Whitcher Wildlife Ltd.
Ecological Consultants.

LAND OFF WHAMS ROAD, CROW EDGE.

OS REF: SE 18712 04614

PRELIMINARY ECOLOGICAL APPRAISAL.

Ref No: **190520/4.**

Date: **31st May 2023.**

Cliff Edge, Cliff Road, Darfield, Barnsley, S73 9HR.
Tel. 01226 753271. Fax. 01226 270993.
info@whitcher-wildlife.co.uk www.whitcher-wildlife.co.uk
Company No. 4401613.

TABLE OF CONTENTS.

1. INTRODUCTION.

1.1. There are plans to develop an area of land off Whams Road, Crow Edge for housing. The plot of land was previously a public house and car park, but the front of the site was developed for housing around 2005. This planning application will be for the back of that plot.

1.2. Whitcher Wildlife Ltd has been commissioned to carry out a Preliminary Ecological Appraisal of the site in support of a planning application for the site.

1.3. The site survey was carried out on 20th May 2019. Following comments from the Council, a further site visit was undertaken on 14th August 2019 and the results of that visit incorporated into this amended report.

1.4. A further visit was carried out at the end of April 2022 prior to the sale of the site, a further site visit in late April 2023 and further modifications to the report have been made to bring it up to date.

1.5. Appendices I and II of this report provide additional information on specific species and are designed to assist the reader in understanding the contents of this report.

****

2. SURVEY METHODOLOGY.

2.1. Prior to visiting the site, the survey area was cross referenced to maps and aerial photographs to give a general idea of the habitats and potential issues within the area and to identify potential access and walking routes.

2.2. The survey area was walked where access was agreed and public rights of way were used where no access was agreed. All habitats within and immediately around the survey area were documented and the dominant species within that habitat listed in line with the JNCC Handbook for Phase 1 Habitat surveys.

2.3. The survey area and immediate surrounding area was thoroughly searched for evidence of badger (*Meles meles*) activity by looking for the following signs in line with Harris S, Cresswell P and Jefferies D (1989). *Surveying Badgers*. Mammal Society: -

* Badger setts.
* Badger latrines or dung pits.
* Badger snuffle holes and evidence of foraging.
* Badger paths.
* Badger prints in areas of soft mud.
* Badger hairs caught on fencing.

2.4. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Rob Strachan, Tom Moorhouse and Merryl Gelling (2011). *Water Vole Handbook: Third Edition*: -

* Water vole burrows.
* Water vole faeces and latrines.
* Water vole feeding stations.
* Water vole runs.
* Water vole prints in areas of soft mud.
* Water vole lawns.
* Predator field signs.

2.5. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of otter (*Lutra lutra*) activity by looking for the following signs

in line with the P Chanin (2003). *Monitoring the Otter* and *Conserving Natura 2000 Rivers: Monitoring Series No10 Guidelines: -*

* Otter prints in soft mud.
* Otter spraints.
* Otter Holts.

2.6. The survey area was searched for watercourses and waterbodies. Where found, and where safe to enter the water, all were thoroughly searched for the presence of crayfish, for approximately 50m in each direction of the site, by searching under rocks and logs. Where stated, crayfish traps were also deployed into the watercourse. All survey work was carried out in accordance with the *Conserving Natural 2000 Rivers Monitoring Series No 1, Protocol for Monitoring the White Clawed Crayfish*.

2.7. The survey area was searched for mature trees and derelict buildings and where found these were checked for potential bat roosting sites in line with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)* by looking for the following signs: -

* Holes, cracks or crevices.
* Bat Droppings.

2.8. The land immediately adjacent to the survey area was assessed for bat roosting potential and bat foraging potential. Connective routes and flight lines were also assessed whilst on site and using maps of the area.

2.9. The area within 500m of the survey site was cross referenced to maps to highlight all ponds close to the site. Where possible, all ponds identified were accessed using agreed access or public rights of way to assess the potential for great crested newts (*Triturus cristatus*) to be present.

2.10. The survey area was assessed for the potential for reptiles and suitable reptile habitats. Where applicable the area was also searched for the presence of reptiles.

2.11. Where appropriate, the habitat within and surrounding the survey area was searched for species such as hazel, oak, honeysuckle, bramble and other species which may provide potential habitat for hazel dormice (*Muscardinus avellanarius*). Field signs such as feeding remains and nests were also searched for where possible, in line with P Bright, P Morris and T Mitchell-Jones *the Dormouse Conservation Handbook 2nd Edition*.

2.12. Where appropriate, the area within and surrounding the survey area was assessed for its potential to house habitat for red squirrels. Field signs of red squirrels were searched for at least every 50m, looking for any dreys, feeding signs or sightings of red squirrels.

2.13. All surveys were carried out in line with the Chartered Institute of Ecological and Environmental Management (CIEEM) survey standards and advice.

2.14. This document is prepared in line with The National Planning Policy Framework (NPPF). This sets out the government policy on biodiversity and nature conservation and places a duty on Planning Authorities to give material consideration to the effect of a development on legally protected species when considering planning applications. The NPPF and the Planning Practice Guidance on "Natural Environment" also promote sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within the development.

2.15. This report is prepared in line with the Natural Environment and Rural Communities (NERC) Act that came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

2.16. The survey was undertaken by Derek Whitcher who has over twenty years' experience of surveying for wildlife and has run his own wildlife consultancy since 1998. He has extensive experience of a wide variety of survey techniques for a variety of species of protected wildlife supplemented by attendance on a wide range of training courses through CIEEM, FSC and BCT. As a member of CIEEM he is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership. He holds current Natural England survey licences for barn owl, bat, great crested newt and white clawed crayfish.

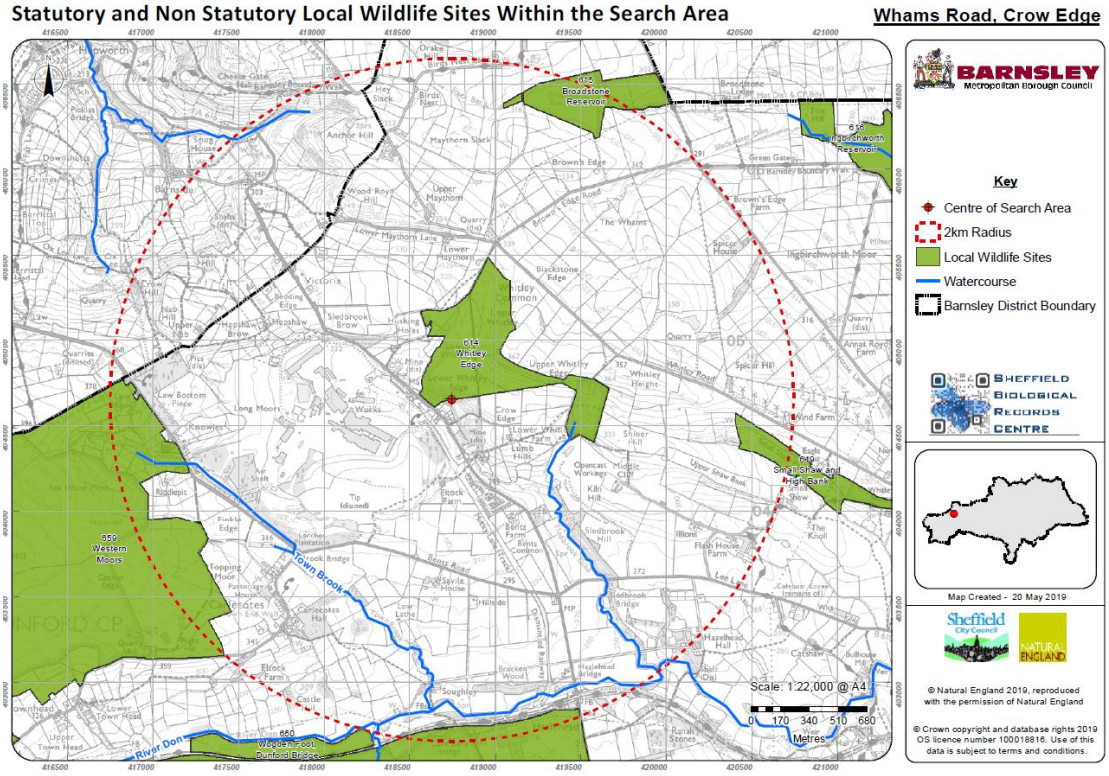
****

3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A desktop data search for existing records of protected species or designated sites within 2km of the surveyed area was submitted to Barnsley Biological Records Centre (BBRC).

3.1.2. BBRC holds records of a number of Local Wildlife Sites within 2km of the site, as shown on the map below. These include Whitley Edge LWS immediately north of the site. The other sites are all at sufficient distance from the site.



3.1.3. The Whitley Edge LWS is described on the Barnsley Biodiversity Trust website as being Lowland Heathland, Blanket Bog, Purple Moor Grass and Rush Pasture, Unimproved Acid Grassland, - a heath/acid grassland matrix.

3.1.4. In addition, a document is provided in Appendix VI of this report as the site citation although it is entitled Whitley Edge LWS Assessment and Phase I Habitat Survey. This outlines the species present on the LWS site from 2011. This states that in the southwest extremity there are two areas of open water surrounded by

broadleaved plantation. There is no mention of amphibians present in these ponds or present on the site or listed under important species.

3.1.5. The predominant habitats present on the areas of the LWS site closed to the proposed development area are unimproved acid grassland, semi-improved acid grassland and marshy grassland. None of these habitats is appropriate to the proposed development site, which comprises dry, made up land from during the previous development on the site.

3.1.6. BBRC also hold abundant records of protected or notable species within 2km of the surveyed area. There are over 3,900 records listed in the data search including numerous bird records, numerous invertebrate records and numerous plant records. Most apply to the Local Wildlife Sites and none apply to this site. Those that apply to the adjacent Whitely Edge LWSite are located away from the site and the existing houses where there is less human disturbance.

3.1.6. BBRC hold one record of common frog on the LWS from 2012 and one record of a common toad half a kilometer away on the opposite side of the main road from 2017. There are no smooth newt or great crested newt records within the search area.

3.1.7. There are no records of any reptiles within the search area.

3.1.8. There are three records of water voles within the search area all from prior to 1998.

3.1.9. There are no otter or white clawed crayfish records within the search area.

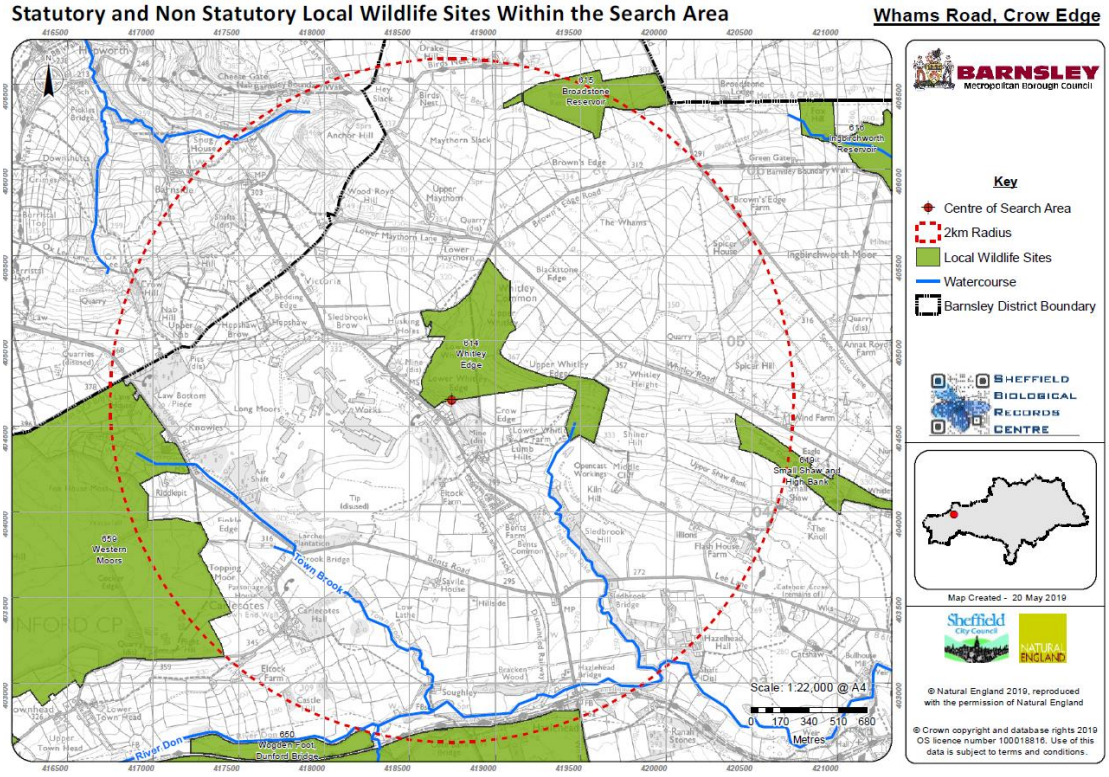
3.1.10. The predominant record groups within the data search results are plants specific to the areas found and birds, which will be mobile across the entire area.

3.1.10. South Yorkshire Badger Group hold no records of badger setts in this immediate area. The nearest record is approximately 0.5km from the site. During the second site visit, a badger dung pit was found to the north of the site within the LWS.

3.1.11. The data search results cannot be placed in the public domain but are available to the client on request.

3.1.1. A desktop data search for existing records of protected species or designated sites within 2km of the surveyed area was submitted to Barnsley Biological Records Centre (BBRC).

3.1.2. BBRC holds records of a number of Local Wildlife Sites within 2km of the site, as shown on the map below. These include Whitley Edge LWS immediately north of the site. The other sites are all at sufficient distance from the site.



3.1.3. The Whitley Edge LWS is described on the Barnsley Biodiversity Trust website as being Lowland Heathland, Blanket Bog, Purple Moor Grass and Rush Pasture, Unimproved Acid Grassland, - a heath/acid grassland matrix.

3.1.4. In addition, a document is provided in Appendix VI of this report as the site citation although it is entitled Whitley Edge LWS Assessment and Phase I Habitat Survey. This outlines the species present on the LWS site from 2011. This states that in the southwest extremity there are two areas of open water surrounded by broadleaved plantation. There is no mention of amphibians present in these ponds or present on the site or listed under important species.

3.1.5. The predominant habitats present on the areas of the LWS site closed to the proposed development area are unimproved acid grassland, semi-improved acid grassland and marshy grassland. None of these habitats is appropriate to the proposed development site, which comprises dry, made up land from during the previous development on the site.

3.1.6. BBRC also hold abundant records of protected or notable species within 2km of the surveyed area. There are over 3,900 records listed in the data search including numerous bird records, numerous invertebrate records and numerous plant records. Most apply to the Local Wildlife Sites and none apply to this site.

3.1.6. BBRC hold one record of common frog on the LWS from 2012 and one record of a common toad half a kilometer away on the opposite side of the main road from 2017. There are no smooth newt or great crested newt records within the search area.

3.1.7. There are no records of any reptiles within the search area.

3.1.8. There are three records of water voles within the search area all from prior to 1998.

3.1.9. There are no otter or white clawed crayfish records within the search area.

3.1.10. The predominant record groups within the data search results are plants specific to the areas found and birds, which will be mobile across the entire area.

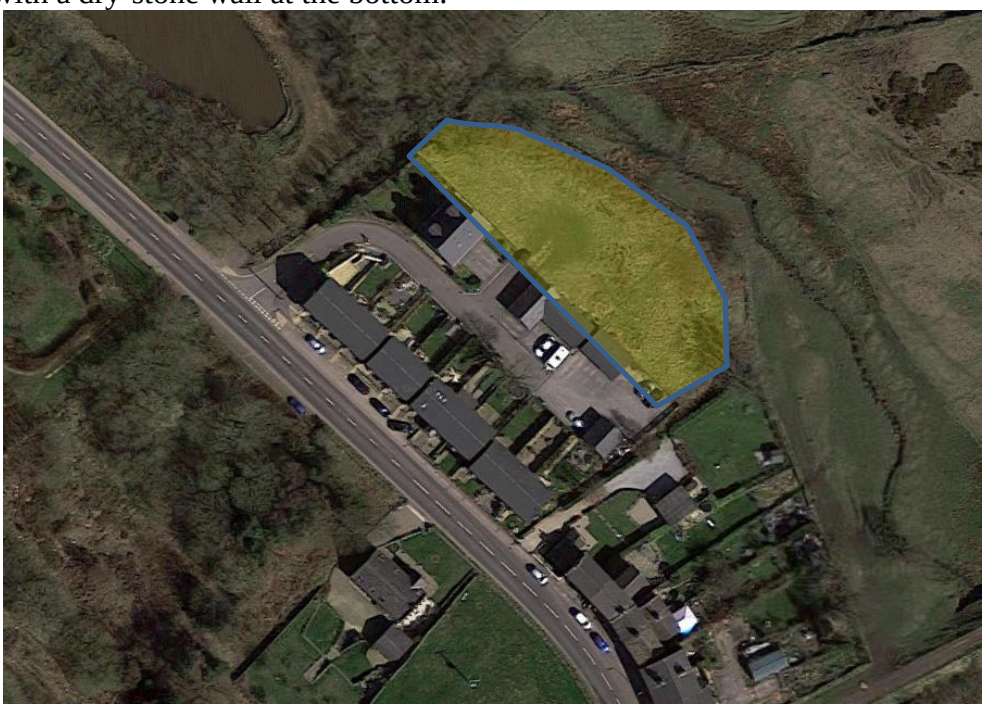
3.1.10. South Yorkshire Badger Group hold no records of badger setts in this immediate area. The nearest record is approximately 0.5km from the site. During the second site visit, a badger dung pit was found to the north of the site within the LWS.

3.1.11. The data search results cannot be placed in the public domain but are available to the client on request.

3.2. The Surveyed Area.

3.2.1. The aerial photograph below shows the location of the site shown by the red arrow and the surrounding area. The site is located within a small hamlet with a large industrial site to the west and with open countryside to the east. The site is bordered by residential developments to the west, the previous development area.

3.2.2. The close-up aerial photo below shows the actual survey area shaded in yellow. The site is level for the most part with a steeply sloping bank down to the east of the site with a dry-stone wall at the bottom.



3.3. Description of Habitats.

Appendix III of this report contain an annotated map marked up with the varying habitats that are cross referenced to target notes in Appendix IV of this report. The habitats on and adjacent to the site are:

- Semi- Improved Grassland.
- Dense Scrub.
- Scattered Scrub.
- Scattered Trees.
- Tall ruderals.
- Fence.
- Wall.
- Species Poor Hedgerow.

3.3.1. Semi-Improved Grassland.

3.3.1.1. The main area of the site comprises semi-improved grassland. There is a significant amount of brick and rubble in the soil indicating that this area has been built up at some point in time, probably at the time of the previous development. The main grass species present are cocksfoot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus),* perennial ryegrass (*Lolium perenne*) and a patch of marsh grass (*Juncus sp*). Other species present include red clover (*Trifolium pratense*), dandelion (*Taraxacum officinale*), broad leaved dock (*Rumex obtusifolius*), nettle (*Urtica dioica*), coltsfoot (*Tussilago farfara*), ribwort plantain (*Plantago lanceolata*), common vetch, (*Vicia sativa*) creeping buttercup (*Ranunculus Repens*), thistle (*Cirsium sp(p)),* Ladies mantel (*Alchemilla mollis*), Loose strife (*Lysimachia punctata*), forget me not (*Myosotis spp*.) and daisy *(Bellis perennis)*

3.3.1.2. The photographs below show various views across this grassland.

3.3.1.3. The following photographs show the history of the site and in particular the area of grassland. In 2001 the site comprised a public house and car park.

3.3.1.4. In 2005 the site had been cleared and comprised bare earth.

3.3.1.5. In 2009 the adjacent development had been completed and grass had become established on the site.

3.3.1.6. The aerial photograph shows the site in 2018.

3.3.2. Dense Scrub.

The eastern and northern side of the site comprises a steep bank down to a wall below. Much of this area supports dense scrub with bramble (*Rubus fruticosus*), nettles (*Urtica dioica*), raspberry (*Rubus idaeus*), rosebay willowherb (*Chamerion angustifolium*) and hogweed (*Heracleum sphondylium*)

3.3.3. Scattered Scrub.

3.3.3.1. The dense scrub on the steep bank is encroaching in areas into the adjacent grassland as scattered scrub and this includes bramble (*Rubus fruticosus*), broom (*Cytisus scoparius*), nettle (*Urtica dioica*), Ladies mantel (*Alchemilla mollis*), Loose strife (*Lysimachia punctata*), dock (*Rumex obtusifolius),* common vetch (*Valeriana officinalis*) and forget me not (*Myosotis sp)*.

3.3.4. Scattered Trees.

At the northern end of the steep bank there are a number of trees growing. These include alder (*Alnus glutinosa*), crack willow (*Salix fragilis*) and silver birch (*Betula pendula*).

3.3.5. Tall Ruderals

There is one area on the bank where Japanese knotweed has been controlled. There are numerous stems laid on the bank and one live shoot. Where this has been controlled by herbicide treatment the scrub has also died back and tall ruderals remain. Species include Japanese knotweed (*Fallopia japonica*), great willowherb (*Epilobium hirsutum*), nettle (*Urtica dioica*) and dock (*Rumex sp.).*

3.3.6. Fence

There are timber fences that separate the previous development from the proposed development site.

3.3.7. Wall.

There is a dry-stone wall along the eastern site boundary with the adjacent field. This is in places buried beneath the spreading brambles. There is a fence along the field side of the wall, but this is a farmer's stock fence outside the site boundary.

3.3.8. Species Poor Hedgerow.

There is a conifer hedge, part Leyland cypress (*Cupressocyparis leylandii)* and part ornamental species, down the southern site boundary with the adjacent garden with one mature ash *(Fraxinus excelsior)* tree in it. This is assumed to belong to the neighbouring property.

3.4. Description of Fauna.

3.4.1. No badger setts or badger field signs were found in the survey area.

3.4.2. There are no watercourses present on the site and there is therefore no habitat for water voles, otters or white clawed crayfish present on the site. There is a small stream, Sledbrooke Dyke, that flows through the adjacent field. This is adjacent to the site boundary at the northern end of the site, shown in the left-hand photograph below but more like 10m from the site as it flows south, shown in the right-hand photograph below. The stream is a narrow watercourse containing little water at the time of this survey flowing over a stony bed with well cropped grass banks from grazing. The watercourse is unsuitable for water voles or otters and white clawed crayfish are very rare in this area and are not listed in the data search results.

3.4.3. During the second site visit, the brook was walked and surveyed from where it exits the LWS south to where it passes underneath the public footpath. The brook is

narrow and fast flowing with insufficient depth of water for water voles. No water vole burrows or field signs were present. The photographs below show this section of the brook.

3.4.4. There are no buildings present on the site to provide habitat for roosting bats. There are modern garages adjacent from the previous development, but these are new and in good condition, unsuitable for roosting bats.

3.4.5. There are no trees on site of sufficient maturity to contain features that may provide habitat for roosting bats.

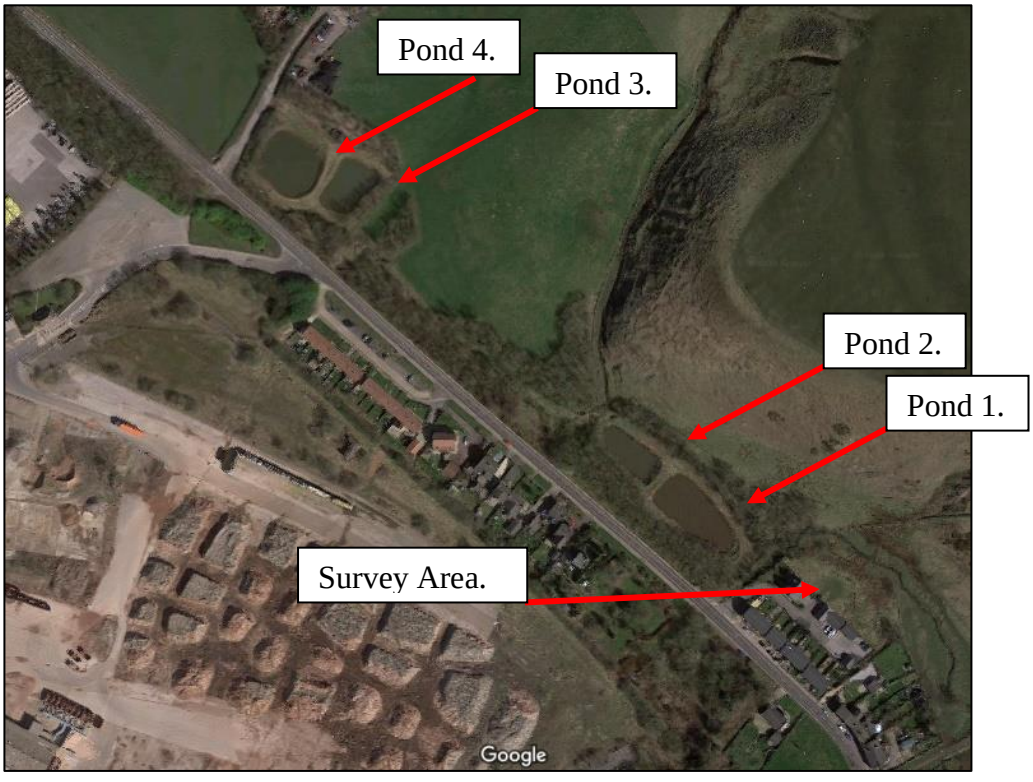
3.4.6. The habitat on site is assessed to be low valuable bat foraging habitat as the site is in an elevated and exposed location. Small numbers of common species probably forage on the Local Wildlife Site as there are abundant trees present.

3.4.7. There are two ponds adjacent to the site, shown on a map of the surrounding area. These could provide breeding habitat for amphibians although there are no records of smooth newts or great crested newts in the surrounding area, the ponds are isolated from other ponds and great crested newts are not listed as present in the Local Wildlife site. There is one record of common frog on the LWS from 2005 and one record of a common toad half a kilometer away on the opposite side of the main road.

3.4.8. During the second survey these ponds and two additional ponds further to the north were visited and assessed.

3.4.8.1. Pond Descriptions.

Four ponds were identified within 500m of the survey area. The aerial map below shows the location of the four ponds and the survey area.



3.4.8.1.1. Pond 1 was a large settling pond located 20m to the northwest of the survey area. The pond contains small amounts of aquatic vegetation and low levels of marginal vegetation. The pond was partially surrounded by tall ruderal species and mature trees to the northeast and the southwest, with rock and broken branches piled to the west of the site under the boundary wall.

3.4.8.1.2. Pond 2 was a large settling pond located 80m to the northwest of the survey rea. The pond contains small amounts of aquatic vegetation and more dense marginal vegetation. The pond was partially surrounded by tall ruderal species and mature trees to the northeast and the southwest, with rock and broken branches piled to the west of the site under the boundary wall.

3.4.8.1.3. Pond 3 was a large settling pond located 300m to the northwest of the survey area. The pond contains small amounts of aquatic vegetation and low levels of marginal vegetation. The water had foam floating on the surface and the nearby water watercourse also had floating foam on it. The pond was partially surrounded by tall ruderal species and mature trees to the northeast and the southwest, with broken branches piled to the west of the site under the boundary wall.

3.4.8.1.4. Pond 4 was a large settling pond located 330m to the northwest of the survey area. The pond contains small amounts of aquatic vegetation and low levels of marginal vegetation. The pond was partially surrounded by tall ruderal species and mature trees to the northeast and the southwest, with broken branches piled to the west of the site under the boundary wall.

3.4.8.2. HSI Assessment.

3.4.8.2.1. The following table shows the Habitat Suitability Index Scores for each of the ponds. This is a method of calculating the potential presence of great crested newts in a pond by awarding points against specified criteria.

3.4.8.2.2. An explanation of the HSI criteria is included in Appendix II of this report.

HSI		**Pond 1**	**Pond 2**	**Pond 3**	**Pond 4**
SI1	Location	1	1	1	1
SI2	Pond Area	0.9	0.8	0.8	0.7
SI3	Pond Drying	0.9	0.9	0.9	0.9
SI4	Water Quality	0.33	0.33	0.33	0.33
SI5	Shade	1	1	1	1
SI6	Fowl	0.67	0.67	0.67	0.67
SI7	Fish	0.67	0.67	0.67	0.67
SI8	Ponds	0.4	0.4	0.4	0.4
SI9	Terrestrial Habitat	0.67	0.67	0.67	0.67
SI10	Macrophytes	0.35	0.35	0.35	0.35
Total score		0.68	0.67	0.67	0.66
Presence		Average	Average	Average	Average

3.4.8.3. e-DNA test results 2023.

At the further request of the Local Authority, e-DNA water sample tests were carried out on the two ponds closest to the site. The test results, as shown below, showed a negative result, no great crested newts have left e-DNA in either pond in recent weeks.

TECHNICAL REPORT

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

SUMMARY

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

RESULTS

Date sample received at Laboratory: 28/04/2023
Date Reported: 11/05/2023
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
0925	Crow Edge - P1	SE 18624 04664	Pass	Pass	Pass	Negative	0
2089	Crow Edge - P2	SE 18599 04689	Pass	Pass	Pass	Negative	0

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

Reported by: Chris Troth **Approved by:** Jackson Young

3.4.9. The trees and scrub within the site provide opportunities for nesting birds during the nesting season, which extends from March to September each year. No nests were identified during this survey although a nesting bird survey was not undertaken.

3.4.10. The site is assessed to be unsuitable habitat for reptiles as the site is elevated and isolated from other suitable reptile habitat and there are no records of reptiles within the data search area.

3.4.11. The site is assessed to be totally unsuitable habitat for hazel dormouse and is located outside the natural range for the species.

3.4.12. The site is assessed to be totally unsuitable habitat for red squirrels.

3.4.13. There is one alien invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981) present on the site. There is a clump of Japanese knotweed on the east facing bank of the site outside the direct build area. There appears to have been an attempt to eradicate the plant as the dead stems on the bank suggest that this has been a large clump of the plant. At the time of this survey only

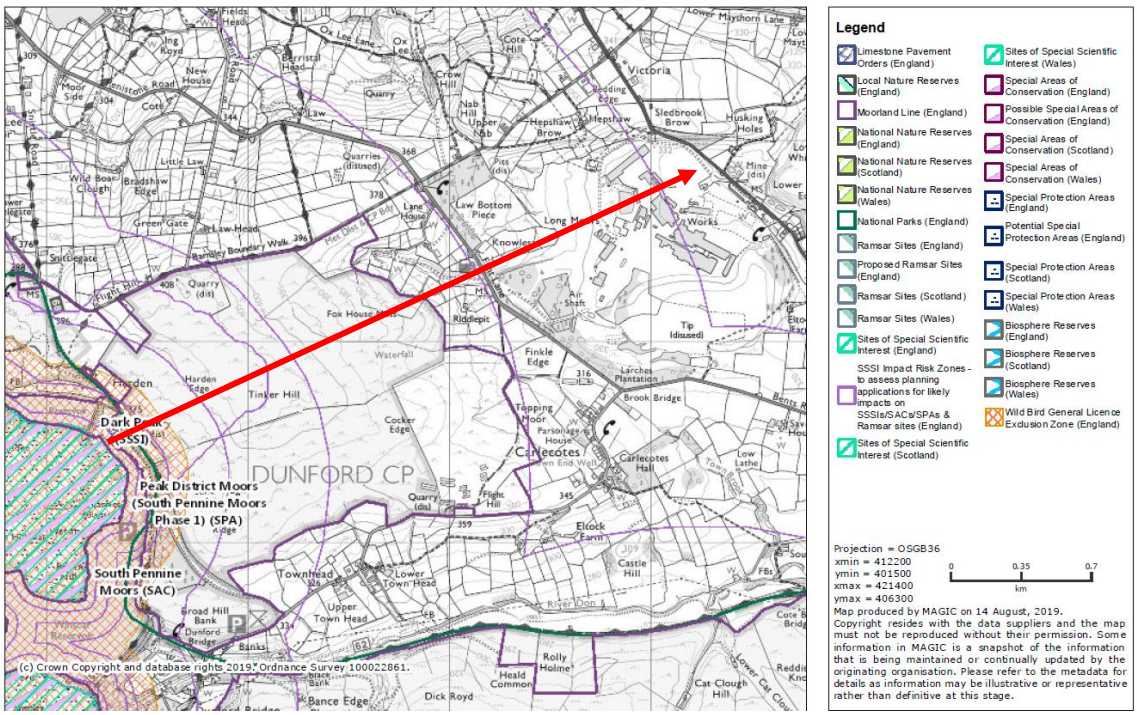
one new stem was seen growing on the northeast facing slope down to the field, as shown in the photographs below. This has since been eradicated.

****

4. EVALUATION OF FINDINGS.

4.1. There are no statutory designated sites on or close to the site. It has been pointed out that there are Nationally designated and European designated sites within some 3.6km to the west of the site. These are shown on the MAGIC map reproduced below along with a red arrow showing the separation of the proposed development from the designated sites. The sites are the Dark Peak SSSI, the South Pennine Moors SAC and the Peak District Moors (South Pennine Moors Phase I) SPA. The proposed development will have **No Negative Impact** on such sites at 3.6km from this small, proposed development.

MAGIC **Magic Map**



4.2. There is one Local Wildlife Site adjacent to the proposed development site, Whitley Edge LWS, described on the Barnsley Biodiversity Trust website as being Lowland Heathland, Blanket Bog, Purple Moor Grass and Rush Pasture, Unimproved Acid Grassland, - a heath/acid grassland matrix. At the point that the site is closest to the LWS there are trees and scrub in both sites. The photograph below looks down on the dilapidated boundary fence to the LWS where it lies between the previous development and the LWS. This gives a good indication of the habitat present in this area. It is therefore assessed that the proposed extra dwellings will have **No Negative Impact** on the Local Wildlife Site and the habitats for which it is designated.

4.3. There are no Priority Habitats as listed under the NERC Act 2006 present on the site and therefore the proposed development will have **No Negative Impact** on such habitats.

4.4. The habitat to be affected by the proposed development is a semi-improved grassland that has generated on the site in the last ten years and scrub that are assessed to be of low ecological value and there will therefore be a **Low Negative Impact** as a result of loss of these habitats.

4.5. There is a small watercourse (Sledbrooke Dyke, which flows down the eastern side of the site between 5m and 10m from the site boundary. The site is already made ground above the watercourse and therefore with due care, this extra development will have no additional impact on the watercourse. The development will have **No Negative Impact** on the watercourse.

4.6. No badger setts or badger field signs were found on the site and therefore there will be **No Negative Impact** on the species.

4.7. There are no watercourses on the site and therefore no habitat for water voles, otters or white clawed crayfish. The stream, Sledbroke Dyke, is close to the site but still at sufficient distance that the works will not affect the stream or banks. There are no water vole, otter or white clawed crayfish field signs present within the Dyke and the Dyke is assessed to be too shallow for both water vole and otter. There will be **No Negative Impact** on these species as a result of the proposed development.

4.8. There are no ponds on the site to provide potential habitat for breeding amphibians. There are two man made ponds in the adjacent LWS and there is one record of a common frog in the LWS from 2005. There is also one record of a common toad approximately half a kilometer to the south of the site, on the opposite side of the main road. With due care, the proposed development of the site will have **No Negative Impact** on amphibians, including great crested newts. The additional survey only went to confirm the very unlikely presence of any form of newt in the two ponds up the valley from the proposed development site.

4.9. There are no buildings or trees present on the site to provide habitat for roosting bats and therefore there will be **No Negative Impact** on roosting bats.

4.10. The habitat on site is assessed to be poor value bat foraging habitat. The proposed development will have **No Negative Impact** on foraging and commuting bats.

4.11. The trees and scrub within the survey area provide nesting habitat for birds during the nesting season, which extends from March to September each year. Any vegetation clearance during the nesting season will potentially have a **Major Negative Impact** on any nesting birds present. Vegetation clearance outside the nesting season will have **No Negative Impact** on nesting birds although nesting habitat will potentially be lost.

4.12. The site is assessed to be totally unsuitable for reptiles and therefore, there will be **No Negative Impact** on reptiles as a result of the proposed development.

4.13. The site is assessed to be totally unsuitable habitat for hazel dormouse, outside the natural range of the species. The proposed development will have **No Negative Impact** on the species.

4.14. The site is assessed to be totally unsuitable habitat for red squirrels, with no suitable habitat present on the site. There will be **No Negative Impact** on the species.

4.15. Japanese knotweed, an invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981) was originally identified on the site. This has been treated with herbicide and most of the plant has died off, but one new stem was found present on the northeast facing bank. Since that time, further herbicide

treatment has been undertaken and during the visit in April 2022 there was no evidence of the plant whatsoever on the site. There is therefore no potential for this plant to be spread in the wild, the planned development will therefore have No **Negative Impact** on the spread of such plants.

****

5. RECOMMENDATIONS.

5.1. It is recommended that the maximum number of trees present on site at this time is retained during any planned development on this site. In particular, the alder trees on the northern end of the steep bank should be retained as a screen between the development and the Local Wildlife Site. Additionally, a root protection zone should be put in place around the mature ash tree within the neighbouring conifer hedgerow to ensure no damage to the tree root system.

5.2. It is recommended that due care be taken to avoid silt contamination of the adjacent watercourse during and after the development.

5.3. All personnel employed on the development should be briefed with respect to the potential presence of amphibians on the site and what to do in the unlikely event one is found. A Toolbox Talk is appended to this report to assist.

5.4. It is recommended that any vegetation clearance is carried out outside the nesting bird season, which extends from March to September each year. Any vegetation clearance during the nesting season should be preceded by a nesting bird survey and any active nests identified must remain undisturbed until the young have fledged.

5.5. It is recommended that to compensate for the loss of the semi-improved grassland on the site, wild flower grassland be planted in all areas of open space. In addition, a grass and wild flower mix should be planted within the new gardens on the site.

5.6. It is recommended that biodiversity enhancements are provided within the development in line with the requirements of the NPPF. In this case these should include-

- Where any ground retention is required, the use of gabion baskets is recommended to provide suitable refugia and hibernacula for amphibians.
- Incorporation of two integrated bat bricks in the new dwellings.
- Provision of two new nest boxes.

****

Prepared by:	
Derek Whitcher, BSc, MCIEEM, MCMI	Date: 14th August 2019.

Checked by:	
Jenny Whitcher Roebuck MCIEEM.	Date: 15th August 2019.

Amended by:	
Derek Whitcher, BSc, MCIEEM, MCMI	Date: 4th May 2022.

Amended by:	
Derek Whitcher, BSc, MCIEEM, MCMI	Date: 31st May 2023.

6. REFERENCES.

Chartered Institute of Ecology and Environmental Management. 2017. ***Guidelines for Preliminary Ecological Appraisal, Second Edition.*** CIEEM, Hampshire.

Chartered Institute of Ecology and Environmental Management. 2017. ***Guidelines for Ecological Report Writing, Second Edition.*** CIEEM, Hampshire.

1981. ***Wildlife and Countryside Act.*** *http://www.legislation.gov.uk/ukpga/1981/69* (accessed 18/02/16)

2000. ***Countryside and Rights of Way Act.*** *http://www.legislation.gov.uk/ukpga/2000/37/contents.*

2017. ***The Conservation of Habitats and Species Regulations.*** *http://www.legislation.gov.uk/uksi/2010/490/contents/made.*

2012. ***National Planning Policy Statement.*** *https://www.gov.uk/government/publications/national-planning-policy-framework--2*

Anon. 1995. ***Biodiversity: the UK Steering Group report. Vol 2: Action Plans.*** HMSO, London.

Joint Nature Conservation Committee. 2004 (ed.). ***Handbook for Phase 1 habitat survey: A technique for environmental audit.*** JNCC, Peterborough.

1992. ***Protection of Badgers Act.*** *https://www.legislation.gov.uk/ukpga/1992/51/contents.*

Harris S, Cresswell P and Jefferies D. 1989. ***Surveying Badgers.*** Mammal Society. London.

Strachan R, Moorhouse T, Gelling M. 2011. ***Water Vole Handbook***. 3rd edition. WILDCRU (Wildlife Conservation Research Unit), Oxford.

Chanin P. 2003(a). ***Ecology of the European Otter.*** Conserving Natura 2000, Ecology Series No.10. English Nature, Peterborough.

Chanin P. 2003(b) ***Monitoring the Otter Lutra lutra.*** Conserving Natura 2000 Rivers Monitoring Series No. 10. English Nature, Peterborough.

Peay S. 2003. ***Monitoring the White-Clawed Crayfish Austropotamobius pallipes.*** Conserving Natura 2000 Rivers Monitoring Series No. 1. English Nature, Peterborough.

English Nature. 2001. ***Great Crested Newt Mitigation Guidelines.***

Langton T, Beckett C, Foster J. 2001. ***Great Crested Newt: Conservation Handbook.*** Froglife, Suffolk.

Oldham et al. 2000. ***Great Crested Newt Habitat Suitability Assessment. ARG UK Advice Note 5, May 2010.***

Collins J. (ed.) 2016. ***Bat Surveys for Professional Ecologist: Good Practice Guidelines.*** 3rd ed. The Bat Conservation Trust, London.

English Nature. 2004. ***Bat Mitigation Guidelines.*** English Nature, Peterborough, UK.

BOCC4 Eaton et al. 2015. ***Birds of Conservation Concern 4: The Population Status of Bird's in the UK, Channel Islands and Isle of Man.***

Joint Nature Conservation Committee. 2004. ***Common Standards Monitoring Guidance for Birds.*** 2004 ed. JNCC, Peterborough.

Froglife. 1999. ***Froglife Advice Sheet 10: Reptile Survey.*** Froglife, London.

Bright P, Morris P, Mitchell-Jones T. 2006. ***The Dormouse Conservation Handbook*** 2nd edition. English Nature, Peterborough.

Joint Nature Conservation Committee. 2004 (ed.). ***Common Standards Monitoring Guidance for: Reptiles and Amphibians.*** JNCC, Peterborough.

Joint Nature Conservation Committee. 1996. ***UK Strategy for Red Squirrel Conservation.*** JNCC, Peterborough.

Appendix I. NESTING BIRD INFORMATION.

Ecology

The nesting season will vary according to the weather each year but generally commences in March, peaks during May and June and continues until September. It is also worth remembering that some birds nest in trees and scrub but others are ground nesting or prefer man- made structures or buildings.

Surveys

Nesting bird surveys search for potential nest sites in vegetation, buildings etc. Potential nesting sites are observed over a suitable period of time for bird movements or calling male birds that would indicate the presence of a nest. The presence of a nest can be identified from the field signs without the necessity to see the nest itself, thereby avoiding any disturbance of the nests. The best way to avoid this issue is to plan for vegetation clearance to be carried out outside the bird-nesting season.

Legislation

Nesting birds are protected under The Wildlife and Countryside Act 1981.

Part 1. -(1) Of the Act states that: - If any person intentionally: - kills, injures or takes any wild bird; takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or takes or destroys an egg of any wild bird, he shall be guilty of an offence.

Part 1. -(5) of the Act states that: - If any person intentionally: - disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on, or near a nest containing eggs or young; or disturbs young of such a bird, he shall be guilty of an offence and liable to a special penalty.

The Countryside and Rights of Way Act 2000 amends the above by inserting after “intentionally” the words “or recklessly”.

Appendix II. GREAT CRESTED NEWT INFORMATION.

Ecology

Great Crested Newts breed in ponds and other water bodies. They can begin to migrate to their breeding ponds as early as the first frost-free days in late January with the majority reaching their breeding ponds by mid-March. Timing will be influenced by several factors, primarily evening temperatures above 5^{o}C and rainfall.

The peak egg-laying period is from mid-March to mid-May. The newts will lay their eggs individually, mainly on the leaves of submerged plants. The larva hatch after three weeks and then take another 2-3 months to complete larval development. Adult newts generally leave their breeding ponds from late May onwards.

Once the larvae have completed metamorphosis (the transition from aquatic larvae, efts, to land-adapted juveniles), they emerge from the pond. This emergence begins in late August and generally continues until late October. It takes 2-4 years to reach sexual maturity, during which time the newts will be land based.

Adults and immature newts spend the winter in places that afford protection from frost and flooding. This will generally be underground amongst tree roots, in mammal burrows, or under suitable refuges above ground like deadwood or rubble piles. Hibernation may last from October to February.

Whilst on land, outside the hibernation period, great crested newts will forage at night, taking a wide range of invertebrate prey.

Great Crested Newts therefore spend the majority of their time on land and only visit the ponds for breeding purposes.

Great Crested Newts will travel large distances between ponds and terrestrial refuges. It is recommended that anywhere within 500m of a pond should be treated as potential Great Crested Newt habitat.

Surveys

Walkover surveys will identify the suitability of any ponds within the area for Great Crested Newts by using an HSI assessment. The terrestrial habitat and their links will also be assessed.

Aquatic surveys of newts can be carried out through the trapping of ponds in suitable weather conditions during the breeding season, although these surveys do not provide accurate population estimates.

Terrestrial surveys and exclusions can be conducted between March and September when newts are moving out of breeding ponds.

An experienced surveyor must carry out the surveys and must be in possession of an appropriate Natural England Great Crested Newt survey license.

It is essential that Great Crested Newt surveys are planned well in advance of any development and ideally before Planning Consent is sought. Surveys can only be carried out at the appropriate time of year and repeat surveys are essential.

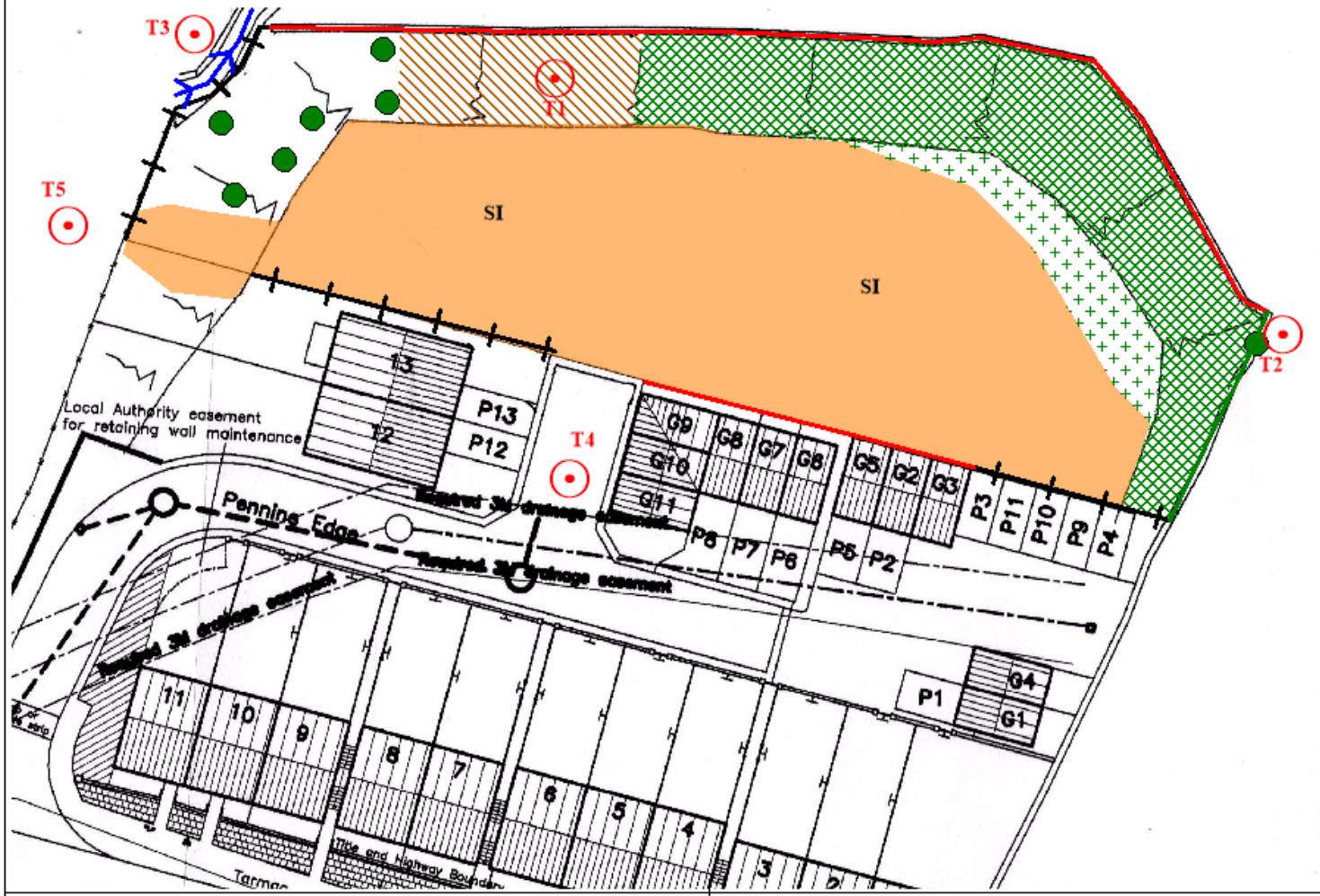
Legislation

Great Crested Newts are protected under Appendix II of the BERN Convention (1982), Schedule 5 of the Wildlife and Countryside Act (1981), Annex II and IV of the Habitats Directive, Annex II of the Conservation and Wildlife Regulations (2010) and are listed under section 41 of the Natural Environment and Communities Act (2006) making them a species of principal importance.

This makes it an offence to kill, injure or take any Great Crested Newt, to interfere with any place used for shelter or protection, or to intentionally disturb any animal occupying such a place.

If Great Crested Newts are to be affected by any development, a thorough assessment of the population is essential followed by the design of a comprehensive mitigation package. Only when this has been done can a license application be submitted to Natural England for approval. It takes 30 working days for a license application to be determined and the period that mitigation measures take can be measured in months. It is therefore essential to plan well in advance of development commencing.

Appendix III. ANNOTATED MAP OF THE SURVEY AREA.



Semi-Improved Grassland SI

Dense Scrub

Scattered Scrub

Scattered Tree

Tall Ruderal

Fence

Wall

Hedgerow, Intact, Species Poor

Running Water

Target Note

Site: Whams Road, Crow Edge	**Prepared by:** Whitcher Wildlife Ltd
Reference: 190520	**Date:** 29th May 2019

Appendix IV. TARGET NOTES.

T1. Japanese knotweed.

T2. Mature Ash Tree in neighbouring hedgerow

T3. Watercourse, outside the site boundary.

T4. The existing development outside the site boundary.

T5. Whitley Edge LWS outside the site boundary.

Appendix V. e – DNA RESULTS 2023.

SureScreen Scientifics

Folio No: E17008
Report No: 1
Purchase Order: 230457
Client: WHITCHER WILDLIFE LTD
Contact: Sam White

TECHNICAL REPORT

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

SUMMARY

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

RESULTS

Date sample received at Laboratory: 28/04/2023
Date Reported: 11/05/2023
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
0925	Crow Edge - P1	SE 18624 04664	Pass	Pass	Pass	Negative	0
2089	Crow Edge - P2	SE 18599 04689	Pass	Pass	Pass	Negative	0

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

Reported by: Chris Troth **Approved by:** Jackson Young

Forensic Scientists and Consultant Engineers
SureScreen Scientifics Ltd, Morley Retreat, Church Lane, Morley, Derbyshire, DE7 6DE
UK Tel: +44 (0)1332 292003 Email: scientifics@surescreen.com
Company Registration No. 08950940

SureScreen Scientifics

METHODOLOGY

The samples detailed above have been analysed for the presence of GCN eDNA following the protocol stated in DEFRA WC1067 'Analytical and methodological development for improved surveillance of the Great Crested Newt, Appendix 5.' (Biggs et al. 2014). Each of the 6 sub-sample tubes are first centrifuged and pooled together into a single sample which then undergoes DNA extraction. The extracted sample is then analysed using real time PCR (qPCR), which uses species-specific molecular markers to amplify GCN DNA within a sample. These markers are unique to GCN DNA, meaning that there should be no detection of closely related species.

If GCN DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If GCN DNA is not present then amplification does not occur, and a negative result is recorded.

Analysis of eDNA requires scrupulous attention to detail to prevent risk of contamination. True positive controls, negative controls and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared and reported. Stages of the DNA analysis are also conducted in different buildings at our premises for added security.

SureScreen Scientifics Ltd is ISO9001 accredited and participate in Natural England's proficiency testing scheme for GCN eDNA testing. We also carry out regular inter-laboratory checks on accuracy of results as part of our quality control procedures.

INTERPRETATION OF RESULTS

SIC: **Sample Integrity Check** [Pass/Fail]
When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results.

DC: **Degradation Check** [Pass/Fail]
Analysis of the spiked DNA marker to see if there has been degradation of the kit or sample between the date it was made to the date of analysis. Degradation of the spiked DNA marker may lead indicate a risk of false negative results.

IC: **Inhibition Check** [Pass/Fail]
The presence of inhibitors within a sample are assessed using a DNA marker. If inhibition is detected, samples are purified and re-analysed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.

Result: **Presence of GCN eDNA** [Positive/Negative/Inconclusive]
Positive: GCN DNA was identified within the sample, indicative of GCN presence within the sampling location at the time the sample was taken or within the recent past at the sampling location.
Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for GCN presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. In accordance with Natural England protocol, even a score of 1/12 is declared positive. 0/12 indicates negative GCN presence.
Negative: GCN eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of GCN absence, however, does not exclude the potential for GCN presence below the limit of detection.

Forensic Scientists and Consultant Engineers
SureScreen Scientifics Ltd, Morley Retreat, Church Lane, Morley, Derbyshire, DE7 6DE
UK Tel: +44 (0)1332 292003 Email: scientifics@surescreen.com
Company Registration No. 08950940

Appendix VI. WHITLEY EDGE LWS CITATION.

PLANNING DESIGN ENVIRONMENT

2. Whitley Edge

LWS Assessment and Phase 1 Survey

Prepared by
TEP

for

Barnsley Metropolitan Borough Council

January 2011
(Edited December 2011)

Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

T: 01925 844004
F: 01925 844002
E: tep@tep.uk.com
W: www.tep.uk.com

TEP

Site Name:	Whitley Edge
Site Area:	39.38ha
Survey Date:	September 2010
Nearest Settlement:	Crow Edge
Grid Reference at Centre:	SE18999, 04907
Surveyor(s)	PG

Site Description:

The site lies in a mainly agricultural area between Whitley Road and Whams Road; however, to the southwest, beyond Whams Road (A616) there is a large brick works and immediately to the south-east there is an active open-cast quarry. The site has limited connectivity to the surrounding area due the local landscape lacking a network of hedges and trees, although the local drainage systems does provide some links.

A large section in the east of the site is species-poor semi-improved grassland, where white clover (*Trifolium repens*) is abundant and ryegrass (*Lolium perenne*) and common bent (*Agrostis capillaris*) are frequent. On the steep well drained slopes, unimproved acid grassland dominated by mat grass (*Nardus stricta*) is prevalent. In some areas, the acid grassland is more species-rich, with autumn hawkbit (*Leontodon autumnalis*), common cat's-ear *(Hypochaeris radicata)* and creeping buttercup (*Ranunculus repens*) more common in the sward. Upper Whitley Edge is a narrow southwest facing strip of steep slope along the eastern edge of the site where much western gorse (*Ulex gallii*) heath grows in an acid grassland matrix.

On the flatter areas, mainly above the steep acid slopes down to Calf Hey Dike, there is marshy rush pasture dominated by soft rush (*Juncus effusus*). This extensive marshy area cuts through the acid grassland in the western valley bottom. A range of wetland species grows along Calf Hey Dike, which defines much of the western site border.

The part of the site extending west of Calf Hey Dike has similar steep acid slopes with semi-improved pasture on the flatter areas above. There are some bare shale areas and rock exposures on the steep slopes rising above the eastern bank of the Dike but generally these slopes support unimproved acid grassland.

In the southwest extremity there are two areas of open water surrounded by broadleaved plantation. In the southeast corner there is an extension of the site southwards into a partially quarried area, where there is a complex mosaic of acid and wet habitats, including western gorse heath, semi-improved acid grassland, marshy grassland, areas of swamp, rock exposures and a small area of broadleaved plantation. Western gorse and mat grass are each abundant in this area.

Important Species:

UKBAP breeding bird species include skylark *(Alauda arvensis),* linnet *(Carduelis cannabina)*, reed bunting *(Emberiza schoeniclus),* curlew *(Numenius arquata)* and lapwing *(Vanellus vanellus).* The site is also important for breeding snipe *(Gallinago gallinago),* an Amber List species.

Target Note:	TN1
Habitat:	Semi-improved grassland with tall swathes of rush pasture

Species List:

This is a wide flattish area of pasture that appears to be in the process of being improved. Whilst much of it is a short and species-poor sward, currently grazed, there are also extensive areas of quite tall rush pasture, mainly in the northern half of the area. With a mix of species similar to that in TN2

No species list compiled for this area

Target Note:	TN2
Habitat:	Soft rush dominated marshy grassland (rush pasture) extending into semi-improved grassland

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	D
Deschampsia cespitosa	Tufted Hair-grass	A
Agrostis stolonifera	Creeping Bent	F
Juncus conglomeratus	Compact Rush	F
Agrostis capillaris	Common Bent	O
Cirsium palustre	Marsh Thistle	O

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN3
Habitat:	Unimproved acid grassland

Species List:

Scientific Name	Common Name	Frequency
Nardus stricta	Mat-grass	D
Agrostis capillaris	Common Bent	F
Agrostis stolonifera	Creeping Bent	F
Deschampsia flexuosa	Wavy Hair-grass	O
Galium saxatile	Heath Bedstraw	O
Juncus conglomeratus	Compact Rush	O
Juncus squarrosus	Heath Rush	O
Polytrichum commune	Moss species	O
Polytrichum juniperinum	Moss species	O
Potentilla erecta	Tormentil	O
Trifolium repens	White Clover	O
Carex panicea	Carnation Sedge	R
Cladonia sp.	Cladonia species	R
Danthonia decumbens	Heath Grass	R
Deschampsia cespitosa	Tufted Hair-grass	R
Hypochaeris radicata	Common Cat's-ear	R
Leontodon autumnalis	Autumn Hawkbit	R
Molinia caerulea	Purple Moor-grass	R
Peltigera sp.	Dog-lichen species	R
Ranunculus repens	Creeping Buttercup	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN4
Habitat:	Soft rush-dominated rush pasture

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	D
Agrostis stolonifera	Creeping Bent	F
Deschampsia cespitosa	Tufted Hair-grass	F
Holcus lanatus	Yorkshire-fog	F
Juncus conglomeratus	Compact Rush	F
Agrostis capillaris	Common Bent	O

Cirsium palustre	Marsh Thistle	O
Festuca rubra	Red Fescue	O
Polytrichum commune	Moss species	O
Potentilla erecta	Tormentil	O
Alopecurus geniculatus	Marsh Foxtail	R
Callitriche stagnalis	Common Water Starwort	R
Cardamine pratensis	Cuckooflower	R
Eriophorum angustifolium	Common Cottongrass	R
Galium palustre	Marsh Bedstraw	R
Glyceria sp.	Sweet-grass species	R
Juncus articulatus	Jointed Rush	R
Juncus bufonius	Toad Rush	R
Juncus squarrosus	Heath Rush	R
Lotus pedunculatus	Marsh Bird's-foot Trefoil	R
Montia fontana	Blinks	R
Persicaria maculosa	Redshank	R
Ranunculus acris	Meadow Buttercup	R
Ranunculus flammula	Lesser Spearwort	R
Ranunculus hederaceus	Ivy-leaved Crowfoot	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN5
Habitat:	Semi-improved grassland

Species List:

Scientific Name	Common Name	Frequency
Trifolium repens	White Clover	A
Agrostis capillaris	Common Bent	F
Lolium perenne	Ryegrass	F
Cerastium fontanum	Common Mouse-ear	O
Hypochaeris radicata	Common Cat's-ear	O
Poa annua	Annual Meadow-grass	O
Cirsium arvense	Creeping Thistle	R
Deschampsia cespitosa	Tufted Hair-grass	R
Juncus conglomeratus	Compact Rush	R
Juncus effusus	Soft Rush	R
Leontodon autumnalis	Autumn Hawkbit	R
Plantago lanceolata	Ribwort Plantain	R
Trifolium pratense	Red Clover	R
Ulex gallii	Western Gorse	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN6
Habitat:	Acid dwarf shrub heath and heath/acid grassland mosaic

Species List:

Scientific Name	Common Name	Frequency
Ulex gallii	Western Gorse	D
Nardus stricta	Mat-grass	A
Agrostis capillaris	Common Bent	F
Cladonia sp.	Cladonia species	O
Galium saxatile	Heath Bedstraw	O
Juncus squarrosus	Heath Rush	O
Dactylis glomerata	Cock's-foot	R
Hypochaeris radicata	Common Cat's-ear	R
Plantago lanceolata	Ribwort Plantain	R
Rumex acetosa	Common Sorrel	R
Trifolium repens	White Clover	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN7
Habitat:	Soft rush-dominated rush pasture

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	D
Deschampsia cespitosa	Tufted Hair-grass	A
Agrostis stolonifera	Creeping Bent	F
Juncus conglomeratus	Compact Rush	F
Agrostis capillaris	Common Bent	O
Molinia caerulea	Purple Moor-grass	O
Cirsium vulgare	Spear Thistle	R
Digitalis purpurea	Foxglove	R
Epilobium sp.	Willowherb species	R
Juncus squarrosus	Heath Rush	R
Poa annua	Annual Meadow-grass	R
Ranunculus acris	Meadow Buttercup	R
Ranunculus flammula	Lesser Spearwort	R
Stellaria media	Chickweed	R
Urtica dioica	Nettle	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN8
Habitat:	Unimproved acid grassland

Species List:

Scientific Name	Common Name	Frequency
Nardus stricta	Mat-grass	D
Agrostis capillaris	Common Bent	F
Galium saxatile	Heath Bedstraw	O
Juncus squarrosus	Heath Rush	O
Potentilla erecta	Tormentil	O
Calluna vulgaris	Heather	R
Cirsium arvense	Creeping Thistle	R
Molinia caerulea	Purple Moor-grass	R
Sorbus aucuparia	Rowan	R
Ulex gallii	Western Gorse	R
Vaccinium myrtillus	Bilberry	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN9
Habitat:	Broadleaved plantation

Species List:

Scientific Name	Common Name	Frequency
Fraxinus excelsior	Ash	F
Crataegus monogyna	Hawthorn	F
Betula pendula	Silver Birch	F
Acer campestre	Field Maple	O
Alnus glutinosa	Alder	O
Populus tremula	Aspen	O
Salix caprea	Goat Willow	O
Populus nigra agg.	Black Poplar species	R
Viburnum opulus	Guelder-rose	R
Corylus avellana	Hazel	R
Sorbus aucuparia	Rowan	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN10
Habitat:	Unimproved acid grassland

Species List:

Scientific Name	Common Name	Frequency
Nardus stricta	Mat-grass	D
Agrostis capillaris	Common Bent	F
Cladonia sp.	Cladonia species	O
Deschampsia flexuosa	Wavy Hair-grass	O
Festuca ovina	Sheep's Fescue	O
Galium saxatile	Heath Bedstraw	O
Juncus squarrosus	Heath Rush	O
Polytrichum juniperinum	Moss species	O
Chamerion angustifolium	Rosebay Willowherb	R
Digitalis purpurea	Foxglove	R
Trifolium repens	White Clover	R
Ulex gallii	Western Gorse	R
Vaccinium myrtillus	Bilberry	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN11
Habitat:	Watercourse through marshy grassland strip

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	A
Cirsium palustre	Marsh Thistle	F
Deschampsia cespitosa	Tufted Hair-grass	F
Holcus lanatus	Yorkshire-fog	F
Ranunculus repens	Creeping Buttercup	F
Trifolium repens	White Clover	F
Agrostis capillaris	Common Bent	O
Agrostis stolonifera	Creeping Bent	O
Callitriche stagnalis	Common Water Starwort	O
Cerastium fontanum	Common Mouse-ear	O
Digitalis purpurea	Foxglove	O
Festuca rubra	Red Fescue	O
Glyceria sp.	Sweet-grass species	O
Lotus pedunculatus	Marsh Bird's-foot Trefoil	O
Rumex acetosa	Common Sorrel	O
Ranunculus flammula	Lesser Spearwort	R
Senecio jacobaea	Ragwort	R
Urtica dioica	Nettle	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN12
Habitat:	Unimproved acid grassland and semi-improved grassland

Species List:

On the western side of Calf Hey Dike the areas included within site are much more heavily grazed and mainly comprise species-poor short-grazed and semi-improved sward. The steep valley slopes are terraced by stock and retain a sward that is more acidic in character but still very short-grazed.

No species list compiled for this area

Target Note:	TN13
Habitat:	Mosaic of acid dry heath, semi-improved acid grassland, marshy grassland etc.

Species List:

Scientific Name	Common Name	Frequency
Nardus stricta	Mat-grass	A
Ulex gallii	Western Gorse	A
Agrostis capillaris	Common Bent	F
Juncus effusus	Soft Rush	F
Cirsium palustre	Marsh Thistle	O
Deschampsia flexuosa	Wavy Hair-grass	O
Galium saxatile	Heath Bedstraw	O
Holcus lanatus	Yorkshire-fog	O
Hypochaeris radicata	Common Cat's-ear	O
Juncus conglomeratus	Compact Rush	O
Leontodon autumnalis	Autumn Hawkbit	O
Lotus corniculatus	Bird's-foot Trefoil	O
Plantago lanceolata	Ribwort Plantain	O
Potentilla erecta	Tormentil	O
Pseudoscleropodium purum	Moss species	O
Ranunculus repens	Creeping Buttercup	O
Rubus fruticosus agg.	Bramble	O
Rumex acetosa	Common Sorrel	O
Trifolium repens	White Clover	O
Agrostis canina	Velvet Bent	R
Blechnum spicant	Hard Fern	R
Callitriche stagnalis	Common Water Starwort	R
Crataegus monogyna	Hawthorn	R
Danthonia decumbens	Heath Grass	R
Digitalis purpurea	Foxglove	R
Fagus sylvatica	Beech	R
Fraxinus excelsior	Ash	R
Galium palustre	Marsh Bedstraw	R
Hydrocotyle vulgaris	Marsh Pennywort	R
Juncus acutiflorus	Sharp-flowered Rush	R
Montia fontana	Blinks	R
Picea sitchensis	Sitka Spruce	R
Ranunculus flammula	Lesser Spearwort	R
Rumex acetosella	Sheep's Sorrel	R
Salix cinerea ssp. cinerea	Grey Willow	R
Salix fragilis	Crack Willow	R
Salix species	Willow species	R
Senecio sylvaticus	Heath Groundsel	R
Vaccinium myrtillus	Bilberry	R
Viola palustris	Marsh Violet	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Management Issues:

The acidic species-poor semi-improved grasslands of target note areas TN1, TN5, TN12 and TN13 appear undergoing active improvement measures, with evidence of recent muck spreading. Some elements of acid grassland remain in TN5, but it is likely that continued improvement will diminish these, both here and in TN13 area. Extensive areas of unmanaged acid grassland and dwarf shrub heath remain.

The public footpath running south, through the central part of the site towards Crow Edge, is deteriorating in places, especially where it crosses wetter areas. Stone walls dividing some of the fields are generally in quite a good state but could do with some maintenance to retain the locally distinctive landscape character into the future.

Diversity:

The fieldwork on 13 September 2010 identified 79 species of vascular plants were noted here, including within the plantation areas of TN9 and within TN13. The majority of these species are native in typical both dry and damp acidic situations.

The most highly modified parts are the semi-improved grasslands, mainly along the eastern side of the site. Even though the main elements of the vegetation (acid grassland, rush pasture and dwarf shrub heath) are quite strongly dominated by single species, mainly mat grass, soft rush and western gorse, the diversity of the topography both increases the overall vegetation diversity as well as militates towards these types being sustainable into the future. There are steep slopes, shallow slopes, valleys, hollows and rock exposures, all adding to the diversity of the acidic vegetation here, with a range of wetland habitats including: water courses, small reservoirs, swamp and flush. Areas of broadleaved plantation also provide shelter for birdlife in areas TN9 and TN13.

Naturalness:

Most of this site has not been highly modified into improved agricultural land so that the remaining areas of acid grassland, rush pasture and dry heath represent semi-natural vegetation characteristic of this hillside area, that ranges from around 300m to 340m above sea level. Whilst there are some unnatural elements here, native plant species are strongly dominant and create an ecologically valuable range of acid habitat types within this part of the Borough.

Rare or Exceptional Features:

The steep acidic bluffs in the western part of the site (TN3 and TN10) have some bare shale and exposed bedrock, along the eastern bank of Calf Hey Dike and the underlying rocks are exposed more accessibly in the northern part of TN13 area, where quarrying has taken place in the past. The large brickworks to the southwest of the site and the almost adjacent opencast quarry to the southeast are visible from site. These features, plus the disused mine in Crow Edge, illustrate the past and present value of the underlying geology to the local economy, whilst the tall white turbines of the nearby wind-farm on the crest of the hill on Whitley Road point to a future potential of such a landscape.

Fragility:

The intrinsic landform and acidity of this site, coupled with the history of human impacts, has resulted in a pretty robust range of semi-natural community types, well suited to this high and exposed location. Further agricultural improvements would be very expensive and not cost effective so it is likely that the steep slopes of acid grassland and dwarf shrub heath will persist, with low-level grazing, far into the future. The wetter areas of rush pasture are unlikely to be drained and so will also remain as useful bird habitat.

Typicalness:

This range of acid communities is typical of this part of the Borough, where it approaches the eastern fringes of the Pennines. The hilly landscape, crossed by a network of dry-stone walls, is distinctly lacking in trees and hedgerows, the main woody growth being patches of the very low western gorse. This dwarf shrub heath is a locally distinctive characteristic that helps define this part of the borough.

Recorded History & Cultural Associations:

This exposed hillside, with its network of stone walls, has long been used for animal husbandry, though the ruined Lower Whitley Farm illustrates how agriculture is changing to larger units. The northern edge of TN13 shows signs of quarrying the local stone in the past. There is an active deep clay quarry just south of TN13, serving the large brickworks on the western side of the A616. There is also a disused mine just to the south, at Crow Edge and shale tips abut the southern site boundary.

Connectivity within the Landscape:

The immediate land-use around this site is agricultural, a mix of pastoral and arable fields, depending on the steepness of the slopes. Field boundaries are a mix of dry-stone walls and barbed-wire fences and the landscape flows through and across the site, uninterrupted by trees or tall hedges.

The boundaries of the site are generally not easily visible in this open landscape. There is little in the way of wildlife corridor habitat, There is a weak link formed by Calf Hey Dike along the western edge, flowing south to the large course of Sledbrook.Dike.

The Broadstone Reservoir Local Wildlife Site lies just to the north of Whitley Edge.

Value for Appreciation of Nature and Learning:

This site is fairly well served by footpaths; on the western side there is a public right of way along Calf Hey Lane, linking south-west to the A616. At its north end, Calf Hey Lane also gives access to the straight path running north/south through the site along the line of a stone wall. This path, in turn, links with a path running eastwards from the A616, past Lower Whitley Farm and through the complex TN13 area. From TN13 paths lead both to the south-east and also north to Whitley Road, to the west of the wind turbines.

In the southeast extremity of the site, TN13 area is close to the wind-farm and has direct views into the working clay pit.

As well as being an intrinsically diverse area in its own right, this part of the site could make a valuable outdoor teaching resource area. Access and parking would be difficult for a school party at present, but there is potential for a pull-in from

Whitley Road, to the north of TN13 area. There are links, via local lanes, to the Broadstone Reservoir LWS, about 1km to the north of this site.

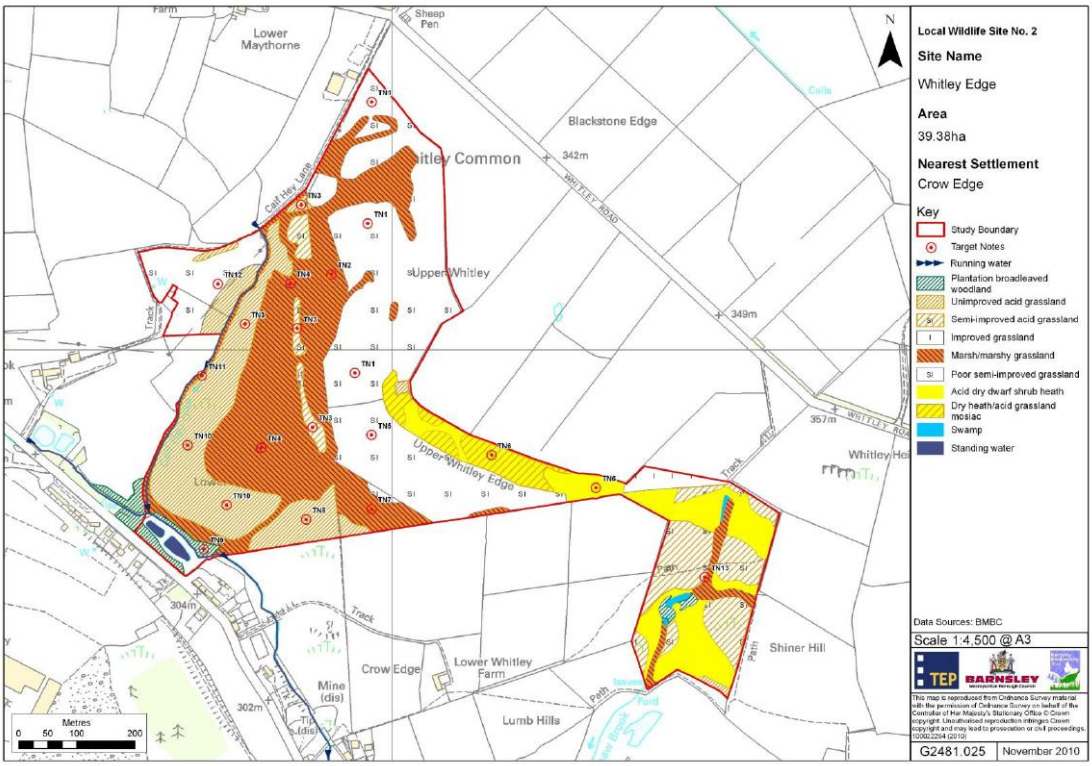
Recommendations:

This site is part of a heath/acid grassland corridor than reaches from Thurlstone to the Western Moors, along with other Local Wildlife Sites such as Small Shaw and High Bank.

The site is a good example of acid grassland possessing many of the species that are associated with this habitat type. It is also habitat for a number of bird species that are UK and Local Biodiversity Action Plan species.

The role this site has in the wider habitat network, its composition and its use by priority species means that it should be retained within the LWS system. The site boundaries are, at present, adequate for the habitat contained within the site.

Action:
Retain as a Local Wildlife Site
Encourage landowners/managers using this site to adopt more wildlife friendly approaches to land management.


Lower Maythorne
Sheep Pen
Blackstone Edge
342m
Whitley Common
Upper Whitley
Upper Whitley Edge
Whitley Hall
357m
349m
Crow Edge
Lower Whitley Farm
Mine (dis)
Lumb Hills
Shiner Hill
304m
302m
Metres
0 50 100 200
N
Local Wildlife Site No. 2
Site Name
Whitley Edge
Area
39.38ha
Nearest Settlement
Crow Edge
Key
Study Boundary
Target Notes
Running water
Plantation broadleaved woodland
Unimproved acid grassland
Semi-improved acid grassland
Improved grassland
Marsh/marshy grassland
Poor semi-improved grassland
Acid dry dwarf shrub heath
Dry heath/acid grassland mosiac
Swamp
Standing water
Data Sources: BMBC
Scale 1:4,500 @ A3
TEP
BARNSLEY
G2481.025
November 2010

Toolbox Talk: Amphibians

Whitcher Wildlife Ltd

Ecological Consultants

Identification: Smooth Newts.

Smooth newts can grow to around 10cm in length. They are usually brown in colour, often with visible black spots on the upper body. Their belly is pale orange with black spots fading away to the sides. The males have a wavy crest running from head to tail, although this can sometimes only be visible in water.

Identification: Palmate Newts.

Palmate newts are very similar to smooth newts but are usually smaller, to around 9cm. Their throat is usually pink and unspotted. The males often have webbed back feet and a fine filament at the end of the tail during the breeding season.

Identification: Common Frogs.

Common frogs are one of the more common amphibians in the UK. They have smooth skin with a distinctive patch behind their eyes. They are predominantly green or brown with black patches although their colour can vary through orange, red or black.

Identification: Common Toads.

Common toads are a Species of Principal Importance in the UK.

Common toads have rough warty skin with two distinctive lumps behind the eyes. When disturbed they have a tendency to remain still, when moving they crawl rather than hopping.

Other Amphibians.

In addition to the common amphibians listed adjacent there are also three other species present in the UK, those being great crested newts, natterjack toads and pool frogs. These species are less common.

The species are also afforded a higher level of protection because they are European Protected Species.

Habitat.

Amphibians predominantly live on land but breed in ponds. The aquatic requirements for each species vary slightly although the presence of one species does not rule out the potential presence of the other species.

When not in their ponds amphibians require a variety of refugia for shelter and can therefore be found under log piles, in rubble, under tree roots or within areas of scrub or rough grassland. Amphibians hibernate, spending the winter in burrows or under logs protected from the cold and predators.

Legislation.

The common amphibians listed above are protected only by Section 9(5) of the Wildlife and Countryside Act 1981. This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy. Collection and keeping of these amphibians is not an offence.

The common toad is also listed as a Species of Principal Importance in the UK.

If amphibians are identified during works, allow them to move away of their own accord.
If large numbers or amphibians (5+) are identified stop works and contact Whitcher Wildlife Ltd directly on 01226 753271 or at info@whitcher-wildlife.co.uk