



envirotech

Ecological Consultants
Environmental and Rural Chartered Surveyors

Preliminary Ecological Appraisal

John Cotton, Leeds Road



Tel: 015395 61894
Email: info@envtech.co.uk
Web: www.envtech.co.uk
Envirotech NW Ltd

The Stables, Back Lane, Hale, Milnthorpe, Cumbria. LA7 7BL
Directors: A. Gardner BSc (Hons), MSc, MRICS, Dip NDEA
H. Gardner BSc (Hons), MSc, CEnv, MRICS
Registered in England and Wales. Company Registration Number 5028111

ACCURACY OF REPORT

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, all of the protected species this survey covers are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and/or in their interaction with protected species. If protected species are found during a work programme, and continuing the work programme could result in their disturbance, injury or death, either directly or indirectly an offence may be committed.

If in doubt, stop work and seek further professional advice.

Quality and Environmental Assurance

This report has been printed on recycled paper as part of our commitment to achieving both the ISO 9001 Quality Assurance and ISO 14001 Environmental Assurance standards. Envirotech have been awarded the Gold standard by the Cumbria Business Environmental Network for its Environmental management systems.

Author	Andrew Gardner	Date	05/04/2023
Checked by	Andrew Gardner	Date	05/04/2023
Report Version	1		
Field data entered	<input type="checkbox"/>		
Report Reference	8352		

Contents

1. EXECUTIVE SUMMARY.....	5
2. INTRODUCTION.....	6
2.1 Background.....	6
2.2 Objectives.....	7
3. METHODOLOGY AND SOURCES OF INFORMATION.....	8
3.1 Data Search.....	8
3.2 Vegetation and Habitats.....	8
3.3 Timing and Personnel.....	8
4. SPECIES SURVEY METHODOLOGY.....	10
4.1 Amphibian.....	10
4.2 Badger.....	10
4.3 Bats.....	11
4.4 Birds.....	11
4.5 Otter.....	12
4.6 Reptiles.....	12
4.7 Water Vole.....	12
4.8 Survey limitations.....	13
5. RESULTS.....	14
5.1 Data Search.....	14
6. PHASE 1 SURVEY RESULTS.....	19
6.1 Habitat Results.....	19
6.2 Vegetation.....	29
6.3 Amphibian.....	29
6.4 Badger.....	29
6.5 Bats.....	29
6.6 Birds.....	30
6.7 Otter.....	30
6.8 Reptiles.....	31
6.9 Water vole.....	31
6.10 Statutory and Non-Statutory Sites.....	31
7. MITIGATION/RECOMMENDATIONS.....	32
7.1 Compensatory planting and habitat enhancement.....	32
7.2 Amphibians.....	32
7.3 Badger.....	32
7.4 Bats.....	32
7.5 Birds.....	33
7.6 Otter.....	33
7.7 Reptiles.....	33

7.8 Water vole 33

8. REFERENCES 34

1. EXECUTIVE SUMMARY

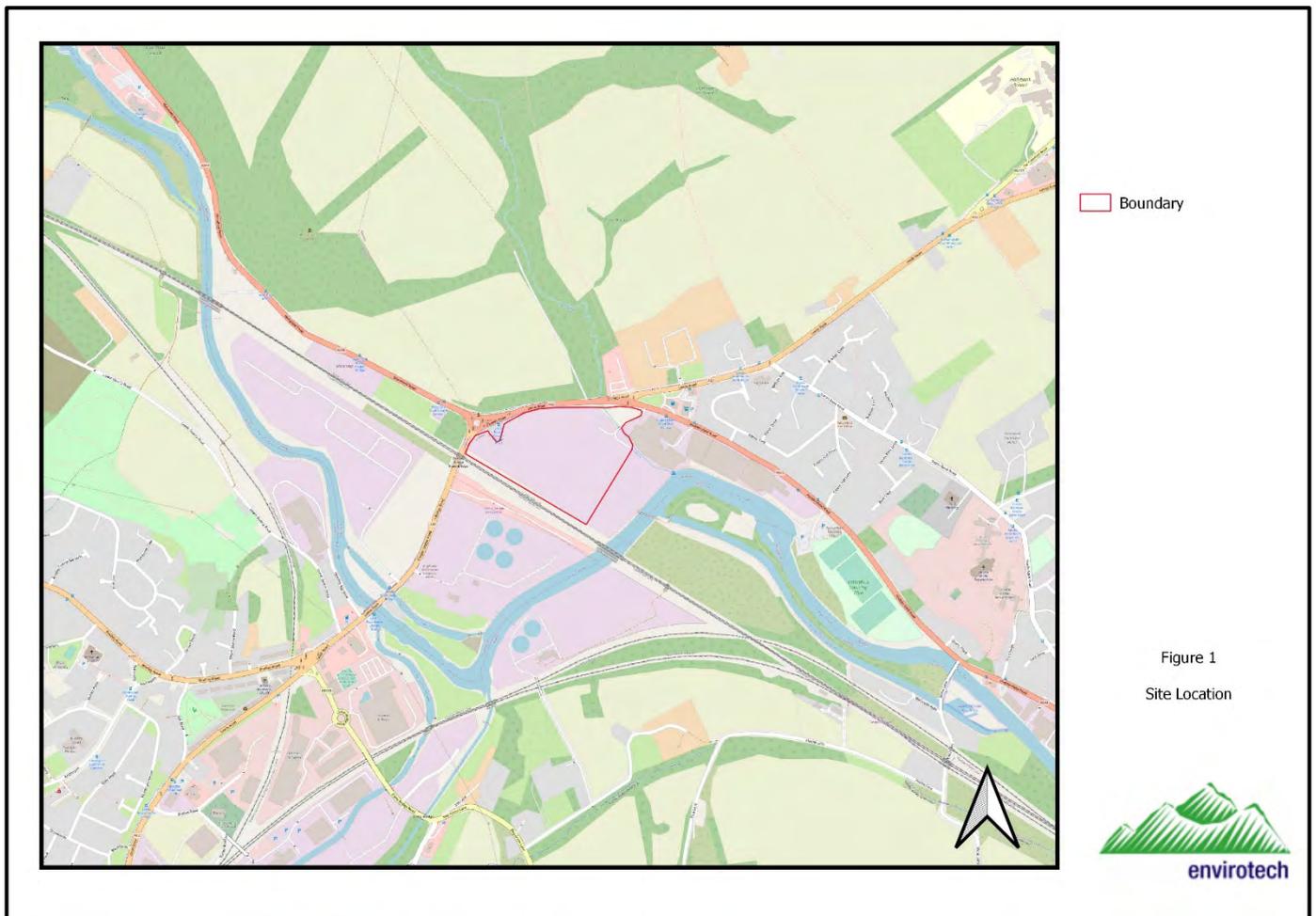
- 1.1.1 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land at Leeds Road. It is proposed that new industrial units are constructed on the site.
- 1.1.2 A data search and desk study of the site and an area within 2km of the site were undertaken to establish the presence of protected species and notable habitats.
- 1.1.3 The site was then visited by a licenced ecologist from Envirotech NW Ltd on the 31st March 2022. A full botanical survey of the site was initially undertaken and this was followed by surveys to establish the presence or absence of notable species at the site or in proximity such that they may be affected by the proposed development.
- 1.1.4 The plant species assemblages recorded at the site are all common in the local area and are considered to be of low ecological value.
- 1.1.5 There is no potential for bats to roost on the site.
- 1.1.6 Birds are likely to utilise scrub on site for nesting between March and September. Any vegetation clearance should therefore be undertaken outside of this period.
- 1.1.7 No other notable or protected species were recorded on the site. The site is disconnected from adjacent riparian habitat.

2. INTRODUCTION

2.1 Background

2.1.1 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land off Leeds Road, central grid reference SE180209 (Figure 1). A site investigation was undertaken and a report compiled which includes recommendations for any future actions and or mitigation required.

2.1.2 The survey was requested in connection with the proposed construction of new industrial units.



2.2 Objectives

2.2.1 The main objectives of the study were:

- The completion of a Phase 1 Habitat Survey including the preparation of a vegetation and habitat map of the site and the immediate surrounding area.
- The survey and assessment of all habitats for statutorily protected species.
- An evaluation of the ecological significance of the site.
- The identification of any potential development constraints and the specification of the scope of mitigation and enhancement required in accordance with wildlife legislation, planning policy and other relevant guidance, and;
- The identification of any further surveys or precautionary assessments that may be required prior to the commencement of any development activities.

3. METHODOLOGY AND SOURCES OF INFORMATION

3.1 *Data Search*

- 3.1.1 The Biological Records centre for Yorkshire “WYE”, the Envirotech dataset, and the Multi-Agency Geographic Information for the Countryside (MAGIC) were searched to establish the presence of any records of statutorily protected, notable or rare species, and any designated sites of international, national, regional or local importance within a 2km radius of the site boundary.
- 3.1.2 The Envirotech dataset is compiled from extensive field surveys from the period 2004-present, as well as records obtained from third parties during this time.
- 3.1.3 Google Earth and Google Street View were consulted to establish the presence of any features of ecological importance within the local area.

3.2 *Vegetation and Habitats*

- 3.2.1 A vegetation and habitat map was produced for the site and the immediate surrounding area. The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC 2003).
- 3.2.2 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act (1981) and indicators of important and uncommon plant communities. All plant nomenclature follows Stace (2019).
- 3.2.3 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the Wildlife and Countryside Act (1981), namely Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) on terrestrial habitat and aquatic species such as floating pennywort (*Hydrocotyle ranunculoides*), water hyacinth (*Eichhornia crassipes*) and New Zealand pygmyweed (*Crassula helmsii*).
- 3.2.4 The survey was also informed by questioning the landowner/site agent to ascertain the recent history of the site.

3.3 *Timing and Personnel*

- 3.3.1 During the visit, weather conditions were suitable for the survey types undertaken being warm and dry in early spring.
- 3.3.2 The site and surrounding land was visited on the 31st March 2023 by
 - (AG) Mr Andrew Gardner BSc (Hons), MSc, MRICS
Natural England Bat Class Licence (Level 2)
Natural England Bat Low Impact Class Licence

Natural England Barn Owl Licence
Natural England Great Crested Newt Licence (Level 1)
Natural England Badger Class Licence
Natural England White Clawed Crayfish Licence

4. SPECIES SURVEY METHODOLOGY

4.1 Amphibian

- 4.1.1 Great crested newts (*Triturus cristatus*) are protected under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedule 5 of the Wildlife & Countryside Act (1981).
- 4.1.2 Water-bodies located within or adjacent to the study area were identified and where access was possible were assessed for their potential to support great crested newts.
- 4.1.3 The criteria used in the assessment are based on those contained in the Herpetofauna Workers Manual and Oldham et al, 2000, and in applying these criteria a precautionary approach was adopted. Following the criteria developed by Oldham et al (2000), the HSI tool developed for use with great crested newts and forming part of Natural England's Licensing process was used to determine the suitability of ponds for great crested newts.
- 4.1.4 The pond assessment was undertaken in order to determine which water-bodies, based on their potential to support great crested newts, should be subject to presence/absence surveys.
- 4.1.5 The site was however considered sufficiently low risk for GCN that no further assessments were warranted.

4.2 Badger

- 4.2.1 Badgers (*Meles meles*) and their setts are protected under the Protection of Badgers Act (1992). This legislation arises from animal welfare issues (rather than on the basis of nature conservation grounds) and protects badgers from being killed, injured or disturbed whilst occupying a sett.
- 4.2.2 A disturbance to badgers in their setts may occur as a result of construction operations. Natural England recommends that the use of heavy machinery in proximity of a sett entrance should be avoided, with a 'disturbance free-zone' being established.
- 4.2.3 The degree of disturbance attributed to construction activity is a function of the background level of activity badgers are accustomed to and that which will be attributed to a proposed activity. The "disturbance free zone" is therefore site specific.
- 4.2.4 The survey for badgers comprised an assessment of all suitable habitat within and outside the study area boundary (where this was possible) to a distance of 30m for indications of use by badgers.
- 4.2.5 Signs of badgers which were searched for included:
- Setts - 'D' shaped entrances at least 25cms wide and wider than they are high with large spoil mounds
 - Discarded bedding at sett entrances (this includes grass and leaves)
 - Scratching posts on shrubs and trees close to a sett entrance

- The presence of badger hairs which are coarse, up to 100mm long with a long black section and a white tip
- Dung pit latrines and footprints
- Habitual runs through vegetation and beneath fences
- Hedgehog carcasses

4.3 Bats

4.3.1 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981), and are included on Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, as a Protected Species. Taken together, these pieces of legislation make it an offence to:

- Intentionally or recklessly kill, injure or capture bats;
- Deliberately or recklessly disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts.

4.3.2 The Bat Conservation Trust (Hundt (2012) and Collins, J. (ed) (2016) issued guidelines on bat survey methodology, a key feature of their recommendation is for the undertaking of a pre-survey assessment - an initial desk-study and a walkover assessment of the survey area and its surrounding area to identify the relative value of the habitats present for bats and likely commuting routes. This is to be followed by a survey program that is appropriate to the likely level of bat activity within the survey area to be determined by and based on the experience of the surveyor.

4.3.3 The potential value of the survey area for foraging bats was assessed through consideration of two main factors: professional knowledge of bat ecology and foraging behaviour in combination with the geographical location, topography and habitats present within the survey area and surrounds.

4.3.4 Trees and structures on and within the survey area boundary were assessed for their potential to support roosting or hibernating bats. This comprised a close inspection of all trees and buildings on the site to allow an assessment of their potential to be used by bats to be made by a licensed surveyor.

4.3.5 Trees were all assessed in accordance with Collins, J. (ed) (2016).

4.4 Birds

4.4.1 All breeding birds, other than pest species, are protected under the Wildlife and Countryside Act of 1981 when building a nest, rearing young or sitting on eggs. Some bird species, such as barn owl (*Tyto alba*), are protected when near an active nest site. Several birds are listed as UK and or County BAP species.

4.4.2 Bird species and behaviour was noted during the other field surveys. All areas are covered equally, in order to avoid the subjective survey of better quality 'bird habitat'. All birds displaying breeding behaviour were recorded.

4.5 Otter

4.5.1 Otters (*Lutra lutra*) are given protection by the Wildlife and Countryside Act (1981) as amended and Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

This protection means that it is an offence to deliberately or recklessly:

- Kill or injure otters;
- Destroy, damage or obstruct their dens, and
- Disturb them whilst in the den.

4.5.2 Watercourses were assessed for their suitability and for the presence of otters within 10m of the banks. The banks and scrub vegetation were carefully searched for spraints, feeding remains, runs, prints and couches/holts.

4.6 Reptiles

4.6.1 All native reptiles are protected in Britain under the Wildlife and Countryside Act of 1981. It is an offence to intentionally kill, injure, sell or advertise to sell any of the six native species.

4.6.2 The survey for these species was based on assessing the habitat type and suitability of the site. This comprised an assessment of satellite imagery for the site and surrounding area as well as comparison of the results from the records searches with habitat types. The general habitat at the site was evaluated in terms of its suitability to reptiles for foraging or breeding.

4.6.3 Reptile surveys comprising visual encounter surveys were undertaken on the 31st March 2023. Searches of suitable refuges were also undertaken by carefully lifting potential refuges such as logs and stones before replacing them. Habitat at the site was not considered sufficiently suitable for a full presence/absence survey to be warranted.

4.7 Water Vole

4.7.1 Water voles (*Arvicola amphibious*) and their habitat are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981). This provides protection from killing or taking by certain prohibited methods and their breeding and resting places are fully protected from destruction or obstruction, it is also an offence to disturb them in these places.

4.7.2 There is a stream on the East boundary of the site. This watercourse was surveyed and assessed for evidence of the presence of water vole.

4.7.3 This involved intensive searches by wading upstream where possible, and observing from the banks where not; looking for burrows and other signs including footprints, droppings and chewed vegetation. This was undertaken up to 5m from the water course.

4.8 Survey limitations

4.8.1 The survey was undertaken in Spring. At this time of year plant species are less easily identified and the activity of some species is reduced.

4.8.2 Due to the habitats present on site there were no significant constraints in respect of identifying the botanical interest of the site.

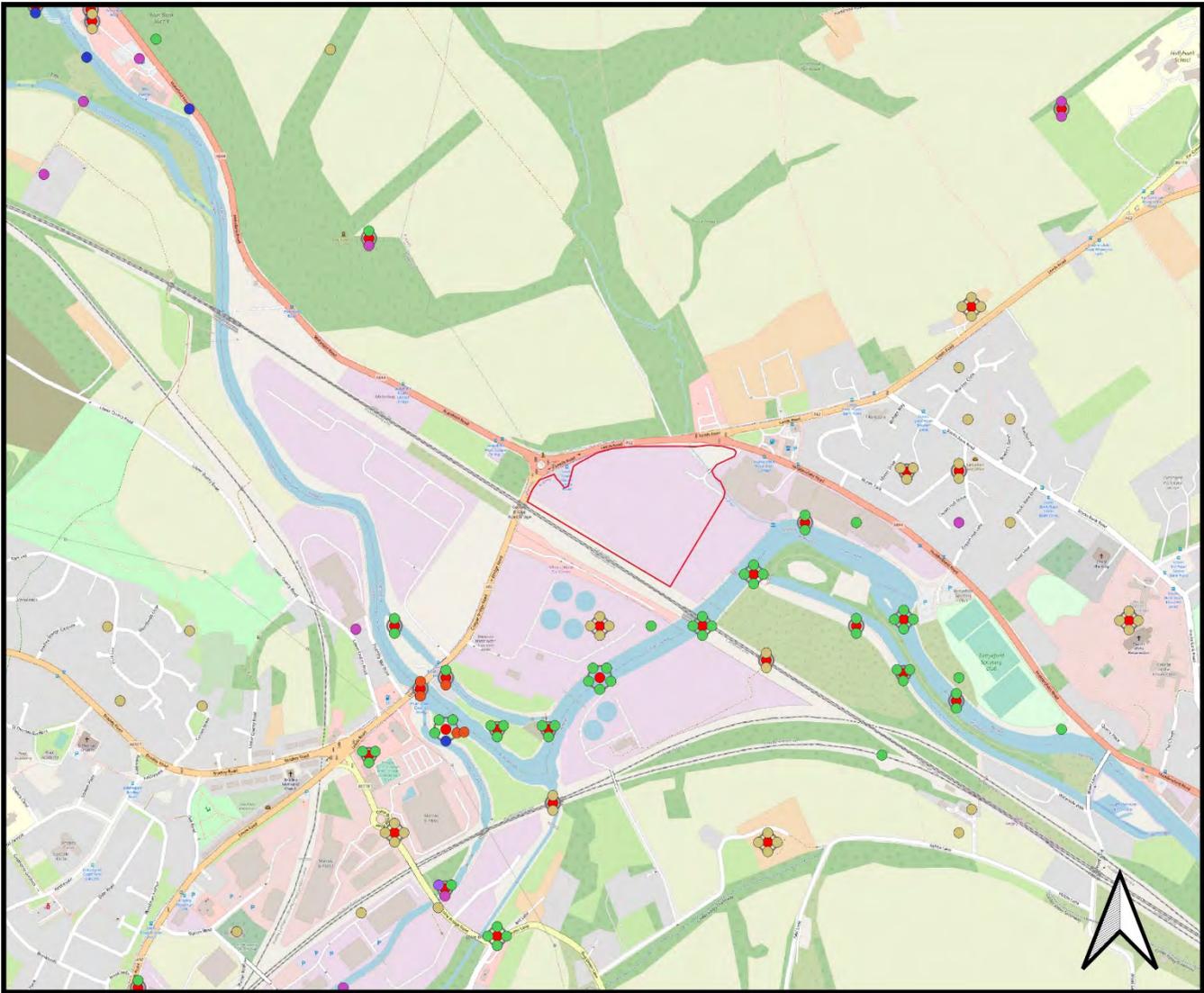
4.8.3 The duration, extent and scope of the surveys were considered sufficient to plan appropriate mitigation and recommend additional precautionary survey work required prior to the commencement of work.

4.8.4 No significant survey limitations were encountered.

5. RESULTS

5.1 *Data Search*

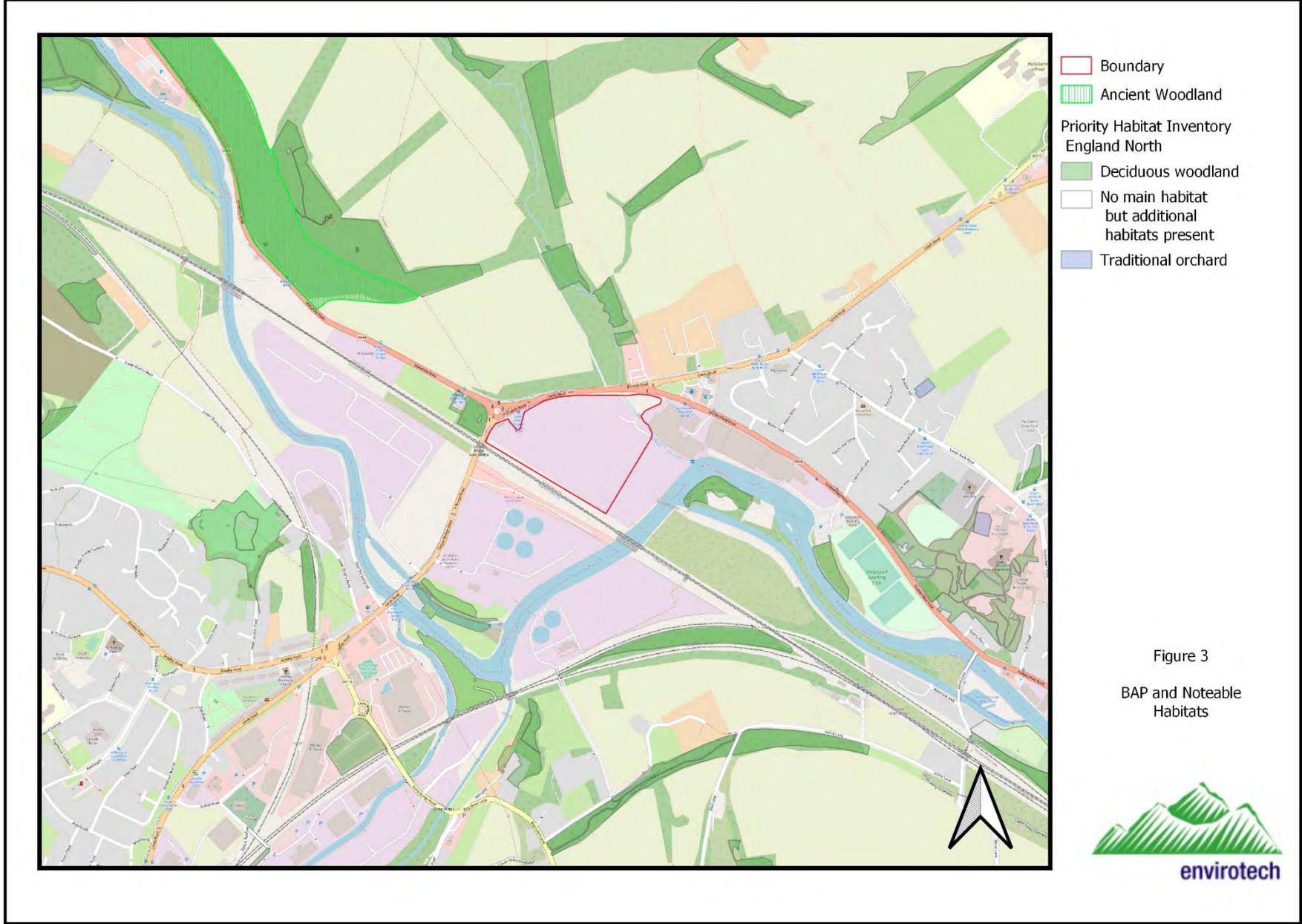
- 5.1.1 Envirotech and WYE hold no records of protected or notable species for the site. There are however records of protected or notable species within 2km (Figure 2). These are discussed in the relevant sections below.
- 5.1.2 The nearest non-statutory protected site is ancient woodland 364m to the North-west (Figure 3). There is no mapped priority habitat on or bounding the site.
- 5.1.3 The Kirklees Wildlife Habitat Network occurs along the North-east boundary of the site, Figure 3a.
- 5.1.4 The nearest statutory protected site Sunny Bank Ponds Local Wildlife Site to the North-East (Figure 4).



- Boundary
- bird
- bony fish (Actinopterygii)
- crustacean
- flowering plant
- insect - beetle (Coleoptera)
- terrestrial mammal

Figure 2
Protected and Notable Species



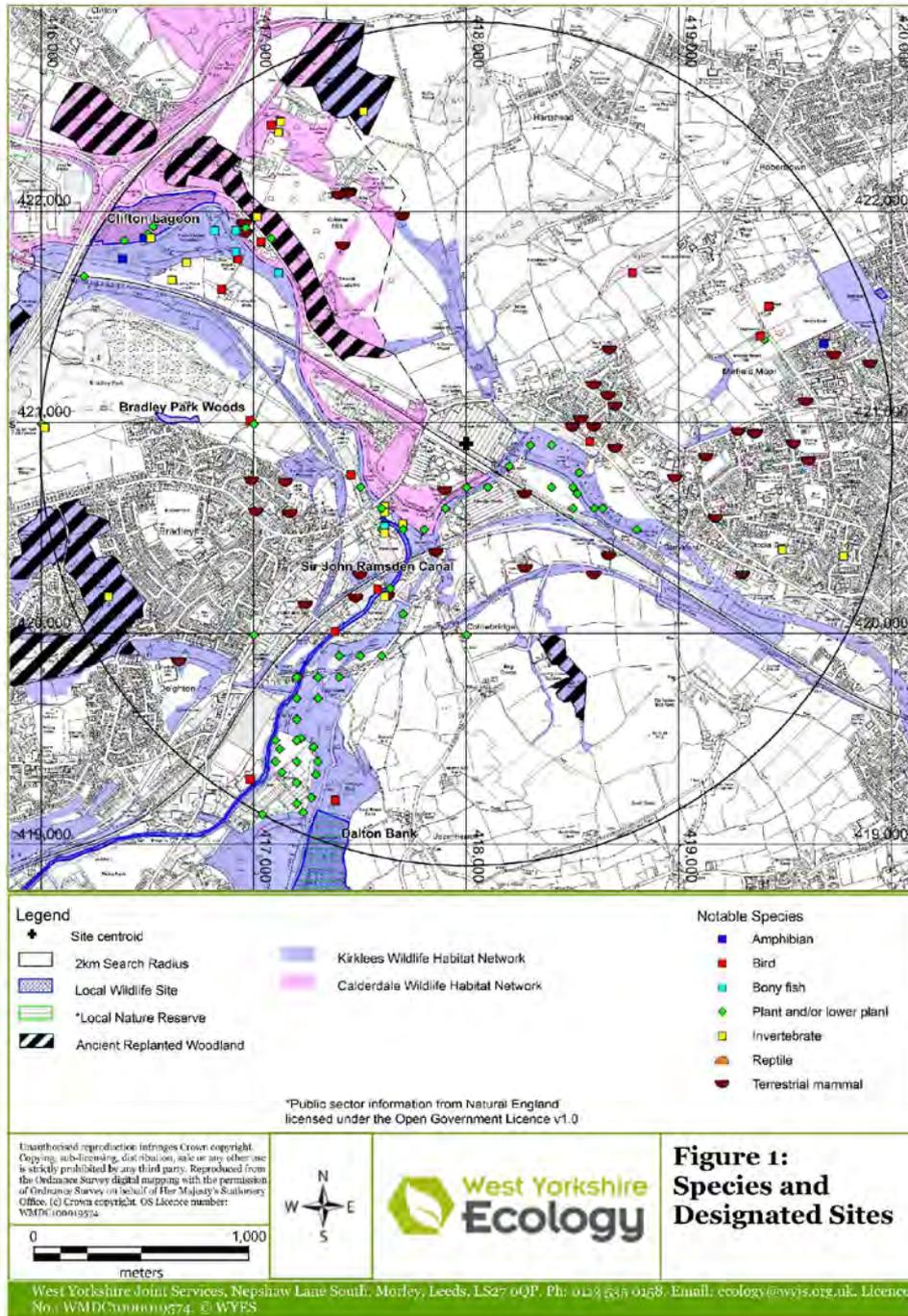


- Boundary
- Ancient Woodland
- Deciduous woodland
- No main habitat but additional habitats present
- Traditional orchard

Figure 3
BAP and Noteable Habitats



Figure 1 – Species and Designated Sites



West Yorkshire Joint Services are provided by a Joint Committee of the Metropolitan Districts of Bradford, Calderdale, Kirklees, Leeds and Wakefield.



Figure 3- Wildlife Networks



Figure 4
Protected Sites



6. PHASE 1 SURVEY RESULTS

6.1 *Habitat Results*

- 6.1.1 A drone was overflown on the 31st March 2023. This produced a number of images which were stitched together to form a orthomosaic map and provided upto date imagery of the site from which phase 1 habitat mapping has been based. Figure 5 shows the hi-resolution imagery overlain to google earth without the phase 1 mapping overlay.
- 6.1.2 The site comprises bare ground bound by tall ruderals with a strip of woodland to the roadside to the North. There is a railway to the South boundary.
- 6.1.3 See Figure 6 for the Phase 1 Habitat Plan and Table 1 for the descriptive Target Notes.



□ Boundary



Figure 5
Orthomosaic map
drone imagery taken
31st March 2023



Target Note	Description	Comment
TN1	Bare ground	An open area of the site which comprises crushed rubble and concrete. This is part flooded to the East with shallow water. Occasional Buddleia (<i>Buddleia Sp.</i>) saplings, Yorkshire Fog (<i>Holcus lanatus</i>), White clover (<i>Trifolium repens</i>) and Broad-leaved Willowherb (<i>Epilobium montanum</i>)
TN2	Hardstanding	A road comprises compacted gravel and tarmac. Species to edges as per TN1 with Annual Meadow Grass (<i>Poa annua</i>). Silver Birch (<i>Betula pendula</i>) saplings and Bramble (<i>Rubus fruticosus agg</i>) around the buildings.
TN3	Ephemeral/ perennial	Short Bare ground to the sides of the site on a bank are beginning to vegetate. Yorkshire Fog, Hogweed (<i>Heracleum sphondylium</i>), Scotch Thistle (<i>Onopordum acanthium</i>), Buddleia, Zigzag Clover (<i>Trifolium medium</i>), Broad-leaved Willowherb , Rosebay Willow herb (<i>Epilobium angustifolium</i>) and Creeping thistle (<i>Cirsium arvense</i>)
TN4	Tall ruderal	Tall ruderals to the edge of the carpark and site boundary. Yorkshire Fog, Nettle (<i>Urtica dioica</i>), Teasel (<i>Dipsacus fullonum</i>), Ribwort Plantain (<i>Plantago lanceolata</i>), Creeping thistle, Cocksfoot (<i>Dactylis glomerata</i>), Hogweed and Bush vetch (<i>Vicia sepium</i>).
TN5	Mixed woodland	plantation Trees to the site boundary include Hawthorn (<i>Crataegus monogyna</i>), Sycamore (<i>Acer pseudoplatanus</i>), Field maple (<i>Acer campestre</i>). Goat Willow (<i>Salix caprea</i>) to carpark area and Leylandii (<i>Leylandii x Cupressocyparis leylandii</i>) forming a tall hedge/ tree line.

Table 1 Details of Target Notes.



-  Boundary
-  Target Note
-  Bare Ground
-  Hardstanding
-  Cultivated/Disturbed Land - Ephemeral/short perennial
-  Tall Herb and Fern - Other Tall Ruderal
-  Woodland - Mixed Semi-Natural
-  Running Water



Figure 6
Phase 1 Habitat Survey





TN1- Bare ground dominates the site



TN2- Hardstanding road with tall ruderals to its edge



TN3- Ephemeral/ Short perennial to a bank with extensive bare ground



TN4- Tall ruderals to the West of the site to boundary of house



TN4- Tall ruderals to side of railway



TN4 - Tall ruderals to side of stream and carpark



TN5- Trees forming mixed plantation woodland to site boundary



Site viewed from the South



Site viewed from the East

Table 2 Photographs

6.2 Vegetation

- 6.2.1 Details of the plant species found on site are included in the target notes. Species recorded are all commonly occurring and undoubtedly occur elsewhere in similar habitats in the local area.
- 6.2.2 Bare ground dominates the site with only limited vegetation cover.
- 6.2.3 The boundary of this area comprises tall ruderals with plants associated with disturbed ground.
- 6.2.4 Small areas of woodland occur to the site boundary with both native and non-native species.
- 6.2.5 There is no evidence of Japanese knotweed, giant hogweed or Himalayan balsam on the site. No other invasive or notable weed species listed on Schedule 9 (Section 14) of the Wildlife and Countryside Act (1981) (as amended) was identified within the site or adjacent land.

6.3 Amphibian

- 6.3.1 There are no records for amphibians on or adjacent the site, the nearest records are +1.7km away.
- 6.3.2 The core development area has a low value to amphibians being open and exposed. The boundary woodland and tall ruderal vegetation could be utilised as refuges and/or hibernacula but there are no breeding ponds in proximity to the site.
- 6.3.3 Amphibians would be unlikely to attempt to cross the site as it comprises an area that is mostly open with uniform length grass. Whilst not a physical barrier to the dispersal of amphibians, the site is regarded as being a potentially hostile environment to them.
- 6.3.4 The proposed development will not result in the permanent loss of or a substantial negative effect on any waterbodies or foraging areas linked to them. Boundary areas which may provide foraging or refuge sites, are to be retained.

6.4 Badger

- 6.4.1 Records of badgers occur within 2km of the site.
- 6.4.2 Badger setts do not occur on site and a lack of feeding signs or runs across the site would suggest that they do not occur within 30m of site boundaries.
- 6.4.3 The proposed development will not impact on any existing badger runs or setts. The porosity of the surrounding fields to the passage of badgers will not be affected.

6.5 Bats

- 6.5.1 There are 78 records of bats within 2km of the site.

- 6.5.2 The foraging habitat at the site is very poor for bat species being open and exposed. The tall ruderal areas offer limited foraging opportunities for bats. The tree lines are poor in terms of their structure, diversity and interconnectivity.
- 6.5.3 Despite being poor, the trees on the site offer the best foraging habitat for bats on the site as the remainder of it comprises open and exposed ground. Whilst these areas of the site are the most structurally diverse but they are not considered exceptional in the local area. More extensive areas of medium and high quality habitat occur locally, including the gardens, woodland and river adjacent.
- 6.5.4 It is not considered there would be significant degradation of foraging habitat as a result of the proposal so long as the trees are retained and or their loss is compensated for in any landscaping scheme.
- 6.5.5 All trees around the site perimeter were also assessed in accordance with Collins ed. (2016) and assigned a risk category. All of the trees on site were category 3 (negligible) risk. No indications of roosting or highly suitable roost sites were located within the trees. All of the trees could be adequately inspected.
- 6.5.6 There are small single storey flat roof buildings on the site These have fully sealed brick walls and flat roofs. They have negligible potential for use by roosting bats.
- 6.5.7 Boundary walls are also well sealed with no potential for use by bats for roosting.
- 6.5.8 We consider bat species are highly unlikely to rely on the site for feeding but may occur in the local area. Roosting by bats will not occur on the site.

6.6 Birds

- 6.6.1 There are records of birds within 2km of the site.
- 6.6.2 The bare ground and tall ruderals have limited potential for nesting birds.
- 6.6.3 There were no rot holes or cracks in the trees within the site boundary which would support tree hole nesting species such as woodpeckers. The buildings on site have no suitable eaves or ledges for birds such as Swallow (*Hirundo rustica*).
- 6.6.4 A risk assessment of the site in respect of its future potential for and value to nesting birds could be adequately made.
- 6.6.5 The habitat on site is not considered to be of anything more than of local significance, habitats present are well represented in the local area. The impact on nesting birds is therefore considered likely to be minor.

6.7 Otter

- 6.7.1 There are no records of otters within 2km of the site.
- 6.7.2 No indication of the presence or past use of the site by otter was found. The stream is considered unlikely to support fish, is canalised and culverted either side of the site.

6.8 Reptiles

- 6.8.1 There are no records for reptiles within 2km of the site.
- 6.8.2 The majority of the site has a very low value to reptiles being devoid of significant ground cover. There are no areas of the core development area which would be particularly favourable to reptiles.
- 6.8.3 Reptiles may occur along the boundary of the site and railway line this provides linkage across the local landscape. It is however outside the site boundary and is unaffected by the proposal.
- 6.8.4 No specific mitigation for these species is considered necessary.

6.9 Water vole

- 6.9.1 There are no records of water voles within 2km of the site.
- 6.9.2 The vegetation growing along the stream could not be accessed by this species as the stream is canalised in an artificial channel with vertical walls.
- 6.9.3 No signs of water voles, such as droppings, feeding piles or footprints were present in. We consider this species is likely to be absent from the site.

6.10 Statutory and Non-Statutory Sites

Direct Impacts:

- 6.10.1 There are no statutory or non-statutory sites which are connected to the site such that site development would directly affect the dispersal of species between them or directly impact upon their integrity.
- 6.10.2 The habitats on site do not represent or are linked to those found in any of the statutory or non-statutory sites locally.

Indirect Impacts:

- 6.10.3 There are no statutory or non-statutory sites which are connected to the site such that site development would indirectly affect the dispersal of species between them or indirectly impact upon their integrity.

7. MITIGATION/RECOMMENDATIONS

7.1 *Compensatory planting and habitat enhancement*

- 7.1.1 The roots of trees on the site and its boundaries should be adequately protected during work in accordance with industry standards. Trees should as far as possible be retained in the scheme.
- 7.1.2 The landscaping scheme should utilise plants which are native and wildlife friendly. In particular night flowering species would be beneficial to bats. Wildflower seed could be used to plant verges to enhance the ecological value of the site and continuity between the site and the wider area.

7.2 *Amphibians*

- 7.2.1 There is no requirement for specific mitigation for these species. There are currently no suitable breeding sites on or near the site. However, as a precautionary measure, in the unlikely event that any signs of any amphibian activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.3 *Badger*

- 7.3.1 Badger setts are known to occur within 2km of the site. These setts will be undisturbed by work but in order to minimise impacts on badgers passing over the site the following points should also be followed.
- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure badgers are not trapped during work.
 - All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

7.4 *Bats*

- 7.4.1 Work at night should be restricted, new planting within the site should enhance structural diversity and light spill onto the boundary should be minimised.
- 7.4.2 New roosting provision for crevice dwelling bats could be incorporated into the buildings on site or bat boxes could be erected in retained trees.
- 7.4.3 Overall it is considered there is more than sufficient scope for mitigation and compensation at the site such that there will be no adverse impact on the favourable conservation status of bats affected by the proposal.

7.5 Birds

- 7.5.1 Nesting by birds within the development area is considered unlikely to occur. Birds may nest within trees on the periphery of the site.
- 7.5.2 Any vegetation to be trimmed or cleared should be checked for nesting birds before it is removed. Ideally this should occur outside the bird nesting period March- September. If vegetation clearance is to occur in the March-September period a check for nesting birds should be conducted first by a suitably qualified individual.
- 7.5.3 New planting within the site and the retention of trees and shrubs on the site boundary will maintain the ecological functionality of the site for breeding birds.
- 7.5.4 If nesting birds are found at the site all site works shall cease and further ecological advice shall be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.6 Otter

- 7.6.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any otter activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.
- 7.6.2 The points in respect of not working at night and leaving open trenches with means of escape detailed for badgers are also applicable to this species which is only likely to pass through the site at night.

7.7 Reptiles

- 7.7.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any reptile activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.8 Water vole

- 7.8.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any Water vole activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

8. REFERENCES

Collins, J. (ed) (2016) *Bat Surveys for Professional Ecologists: Good practice guidelines* (3rd edn). The Bat Conservation Trust, London.

Hundt, L. (2012) *Bat Surveys: Good Practice Guidelines* (Second Edition). BCT, London.

Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit*. Reprinted by JNCC, Peterborough. - See more at: <http://www.cieem.net/habitats-general#sthash.mJYIrP8L.dpuf>

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10 (4), 143-155.

Stace, C. (2019). *New Flora of the British Isles*. Cambridge University Press.