation Sites** (LNCS), **Sites of Biological Importance** (SBIs), **Sites of Importance for Nature Conservation** (SINCs), or **Sites of Nature Conservation Importance** (SNCIs). The criteria for designation may vary between counties.

Together with the statutory designations, these are defined in Local Plan documents under the Town and Country Planning system and are a material consideration when planning applications are being determined. The level of protection afforded to these sites through local planning policies and development frameworks may vary between counties.

Local Geological Sites (previously known as Regionally Important Geological and Geomorphological Sites or RIGS) are the most important places for geology and geomorphology outside land holding statutory designations such as SSSIs. Locally-developed criteria are used to select these sites, according to their value for education, scientific study, historical significance or aesthetic qualities. As with local Wildlife Sites, Local Geological Sites are a material consideration when planning applications are being determined.

C PLANNING POLICY

National Planning Policy Framework

The National Planning Policy Framework replaced PPS9 and emphasises the need for sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and priority species (see Section D below). An emphasis is also made for the need for ecological networks via preservation, restoration and re-creation. The protection and recovery of priority species is also listed as a requirement of planning policy. In determining planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty

Section 40 of The Natural Environment and Rural Communities (NERC) Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the ‘biodiversity duty’.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of ‘principal importance for the conservation of biodiversity.’ This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a

material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

Local Plan / Local Development Framework

The Barnsley Metropolitan Borough Council Local Plan Adopted contains the following nature conservation policies that are considered relevant to the site. The Local Plan Adopted (2019) provides local planning policy for the future development of Barnsley up to the year 2033.

The Barnsley Metropolitan Borough Council Local Plan Adopted (2019)

Policy BIO1 Biodiversity and Geodiversity

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.
- 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).

Policy CC1 Climate Change

We will seek to reduce the causes of and adapt to the future impacts of climate change by:

- Giving preference to development of previously developed land in sustainable locations;
- Promoting the reduction of greenhouse gas emissions through sustainable design and construction techniques;
- Locating and designing development to reduce the risk of flooding;
- Promoting the use of Sustainable Drainage Systems (SuDS);
- Promoting and supporting the delivery of renewable and low carbon energy; and
- Promoting investment in Green Infrastructure to promote and encourage biodiversity gain.

Policy RE1 Low Carbon and Renewable Energy

All developments will be expected to seek to incorporate initially appropriate design measures, and thereafter decentralised, renewable or low carbon energy sources in order to reduce carbon dioxide emissions and should at least achieve the appropriate carbon compliance targets as defined in the Building Regulations.

We will allow development that produces renewable energy as long as there is no material harm upon:

- The character of the landscape and appearance of the area;
- Living conditions;
- Biodiversity, Geodiversity and water quality;
- Heritage assets, their settings and cultural features and areas;
- Key views of, from or to scenic landmarks or landscape features;
- Highway safety, or
- Infrastructure including radar.

In assessing effect, we will consider appropriate mitigation which could reduce harm to an acceptable level.

Proposals will be expected to include information regarding their efficiency.

Proposals must be accompanied by information that shows how the local environment will be protected, and that the site will be restored when production ends.

D BIODIVERSITY ACTION PLANs (BAPs)

The UK BAP was published in 1994 to comply with obligations under the Convention on Biological Diversity (The Biodiversity Treaty, 1992). It described the UK's biological resources and committed to developing detailed plans to conserve these recourses i.e. Habitat Action Plans and Species Action Plans. Running parallel to this, planning authorities promoted habitat and species conservation at a county and district/borough level through their development of Local BAPs (LBAPs). The aims and objectives of some of these LBAPs (most notable those at county level) are simply to reflect national targets for habitats and species of principal importance, translate them at a local level and to integrate the needs of species and habitats within landscape-scale delivery.

Since the publication of these BAPs, new strategies and frameworks have resulted in the development of biodiversity issues and changes in the terminology used to describe these habitats and species in England. This has been brought about through the replacement of the previous England Biodiversity Strategy with *Biodiversity 2020: A Strategy For England's Wildlife and Ecosystem Services* (2011) and the replacement of the UK BAP itself with the *UK Post-2010 Biodiversity Framework* (2012). All previous UK BAP species and habitats are still of material consideration in the planning process but are now referred to as priority habitats and species (as described under the NERC Act above).

The distribution of BAP/priority habitats has been used to identify Biodiversity Opportunity Areas at a regional scale through Biodiversity Strategies/Partnerships. They represent a strategic landscape scale approach to habitat creation, restoration or expansion. They represent regional priority areas of opportunity to restore and create BAP/priority habitat. They are therefore a spatial representation of targets for BAP/priority habitat and are areas of opportunity, not constraint.

District/Borough Local Biodiversity Action Plan

Many local authorities in the UK have also produced a local Biodiversity Action Plan (LBAP) at the County or District level. The Barnsley Biodiversity Action Plan describes the diversity of habitats and wildlife species found in Barnsley. It sets out those that are a priority for conservation and how this can be achieved.

Species of Principal Importance and Barnsley BAP species, as reported in the desk study or recorded as having potential to be present following the survey, as follows:

- Brown long-eared bat;
- Soprano pipistrelle;

- Noctule bat;
- Great Crested Newt;

The Ecology Consultancy is part of the Temple Group.

Making places better for people and wildlife

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