

Berry Lane, Howbrook
Preliminary Ecological Appraisal
6th August 2019



Prepared by:

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Site Name Berry Lane	Location Howbrook, Sheffield S35 7EH
Document ref: MBE/ECO/2019/17/01	
Local Authority Barnsley Metropolitan Borough Council	Grid Reference SK 32564 98125
Surveyor Peter Middleton MCIEEM	Date of Survey 11/07/2019
National Character Area (NCA) NCA 38 The Nottinghamshire, Derbyshire and Yorkshire Coalfield	Designation of Site None

Phase 1 Habitat Types on Site A3.1 Scattered broad-leaved trees, G1 Standing water, J2 Amenity grassland, J1.4 Introduced shrub, J2.1.2 Intact species poor hedge, J2.5 Wall, J3.6 Buildings, J4 Bare ground, J5 Other habitat.
NVC Communities on Site None
Protected/Notable Species, Constraints on Site Nesting birds, cotoneaster species, rhododendron
HPIs and SPIs under NERC Act 2006 None
Barnsley BAP None

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1. Summary

- 1.1.1 The Preliminary Ecological Appraisal of land off Berry Lane, Howbrook was commissioned by architect Mark Booth on behalf of the client, the Wharncliffe Estate, on 19th June 2019.
- 1.1.2 The survey was commissioned to inform a planning application for a residential development comprising a single dwelling. The proposed development will result in the land-take of approximately 0.10ha of land (garden) associated with two dwellings at the junction with Howbrook Lane.
- 1.1.3 The proposed development will not result in any foreseeable impacts upon designated sites. The site is not considered to be of more than site level importance to any habitat or species group.
- 1.1.4 The following ecological constraints and associated recommendations to avoid/mitigate/compensate for potential impacts have been identified.
- **Trees** – Damage to the root systems or stems of existing trees.
 - **Nesting birds** – Site clearance to be undertaken when will not affect nesting birds or be proceeded by a nesting bird check.
 - **Invasive flora** (presence of cotoneaster and rhododendron species on site) – Avoid spread through development of a plan to control the species during construction works.
- 1.1.5 In addition to mitigation recommendations outlined above, enhancement recommendations include:
- An In-situ cavity bat box integral to the fabric of the building
 - Soft landscaping scheme making use of native species of trees and shrubs.
 - Boundaries and fences that will not impede the free movement of hedgehogs throughout the site.
- 1.1.6 In order to further reduce scheme impacts and to ensure the scheme maximises potential benefits to nature conservation, it is recommended that mitigation and enhancement measures detailed in Sections 6.3 and 6.4 are adopted.

2. Introduction

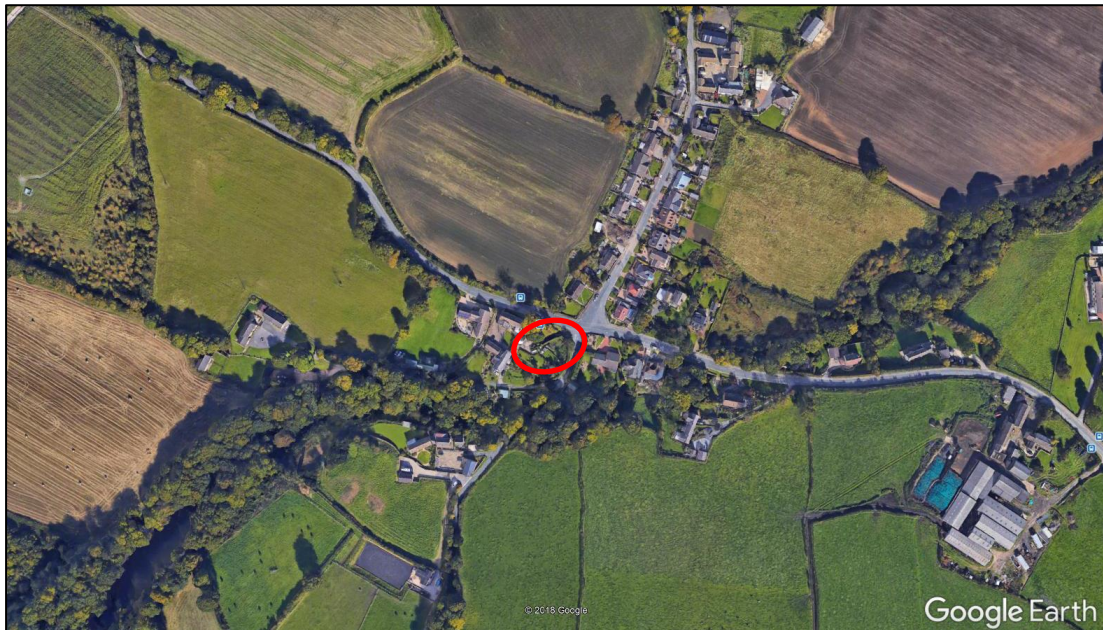
- 2.1.1 The Preliminary Ecological Appraisal of land off Berry Lane, Howbrook was commissioned by architect Mark Booth on behalf of the client, the Wharnccliffe Estate, on 19th June 2019.
- 2.1.2 The survey was commissioned to inform a planning application for a residential development comprising a single dwelling. The proposed development will result in the land-take of approximately 0.10ha of land (garden) associated with two dwellings at the junction with Howbrook Lane.
- 2.1.3 The purpose of this report is to present the results of an extended Phase 1 habitat survey which includes determining the potential for, or presence of, protected and notable species, plus an appended map of the site showing the Phase 1 habitats present. Where impacts can be confidently determined, recommendations in relation to avoiding, mitigating and compensating for these impacts are included in this report, together with biodiversity enhancement recommendations.
- 2.1.4 Ecological impacts associated with the scheme have been assessed with the focus on identifying significant impacts. Mitigation, compensation and enhancement measures are detailed.
- 2.1.5 Key legislation relating to designated sites and protected species and habitats is presented in Appendix 3. The implications of legislation are detailed in the body of the report where necessary.

3. Site Description

- 3.1.1 The application site is at the junction of Howbrook Lane with Berry Lane in the small village of Howbrook near Wortley, Sheffield. The site is in a rural location approximately eight kilometres south-southwest of Barnsley and 10km north-northwest of Sheffield. The site's red line boundary consists of approximately 0.22ha of land with the development plot comprising 0.10ha of garden associated with two dwellings. Semi-natural habitats present on site are largely restricted to amenity grass (lawns), scattered trees and hedges, whilst man-made habitats include introduced shrub, including many small hedges, two small butyl lined ponds and a vegetable plot (see Appendix 1, Figure 1 and Plates 1, 2, & 3).
- 3.1.2 Land adjacent to the application site supports the following habitats.
 - Residential properties and associated gardens
 - Tarmac roads
 - Grassland
 - Arable
- 3.1.1 The site falls within National Character Area 38: The Nottinghamshire, Derbyshire and Yorkshire Coalfield. This National Character Area (NCA) comprises a generally low-lying area, with hills and escarpments above wide valleys, the landscape embraces major industrial towns and cities as well as villages and countryside. Over half of the NCA (64 per cent) is currently designated as greenbelt land; this maintains some distinction between settlements and represents areas that are often under pressure for development and changes in land use. Very little of the NCA is designated for geology

or nature conservation, but instead the landscape is dotted with many pockets and patches of habitat where species find refuge. This is often on land that was once worked for minerals or occupied by major industry.

Figure 1. The site location, as indicated by red circle



4. Methodology

4.1 Data Consultation

4.1.1 Barnsley Biological Records Centre (BBRC) were contacted to request the following information for locations within a 1.5km radius of the site:

- Protected and notable species records
- The boundaries of non-statutory designated sites of nature conservation interest

4.1.2 A search of the Multi-Agency Geographical Information for the Countryside (MAGIC) website was undertaken to determine the following:

- The boundaries of statutory designated sites of nature conservation interest
- The locations of historic European Protected Species (EPS) licences granted by Natural England

4.2 Field Survey

Extended Phase 1 Habitat Survey

4.2.1 The site was surveyed on 11th July 2019 using extended Phase 1 habitat survey methodology (JNCC, 2010) by the following personnel:

- Peter Middleton (MCIEEM)

- 4.2.2 Notable, rare or scarce plant species were highlighted if present. Evidence of protected species or species of nature conservation importance was recorded where present at the time of survey. Species recorded are included within the report as appropriate. Information is presented on the Phase 1 plan, using Target Notes (TN) to identify particular features of interest, where appropriate. Additionally, and where possible, habitats were classified using the National Vegetation Classification (NVC), as described in the JNCC National Vegetation Classification – Users Handbook (Rodwell, 2006).
- 4.2.3 Ariel photographs (Google Earth) were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This is particularly useful for identifying wildlife corridors and ponds but because the latter are often not apparent on aerial photographs, OS 1:25 000 scale maps are also used.
- 4.2.4 Habitats of Principal Importance (HPIs) and Species of Principal Importance (SPIs) are included on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 were noted together with priority species and habitats as included on the Local Biodiversity Action Plan (LBAP).

Methods of assessment

- 4.2.5 The value and sensitivity of ecological features present on site were determined based on the guidance given in 'Guidelines on Ecological Impact Assessment' (CIEEM, 2016). Individual ecological receptors (habitats and species that could be affected by the development) for the scheme were assigned levels of importance for nature conservation. The highest level is international, then decreasing in order of importance through national, regional, county, local and lastly site.

GCN eDNA Survey

- 4.2.6 Two garden ponds were subject to eDNA sampling to determine the presence or absence of Great Crested Newt (GCN). A total of 20 water samples were taken from regularly distributed sample points around one of the two ponds, being careful to stir the water but not disturb the sediment. These were mixed together, and six samples were taken from the combined liquid and added to the laboratory sample pots/vials (per-pond). All samples were taken using in-date sterile kits provided by the laboratory at SureScreen Scientifics. Samples were refrigerated overnight and couriered to the laboratory the next day, in accordance with the guidance. The pond sampling was undertaken by Peter Middleton (GCN Level 1 Class Licence: 2015-17416-CLS-CLS) on 17th July 2019.
- 4.2.7 Strict biosecurity measures were followed to prevent contamination of water bodies, including avoiding entering the water when taking samples, washing wellington boots with a bleach solution prior to attending site, wearing the gloves provided, employing glove changes during sampling and using only the sterile kit provided by the laboratory.

4.3 Survey Limitations

- 4.3.1 The GCN eDNA survey was undertaken shortly after the end of June and outside of the season for collecting water samples for analysis. Whilst the recommended survey season ends at the end of June, a recent study by Reece *et al.*, (2017) found that highly positive identification was detected through the months of March–August with identification found in in all months of the year in at least one of the two ponds in the

study. As a result, it is considered that a relatively high degree of confidence in the mid-July eDNA survey result is possible in this case.

5. Ecological Baseline

5.1 Data Consultation

5.1.1 Designated sites present within 1.5km of the site are detailed in Table 1.

Table 1. Designated sites

Designation	Name	Interest	Distance and direction to site
Local Wildlife Site (LWS)	West Wood	Broad Leaved Woodland	900m northeast
	Westwood Lane (Candidate Site)	Various features of interest including GCN	1.3km north-northeast
	Sowell Pond	Great Crested Newt	1.5km northeast

5.1.2 A consideration of the scheme's potential to impact designated sites is presented in Section 6 of the report.

5.1.3 Records of protected and notable species obtained are discussed in the species accounts within the results section of this report.

5.2 Field Survey

5.2.1 The arrangement of site habitats is shown on the Phase 1 plan in Appendix 1, whilst a field survey botanical species list is provided in Appendix 2.

5.2.2 Site habitats are considered to be of site level importance to nature conservation. The site is also unlikely to be of greater than site level importance to any faunal species group.

5.2.3 A detailed description of the site habitats and the site's potential to support protected and notable species is provided below.

Habitats

A3.1 Scattered broad leaved trees

5.2.4 Scattered trees on site include occasional sycamore *Acer pseudoplatanus* (three specimens) together with single specimens of ash *Fraxinus excelsior*, an ornamental cherry *Prunus* spp., rowan *Sorbus aucuparia*, yew *Taxus baccata*, common spruce *Picea abies* and two unidentified ornamental species. The largest and most mature of the trees comprise a single sycamore and an ash both of which are at the north end of the site (see Plate 1).

Plate 1. The driveway with the large sycamore, the ash tree can also be seen



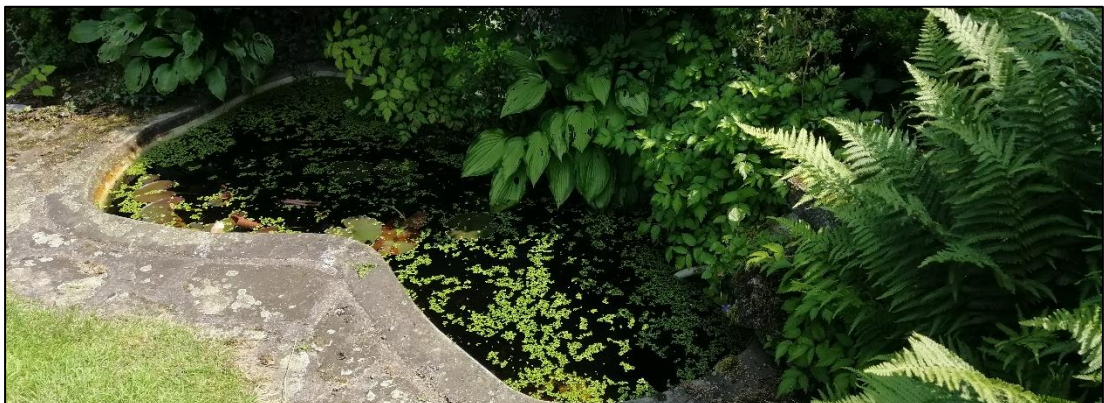
G2 Standing water

- 5.2.5 There are two man-made ponds with butyl liners on site, the largest of which is 12m². There are many non-native marginal species together *Iris* spp. and common duckweed *Lemna minor*. Pond 2 is approximately 2m² and it has a lily *Nymphaea* and common duckweed (see Plates 2 & 3).

Plate 2. Pond 1



Plate 3. Pond 2



J2 Amenity grassland

- 5.2.6 There are four areas of regularly mown grass within the red-line boundary. Three of the areas are associated with the two dwellings whilst the third is a linear area between the boundary hedge to the gardens and the highway. The grass contains abundant creeping bent *Agrostis stolonifera* together with frequent perennial ryegrass *Lolium perenne* and red fescue *Festuca rubra*. Herbs present in the forb include a frequent unidentified garden escape and dandelion *Taraxicum officinale* agg. together with occasional white clover *Trifolium repens* and rarely occurring self-heal *Prunella vulgaris*. The linear perimeter area adjacent to the road is somewhat different with herbs including locally abundant creeping cinquefoil *Potentilla reptans*, frequent yarrow *Achillea millefolium* and daisy *Bellis perennis* and rarely occurring ragwort *Senecio jacobea* and field forget-me-not *Myosotis arvensis*.

Plate 4. Amenity grass (lawn) and introduced shrub (berberis hedge)



J1.4 Introduced shrub

- 5.2.7 Introduced shrub (and perennials) make up a large component of the site. Species positively identified include lilac *Syringa vulgaris*, Forsythia *intermedia*, holly *Ilex aquifolium*, box *Buxus sempervirens*, Skimmia *japonica*, Spiraea *bumalda*, garden rose *Rosa*, laurel *Aucuba japonica*, cypress *Cupressus* spp., rhododendron *Rhododendron ponticum*, wall cotoneaster *Cotoneaster horizontalis*, ornamental current *Ribes sanguineum*, rosemary *Rosemarinus officinalis*, garden privet *Ligustrum ovalifolium*, honeysuckle *Lonicera* spp., heather *Erica* spp., red robin *Photinia fraseri* and hebe *Hebe* spp. (see Appendix 1). Two low hedges of both barberry *Berberis ottawensis purpurea* and box are also present

J2.1.2 Intact species poor hedge

- 5.2.8 A 1.8m high hedge at the perimeter of the site adjacent to the road is dominated by holly together with occasional garden privet and hawthorn *Crataegus monogyna* and rarely occurring lilac and sycamore.

Plate 5. Introduced shrub and perennials and species poor hedge



J3.6 Buildings

- 5.2.9 There is a detached garage, a single storey outbuilding with a mono pitched slate roof and several timber sheds on site. On the western edge of the site is a detached building beneath a pitched Welsh slate roof which comprises the two dwellings to which the garden areas belong. The external walls of the two dwellings are cement rendered (see Plate 6).

Plate 6. Bare ground on track at southern boundary of the site with detached building (two dwellings) in distance



J3.4 Bare ground

5.2.10 Two tracks (driveways) on site comprise bare ground (see Plates 1 & 6).

J5 Other (vegetable garden)

5.2.11 One section of a garden associated with the dwelling is allocated to growing vegetables (see Plate 7).

Plate 7. Vegetable garden



Species and species groups

Amphibians

- 5.2.12 BBRC provided five Great Crested Newt (GCN) *Triturus cristatus* records collected from two locations within a 1.5km radius of the site. The nearest known breeding pond is located 1.35km north of the application site centroid. One EPS Mitigation licence has been issued for a location within 2km of the site, the licence issued in 2010 was to permit the destruction of a breeding pond 1.9km from the site.
- 5.2.13 Four ponds and two reservoirs were identified within one kilometre of the site during the pond search. However, only a reservoir to the southwest is within 500m of the site boundary.
- 5.2.14 A Habitat Suitability Index (HSI) assessment was undertaken on the two site ponds. No other ponds were identified within 500m of the site during the pond search. The HSI assessment showed Pond 1 has average suitability to support breeding GCN, whilst Pond 2 has below average suitability to support GCN (see Table 2).
- 5.2.15 A GCN eDNA survey of the largest pond (Pond 1) was undertaken on 17th July 2019, which showed a negative result for the presence of GCN eDNA (see Appendix 4).
- 5.2.16 Given the distance of GCN records supplied by BBRC, the lack of ponds with 500m of the site and the negative result from the eDNA analysis. GCN are not considered to be a receptor to the proposed scheme.

Table 2. Pond HSI result

HSI Pond Results	Pond 1 (Nearest)	Pond 2	HSI Scores to define pond suitability for GCNs
Location 1	1	1	<0.5 = Poor 0.5 – 0.59 = Below average 0.6 – 0.69 = Average 0.7 – 0.79 = Good >0.8 = Excellent
Pond Area 2	0.05	0.05	
Pond Permanence 3	0.9	0.9	
Water Quality 4	0.67	0.33	
Pond Shading 5	1	1	
No of Waterfowl 6	1	1	
Fish Presence7	1	1	
Pond Density 8	1	1	
Newt Friendly Habitat 9	1	1	
Macrophyte 10	0.5	0.3	
Multiplication	0.015	0.004	
Result Root (overall HSI)	0.65 Average	0.58 Below average	

Badger

- 5.2.17 Badger *Meles meles* records were provided by BBRC for locations within a 2km radius of the site. All locations are in excess of 0.9km from the site.
- 5.2.18 No badger setts were found on site and it is unlikely to comprise part of a wider foraging habitat for this species.

Bats

- 5.2.19 Twelve bat records of five species were provided by BBRC. Species positively identified in the records comprised common pipistrelle *Pipistrellus pipistrellus*, Leisler's bat *Nyctalus leisleri*, noctule *Nyctalus noctula*, brown long-eared bat *Plecotus auritus* and Daubenton's bat *Myotis daubentonii*. The nearest roost record comprises a brown long-eared bat roost, recorded in 2008 from a location approximately 230m from the site.
- 5.2.20 No historic EPS mitigation licences have been obtained for locations within 2km of the application site.

Buildings – bat roost potential

- 5.2.21 There are five buildings on site plus a greenhouse. A description of the buildings and their potential to support roosting bats is provided below.

Description

- 5.2.22 Buildings on site comprise a prefabricated concrete garage (B1) with a pitched asbestos cement roof, a single storey stone-built outbuilding (B2) with a mono pitched stone slate roof, two timber sheds and a glass metal framed greenhouse. The survey area is a detached building (including the two dwellings) with cement rendered external walls and a pitched Welsh slate roof (see Figure 2).

Internal inspection

- 5.2.23 No internal inspection was undertaken on the detached building, given that it is not within the proposed development zone and it will not be impacted by the proposed development. Other on-site buildings lack features with potential to accommodate bats within the interior of these structures.

Figure 2. Site buildings



External inspection

- 5.2.24 The cement rendered walls of the detached building (the two dwellings) lacks features with potential to accommodate bats, however, there is perhaps potential access to the wall top behind the gutter and potential access beneath slates at the roof verge.
- 5.2.25 With the exception of the stone slate roof on the stone built outbuilding (B2), the other structures on site lack features with potential to accommodate roosting bats.
- 5.2.26 The detached building (the two dwellings) and the outbuilding (B2) display a low number and diversity of roost features and were considered to offer a low level of bat roost potential. Neither of these buildings will be impacted by the proposed development. Other site buildings offer negligible bat roost potential.
- 5.2.27 No trees on site display features with potential to accommodate bats, however, the site provides relatively good foraging habitat for bats. The site is however limited in size and higher quality bat foraging habitat is present in the form of woodland to the south.

Birds

- 5.2.28 No red listed species within the Birds of Conservation Concern (Eaton *et al.*, 2015) were recorded during the survey. The site does however have the potential to support song thrush *Turdus philomelos*.

5.2.29 No birds were recorded on site during the survey. However, the site does have the potential to support a number of common resident species.

5.2.30 Trees, hedgerows and introduced shrub on site have potential to be used by a range of common bird species for nesting.

Invasive species

5.2.31 Invasive species recorded on site include *Cotoneaster horizontalis*, *Rhododendron ponticum* and variegated yellow archangel *Lamium galeobdolon* sub sp. *Argentatum*. All are listed as invasive species on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended).

Invertebrates

5.2.32 Given the ubiquitous largely un-natural habitats on site, rarely occurring and/or notable species are not likely to be present.

Plants

5.2.33 Given the ubiquitous largely un-natural habitats on site, it is unlikely to support rare or notable species of flowering plants

Reptiles

5.2.34 Four relatively old reptile records were supplied by BBRC for locations within 2km of the site. The nearest record to site comprises a grass snake *Natrix natrix* recorded in 1986 from a location 450m from the site. Given, the paucity of records and the site's relative isolation from suitable reptile habitat, reptiles are not considered to be a likely receptor to the proposed scheme. Further reptile surveys are not therefore considered necessary.

6. Assessment

6.1 Proposals

6.1.1 The proposed development will result in the demolition/removal of two garden sheds and a greenhouse followed by the construction of a single dwelling. The proposed development will result in the land-take of approximately 0.10ha of land (garden) including amenity grass, introduced shrub, several trees and two ponds.

6.1.2 The assessment of scheme impacts is based upon an indicative plan produced by M Booth Design 2019.

6.2 Assessment of Impacts

6.2.1 No impacts upon the designated site (West Wood) are anticipated because of the nature of the development and the distance from the site.

6.2.2 The site is not considered to be of more than site level importance to any habitat or species group.

6.2.3 Potential impacts of the development are considered to comprise:

- Damage to the root systems or stems of existing trees.
- Potential to damage or destroy active bird nests. Bird nests are subject to strong legal protections as detailed in Appendix 3.
- Potential to spread cotoneaster, it is an offence to plant or otherwise cause these plant species to grow in the wild (see Appendix 3).
- Temporary increase in vehicle movements during the period of construction into and out of the site.
- Temporary increase in noise, dust and vibration caused by construction work.
- Long term increase in human presence on site following the construction of new dwelling.
- Potential increase in domestic pets which potentially negatively impact wild birds and mammals.

6.2.4 Methods to avoid or mitigate for the impacts detailed above are discussed in Section 6.3

6.3 Further Survey and Mitigation

6.3.1 In order to avoid or mitigate ecological impacts of the scheme it is advised that the following recommendations are adopted:

- Retain yew tree near eastern boundary if possible. Boundary hedgerows and trees to be retained should remain intact. Taking a best practice approach to nature conservation issues, where boundary hedgerows and trees are to be retained, British Standard 5837 (2012): Trees in relation to design, demolition and construction, should be followed. Root Protection Zones (RPZ's) should be calculated and implemented to prevent harm to trees. This should also apply to any trees outwith the site, up to 5 m from the boundary.
- Site clearance should take place at a time when it will not affect nesting birds (March to August), or be preceded by a nesting bird check.
- Avoid spread of cotoneaster and rhododendron species through the development of a plan to control the spread of these species during site clearance and construction works.

6.4 Enhancements

6.4.1 In accordance with the aims of planning policy NPPF: 15, it is suggested that the developer follows the recommendations detailed below. These measures could be secured by a suitably worded planning condition. Please note that the enhancements have been informed by the results and findings of the field survey.

- The new property should have an in-situ cavity bat box integral to the fabric of the building, situated high on the west facing gable but not over windows or doors.
- New tree and shrub plantings should be an integral component of the soft landscaping proposals for the site. Plantings within the site should be generous and be of locally native species of trees and shrubs.
- Dwelling boundaries and fences should not impede the free movement of hedgehogs throughout the site.

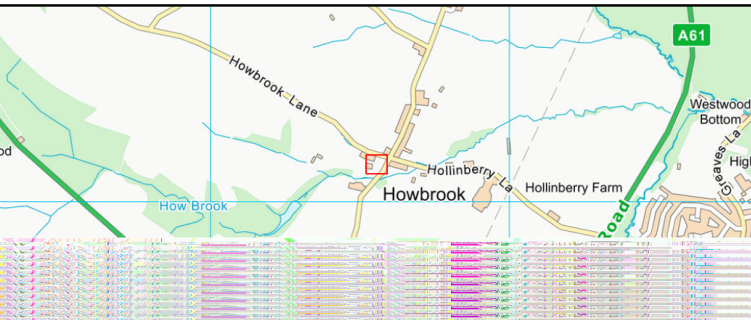
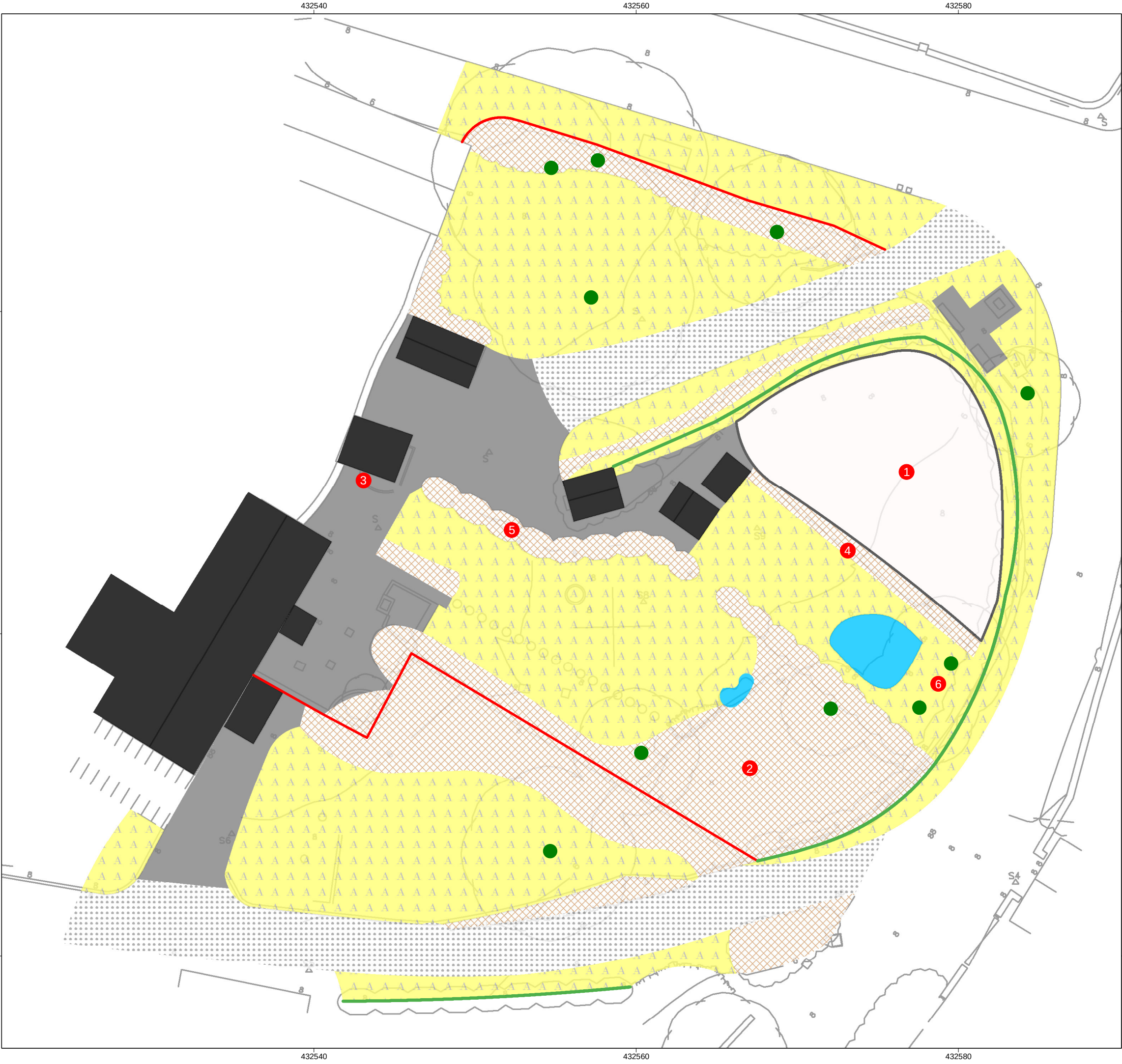
6.5 Conclusion and Residual Effects

- 6.5.1 The site is not considered to be of greater than site level importance to any habitat or species group.
- 6.5.2 In order to further reduce scheme impacts and to ensure the scheme maximises potential benefits to nature conservation, it is recommended that mitigation and enhancement measures detailed in Sections 6.3 and 6.4 are adopted.
- 6.5.3 Provided that works commence within 24 months of the survey date then no further ecological survey effort is considered necessary.

7. References

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Appendix 1. Phase 1 Plan



Phase 1 Habitat Survey	
	Pond
	Bare ground
	Amenity grassland
	Introduced shrub
	Building
	Hardstanding
	Other habitat (vegetable plot)
	Hedgerow
	Wall
	Phase 1 Points
	Target note

Target Notes:

[1] Vegetable plot
[2] Cotoneaster
[3] Cotoneaster
[4] Box hedge
[5] Berberis hedge
[6] *Cotoneaster horizontalis*

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PROJECT TITLE

BERRY LANE, HOWBROOK

DRAWING TITLE

Figure 1. Phase 1 Habitat Plan

VER	DATE	REMARKS	Drawn	Checked
1.1	16/07/19	Phase 1	MP	PM

DRAWING NUMBER:

MIDDLETONBELLECOLOGY/BerryLn/Phase 1

SCALE	1:230	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
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Appendix 2. Plant Species Recorded on Site

Full Species List		
English Name	Scientific Name	DAFOR Rating
A3.1 Scattered broad-leaved trees		
Sycamore	<i>Acer psuedoplatanus</i>	O
Ash	<i>Fraxinus excelsior</i>	R
Rowan	<i>Sorbus aucuparia</i>	R
Yew	<i>Taxus baccata</i>	R
Japanese cherry	<i>Prunus serrulata</i>	R
G1 Open water		
Common duckweed	<i>Lemna minor</i>	A
Iris spp	<i>Iris spp.</i>	R
Lily spp	<i>Nymphaea</i>	R
None-native species		F
J1.3 Amenity grassland		
Red fescue	<i>Festuca rubra</i>	F
Perennial ryegrass	<i>Lolium perenne</i>	F
Creeping bent	<i>Agrostis stolonifera</i>	F
Dandelion	<i>Taraxicum officinale</i> agg.	F
White clover	<i>Trifolium repens</i>	O
Great plantain	<i>Plantago major</i>	O
Self-heal	<i>Prunella vulgaris</i>	R
Creeping cinquefoil	<i>Potentilla reptans</i>	F
Yarrow	<i>Achillea millefolium</i>	O
Ragwort	<i>Senecio jacobea</i>	R
Lesser trefoil	<i>Trifolium dubium</i>	R
Field forgetmenot	<i>Myosotis arvensis</i>	R
Creeping thistle	<i>Cirsium arvense</i>	R
Daisy	<i>Bellis perennis</i>	R
J1.4 Introduced shrub		
Cotoneaster spp	<i>Cotoneaster spp.</i>	O
Ivy	<i>Hedera helix</i>	Loc D
Lilac	<i>Syringa vulgaris</i>	O
Holly	<i>Ilex aquifolium</i>	A
Golden bells	<i>Forsythia intermedia</i>	R
Box	<i>Buxus sempervirons</i>	Loc D
Skimmia	<i>Skimmia japonica</i>	R
Spiraea	<i>Spiraea</i>	O
Rose	<i>Rosa spp</i>	F
Laurel	<i>Aucuba japonica</i>	O
Veronica	<i>Hebe spp</i>	O
Cypress	<i>Chamaecyparis spp</i>	O
Rhododendron	<i>Rhododendron ponticum</i>	O
Cotoneaster horizontalis	<i>Cotoneaster horizontalis</i>	R
Barberry	<i>Berberis thunbergii</i>	Loc D
Red current	<i>Rubus rubra</i>	R
Heather spp	<i>Calluna spp</i>	R
Honeysuckle	<i>Lonicera spp</i>	R
Rosemary	<i>Rosmarinus officinalis</i>	R
Photinia	<i>Photinia fraseri</i>	R

Teasal	<i>Dipsacus fullonum</i>	R
Ladies mantle	<i>Alchemilla mollis</i>	O
Periwinkle	<i>Vinca minor</i>	O
Geranium spp	<i>Geranium spp</i>	O
Nettle	<i>Urtica dioica</i>	O
Herb bennet	<i>Geum urbanum</i>	O
Coltsfoot	<i>Tussalago farfara</i>	R
Prickley sowthistle	<i>Sonchus asper</i>	O
Foxglove	<i>Digitalis purpurea</i>	R
J2.1.2 Intact species poor hedge		
Garden privet	<i>Ligustrum ovalifolium</i>	O
Hawthorn	<i>Crataegus monogyna</i>	O
Holly	<i>Ilex aquifolium</i>	D
Sycamore	<i>Acer psuedoplatanus</i>	R
Privet	<i>Ligustrum ovalifolium</i>	O
Ground ivy	<i>Glechoma hederacea</i>	O
Garlic mustard	<i>Alliaria petiolata</i>	O
Creeping thistle	<i>Cirsium arvense</i>	O
Cleavers	<i>Gallium aperine</i>	O
Nettle	<i>Urtica dioica</i>	O
Creeping cinquefoil	<i>Potentilla reptans</i>	O
Cockfoot	<i>Dactylis glomerata</i>	O
False oat-grass	<i>Arrhenatherum elatius</i>	O
Ivy	<i>Hedera helix</i>	Loc A
Creeping buttercup	<i>Ranunculus repens</i>	O

Appendix 3. Relevant Legislation and Policy

Wildlife legislation relating to statutory designated sites and species is summarised in Table A1 and A2 below. This legal information is intended for summary only, and the original legal documents should be consulted if a detailed understanding is required.

Table A1. Legislation relating to designated sites and habitats

Designated Site	Legal Status
Local Wildlife Site (LWS)	While they have no direct legal status, Local Wildlife Sites are considered important enough to receive recognition within the planning system. National planning policy requires local authorities to identify Local Wildlife Sites and provide for their protection through local policy.

Table A2. Legislation relating to species

Species	Legal Status
European protection	
European Protected Species (EPS) (including bats, Great Crested Newt (GCN), otter and hazel dormouse)	These animal species and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2017, which makes it illegal to: • Intentionally or deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs; • Deliberately disturb such an animal; • Damage or destroy a breeding site or resting place of such an animal. European Protected Species (EPS) licences can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed: • The development is for reasons of overriding public interest; • There is no satisfactory alternative; and • The favourable conservation status of the species concerned will be maintained and/or enhanced. Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a legal duty to 'have regard to the requirements of the EC Habitats Directive in the exercise of their functions'. This means that they must consider the above 3 tests when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations. As a consequence, Planning Applications for such developments must demonstrate that the 3 tests will be passed. Natural England also allow sites to be registered on the Bat Low Impact Class Licence to permit activities that would otherwise be unlawful under the Conservation Regulations where the 3 tests can be passed and the bat roosts to be impacted are of low conservation status.

Species	Legal Status
National protection	
European Protected Species and other species including water vole and white clawed crayfish	These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: • Intentionally kill, injure or take any such animal; • Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and • Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Common amphibians and reptile species	These animals receive limited protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal to intentionally kill or injure any such animal.
Badger	The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a Badger or attempt to do so and also make it illegal to intentionally or recklessly interfere with a Badger sett. This includes damaging or destroying a sett, obstructing access to a sett and disturbing a Badger while it is occupying a sett. Licences can be granted by Natural England to permit sett closure and/or disturbance between July and November inclusive.
Schedule 1 birds	Special penalties relate to offences concerning birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to intentionally or recklessly disturb any Schedule 1 bird or their dependent young while nesting.
All bird species	All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: • Intentionally kill, injure or take any wild bird; • Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Invasive species	The Wildlife and Countryside Act 1981 (as amended) contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 of the Act. In relation to Schedule 9 plants it is an offence to plant or otherwise cause these plant species to grow in the wild.

Species and Habitats of Principal Importance

Planning authorities have a duty under Section 40 of the NERC Act 2006 to have regard to priority species and habitats in exercising their functions including development control and planning. In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principal importance for conserving biodiversity in England under the UK Post-2010 Biodiversity Framework. This is known as the list of Habitats and Species of Principal Importance (HPI/SPI). The HPI/SPI list is used to guide planning authorities in implementing their duty under the NERC Act.

National Planning Policy Framework

The National Planning Policy Framework for England was revised in 2019. This document states that plans should 'promote the conservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity'. It also puts an

emphasis on refusing development which would result in the 'loss or deterioration of irreplaceable habitats (such as ancient woodland)' unless there are 'wholly exceptional reasons and a suitable mitigation strategy exists'.

Local Biodiversity Action Plans

The HPI/SPI list included on Section 41 of the NERC Act 2006 is supported by a series of Local Biodiversity Action Plans (LBAPs), usually set up on a local authority local authority administrative boundary basis. Each LBAP identifies those habitats and species considered to be most important in that area (usually referred to as priority habitats and species). Commonly, an LBAP will identify a number of habitats and species for which "action plans" have been prepared.

Appendix 4. GCN eDNA Result



Folio No: E6112
Report No: 1
Order No: 22/07
Client: MIDDLETON BELL ECOLOGY
Contact: Peter Middleton
Contact Details: peter@middletonbellecology.co.uk
Date: 25/07/2019

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS

Date sample received at Laboratory: 22/07/2019
Date Reported: 25/07/2019
Matters Affecting Results: None

RESULTS

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
4476	Howbrook	SE 32564 98125	Pass	Pass	Pass	Negative	0

SUMMARY

When Great Crested Newts (GCN); *Triturus cristatus* inhabit a pond, they deposit traces of their DNA in the water as evidence of their presence. By sampling the water, we can analyse these small environmental DNA (eDNA) traces to confirm GCN habitation, or establish GCN absence.

The water samples detailed below were submitted for eDNA analysis to the protocol stated in DEFRA WC1067 (Latest Amendments). Details on the sample submission form were used as the unique sample identity.

RESULTS INTERPRETATION

Lab Sample No.- When a kit is made it is given a unique sample number. When the pond samples have been taken and the kit has been received back in to the laboratory, this sample number is tracked throughout the laboratory.

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Appendix 5. Designated Sites Map

