Whitcher Wildlife Ltd.
Ecological Consultants.

LAND OFF CROSS LANE, SCHOLES.

OS REF: SE 151-070.

EXTENDED PHASE I HABITAT SURVEY.

Ref No:- **170236.**

Date:- **1st March 2017.**

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1. INTRODUCTION.

1.1. Plans are being drawn up for the development of an area of land off Cross Lane, Scholes near Holmfirth. The plan in Appendix XVI of this report shows the current development plan for the site.

1.2. An Extended Phase 1 Habitat survey of the site was commissioned to accompany the application for planning permission on the site.

1.3. Whitcher Wildlife Ltd carried out the survey on the 24th February 2017. This report outlines the findings of the survey and makes appropriate recommendations.

1.4. Appendices I to XII 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 50m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Rob Strachan, Tom Moorhouse and Merryl Gelling (2011). *Water Vole Handbook: Third Edition*:-

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

2.5. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of otter (*Lutra lutra*) activity by looking for the following signs in line with the P Chanin (2003). *Monitoring the Otter* and *Conserving Natura 2000 Rivers: Monitoring Series No10 Guidelines:-*

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

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

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

* Holes, cracks or crevices.
* Bat Droppings.

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

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

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

2.11. Where appropriate, the habitat within and surrounding the survey area was searched for species such as hazel, oak, honeysuckle, bramble and other species which may provide potential habitat for hazel dormice (*Muscardinus avellanarius*). Field signs such as feeding remains and nests were also searched for where possible,

in line with P Bright, P Morris and T Mitchell-Jones *The Dormouse Conservation Handbook 2nd Edition*.

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

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

2.14. This survey was carried out by Steven Whitcher MCIEEM. Since 2002 Steven has gained extensive experience in a professional capacity as an ecological consultant carrying out ecology, protected species and Phase 1 Habitat surveys. Steven's knowledge has been supplemented through the attendance of a variety of courses run by the Chartered Institute of Ecology and Environmental Management (CIEEM), the Bat Conservation Trust (BCT) and the Field Studies Council (FSC) in the relative protected species, plant species and in carrying out Phase 1 Habitat Surveys. Steven holds Natural England Survey Licences in respect of bats, great crested newts, crayfish and barn owls, NRW Survey Licences in respect of bats and great crested newts and an SNH Survey Licence in respect of bats. Steven is also a Registered Consultant with Natural England and is confined spaces trained and qualified in tree climbing and aerial rescue.

****

3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A desktop data search for existing records of protected species or designated sites in the area of the site was submitted to West Yorkshire Ecology (WYE).

3.1.2. WYE hold several records of locally designated sites within the area of the site including Sites of Scientific Interest (SSI), Local Wildlife Sites (LWS) and Sites of Wildlife Significance (SWS). The sites include:

- Holme Styes Heathland SSI – located 1.8km southwest of the site.
- Morton Wood SSI – located 775m east of the site.
- Wild Boar Clough SSI – located 1.5km south of the site.
- Malkin House Wood LWS – located 1.8km west of the site.
- Morton Wood LWS – located 775m east of the site.
- Rakes Wood LWS – located 1.6km southeast of the site.
- Wild Boar Clough LWS – Located 1.5km south of the site.
- Boshaw Whams Reservoir SWS – located
- Malkin House Wood SWS – located 1.8km west of the site.

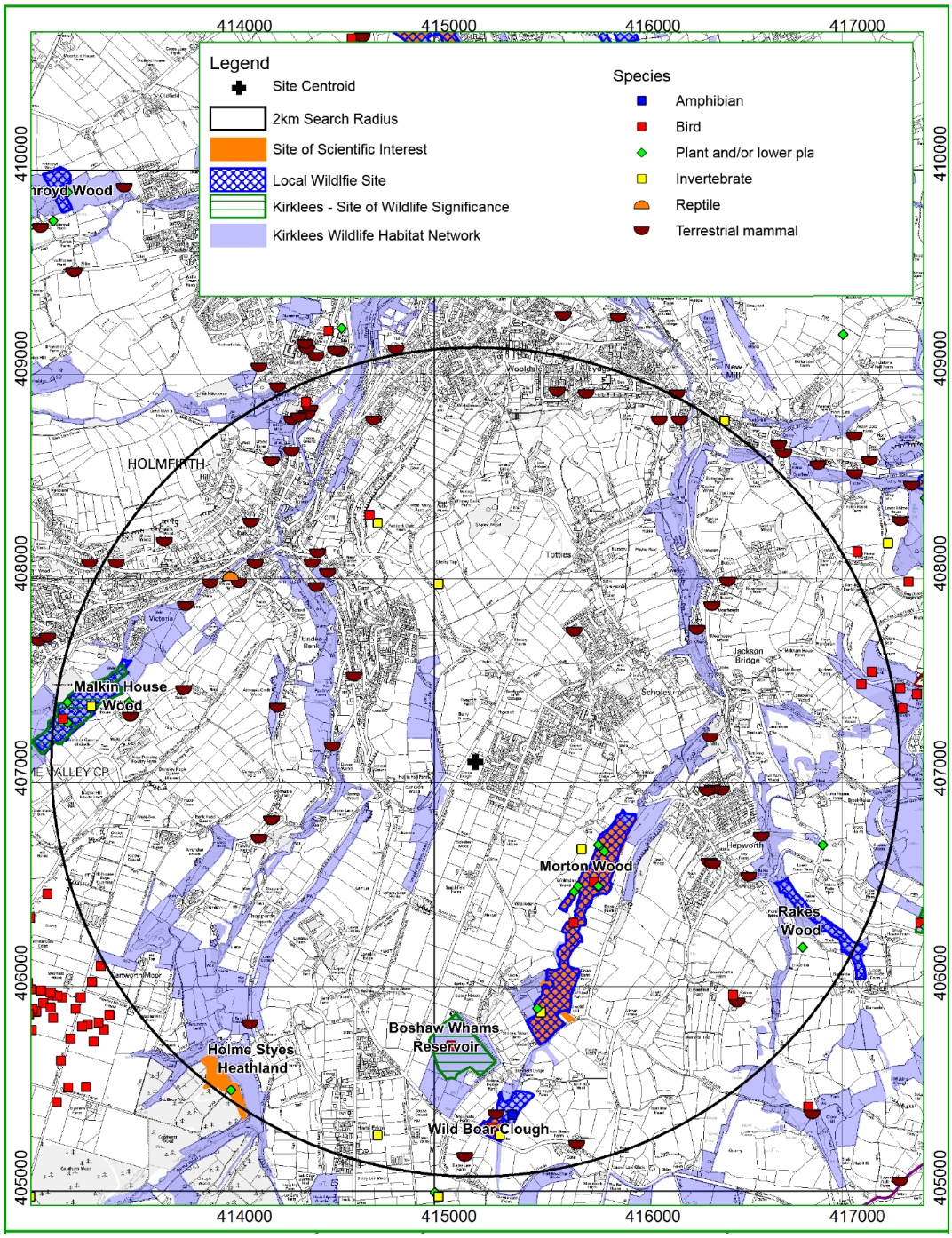
3.1.3. There are also abundant area designated as part of the Kirklees Wildlife Habitat Network located within the surrounding area with the closest area being located approximately 85m to the west of the site.

3.1.4. WYE hold abundant records of bats within the search area covering a variety of bat species. The closest record refers to a roost of Pipistrelle bats located 740m from the site with the majority of the records being over 1km from the surveyed area.

3.1.5. WYE also hold abundant records of several species of bird, plant, invertebrate and reptile within the surrounding area with the closest records being approximately 700m from the site and the abundance of records being in excess of 1km from the site.

3.1.6. There are also occasional records of badgers within the search area although the records are all from the 1980’s with the closest record being over 600m from the surveyed area.

3.1.7. The map below shows the location of the site and species records located within the search area.



3.1.8. A full copy of the results returned by WYE can be provided on request.

3.2. The Surveyed Area.

3.2.1. The surveyed area was an area of land off Cross Lane in Scholes near Holmfirth, as shown below.

3.2.2. The site lies in an elevated location to the southeast of Holmfirth with the village of Scholes to the northeast, a small play area immediately to the north and open farmland on all other sides.

3.3. Description of Habitats.

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

- Improved Grassland.
- Species Poor Intact Hedgerow.
- Scattered Trees – Mixed.
- Walls.
- Fences.
- Other Habitat – Road.

3.3.2. Improved grassland: The site comprises a large grazing field that displays recent grazing activity with a short sward length throughout. The grassland comprises perennial rye grass (*Lolium perenne*), cocks foot (*Dactylis glomerata*), annual meadow grass (*Poa annua*) and fescue (*Festuca sp*) with no herbs visible at the time of this survey.

3.3.3. Species poor defunct hedgerow: A short section of hedgerow extends along the eastern boundary of the site along the rear of the residential gardens in this direction. The hedgerow is intact, although only a short length of hedgerow, and comprises Leyland cypress (*Cupressus x leylandii*).

3.3.4. Scattered trees – mixed: There are occasional scattered trees within the residential gardens and play area immediately adjacent to the site. The trees are predominantly sapling or very small semi mature trees including silver birch (*Betula pendula*), scots pine (*Pinus sylverstris*) and cherry (*Prunus sp*).

3.3.5. Walls: The field boundaries are predominantly low dry stone walls around the surveyed area with the walls being in varying states of repair including several sections that have completely collapsed.

3.3.6. Fences: To the east and north of the site there are several areas where the site is separated from the adjacent land by fences including concrete post and rail, stock fencing and decorative panel fencing.

3.3.7. Other habitat – roads: Public roads, Cross Lane and Ryecroft Lane, extend along the southern and western boundaries of the site. The roads comprise tarmac public roads with grass verges comprising perennial rye grass (*Lolium perenne*), cocks foot (*Dactylis glomerata*), annual meadow grass (*Poa annua*), fescue (*Festuca sp*), dandelion (*Taraxacum officinale*), ribwort plantain (*Plantago lanceolata*) and thistle (*Cirsium sp*).

3.4. Description of Species.

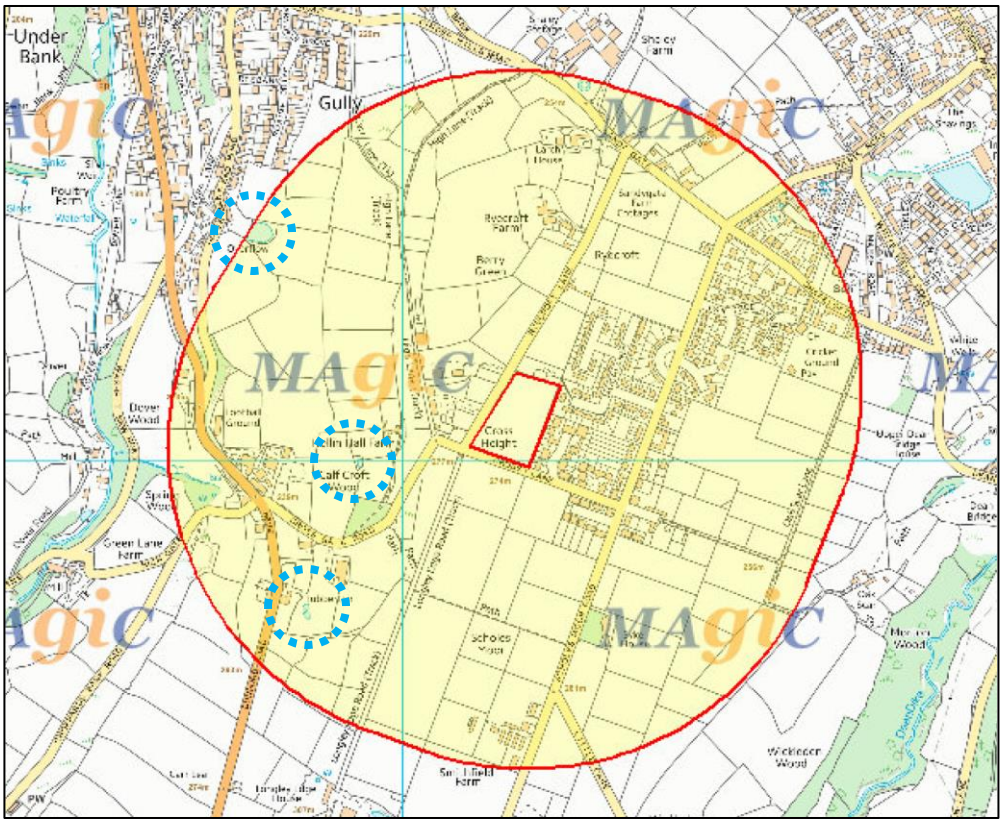
3.4.1. No badger setts or other badger field signs were identified within the surveyed area.

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

3.4.3. No structures or trees that would provide suitable roosting opportunities for bats were identified within the surveyed area or the immediately surrounding area.

3.4.4. The site has been assessed as providing a very low value habitat for foraging or commuting bats due to its elevated location and lack of suitable vegetation or linear features. A full assessment of the foraging and commuting activity in the area of the site could not be carried out during this daytime survey of the site.

3.4.5. Three ponds were identified within 500m of the site on a map of the area. The location of the ponds is shown on the plan below.



3.4.6. The ponds are located 180m west, 380m southwest and 480m west of the site with all of the ponds being located on private land away from public access. Therefore a thorough assessment of the ponds could not be made during this survey of the site.

3.4.7. The site provides a very low value habitat for terrestrial great crested newts due to the lack of suitable refugia within the grassland. The dry stone walls provide some suitable habitat although minimal with areas of more suitable habitat between the ponds and the site.

3.4.8. The site provides little value to nesting birds due to the close grazed and regularly disturbed nature of the grassland and the lack of other areas of suitable vegetation. Occasional bird activity was identified along the residential garden to the east of the site although no nests were identified during this survey of the site.

3.4.9. The site provides a low value habitat for reptiles due to the lack of suitable refugia or basking sites. The dry stone walls provide some suitable habitat although

this is limited with little or no connectivity to other areas of higher value habitat. No reptiles were identified during this survey of the site.

3.4.10. No habitat suitable for hazel dormice or red squirrels is present on the site or in the immediately surrounding area.

3.4.11. One area of cotoneaster (T1) was identified on the eastern boundary of the site where the plant is growing over from the adjacent residential gardens.

3.4.12. No other invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 were identified within the surveyed area.

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4. EVALUATION OF FINDINGS.

4.1. West Yorkshire Ecology hold several records of locally designated sites within the area around the site. However, the closest site is located 775m from the site and therefore there will be no impact on the locally designated sites during the proposed development.

4.2. There are also abundant areas designated as being within the Kirklees Wildlife Habitat Network in the area of the site. The closest area of Wildlife Habitat Network lies approximately 85m from the surveyed area and therefore the proposed development will not have a direct impact on these areas.

4.3. The site comprises a field that was previously utilised as grazing pasture. The site is therefore of a relatively low ecological value and a habitat found in abundance within the surrounding area.

4.4. The grassland was assessed outside the peak growing season. However, due to the obvious grazing activity and low species diversity the grassland has been assessed as displaying a low ecological value with it assessed as unlikely that the grassland will display a significantly higher ecological value during the peak season.

4.5. The remaining habitats on the site are predominantly boundary features, with the majority being dry stone walls of varying states of repair. The walls provide a low ecological value with some potential for animals to seek refuge in the walls but little other value.

4.6. The other boundary features are associated with the residential gardens and play area to the east and north of the site. These features have some ecological value, particularly the short section of hedgerow because hedgerows are a Habitat of Principal Importance under Section 41 of the NERC Act 2006.

4.7. The roads surrounding the site have a low ecological value. The grass verges have some ecological value but do not display a diverse range of species, albeit assessed outside the peak season.

4.8. The proposed development of the site will only affect the grassland and dry stone walls, areas of low ecological value, and will therefore have some detrimental effect on the ecological value of the site. However, the dry stone walls will be repaired and

there will be residential gardens present following the development that will have a similar level of ecological value and therefore the development is not assessed as being detrimental to the overall ecological value of the surrounding area.

4.9. No badger setts or other badger field signs were identified within the surveyed area. Therefore the proposed development will not have an impact on badgers.

4.10. No watercourses that would provide suitable habitats for water voles, otters or crayfish were identified within the surveyed area or the immediately surrounding area. Therefore the proposed development will not impact on these species.

4.11. No structures or trees that would provide suitable roosting opportunities for bats were identified within the surveyed area and the closest record of bats was over 700m from the site. Therefore the proposed development will not have a direct impact on roosting bats. There is some potential for bats to roost in the areas surrounding the surveyed area although these areas are already dominated by residential housing and therefore it is not assessed that the development will have an impact on roosting bats in the surrounding area.

4.12. The site has been assessed as providing a low value habitat for foraging or commuting bats due to the lack of linear features and the exposed location of the site. Therefore the development has been assessed as highly unlikely to impact on foraging or commuting bats despite a thorough assessment of the activity not being made during this daytime survey of the site.

4.13. Three ponds were identified within 500m of the site, all located on private land to the west of the surveyed area with the closest pond being 180m from the site. Due to the land in this direction dropping away into a valley with areas of open grazing pasture, low value terrestrial habitat for amphibians, between the site and the ponds, the lack of amphibian records in the area of the site and the low terrestrial value of the site it is assessed as highly unlikely that great crested newts would be present on the site if they utilised the ponds identified within 500m of the site. It is therefore assessed as highly unlikely that great crested newts, or other amphibians, will be impacted upon by the proposed development.

4.14. The site provides a low value habitat for nesting birds due to the short grazed nature of the grassland and the lack of vegetation along the boundaries. Therefore the development is assessed as unlikely to impact on nesting birds even if works are

carried out during the nesting season, which extends from March to September each year.

4.15. The site provides a low value habitat for reptiles with no records of reptiles in the immediately surrounding area. Therefore there will be no impact on reptiles during the proposed development.

4.16. No habitat suitable for hazel dormice or red squirrels was identified within the surveyed area and therefore the development of the site will not impact on these species.

4.17. One invasive non-native plant species, Cotoneaster (T1), was identified on the eastern boundary of the surveyed area growing over the boundary from the adjacent residential gardens.

4.18. Cotoneaster spreads by seed, with the seeds predominantly being dispersed by birds, and therefore there is some potential for viable seeds to be present in the grassland. However, the cotoneaster plant will remain unaffected and therefore it is assessed as highly unlikely that the development will have a significant potential to spread the plant to other areas.

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5. RECOMMENDATIONS.

5.1. It is recommended that a sensitive lighting scheme is implemented during the development ensuring that the development does not cause a significant increase in light pollution in the surrounding area that could potentially impact on foraging or commuting bats.

5.2. Ideally it is recommended that the site includes biodiversity enhancements in the form of bat and bird boxes and through the planting of native fruit and berry bearing species within the landscaping.

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Prepared by:	
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Checked by:	
Ruth Georgiou. BSc, MCIEEM.	Date: 1st March 2017.

6. REFERENCES.

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

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

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

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

Chartered Institute of Ecology and Environmental Management. 2013. ***Guidelines for Preliminary Ecological Appraisal.*** CIEEM, Hampshire.

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

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

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

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

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

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

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

Nobel DG, Bashford RI and Baille SR. 2000. ***Breeding Bird Survey 1999.*** British Trust for Ornithology.

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

Sutherland WJ, Newton I and Green RE. 2004. ***Bird Ecology and Conservation: A Handbook of Techniques.*** Oxford University Press, Oxford.

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

Sutherland WJ, Newton I and Green RE. 2004. ***Bird Ecology and Conservation: A Handbook of Techniques.*** Oxford University Press, Oxford.

1979. ***Convention on the Conservation of European Wildlife and Natural Habitats.*** *http://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104* (accessed 18/02/16)

2000. ***Countryside and Rights of Way Act.*** *http://www.legislation.gov.uk/ukpga/2000/37/contents* (accessed 18/02/16)

2010. ***The Conservation of Habitats and Species Regulations.*** *http://www.legislation.gov.uk/uksi/2010/490/contents/made* (accessed 18/02/16)

1979. ***The Convention on the Conservation of Migratory Species of Wild Animals.*** *http://www.cms.int/* (accessed 18/02/16)

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

Appendix I.

BADGER INFORMATION.

The following background information on the territorial behaviour, ecology and legal protection of badgers is provided to enable the reader to more clearly understand the contents of this report.

1. Territoriality.

Badgers live in social groups called clans and are territorial. Each clan territory can vary considerably in size, from 0.2 sq. km to 1.5 sq. km. The average number of badgers in a clan has been calculated to be six but this number can vary between two and twenty badgers. In areas with a significant badger population there will be contiguous clans and a well-defined boundary between clan territories will exist with the badgers scent marking their boundary with areas of dung pits, called latrines. In areas with relatively low badger populations there will be less competition for territory and the amount of territorial markings will be low or even non-existent.

Territorial boundaries can be defined using a technique called bait marking. Over a two-week period badgers are fed at their main setts with food containing coloured plastic pellets, a different colour at each main sett. The colour of pellet found in dung pits and territorial latrines shows what areas each clan of badgers is occupying.

2. Ecology.

Badgers are omnivorous but their preferred food source is worms and insects. Worms are most abundant in well-grazed pastureland while mixed woodland is a good source of insects and grubs. Badgers have a soft and supple nose with which they snuffle into the ground to find insects. When they do this they leave distinct round holes known as snuffle holes or grubbings. Badgers easily find worms on the surface of well-grazed pastureland and often leave no visible indications of this foraging.

The badger's most important sense is that of smell. They will use particular paths around their territory repeatedly, following a scent trail from previous use. As a result badger paths become well worn. These paths are important to the badgers and obstruction to these paths will interfere with the badger's movement around their territory.

Badgers mate at any time of year but delayed implantation controls the time of birth. Most cubs are born between January and March but they can be born at any time between December and June. An average of two to three badger cubs are born to each sow and will initially be totally dependent on their mother. Cubs do not appear above ground until during April or May when they are 8 – 10 weeks old and are not fully weaned until June of each year.

3. Badger Setts.

A badger sett is any structure or place, which displays signs of current or seasonal use by a badger. Within a badger clan territory there can be several badger setts, which are categorised in the following ways.

Main Sett. There will normally be one main sett in a territory. This will generally be the largest sett in the territory, typically with five or more entrances, will be permanently occupied throughout the year and used as the breeding sett.

Outlying Sett. These are the smallest setts with generally only one or two entrances. They are intermittently occupied and there can be any number in a territory.

Annex Sett. A sett of intermediate size, located close to the main sett and connected by well-defined paths. These are occupied for prolonged periods and may be used as a second breeding sett if there are two breeding sows in the clan.

Subsidiary Sett. A sett of intermediate size, similar to an annex sett but located at some distance from the main sett and not connected to the main sett by defined paths.

4. Legislation

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under the Act it is illegal to:-

- Willfully kill, injure or take a badger or attempt to do so.
- Cruelly ill-treat a badger.
- Interfere with a sett by doing any of the following:-
    - (i) damaging a badger sett or any part of it
    - (ii) destroying a badger sett
    - (iii) obstructing access to a badger sett
    - (iv) causing a dog to enter a sett
    - (v) disturbing a badger while it is occupying a sett.

Penalties for offences under the Act are up to six months in prison and a fine of £5,000 for each offence.

Disturbance to a badger in a sett can be caused by working close to a sett.

Before any work goes ahead which will cause damage to setts or disturbance to badgers, a licence will be needed from Natural England in accordance with their guidelines. To obtain a licence an application must be made giving at least one months notice. This application must include full justification for the work, the manner in which any work is to be carried out, full supporting information and a named person capable of carrying out specialised badger work, to supervise that licence. Natural England will normally only issue such licences for work to be carried out between the months of July and October inclusive, to avoid the breeding season, although exceptions may be possible if a sound justification can be made.

Appendix II. WATER VOLE INFORMATION.

It is necessary to understand a little about water voles, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

The water vole is the largest of the British voles. It lives in a series of holes or burrows at the waters edge and can be found along the banks of ditches, streams, rivers, lakes and canals. Although water voles live in colonies, the breeding females are territorial, each defining their contiguous territory with latrines during the breeding season. This lasts from March to October.

The water vole is herbivorous, feeding primarily on the lush aerial stems and leaves of waterside plants growing alongside the watercourse. Its activity is normally confined to the area within two metres of the watercourse. Bankside vegetation in this area is not only essential for food but also for cover from predators.

The water vole population has been on the decline in recent years. This is partly due to loss of suitable riverside habitats but also due to the increasing population of predators, particularly the escaped American mink. Population decline has been dramatic and has accelerated over the last seven years. Surveys carried out by the Vincent Wildlife Trust show a loss of 67% of occupied sites and of 88% of the remaining population in the last seven years.

The water vole has received limited legal protection since April 1998 when it was included in Schedule 5 of the Wildlife and Countryside Act 1981. Section 9(4) of the Act protects the water vole's place of shelter or protection but does not protect the water vole itself.

From the 6th April 2008 water voles received an increased level of protection, becoming fully covered by the provisions of section 9 of the Wildlife and Countryside Act 1981 (as amended).

Full legal protection under the Act makes it an offence to:

- Intentionally kill, injure or take water voles.
- Possess or control live or dead water voles or derivatives.
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection.
- Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.
- Sell water voles or offer or expose for sale or transport for sale.
- Publish or cause to be published any advertisement which conveys the buying or selling of water voles.

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Appendix III. OTTER INFORMATION.

It is necessary to understand a little about otters, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

Otters are nocturnal and are active all year round. They are large with an adult male reaching 1.2m from nose to tail and weighing about 10kg.

Otters live by undisturbed waters where there is plenty of cover, mostly by freshwater lakes, rivers and quiet small streams as well as some coasts.

Fish are the otter's main source of food, especially eels and they therefore rely on good fish populations. They also eat amphibians and the occasional bird and small mammal.

An otter may use over 40km of river and needs many resting places throughout this range. A female otter will give birth to 1 to 3 cubs in a natal holt which is often away from the main river and must be completely undisturbed.

Generally the only evidence seen of the otter is its faeces or 'spraint', which are deposited along a watercourse in prominent positions.

Once found throughout Britain, most of our otter populations crashed in the 1960's due to poisoning from agricultural pesticides which drained into our river systems. Although this threat has passed and otter numbers are slowly beginning to recover, they are still subject to a number of serious pressures.

- Habitat loss through intensive river management for drainage and flood defence and due to agriculture and urban development.
- Inadequate food supplies, mainly fish.
- Disturbance of breeding sites by people and especially dogs.
- Low water quality and low river flows.
- Roads which cross or run alongside, rivers.

The UK Biodiversity Plan (BAP) contains an otter Species Action Plan (SAP) aimed at maintaining its existing range and population status, as well as increasing the number of populations through re-colonisation.

The otter is listed on Appendix 1 of CITES, Appendix II of the Bern Convention and Annexes II and IV of the Habitats Directive. It is protected under Schedule 5 of the WCA 1981 and The Conservation of Habitats and Species Regulations 2010 (as amended), known as the 'Habitats Regulations'. The European sub-species is also listed as globally threatened on the IUCN/WCMC RDL.

39.—(1) It is an offence-

(a) deliberately to capture or kill an otter;

(b) deliberately to disturb an otter;

(c) to damage or destroy a breeding site or resting place of an otter.

Appendix VI. CRAYFISH INFORMATION.

It is necessary to understand a little about crayfish, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

Crayfish are the largest and most mobile freshwater invertebrate. The white-clawed crayfish *(Austropotamobius pallipes)* is the only native crayfish and this is protected under European and UK legislation.

White clawed crayfish are generally found in areas with relatively hard, mineral rich waters on calcareous and rapidly weathering rocks. They can be found in a wide variety of environments including canals, streams, rivers, lakes reservoirs and water-filled quarries.

White clawed crayfish are typically found in water between 0.75 and 1.25m deep but can occur in very shallow streams with as little water as 50mm and in deeper, slow flowing rivers. They are typically found under rocks and submerged logs or among tree roots and in river-banks. White clawed crayfish are omnivorous but primarily carnivorous eating macro invertebrates and carrion when available. They will also eat worms, insect larvae, snails, small fish, macrophytes, algae and calcified plants.

Crayfish can live for up to ten years and generally reach sexual maturity after three to four years. Breeding takes place between September and November when the water temperature drops consistently to below ten degrees centigrade. Females over winter with a clutch of eggs held beneath their tail. These may number from 20 to 120 and hatch on the female. The juveniles are released from the mother from June in the south to August in the north.

The main threat to the indigenous white-clawed crayfish is the spread of introduced non indigenous species, particularly the larger, faster growing and aggressive North American signal crayfish *(pacifastacus leniusculus).* They are also vulnerable to disease, particularly porcelain disease and crayfish plague, and the latter carried by the signal crayfish.

Crayfish are also extremely vulnerable to pollution incidents, particularly those involving biocides, silage and sheep dip.

As a result, white-clawed crayfish are endangered across most of its range and has been given protection under both European and UK legislation.

The white-clawed crayfish is covered by the Conservation of Habitats and Species Regulations 2010 (as amended), and as species listed in Annexes 2 and 5 of the Habitats Directive, which means that Member States should take measures to ensure that the taking of white-clawed crayfish in the wild is compatible with their being maintained at a favourable status.

In 1998, the white-clawed crayfish was added to Schedule 5 of the Wildlife and Countryside Act giving it partial protection in relation to Section 9(1) as far as it relates to taking and in respect of Schedule 9(5). It is therefore an offence to

intentionally take any white-clawed crayfish from the wild and an offence to sell wild crayfish.

Licences are available from English Nature to allow the taking of white-clawed crayfish for certain specified purposes, including scientific or educational purposes and for conservation purposes. An English Nature survey licence is required where any survey is aimed at finding white-clawed crayfish and involves handling them for counting or identification purposes.

An English Nature Conservation Licence is required for the purpose of conserving white-clawed crayfish or introducing them to particular areas.

Non indigenous crayfish species are also covered under the Wildlife and Countryside Act 1981. Section 14 makes it an offence for any person to (a) release or allow to escape, any wild animal which is of a kind not ordinarily resident in or a regular visitor to Great Britain in a wild state or; (b) is included in Schedule 9 of the Wildlife and Countryside Act.

Three species of non-indigenous crayfish are listed on Schedule 9. These are the signal crayfish *(Pacifastacus leniusculus),* the narrow clawed crayfish *(Astacus leptodacylus)* and the noble crayfish *(Astacus astacus).* Any of these three species found during a survey cannot be returned to the wild.

Appendix V. BAT INFORMATION.

It is necessary to understand a little about bats, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

18 species of bat currently reside in Britain, 17 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 shortage of food, caused by pesticides, as insects are their sole diet, and habitat change.

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 manmade structures and will readily use these to roost and to rear their young.

Bats are protected under the Wildlife and Countryside Act 1981, Regulation 41 of The Conservation of Habitats and Species Regulations 2010, and the Countryside & Rights of Way Act 2000.

It is an offence to intentionally or recklessly kill, injure or capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

A breeding or resting site of any bat is known as a bat roost. A bat roost is therefore any structure a bat uses for shelter or protection. Because bats tend to use the same roosts each year, legal opinion is that the roost site is protected whether or not the bats are present at that time.

Bat roosts can be identified by looking for:-

- Suitable holes, cracks and crevices.
- Bat droppings.
- Prey remains.
- By carrying out night observations using a bat detector.

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

The person applying for that licence has to be suitably qualified and experienced in bat matters. That person is then responsible for ensuring that the measures contained in the licence are carried out.

Appendix VI.

BACKGROUND GREAT CRESTED NEWT INFORMATION.

The great crested newt population has suffered a major decline in Britain over the last century. Numerous ponds have been lost, unmanaged ponds have become silted up and over-shaded, development has destroyed ponds and associated terrestrial habitat and caused fragmentation of populations. The loss of grassland, scrub and woodland has resulted in fewer opportunities for foraging, dispersal and hibernation.

The UK Biodiversity Plan (BAP) contains a great crested newt Species Action Plan (SAP) aimed at maintaining its existing range and population status, as well as increasing the number of populations through re-colonisation.

The great crested newt is listed on Schedule 5 of the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000. The great crested newt is therefore subject to the provisions of Schedule 9, which make it an offence to:

- Intentionally kill, injure or take a great crested newt.
- Possess or control any live or dead specimen or anything derived from a great crested newt.
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt.
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place, which it uses for that purpose.

The great crested newt is also listed on Regulation 41 of the Conservation of Habitats and Species Regulations 2010. Regulation 41 makes it an offence to:

- Deliberately capture or kill a great crested newt
- Deliberately disturb a great crested newt.
- Deliberately take or destroy the eggs of a great crested newt.
- Damage or destroy a breeding site or resting place of a great crested newt.

The legislation applies to all life stages of great crested newts.

The maximum fine on conviction of offences under Section 9 and Regulation 41 currently stands at £5,000. The CroW Act 2000 amendment also allows for a custodial sentence of up to six months instead of, or in addition to, a fine. In addition, items, which may constitute evidence of the commission of an offence, may be seized and detained.

In order to understand the potential effects of development it is essential to understand a little of the great crested newt ecology.

Great crested newts breed in ponds and other water bodies. They can begin to migrate to their breeding ponds as early as the first frost-free days in late January with the

majority reaching their breeding ponds by mid March. Timing will be influenced by a number of factors, mainly evening temperatures above 5ºC and recent rain.

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

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

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

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

From the above, it can be seen that great crested newts spend the majority of their time on land and only visit the ponds for breeding purposes. As a result, surveys need to be timed very carefully. Terrestrial surveys are very inaccurate and the only time that surveys can be truly thorough is in the narrow window of opportunity between March and September.

Great crested newts will travel large distances between ponds and terrestrial refuges. It is recommended that anywhere within 500m of a pond should be treated as potential great crested newt habitat and should be surveyed and evaluated.

An experienced surveyor must carry out the surveys and must be in possession of an appropriate Natural England great crested newt survey licence.

It is essential that great crested newt surveys are planned well in advance of any development and ideally before Planning Consent is sought. Surveys can only be carried out at the appropriate time of year and repeat surveys are essential. The guidelines suggest that between four and six surveys need to be carried out, three of these between mid-March and mid-June.

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

Appendix VII. NESTING BIRD INFORMATION.

It is necessary to understand a little about the legal protection offered to nesting birds in order to evaluate the findings of this report.

Part 1.-(1) Of the Wildlife and Countryside Act 1981states that:-

If any person intentionally:-

(a) kills, injures or takes any wild bird;
(b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
(c) 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:-

(a) 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
(b) disturbs dependant 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".

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, scrub and buildings but others are ground nesting.

The best way to avoid this issue is to plan for vegetation clearance to be carried out outside the bird-nesting season.

Appendix VIII.

REPTILES - GRASS SNAKE AND ADDER INFORMATION.

The grass snake (*Natrix natrix*) and the adder (*Vipera berus*) are the two most common snakes to be found in the UK. Adders are found all over Britain while the grass snake becomes rarer towards the north and are rarely found in Scotland.

The grass snake is usually around 120cm long, live in a variety of rough habitats and lay their eggs in warm rotting vegetation. The background colour is dark green and the body is marked with vertical black bars and spots that run along its sides. There is generally a dark collar marking.

The adder is the only native species that is venomous but this is rarely harmful to humans. Adult adders are generally up to 66cm long. Background 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.

Both snakes hibernate, spending the winter in burrows or under logs protected from the cold and predators. 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.

Both snakes 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.

Appendix IX. REPTILES - LIZARD INFORMATION.

The common or viviparous lizard (*Lacerta vivipara*) is one of three species of lizard that occur in the UK. They have a dry scaly skin and are variable in colour ranging from brown or yellow-brown to almost green with varying patterns of spots or stripes. The typical length of an adult is 150mm, including the tail.

Common lizards hibernate over the winter, emerging from February onwards depending upon the weather. They begin to mate in April and May and the young are born in late July or August. The lizard gives birth to live young, hence the term viviparous, meaning live bearing.

The lizards draw their body warmth from the sun and consequently spend long periods basking in the sun. They are commonly seen on road and railway embankments and on walls where they sit for long periods soaking up the heat of the sun before going to find food.

They occupy a wide range of habitats including woodland, marshes, heathland, moors, sand dunes, hedgerows and bogs.

Common lizards hunt insects, spiders, snails and earthworms. They stun their prey by shaking it and then swallow it whole.

At night, and when startled, they will shelter beneath logs or stones or under other refuges that may be available.

Common lizards 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) and Schedule 2 of The Conservation of Habitats and Species Regulations 2010 (as amended) making it a European Protected Species.

Common lizards should not be confused with the somewhat larger sand lizard (*Lacerta agilis*). These are typically 190mm long and stockier than the common lizard. Their marking are distinctly different being considerably more colourful. 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. Sand lizards are a European protected species.

The third species of lizard is the slow worm *(Anguis fragilis)*, which is frequently mis-identified as a snake. The firm body of the slow worm is distinctly cylindrical in shape and the tiny smooth scales result in a very smooth, shiny appearance. Colouration is typically a uniform grey to brown although there is a wide variation from straw coloured to almost black and some animals have very fine stripes or a zig-zag along the centre of the back. The typical length of an adult is 400mm.

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.

Slow worms hibernate over the winter, emerging from March onwards depending upon the weather. They begin to mate in April and May and six to twelve young are born in August or September.

Their favourite food is slugs but they will also eat insects and spiders.

Slow worms are hard to find. They will bask in the sun but they quickly and quietly move into cover when disturbed and do not generally attract attention as they retreat from a basking spot.

Slow worms are also 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.

Appendix X. HAZEL DORMOUSE INFORMATION.

Once widespread throughout the country, dormice declined in both population and distribution during the 20th Century; largely due to the loss of habitat. They now have a patchy distribution, primarily in southern England and Wales with some areas of reintroduction in the north of England and Scotland.

The hazel dormouse is listed on Schedules 5 and 6 of the Wildlife and Countryside Act 1981, recently modified by the Countryside and Rights of Way Act 2000.The dormouse is therefore subject to the provisions of Schedule 9, which make it an offence to:

- Intentionally kill, injure or take a dormouse.
- Possess or control any live or dead specimen or anything derived from a dormouse.
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a dormouse.
- Intentionally or recklessly disturb a dormouse while it is occupying a structure or place, which it uses for that purpose.

The hazel dormouse is also listed on Annex II of The Conservation (Natural Habitats &c) Regulations 1994. Regulation 39 makes it an offence to:

- Sell or offer for sale a dormouse.
- Possess or transport for the purpose of sale, any live or dead specimen or anything derived from a dormouse.
- Advertise for buying or selling of any such things.

The legislation applies to all life stages of dormice.

The maximum fine on conviction of offences under Section 9 and Regulation 39 currently stands at £5,000. The CroW Act 2000 amendment also allows for a custodial sentence of up to six months instead of, or in addition to, a fine. In addition, items, which may constitute evidence of the commission of an offence, may be seized and detained.

Hazel dormice are also listed as a priority species on the UK Biodiversity Action Plan (BAP).

Dormice typically occur in diverse deciduous woodland, hedgerows and scrub. They are small mammals with a body size of around 6-9cm (plus tail 5-8cm), an orange/brown colour with white underbellies, black eyes, round ears and furry tails.

The dormouse is a nocturnal animal that is rarely caught and hence easy to overlook. They are highly arboreal, spending most of their time high off the ground, feeding along the branches of trees and shrubs and rarely travelling further than 70m from their nest.

Nests may be created in bushes and shrubs; however, more robust resting places such as hollow tree branches, squirrel dreys, old birds' nests are preferred; with nests also found in bat boxes and bird nest boxes.

For around a third of the year, dormice hibernate on or under the ground from October until March/April. They are therefore, highly sensitive to any disturbance to the ground throughout the winter and spring.

It is virtually impossible to prove that dormice are absent and the only certain way to determine their presence is by surveying. This can be done by using traps and baiting points; although, the best way to establish presence is to look for feeding remains (such as gnawed hazel nuts). The erection of nest boxes or nest tubes will also reveal the presence of dormice; however, they are unlikely to be used immediately.

Appendix XI. RED SQUIRREL INFORMATION.

The red squirrel (*Sciurus vulgaris*) is the only native species of squirrel to England. Believed to once have a population of around 3.5 million in the UK; current population estimates there are around 15,000 red squirrels left in England.

The red squirrel is listed on Schedules 5 and 6 of the Wildlife and Countryside Act 1981, recently modified by the Countryside and Rights of Way Act 2000.The red squirrel is therefore subject to the provisions of Schedule 9, which make it an offence to:

- Intentionally kill, injure or take a red squirrel.
- Possess or control any live or dead specimen or anything derived from a red squirrel.
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a red squirrel.
- Intentionally or recklessly disturb a red squirrel while it is occupying a structure or place, which it uses for that purpose.
- Sell, or offer for sale, a red squirrel or any part of a red squirrel.

The grey squirrel is a non-native invasive species which was introduced from North America in 1876. It is covered by Schedule 9 of the Wildlife and Countryside Act 1981 and is recognised as a global threat, being listed on the IUCN international list of 100 worst invasive species.

It is illegal to release or allow a grey squirrel to escape into the wild. Any grey squirrel that is trapped must be humanely dispatched. It is illegal to keep grey squirrels in captivity.

The threat of grey squirrels to red squirrels comes from their ability to live in much denser populations and their capability to decimate food sources before they become viable for red squirrels. Grey squirrels are also carriers of the squirrelpox virus, taking only one individual to introduce the virus to a population of red squirrels. The virus can spread quickly through a population, creating decline up to 25 times quicker than competition alone.

Squirrels are arboreal mammals that like to live in mixed or broadleaf woodlands, but can live in all types of woodland. Due to competition with grey squirrels, red squirrels are increasingly restricted to coniferous woodlands.

Squirrels are active all year round and do not hibernate. They live in dreys, a ball like nest made up of interwoven twigs lined with soft materials such as leaves and moss. Dreys are usually found tight against the tree trunk high up in the tree.

There are 17 large plantation conifer forests within northern England, found in Northumberland, Cumbria, North Yorkshire and Merseyside; which have been designated to help red squirrel conservation. Each reserve is surrounded by a 5km buffer zone to protect from grey squirrels.

Appendix XII. SCHEDULE 9 INVASIVE PLANT SPECIES.

1. Schedule 9 of the Wildlife and Countryside Act 1981 contains a list of invasive species of plant. 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.

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

Common Name	***Latin Name***
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*
Fanwort (Carolina Water-Shield)	*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	*Macrocyctis pyrifera*
Kelp, Giant	*Macrocystis angustifolia*
Kelp, Giant	*Macrocystis intergrifolia*
Kelp, Giant	*Macrocystis laevis*
Kelp, Japanese	*Laminarial japonica*

Knotweed, Giant	*Fallopia sachalinensis*
Knotweed, Hybrid	*Fallopia japonica x Fallopia sachalinensis*
Knotweed, Japanese	*Fallopia japonica*
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*
Primrose, Water	*Ludwigia uruguayensis*
Rhododendron	*Rhododendron ponticum*
Rhododendron	*Rhododendron ponticum x Rhododendron maximum*
Rhubarb, Giant	*Gunnera tinctoria*
Rose, Japanese	*Rosa rugosa*
Salvinia, Giant	*Salvinia molesta*
Seafingers, Green	*Codium fragile*
Seaweed, Californian Red	*Pikea californica*
Seaweed, Hooked Asparagus	*Asparagopsis armata*
Seaweed, Japanese	*Sargassum muticum*
Seaweeds, Laver (except native species)	*Porphyra spp except*
	p. amethystea
	p. leucosticte
	p. linearis
	p. miniata
	p. purpurea
	p. umbilicalis
Stonecrop, Australian Swamp (New Zealand Pygmyweed)	*Crassula helmsii*
Wakame	*Undaria pinnatifida*
Waterweed, Curly	*Lagarosiphon major*
Waterweeds	*All species of the genus Elodea*

3. 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 orgainisations, land managers and the public.

4. 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.

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

5.1. Mechanical control includes cultivation, hoeing, pulling, cutting, raking dredging or other methods to uproot or cut weeds.

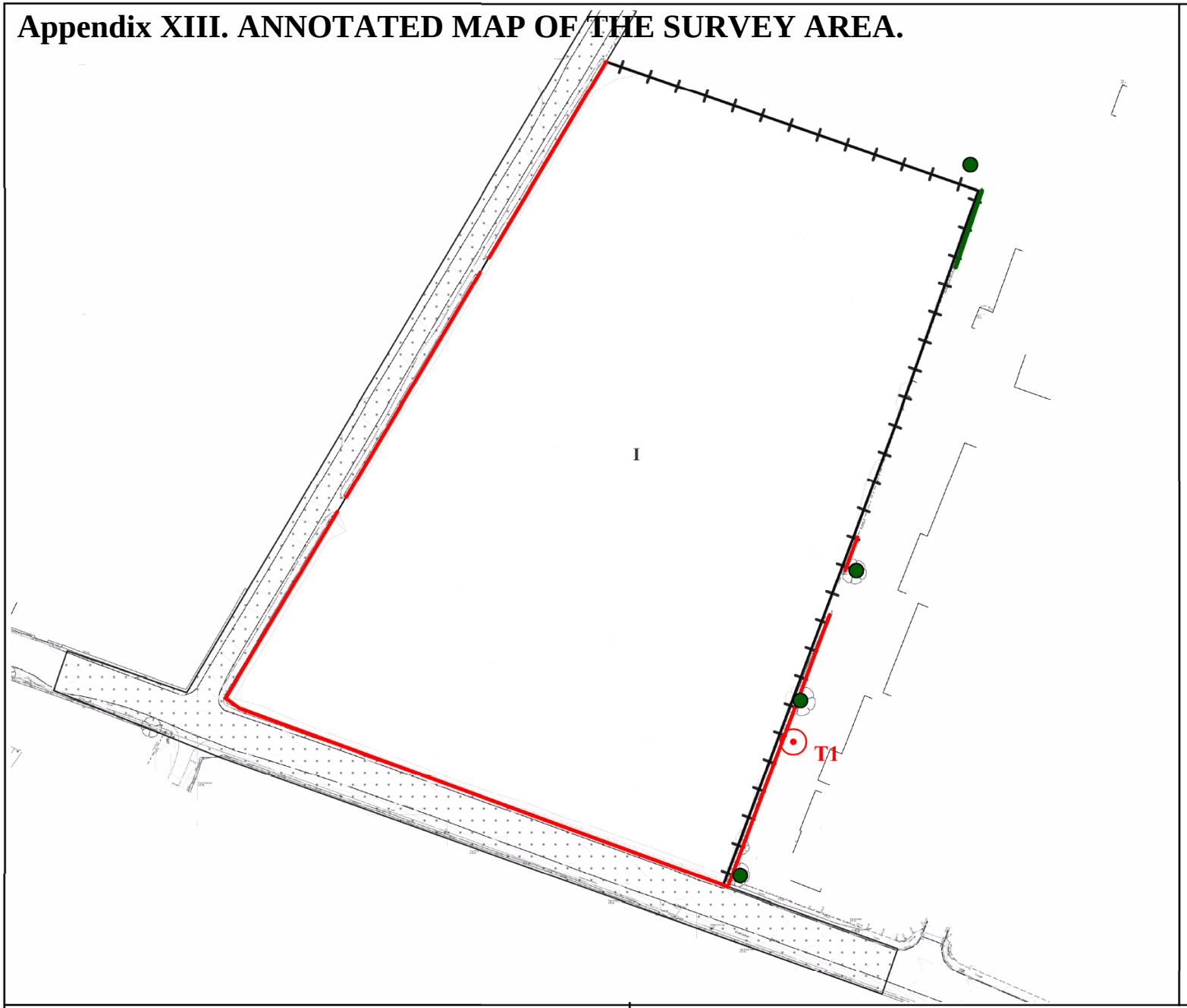
5.2. Where this method is used all plant material must be considered “controlled waste” and must be disposed properly.

5.3. Chemical control uses approved herbicides.

5.4. Natural control uses pests and diseases of the target weed to weaken it and prevent it from becoming a nuisance.

5.5. Environmental control works by altering the environment to make it less suitable for weed growth, for example by increasing or decreasing water velocity.

Appendix XIII. ANNOTATED MAP OF THE SURVEY AREA.



Improved Grassland I

Species Poor Intact Hedgerow

Scattered Trees - Mixed

Walls

Fences

Other Habitat - Road

Target Note

Site: Land off Cross Lane, Scholes

Reference: 170236

Prepared by: Steven Whitcher, MCIEEM

Date: 27th February 2017

Appendix XIV. TARGET NOTES.

T1: An area of cotoneaster growing over the boundary of the site from the adjacent residential gardens.

Appendix XV. SPECIES LISTS.

1. Improved Grassland.

Species.	DAFOR Assessment.
Perennial rye grass (*Lolium perenne*)	D
Cocks foot (*Dactylis glomerata*)	A
Annual meadow grass (*Poa annua*)	F
Fescue (*Festuca sp*)	F

2. Species Poor Intact Hedgerow.

Species.	DAFOR Assessment.
Leyland cypress (*Cupressus x leylandii*)	D

3. Scattered Trees – Mixed.

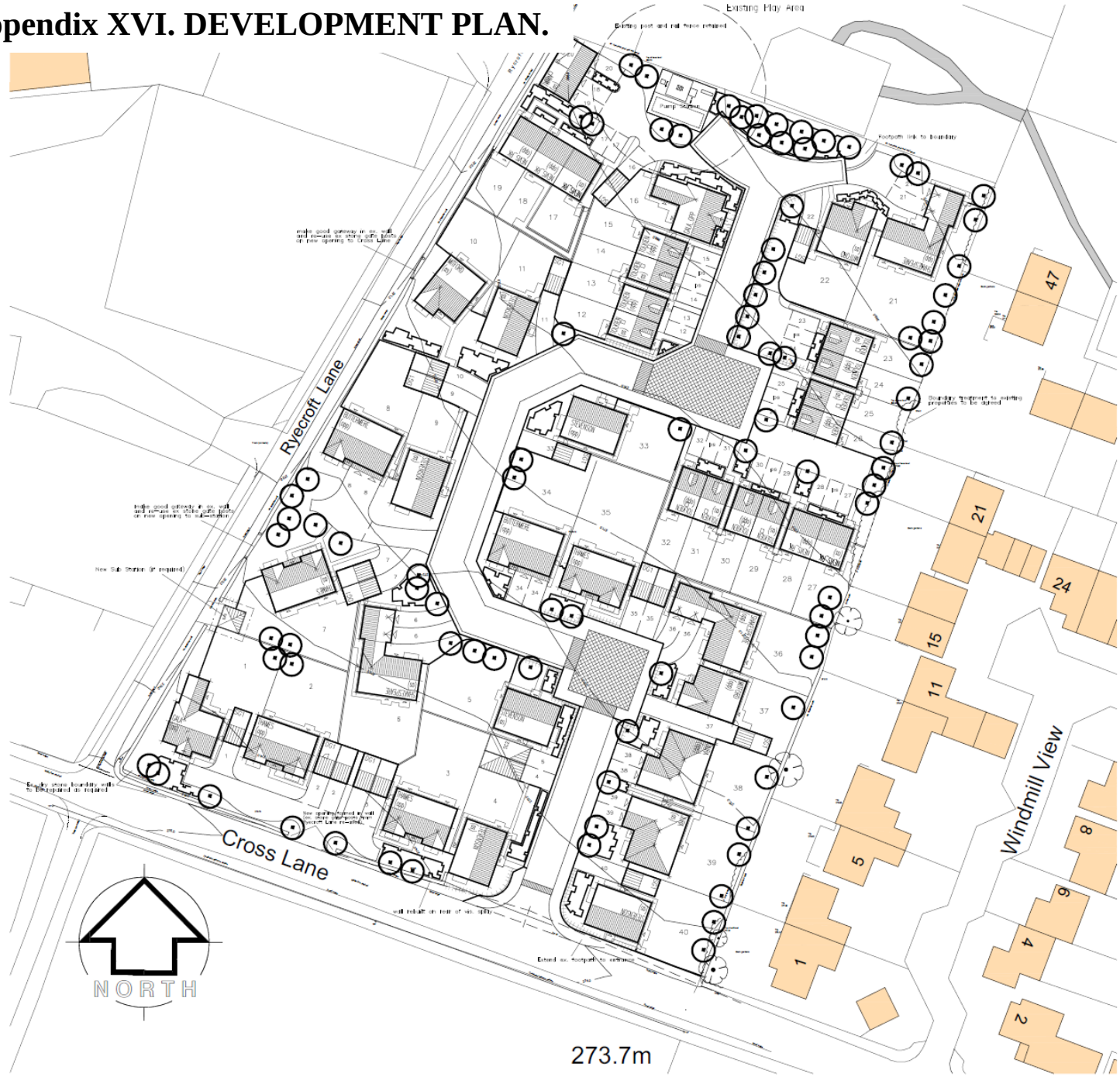
Species.	DAFOR Assessment.
Silver birch (*Betula pendula*)	O
Scots pine (*Pinus sylverstris*)	O
Cherry (*Prunus sp*)	O

4. Other Habitat – Roads.

Species.	DAFOR Assessment.
Perennial rye grass (*Lolium perenne*)	D
Cocks foot (*Dactylis glomerata*)	A
Annual meadow grass (*Poa annua*)	A
Fescue (*Festuca sp*)	F
Dandelion (*Taraxacum officinale*)	O
Ribwort plantain (*Plantago lanceolata*)	O
Thistle (*Cirsium sp*).	O

Appendix XVI. DEVELOPMENT PLAN.

CROSS LANE, SCHOLES, HOLMFIRTH
Site Layout



ACCOMMODATION SCHEDULE

Ref	Name	Format	No.
TW	Twain	2 Bed flat over garage	1
NE	Nevis	3 Bed semi house	5
TO	Tolkien	3 Semi det house 2.5 st.	12
MT	Mitford	4 Bed house	3
ST	Stevenson	4 Bed house	6
GA	Gala	4 Bed house	2
BT	Buttermere	5 Bed house	2
TH	Thames	5 Bed house	4
JU	Jura	5 Bed house	2
SH	Shakespeare	5 Bed house	3

TOTAL 40 No

B: Amended to suit topo insertion. Plots 8&34 Buttermere / Mitford swopped over. JET 06.12.16
A: Re-planned for pump station JET 29.11.16

Rev.	Description	Drawn	Date

miller homes
Miller Homes Ltd - Yorkshire
Lapwing House
Peel Avenue, Calder Park
Wakefield
West Yorkshire, WF2 7UA

Telephone 0870 336 4600
Fax 0870 336 4602
www.millerhomes.co.uk

Project Title
LAND AT CROSS LANE
SCHOLES
HOLMFIRTH

Drawing Title
SITE LAYOUT

Scale	Drawn By	Checked By	Authorised By
1:500	JET		
	Date 12.10.16	Date	Date

Job No.	Drawing No.	Revision
	SCH/PLAN/001	B

Original Sheet Size A1