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Ecological Consultants
Environmental and Rural Chartered Surveyors

Preliminary Ecological Appraisal

Thomas Graham, Egremont

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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	Andrew Gardner	Date	10/01/2023
Checked by	Andrew Gardner	Date	10/01/2023
Report Version	1		
Field data entered	☐		
Report Reference	8399		

Contents

1. EXECUTIVE SUMMARY

1.1.1 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land at Egremont. It is proposed that new commercial 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 9th January 2023. 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. Woodland and scrub to the boundary is higher value but is retained in the scheme.

1.1.5 None of the hedgerows around the site perimeter were considered important under the Hedgerow Regulations (1997).

1.1.6 No bats were recorded roosting on or near site.

1.1.7 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.

1.1.8 No other notable or protected species were recorded on the site.

2. INTRODUCTION

2.1 Background

2.1.1 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land at Egremont, central grid reference NY014099 (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 commercial 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 Cumbria "CBDC", 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 cool and dry in mid winter.

3.3.2 The site and surrounding land was visited on the 9th January 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 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 carcases

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 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 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’.

4.5 Brown Hare

4.5.1 The brown hare (*Lepus europaeus*) is a UK BAP species.

4.5.2 The survey method involved walking boundaries and surveying with binoculars. The survey was conducted at a suitable distance to ensure that the hares were not disturbed. Generally, surveys were undertaken throughout the early afternoon and evening when hares are thought to be most active and feeding.

4.5.3 Where present the number of brown hares in each field or hedgerow was recorded, together with the nature and use of the field, climatic conditions and time of day. The presence of forms and faeces where present were also recorded.

4.6 Otter

4.6.1 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.

4.6.2 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.

4.7 Red Squirrel

4.7.1 The site was walked over and the species of any tree over 15 years old was recorded.

4.7.2 At 50m intervals a check for signs of red squirrels (*Sciurius vulgaris*) was made and a note made of whether these are few, moderate or many. This was done by looking for feeding activity such as the remains of tree seeds, and whether or not there are dreys. Tree seed availability can vary greatly at different times of the year and from year to year. Seeds of broadleaved trees will usually be available from the autumn and the abundance of seeds will decline through winter and spring. Conifer seeds are available from summer, and often through to the following spring or summer. Thus, looking for signs of squirrel feeding activity can provide useful clues as to whether squirrels are currently resident and feeding within the wood.

4.8 Survey limitations

4.8.1 The survey was undertaken in winter. 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 CBDC 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 "fish hatcheries" 350m to the North (Figure 3). This is isolated from the site by a busy road. The site does not lie within an area mapped as priority habitat, the nearest mapped priority habitat is deciduous woodland, Figure 3a.

5.1.3 The nearest statutory protected site is Florence Mine SSSI 325m to the North-east (Figure 4). This is isolated from the site by a busy road. This site is designated for its geological interest.

"The Florence or Beckermet Mine provides excellent three-dimensional exposures through the largest 'flat'-type iron ore replacement body in the West Cumbria iron orefield.".

5.1.4 The development site lies within a SSSI impact zone under the following criteria

- "Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more." relating to potential water supply and
- "Any development that could cause AIR POLLUTION" relating to Air Pollution.

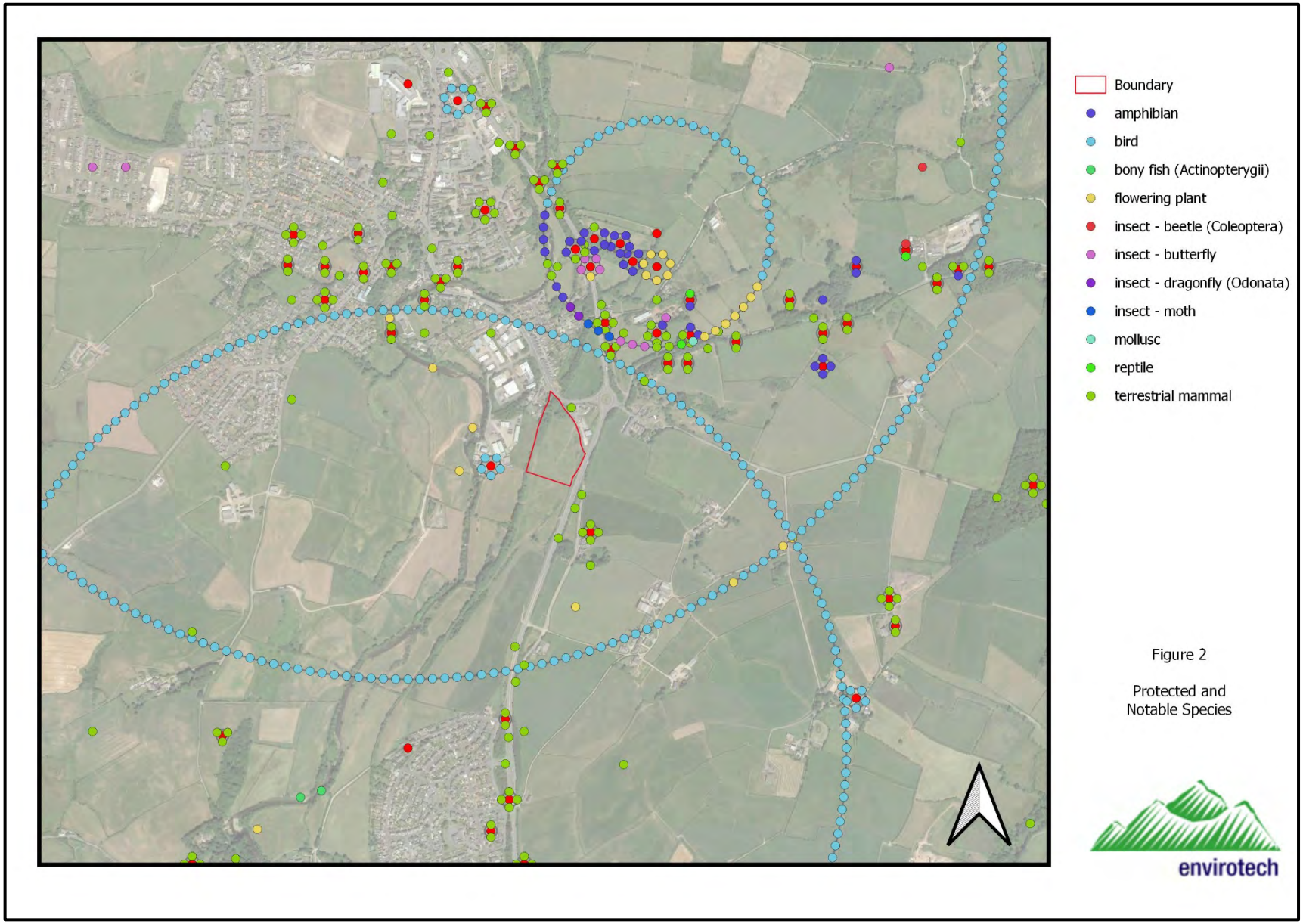

Figure 2

Protected and
Notable Species

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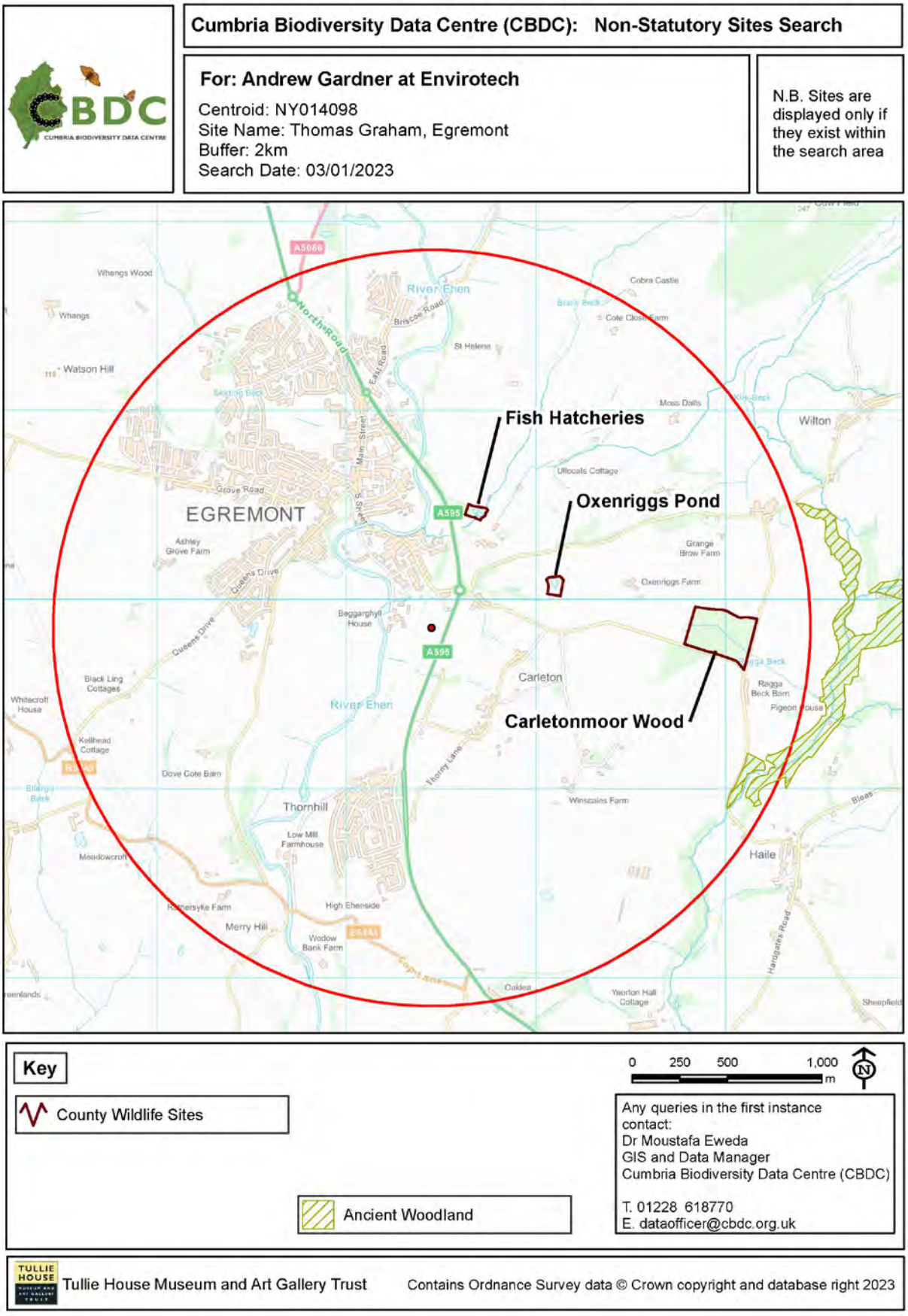

Figure 3 *Non-statutory designated site.*

Figure 3a

BAP and Noteable Habitats

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SSSI
Boundary

Figure 4

Protected Sites

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6. PHASE 1 SURVEY RESULTS

6.1 Habitat Results

6.1.1 The site comprises poor semi-improved grassland with scrub and woodland on its boundary.

6.1.2 See Figure 5 for the Phase 1 Habitat Plan and Table 1 for the descriptive Target Notes.

Target Note	Description	Comment
TN1	Poor semi-improved grassland	An open and exposed field. Heavy poaching by cattle to the site entrance becoming less poached to the South. Common Bent (*Agrostis capillaris)*, Crested Dog's-Tail *(Cynosurus cristatus)* and Yorkshire Fog *(Holcus lanatus)* with occasional Ribwort Plantain *(Plantago lanceolata)* and Creeping Buttercup (*Ranunculus repens*). Soft Rush (*Juncus effusus)* becomes locally abundant to the South suggesting impeded drainage. The rush beds are insufficiently dense for the grassland to be classified as "marshy". Yorkshire Fog is dominant to the North and site entrance. The sward is insufficiently diverse for it to be classified as unimproved. The grassland is likely topped and box muck is likely to have been applied, drainage may be present but has likely not been maintained. Poor semi-improved grassland would be the appropriate classification in this case.
TN2	Tall ruderal	To the East of the site, atop a bank is dense Bramble *(Rubus fruticosus agg)* and occasional Gorse *(Ulex europaeus)*. Exposed piles of stone suggest former tipping of spoil and Nettle *(Urtica dioica)* suggests localised nutrient enrichment. Yorkshire Fog becomes more dominant as the grass species present. Rosebay Willow herb *(Epilobium angustifolium)* and Creeping thistle locally dominant.
TN3	Dense scrub	Dense Bramble and Hawthorn *(Crataegus monogyna)* scrub with occasional gorse and Sycamore (*Acer pseudoplatanus)* to a steep bank leading to a small stream. Cattle paths within it are poached. Pendulous Sedge *(Carex pendula)* recorded to the stream side had been grazed down to its base. Rosebay Willow herb and Creeping buttercup to the exposed bare earth banks of the stream.
TN4	Deciduous woodland	A flat, linear area of the field to the West boundary which appears to be an old railway line. Drainage is impeded with Goat Willow *(Salix caprea)* dominant. Hawthorn is occasional. Woodland is grazed and ground flora limited but Ground elder (*Aegopodium podagraria)* was recorded along with occasional Hart's tongue fern *(Asplenium scolopendrium)* and Tutson *(Hypericum androsaemum)* significantly grazed.
TN5	Bramble	Bramble extends from the field boundary out into the grassland.

TN6	Stream	A shallow but fast flowing stream empties from a pipe to the East. The steam bed is natural comprising small stones. The banksides are heavy poached by cattle with extensive bare ground. The stream enters a culvert within the site.
TN7	Species poor hedge	A species poor hedge comprising Hawthorn runs up the East and North side of the site. The hedge is well grown but appears not to have been laid.

Table 1 *Details of Target Notes.*

Figure 5

Phase 1 Habitat Survey

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  	TN1- Poor semi-improved grassland which is open and exposed. Heavy poaching by cattle Occasional bramble beds

TN2- Tall ruderal and bramble to the site boundaries. Bramble beds extend into the middle of the field

 	TN3- Dense scrub and bramble to the field corner around a small stream
	TN4- Woodland along what appears to be a former railway line, linear flat strip

	TN5- Treeline extending along the West side boundary with bramble to its base extending into the field
 	TN6- Small stream emerged from a culvert and enters a culvert on site. Steep, poached banks

 	TN7- Species poor hedge to site boundary

Table 2 *Photographs*

6.2 Vegetation

6.2.1 The poor semi-improved grassland has a very low species diversity and ecological value. Whilst the assemblage of species within it is higher than improved pasture, the species are all indicative of regular grazing and disturbance, this habitat does not constitute a BAP habitat.

6.2.2 The intact hedge bounding the site to the East is species poor and contains a low diversity of woody plant species but all hedgerows are a UK BAP habitat. It should be retained in any proposed scheme and where lengths need to be lost, they should be transplanted or new hedges planted as compensation.

6.2.3 The hedgerow is not classified as important under the Hedgerow Regulations (1997) as it has insufficient numbers of woody species.

6.2.4 Trees within the site boundary are confined to the boundary and former railway line. These appear small and a typical NVC woodland ground flora is absent.

6.2.5 Scrub and tall ruderals to the site boundary are impacted by livestock poaching.

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 records for amphibians within 2km of the site. There are also records of great crested newt in the local area, which are clustered to the North-east and "Carlton Quarry", 450m to the North. This is isolated from the site by a busy road which is a significant barrier to dispersal.

6.3.2 There are no potential breeding ponds shown on OS mapping within 250m of the site.

6.3.3 The core development area has a low value to amphibians being open and exposed grassland. The boundary hedgerow, scrub and woodland could be utilised as refuges and/or hibernacula but there are no breeding ponds in proximity to the site.

6.3.4 It is unlikely amphibians would occur on site but their presence on the wider landscape means that precautionary mitigation would be appropriate in respect of construction activities.

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 29 records of six species of bat within 2km of the site.

6.5.2 The foraging habitat at the site is very poor for bat species being open and exposed grassland. The poor semi-improved grassland offers negligible foraging opportunities for bats. The hedge and tree lines are poor in terms of their structure, diversity and interconnectivity.

6.5.3 Despite being poor, the trees and hedgerows on the site offer the best foraging habitat for bats on the site as the remainder of it comprises open and exposed pasture. 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.

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 hedgerows and 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 The stream culvert appears to be piped and would not provide hibernation potential.

6.5.7 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 2515 records of birds within 2km of the site.

6.6.2 The intact hedgerow, scrub and woodland offer potential habitat for feeding and nesting birds. The poor semi-improved grassland has a low potential for use by nesting birds as the grassland is grazed and as such is usually short. Trampling risks are also very high within this area of the site.

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.

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 Precautionary mitigation is considered appropriate. The landscaping scheme should include species such as Rowan (*Sorbus aucuparia*) which are seed bearing and will provide food for birds in the winter.

6.6.6 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 Brown Hare

6.7.1 Brown hare are a UK BAP priority species. There are 18 records of brown hares within 2km of the site.

6.7.2 No indication of brown hares was recorded on the site.

6.7.3 The site boundary has some potential for brown hares to create forms but use of the site is likely to be limited due to its open and exposed nature and regular human presence.

6.7.4 A risk assessment of the site in respect of its future potential for and value to brown hares could be adequately made. We consider the risk to brown hares is very low.

6.8 Otter

6.8.1 There are 17 records of otters within 2km of the site.

6.8.2 No indication of the presence or past use of the site by otter was found. The stream is considered unlikely to support fish.

6.8.3 The stream is isolated from the wider catchment by culverts leading onto and off the site. There are no waterbodies in proximity to the site which would be attractive to Amphibians. This species is considered as being absent from

6.8.4 The stream should be retained in the scheme, dense scrub/ woodland should be retained on the site boundaries so as to continue to provide suitable holt sites in the future. Precautionary mitigation would be appropriate in respect of construction activities.

6.9 Red Squirrel

6.9.1 This species has been recorded locally.

6.9.2 No dreys were however located within the trees and scrub. No feeding signs were located.

6.10 Other

6.10.1 The boundary hedgerows are species poor and provide little potential for use by hedgehog (*Erinaceus europaeus*). Fragmentation of habitat locally and existing land use do not provide optimal conditions for the free passage of this species across the site and slugs and snails are likely to occur only at very low numbers.

6.10.2 The site may be crossed by species such as fox (*Vulpes vulpes*) and rabbit (*Oryctolagus cuniculus*) are known to occur locally.

6.11 Statutory and Non-Statutory Sites

Direct Impacts:

6.11.1 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.

6.11.2 The site is "down slope" from Florence Mine SSSI. There is as such no hydrological link to the SSSI. The proposal should not result in air pollution.

Indirect Impacts:

6.11.3 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.

6.11.4 The site is "down slope" from Florence Mine SSSI. There is as such no hydrological link to the SSSI. The proposal should not result in air pollution.

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. All 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.

7.1.3 The hedgerow around 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.

7.1.4 The cessation of grazing of the site will result in regeneration of the woodland and scrub which is degraded by poaching and grazing pressure. Undersowing of the woodland may promote a more typical woodland understory to develop.

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 Consider the use of SUDS on site to provide new aquatic habitat during development. Such areas would be best placed in public open space where connectivity to the site boundaries and wider area is improved.

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 New planting within the site should enhance structural diversity and light spill onto the boundary woodland and trees 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 Any trees to be felled should be re-inspected for bats to confirm they remain absent.

7.5 Birds

7.5.1 Nesting by birds within the development area is considered unlikely to occur. Birds may nest within hedges or scrub and woodland 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 Artificial bird nesting sites for swallow could be incorporated into the new buildings under the eaves in suitable locations.

7.5.5 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 Brown Hares

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 brown hare 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.

7.7 Otter

7.7.1 The points in respect of not leaving open trenches with means of escape detailed for amphibians are also applicable to this species which is only likely to pass through the site at night.

7.7.2 The points in respect of new shrub and tree planting around the site and the ecological enhancement of the stream are also likely to enhance the sites potential for future use of the site.

7.8 Red Squirrels

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 Red Squirrel 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

Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F 2014. Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA. Freshwater Habitats Trust, Oxford.

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.mJYlrP8L.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.