

**Whitcher Wildlife Ltd.
Ecological Consultants.**



26 CROSS LANE, ROYSTON.

OS REF: SE 37283 11576.

EXTENDED PHASE I HABITAT SURVEY.

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1. INTRODUCTION.

1.1. There are plans to develop an area of land to the rear of 26 Cross Lane, Royston, Barnsley.

1.2. Whitcher Wildlife Ltd carried out an ecology survey in February 2012 with a follow up survey in May 2013.

1.3. Whitcher Wildlife Ltd has now been commissioned to carry out an Extended Phase I Habitat Survey of the site to update the previous reports and to establish whether there are any issues that may affect the proposed works.

1.3. The site survey was carried out on 29th September 2016 and this report outlines the findings of that survey and makes appropriate recommendations.

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

2. SURVEY METHODOLOGY.

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

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

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

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

2.4. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Rob Strachan, Tom Moorhouse and Meryll 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 Jenny Whitcher Roebuck MCIEEM. Since 2001 Jenny has had experience in a professional capacity as a Wildlife Consultant carrying out Ecology Surveys and Phase 1 Habitat surveys. Jenny holds Natural England Survey Licences in respect of bats, great crested newts, crayfish and barn owls, CCW and SNH Survey Licences in respect of bats and great crested newts. She has also successfully completed a number 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. As a full member of CIEEM she is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership.

3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. Barnsley Biological Records Centre was consulted for records of protected species and designated sites within 2km of the survey area.

3.1.2. There are three designated sites within the surrounding area, Rabbit Ings Country Park (550m to the east), Carlton Marsh Local Wildlife Site (1.4km to the south) and Barnsley Canal Local Wildlife Site (175m to the west).

3.1.3. There are six records of great crested newts, all within the Rabbit Ings Country Park to the east. Three of the records are over 800m to the northeast of the site, two have no specific location and one is located 420m to the southeast of the site.

3.1.4. There are a large number of records of water vole, grass snake, pipistrelle bats, noctule bats and Daubentons bats but most of these records are in Carlton Marsh LWS and Rabbit Ings Country Park with a few pipistrelle records in the village of Carlton to the south. There are no records within the site.

3.1.5. The full data search results are available to the client on request.

3.2. The Surveyed Area.

The survey area is shown within the red line on the aerial photograph below. The site is currently used to house chickens and horses. During the surveys carried out in 2012 and 2013 the house and garden of 26 Cross Lane was included in the survey. This property is no longer part of the survey area.



3.3. Description of Habitats.

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

- Scattered Trees
- Improved Grassland
- Tall Ruderal
- Introduced Shrub
- Hedge with trees, species poor
- Hedge, defunct, species poor
- Building
- Fence

3.3.2. Scattered Trees

3.3.2.1. Most of the site is covered with scattered trees. These are more dense in some areas than in others. All trees are semi-mature or sapling and the main species present are hawthorn (*Crataegus monogyna*), sycamore (*Acer pseudoplatanus*), eucalyptus (*Eucalyptus sp.*), cherry (*Prunus sp(p)*), ash (*Fraxinus excelsior*), apple (*Malus domestica*), elder (*Sambucus nigra*), holly (*Ilex aquifolium*), horse chestnut (*Aesculus hippocastanum*), hazel (*Corylus avellana*) and ornamental conifers.

3.3.2.2. Photograph looking east along the northern side of the site.



3.3.2.3. Photograph looking north across the site showing trees in the center of the site.



3.3.2.4. Photograph looking west across the southern side of the site.



3.3.2.5. Photograph looking northeast across the site.



3.3.3. Improved Grassland

3.3.3.1. The whole site is grazed by a large number of chickens that roam around the site. The majority of the site is also grazed by three horses and therefore the grassland across the site is grazed short. The main grass species present are perennial rye grass (*Lolium perenne*) and cocks foot (*Dactylis glomerata*) with nettle (*Urtica dioica*), greater plantain (*Plantago major*), dock (*Rumex acetosella*), white clover (*Trifolium repens*), dandelion (*Taraxacum officinale*), thistle (*Cirsium sp(p)*), ragwort (*Senecio jacobaea*), creeping buttercup (*Ranunculus Repens*), ribwort plantain (*Plantago lanceolate*), ox eye daisy (*Leucanthemum vulgare*), cow parsley (*Anthriscus sylvestris*) and bramble (*Rubus fruticosus*).

3.3.3.2. Photograph looking south along the eastern side of the site showing an area grazed by horses and chickens.



3.3.3.3. Photograph looking west across the south of the site showing another area grazed by chickens and horses.



3.3.3.4. Photograph showing an area grazed by chickens.



3.3.4. Tall Ruderal

3.3.4.1. At the southeast corner of the site there is an area where horses cannot access which is growing nettle (*Urtica dioica*), bramble (*Rubus fruticosus*) and Japanese Knotweed (*Reynoutria japonica*) with a small elder (*Sambucus nigra*).

3.3.4.2. Photograph showing the southeast corner of the site with the Japanese Knotweed circled in red.



3.3.4.3. Photograph showing the Japanese Knotweed.



3.3.5. Introduced Shrub

3.3.5.1. There are two areas of large shrubs growing on the site which are both a type of dogwood (*Cornus sp.*).

3.3.5.2. Photograph showing shrubs growing at the southern side of Building 1.



3.3.6. Hedge with trees, species poor

3.3.6.1. Along the eastern site boundary there is a line of trees between the site and the adjacent grazing field. All the trees are semi-mature and the main species are conifer, crab apple (*Malus sp(p)*), cherry (*Prunus sp(p)*), sycamore (*Acer pseudoplatanus*), eucalyptus (*Eucalyptus sp.*) and ash (*Fraxinus excelsior*).

3.3.6.2. Photograph looking south along this tree line.



3.3.7. Hedge, defunct, species poor

3.3.7.1. At the southeast corner of the site there is a small section of hawthorn (*Crataegus monogyna*) hedge with sapling rowan (*Sorbus aucuparia*) and bramble (*Rubus fruticosus*) between the area of tall ruderal and improved grassland. The photograph below shows this hedge.



3.3.8. Building

There are four buildings on the site, all used to house animals.

3.3.8.1. Building 1 is a large single storey barn constructed with corrugated sheet walls and a shallow pitched roof covered with corrugated sheets. The northern part of this barn has ivy (*Hedera helix*) growing over the roof. There is a large opening at the western side of the building with a low gate across. The floor of the building is covered with straw and the barn is used to house animals. The photograph below shows the western side of Building 1.



3.3.8.2. Building 2 is a single storey wooden stable building with a shallow pitched corrugated sheet covered roof and wood clad walls with three separate stables. Inside the roof is open to the underside of the corrugated sheets. The photograph below looks towards the northeast corner of the building.



3.3.8.3. Building 3 is an open barn with a shallow pitched roof supported on wooden pillars. The roof is covered with concrete tiles with a felt lining below. The photograph below shows the northern side of the building.



3.3.8.4. Building 4 is a small single storey building constructed with cavity walls, which are brick externally and concrete block internally. The roof is pitched and covered with concrete tiles. Inside is one room open to the underside of the roof, which is felt lined under the tiles. The felt lining is in poor condition with gaps and tears. The walls are in good condition with no cracks or gaps. The roof has some slipped and lifted tiles. The building is currently used to house ducks. The photograph below looks towards the northeast corner of the building.



3.3.8.5. There are also two small chicken pens on the site constructed of wood and wire mesh. The photograph below shows one of these pens.



3.3.9. Fence

There are a number of fences along the site boundaries and on the site ranging from wood panel fencing to tape electric fencing.

3.4. Description of Fauna.

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

3.4.2. No watercourses were identified within the survey area. Therefore, there is no habitat for water voles, otters or white clawed crayfish within the survey area.

3.4.3. Five ponds were identified within 500m of the survey area on an Ordnance Survey Map of the area. All five ponds are located in Rabbit Ings Country Park to the east with the nearest pond 250m to the southeast of the site. None of these ponds were visited during this survey. The habitat between the ponds and the site to the east of the railway line is good value terrestrial habitat for great crested newts, including the railway corridor. To the west of the railway the habitat is low value and there are no other ponds in this direction. Therefore, it is unlikely that any newts in these ponds would travel west as far as the site. The site itself is unsuitable as it is heavily grazed by chickens and horses.

3.4.3.1. The map below shows the survey area with a 500m buffer around the site and the five ponds to the east.



3.4.4. Four buildings were identified on the site during this survey.

3.4.4.1. Building 1 is constructed of corrugated sheets and provides no bat roost potential.

3.4.4.2. Building 2 is a wooden stable with a corrugated roof and provides no bat roost potential.

3.4.4.3. Building 3 is an open barn with a pitched tiled roof with a felt lining. This provides very low potential for individual crevice dwelling bats to roost on occasions.

3.4.4.4. Building 4 is a brick building with a pitched, concrete tile covered roof, which has a felt lining that is in poor condition. This building provides very low potential for individual bats to roost on occasions.

3.4.4.5. There are no mature trees on the site although there is a large dead semi-mature eucalyptus tree against the southeast corner of Building 1. This tree has some large sheets of loose bark which could provide very low potential for individual bats to roost on occasions.

3.4.5. The survey area provides moderate potential for foraging bats due to tree lines and the adjacent railway corridor providing a linear feature. However, the site has poor connectivity to other areas except for the railway corridor to the east.

3.4.6. The vegetation and buildings within the survey area provides opportunities for nesting birds during the nesting season, which extends from March to September each year. However, no active nests were identified during this survey but old nests were identified in Building 4.

3.4.7. The survey area provides low potential habitat for reptiles as the site is heavily grazed by chickens and horses, which will be a deterrent. However the railway corridor and Rabbit Ings to the east provide suitable habitat for reptiles. No reptiles were identified during this survey.

3.4.8. No suitable dormouse habitat was identified during this survey.

3.4.9. No red squirrels or red squirrel field signs were identified during this survey and there is no suitable habitat within the survey area.

3.4.10. Japanese Knotweed and Virginia Creeper were identified on the site, both of which are invasive species of plant listed under Schedule 9 of The Wildlife and Countryside Act 1981 and it is an offence to cause these plants to spread.

3.4.10.1. The Japanese Knotweed is located in the area of tall ruderal herbs at the southeast corner of the site. This plant spreads by any part of the rhizome or stem growing into a new plant.

3.4.10.2. The photograph below shows the Japanese Knotweed.



3.4.10.3. The Virginia Creeper is growing at the southeast corner of Building 1 and is growing in the trees and shrubs in this area. This plant grows upwards but if a stem lays on the ground this can root and form a new plant.

3.4.10.4. The photograph below shows the red leaves of the Virginia Creeper growing through a tree on the site.



4. EVALUATION OF FINDINGS.

4.1. There are no designated sites within the survey area. Therefore, there will be no impact on designated sites.

4.2. No badger setts or badger field signs were identified within the survey area. Therefore, there will be no impact on badgers during the proposed works.

4.3. No watercourses were identified within the survey area. Therefore, there will be no impact on water voles, otters or crayfish during the proposed works.

4.4. Five ponds were identified within 500m of the survey area on an Ordnance Survey Map of the area. All five ponds are located in Rabbit Ings Country Park to the east with the nearest pond 250m to the southeast of the site. Habitat to the east of the site is good value terrestrial habitat. There are also no ponds to the west of these five ponds. Therefore, it is unlikely that any newts in these ponds would travel west as far as the site. The site itself is unsuitable as it is heavily grazed by chickens.

4.5. Four buildings were identified on the site. Buildings 1 and 2 are assessed as providing no bat roost potential. Buildings 3 and 4 may provide low potential for individual bats to roost on occasions. There is also a large dead semi-mature eucalyptus tree against the southeast corner of Building 1 that may provide low potential for individual bats to roost on occasions. There is no potential on the site for a large roost or for hibernating bats.

4.5.1. If precautions are put in place there will be no impact on roosting bats and if biodiversity enhancements are made on the site this will enhance the habitat for roosting bats.

4.6. The survey area provides some foraging potential for bats although the site has poor connectivity to other foraging areas. The proposed works will not fragment any foraging habitat and will therefore have a low impact on foraging or commuting bats if precautions are put in place.

4.7. The vegetation and buildings within the survey area provides opportunities for nesting birds during the nesting season, which extends from March to September, inclusive, each year. Vegetation clearance or works to demolish the buildings within the nesting bird season will have an impact on any birds nesting within the work site.

4.8. The survey area provides low potential habitat for reptiles as the site is heavily grazed by chickens which will be a deterrent. The works will have a low impact on any reptiles within the area.

4.9. No suitable dormouse habitat was identified during this survey. Therefore, there will be no impact on dormice during the proposed works.

4.10. No red squirrels or red squirrel field signs were identified during this survey and there is no suitable habitat within the survey area. Therefore, there will be no impact on red squirrels during the proposed works.

4.11. Japanese Knotweed and Virginia Creeper were identified growing on the site. Both plants are invasive and it is an offence to cause the plants to spread. Therefore, there is the potential that developing the site could cause both species of plant to spread.

5. RECOMMENDATIONS.

5.1. As a precaution it is recommended that all personnel working on the site are briefed on the possible but unlikely presence of great crested newts. A toolbox talk and identification sheet can be found in Appendices X and XI of this report to assist with this briefing. In the unlikely event that a great crested newt is found on the site work must stop and Whitcher Wildlife Ltd must be contacted immediately for further advice.

5.2. As there is some low potential for individual bats to roost on occasions in Buildings 3 and 4 and in the dead eucalyptus these buildings and the dead tree must not be removed during the bat activity season. They can only be removed or demolished between November and February when bats are in hibernation.

5.3. It is also recommended that bat roosting opportunities are incorporated into the new development in the form of bat bricks in the gable ends of buildings.

5.4. As there is some potential for bats for forage and commute along the site boundaries it is recommended that as many trees as possible are left in place along the boundaries to provide continued habitat.

5.5. It is also recommended that any lighting installed on the site is down lighting and is not aimed at the trees along the site boundaries.

5.6. Any vegetation clearance and works to demolish any of the buildings on the site should be carried out outside the nesting bird season, which extends from March to the end of September each year.

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

5.8. It is recommended that all personnel are briefed on the potential presence of reptiles and if any reptiles are found during the works they must be left to safely move away of their own accord. If large numbers of reptiles (5+) are found works must stop

and Whitcher Wildlife Ltd contacted for further advice. Appendix XII of this report contains a toolbox talk to assist with this briefing.

5.9. It is recommended that the Japanese Knotweed on the site is treated with an approved herbicide. This should begin immediately as it can take a number of treatments to eradicate the plant. If the treatment is started now the plant may be eradicated from the site before the development begins. A toolbox talk is added in Appendix XIII of this report with further information on this plant.

5.10. The other option is that the plant is dug out but this would mean an area of 7m around the clump and 2m deep must be excavated and disposed of as contaminated waste.

5.11. It is recommended that the Virginia Creeper is cut back and the root dug out and all either chipped or burnt to prevent further spread of the plant.

5.12. It is recommended that biodiversity enhancements are incorporated into the new buildings on the site. One bat brick per four houses is recommended. An example bat brick is shown in Appendix of this report.

5.13. It is recommended that four bird nest boxes are erected on the site to provide enhanced nesting opportunities.

Prepared by:	
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Checked by:	
Derek Whitcher. BSc, MCIEEM, MCMI.	Date: 30 th September 2016.

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Appendix I. 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 II.

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 5°C 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 III. 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 1981 states 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 IV.

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 V. 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 markings 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 VI. 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	<i>Smyrniun perfoliatum</i>
Algae, Red	<i>Grateloupia luxurians</i>
Archangel, Variegated Yellow	<i>Lamiastrum galeobdolon</i> subsp. <i>Argentatum</i>
Azalea, Yellow	<i>Rhododendron luteum</i>
Balsam, Himalayan	<i>Impatiens glandulifera</i>
Cotoneaster	<i>Cotoneaster horizontalis</i>
Cotoneaster, Entire Leaved	<i>Cotoneaster integrifolius</i>
Cotoneaster, Himalayan	<i>Cotoneaster simonsii</i>
Cotoneaster, Hollyberry	<i>Cotoneaster bullatus</i>
Cotoneaster, Small Leaved	<i>Cotoneaster microphyllus</i>
Creeper, False Virginia	<i>Parthenocissus inserta</i>
Creeper, Virginia	<i>Parthenocissus quinquefolia</i>
Dewplant, Purple	<i>Disphyma crassifolium</i>
Fanwort (Carolina Water-Shield)	<i>Cabomba caroliniana</i>
Fern, Water	<i>Azolla filiculoides</i>
Fig, Hottentot	<i>Carpobrotus edulis</i>
Garlic, Three-cornered	<i>Allium triquetrum</i>
Hogweed, Giant	<i>Heracleum mantegazzianum</i>
Hyacinth, Water	<i>Eichhornia crassipes</i>
Kelp, Giant	<i>Macrocystis pyrifera</i>
Kelp, Giant	<i>Macrocystis angustifolia</i>
Kelp, Giant	<i>Macrocystis intergrifolia</i>
Kelp, Giant	<i>Macrocystis laevis</i>
Kelp, Japanese	<i>Laminarial japonica</i>
Knotweed, Giant	<i>Fallopia sachalinensis</i>

Knotweed, Hybrid	<i>Fallopia japonica x Fallopia sachalinensis</i>
Knotweed, Japanese	<i>Fallopia japonica</i>
Leek, Few-flowered	<i>Allium paradoxum</i>
Lettuce, Water	<i>Pistia stratiotes</i>
Montbretia	<i>Crocsmia x crocosmiiflora</i>
Parrot's Feather	<i>Myriophyllum aquaticum</i>
Pennywort, Floating	<i>Hydrocotyle ranunculoides</i>
Potato, Duck	<i>Sagittaria latifolia</i>
Primrose, Floating Water	<i>Ludwigia peploides</i>
Primrose, Water	<i>Ludwigia grandiflora</i>
Primrose, Water	<i>Ludwigia uruguayensis</i>
Rhododendron	<i>Rhododendron ponticum</i>
Rhododendron	<i>Rhododendron ponticum x Rhododendron maximum</i>
Rhubarb, Giant	<i>Gunnera tinctoria</i>
Rose, Japanese	<i>Rosa rugosa</i>
Salvinia, Giant	<i>Salvinia molesta</i>
Seafingers, Green	<i>Codium fragile</i>
Seaweed, Californian Red	<i>Pilea californica</i>
Seaweed, Hooked Asparagus	<i>Asparagopsis armata</i>
Seaweed, Japanese	<i>Sargassum muticum</i>
Seaweeds, Laver (except native species)	<i>Porphyra spp except</i>
	<i>p. amethystea</i>
	<i>p. leucosticte</i>
	<i>p. linearis</i>
	<i>p. miniata</i>
	<i>p. purpurea</i>
	<i>p. umbilicalis</i>
Stonecrop, Australian Swamp (New Zealand Pygmyweed)	<i>Crassula helmsii</i>
Wakame	<i>Undaria pinnatifida</i>
Waterweed, Curly	<i>Lagarosiphon major</i>
Waterweeds	<i>All species of the genus Elodea</i>

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 organisations, 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.

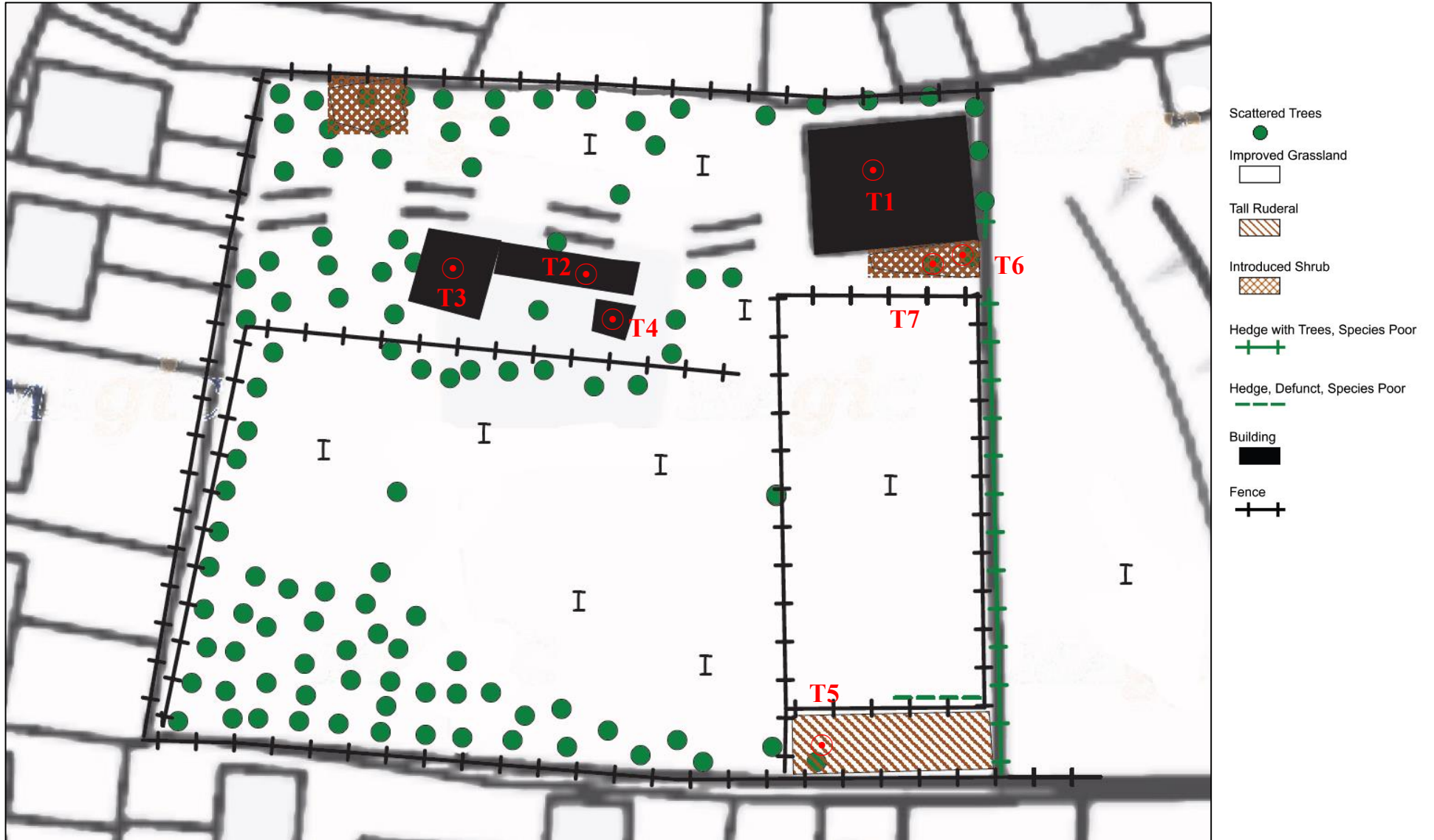
5.2. Where this method is used all plant material must be considered controlled waste and must be disposed properly.

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 VII. ANNOTATED MAP OF THE SURVEY AREA.



Appendix VIII. TARGET NOTES.

T1 is Building 1.

T2 is Building 2.

T3 is Building 3.

T4 is Building 4.

T5 is the location of the Japanese Knotweed.

T6 is the location of the dead eucalyptus tree.

T7 is the location of the Virginia Creeper.

Appendix IX. SPECIES LISTS.

Scattered Trees

Species.	DAFOR Assessment.
hawthorn (<i>Crataegus monogyna</i>)	D
sycamore (<i>Acer pseudoplatanus</i>)	A
eucalyptus (<i>Eucalyptus sp.</i>)	F
cherry (<i>Prunus sp(p)</i>)	O
ash (<i>Fraxinus excelsior</i>)	O
apple (<i>Malus domestica</i>)	F
elder (<i>Sambucus nigra</i>)	F
holly (<i>Ilex aquifolium</i>)	O
horse chestnut (<i>Aesculus hippocastanum</i>)	R
hazel (<i>Corylus avellana</i>)	R
Conifers	F

Improved Grassland

Species.	DAFOR Assessment.
perennial rye grass (<i>Lolium perenne</i>)	D
cocks foot (<i>Dactylis glomerata</i>)	F
nettle (<i>Urtica dioica</i>)	A
greater plantain (<i>Plantago major</i>)	F
dock (<i>Rumex acetosella</i>)	F
white clover (<i>Trifolium repens</i>)	A
dandelion (<i>Taraxacum officinale</i>)	O
thistle (<i>Cirsium sp(p)</i>)	O
ragwort (<i>Senecio jacobaea</i>)	O
creeping buttercup (<i>Ranunculus Repens</i>)	F
ribwort plantain (<i>Plantago lanceolate</i>)	F
ox eye daisy (<i>Leucanthemum vulgare</i>)	R
cow parsley (<i>Anthriscus sylvestris</i>)	R
bramble (<i>Rubus fruticosus</i>)	O

Tall Ruderal

Species.	DAFOR Assessment.
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nettle (<i>Urtica dioica</i>)	D
bramble (<i>Rubus fruticosus</i>)	F
Japanese Knotweed (<i>Reynoutria japonica</i>)	O
elder (<i>Sambucus nigra</i>)	R

Introduced Shrub

Species.	DAFOR Assessment.
dogwood (<i>Cornus sp.</i>)	D

Hedge with trees, species poor

Species.	DAFOR Assessment.
Conifer	O
crab apple (<i>Malus sp(p)</i>)	R
cherry (<i>Prunus sp(p)</i>)	O
sycamore (<i>Acer pseudoplatanus</i>)	D
eucalyptus (<i>Eucalyptus sp.</i>)	F
ash (<i>Fraxinus excelsior</i>)	O

Hedge, defunct, species poor

Species.	DAFOR Assessment.
hawthorn (<i>Crataegus monogyna</i>)	D
rowan (<i>Sorbus aucuparia</i>)	O
bramble (<i>Rubus fruticosus</i>)	F

Building

Species.	DAFOR Assessment.
ivy (<i>Hedera helix</i>)	D

Appendix X. EXAMPLE BAT BRICKS.



Enclosed Bat Box C with engraved motif

Designed specifically for the pipistrelle bat
Available in smooth blue, smooth gold & smooth red
Attractive "bat" motif
Discrete home for bats
Various sizes
Several roosting zones are created inside the box
Bats are contained within the bat box itself
Maintenance free with entrance at the base
Ideal for new build & conservation work

Toolbox Talk : Great Crested Newts

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.

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Identification: Great Crested Newts.

Great crested newts are dark, nearly black in colour with a speckled belly, distinctly orange in colour and with orange stripes across their toes. Great crested newts can grow up to 15cm in length.



Identification: Smooth and Palmate Newts.

Smooth newts are predominantly lighter in colour although their colour may vary from sandy coloured to very dark. Smooth newts also have a speckled orange belly but the orange colour fades to pale.



Palmate newts are similar to smooth newts but with a pinker belly and webbed feet.

Habitat.

Great crested newts live predominantly on land but breed in ponds between March and June.

Great crested newts may be found on land almost all year round. They spend the daytime under rocks or logs, in cracks, crevices or holes, or anywhere that is moist and cool and emerge at night to forage. During the winter months great crested newts hibernate deep down away from frost.

When disturbed in terrestrial habitats newts will usually be very sluggish and will take time to move away.

Legislation.

The great crested newt is listed on Schedule 5 of the Wildlife and Countryside Act 1981, recently modified by the Countryside 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 Annex II and Annex IV of The Conservation (Natural Habitats & C) Regulations 1994. Regulation 39 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 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.

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

Identification : Great Crested Newts

If newts are identified during works the following document can be used to identify whether the newts are likely to be Great Crested Newts.

The newts should also be photographed and professional advice should be sought on the way forward.

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Great crested newts can grow up to 15cm in length. They are dark, nearly black in colour with a speckled belly which is distinctly orange in colour and with orange stripes across their toes.



Great crested newts and other amphibians will often be found underneath refugia such as logs, stones and other rubbish on the ground. They will also often be found in railway ballast and in cable troughs.



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

Toolbox Talk : Reptiles

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Identification: Grass Snakes.

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



Other Reptiles.

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

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

Identification: Adders.

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



Habitat.

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

Identification: Slow Worms.

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



Identification: Common Lizards.

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



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

Legislation.

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

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

Toolbox Talk : Japanese Knotweed

Japanese Knotweed is a large hollow stemmed herbaceous perennial plant that is native to eastern Asia. The plant was originally imported into the UK as an ornamental plant and has since been included onto the list of Schedule 9 invasive non native plants due to its highly invasive growth.

Identification : Japanese Knotweed.

Japanese Knotweed is a hollow stemmed plant that is very changeable throughout the seasons with new shoots in the spring, full grown flowering plants in during late summer and dead stems during the winter.



The shoots of the plant are speckled purple and it forms large dense stands to 3 metres in height with creamy white flowers in the late summer.



Identification : Giant Knotweed and Hybrid Knotweed.

Giant Knotweed and Hybrid Knotweed are very similar plants to Japanese Knotweed with the predominant difference being leaf shape and the size of the plant. Giant Knotweed can grow to 4 or 5m in height

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Legislation

Under section 14 and Part II of Schedule 9 of the Wildlife and Countryside Act 1981 it is an offence for it to be planted or otherwise caused to grow in the wild.

Habitat and Spreading

Japanese Knotweed is diverse and will grow in most situations eventually shutting out the light and killing off the surrounding species of plant.

The plant is a highly invasive fast growing plant species that can grow up to 10cm per day. It can grow from any part of the crown, stem or rhizomes (underground shoots) spread to another area with a new plant potentially growing in within 10 days although rhizome segments can lay dormant for up to twenty years before developing into a plant.

The rhizomes and roots systems of the plant can spread for up to 7m from the plant to a depth of 2m.

Japanese Knotweed re-growth can cause damage with new shoots being capable of growing through tarmac or concrete and the potential for the plant to cause extensive damage to structures.



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