



envirotech

Ecological Consultants
Environmental and Rural Chartered Surveyors

Ecological Appraisal

Land Adjacent to A666, Near Egerton, Bolton



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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

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Author	Matthew Thomas	Date	24 th October 2017
Checked by	Andrew Gardner	Date	25 th October 2017
Report Version	1		
Field data entered	<input checked="" type="checkbox"/>		
Report Reference	4333		

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1. EXECUTIVE SUMMARY

- 1.1.1 Envirotech NW Ltd were commissioned in September 2017 by ML Planning to carry out an ecological appraisal of a former forestry access track off the A666 near Egerton. It is proposed that a turning head will be added and the access from the A road widened.
- 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 two licenced ecologists from Envirotech NW Ltd on the 18 October 2017. A full botanical survey of the site was initially undertaken and this was followed by surveys to establish the presence or absence of bats, amphibians, nesting birds, reptiles and badgers 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 on the surrounding land. There will only be very minor encroachment onto the vegetated land either side of the existing access track.
- 1.1.5 The hedgerow that will need to be removed as part of the proposal is not considered important under the Hedgerow Regulations (1997).
- 1.1.6 Birds may nest in the scrub on the periphery of the site and it is therefore recommended that site works take place outside of the nesting bird season or are thoroughly checked by a suitably qualified individual if this is not possible.
- 1.1.7 Reptiles may utilise parts of the site, particularly during the spring, summer and autumn and therefore recommendations have been made for mitigation and avoidance of these species.
- 1.1.8 No other notable or protected species were recorded on the site.

2. INTRODUCTION

2.1 Background

2.1.1 In September 2017 Envirotech NW Ltd were commissioned by ML Planning to carry out an Ecological Appraisal of land off the A666 near Egerton, central grid reference SD 70263 16498 (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 widening of an access track.

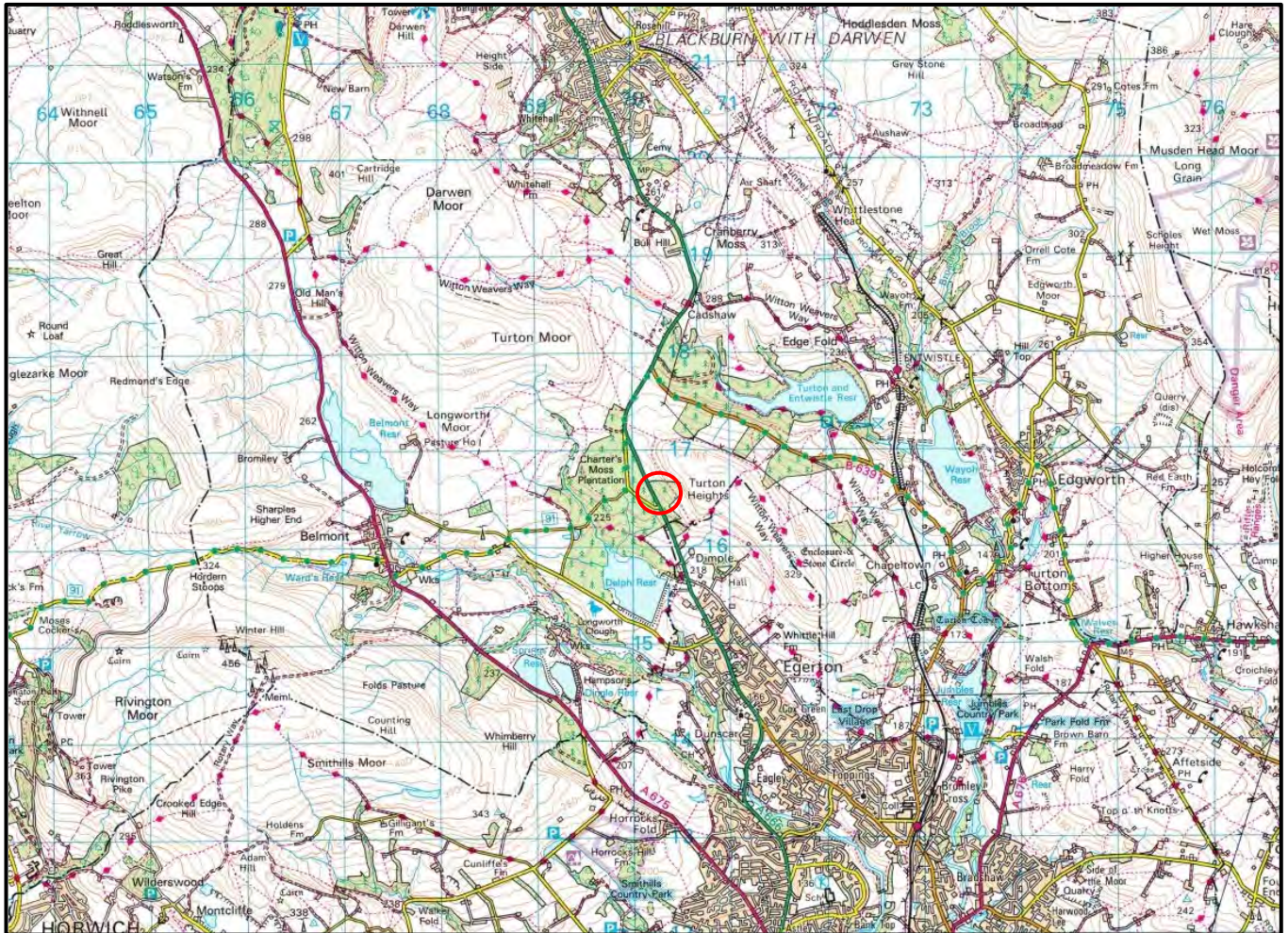


Figure 1 Site location at SD 70263 16498 circled red.

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 Lancashire "LERN", 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 (1991).
- 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 The site and surrounding land was visited on the 18th October 2017.
- 3.3.2 During the visit, weather conditions were suitable for the survey types undertaken.
 - (MT) Mr Matthew Thomas BSc (Hons), Grad CIEEM
Natural England Bat Class Licence (Level 2)
Natural England Barn Owl Licence
Natural England Great Crested Newt Licence (Level 1)

4. SPECIES SURVEY METHODOLOGY

4.1 *Amphibian*

- 4.1.1 Great crested newts (*Triturus cristatus*) are listed on Annexes II and IV of the EC Habitats Directive and Appendix II of the Bern Convention. It is protected under Schedule 2 of the Conservation (Natural Habitats) Regulations (2010) and Schedule 5 of the Wildlife & Countryside Act (1981).
- 4.1.2 A search was made of Ordnance Survey and aerial mapping for ponds in proximity to the site (250m) such that amphibian communities using them would be directly influenced by site development works. There are no ponds within 500m of the site.
- 4.1.3 As there may be annual and temporary waterbodies in the local area due to forestry works making craters and furrows which may not show up on mapping, an assessment was made of the sites potential value to amphibians for foraging, commuting, refuge or hibernacula.

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) 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 Natural Habitats) Regulations (2010), as European 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. This resulted in the production of a map showing habitat quality both on and adjacent to the site.

4.3.4 All 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 *Invertebrates*

- 4.5.1 A general assessment was made of the study area's suitability for supporting invertebrates during the phase 1 survey. The study area's lack of habitat diversity, species-poor composition and uniformity of vegetation structure (i.e., lack of variation in height and microtopography) resulted in our belief that a low diversity of invertebrates would be likely to occur across the site.
- 4.5.2 The presence of invertebrates was noted during the other surveys which were undertaken. The extent of sampling was limited in that it could be confirmed that no priority or BAP species would be likely to be affected by the proposal.

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. Habitat at the site was not considered sufficiently suitable for a full presence/ absence survey to be warranted.

4.7 *Survey limitations*

- 4.7.1 No significant survey limitations were encountered.

5. RESULTS

5.1 *Data Search*

- 5.1.1 Envirotech and LERN 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 site is 200m to the east of the site being Turton Height Trough (Figure 3).
- 5.1.3 The nearest statutory protected site is the West Peninne Moors SSSI, SAC 200m to the east (Figure 4).

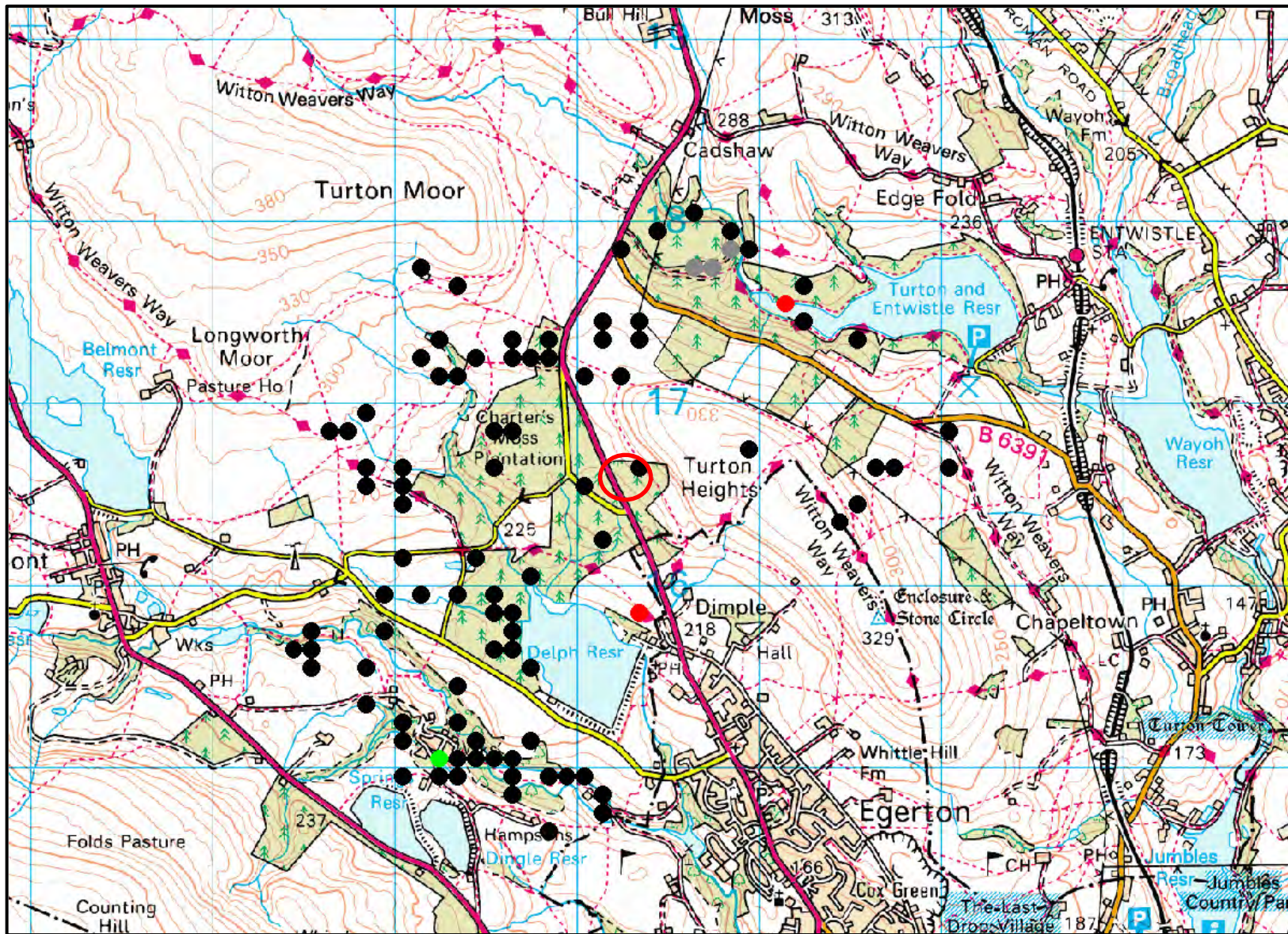


Figure 2 Notable species records where black indicates amphibians records, with grey being great crested newt, green being badger and red being reptiles. The site location is circled red.

Lancashire County Heritage Sites

Biological Heritage Site

Turton Height Trough



Site Boundary

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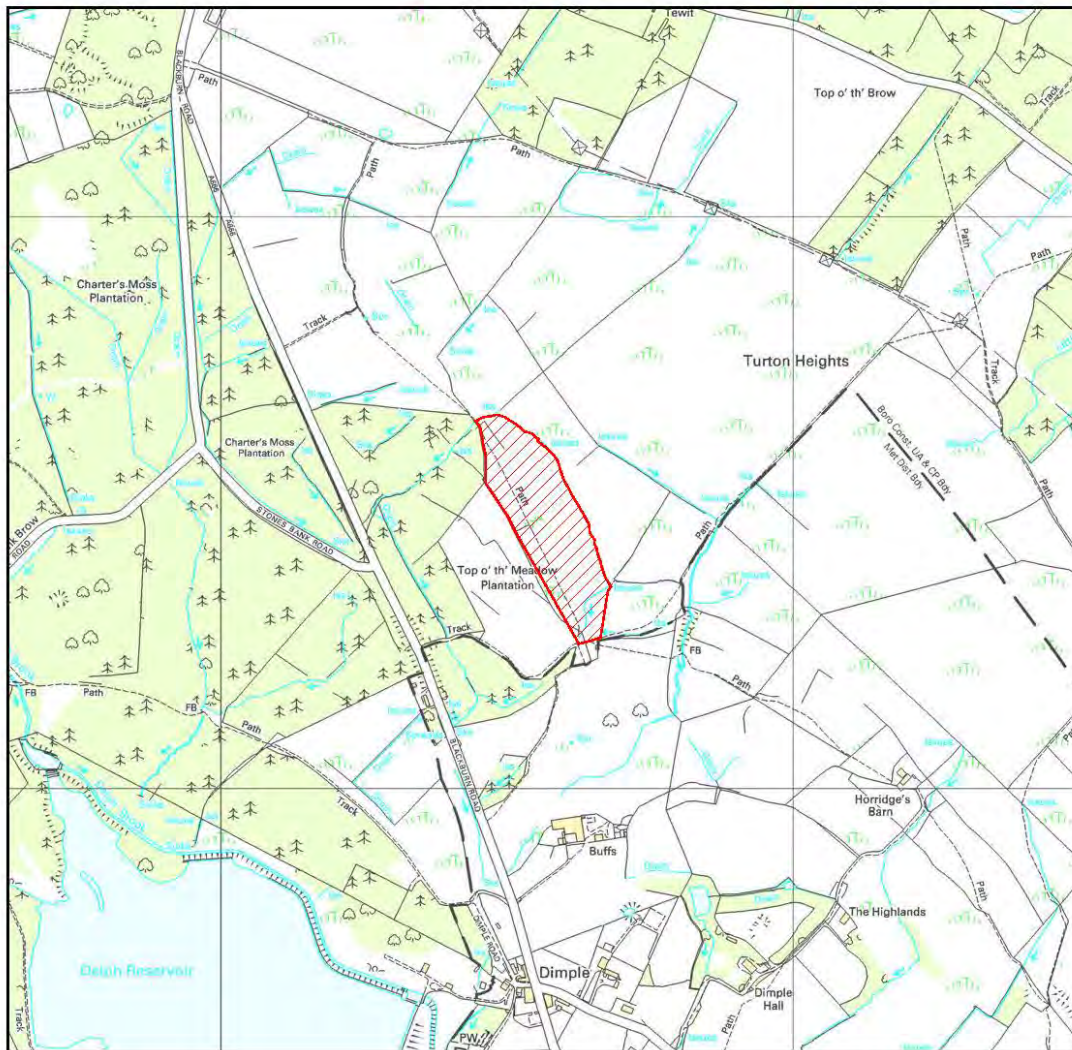
This map shows only the boundary of the Biological Heritage Site named above. It does not show any other designated sites which may occur within the area covered by the map.

Ref No. 71NW20

Biological Heritage Sites Partnership

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Manchester and North Merseyside
Natural England



Grid ref. SD705164

Scale 1:10,000

Site approved

Map 1 of 1

Boundary revised

Date of Map 29/09/14



Figure 3 Non-statutory sites 2km buffer.

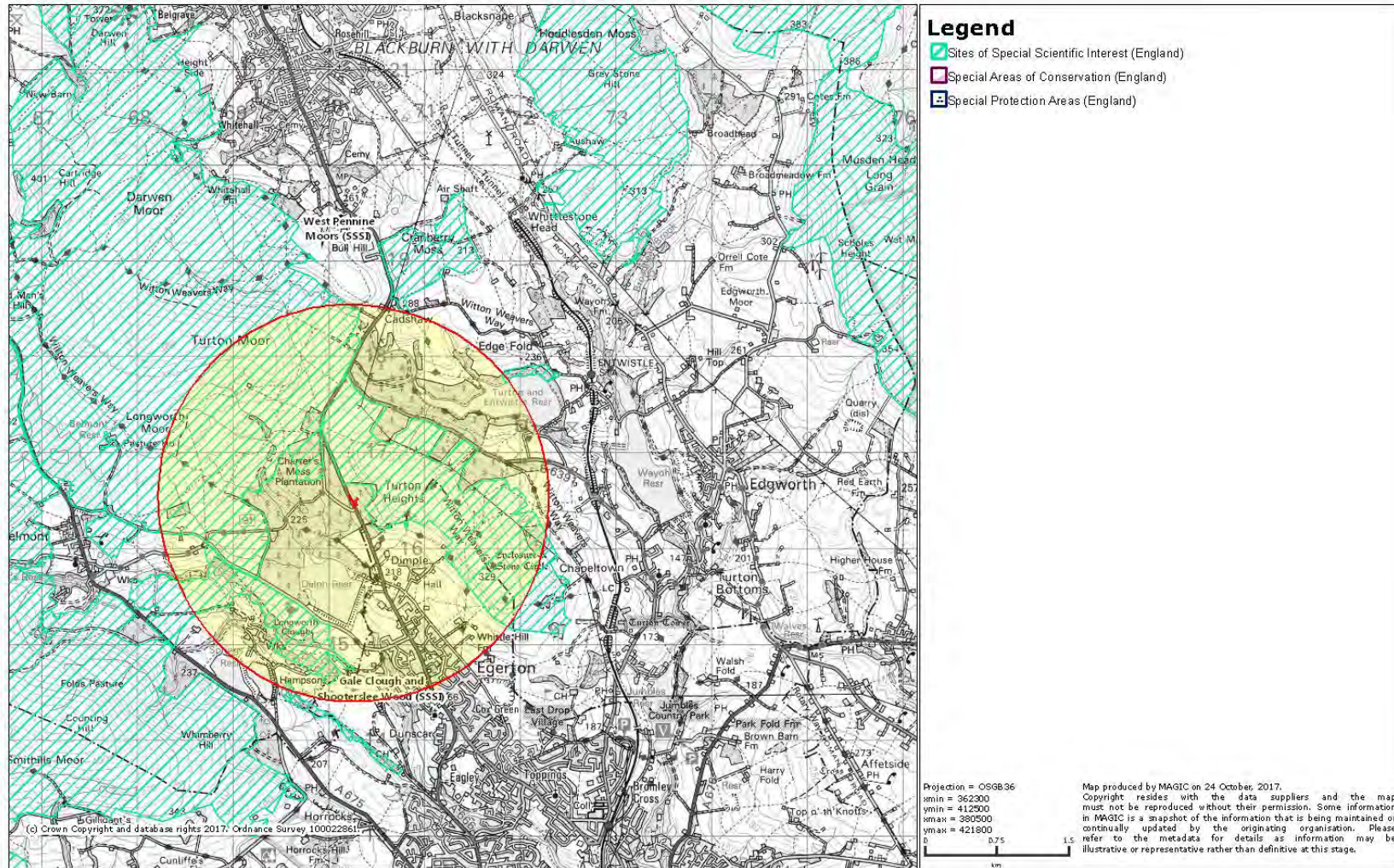


Figure 4 Statutory designated sites 2km buffer.

6. PHASE 1 SURVEY RESULTS

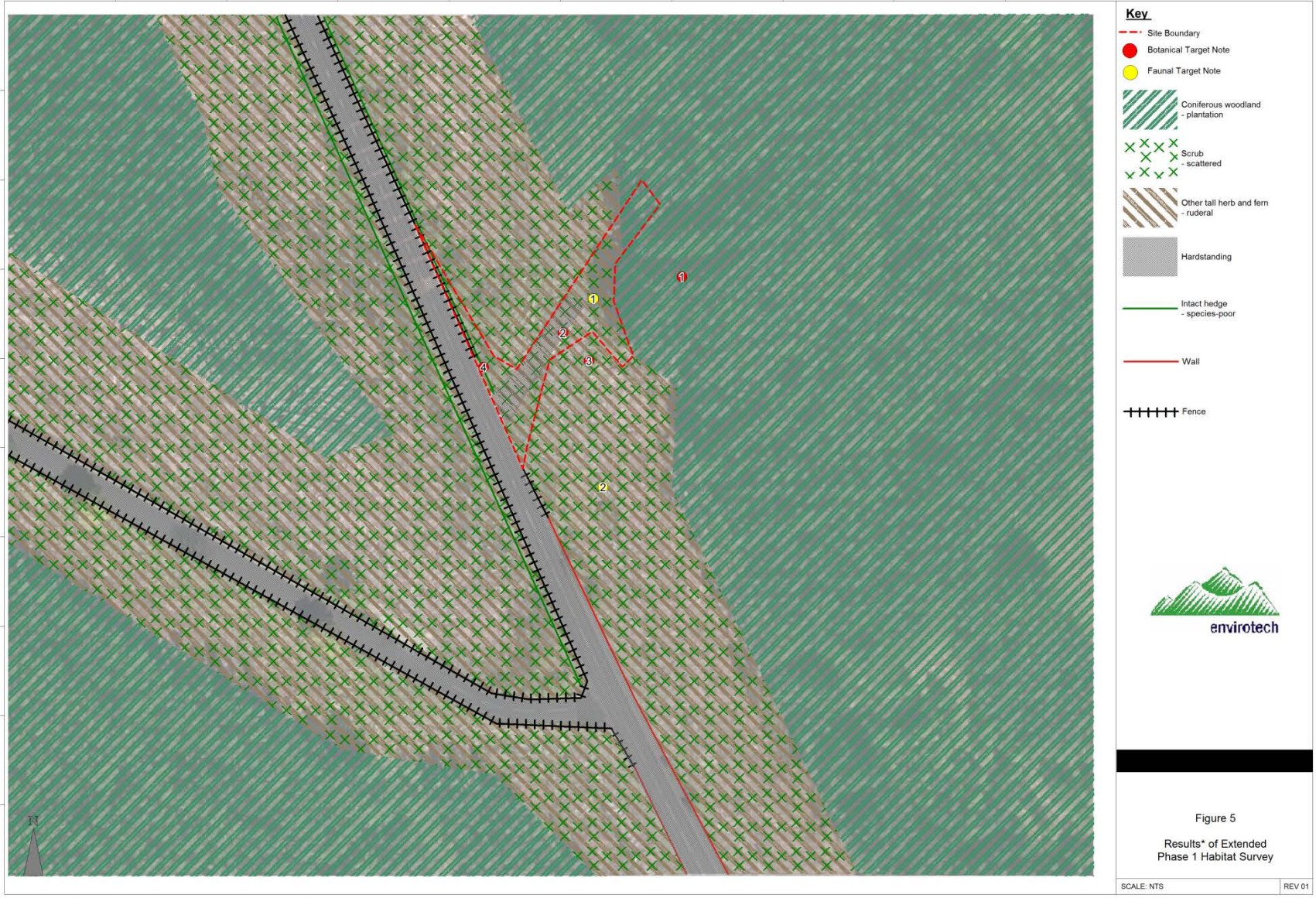
6.1 *Habitat Results*

6.1.1 The site comprises the site of a now overgrown aggregate forestry access track with scattered scrub and ruderal growing across it. There is plantation woodland to the east bordered by scattered scrub and ruderal, the A666 to the west and further plantation woodland across the A666.

6.1.2 See Figure 5 for the Phase 1 Habitat Plan and Table 1 for the descriptive Botanical and Faunal Target Notes, hereafter referred to as BTN and FTN.

Target Note	Description	Comment
BTN1	Coniferous woodland - plantation	A mature plantation of sitka spruce (<i>Picea sitchensis</i>) and Scots pine (<i>Pinus sylvestris</i>) that has no real under storey except for saplings of the same species at the edges of the plantation.
BTN2	Scrub - scattered / Other tall herb/fern - ruderal	Species such as foxglove (<i>Digitalis purpurea</i>), herb-robert (<i>Geranium robertianum</i>), ragwort (<i>Jacobaea vulgaris</i>), thistle (<i>Cirsium</i> sp.), creeping jenny (<i>Lysimachia nummularia</i>), ribwort plantain (<i>Plantago lanceolata</i>) and dandelion (<i>Taraxacum officinale</i>) grow from the access track. Bramble has begun to stretch across and there is a jumble of grass species scattered across the area also including tufted hair grass (<i>Deschampsia cespitosa</i>), mat grass (<i>Nardus stricta</i>), cocksfoot (<i>Dactylis glomerata</i>), common bent (<i>Agrostis capillaris</i>).
BTN3	Scrub - scattered / Other tall herb/fern - ruderal	The wide strip of ruderal and scattered scrub between the plantation woodland and the road has frequent areas of wet ground and contains species such as reed canary grass (<i>Phalaris arundinacea</i>) and soft rush (<i>Juncus effusus</i>) in large stands. Other species present in varying dominance include goat willow (<i>Salix caprea</i>), great willowherb (<i>Epilobium hirsutum</i>), yarrow (<i>Achillea millefolium</i>), bracken (<i>Pteridium aquilinum</i>), and the remains of some planted saplings including rowan (<i>Sorbus aucuparia</i>) and red current (<i>Ribes rubrum</i>).
BTN4	Intact hedge - species poor	A sparse hedge of hawthorn (<i>Crataegus monogyna</i>) with occasional alder (<i>Alnus glutinosa</i>) and bramble (<i>Rubus fruticosus</i> agg.) and nettle (<i>Urtica dioica</i>) at the base.
FTN1	Habitat	The site covers just a small area and this could easily be checked for the presence of notable or specifically protected species. There was no evidence to suggest the site has recently been utilised by any of afore mentioned species.
FTN2	Habitat	The land surrounding the existing track is considered suitable for use by reptiles and amphibians for foraging, commuting, refuge and hibernacula. There is also suitable foraging and nesting habitat for a range of bird species.

Table 1 Details of Botanical and Faunal Target Notes.



*Habitats outside the site boundary are indicative only and have been mapped from within the site boundary or from publicly accessible land



BTN1

Plantation woodland is present to the east of the site.



BTN2

The site is a former access track for the plantation woodland. It has been encroached by the surrounding ruderal growth and scattered scrub.





BTN3

Scattered scrub and ruderal reach off to the north and south of the site, growing between the plantation and the road.



BTN4

A sparse hedge, fence and wall separate the scattered scrub and ruderal from the road.



FTN1

The habitat surrounding the site would potentially be suitable for use by a variety of species.

Table 2 Photographs of important and target noted features on the site.

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 The plantation woodland to the north of the site is of little ecological value except in its structure which will offer cover for wildlife and nesting opportunities for birds. There is no understorey or ground flora below this woodland.
- 6.2.3 The scattered scrub and ruderal growth contains an assemblage of species from several different habitats and is therefore likely to provide a range of opportunities a wide variety of wildlife.
- 6.2.4 The scattered scrub and ruderal reaches across the former access track a the site and but is sparse. The species here are all present within the habitats to the north and south.
- 6.2.5 The intact but sparse hedge bounding the site at the road side contains only two woody species and is of little ecological value. It is not classified as important under the Hedgerow Regulations (1997) (See Appendix 1).
- 6.2.6 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 183 records of five amphibian species within 2km of the site, including four records of great crested newt (*Triturus cristatus*).
- 6.3.2 The nearest great crested newt records are at a distance greater than 1km north of the site.
- 6.3.3 There is no standing water on site, and the nearest permanent pond is at a distance greater than 500m from the site. There are however areas of standing water and incidentally formed depressions in the local area due to forestry activity. It is therefore likely that amphibians can breed within 250m of the site.
- 6.3.4 The habitat surrounding the site would be suitable for use by commuting and foraging amphibians as there is cover and a good degree of vegetative diversity.
- 6.3.5 There are tree stumps, log piles and rocks in the scattered scrub and ruderal habitat which would offer potential refugia and hibernacula for amphibians. There is however little potential for this within the bounds of the site.

6.4 Badger

- 6.4.1 There is a single record of badgers within 2km of the site. This record is for a location 1.5km north of the site.
- 6.4.2 There are no badger setts on the site or within 30m of its boundaries. It is considered that the site and immediate surrounds are too wet for use by this species.
- 6.4.3 There was no evidence of badger activity on site, habitual or otherwise. There were no footprints, latrines, feeding signs or habitual runs.
- 6.4.4 We consider this species to be absent from the site. There will be no change in the porosity of the surrounding landscape as a result of the proposals.

6.5 Bats

- 6.5.1 There are two records of two species of bat within 2km of the site. These are for a location 1.8km to the south of the site.
- 6.5.2 The foraging habitat at the site is considered to be of moderate quality due to the presence of a diverse plant assemblage in the scattered scrub/ruderal lining the edge of the plantations. There is also wet ground and ephemeral pools in the locality that will give rise to flying invertebrates.
- 6.5.3 The site is on higher more exposed ground than the nearby high quality foraging habitat of the reservoirs to the north and south (Figure 6).
- 6.5.4 It is not considered there are any roosting opportunities on site or within 500m of the site. The uniform Scots pine and sitka spruce typically do not contain features used by bats for roosting or hibernating.
- 6.5.5 All of the other trees on site or immediately adjacent to the site are below 'standard' size and do not contain cracks or fissures which could be utilised by bats for roosting. Assessed in accordance with Collins ed. (2016) and assigned a risk category, All of the trees on site and immediately adjacent were considered to be 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. Risk categories from Hundt (2012) and the requirement for mitigation for each tree category are shown on Figure 7.
- 6.5.6 We consider it highly unlikely that bats rely on site. There are no opportunities for bats to roost on the site.



Key

-  Site Boundary
-  High Quality
-  Moderate Quality
-  Low Quality



Figure 6
 Results* of Extended
 Phase 1 Habitat Survey

SCALE: NTS REV 01

*Habitats outside the site boundary are indicative only and have been mapped from within the site boundary or from publicly accessible land

Tree category and description	Stage 1 Initial survey requirements	Stage 2 Further measures to inform proposed mitigation	Stage 3 Likely mitigation
Known or confirmed roost	Follow SNCO guidance and these guidelines wherever possible, to establish the extent to which bats use the site. This is particularly important for roosts of high risk species and/or roosts of district or higher importance and above		The tree can be felled only under EPS licence following the installation of equivalent habitats as a replacement.
Category 1* Trees with multiple, highly suitable features capable of supporting larger roosts	Tree identified on a map and on the ground. Further assessment to provide a best expert judgement on the likely use of the roost, numbers and species of bat, by analysis of droppings or other field evidence. <i>A consultant ecologist is required</i>	Avoid disturbance to trees, where possible. Further dusk and pre-dawn survey to establish more accurately the presence, species, numbers of bats present and the type of roost, and to inform the requirements for mitigation if felling is required.	Felling would be undertaken taking reasonable avoidance measures ³ such as 'soft felling' to minimise the risk of harm to individual bats.
Category 1 Trees with definite bat potential, supporting fewer suitable features than category 1* trees or with potential for use by single bats	Tree identified on a map and on the ground. Further assessed to provide a best expert judgement on the potential use of suitable cavities, based on the habitat preferences of bats. <i>A consultant ecologist required</i>	Avoid disturbance to trees, where possible. More detailed, off the ground visual assessment. Further dusk and pre-dawn survey to establish the presence of bats, and if present, the species and numbers of bats and type of roost, to inform the requirements for mitigation if felling is required.	Trees with confirmed roosts following further survey are upgraded to Category 1* and felled under licence as above. Trees with no confirmed roosts may be downgraded to Category 2 dependent on survey findings
Category 2 Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.	None. <i>A consultant ecologist is unlikely to be required</i>	Avoid disturbance to trees, where possible. No further surveys.	Trees may be felled taking reasonable avoidance measures. Stop works and seek advice in the event bats are found, in order to comply with relevant legislation.
Category 3 Trees with no potential to support bats	None. <i>A consultant ecologist is not required unless new evidence is found</i>	None.	No mitigation for bats required.

Figure 7 Tree risk categories from Hundt (2012).

6.7 Birds

- 6.7.1 There are numerous records of birds within 2km of the site. Many of which are for species that would not utilise the habitats on site.
- 6.7.2 The core of the site, which is the now overgrown access track, has insufficient density to offer any nesting habitat for birds. It is also raised above the surrounding scattered scrub and ruderal. The foraging within this small area for birds is also considered to be limited.
- 6.7.3 Species such as woodcock (*Prunella modularis*) and snipe (*Gallinago gallinago*) may utilise the scattered scrub and ruderal habitat to the north and south of the site to nest and forage as there are wet depressions and ephemeral ponds that will likely provide the suitable habitat for these species.
- 6.7.4 Other species such as dunnock (*Prunella modularis*) and linnet (*Linaria cannabina*) may nest within the scattered scrub and ruderal that surrounds the site.
- 6.7.5 The sparse hedge leading off to the north of the site is unlikely to provide nesting habitat for any bird species, it provides very little cover.
- 6.7.6 None of the trees on site are considered to offer suitable nesting habitat for birds. All of the trees are saplings.

6.8 Invertebrates

- 6.8.1 110 notable invertebrates have been recorded within 2km of the site. Most of those returned in the data searches are moths associated with the grassland of the glades in the surrounding plantations.
- 6.8.2 There will only be a minor encroachment on the scattered scrub/ruderal that grows on the side of the existing access track as part of the proposals.
- 6.8.3 There is deadwood on the site in the form of roots and stumps of plantation trees. This is not a limited resource in the local area and can be retained as part of the proposals.
- 6.8.4 Providing precautionary mitigation is used with respect to fuels and contaminants, it is not considered there would be a significant impact on invertebrates.

6.9 Reptiles

- 6.9.1 There are 7 records for reptiles within 2km of the site. These records are all of common lizard (*Zootoca vivipara*). There are records within 500m of the site boundary.
- 6.9.2 We consider it highly likely that common lizards and potentially adders (*Vipera berus*) also occur within the scattered scrub/ruderal habitat that surrounds the site. These species therefore may also occur on the site.
- 6.9.3 Foraging opportunities on and around the site for reptiles are likely to be of moderate quality as there are areas of standing water, a diverse and varied plant assemblage and

deadwood which are likely to give rise to invertebrate and sustain amphibians for these species to forage.

6.9.4 There are numerous opportunities for these species to find refuge and hibernacula in the local area and this includes the stone walls the come close to the boundary of the site and the stumps and roots of trees that can be found at the edge of the site.

6.9.5 We consider there to be the potential for these species to occur on site, but given the very small size of the site, the likelihood is very small.

6.10 Statutory and Non-Statutory Sites

Direct Impacts:

6.10.1 There are both statutory and non-statutory sites in close proximity to the site however the proposals are of such small scale that site development would not directly affect the dispersal of species between them or directly impact upon their integrity.

Indirect Impacts:

6.10.2 There are both statutory and non-statutory sites in close proximity to the site however the proposals are of such small scale that site development would not 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 hedgerow leading off to the north of the site should be retained or improved where possible. Any lengths of intact hedgerow to be removed to facilitate development should be transplanted and or replanted in order that there is no net negative impact on this BAP habitat due to development. The roots of hedgerow plants/trees should be adequately protected during development from compaction/ground disturbance.
- 7.1.2 Cut wood from felled hedgerows on site, chipping and the stumps and potential refugia that occur on site should be retained on the land adjacent to the site such that they can continue to offer refugia, hibernacula and resources to a range of species.
- 7.1.3 Disturbed ground should be allowed to recolonise naturally from the existing seedbank at the site as this will provide a continuation of the existing habitats.
- 7.1.4 Development works should take place prior to the commencement of the bird nesting season.

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.
- 7.2.2 In order to further minimise impacts on amphibians the following points should also be followed.
- All work must take place during daylight hours as amphibians are more likely to be commuting over night and this will ensure the risk to any amphibians commuting through the site will be minimised.
 - During the development, measures should be put in place to discourage amphibians from using the development area, the creation of any piles of earth, materials and rubble which could form potential artificial hibernacula and refuge should be avoided at all times. It is recommended that any spoil or rubble will be removed immediately to skips, or on hard standing or short grass. This will ensure that no potential amphibian hibernation or resting sites are created.
 - The storage of all loose materials must be palletised or similar so they are off the ground whenever possible.
 - 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 amphibians 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.

7.3 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.

- All work must take place during daylight hours as badgers are more likely to be commuting over the site at night and this will ensure the risk to any badgers passing through the site will be minimised.
- 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.
- Boundary fences/walls should incorporate gaps at their base to facilitate the passage of badgers across the site.

7.4 Bats

7.4.1 Work at night should be restricted and light spill from any cabin or other feature at the site should be minimised.

7.4.2 Overall it is considered that there will be no adverse impact on the favourable conservation status of bats affected by the proposal. There are no roosting opportunities at the site.

7.5 Birds

7.5.1 Nesting by birds within the development area is considered possible. Birds may nest within hedge and in the scrub 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 The retention of the scrubland 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 *Invertebrates*

- 7.6.1 Contaminants should not be allowed to enter the soils on site during work. To effect this, spill kits should be provided on site. Re-fuelling of all plant and machinery should be undertaken away from open drains and water courses. Drip trays should be used under static machinery.
- 7.6.2 Timber, brash and chippings from the site should be retained on the adjacent land where it can continue to provide a resource.

7.7 *Reptiles*

- 7.7.1 The points in respect of not leaving open trenches without means of escape detailed for badgers are also applicable to these species.
- 7.7.2 There should not be any potential refugia created on site from aggregate or other materials as this may encourage reptiles to utilise the site.
- 7.7.3 If the stone walls need to be removed as part of the proposals, then this should be done by hand and with care. Reptiles may utilise gaps or fissures in stonewalls to hibernate and as refuge.
- 7.7.4 If a reptile or reptiles are found on site then all work should cease and the ecologist for this project should be contacted for further advice.
- 7.7.5 Brash, chippings and wood moved from the site should be retained on the surrounding land such that it can provide a potential resource for reptiles.

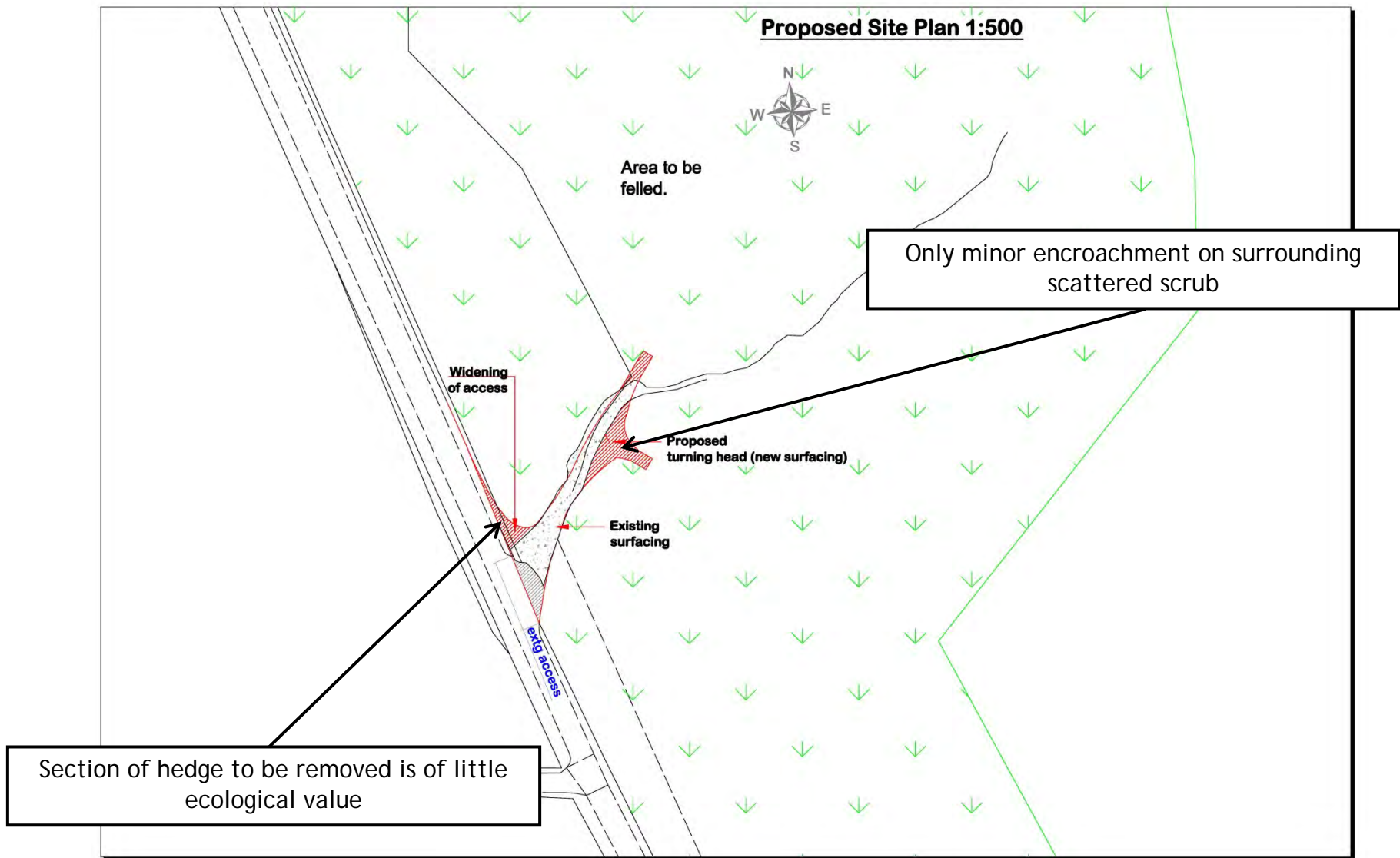


Figure 8 Proposed site plan.

8. CONCLUSION

- 8.1.1 Ecological surveys, site appraisals and impact assessments were carried out with respect to land comprising a former forestry access track and a small area of scattered scrub surrounding it. It is proposed the track will have a turning head added.
- 8.1.2 Bats, badgers, reptiles, amphibians and nesting birds are known to occur in the local area, there was however no conclusive evidence of any specifically protected species regularly occurring on the site or the surrounding areas which would be negatively affected by site development following the mitigation proposed.
- 8.1.3 There was no evidence of any specifically protected species regularly utilising the site for any purpose, however it is considered that reptiles will use the site in conjunction with the wider area.
- 8.1.4 Contractors will be observant for protected species and all nesting birds. Should any species be found during construction, 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.

9. REFERENCES

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10. APPENDIX



Hedge		Feature		
1	Yes	Length 20m +	Yes	Hedge is not bounding the curtilage of dwelling
	Yes	Hedge established more than 30years	Yes	Hedge boundary of protected or common land or land used for agriculture or forestry
ARCHAEOLOGY AND HISTORY				
	No*	Archaeological feature which is included in the schedule of monuments	No*	Situated wholly or partly within an archaeological site
	No*	Boundary of a pre-1600 AD estate	No*	Integral part of a field system
	No	Protected species records		
FEATURES				
	No	Bank or wall		
	Yes	Gaps less than 10%		
	No	Standard trees		
	No	Ditch		
	No	Parallel hedge		
	No	Footpath/ Bridleway		
	0	Connection points		
	2	Woody species		
	0	Average ground flora species		
		7 woody species or 6 woody species + 3 features or 5 woody species + 4 features or highway + 4 woody species and 2 features		
		No		
		HEDGE CLASSIFIED AS IMPORTANT		

* Historic and archaeological records have not been checked for this site.