Whitcher Wildlife Ltd.
Ecological Consultants.

BURNTWOOD HALL FARM.

OS REF: SE 42963 09113.

PRELIMINARY ECOLOGICAL APPRAISAL.

Ref No: **230512 / Rev 1.**

Date: **22nd February 2024.**

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1. INTRODUCTION.

1.1. There are plans to develop an area of land off Moor Lane in Brierley, Barnsley. The plans include a riding arena and stable block.

1.2. Whitcher Wildlife Ltd has been commissioned to carry out a Preliminary Ecological Appraisal of the site to establish whether there are any issues that may affect the proposed works.

1.3. The site survey was carried out on 26th May 2023 and this report outlines the findings of that survey and makes appropriate recommendations.

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

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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 100m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Dean M, Strachen R, Gow D and Andres R (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).* Eds Fiona Mathews and Paul Chanin. The mammal Society, London: -
(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 trees and structures 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. The survey area was searched for all alien invasive plant species as listed on Schedule 9 of the Wildlife and Countryside Act 1981. The location of all plants identified were recorded and listed within the survey report along with appropriate recommendations to avoid causing the plants to spread in the wild. All species were searched for, but the main species generally found under this category are Japanese knotweed, Giant hogweed, Himalayan balsam, Cotoneaster, Rhododendron and Japanese Rose.

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

2.15. This survey was carried out by Alexandrea White BSc (Hons) MSc ACIEEM MIEnvSc. Alex has worked as a consultant since 2013 carrying out array of different habitat and species surveys. Alex holds Natural England Survey Licences for Great Crested Newts, Bats, Hazel Dormice and Barn Owls. She also holds Scottish Natural Heritage Licences for bats and great crested newts and Natural Resources Wales Licence for Great Crested Newts. She holds an undergraduate honours degree in Zoology and a Masters degree in Environmental Management (Landscape and Wildlife Conservation). She has successfully completed courses run by the Chartered Institute of Ecology and Environmental Management (CIEEM), Field Studies Council and the Mammal Society to further her knowledge of protected species and plant identification. Alex is an Associate member of CIEEM and a full member of IES.

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3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. Barnsley Biological Records Centre, the South Yorkshire Badger Group and South Yorkshire Bat Group were contacted for data searches of designated sites and protected species within 2km of the survey area.

3.1.2. The following recent relevant records were returned:

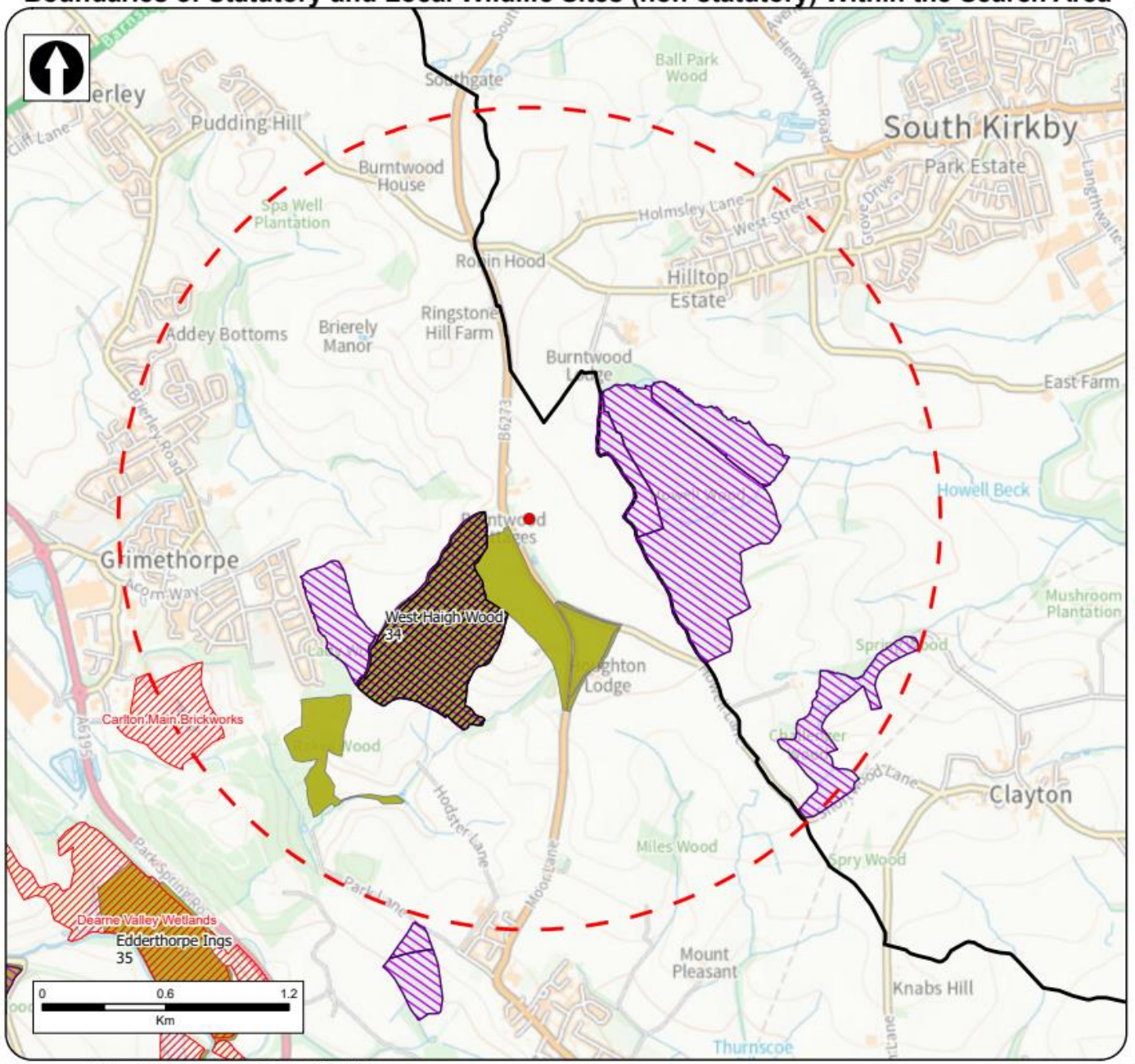
- Three records of common lizard, the closest was recorded approximately 1.7km southwest of the survey area in 2019.
- A single record of badger although this was not within the survey area. Given the sensitive nature of this record no further information will be provided.
- Soprano pipistrelle, common pipistrelle and myotis bats were recorded within 2km of the survey area. The closest roost record was a soprano pipistrelle roost in an oak tree approximately 0.4km west of the survey area which was recorded in 2018.
- Water vole have been recorded approximately 1.4km northwest of the survey area in 2019.
- Japanese knotweed was recorded off Burnt Wood Lane in 2016; this was approximately 0.3km north of the survey area.
- Rhododendron was recorded in the woods to the south of the survey area in 2017.

3.1.3. In addition to those records above, there are numerous historic records (Pre-2013) although given the age of these records, they are not considered likely to represent the current species distribution.

3.1.4. The were no statutory or non-statutory designated sites within the survey area although there were two Local Wildlife Sites, one Local Nature Reserve and one Site of Special Scientific Interest within 2km of the survey area. The closest of these sites was the West Haigh Wood Local Wildlife Sites which was immediately to the south and west of the survey area.

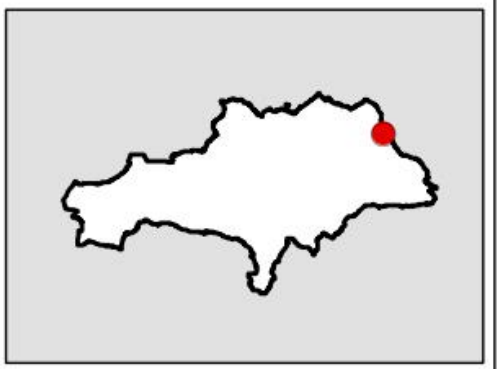
3.1.5. The map below highlights the location of the centre of the survey area with 2km buffer and distribution of designated sites.

Boundaries of Statutory and Local Wildlife Sites (non-statutory) Within the Search Area



Burntwood Hall Farm

- Centre of Search Area
- SSSI (England) © Natural England
- LNR NEngland
- Local Wildlife Sites - Barnsley
- Ancient Woodland Natural England
- Barnsley Boundary
- 2km radius



BARNSLEY Metropolitan Borough Council

3.1.6. The data search is available to the client upon request although this must not be placed within the public domain.

3.2. The Surveyed Area.

3.2.1. The survey area is an arable field off Moor Lane in Brierley. The aerial photograph below highlights the survey area in red.

3.2.2. The survey area was predominantly arable land with associated grassland field margins and hedgerows. Woodland was situated to the northwest and southwest. The photographs below show the current status of the site.

3.2.3. The survey area is surrounded by woodland to the south and west with a mixture of arable, woodland and residential properties to the north, northwest and east. The

aerial photograph below highlights the location of the survey area within the wider landscape.

3.3. Description of Habitats.

3.3.1. Appendix V of this report contains annotated maps marked up with the varying habitats that are cross referenced to target notes in Appendix VI of this report. The habitats on and adjacent to the site are: -

- C1 Arable
- G3c Other Neutral Grassland
- W1g Other Woodland; Broadleaved
- H2a Hedgerow (Priority)

3.3.2. ***C1 Arable***
Secondary Codes: 68 Mortared Wall; 69 Fence

The vast majority of the survey area comprised of arable land.


3.3.2.1. There were lengths of wall and fencing within the survey area.


3.3.3. ***G3c Other Neutral Grassland***

3.3.3.1. The field margins comprised of cock's foot (*Dactylis glomerata*), creeping bent (*Agrostis stolonifera*), perennial ryegrass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), barren brome (*Bromus sterilis*), false oat grass (*Arrhenatherum elatius*), common nettle (*Urtica dioica*), sow thistle (*Sonchus oleraceus*), broadleaved dock (*Rumex obtusifolius*), ribwort plantain (Plantago lanceolata), greater plantain (*Plantago major*), daisy (*Bellis perennis*), creeping thistle (*Cirsium arvense*), spear thistle (*Cirsium vulgare*), cow parsley (*Anthriscus sylvestris*), common hogweed (*Heracleum sphondylium*), yarrow (*Achillea millefolium*), chickweed (*Stellaria media*), creeping buttercup (*Ranunculus repens*), white clover (*Trifolium repens*), upright hedge parsley (*Torilis japonica*), cutleaved cranesbill (*Geranium dissectum*), white dead nettle (*Lamium album*), purple dead nettle (*Lamium purpureum*), rosebay willowherb (*Chamaenerion angustifolium*), and common sorrel (*Rumex acetos*a).


3.3.3.2. These field margins have not been assessed as the priority habitat because they are well managed to allow for access around the field.

3.3.3.3. The condition assessment for this habitat is shown in the table below.

Condition Assessment Criteria	**Condition Achieved (Y/N)**
1 – Matches specific grassland type	Y
2 – Sward height	N
3 – Bare ground	Y
4 – Bracken cover	Y
5 – Non-native species	Y
6 – Species per m2	N
Condition Assessment Result	**Condition Assessment Score**
Non-acid Grassland Types:	
Passes 3 or 4 of 6 criteria, including essential criterion 1.	Moderate (2)

3.3.4. ***W1g Other Woodland; Broadleaved***

Woodland pockets were located to the north and southwest. The species within the woodland pockets included: sycamore (*Acer pseudoplatanus*), beech (*Fagus sylvatica*), copper beech (*Fagus sylvatica purpurea*), leyland cypress (*Cupressus x leylandii*), rhododendron (*Rhododendron ponticum*), elder (*Sambucus nigra*), oak (*Quercus* sp.) and silver birch (*Betula pendula*).


3.3.4.1. The condition assessment for this habitat is shown in the condition assessment below.

Attributes and functional groupings	**Score per indicator**
1 – Age distribution of trees[1]	2
2 – Wild, domestic and feral herbivore damage	3
3 – Invasive plant species[3]	1
4 – Number of native tree species	2
5 – Cover of native tree and shrub species	3
6 – Open space within woodland[4]	2
7 – Woodland regeneration[5]	2
8 – Tree health	2
9 – Vegetation and ground flora	2
10 – Woodland vertical structure[6]	2
11 – Veteran trees[7]	1
12 – Amount of deadwood	1
13 – Woodland disturbance[8]	3
Total:	26
Condition Assessment Result	**Condition Assessment Score**
Total score 26 to 32	Moderate (2)

3.3.5. ***H2a Hedgerow (Priority)***

3.3.5.1. Three of the boundaries supported hedgerows and these were split into two distinct types of hedgerow.

3.3.5.2. Hedgerow 1 was a defunct species poor boundary hedge featuring holly (*Ilex aquifolium*), field maple (*Acer campestre*) and Leyland cypress (*Cupressus x leylandii*).


3.3.5.3. The condition assessment for Hedgerow 1 is shown in the table below.

Attributes and functional groupings	**Condition Achieved (Y/N)**
A1 – Height	Y
A2 – Width	Y
B1 – Gap – hedge base	N
B2 – Gap – hedge canopy	N
C1 – Undisturbed ground and perennial vegetation	Y
C2 – Undesirable perennial vegetation	N
D1 – Invasive neophyte species	Y
D2 – Current damage	N
Condition Assessment Result	**Condition Assessment Score**
Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	Poor Condition

3.3.5.4. The second hedgerow was present on the northeastern and southeastern boundaries. This hedge was intact and well managed with dominant species including: hazel (*Corylus avellana*), sycamore (*Corylus avellana*), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), field maple (*Acer campestre*) and holly (*Ilex aquifolium*). The species at the base of this hedgerow included: Jack by the hedge (*Alliaria petiolata*), bramble (*Rubus fruticosus*), common hogweed (*Heracleum sphondylium*), cow parsley (*Anthriscus sylvestris*) and common nettle (*Urtica dioica*).


3.3.5.5. The condition assessment for hedgerow 2 is shown in the table below.

Attributes and functional groupings	**Condition Achieved (Y/N)**
A1 – Height	Y
A2 – Width	Y
B1 – Gap – hedge base	Y
B2 – Gap – hedge canopy	Y
C1 – Undisturbed ground and perennial vegetation	Y
C2 – Undesirable perennial vegetation	N
D1 – Invasive neophyte species	Y
D2 – Current damage	N
Condition Assessment Result	**Condition Assessment Score**
No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).	Moderate Condition

3.4. Description of Fauna.

3.4.1. No badger setts or their field signs were identified within the survey area.

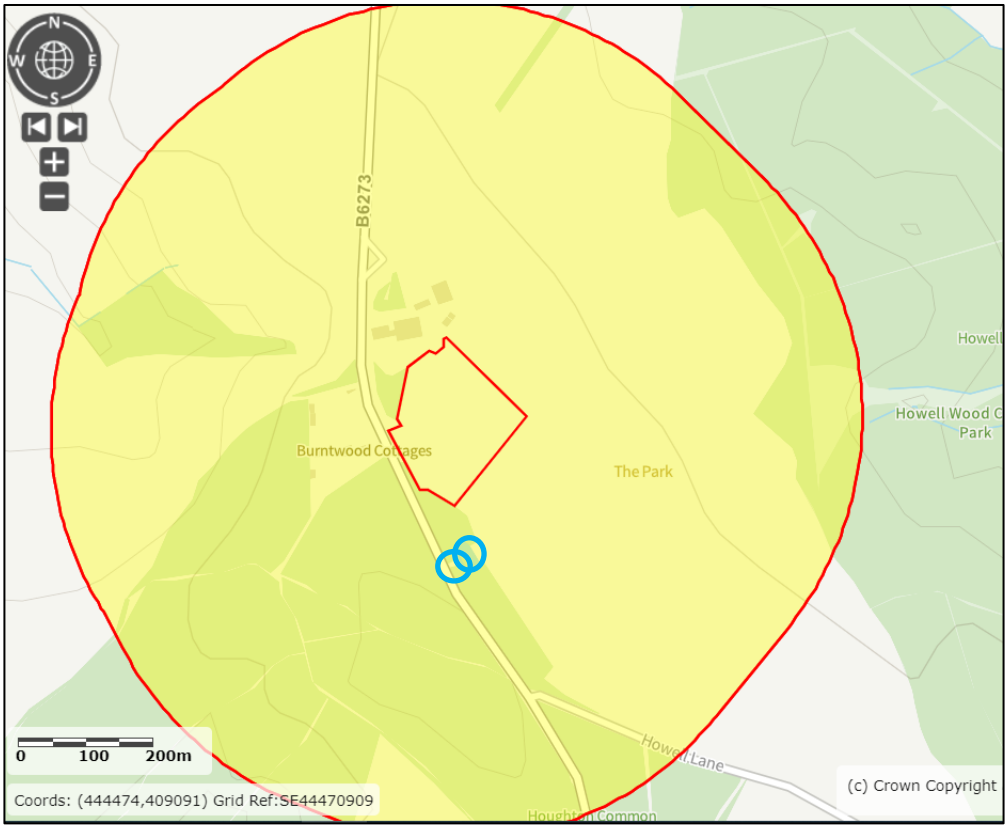
3.4.2. There are no watercourses within the survey area and therefore, no suitable habitat for water vole, otter or white clawed crayfish.

3.4.3. There were no structures identified within the survey area and therefore, no potential for roosting bats within buildings.

3.4.4. During the survey, a thorough ground level examination was carried out on all trees within the survey area to check for potential bat roost features such as knot and rot holes, lifted bark, storm damage or voids. No such features were identified although the mature trees within the northwestern extent of the survey area could be of an age where features are present. Therefore, these trees were assessed as having low bat roost potential. These trees are shown in the photograph below.

3.4.5. The survey area was assessed as having moderate potential for foraging and commuting bats. No full assessment for bat activity was carried out during the daytime survey of the site.

3.4.6. There were two ponds identified within 500m of the survey area, these may provide suitable habitat for great crested newts or other amphibians. The larger pond was completely dry during the survey and the smaller pond appeared to be part of a drainage ditch and was also completely dry. There is also no vegetation present to suhggest these areas hold water frequently. Therefore, there is no suitable habitat to support breeding great crested newts. The map below highlights the location of the survey area with 500m buffer and distribution of the ponds.



3.4.6.1. The photographs below highlight both waterbodies.

3.4.6.2. The Ecology Officer raised concerns over a pond, close to the survey area. At the time of the initial desktop study, there was an additional pond noted on maps, adjacent to the boundary within the farm, although this area was visually checked whilst on site and no pond was seen. From aerials it appears this area has been landscaped and this is also what was viewed from the boundary during the initial survey.

3.4.6.3. Since the further concerns have been raised the landowner has also been questioned about any ponds and they have confirmed there is no pond on within this area.

3.4.6.4. The screenshot below, taken from Google Earth, shows the landscaping at this location.

3.4.6.5. The aerial imagery has to be set back to the year 1999 in order to get a more natural landscape, which could have supported a pond, as shown in the screenshot below.

3.4.6.3. The terrestrial land provides limited habitat for great crested newts and there are no known populations of great crested newts within the local area.

3.4.7. The vegetation on site, both the mature trees and the arable land and field margins provide opportunities for nesting birds during the nesting season, which extends from March to September each year. Sky larks were noted to be singing over an adjacent field.

3.4.8. The habitat within the survey area offers limited suitability for reptiles due to the majority of the site being arable land. No reptiles were identified during the survey although there are records of common lizard within the data search.

3.4.9. The survey area lies outside of the known UK range of hazel dormouse and there are no reintroduction schemes within this county.

3.4.10. The survey area lies outside of the known UK range of red squirrel and therefore this species will not be considered further.

3.4.11. The survey area provides suitable habitat for hedgehogs especially the woodland and scrub areas.

3.4.12. Rhododendron, an invasive, non-native plant species listed on schedule 9 of the Wildlife and Countryside Act (1981) was identified within the survey area (T1). This species is shown in the photograph below.

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4. EVALUATION OF FINDINGS.

4.1. There were no statutory or non-statutory designated sites within, the survey area. Therefore, no such sites will be directly impacted by the proposals. There was a Local Wildlife Site, West Haigh Wood, immediately adjacent to the survey area although given the proposals, it is considered highly unlikely this site would be affected by the plans.

4.2. The survey area comprised of arable land and grassland field margins with hedgerows and woodland on the boundary.

4.3. The native hedgerows within the survey are Habitats of Principal Importance under the NERC Act 2006. These hedgerows are of moderate ecological value as they provide shelter and a food source for a variety of species.

4.3.1. The Biodiversity Metric 4.0 was used to calculate the biodiversity within the survey area. The total Baseline Biodiversity Units (Bu) are shown in the table below.

Habitat Type	**Area in ha.**	**Distinctiveness**	**Condition Assessment**	**Biodiversity Units**
Arable	2.49	Low	N/A	4.98
Neutral Grassland	0.3	Medium	Moderate	2.40
Broadleaved Woodland	0.03	Medium	Moderate	0.24
Total	**2.82Ha**			**7.62Bu**

4.3.2. The hedgerows within the survey area also provide additional linear habitat. The Hedgerow Units (Hu) are shown in the table below.

Habitat Type	**Area in ha.**	**Distinctiveness**	**Condition Assessment**	**Hedgerow Units.**
Native Hedgerow (H1)	0.07	Low	Poor	0.14
Native Species Rich Hedgerow (H2)	0.32	Medium	Moderate	2.56
Total	**0.39km**			**2.70Hu**

4.3.3. The majority of the survey area is to remain unaffected by the works. A small area of habitat will be lost to facilitate to the arena and stables.

4.3.4. Given the small scale of the development Biodiversity Net Gain is unlikely to be required in this instance and it has not been requested by the Local Authority. However, the following comment was returned by the ecology officer:
'The development should still ensure no net loss of biodiversity as per policy BOI1 and the Supplementary Planning Document Biodiversity and Geodiversity, which states that the LPA will not support applications that would damage the ecological network and cause a net-loss in biodiversity in line with the NPPF.'

4.3.5. The client has therefore, agreed to undertake some tree planting to offset the small loss. This has been calculated at 20 small trees with a moderate habitat condition as shown in the calculations below.

Habitat Type	**Area in ha.**	**Distinctiveness**	**Condition Assessment**	**Biodiversity Units**
Retained				
Arable	2.44	Low	N/A	4.88
Neutral Grassland	0.29	Medium	Moderate	2.32
Broadleaved Woodland	0.03	Medium	Moderate	0.24
Created				
Developed Land: Sealed Surface	0.06	V. Low	N/A	0
Urban Tree	0.08	Medium	Moderate	0.24
Total	**2.82Ha**			**7.68Bu**

4.3.6. Therefore, there is an increase in the biodiversity value of the survey area by 0.06Bu which is a 0.86% increase.

4.4. No badger setts or their field signs were identified within the survey area. Therefore, the works will have no direct impact on badger setts.

4.5. There are no watercourses on, or near to, the site to offer habitat to otter, water vole or white-clawed crayfish. Therefore, the works will have no impact on this species.

4.6. All trees within the survey area were thoroughly assessed from ground level for potential bat roost features. No such features were found, although the woodland pocket to the northwest were of and age and size where features could be present and therefore in accordance with the Bat Conservation Trust's Good Practice Guidelines, these trees were assessed as having low bat roost potential. The works will not have any impact upon these trees and therefore, no roosting bats within trees will be affected by the works.

4.7. There were no structures within the survey area that would support roosting bats, therefore, no roosting bats within buildings will be affected by the proposed works.

4.8. The vegetation and boundary hedgerows do provide suitable habitat for foraging and commuting bats. The works will not impact upon the hedgerows and there will be no fragmentation in suitable habitat as a consequence of the works. The Ecology Officer raised concerns of additional lighting disturbing foraging and commuting bats, a sensitive lighting scheme was, and still is, recommended in Section 5, to ensure this does not occur.

4.9. There were two ponds within 500m of the survey area although both were completely dry during the survey. Given that the ponds are dry, the lack of records and low impact of works which are confined to unsuitable habitat, the works will not impact upon great crested newts.

4.10. The vegetation within the survey area was assessed as suitable for nesting birds, including ground nesting birds. Any de-vegetation works carried out during the nesting bird season could have a high impact on nesting birds.

4.11. The survey area offers very limited suitability for reptiles due to the arable land throughout the survey area. It is therefore assessed that the works will have no impact on reptiles although precautions will ensure no harm if individual reptiles are present.

4.12. The survey area is outside of the known UK range of hazel dormouse and red squirrel. Therefore, neither species will be affected by the proposals.

4.13. The survey area is suitable for hedgehogs and the boundary vegetation and log piles provide suitable areas for hibernating and sheltering. Therefore, hedgehogs could be affected by the proposals in the initial site clearance.

4.14. Rhododendron, an invasive, non-native plant species listed on schedule 9 of the Wildlife and Countryside Act (1981), was identified on the boundary of the survey area. No works will occur within this location and therefore, this species will not be spread by the works.

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5. RECOMMENDATIONS.

5.1. It is considered unlikely the construction works will be of a nature that would cause injury to any badgers that venture on to site although if any excavations are required, they must be profiled in a way to allow badgers to escape. Alternatively, mammal ramps should be installed. Furthermore, any open pipe ends must be capped at the end of each shift.

5.2. If any additional lighting is to be used around the stables or arena, this should be downlit and directed away from woodlands and hedgerows on the boundary of the survey area.

5.3. Any vegetation clearance should be carried out outside the nesting bird season, which extends from March to September each year.

5.4. If any vegetation clearance is to be carried out during the nesting bird season a thorough nesting bird survey must be carried out by a suitably experienced person immediately prior to works commencing. If any active nests are found during this survey, they must be left undisturbed until the young have fledged. This could put a considerable delay on proposed works.

5.4.1. The nesting bird survey would also ensure that no ground nesting birds, such as skylark, are present within the areas to be affected.

5.5. It is recommended that when the site is cleared, vegetation clearance is carried out to a minimum height of 150mm and left for 24 hours before being cleared to ground level to prevent harm to any mammals, amphibians or reptiles that may be present on the site.

5.6. In the unlikely event that any reptiles are found during the works they must be left to safely move away of their own accord. If large numbers of reptiles (5+) are found works must stop and Whitcher Wildlife Ltd contacted for further advice. Toolbox talk to aid in the identification of reptiles are appended to the end of this report.

5.7. If the plans change to impact upon the areas of woodland, the undersigned should be contacted for further advice to ensure no impact on protected or invasive species such as roosting bats and rhododendron.

5.8. A bat box of a suitable inbuilt design should be installed within the site. The Miramare Bat Box, or similar, will be used to ensure roosting opportunities are enhanced post development.

5.9. It is recommended that a bird box is installed on the site. The Vivara Pro Seville 28mm WoodStone Nest Box, or similar, will be used to ensure nesting opportunities remain post development.

5.10. The Ecology Officer has required mitigation for ground nesting birds. In order to ensure suitable habitat for ground nesting birds, the field margins will be left unsprayed and spring sowing will be undertaken to provide improved nesting sites.

5.10.1. Alternatively, if spring sowing is not viable, a sky lark plot should be maintained. Skylark plots are bare patches in winter cereal fields designed to help skylarks to forage. These plots help improve productivity for skylarks and are an effective measure. The plot should be at least 16m2 are created by leaving areas undrilled or by spraying out the area required.

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Prepared by:	
Alexandrea White BSc (Hons) MSc ACIEEM MIEnvSc	Date: 23rd February 2024.

Checked by:	
Ruth Georgiou. BSc, MCIEEM.	Date: 29th February 2024.

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Appendix I. BAT INFORMATION.

Ecology

There are currently 18 species of bat residing in Britain, 17 of which of which are known to breed here. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to habitat change and shortage of food, caused by pesticides, as insects are their sole diet.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to man-made structures and will readily use these to roost and to rear their young.

Surveys

During walkover surveys, bat roosts can be identified by looking for:

- Suitable holes, cracks and crevices within any building, tree or other structure.
- Bat droppings along walls, window cills, or on the ground.
- Prey remains, such as insect wings.

Further investigations can be made using endoscopes, by carrying out aerial inspections of trees or by conducting bat activity surveys during dusk and dawn over summer months.

Legislation

Bats are protected under Appendix II and III of the Bern Convention (1982), Schedule 5 and 6 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats Directive (some species under Annex II), Annex II of the Conservation of Habitats and Species Regulations (2010) and EUROBATS agreement. Numerous species are also listed under section 41 of the Natural Environment and Rural Communities Act (2006) making them species of principal importance.

All bats and their roosts are therefore protected in the UK. This makes it an offence to kill, injure or take any bat, to interfere with any place used for shelter or protection, or to intentionally disturb any animal occupying such a place.

The UK has designated maternity and hibernacula areas as Special Areas of Conservation (SAC's) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

Appendix II. 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 III. REPTILE INFORMATION.

Ecology

There are five main species of reptile that reside in the UK; Common or Viviparous Lizard (*Lacerta vivipara*); Sand Lizard (*Lacerta agilis*); Slow Worm *(Anguis fragilis*); Grass Snake (*Natrix natrix*) and Adder (*Vipera berus*). The Adder is the only native species that is venomous although this is rarely harmful to humans.

Reptiles occupy a wide range of habitats including woodland, marshes, heathland, moors, sand dunes, hedgerows and bogs. Sand Lizards are confined to moorland and coastal sand dunes where they lay their eggs in the warm sand. The range of the Sand Lizard in the UK is therefore very limited. Slow Worms can be found in a wide variety of habitats throughout Britain and is the most likely reptile to be found in urban and suburban environments.

Maintaining the right body temperature is vital to reptiles' survival. In the morning, they find a warm basking site to heat up their bodies, then later they may move back into the shade because they do not sweat and have to be careful not to overheat. During hot summers, Adders will try to move to damper, cooler sites.

Over winter reptiles will hibernate in burrows or under longs where they are protected from the cold and predators, emerging from February onwards as the weather warms up.

Reptiles generally begin to mate April to May with young born in late July to September. The Common Lizard gives birth to live young, hence the term viviparous, meaning live bearing.

Surveys

Reptile surveys involve the searching of refuge such as logs and stones for any animal sheltering below. Artificial refuge may be laid out on site for the purpose of reptile surveys.

Legislation

Reptiles are protected under Appendix II (sand lizards) and Appendix III (common lizard, slow worms, smooth snake, grass snake and adders) of the BERN Convention (1982), partially protected under Schedule 5 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats Directive and are all 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 disturb any reptile while it is occupying a structure or place it uses for shelter or protection or to obstruct access to such a place.

Appendix IV. INVASIVE PLANT SPECIES INFORMATION.

Ecology

The Government has acknowledged the problems that can be caused by non-native invasive species. In 2008 the Government launched "The Invasive Non-Native Species Framework Strategy for Great Britain". The strategy provides a framework for a more co-ordinated approach to invasive species management. It seeks to create a stronger sense of shared responsibility across government, key organisations, land managers and the public.

The Non-Native Species Secretariat has been established to oversee the implementation of the strategy. Details of the secretariat including risk assessments and action plans for some species are available at www.nonnativespecies.org.

In general, there are four basic methods of controlling weeds; mechanical, chemical, natural and environmental.

- ***Mechanical control*** *includes cultivation, hoeing, pulling, cutting, raking, dredging or other methods to uproot or cut weeds.*
  Where this method is used all plant material must be considered "controlled waste" and must be disposed of properly.
- ***Chemical control*** *uses approved herbicides.*
- ***Natural control*** *uses pests and diseases of the target weed to weaken it and prevent it from becoming a nuisance.*
- ***Environmental control*** *works by altering the environment to make it less suitable for weed growth, for example by increasing or decreasing water velocity.*

Surveys

A site will be searched for invasive plant species growing on site, from mature plants to new shoots. A site will also be searched for dead stems indicating that plants that may have seasonally died back are present.

Legislation

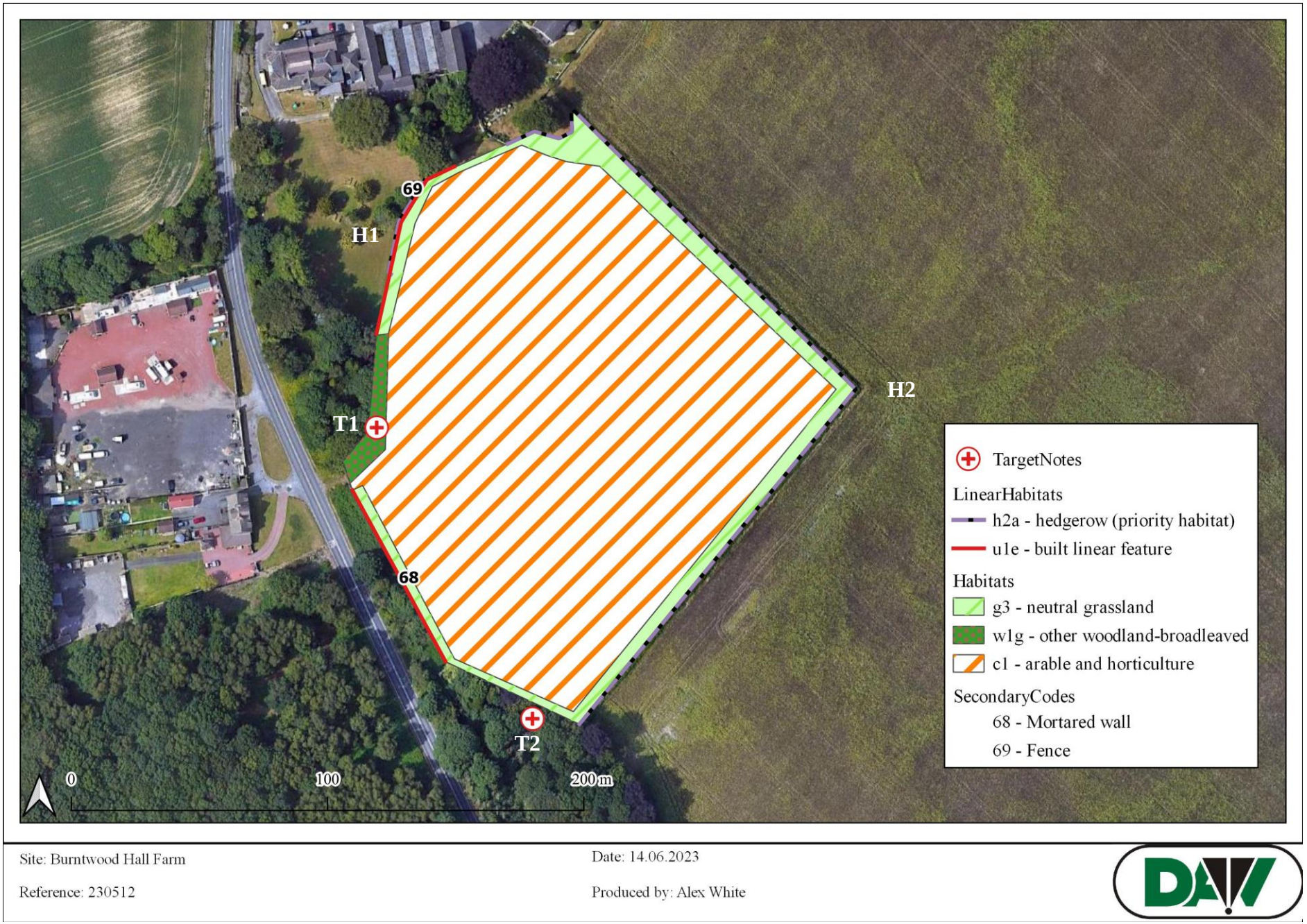
Invasive species listed under Schedule 9 are prohibited from release into the wild. Schedule 9, Section 14(2) prohibits 'planting' or 'causing to grow' in the wild of any plant listed in Part 2 of Schedule 9.

The following is a list of all the species of plant listed under Schedule 9 of The Wildlife and Countryside Act 1981.

Common Name	**Scientific Name**	**England & Wales**	**Scotland**
Alexanders, Perfoliate	*Smyrnium perfoliatum*	✓	
Algae, Red	*Grateloupia luxurians*	✓	
Archangel, Variegated Yellow	*Lamiastrum galeobdolon subsp. Argentatum*	✓	
Azalea, Yellow	*Rhododendron luteum*	✓	
Balsam, Himalayan	*Impatiens glandulifera*	✓	
Cotoneaster	*Cotoneaster horizontalis*	✓	
Cotoneaster, Entire Leaved	*Cotoneaster integrifolius*	✓	
Cotoneaster, Himalayan	*Cotoneaster simonsii*	✓	
Cotoneaster, Hollyberry	*Cotoneaster bullatus*	✓	
Cotoneaster, Small Leaved	*Cotoneaster microphyllus*	✓	
Creeper, False Virginia	*Parthenocissus inserta*	✓	
Creeper, Virginia	*Parthenocissus quinquefolia*	✓	
Dewplant, Purple	*Disphyma crassifolium*	✓	
False-acacia	*Robinia pseudoacacia*		✓
Fanwort	*Cabomba caroliniana*	✓	✓
Fern, Water	*Azolla filiculoides*	✓	✓
Fig, Hottentot	*Carpobrotus edulis*	✓	✓
Garlic, Three-Cornered	*Allium triquetrum*	✓	
Hogweed, Giant	*Heracleum mantegazzianum*	✓	✓
Hyacinth, water	*Eichhornia crassipes*	✓	✓
Kelp, Giant	*Macrocystis angustifolia*	✓	✓
Kelp, Giant	*Macrocystis integrifolia*	✓	✓
Kelp, Giant	*Macrocystis laevis*	✓	✓
Kelp, Giant	*Macrocystis pyrifera*	✓	✓
Kelp, Japanese	*Laminaria japonica*	✓	✓

Knotweed, Giant	*Fallopia sachalinensis*	✓	
Knotweed, Hybrid	*Fallopia japonica x Fallopia sachalinensis*	✓	
Knotweed, Japanese	*Fallopia japonica*	✓	
Knotweed, Japanese	*Polygonum cuspidatum*		✓
Leek, Few-flowered	*Allium paradoxum*	✓	✓
Lettuce, water	*Pistia stratiotes*	✓	✓
Montbretia	*Crocosmia x crocosmiiflora*	✓	
Parrot's-feather	*Myriophyllum aquaticum*	✓	
Pennywort, Floating	*Hydrocotyle ranunculoides*	✓	
Potato, Duck	*Sagittaria latifolia*	✓	
Primrose, Floating Water	*Ludwigia peploides*	✓	
Primrose, Water	*Ludwigia grandiflora*	✓	
Rhododendron	*Rhododendron ponticum*	✓	
Rhubarb, Giant	*Gunnera tinctorial*	✓	
Rose, Japanese	*Rosa rugosa*	✓	
Salvinia, Giant	*Salvinia molesta*	✓	✓
Seafingers, Green	*Codium fragile*	✓	
Seafingers, Green	*Codium fragile tomentosoides*		✓
Seaweed, Californian Red	*Pikea californica*	✓	✓
Seaweed, Hooked Asparagus	*Asparagopsis armata*	✓	✓
Seaweed, Japanese	*Sargassum muticum*	✓	✓
Seaweeds, Laver (except native species)	*Porphyra sp. except -* *P. amethystea* *P. leucosticta* *P. linearis* *P. miniata* *P. purpurea* *P. umbilicalis*	✓	✓
Shallon	*Gaultheria shallon*		✓
Stonecrop, Australian swamp	*Crassula helmsii*	✓	✓
Wakame	*Undaria pinnatifida*	✓	✓
Waterweed, Curly	*Lagarosiphon major*	✓	✓
Waterweeds	*All species of the genus Elodea*	✓	

Appendix V. ANNOTATED MAP OF THE SURVEY AREA.



Site: Burntwood Hall Farm

Reference: 230512

Date: 14.06.2023

Produced by: Alex White

Appendix VI. TARGET NOTES.

T1. Group of trees, at the field access, assessed as having low bat roost potential.

T2. Rhododendron present within this woodland pocket.

Toolbox Talk: Reptiles

Whitcher Wildlife Ltd
Ecological Consultants

Identification: Grass Snakes.

The grass snake can be up to 120cm long. It is generally dark green in colour but may occasionally appear grey with vertical black bars and spots that run along its sides. There is usually a yellow marking around the neck.

Identification: Adders.

The adder is the only native species that is venomous, but it is rarely harmful to humans. Adult adders are generally up to 66cm long. Back ground colouration is a light shade of grey or brown with a black zigzag marking along the length of the back. As with all reptiles, colouration varies and becomes duller as sloughing (skin shedding) approaches.

Identification: Slow Worms.

Slow worms grow to around 45cm in length. The males and females display a marked difference in colour when fully grown. In general, the species displays colouring that varies from light brown, dark brown, grey, bronze or brick red with the females often displaying a dark vertebral stripe and both males and females displaying occasional markings on the flanks.

Identification: Common Lizards.

Common lizards grow to around 16cm. They are grey brown to dark brown, often with a darker streak that may run the entire length of the spine. A continuous dark band bordered by light yellow or white spots is often seen on either side of the body. The underside of the males is egg yolk yellow to orange spotted with black. Females are yellowish grey.

Other Reptiles.

In addition to the reptiles outlined on this document, there are also two other reptile species in Great Britain, the smooth snakes and the sand lizard. These reptiles are a lot less common than the four species covered with the smooth snake being predominantly found on heathland in southern England and the sand lizard found throughout Great Britain in coastal dune areas.

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

Habitat.

Maintaining the right body temperature is vital to reptiles' survival. In the morning they find a warm basking site to heat up their bodies and then later they may move back into the shade so as not to overheat. Hence, reptiles require a habitat that provides a range of suitable refugia for shelter such as dense vegetation, rubble or log piles, or crevices and open areas for basking such as bare ground, rocks or railway ballast shoulders. During hot summers reptiles may be found in damper, cooler sites. Reptiles hibernate, spending the winter in burrows or under logs protected from the cold and predators.

When disturbed in their natural habitat reptiles will usually move away quickly.

Legislation.

Reptiles are protected under Schedule 5 of the Wildlife and Countryside Act 1981. They received greater protection following reviews of the schedules published in 1988 and 1991. This means they are protected against intentional or recklessly killing and injuring and against sale or transporting for sale.

If reptiles are identified during works, stop all works and contact Whitcher Wildlife Ltd directly on 01226 753271 or at info@whitcher-wildlife.co.uk