

SF 3082 Hart Street, Newsome

ECOLOGICAL APPRAISAL REVISION A

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EXECUTIVE SUMMARY

Smeeden Foreman Limited has been commissioned by Urban Group Limited to undertake an ecological appraisal of land off Hart Street in Newsome, West Yorkshire.

A desk study of relevant information has been undertaken including designated nature conservation sites and existing records of protected species; and initial site survey (extended phase 1 habitat survey) and species-specific surveys (HSI survey, eDNA survey and bat transect survey).

Designated sites

No adverse impact upon statutorily or non-statutorily designated sites is anticipated as a result of the proposed development.

Habitats

The mosaic of habitats within the proposals site are considered to offer opportunities for wildlife within the local area, comprising two mill ponds, areas of dense scrub and mature trees. To facilitate the development the mill ponds and dense scrub habitats will be lost. Mature trees which occur along the western boundary will largely be retained within the proposals.

Recommendations with the aim to mitigate the loss of habitats on site and protect those proposed for retention include:

- Use of temporary protective demarcation fencing to protect retained areas;
- Use of directional lighting during construction, which will not shine upon the site boundaries, hedgerows or trees within the site;
- Implementation of a sympathetic lighting scheme within proposals that minimises illumination of trees and areas of new planting;
- Appropriate native tree and shrub planting to the site boundaries and within the site to mitigate the loss of existing trees and scrub;
- Consideration of seeding of areas within the Public Open Space with a suitable wildflower mix.

Species

The potential for the following protected and notable species to be affected by the development has been assessed with potential mitigation and further survey work as follows:

- **Great crested newt** – no adverse impact anticipated upon this species as a result of the development.
- **Water vole and otter** – no adverse impact anticipated upon this species as a result of the development.
- **Bats** – to mitigate loss of suitable foraging and commuting habitat on site, it is recommended that landscape proposals incorporate appropriate native tree and shrub planting. Sympathetic lighting should be adopted during construction works and once the site is occupied, with lighting avoiding illuminating existing trees and new areas of planting. Precautionary measures should be adopted during proposed felling/tree surgery works of trees identified as having a low potential to support roosting bats. Bat

boxes should be installed onto retained trees/new buildings on site to enhance opportunities for roosting bats.

- **Breeding birds** – Vegetation clearance will be undertaken outside of the nesting bird period or following checks by an ecologist where active nests have been identified as absent. Mitigation for nesting birds will include the incorporation of native trees and shrubs within the site and the provision of a range of nest box types onto retained trees and new buildings, including a tawny owl box.
- **Badger** – No adverse impact upon this species is anticipated as a result of the proposed development.
- **Hedgehog** – Precautionary working methods are recommended in regards to this species during construction works. It is recommended that gaps are provided in proposed fences/walls to allow access to hedgehogs throughout the site.
- **White-clawed crayfish** – No adverse impact upon this species is anticipated as a result of the proposed development.
- **Other species** – Fish occur within the mill ponds on site. Prior to the proposed draining of the ponds, the fish should be moved off-site using electrofishing techniques. Advice should be sought from the Environment Agency in regards to the movement of fish.
- **Cotoneaster** - A cotoneaster was identified on site. A number of cotoneaster species are included within Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as non-native invasive species making it an offence to plant or otherwise cause to grow these species in the wild. It is therefore recommended that the cotoneaster identified on site is removed/treated on site prior to proposed development works commencing on site.

1.0 INTRODUCTION

- 1.1.1 Smeeden Foreman Limited has been commissioned by Urban Group Limited to undertake an ecological appraisal of a site located off Hart Street in Newsome, West Yorkshire (central grid reference SE 14431481), hereafter referred to as the 'site'.
- 1.1.2 This report will include the following information gathered by desk study and site survey:
- Proximity to statutory and non-statutory designated sites;
 - Proximity to existing records of protected species; and,
 - Site habitat appraisal and protected species surveys.
- 1.1.3 A review of the above information will be made to identify any features or sites of ecological interest which may be affected by the development proposals. Where potential impacts or protected species are identified the need for mitigation measures and requirements for further surveys will be discussed.
- 1.1.4 The report has been commissioned to inform a planning application for a residential development.
- 1.1.5 The methodologies used to survey and assess the ecological value and potential impacts on the site are based upon guidelines produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) (Guidelines for Preliminary Ecological Appraisal, 2017 and Guidelines for Ecological Impact Assessment, 2018).

2.0 SITE DESCRIPTION

- 2.1.1 The proposals site is located within Newsome, West Yorkshire, approximately 1.7km to the south of Huddersfield centre. The site is set within a largely residential area, with residential properties, associated gardens and roads located to the south, east, south-west and north-east. Adjacent to the north-west is a complex of buildings which are used for residential and commercial purposes and beyond this is a disused mill building, with areas of woodland adjacent to the north-west.
- 2.1.2 The proposals site itself comprises two mill ponds, presumably once associated with the disused mill to the north-west, and an area of unmanaged land, which at the time of the walkover survey comprised areas of dense scrub and tall ruderal vegetation; during surveys undertaken on site at a later stage, the majority of dense scrub habitat was cleared, leaving areas of bare ground, with dense scrub and tall ruderal vegetation located to the boundaries of this half of the site. Mature trees line the south-western boundary of the site, with a small number of trees and saplings/scrub marking the north-eastern boundary and the strip of land between the two mill ponds. Refer to *Figure 01* below.



Figure 01: Aerial view of site location

3.0 PRINCIPLE LEGISLATION AND POLICIES

- 3.1.1 The national nature conservation legislation and policies that may be relevant to the proposed development are listed below. A brief explanation of the principle legislation and policies relating to nature conservation, biodiversity and ecology is provided in *Appendix 01*.

Principle Legislation and Policies

- Wildlife and Countryside Act 1981 (*as amended*)
- EC Habitats Directive (92/43/EEC)
- EC Birds Directive (79/409/EEC)
- Conservation of Habitats and Species Regulations 2017
- Countryside and Rights of Way Act 2000
- Protection of Badgers Act 1992
- United Kingdom Biodiversity Action Plan (UKBAP)
- Natural Environment and Rural Communities Act (NERC), 2006 – Biodiversity Duty
- Hedgerow Regulations 1997
- National Planning Policy Framework (NPPF)

4.0 BASELINE INFORMATION

4.1 METHODOLOGY

- 4.1.1 The ecological interest of the site and its surroundings has been investigated by a combination of the following:
- Field survey of the site and immediate surroundings including a phase 1 habitat survey, HSI and eDNA surveys of the mill ponds to assess the presence/likely absence of great crested newts and bat transect surveys;
 - Consultation with relevant bodies to obtain existing protected species records and statutory / non-statutory designated sites information within 2km of the development site: West Yorkshire Ecology Service (WYES) and West Yorkshire Bat Group (WYBG);
 - The UK Biodiversity Action Plan (UKBAP);
 - The Kirklees Biodiversity Action plan (LBAP);
 - Magic map, a government website for nature conservation information; and,
 - Aerial photographs;

4.2 NATURE CONSERVATION DESIGNATED SITES

Statutory Designations

- 4.2.1 There are three statutorily designated nature conservation sites within 2km of the proposals site boundary, which are detailed below in *Table 01*.

- 4.2.2 The proposals site falls within the outer limits of the Impact Risk Zone (IRZ) for the Peak District Moors Special Protection Area (SPA), located approximately 7.5km to the south-west of the proposals site. The proposed development type for the site is not deemed likely to have an impact upon the SPA.

Table 01: Statutorily designated sites within 2km

Site Name	Designation	Grid reference	Location from site	Notes
Castle Hill	LNR ¹	SE152141	Approx. 0.9km south-east	Acid grassland and scrub with semi-improved neutral grassland
Upper Park Wood	LNR	SE145130	Approx. 1.5km to the south	Woodland, grassland and standing water habitats
Gledholt Woods	LNR	SE131165	Approx. 1.9km north-west	Woodland habitat; ancient semi-natural woodland

¹Local Nature Reserves (LNR) are designated by local authorities under the National Parks and Access to the Countryside Act 1949. They cover sites of local significance in terms of their nature conservation value and can contribute to opportunities for public education and enjoyment of wildlife. Local Authorities are required to consult English Nature regarding such designation and the criteria for site selection are published by them in 'Local Nature Reserves in England'.

Non-statutory Designations

- 4.2.3 West Yorkshire Ecology Services (WYES) provided information on nine non-statutorily designated sites within 2km of the proposals site. These sites are designated as Local Wildlife Sites (LWS) or Local Geological Sites (LGS) and are detailed in *Table 02* below with locations on *Figure 03*.

Table 02: Non-statutorily designated sites within 2km

Site Name	Designation	Grid reference	Location from site	Notes
Arthur, Molly Carr and Roaf Woods	LWS ²	SE159136	Approx 1.9km south-east.	Ancient and semi-natural woodland
Castle Hill	LWS, LGS ³	SE152141	Approx. 1.1km south-east of site.	Acid grassland and scrub with semi-improved neutral grassland
Gledholt Woods	LWS	SE131165	Approx 1.6km north-west.	Woodland habitat; ancient semi-natural woodland
Huddersfield Narrow Canal	LWS	SE083141	Approx. 1.4km to the north	Standing open water; value for appreciation of nature
Longley Hill Plantation	LWS	SE156148	Approx 1.3km east.	Neutral and acid grassland, scrub and woodland areas. Dense bluebell coverage

Park Wood	LWS	SE138132	Approx 1.7km south.	Species rich, ancient acid woodland
Sir John Ramsden Canal	LWS	SE155185	Approx. 1.3km to the north	Standing open water; value for appreciation of nature
Upper Park Wood	LWS	SE145130	Approx 1.9km south.	Small woodland habitat
Beaumont Park	LGS	SE 128 147	Approx 1.4km west.	A series of exposed cliff with range of sedimentary features and sections of fine fissile bedding.

² Local Wildlife Sites (LWS) are areas identified and selected locally for their wildlife value. The designation is non-statutory but is recognition of a site's significance with many LWS being of county and often regional importance for wildlife. Examples range from field ponds, streams and reed beds, to ancient woodlands, flower-rich meadows and hedgerows. This designation is equivalent to a SINC. This designation is used by local authorities to allow the ecological value of a site to be considered within the planning system.

³ Local Geological Sites (LGS) are areas identified as being important for their geological features.

- 4.2.4 Refer to Appendix 02 which shows the locations of the designated sites in relation to the application site.

4.3 EXISTING SPECIES RECORDS

- 4.3.1 Existing biological records were provided following consultation with WYES and WYBG. The records detailed in the following tables are those in closest proximity to the proposed development site within the 2km search area. WYES and WYBG provided a number of duplicate records for bat species recorded within 2km of the site. Any additional records WYBG provided are detailed in Table 04. The raw data provided by the records centre was extensive and is therefore not appended to the report but a copy can be provided on request.

Table 03: Protected species records within 2km

Species	Grid reference	Notes
Great crested newt <i>Triturus cristatus</i>	SE137147	Three records. 2009. Approx 0.6km east of site central grid reference. 6 count.
Slow worm <i>Anguis fragilis</i>	SE128145	One record. 1986. Approx 1.6km south-west of site central grid reference.
Water vole <i>Arvicola terrestris</i>	SE133146	Six records. 1999. Approx 1.1km south-west.
Daubenton's bat <i>Myotis daubentonii</i>	SE1354113648	Three records. 2009. Approx 1.4km south-west. Roost.
Whiskered bat <i>Myotis mystacinus</i>	SE1602513975	One record. 2018. Approx 1.8km south-east. Roost.
Natterer's bat <i>Myotis nattereri</i>	SE14421482	One record. 2007. Two count. On site.
Noctule <i>Nyctalus noctula</i>	SE139157	Two records. 2016. Approx 1km north.

Common pipistrelle <i>Pipistrellus pipistrellus</i>	SE14421482	Fifty four records. Most recent 2019. Field and roost records. Closest record less than 100m south-east of site central grid reference.
Pipistrelle species <i>Pipistrellus sp.</i>	SE14021448	Six records. 2007. Approx 0.5km south-west.
Brown long-eared bat <i>Plecotus auritus</i>	SE149163	One record. 2008. Approx 1.5km north-east.
Vesper bat species <i>Vespertilio sp.</i>	SE1522015389	Seventeen records. 2008. Approx 1km north-east. Roost.

Table 04: Bat species records within 2km

Species	Grid reference	Notes
Common pipistrelle <i>Pipistrellus pipistrellus</i>	SE139157	Seven records. 2016. Approx 0.8km north-west.
Pipistrelle species <i>Pipistrellus sp.</i>	SE14821648	Five records. 2014. Approx 1.5km north.
Vesper species <i>Vespertilio sp.</i>	SE13801370	Two records. 2013. Approx 1.3km south.

- 4.3.2 Three European Protected Species Licences were identified within the 2km search area, the closest of which located approximately 1.3km north-east of the proposals site (reference EPSM2010-1750 for common pipistrelle, soprano pipistrelle, and brown long-eared bat, 2010-2012).
- 4.3.3 Badger have also been recorded within 2km of the proposals site, with the closest sett record within 1.7km of the site.
- 4.3.4 Non-native invasive species included on Schedule 9 of the Wildlife and Countryside Act 1981 which have been recorded within 2km of the proposals site include:
- Water fern *Azolla filiculoides*
 - Water hyacinth *Eichhornia crassipes*
 - Canadian waterweed *Elodea canadensis*
 - Nuttall's water weed *Elodea nuttallii*
 - Japanese Knotweed *Fallopia japonica*
 - Giant hogweed *Heracleum mantegazzianum*
 - Indian balsam *Impatiens glandulifera*
 - Curly waterweed *Lagarosiphon major*
 - Yellow archangel *Lamiastrum galeobdolon*
 - Water lettuce *Pistia stratiotes*
 - Rhododendron *Rhododendron ponticum*
 - American mink *Mustela vison*
 - Grey squirrel *Sciurus carolinensis*
 - Canada goose *Branta canadensis*

- 4.3.5 Records of priority UK Biodiversity Action Plan species within 2km of the study area were provided for the following species:

Amphibians: Common toad

Birds: Skylark, linnet, lesser spotted woodpecker, yellowhammer, spotted flycatcher, house sparrow, tree sparrow, dunnock, bullfinch, starling, song thrush

Insects and invertebrates: Small heath, wall, white-letter hairstreak, cinnabar, white-clawed crayfish

Fish: Sea trout

Plants: Floating water-plantain

Mammals: Brown hare

4.4 BIODIVERSITY ACTION PLANS

National Biodiversity Action Plan

- 4.4.1 The UK Biodiversity Action Plan (UK BAP) identifies priority species and habitats which are those considered to be the most threatened and therefore most in need of conservation action. The lists were updated in 2007 to include 1150 species and 65 habitats. The UK Post-2010 Biodiversity Framework (July 2012) has succeeded the UKBAP, however priority species and habitats listed under the UKBAP remain a valuable reference source and have been used to inform statutory lists at a national level including Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (England).
- 4.4.2 Priority habitats known to occur within 2km of the site include standing open waters and canals, acid grassland and wood pasture and parkland.

Local Biodiversity Action Plan

- 4.4.3 Habitat types for which action plans have been prepared for the Kirklees BAP include:

- Arable field margins
- Blanket bog
- Hedgerows
- Inland rock outcrop and scree habitats
- Lowland dry acid grassland
- Lowland heathland
- Hay meadows
- Lowland mixed deciduous woodland
- Open mosaic habitats on previously developed land
- Ponds
- Reedbeds
- Rivers
- Traditional orchards
- Upland flushes, fens and swamps

- Upland heathland
- Upland mixed ashwoods
- Wet woodland
- Wood pasture and parkland
- Scrub
- Other semi-natural grassland (wet/rush pasture and rough grassland)
- Riverine

4.4.4 The proposals site comprises two mill ponds and areas of scrub habitat.

4.4.5 There are numerous species listed within the Kirklees Biodiversity Action Plan. Species included within the Kirklees BAP which have been recorded on site include common pipistrelle and noctule, found to utilise habitats on site for foraging and commuting purposes and house sparrow. Other species within the Kirklees BAP which may potentially utilise habitats on site include swift, hedgehog, and starling.

4.5 SITE SURVEY – PHASE 1 HABITAT SURVEY

Methodology

4.5.1 A walk over survey was undertaken by on the 16th July 2020. Habitat types and key species were noted and are presented in the Phase 1 Habitat format proposed by the Joint Nature Conservation Committee (2010), refer to Figure 02 for corresponding target notes (TN).

Results

Dense scrub

4.5.2 The southern half of the site comprised an area of dense scrub habitat (**Target note 1**). As discussed, following the initial site walkover survey, the majority of this area was noted as cleared during later surveys, with scrub and associated tall ruderal vegetation remaining to the boundaries of this section. Scrub species recorded include bramble, which is dominant, with scattered immature sycamore *Acer pseudoplatanus*, snowberry *Symphoricarpos sp.*, raspberry *R. ideaus*, wych elm *Ulmus glabra* and elder *Sambucus nigra*. Associated species include tall ruderal vegetation and species typical of tall rank grassland, including common nettle *Urtica dioica*, false oat-grass *Arrhenatherum elatius*, rosebay willowherb *Chamerion angustifolium*, common couch *Elytregia reptans*, common ragwort *Senecio jacobaea*, spear thistle *Cirsium vulgare*, broadleaved dock *Rumex obtusifolius*, creeping thistle *C. arvense*, perennial rye-grass *Lolium perenne*, great willowherb *Epilobium hirsutum*, smooth sow-thistle *Sonchus oleraceus*, herb robert *Geranium robertianum*, cow parsley *Anthriscus sylvestris*, a garden geranium, purple toadflax *Linaria purpurea*, ivy *Hedera helix*, white clover *Trifolium repens*, dandelion *Taraxacum agg.* and prickly sow thistle *S. asper*.

4.5.3 Dense scrub and immature trees occur to the north of the site (**Target note 2**), along the northern edge of the mill ponds and in association with a stone wall occurring along this boundary. Species include ash *Fraxinus excelsior*, butterfly bush *Buddleja davidii*, sycamore and willow *Salix sp.*

Broadleaf trees

4.5.4 The south-western boundary of the site marked by Naomi Road is bordered by a row of mature trees (**Target note 3**). Tree species include lime *Tilia sp.*, sycamore, ash, oak *Quercus sp.*, rowan *Sorbus aucuparia* and cherry *Prunus avium*, with associated shrubs

including a cotoneaster species *Cotoneaster sp.*, wych elm, holly *Ilex aquifolium* and elder. Ground flora species recorded include ivy, cow parsley, herb robert, common nettle and wood avens *Geum urbanum*.

- 4.5.5 The north-eastern boundary marked by Hart Street is boarded by a number of immature to semi-mature trees (**Target note 4**) with species recorded including sycamore, ash and willow, with holly scrub also present.

Species-poor semi-improved grassland

- 4.5.6 A verge of rough grassland occurs along the north-eastern boundary of the site (**Target note 5**). Species recorded include grasses such as false oat-grass, cock's-foot *Dactylis glomerata*, a wheat species *Triticum sp.* and Yorkshire fog *Holcus lanatus*. Forbs recorded include common nettle, broadleaved willowherb *Epilobium montanum*, common ragwort, dandelion, wood avens, ribwort plantain *Plantago lanceolata*, smooth sow-thistle, cow parsley, white clover and wild parsnip *Pastinaca sativa*.

- 4.5.7 A similar habitat has developed on top of the wall dividing the two mill ponds (**Target note 6**), with rough grassland habitat and scattered scrub including ash saplings. Species noted include false oat-grass, common ragwort, broadleaved dock, great willowherb and reflexed stonecrop *Sedum reflexum* growing on the walls.

- 4.5.8 Unmanaged grassland habitat also occurs in association with the dense scrub to the northern boundary of the site (**Target note 7**), to the north of the mill ponds. A number of species appear to have been planted by residents from the adjacent properties. Species recorded include grasses such as timothy *Phleum pratense*, a wheat species and false oat-grass, with forbs including great willowherb, common ragwort, red dead-nettle *Lamium purpureum*, yarrow *Achillea millefolium*, spear thistle, white clover, red valerian *Centranthus ruber*, ivy, bristly oxtongue *Picris echioides*, common nettle and garden plants including a daisy species *Leucanthemum sp.*, a burnet species *Sanguisorba sp.* and a poppy species.

Ponds

- 4.5.9 The two mill ponds (**Target note 8**) are surrounded by high stone walls, with adjacent habitats including scrub, rough grassland and broadleaf trees causing some overshadowing of the pond edges. No emergent or submerged vegetation was noted as occurring within the ponds during the surveys carried out. The ponds supports fish, with fish regularly seen surfacing.

Fauna

- 4.5.10 During the survey the following bird species were recorded: wren, wood pigeon, blackbird and house sparrow, with a small number of mallard were recorded using the mill ponds.

4.5.11 Photographs



Image 01: Target note 1 – Dense scrub



Image 02: Target note 4 – Trees along Hart Street



Image 03: Target note 7 – Mill pond lined with mature broadleaf trees (Target note 3)



Image 04: Target note 6 - Rough grassland and scrub on top of wall between the mill ponds

Conclusion

- 4.5.12 Habitats within the proposals site are of limited interest in terms of species composition, comprising common species which occur widely within the local area. No rare or locally uncommon plant species or invasive species as listed under the Wildlife and Countryside Act 1981 (as amended) were detected at the site. Although of limited botanical interest, the mosaic of habitats within the site, such as the dense scrub, mature trees and ponds are likely to be of value to a range of species such as breeding and foraging birds, foraging and commuting bats and other small mammals such as hedgehog.
- 4.5.13 A cotoneaster was identified to the western boundary of the site, within the avenue of trees along Naomi Road. A number of cotoneaster species are included within Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as non-native invasive species making it an offence to plant or otherwise cause to grow these species in the wild. It is therefore recommended that the cotoneaster identified on site is removed/treated on site prior to proposed development works commencing on site.

4.6 SITE SURVEY – HABITAT SUITABILITY INDEX SURVEY & EDNA SURVEY

Methodology – Habitat Suitability Index

- 4.6.1 The two mill ponds within the site were assessed using the Habitat Suitability Index (HSI) survey methodology to consider their suitability for great crested newts and the requirement for further assessment and appropriate mitigation in regards to the proposed development.
- 4.6.2 From consulting an OS base of the surrounding area, there are no other ponds within 500m of the site which require assessment.

4.6.3 The HSI survey is a method produced by Oldham *et al.* (2000) to assess the suitability of ponds for great crested newts by quantifying ten factors (suitability indices) which can affect great crested newt occurrence, such as the presence of fish and wildfowl, shading, coverage of aquatic vegetation, etc. and provides a score which can indicate the suitability of a pond to support breeding great crested newts. The HSI is calculated as a geometric mean of the ten suitability indices using the formula below:

$$4.6.4 \quad HSI = (SI_1 \times SI_2 \times SI_3 \times SI_4 \times SI_5 \times SI_6 \times SI_7 \times SI_8 \times SI_9 \times SI_{10})^{1/10}$$

4.6.5 The score can range from 0 to 1, 0 indicating low suitability and 1 indicating a high suitability. The HSI has been adapted by the National Amphibian and Reptile Recording Scheme (NARRS) who have categorised the suitability of a pond to support great crested newts by the HSI obtained, which is as follows:

Table 05: HSI scoring system

HSI Score	Pond Suitability
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

Results

4.6.6 The results of the HSI survey are detailed in the table below:

Table 06: Habitat Suitability Index Survey

	Pond 1		Pond 2	
SI ₁ Location	A	1	A	1
SI ₂ Pond area	1650m ²	0.85	1650m ²	0.85
SI ₃ Pond drying	Never	0.9	Never	0.9
SI ₄ Water quality	Poor	0.33	Poor	0.33
SI ₅ Perimeter Shade	50%	1	40%	1
SI ₆ Fowl	Minor	0.67	Minor	0.67
SI ₇ Fish	Major	0.01	Major	0.01
SI ₈ Ponds within 1km*	1	0.4	1	0.4
SI ₉ Terrestrial habitat (within 250m)	Poor	0.33	Poor	0.33
SI ₁₀ Macrophytes	0%	0.3	0%	0.3
HSI Score	0.38 - Poor		0.38 - Poor	

* No ponds were noted within 1km of the mill ponds on an OS base, but it was presumed there is at least one pond due to records of GCN being provided within consultation held with WYES with similar grid references situated within 0.6km of the mill ponds.

Conclusions

- 4.6.7 The HSI survey of the two mill ponds on site indicate that they are of poor suitability for great crested newts, due to the presence of fish, poor availability of terrestrial habitat within 250m and the lack of aquatic vegetation.

Methodology – eDNA Survey

- 4.6.8 Based on the HSI survey it is considered that the potential for great crested newts to be present within the site is low; however, as a precautionary measure, it was recommended that an environmental DNA (eDNA) survey be carried out at the ponds to confirm the presence/absence of great crested newts, due to the proposed loss of the mill ponds on site.
- 4.6.9 Water samples were taken from the ponds on the 30th June 2020 following the survey methodology detailed within the document *Analytical and methodological development for improved surveillance of Great Crested Newt Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA (2014)* published by DEFRA and adopted by Natural England. Water samples were collected by Katie Lawrence (licence ref: 2015-17393).

Conclusions

- 4.6.10 Water samples were submitted to and tested by Surescreen Scientific who confirmed that great crested newt are likely to be absent from the ponds on site with a negative result for great crested newt DNA (refer to *Appendix 03* for results provided by Surescreen Scientific).

4.7 SITE SURVEY – TREE ASSESSMENT FOR BAT ROOST POTENTIAL

Methodology

- 4.7.1 Trees on site were surveyed during the walkover survey in order to identify if they had features present with the potential to support roosting bats. All aspects of the trees were surveyed using close focusing binoculars and high powered torch light. The surveyor looked for features which are commonly used by bats for roosting or shelter, such as natural holes, woodpecker holes, cracks and splits, cavities, epicormic growth and bat boxes; and, for signs of bats utilising a tree for roosting purposes such as scratches on the bark at entry points, staining, droppings, audible noise, distinctive smells and the smoothing of surfaces near to cavities. The trees potential to support roosting bats was categorised to relate to the value of identified features. These categories are provided by the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition* (2016) and are summarised in the Table 07 below.

Table 07: Summary of BCT structure (tree/building) categories

BCT Category	Description
High	One or more highly suitable features capable of supporting larger roosts on a regular basis and for long periods of time.
Moderate	One or more suitable features but unlikely to support a roost of high conservation status.
Low	One or more suitable features suitable for low numbers of bats e.g. individual bats opportunistically.
Negligible	Negligible features likely to be used by roosting bats.

Results

- 4.7.2 During the walkover survey a total of four trees were considered to have bat potential. Refer to Table 08 below for details of potential roost features (PRFs) identified. Refer to the arboricultural document compiled by Smeeden Foreman (*SF3082 Arboricultural Survey Report*) for further arboricultural details on the trees concerned and their location.

Table 08: Trees identified with bat roost potential

Tree Ref.	Species	Comments	Bat Potential
T4	Lime	Covered in ivy, potentially covering suitable features	Low
T5	Lime	Mature tree, appears largely intact	Low
T9	Rowan	Broken limb, though wounds appear shallow	Low
T13	Lime	Mature, largely intact, with one broken limb though appears to provide limited roosting opportunities	Low

4.8 SITE SURVEY – BAT ACTIVITY SURVEY

Methodology

- 4.8.1 Following the initial walkover survey, it was noted that habitats on site, such as areas of dense scrub, broadleaf trees and the mill ponds offered suitable foraging and commuting opportunities for bats. A total of four transect surveys were undertaken during the months of July, August, September and October to assess the use of the site by bats. The methodology used was based upon recommendations made within the Bat Conservation Trust publication *Bat Surveys for Professional Ecologists Good Practice Guidelines (2016)*.
- 4.8.2 A total of two surveyors were present during each survey visit, covering the boundaries of the site. Batbox Duet and Magenta Bat 4 Precision detectors were used set on heterodyne mode. Anabat Express and SD2 static detectors were used to record bat activity on site during each visit. The surveys were carried out under the supervision of licenced bat worker Katie Lawrence (bat licence ref. 2015-7301)
- 4.8.3 Due to the urban situation of the site, it was deemed unsecure to leave a static detector on site over a five night period for each of the transect visits undertaken as per the survey guidance; however as detailed above a static detector was used during each survey visit to confirm species using the site.
- 4.8.4 The locations of bat activity identified during the surveys are described below and shown in *Figure 03* (appended). Table 09 below includes information on the timing and conditions of the surveys:

Table 09: Survey specifics

Date	Start time	Finish time	Sunset/Sunrise	Temp.	Cloud cover	Wind speed	Rain	Humidity
29.07.20	21:08	23:08	21:08	15-14°C	70%	3-2mph	None	63-70%
13.08.20	20:39	22:39	20:39	17-16°C	100%	8-7mph	None	87-90%
08.09.20	19:39	21:39	19:39	17°C	100-70%	10-13mph	None	73-75%
01.10.20	05:10	07:10	07:10	10-9°C	10%	7-5mph	None	85-83%

Results

Activity Survey – 29th July 2020

- 4.8.5 During the first survey visit, the first bat recorded was a noctule 21:21, approximately ten minutes after sunset. This bat was recorded foraging and commuting across the site over the mill pond to the north-west. During the remainder of the survey, common pipistrelle were recorded, with frequent to constant activity to the north-west over the mill pond and the associated avenue of trees along Naomi Road, with a maximum of five bats observed. Occasional bat activity was recorded along trees, scrub and the mill pond adjacent to Hart Street and to the south-east corner of the site in association with trees where Naomi Street and Newsome Road meet.
- 4.8.6 Recordings from static Anabat SD2 detector were analysed, confirming the species listed above to be utilising the site.
- 4.8.7 During this survey visit, a tawny owl was recorded calling on site within the avenue of trees along Naomi Road.

Activity Survey – 13th August 2020

- 4.8.8 During the second survey the first bat was recorded at 20:54, 15 minutes after sunset; this was a common pipistrelle seen commuting along the avenue of trees on Naomi Road, heading south. For the remainder of the survey common pipistrelle were recorded foraging and commuting across the site, with most activity noted along the avenue of trees on Naomi Road and the mill pond to the north-west, with a maximum of two bats observed at one time. Occasional to minimal activity was recorded along Newsome Road and Hart Street. Activity was markedly reduced in comparison to the first survey visit.
- 4.8.9 Recordings from static Anabat SD2 detector were analysed, confirming the species listed above to be utilising the site.

Activity Survey – 8th September 2020

- 4.8.10 During the third survey the first bat was recorded at 20:00, approximately 20 minutes after sunset. This bat was recorded at the corner of Newsome Road and Naomi Road, but went unseen. Similar activity was recorded to that of the second survey, with common pipistrelles being recorded foraging and commuting within the site, largely using the western side of the site including the avenue of trees along Naomi Road, and the mill pond to the north-west. Minimal to no activity was recorded along Hart Street and the adjacent mill pond and Newsome Road.

- 4.8.11 Recordings from static Anabat SD2 detector were analysed, confirming the species listed above to be utilising the site.

Activity Survey – 1st October 2020

- 4.8.12 During the fourth survey, a single bat was recorded, this being a common pipistrelle. The recording was taken at the corner of Hart Street and Newsome Road at 05:55, an hour and 15 minutes prior to sunrise. This was a brief call and the bat went unseen.

- 4.8.13 Recordings from static Anabat Express detector were analysed, confirming the findings detailed above.

Conclusions

- 4.8.14 Species confirmed include common pipistrelle and noctule. Recordings from static Anabat SD2 and Express detectors were analysed, confirming the species listed above to be utilising the site. Bat activity recorded during the four surveys indicate that habitats to the west of the site are preferred by bats, with the majority of activity recorded over the mill pond to the north-west and the avenue of trees along Naomi Road. Activity was fairly minimal along Newsome Road, Hart Street and the mill pond adjacent to Hart Street; it is considered that this is due to these areas being more illuminated by external street lighting, with trees along Naomi Road providing continuous cover along the western boundary creating a darker environment.

Limitations

- 4.8.15 Due to timing of instruction it was not possible to undertake transect surveys throughout the active period (April – October), with surveys commencing from July; however, this allowed for two survey visits to be undertaken within the peak survey period (May – August) and the surveys undertaken are therefore considered to give a robust indication of the use of the site by commuting and foraging bats.
- 4.8.16 Although other bat species are likely to occasionally use the site, with Natterer's bat being recorded on site in 2007 (record provided by WYES), species such as common pipistrelle and noctule, which were the species recorded during the transect surveys are considered to provide a good indication of the species likely to largely use the site due to its urban situation.

5.0 IMPLICATIONS/RECOMMENDATIONS

5.1 NATURE CONSERVATION DESIGNATED SITES

- 5.1.1 Three LNR (Castle Hill, Upper Park Wood and Gledholt Woods) lie within a 2km radius of the proposals site. It is considered that there will be no adverse impact upon these designated sites as a result of the development due to a combination of distance from the proposals site, the lack of complementary habitats, intervening land uses (roads and built up areas) and the nature and scale of the proposals.
- 5.1.2 The proposals site falls within the outer limits of the IRZ of the Peak District Moors Special Protection Area (SPA), located approximately 7.5km to the south-west of the proposals site. The proposed development type for the site is not deemed likely to have an impact upon the SPA and due to the distance from the proposals site, the presence of intervening land uses and lack of complimentary habitats, an adverse impact is not anticipated.

- 5.1.3 Nine non-statutorily designated sites are located within 2km of the site, however it is considered that there will be no adverse impact upon these designated sites as a result of the development due to a combination of distance from the proposals site, intervening land uses (roads and built up areas) and the nature and scale of the proposals.

5.2 HABITATS

- 5.2.1 Habitats within the proposals site are of limited interest in terms of species composition, comprising common species which occur widely within the local area. No rare or locally uncommon plant species or invasive species as listed under the Wildlife and Countryside Act 1981 (as amended) were detected at the site. Although of limited botanical interest, the mosaic of habitats within the site, such as the dense scrub, mature trees and ponds are likely to be of value to a range of species such as breeding and foraging birds, foraging and commuting bats and other small mammals such as hedgehog.
- 5.2.2 A cotoneaster was identified to the western boundary of the site, within the avenue of trees along Naomi Road. A number of cotoneaster species are included within Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as non-native invasive species making it an offence to plant or otherwise cause to grow these species in the wild. It is therefore recommended that the cotoneaster identified on site is removed/treated on site prior to proposed development works commencing on site.
- 5.2.3 In addition ponds and scrub habitats are included within the Kirklees Local BAP and therefore these habitats are of local value.
- 5.2.4 The proposals will involve the loss of the mill ponds currently on site and the remaining areas of dense scrub to the south. Mature trees associated with the south-western boundary of the site along Naomi Road will be largely retained.
- 5.2.5 Recommendations with the aim to mitigate the loss of habitats on site and protect those proposed for retention include:
- Use of temporary protective demarcation fencing to protect retained areas/features. The fencing must be in accordance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction', extend outside the canopy of the retained trees, and remain in position until construction is complete;
 - Use of directional lighting during construction, which will not shine upon the site boundaries or trees within the site;
 - Implementation of a sympathetic lighting scheme within proposals that minimises illumination of trees and areas of new planting to the boundaries of the site, particularly the mature trees along the western boundary. Incorporation of appropriate luminaire specifications and locations should be considered in the interest of minimising impacts on ecological receptors, including light sensitive species i.e. bats. Reference should be made to the document published by the Bat Conservation Trust and the Institute of Lighting Professionals 'Bats and artificial lighting in the UK' (2018);
 - Appropriate native tree and shrub planting to the site boundaries and within the site to mitigate the loss of existing trees and scrub;
 - Consideration of seeding of areas within the Public Open Space (POS) with a suitable wildflower mix.

5.3 PROTECTED SPECIES

- 5.3.1 Existing records data and site survey have noted the potential for various protected species to occur within the search area or on site, upon which the potential effects of the proposed development are discussed in the following sections (refer to *Appendix 04* for relevant species legislation).

Great Crested Newts

- 5.3.2 From consultation with the local records centre three records of great crested newt were provided approximately 0.6km to the north-west of the site, within the grounds of Kirklees College, most recently dated 2009. Due to the distance of these records (>500m) and a degree of severance between the location of the records and the proposals site, no adverse impact upon this population, if still present, is anticipated.
- 5.3.3 The mill ponds on site were subject to a HSI survey to assess their suitability for use by great crested newts. The ponds both obtained a HSI score which indicate that they are of poor suitability for great crested newts, scoring low on indices such as the presence of fish, lack of extensive suitable terrestrial habitat within 250m and lack of macrophytes.
- 5.3.4 Although the mill ponds scored low for great crested newt suitability, eDNA surveys were carried out as a precaution with the ponds proposed to be lost to facilitate the proposals. The eDNA surveys obtained a negative result, indicating the likely absence of great crested newts within the mill ponds. This coupled with the results of the HSI survey indicating that the ponds are of poor suitability for great crested newts, no further assessment is deemed necessary and no adverse impact upon this species is anticipated as a result of the proposed development.

Bats – commuting/foraging habitat

- 5.3.5 Bat species recorded within 2km of the proposals site include field and roost records relating to Daubenton's, whiskered, Natterer's bat, noctule, common pipistrelle, pipistrelle species, brown long-eared and a vesper bat species, with the closest of these records being Natterer's bat which was recorded as a field record on site in 2007.
- 5.3.6 Habitats on site, such as the mill ponds, scrub and broadleaf trees provide suitable habitat for foraging and commuting bats. Transect surveys were undertaken from July to October to assess the use of the site by foraging and commuting bats. Species recorded included common pipistrelle and noctule bats, with sections of the site found to be most regularly used including the mill pond to the north-west of the site and the avenue of trees along Naomi Road. Activity was less frequent along Hart Street, Newsome Road and the mill pond adjacent to Hart Street, with these areas being more well-lit by external lighting, potentially causing reduced activity.
- 5.3.7 Proposals involve the loss of the mill ponds and the areas of remaining dense scrub to the south. Mature broadleaved trees occurring to the west of the site along Naomi Road will be largely retained. Recommendation with the aim of mitigating losses of habitat on site include the planting of native trees and shrubs to the site boundaries and through the site and the seeding of wildflower grassland within the POS, where possible.
- 5.3.8 Any new lighting should be appropriately designed including directional and low wattage luminaires to avoid illuminating the areas of planting. Reference should be made to the Bat Conservation Trust publications '*Artificial Lighting and Wildlife*' (2014) and '*Bats and Artificial Lighting in the UK*' (2018) which includes the following guidelines:

- Using warm white, narrow spectrum lights with little or no UV;
- Low wattage (eg 20W);
- Directional lighting with near full horizontal cut off, mounted at a low height;
- Minimum height columns at maximum spacing.

Bats – potential tree roosts

- 5.3.9 Four trees on site were assessed as having low potential to support roosting bats, with potential roost features identified including branch socket holes, lifted bark, tear out wounds and deadwood. From referring to the Tree Constraints Plan produced by Smeeden Foreman (ref: SF3082, August 2020), one tree (T9) of the four identified as having bat potential is proposed for removal.
- 5.3.10 As T9 was assessed as having low potential to support roosting bats it is recommended that this tree is felled using a precautionary approach, with arborists undertaking felling works being alerted to the possibility of bats being present and the need for vigilance during felling. Soft felling methods would be used, including careful cutting (i.e. cutting through solid sections of the trees rather than where cavities occur and lowering of limbs, where necessary. If any tree surgery works are required of other trees identified as having low bat potential (T4, T5 and T13), the precautionary working methods described above should be used.
- 5.3.11 If during felling works roosting bats are identified, advice should be sort from an ecologist and a European Protected Species Licence (EPSL) obtained from Natural England would be required prior to works commencing/re-commencing.
- 5.3.12 To enhance bat roosting opportunities on site, it is recommended that bat boxes are installed on retained trees and new buildings on site.

Breeding Birds

- 5.3.13 Bird species recorded during the walkover survey included wren, wood pigeon, blackbird and house sparrow, with a small number of mallard were recorded using the mill ponds. Trees, scrub and the ponds on site are likely to be used by all these species and local breeding and roosting bird populations in general.
- 5.3.14 All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) during breeding. It is therefore recommended that any vegetation clearance takes place outside the core bird nesting period (March – August inclusive) unless checks by an appropriately qualified ecologist find active nests to be absent immediately prior to clearance works. If nesting birds are identified advice will be sought. The advising ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. Measures such as applying a set boundary around the nest may be necessary until the young birds have fledged.
- 5.3.15 Mitigation to incorporate on site in relation to birds could include appropriate tree and shrub planting to the site boundaries and throughout the site and the installation of species-specific boxes upon suitable trees/proposed buildings on site to provide roosting/breeding opportunities for breeding birds in general. Tawny owl was recorded on site within trees to the western boundary during the bat transect surveys carried out; consideration should be given to the installation of a tawny owl box onto a retained tree to the western boundary to provide nesting opportunities for this species.
- 5.3.16 Sympathetic management of existing and newly planted trees and shrubs should be considered to avoid disturbance to breeding birds. This involves the avoidance of

management during the core active season March – August and preferably only to be carried out during January and February when the berry crop is mostly finished to benefit species during winter.

Badger

- 5.3.17 No signs of badger were recorded within or adjacent to the site during the survey. From consultation with WYES, one record of badger was provided within 1.7km of the site. Due to the urban situation of the proposals site, it is considered unlikely that badgers will use habitats within the site and therefore no adverse impact is anticipated upon this species as part of the proposed development.

Otter

- 5.3.18 No signs of otter were identified during the walkover survey and WYES provided no records for this species within 2km of the proposals site. The ponds provide potential foraging habitat for otter; however, due to the distance of the closest watercourse (River Holme, approx. 0.8km to the north), intervening land uses between the site and the watercourse such as buildings and roads and the urban nature of the site, it is considered unlikely that otter will use the ponds on site and no adverse impact upon this species is anticipated.

Water Vole

- 5.3.19 No signs of water vole were identified during the walkover survey. Consultation with WYES provided records of this species, with the closest record location approximately 1.1km from the proposals site. The ponds on site are considered unsuitable for use by water vole due to the lack of dense aquatic vegetation and their lack of connectivity with other water courses. No adverse impact upon this species is therefore anticipated as a result of the proposed development.

White-clawed crayfish

- 5.3.20 From consultation with WYES, no records of white-clawed crayfish were provided. The mill ponds on site are considered to offer sub-optimal habitat for this species and the ponds lack connectivity with watercourses within the surrounding area. No adverse impact upon this species is anticipated as a result of the proposed development.

Other protected species

- 5.3.21 Due to the lack of suitable habitat on and adjacent to the site for reptile species no adverse impact upon such species is anticipated as a result of the proposed development.

5.4 NOTABLE SPECIES

Hedgehog

- 5.4.1 Dense scrub habitats on site are considered to be suitable for hedgehog. Precautionary working methods will therefore be adopted to ensure hedgehogs are not harmed/killed during works. Such works would include the removal of any tree/shrub cuttings from site, once vegetation is cut so as to avoid the creation of brash piles; these may be attractive to hedgehogs, which could subsequently be harmed if the brash pile is burnt or removed with machinery. In addition, any trenches created on site will be covered or a means of escape shall be provided and any open pipe work will be capped at the end of each working day.

- 5.4.2 It is also recommended that small gaps (0.15m) are left under sections of new fencing/walls within the development to allow passage of hedgehog and maintain connectivity across the site.

UKBAP Priority Bird Species

- 5.4.3 House sparrow recorded during site survey have been afforded national priority within the UK Biodiversity Action Plan and have also been assigned red status on the UK Red List due to population declines as a result of habitat loss.
- 5.4.4 To enhance the site for colony nesters such as house sparrow, consideration should be given to the installation of species-specific bird boxes onto retained trees/new buildings within the site.
- 5.4.5 The inclusion of native berry-bearing tree and shrub species within planting proposals will benefit thrush species and breeding/wintering bird populations in general. Particular consideration should be given to the incorporation of berry-bearing species such as rowan *Sorbus aucuparia*, guelder-rose *Viburnum opulus*, holly *Ilex aquifolium*, hawthorn, blackthorn and ivy as a climber.

5.5 OTHER SPECIES

- 5.5.1 During surveys undertaken on site it was noted that fish occur within the mill ponds, with fish seen surfacing frequently. As the mill ponds will be lost to facilitate the proposals, it is recommended that prior to draining, the ponds are subject to electrofishing to remove and relocate the fish. Advice should be sought from the Environment Agency in regards to the movement of fish and the relevant permissions required.

5.6 INVASIVE NON-NATIVE SPECIES

- 5.6.1 A cotoneaster was identified to the western boundary of the site, within the avenue of trees along Naomi Road. A number of cotoneaster species are included within Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as non-native invasive species making it an offence to plant or otherwise cause to grow these species in the wild. It is therefore recommended that the cotoneaster identified on site is removed/treated on site prior to proposed development works commencing on site.

5.7 IMPACT ASSESSMENT SUMMARY

- 5.7.1 A summary of the resulting impact assessment based upon CIEEM guidelines (see *Appendix 05* for methodology) is provided in Table 10. With the mitigation and enhancement measures detailed within this report incorporated within the site proposals, there are anticipated to be no significant residual ecological impacts.
- Designated sites are not included in Table 10 as impact upon such sites have been identified.

Table 10: Ecological Impacts Summary

Ecological Feature (to be affected by the proposals)	Geographical level of importance (of local level and above)	Identified impacts	Magnitude Of impact	Duration of impact (reversibility)	Impact significant without mitigation	Mitigation and enhancement proposals	Residual impact.
Habitats							
Ponds	Local	Direct loss	Negative	Permanent	Yes	Planting of appropriate native species within the landscape proposals.	Negative
Dense scrub	Local	Direct loss	Negative	Permanent	Yes	Replacement planting of appropriate native species within the landscape proposals.	Neutral - Minor negative
Trees	Local	Direct loss Accidental damage	Negative/ minor negative	Permanent	Yes	Retention of trees where possible. Temporary protective fencing. Replacement planting of appropriate native species within the landscape proposals.	Neutral
Species							
Bats (foraging)	Site/local	Loss of foraging / commuting habitat and effects of light pollution.	Negative	Permanent	Yes	Retention of trees to western site boundary. Inclusion of native species within the landscape proposals. Sympathetic lighting design.	Minor negative
Bats (roosting)	Unknown (trees with bat potential)	Loss of potential roost	Negative	Permanent	Yes	Tree identified with low bat roost potential (T9) to be removed as part of the proposals. Precautionary measures recommended to be adopted during felling works. If bat roost identified during felling, works would halt and an EPSM licence application would be made and appropriate mitigation adopted on site (i.e. provision of bat boxes on retained trees/new buildings).	Neutral
Birds	Site/local	Loss of habitat.	Minor negative	Permanent/ temporary	Yes	Vegetation clearance outside the nesting season (or following checks for active nests). Replacement planting to include appropriate native species. Installation of nest boxes in retained trees/new build.	Neutral – minor beneficial
Hedgehog	Site/local	Increased harm /injury.	Minor negative	Permanent	Yes	Working methods during construction and measures to maintain habitat connectivity and quality.	Neutral

6.0 CONCLUSIONS

- 6.1.1 The mosaic of habitats within the proposals site are considered to offer opportunities for wildlife within the local area, comprising two mill ponds, areas of dense scrub and mature trees. To facilitate the development the mill ponds and dense scrub habitats will be lost. Mature trees which occur along the western boundary will largely be retained within the proposals.
- 6.1.2 To mitigate for the loss of habitats of value, it is recommended that landscape proposals incorporate appropriate native tree and shrub planting to the boundaries and throughout the site. Further recommendations to protect retained features and ensure the continues use of the site by wildlife have been recommended within the report, such as the use of tree protection fencing during construction works and sympathetic lighting to be used during construction and once the site is occupied. Removal of a cotoneaster identified on site has also been recommended.
- 6.1.3 Precautionary working methods and/or mitigation have been recommended for species such as bats, breeding birds, hedgehog and fish present within the mill ponds.

7.0 REFERENCES

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FIGURES

Figure 01: Aerial photograph (included within body of report)

Figure 02: Phase 1 Habitat Map

Figure 03: Bat Activity Map

FIGURE 02: PHASE 1 HABITAT MAP



FIGURE 03: BAT ACTIVITY MAP



APPENDICES

Appendix 01: Principle Legislation and Policies

Appendix 02: Designated Site map

Appendix 03: eDNA results

Appendix 04: Protected Species Legislation

Appendix 05: Ecological Assessment Methodology

APPENDIX 01: PRINCIPLE LEGISLATION AND POLICIES

Principle Legislation

Wildlife and Countryside Act 1981 (as amended)

This is the primary legislation for nature conservation in England and Wales. It confers varying degrees of protection on selected species according to their conservation status, ranging from making it an offence to take a species from the wild for profit, to full protection of a species and its habitat. The Act also gives guidance and instruction on statutory sites, such as sites of Special Scientific Interest (SSSI). License exempting specific works can be granted by Natural England. Such licenses are only granted once a full assessment has been made and an appropriate, sustainable mitigation package devised.

Protection of Badgers Act 1992

Allied to the Wildlife and Countryside Act, 1981 are subsidiary Acts such as the Protection of Badgers Act, 1992 which consolidated and added to previous legislation. According to the PBA it is an offence to wilfully kill, injure or maim a badger. Badger setts are also protected from interference unless such activities are licensed through Natural England. Any mitigation packages devised for badgers found on development sites must be agreed by Natural England and all mitigation activities must be fully licensed.

Countryside and Rights of Way Act 2000

As well as providing measures to improve countryside access for walkers, ramblers and horse riders, this Act also strengthens the protection of species and designated sites made in the Wildlife and Countryside Act 1981. This Act also gives the importance of biodiversity conservation statutory basis requiring government departments to have regard for biodiversity in carrying out their functions, and to take positive steps to further the conservation of listed species and habitats.

Natural Environment and Rural Communities Act (NERC), 2006 – Biodiversity Duty

NERC received royal assent in March 2006. Section 40 of the Act replaces and extends a duty, from Section 74 of the Countryside and Rights Of Way Act 2000, on Ministers and Government which already requires them to have regard to the purpose of conserving biodiversity. Section 40(1) states that, "*Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.*"

EC Habitats Directive (92/43/EEC)

This Directive aims to give Europe-wide protection to certain rare and threatened habitats on land and at sea. It builds on legislation already established under the Birds Directive of 1979, and aims to establish a series of protected sites known as Natura 2000 series. These sites are intended to protect the unique and special wildlife of Europe and to preserve it for future generations. In Britain these Natura 2000 sites include those areas designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The Habitats Directive is implemented in the UK through the Conservation of Habitats and Species Regulations 2017.

EC Birds Directive (79/409/EEC)

The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It sets broad objectives for a wide range of activities, although the precise legal mechanisms for their achievements are at the discretion of each Member State (in the UK delivery is via several different statutes). The Directive applies to the UK and to its overseas territory of Gibraltar.

The main provisions of the Directive include:

The maintenance of the favourable conservation status of all wild bird species across their distributional range with the encouragement of various activities to that end;

The identification and classification of Special Protection Areas (SPAs) for the rare and vulnerable species listed in Annex I of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance;

The establishment of a general scheme of protection for all wild birds; Restrictions on the sale and keeping of wild birds.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

For species-specific legislation, please refer to *Appendix 03* for further information.

Policy

National Planning Policy Framework (2018)

The National Planning Policy Framework replaces Planning Policy Statement 9 (PPS 9) Biodiversity and Geological Conservation but the accompanying guidance document (ODPM 06/2005: Biodiversity and Geological Conservation-Statutory Obligations and their impact within the Planning System) has not been withdrawn.

The NPPF sets out the Government's policies on the protection of biodiversity and sites of geological interest through the planning system. It required local planning authorities, when taking decisions, to ensure that appropriate weight is attached to designated sites of international, national and local importance, protected species and to biodiversity and sites of recognised geological interest within the wider environment. It states:

"The planning system should contribute to and enhance the natural and local environment by:

Protecting and enhancing values landscapes, geological conservation interests and soils;

Recognising the wider benefits of ecosystem services;

Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."

"When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

If significant harm resulting from a development cannot be abided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused."

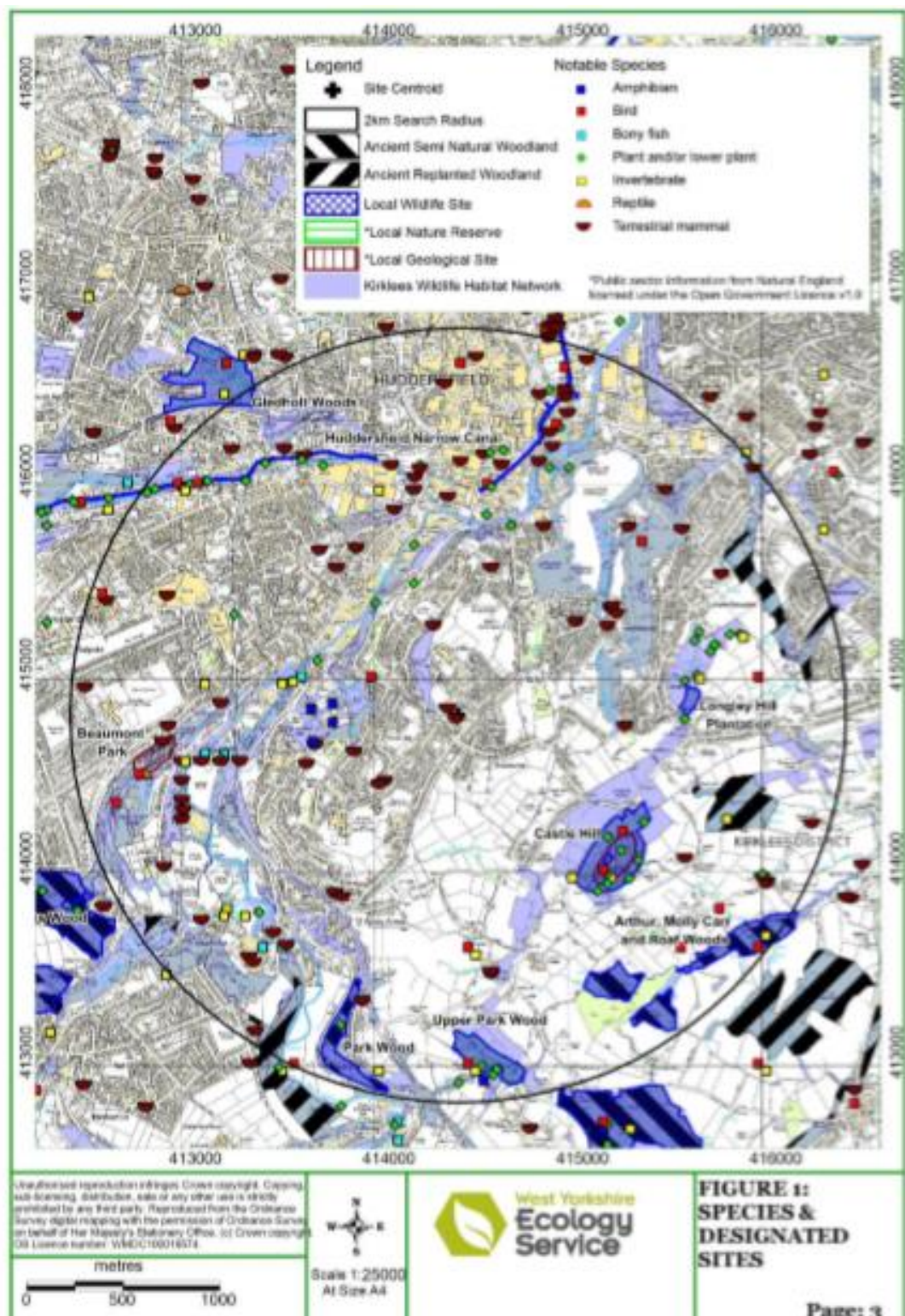
Biodiversity Action Plan (BAP)

In 1993, the UK government consulted over three hundred organisations throughout the UK and held a two day seminar to debate the key issues raised at the Convention of Biological Diversity. The product of this was the launch of Biodiversity: the UK Action Plan in 1994 which outlined the UK Biodiversity Action Plan for dealing with biodiversity conservation in response to the Rio Convention.

The UK Biodiversity Steering Group was created in 1994 and published Biodiversity: the UK Steering Group Report – meeting the Rio challenge. This established the framework and criteria for identifying species and habitat types of conservation concern.

From this list, action plans for 391 species and 45 broad habitat types were produced. As well as having national priorities and targets, action was also taken at a local level. The Steering Group drew up a set of guidelines that were discussed with the Local Authority Association and the Local Government Board. Today there are 162 Local Biodiversity Action Plans in the UK. A review of the UK BAP was undertaken between 2003 and 2006.

APPENDIX 02: DESIGNATED SITE MAP



APPENDIX 03: eDNA RESULTS



File No: ES400
Report No: 1
Purchase Order: SF3082
Client: SMEEDEN FOREMAN
Contact: Katie Lawrence

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (TRITURUS CRISTATUS)

SUMMARY

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 06/07/2020
Date Reported: 20/07/2020
Matters Affecting Results: None

Lab Sample No.	Site Name	Q/S Reference	SSC	DC	IC	Result	Positive Replicates
4192	Naomi St. Pond, Mat St. Newsome	SE 1462 1480	Pass	Pass	Pass	Negative	0
5310	Hart St. Pond, Mat St. Newsome	SE 1464 1482	Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Jennifer Higginbottom

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APPENDIX 04: PROTECTED SPECIES LEGISLATION

Bats

Bats and their roosts are afforded full legal protection under both UK and European legislation. Conservation of Habitats and Species Regulations 2017 transpose the Habitats Directive into UK law, making it an offence to:

- deliberately disturb a bat;
- deliberately kill, injure or capture a bat;
- damage, destroy or obstruct access to a breeding site or resting place (note this applies to both deliberate and reckless actions).

The Wildlife and Countryside Act 1981 (as amended) (Schedule 5) made it an offence to:

- intentionally kill, injure or take a bat ;
- damage, destroy or obstruct a bat roost *;
- disturb a bat at a roost *;
- possess or control a bat or any part thereof;
- sell, offer for sale, possess or transport for sale any bat or part thereof;
- set traps for catching, killing or injuring bats;
- possess articles for the purposes of committing offences against bats;

[*= intentional and reckless offences covered].

Legal protection under the Habitats Directive applies to the animals and their breeding sites and resting places. This means that bat roosts are fully protected, whether they are in use at the time or not. Where roosts or resting/breeding sites are identified, any works which may contravene the protection afforded to them require derogation from the provisions of the legislation in the form of a licence from Natural England..

Great crested newts

The Wildlife and Countryside Act 1981 (as amended) transposes into UK law and the Convention on the Conservation of European and Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'). The 1981 Act was amended by the Countryside and Rights of Way ['CRoW'] Act 2000.

The great crested newt is listed on Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which make it an offence to:

- Intentionally kill, injure or take a great crested newt [Section 9 (1)];
- Possess or control any live or dead specimen or anything derived from a great crested newt [Section 9 (2)];
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt [Section 9 (4)(a)];
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose [Section 9(4)(b)].

The Conservation of Habitats and Species Regulations 2017 transpose into the UK law Council Directive 92/43/EEC of 21st May 1992 on the conservation of Natural Habitats and of Wild Fauna and Flora (often referred to as the 'Habitats [and Species] Directive'). The great crested newt is listed on Annex II and Annex IV of the Directive. The former Annex relates to the designation of Special Areas of Conservation (SACs) for this species; even where great crested newts occur outside SACs, the inclusion on Annex II serves to underline their conservation significance. Inclusion of the Annex IV ('European Protected Species') means that member states are required to put in place a system of strict protection as outlined

in Article 12, and this is done through inclusion on Schedule 2 of the Regulations. Regulation 43 makes it an offence to:

- Deliberately capture or kill a great crested newt [Regulation 43(1)(a)]
- Deliberately disturb a great crested newt [Regulation 43(1)(b)]
- Deliberately take or destroy the eggs of a great crested newt [Regulation 43(1)(c)]
- Damage or destroy a breeding site or resting place of a great crested newt [Regulation 43(1)(d)]

The legislation applies to all life stages of great crested newts.

Breeding birds

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built or,
- take or destroy an egg of any wild bird.

This protection applies from the moment the nest is being built. Additional protection against disturbance on the nest or of dependent young is provided for birds included on Schedule 1.

Badger

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under the Act it is illegal to:

- Wilfully kill, injure or take a badger or attempt to do so;
- Cruelly ill-treat a badger; and,
- Interfere with a sett by doing any of the following:
 - (i) damaging a badger sett or any part of it;
 - (ii) destroying a badger sett;
 - (iii) obstructing access to a badger sett;
 - (iv) causing a dog to enter a sett; and,
 - (v) disturbing a badger while it is occupying a sett.

Otter

Otter are afforded full legal protection under both UK and European legislation. The Conservation of Habitats and Species Regulations 2017 transpose the Habitats Directive into UK law, making it an offence to:

- deliberately capture, injure or kill an otter;
- deliberately disturb an otter in such a way as to be likely to significantly affect the local distribution or abundance of otters or the ability of any significant group of otters to survive, breed, rear or nurture their young; or,
- damage or destroy an otter holt.

The otter is also protected under Section 9(4)(b) of the Wildlife and Countryside Act 1981

- intentionally or recklessly disturb any otter whilst it is occupying a holt; or,
- intentionally or recklessly obstruct access to a holt.

Water Vole

Water voles are given full legal protection under Section 9(4) of Schedule 5 of the Wildlife & Countryside Act 1981 (as amended in 2008). This makes it a legal offence to intentionally kill, injure or take, sell, damage or destroy or obstruct access to any structure or place used by water voles for shelter or protection, or to disturb water voles while they are using such a place.

APPENDIX 05: ECOLOGICAL ASSESSMENT METHODOLOGY

The assessment of the impact of the proposed development on ecological features is based upon the Chartered Institute of Ecology and Environmental Management publication Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (2018).

The baseline condition of the site is established through a combination of desk study and site survey.

This identifies the ecological features present on and within the vicinity of the site. These features are evaluated to establish their level of importance and their potential to be significantly affected by the proposed development. Features which are judged to be important and likely to be significantly affected by the proposed development are assessed.

The importance of an ecological feature is based upon consideration of the following:

- *Designation: European, national and local designated wildlife sites;*
- *Listing: Country Biodiversity, Biodiversity Action Plan, Red Listed, Rare and Legally Protected Species;*
- *Function: e.g. as a buffer, corridor or 'stepping stone' etc.;*
- *Characteristics: naturalness, rarity, diversity, connectivity, trend, assemblage, typicality, range.*

The guidelines suggest that the importance of the ecological feature is considered within a defined geographical context. The following frame of reference is recommended:

- *International and European e.g Ramsar sites;*
- *National e.g. Sites of Special Scientific Interest;*
- *Regional e.g. North West England;*
- *Metropolitan, County vice-county or other local authority wide area e.g. West Yorkshire;*
- *Local.*

The following table illustrates how the concept of importance of the ecological features has been applied to assess the impacts of the development.

<i>Level of importance</i>	<i>Description of ecological features</i>
<i>International</i>	<i>Internationally designated sites (Special Protection Area (SPA), Ramsar, Special Area for Conservation (SAC))</i> <i>Habitats listed on Annex 1 of the Habitats Directive.</i> <i>Species listed on Annexes II, IV and V of the Habitats directive.</i> <i>Species listed on Annex 1 of the Birds Directive.</i> <i>e.g. A significant population of a European protected species in this geographical region (a population of bird species representative of more than 1% of the international population).</i>
<i>National</i>	<i>Nationally designated sites (Site of Special Scientific Interest (SSSI), National Nature Reserve).</i> <i>Habitats listed as habitats of principle importance under section 41/42 of the NERC Act 2006.</i> <i>Species listed as species of principle importance under section 41/42 of the NERC Act 2006.</i> <i>e.g. A significant population of a more common and widespread European protected species in this geographical region (a population of bird species representative of more than 1% of the national population).</i> <i>e.g. A significant population of a protected species under all parts of Schedule 1, 5 or 6 of the Wildlife and Countryside Act 1981 e.g. water vole.</i>
<i>Regional</i>	<i>e.g. A good/typical example of a UK BAP Priority Habitat that satisfies all the criteria in the Priority Habitat definition but is in some way slightly enhanced (e.g. presence of a species that is localised in the region).</i> <i>e.g. A regularly occurring, locally significant population of a species listed as being nationally scarce.</i>
<i>County</i>	<i>Sites of county importance (non-statutory) designated by local authorities to allow their importance to be considered within the planning system. Names vary between authorities including Local Wildlife Sites (LWS), Sites of Interest for Nature Conservation (SINC). Local Biodiversity Action Plan (LBAP) Priority Habitats and Species considered to be exceptional or of significance in the local (county/district) geographical area.</i>
<i>Local</i>	<i>Populations of BAP Priority Species which are not considered to be exceptional or of significance in the local geographical area.</i> <i>Areas of habitat which contribute towards habitat resources at the local level but are not of significant ecological importance e.g. local greenspaces and wildlife corridors within an urban area.</i> <i>Priority habitats and species listed on the LBAP (but not already listed under UK BAP).</i>
<i>Negative</i>	<i>Presence of a legally controlled animal or plant species listed under Schedule 9 of the wildlife and Countryside Act 1981 or other non-native invasive/injurious species that have potential to have a significant impact on the native flora and fauna and could be considered to have an ecological commercial or social adverse effect, usually at the local or site level.</i>

Site level has been used for ecological features of less than local importance such as:

- species-poor vegetation communities;
- typical populations of common and widespread mammal, bird, amphibian and/or invertebrate species;
- habitats common and abundant within the local area, where that within the site does not represent a significant concentration.

Once the important ecological features are identified, consideration is given to the likelihood of change to these features as a result of the development and associated activities i.e. the predicted impacts of the development.

This change may be either positive or negative and includes consideration of the following characteristics of the impact:

- *Extent*
- *Magnitude*
- *Duration*
- *Timing*
- *Frequency*
- *Reversibility*

Positive and negative effects are defined as follows:

- *Positive impact: a change that improves the quality of the environment e.g. by increasing species diversity, extending habitat or improving water quality; halting or slowing an existing decline.*
- *Negative impact: a change which reduces the quality of the environment e.g. destruction of habitat, removal of species foraging habitat, habitat fragmentation, pollution.*

The identification of whether these effects are significant is based upon whether the effect supports or undermines biodiversity conservation objectives of the features which have been judged to be 'important' and is considered at the relevant geographical scale. It is generally the case that no significant effect can occur to features of less than local importance, other than in exceptional circumstances such as where a feature has high social or economic value, or the magnitude of effect is particularly high.

The identification of a significant effect then forms the basis for further consideration of the effects on the feature concerned and the potential to reduce effects by employing appropriate mitigation measures or providing compensation. The 'mitigation hierarchy' is applied to reduce identified impacts, and provide enhancements, by avoidance in the first instance, then mitigation and finally compensation.

The overall effects of the proposed development with appropriate mitigation and/or compensation incorporated within the project proposals provide the residual impacts of the scheme.