Whitcher Wildlife Ltd.
Ecological Consultants.

PLANE STREET, HUDDERSFIELD.

OS REF: SE 145 154.

ECOLOGICAL IMPACT ASSESSMENT.

Ref No: **191012/EcIA.**

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1. INTRODUCTION.

1.1. A planning application has been submitted for the development of an area of land off Plane Street in Huddersfield. A final site plan is included in Appendix X of this report.

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 initial site survey was carried out on 23rd October 2019.

1.4. Since that original survey the site layout has been amended and a site visit was carried out on the 4th December 2020 to carry out a walk-through survey, badger survey and assess the trees to be affected.

1.5. This is an Ecological Impact Assessment designed to support that planning application.

1.6. Appendices I to V 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. The surveys were undertaken by a team of ecologists led 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, CCW and NRW survey licences for, bat, great crested newt and white clawed crayfish.

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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 West Yorkshire Ecology Service (WYES).

3.1.2. WYES hold records of several locally designated sites within 2km of the surveyed area although no sites within or immediately adjacent to the surveyed area. The sites comprise:

- Arthur, Molly Carr and Roaf Woods Local Wildlife Site (LWS) – located 1.9km south of the surveyed area.
- Castle Hill LWS – located 1.3km south of the surveyed area.
- Gledholt Woods LWS – located 1.6km northwest of the surveyed area.
- Huddersfield Narrow Canal LWS – located 700m north of the surveyed area.
- Longley Hill Plantation LWS – located 1.1km southeast of the surveyed area.
- Beaumont Park Local Geological Site (LGS) – located 1.8km southwest of the surveyed area.
- Castle Hill LGS – located 1.3km south of the surveyed area.
- Gledholts Woods Local Nature Reserve (LNR) – located 1.6km northwest of the surveyed area.
- Castle Hill LNR – located 1.3km south of the surveyed area.

3.1.3. In addition, there are several areas of Kirklees Wildlife Habitat Network within 2km of the surveyed area although the closest areas lie over 350m to the north and west.

3.1.4. WYES hold abundant records of protected and notable species within 2km of the surveyed area although none relating to the surveyed area or immediate surrounding area. The notable records comprise:

- Abundant field records of bats, including Pipistrelle, Natterers and Daubentons, with the closest roost record located approximately 400m to the east.
- Records of brown hares approximately 250m to the west of the surveyed area.
- Records of several invasive non-native plant species within the surrounding area, including Japanese knotweed and giant hogweed.
- Records of great crested newts in the wider surrounding area, the closest located over 1km to the southwest of the surveyed area.

3.1.5. A full copy of the results received from WYES can be provided on request.

3.2. The Surveyed Area.

3.2.1. The surveyed area was an area of land off Plane Street in Huddersfield, as shown below.

3.2.2. The site comprises the site of an old school and areas of land to the south and east. The school was knocked down approximately 10 years ago and the site has been disused since.

3.2.3. The site lies towards the south of Huddersfield with residential housing immediately to the north, west and east. The land to the south comprises a band of woodland (within the surveyed area) with open grazing pasture beyond.

3.2.4. The further surrounding area comprises urban land on all sides with Huddersfield centre to the north, areas of woodland and a golf course to the east and west and further areas of open grazing pasture to the south.

3.3. Constraints.

3.3.1. The initial survey was carried out during October when vegetation levels remained quite high. Therefore, some areas of the site, particularly the scrub and woodland habitats, remained very dense making a thorough survey of all areas impossible.

3.3.2. No access could be gained to inspect the interior of the garage buildings located at the eastern side of the surveyed area.

3.3.3. During the December 2020 site visit the vegetation was less dense and a more thorough survey of these areas of dense vegetation was possible, although some areas of bramble were still difficult to access.

3.4. Description of Habitats.

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

- Dense/Continuous Scrub.
- Scattered Scrub.
- Semi Natural Broad Leaf Woodland.
- Scattered Trees.
- Buildings.
- Other Habitat – Hard Standing.
- Walls.
- Fences.

3.4.2. Dense/continuous scrub: There are several areas of dense scrub within the surveyed area.

3.4.2.1. The school on the site was demolished approximately 10 years ago with no management on the site since the demolition. Therefore, scrub species have become established on the site with occasional areas of the old hard standing ground still visible. The scrub on the site comprises silver birch (*Betula pendula*), crack willow (*Salix fragilis*), Norway maple (*Acer platanoides*), goat willow (*Salix caprea*), sycamore (*Acer pseudoplantus*), ash (*Fraxinus excelsior*), cherry (*Prunus sp*), eucalyptus (*Eucalyptus sp*), dogwood (*Comus sanguinea*), buddleia (*Buddleja davidii*), hawthorn (*Crataegus monogyna*), dog rose (*Rosa canina*), sedge (*Carex sp*), laurel (*Laurus nobilis*), cotoneaster (*Cotoneaster sp*), red valerian (*Centranthus ruber*), sow thistle (*Sonchus oleraceus*), thistle (*Cirsium sp*), colts foot (*Tussilago farfara*), lady's mantle (*Alchemilla mollis*), teasel (*Dipsacus fullonum*), mugwort (*Artemisia vulgaris*), red clover (*Trifolium pratense*), perennial rye grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), common bent (*Agrostis capillaries*) and common ragwort (*Senecio jacobaea*).

3.4.2.2. To the east of the old school site there is a narrow strip of land that appears to have been previously open ground but has also remained unmanaged and now comprises a further area of dense scrub. The area was very dense making access difficult although the species visible comprised ash (*Fraxinus excelsior*), holly (*Ilex aquifolium*), sycamore (*Acer pseudoplantus*), scots pine (*Pinus sylvestris*), dogwood (*Comus sanguinea*), cherry (*Prunus sp*), hawthorn (*Crataegus monogyna*) and bramble (*Rubus fruticosus*).

3.4.3. Scattered scrub: To the northeast of the surveyed area there are two old, prefabricated garage buildings at the end of Plane Street. The garages appear to be disused and scattered scrub has become established around the garages and on the adjacent land. The scrub predominantly comprises bramble (*Rubus fruticosus*), buddleia (*Buddleja davidii*), rosebay willowherb (*Chamerion angustifolium*), nettle (*Urtica dioica*) and hedge bindweed (*Calystegia sepium*).

3.4.4. Semi natural broad leaf woodland: To the south a strip of woodland extends between the old school site and the adjacent open grazing pasture. The woodland displays a mixture of mature and semi mature trees with a mixed understory. The species present comprise oak (*Quercus sp*), ash (*Fraxinus excelsior*), crack willow (*Salix fragilis*), hazel (*Corylus avellana*), holly (*Ilex aquifolium*), hawthorn (*Crataegus monogyna*), cherry (*Prunus sp*), dogwood (*Comus sanguinea*), bramble (*Rubus fruticosus*), nettle (*Urtica dioica*), common bent (*Agrostis capillaries*) and false oat grass (*Arrhenatherum elatius*), among other species.

3.4.4.1. There are signs of disturbance in some areas of the woodland with paths, rubbish and a tent implying that people occasionally live in the woodland.

3.4.5. Scattered trees: There are occasional trees within the areas of scrub that are distinctly more mature than the scrub and have therefore been classified as individual trees rather than included within the scrub. The trees comprise ash (*Fraxinus excelsior*), eucalyptus (*Eucalyptus sp*), goat willow (*Salix caprea*) and apple (*Malus domestica*).

3.4.6. Buildings: To the northeast of the surveyed area two old, prefabricated garages lie adjacent to the end of Plane Street.

3.4.7. Other habitat – hard standing: Plane Street, a tarmac public road, extends along the northern side of the surveyed area.

3.4.8. Walls: The old school site is surrounded by large, coursed stone walls that retain the site and create a decorative boundary. The walls are topped with metal railings around the majority of the site.

3.4.9. Fences: To the south of the surveyed area post and wire stock fences extend along the border of the woodland separating the site from the adjacent grazing pasture.

3.4.9.1. Further fences, in various states of repair, are present throughout the woodland and scrub habitats.

3.5. Description of Species.

3.5.1. No badger setts or other badger field signs were identified within the surveyed area during either survey. Occasional animal paths were identified within the areas of scrub and woodland (T2) although the paths appeared to be created by people, domestic animals and foxes with no badger field signs identified.

3.5.2. No watercourses that would provide a suitable habitat for water voles, otters or crayfish were identified within the surveyed area or immediate surrounding area.

3.5.3. The only buildings located within the surveyed area were the two prefabricated garages located at the end of Plane Street (T1).

3.5.4. Access could not be gained to the interior of the garages during this survey although the garages were assessed as providing a negligible potential to support roosting bats due to their prefabricated construction.

3.5.5. No bat field signs were identified around the exterior of the garages during this survey of the site.

3.5.6. The walls around the old school displayed occasional voids where the root systems of the scrub were growing into the walls. However, the walls were assessed as predominantly providing a negligible potential to support roosting bats.

3.5.7. Several trees that may support roosting bats were identified within the woodland (T3). The trees were predominantly mature and semi mature oak (*Quercus sp*) trees although further trees with roosting potential may also be present in some of the less accessible areas of the site. This area of woodland will now be retained and the more significant trees to the western side of the woodland will remain unaffected by works.

3.5.8. No Potential Roost Features (PRF) or bat field signs were identified around the accessible trees during this survey although access was restricted by the dense vegetation.

3.5.9. The surveyed area was assessed as providing a moderate value foraging and commuting habitat for bats due to the woodland and scrub habitats present and the connections the site has to the surrounding area. A thorough assessment of the foraging and commuting activity within and around the surveyed area was not possible during this daytime survey of the site.

3.5.10. No ponds were identified within 500m of the surveyed area during this survey or on maps of the area. Therefore, the site was assessed as being unsuitable for great crested newts.

3.5.11. The surveyed area provides a suitable nesting habitat for a variety of bird species. No nests were identified during this survey of the site, which was carried out outside the nesting season, although bird activity was identified throughout the surveyed area.

3.5.12. The site provides a low value habitat for reptiles and has limited connectivity to other areas of suitable reptile habitat within the surrounding area. No reptiles were identified during this survey of the site.

3.5.13. Although the site displays habitats suitable for hazel dormice and red squirrels it lies outside the known UK range for both species.

3.5.14. Cotoneaster, an invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981, was identified growing extensively within the old school site (T4). The plant may have previously been used in the landscaping on the site and has now spread to other areas with a mixture of large established plants and new growth identified during this survey.

3.5.15. Occasionally rose (*Rosa sp*) were identified in the scrub of the old school site. The species may include Japanese Rose (*Rosa rugosa*), an invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981, which is commonly used in landscaping on public sites. However, an accurate species identification was not possible during this survey carried out late in the growing season.

3.5.16. The surveyed area provides a suitable habitat for hedgehogs, although no hedgehog field signs were identified during this survey of the site.

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4. ASSESSMENT OF IMPACTS, MITIGATION AND RESIDUAL EFFECTS.

4.1. Designated Sites.

4.1.1. Assessment.

4.1.1.1. No designated sites were identified within the surveyed area or immediate surrounding area, the closest is located 700m to the north.

4.1.1.2. The development does not lie within area of Kirklees Wildlife Habitat Network, although there are areas of that network in the surrounding area with the closest over 350m to the north and west of the survey area.

4.1.2. Mitigation.

As the development will not directly affect either any designated sites or the Kirklees Wildlife Habitat Network, no mitigation measures are necessary.

4.1.3. Residual Effects.

The proposed development will have no direct impact on any designated sites and will cause no loss or fragmentation of the Kirklees Wildlife Habitat Network. The site is a small development in an area that is already densely urban and therefore the development is unlikely to impact on designated sites in the area through a significant increase in foot traffic.

4.2. Habitats.

4.2.1. Assessment.

4.2.1.1. The surveyed area was found to be an old school site that had the buildings demolished approximately ten years ago and shows no signs of management since that time. The main area of the site therefore comprises dense scrub that has become established on the site. The scrub provides a suitable habitat for a range of species and therefore the scrub is assessed as providing a moderate ecological value with a continued lack of management potentially increasing this value.

4.2.1.2. The strip of scrub to the east of the old school site contains more woody species although the dense nature of the scrub meant that a thorough survey of the habitat was difficult during the first survey. Access was gained through this area during the subsequent survey and the scrub has been assessed as also displaying a moderate ecological value.

4.2.1.3. The area of woodland to the south of the old school site comprises a mixture of mature and semi mature trees with a varied understory. A thorough survey of all areas of the woodland was not possible during the original survey. During the December 2020 site visit more areas of the woodland could be accessed due to the lower vegetation levels, although some areas of dense bramble were still present. The woodland was assessed as displaying a high ecological value due to the age of the woodland, the structure it provides in the wider landscape and the fact that woodlands are a Habitat of Principal Importance under the NERC Act 2006. Following amendments to the site layout, this area of woodland at the southern end of the site will be retained.

4.2.1.4. The scattered trees on the site predominantly appear to be trees that were part of the landscaping on the old school site or are trees that have become established in the areas of scrub. The trees provide a suitable habitat for a range of species and provide structure throughout the areas. Therefore, the trees are assessed as displaying a moderate ecological value.

4.2.1.5. The remaining habitats on the site are man-made and boundary habitats that display little or no ecological value.

4.2.1.6. Overall, the site is assessed as displaying a moderate/high ecological value due to the dense nature and age of the habitats present and the structure the habitats provide in the wider landscape. The highest value habitat is assessed to be the retained woodland to the south of the site.

4.2.1.7. Using the DEFRA Metric 2.0, the development site pre-development contains the following habitats, areas and Baseline Biodiversity Units. The Condition Assessment has been reduced to fairly poor due to the areas of tarmac and concrete, remnants of the old school.

Habitat Type	Area in ha.	Distinctiveness	Condition Assessment	Biodiversity Units.
Heathland and Shrub – Mixed Scrub	0.2176	Medium	Fairly Good	2.63Bu
Heathland and Shrub – Mixed Scrub	0.3593	Medium	Fairly Poor	2.37Bu
Urban – sealed surface	0.1457	N/A	N/A	0
Total				5.00 Bu

4.2.2. Mitigation.

4.2.2.1. The original plans showed the whole site to be developed. Since that time, the plans have been amended in order to retain the woodland, the Habitat of Principal Importance under the NERC Act 2006. This greatly reduces the impact of the proposed development.

4.2.2.2. A new, native, species rich hedgerow, 249m long will be planted along three of the site boundaries, those to the west, south and east of the site. These will connect directly to the retained woodland and scrub habitats around the site to provide continuity of wildlife corridors.

4.2.2.3. The development site will comprise developed land with sealed surfaces and urban vegetated gardens plus an area of public open space planted with modified grassland giving the following post development Biodiversity values.

Habitat Type	Area in ha.	Distinctiveness	Condition Assessment	Biodiversity Units.
Developed land, sealed surface	0.4845	N/A	N/A	0.0Bu
Amenity Grassland	0.041	Low	Moderate	0.17

Urban – Vegetated garden.	0.207	Low	Poor	0.44
Native species rich hedgerow	240m	Medium	Moderate	1.30
Total				1.91 Bu

4.2.2.4. The on-site Biodiversity values show a Biodiversity net loss of 3.09 Bu, a loss of 62%.

4.2.2.5. This will necessitate a further off-site Biodiversity provision with a value of 3.399Bu to arrive at the required baseline value of plus 10%.

4.2.3. Residual Effects.

4.2.3.1. There will be a considerable negative impact on habitats as a result of the proposed development leading to an on-site Biodiversity loss of 62%, a **Moderate Negative Impact at site level.**

4.2.3.2. As a result of the developer financing an off-site Biodiversity provision, this will result in but a **Low Positive Impact at Borough level**.

4.3. Species.

4.3.1. Bats.

4.3.1.1 Assessment.

4.3.1.1.1. No existing records of roosting bats were identified within the surveyed area with the closest located approximately 400m to the east. Therefore, there will be no impact on known bat roosts during the proposed development.

4.3.1.1.2. The buildings and walls located within the surveyed area were assessed as providing negligible potential to support roosting bats with no bat field signs identified around the accessible areas during this survey.

4.3.1.1.3. Several trees that would provide potential roosting opportunities for bats were identified within the area of woodland to the west of the site. However, these are on the southern edge of the woodland and this strip of woodland will be retained.

4.3.1.1.4. The woodland to the west of the survey area was assessed as providing a moderate value foraging and commuting habitat for bats due to the connectivity the woodland provides to the wider landscape.

4.3.1.2. Mitigation.

4.3.1.2.1. There are no buildings present on the site to provide potential bat roosting opportunities.

4.3.1.2.2. There are no trees with potential bat roosting features within the development footprint. Several trees that could provide potential roosting opportunities for bats were identified within the area of woodland to the west of the site although this strip of woodland will be retained.

4.3.1.2.3. The amended development plans show the retention of the wooded area at the western side of the site and the retention of a woodland edge habitat to provide continuity of bat commuting and foraging habitat.

4.3.1.2.4. The layout of the site provides a central access road between the houses and it is along this central spine that street lighting will be provided. In addition, all street lighting will be in the form of down lights that will focus the light onto the roads where it is required and will minimise light spill onto perimeter hedgerows and woodland.

4.3.1.3. Residual Effects.

4.3.1.3.1. The development will have no direct impact on roosting bats and by retaining a woodland edge while creating species rich natural perimeter hedgerows, will enhance the bat foraging and commuting habitat on and past the site.

4.3.1.3.2. The development will provide a **Low Positive Residual Impact on bats at Site Level**.

4.3.2. Birds.

4.3.2.1 Assessment.

4.3.2.1.1. The surveyed area provides a suitable nesting habitat for a variety of bird species during the nesting bird season, which extends from March to September.

4.3.2.1.2. Any site or vegetation clearance works carried out during the nesting season will potentially have a high impact on any birds nesting in the vegetation at that time.

4.3.2.2. Mitigation.

4.3.2.2.1. Ideally, all site or vegetation clearance will be carried out outside the nesting season, which extends from March to September each year.

4.3.2.2.2. Any vegetation clearance works carried out during the nesting season will be immediately preceded by a thorough nesting bird survey carried out by a suitably experienced surveyor. Any nests identified, plus a buffer zone around them, will remain undisturbed until the young have fledged from the nest.

4.3.2.2.3. Two hundred and forty metres of new, species rich, native hedgerows will provide additional nesting opportunities on the site.

4.3.2.3. Residual Effects.

With due precautionary measures as outlined, the development will have **No Negative Residual Impact at Site Level** on nesting birds.

4.3.3. Hedgehogs

4.3.3.1 Assessment.

The surveyed area provides a suitable habitat for hedgehogs although no hedgehog field signs were identified during this survey of the site.

4.3.3.2. Mitigation.

4.3.3.2.1. Site clearance works will be carried out with care and ideally outside peak of the winter. The site will be hand searched for hedgehogs prior to site clearance.

4.3.3.2.2. In the event that any hedgehogs are encountered they will be carefully moved to a place of safety.

4.3.3.3. Residual Effects.

With due precautionary measures as outlined, the development will have **No Negative Residual Impact at Site Level** on hedgehogs.

4.3.4. Badgers.

4.3.4.1. Assessment.

No badger setts or other badger field signs were identified within the surveyed area during either survey. Occasional animal paths were identified within the areas of scrub and woodland (T2) although the paths appeared to be created by people, domestic animals and foxes with no badger field signs identified.

4.3.4.2. Mitigation.

4.3.4.2.1.As far as is possible, no trenches will be left open overnight.

4.3.4.2.2. Where it is necessary to leave a trench open overnight, the trench will be furnished with a sloping ramp that will enable any species that fall into the trench access to escape.

4.3.4.2.3. All open trenches will be inspected for animals before work recommences. In the unlikely event an animal is trapped in the trench, the ecologists will be contacted for further assistance and advice.

4.3.4.2.4. All open pipe ends over 50mm in diameter will be capped overnight to ensure no animals are trapped inside the pipe.

4.3.4.3.5. If any new animal holes are found that are larger than a rabbit burrow, no work should be undertaken within 10m of that hole and the ecologists should be contacted for further advice.

4.3.4.3. Residual Effect.

By following the precautions outlined above, there will be **No Negative Residual Impact on Badgers.**

4.3.5. Alien, Invasive, Non-Native Species.

4.3.5.1 Assessment.

One definite and one potential invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 were identified within the surveyed area, those species being cotoneaster and Japanese rose, which are commonly used in landscaping on public sites.

4.3.5.2. Mitigation.

4.3.5.2.1. Prior to any site clearance works commencing, all cotoneaster and Japanese Rose plants on site will be identified and the locations marked-up on a site plan. Plants will be sprayed with coloured paint on site.

4.3.5.2.2. All plants will be carefully dug out in the presence of an ecologist and the plants carefully disposed of as contaminated waste. Any cotoneaster berries that may have dropped off the plants will be collected and all Japanese rose roots will also be collected, bagged and disposed of to prevent regrowth.

4.3.5.3. Residual Effects.

By careful collection and disposal of the plants as contaminated waste, there will be **No Residual Negative Impact** on the spread of alien invasive, non-native plants in the wild.

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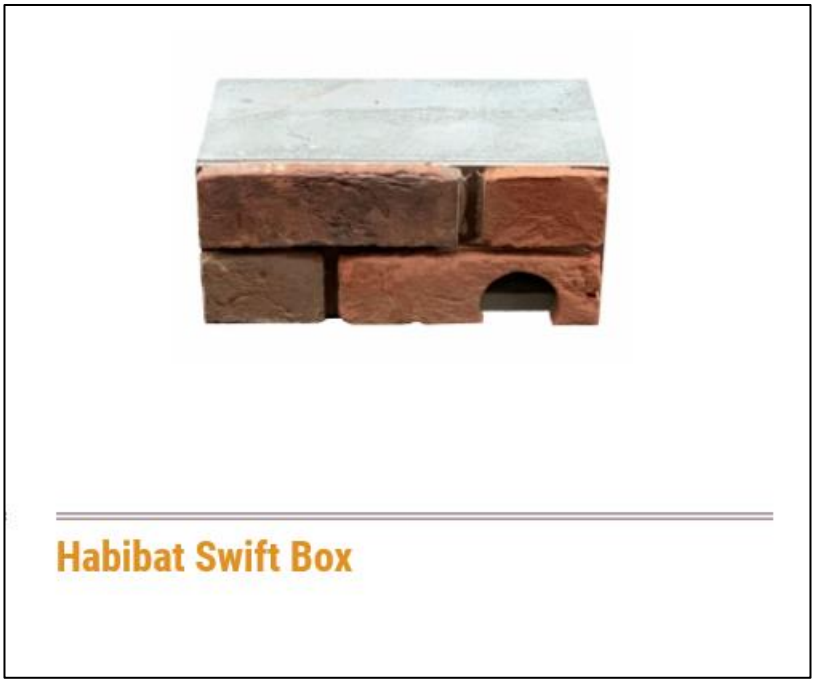
5. COMPENSATION AND ENHANCEMENT MEASURES.

5.1. Three integrated bat bricks will be installed in the new houses in the positions shown by the yellow dots on the site plan below.

5.2. Each will be a Habibat box installed at the top of the gable end wall. The finish on the box will match the external wall of the dwelling it is installed in.

5.3. Four integrated swift boxes will be installed, two in each location shown by a red dot on the site plan above. Each integrated swift box will be as shown below. These will be erected high in the gable end walls in pairs.



5.4. Holes a minimum of 130mm being provided in all boundary fences to allow hedgehogs continued access around the site.

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Prepared by:	
Derek Whitcher, BSc, MCIEEM, MCMI	Date: 6th May 2021.

Checked by:	
Jenny Whitcher Roebuck MCIEEM.	Date: 6th May 2021.

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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 of 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. HEDGEHOG INFORMATION.

Ecology

The hedgehog was a common species once widespread throughout the country but it has suffered a major decline due to loss of habitat. They are now found distributed across the UK, but the population increases to the south and east. Hedgehogs are rare in Scotland, Wales and Northern Ireland.

The hedgehog is a small, spiny mammal around 20cm long with a long snout. The back and sides of the hedgehog are covered in 25mm (1”) long spines. These are absent from the face, legs and underside, which are covered with coarse, grey-brown fur.

Hedgehogs are highly active and range widely. They need to be able to move freely through a well-connected range of habitats to find food, mates and areas to nest. Studies show that hedgehogs can travel around 2km in a night in urban areas and 3km a night in rural landscapes. A viable population of urban hedgehogs is thought to need 0.9km^2 of well-connected habitat.

Hedgehogs nest year-round and produce different types of nest for daytime resting, breeding and hibernation. Daytime nests are a retreat during the active season, and are often temporary, flimsy and found in areas of rough grassland, loose leaf piles or garden vegetation. Breeding nests are made by females and are used to raise young. They tend to be more robust, like hibernation nests. Winter nests can be used for several months to hibernate through periods of cold weather and low food availability. The sturdiest nests rely on medium-sized deciduous leaves and a structure to hold the leaves in place. Bramble patches, log piles and open compost heaps are common locations for breeding and hibernation.

Hedgehogs are omnivores, but the bulk of their diet consists of macro-invertebrates such as beetles, worms, slugs, earwigs, caterpillars and millipedes. In urban areas, supplementary food in the form of cat, dog or formulated hedgehog food can make up a significant part of their diet. Access to water is also very important.

Surveys

Hedgehogs are nocturnal animals, so despite their spiny appearance they are often difficult to find.

All surveys should be conducted between May and November when hedgehogs are active.

Droppings can be found in grassland, farmland and in gardens. The droppings are crinkly, often studded with shiny fragments due to their diet of insects. They are variable in size, 15-50mm long and 8-10mm thick, blue/black in colour and sweet smelling with a hint of linseed oil.

Footprint tunnels and camera traps can also be used to survey for hedgehogs.

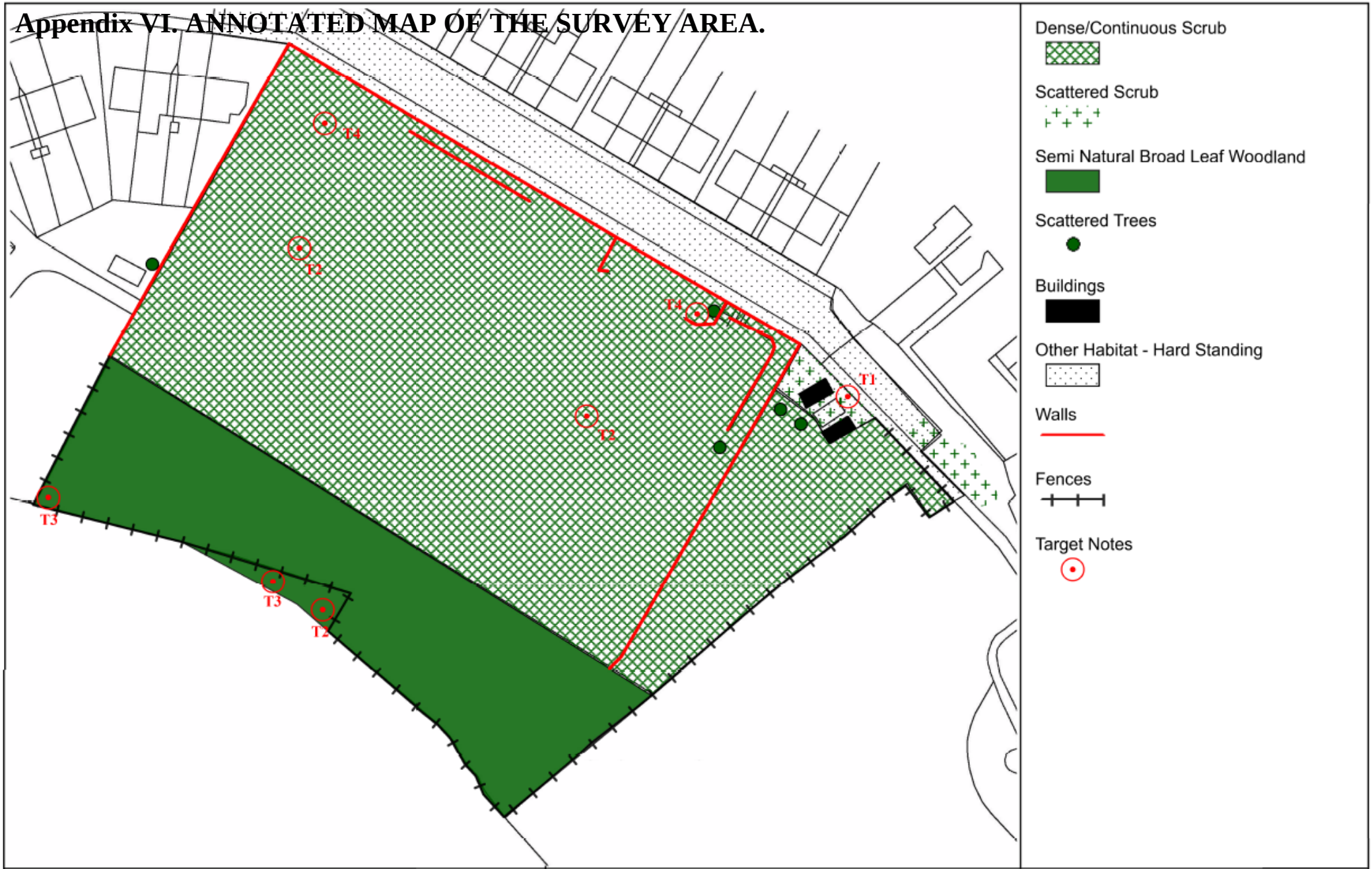
Further survey techniques can also be used to survey for hedgehogs, but these require a survey licence to carry out surveys involving trapping and torch or spotlight searches.

Legislation

The hedgehog is considered an endangered species, but it benefits only from general protection under the Wildlife and Countryside Act 1981. They are listed under Schedule 6 of the Act, which makes it illegal to kill, trap or capture wild hedgehogs, with certain methods listed. They are also listed under the Wild Mammals Protection Act (1996), which prohibits cruel treatment of hedgehogs and they are a species of ‘principal importance’ under the NERC Act, which confers a ‘duty of responsibility to public bodies’.

However, none of these deal with the issues that are a threat to the hedgehog. The main threat is the increasing loss of habitat, the increasing traffic on our roads and the increasing use of herbicides, in particular those used to kill garden slugs.

Appendix VI. ANNOTATED MAP OF THE SURVEY AREA.



Site: Plane Street, Huddersfield

Reference: 191012

Prepared by: Steven Whitcher

Date: 29th October 2019

Appendix VII. TARGET NOTES.

T1: Two prefabricated garages assessed as providing negligible potential to support roosting bats.

T2: Animal paths.

T3: Semi mature and mature oak trees identified to provide potential roosting opportunities for bats.

T4: Cotoneaster.

Appendix VIII. SPECIES LISTS.

1. Dense/Continuous Scrub.

Species.	DAFOR Assessment.
Old School Area.	
Silver birch (*Betula pendula*)	A
Crack willow (*Salix fragilis*)	O
Norway maple (*Acer platanoides*)	F
Goat willow (*Salix caprea*)	F
Sycamore (*Acer pseudoplantus*)	O
Ash (*Fraxinus excelsior*)	O
Cherry (*Prunus sp*)	F
Eucalyptus (*Eucalyptus sp*)	R
Dogwood (*Comus sanguinea*)	F
Buddleia (*Buddleja davidii*)	F
Hawthorn (*Crataegus monogyna*)	O
Dog rose (*Rosa canina*)	O
Sedge (*Carex sp*)	R
Laurel (*Laurus nobilis*)	R
Cotoneaster (*Cotoneaster sp*)	F
Red valerian (*Centranthus ruber*)	F
Sow thistle (*Sonchus oleraceus*)	O
Thistle (*Cirsium sp*)	F
Colts foot (*Tussilago farfara*)	O
Lady's mantle (*Alchemilla mollis*)	O
Teasel (*Dipsacus fullonum*)	R
Mugwort (*Artemisia vulgaris*)	O
Red clover (*Trifolium pratense*)	F
Perennial rye grass (*Lolium perenne*)	F
Yorkshire fog (*Holcus lanatus*)	O
Common bent (*Agrostis capillaries*)	O
Common ragwort (*Senecio jacobaea*)	F
To the east of the old school.	
Ash (*Fraxinus excelsior*)	A
Holly (*Ilex aquifolium*)	F
Sycamore (*Acer pseudoplantus*)	F
Scots pine (*Pinus sylvestris*)	O

Dogwood (*Comus sanguinea*)	F
Cherry (*Prunus sp*)	F
Hawthorn (*Crataegus monogyna*)	F
Bramble (*Rubus fruticosus*)	A

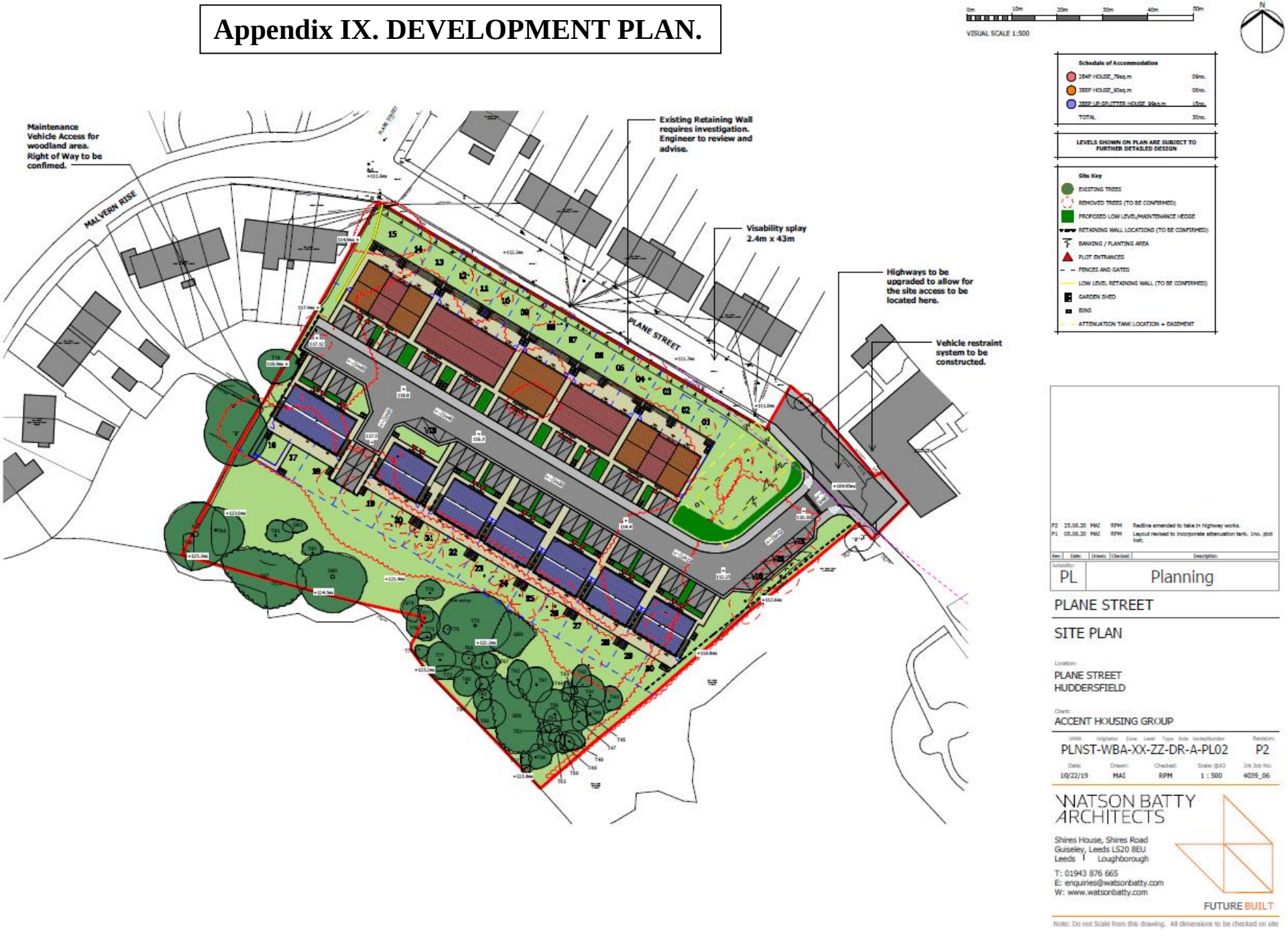
2. Scattered Scrub.

Species.	DAFOR Assessment.
Bramble (*Rubus fruticosus*)	A
Buddleia (*Buddleja davidii*)	O
Rosebay willowherb (*Chamerion angustifolium*)	F
Nettle (*Urtica dioica*)	F
Hedge bindweed (*Calystegia sepium*)	O

3. Semi Natural Broad Leaf Woodland.

Species.	DAFOR Assessment.
Oak (*Quercus sp*)	A
Ash (*Fraxinus excelsior*)	O
Crack willow (*Salix fragilis*)	O
Hazel (*Corylus avellana*)	F
Holly (*Ilex aquifolium*)	O
Hawthorn (*Crataegus monogyna*)	F
Cherry (*Prunus sp*)	O
Dogwood (*Comus sanguinea*)	O
Bramble (*Rubus fruticosus*)	A
Nettle (*Urtica dioica*)	O
Common bent (*Agrostis capillaries*)	O
False oat grass (*Arrhenatherum elatius*)	O

4. Scattered Trees.

Species.	DAFOR Assessment.
Ash (*Fraxinus excelsior*)	O
Eucalyptus (*Eucalyptus sp*)	R
Goat willow (*Salix caprea*)	O
Apple (*Malus domestica*)	R

Appendix IX. DEVELOPMENT PLAN.