



Eastbourne School – Ecological Survey Report



FEBRUARY 2007



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*Eastbourne School – Ecological Survey Report
Final Report
05 March 2007*

Quality Control

Authors	Checked	Authorised for issue
Anita Hogan	Reuben Singleton	Reuben Singleton

Scott Wilson Scotland Limited

23 Chester Street
Edinburgh
EH3 7ET

Tel: +44 (0)131 225 1250
Fax: +44 (0)131 225 5582
Web: www.scottwilson.com

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Introduction

Scott Wilson Scotland & Ireland Ltd. were contracted by Darlington Borough Council to undertake an ecological walkover survey and produce a survey report in relation to a proposed new Eastbourne School in Hunden's Park in Darlington (central National Grid Reference NZ 305150).

The proposed site consists of amenity grassland playing fields, with woodland, trees and scrub bordering the perimeter of the site. A minor watercourse runs along the eastern perimeter, and to the north of the study area there is an immature woodland belt, and semi-improved grassland with a pond and associated marshy grassland habitats. There have been previous reports of great crested newt (*Triturus cristatus*) populations within this pond, referred to as "Arnold Road Pond" within this report, and a series of great crested newt surveys were carried out by E3 Partnership in 2005 in relation to the proposed Eastern Transport Corridor Link Road (E3 Partnership, 2005).

While the proposed school site will only encroach directly upon the amenity grassland, it was deemed appropriate that an appraisal of the ecological habitats and species on, and adjacent to the site was undertaken. The aim of this study was to:

- Provide baseline data on habitat and species on and adjacent to the site;
- Investigate potential impacts that may occur during construction and/or operational stages;
- Provide advice on legislative framework relating to habitats and species on site, particularly great crested newt;
- Suggest mitigation measures to be employed during the construction and operational stage; and
- Identify possible opportunities for ecological enhancement.

Methodology

Anita Hogan, an Ecologist from the Edinburgh office of Scott Wilson Scotland, undertook all site surveys on 8th February 2007. Anita has over six years experience of ecological survey and protected species surveys. Anita is a full Member of the Institute of Ecology and Environmental Management (MIEEM) and a Chartered Environmentalist (CEnv).

The scope of the fieldwork was informed by research, knowledge of the study area, discussions with Darlington Borough Council, E3 Partnership Report 2005, and the timing and timescale of the study. The methodologies used for the field survey are outlined below.

1.1 Desk-based information

Information was gained through consulting Darlington Council, the Durham Biodiversity Action Plan (BAP), the UK BAP, Darlington Local Plan (1997, incorporating adopted alterations 2001). The Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) was also consulted for information on key environmental schemes and designations of relevance to the site.

Additionally, the E3 Partnership Report: Survey for Great Crested Newts along the Eastern Transport Corridor, Darlington. June 2005, provided background information to the great crested newt population within the Arnold Road Pond (results summarized and interpreted in context below).

1.2 Vegetation & Habitat Surveys

Important hedgerows in England and Wales, which are more than 30 years old and over 20 metres in length, may be protected under the Hedgerow Regulations 1997. They must also meet at least one of eight other criteria¹. It is the aim of the Regulations to secure such important countryside hedgerows, as they can be important wildlife and historical features. This site survey noted any potentially important hedgerows and their ecological importance within the site.

The surveyor undertook a vegetation survey at the site. Though based upon a Phase 1 format (JNCC, 2003), this was not a formal Phase 1 habitat survey, due to seasonal constraints. The optimum field survey period for Phase 1 habitat surveying can be regarded as late April until October, which fell outside the timescales of this project. A Phase 1 survey provides a rapid assessment of habitat presence and quality. Whilst it is focussed upon categorisation of parcels of land based on their vegetation, the potential value of areas to fauna is also considered. Blocks of land are assigned to recognised broad-habitat categories (e.g. semi-improved grassland, running water), and marked on a map using either standard alphanumeric codes or standard mapping colour codes. Target notes are used to provide additional descriptions of features of particular note (e.g. key and characteristic species, presence of notable species).

Consideration was given to possible breeding bird habitat in trees, hedgerows, scrub, and wetland areas within the site. Any mature trees may also have the potential for bat roosts within any cracks and holes in the trunk and branches (see below). The surveyor also noted the presence of any watercourses or waterbodies within, or immediately adjacent to the site, and the key ecological characteristics of the development area. The suitability of these watercourses for protected species, such as otter (*Lutra lutra*), great crested newt and water vole (*Arvicola terrestris*) (see below), was noted.

Exotic and invasive species, such as Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*), were noted by the surveyor if present. These species can have implications for construction activity and human health respectively.

1.3 Breeding Bird Habitat

An assessment was made as regards the suitability of the habitats on site as breeding bird habitat. This was based on professional judgement and based on the species observed during the survey period.

¹ 1. Marks a pre-1850 parish or township boundary, 2. Incorporates an archaeological feature, 3. Is part of, or associated with, an archaeological site, 4. Marks the boundary of, or is associated with, a pre-1600 estate or manor, 5. Forms an integral part of a pre-Parliamentary enclosure field system, 6. Contains certain categories of species of bird, animals or plants listed in the Wildlife and Countryside Act or Joint Nature Conservation Committee (JNCC) publications, 7. Includes (in County Durham): (a) at least 6 woody species, on average, in a 30m length; (b) at least 6 woody species, on average, in a 30m length and has at least 3 associated features; (c) at least 6 woody species, on average, in a 30m length including a black-poplar tree, or a large-leaved lime, or small-leaved lime, or wild service-tree; or (d) at least 4 woody species, on average in a 30m length and has at least 4 associated features. 8. Runs alongside a bridleway, footpath, road used as a public path, or a byway open to all traffic and includes at least 4 woody species, on average, in a 30m length and has at least 2 of the associated features listed at (i) or (v) below. The associated features are: (i) a bank or wall supporting the hedgerow; (ii) less than 10% gaps; (iii) on average, at least one tree per 50m; (iv) at least 3 species from a list of 57 woodland plants; (v) a ditch; (vi) a number of connections with other hedgerows, ponds or woodland; and (vii) a parallel hedge within 15m.

1.4 Badger

A badger (*Meles meles*) survey of the study area was conducted using the standard survey methodology (Harris, Cresswell & Jefferies, 1989). According to this methodology, setts were assessed for level of use and the number of entrance holes, and are thus classified into four types: main, annexe, subsidiary and outlying. These are defined below.

- Main sett: These are large, well-established setts, normally in continuous use. Each group will use only one main sett and it will form the most likely location for the raising of cubs;
- Annexe sett: These setts are usually found in close association with the main sett, and will often be linked to it by a well-worn path. Where a second litter of cubs is born they will be raised in the annexe sett;
- Subsidiary sett: Subsidiary setts will usually have five or less holes, although not all of these will be in continuous use;
- Outlying sett: These setts are used on an occasional basis and will usually consist of only one to three holes. Spoil heaps will generally be smaller than those found associated with the other sett types, indicating a smaller underground structure.

The entrance holes to setts can provide an indication as to the level of use of the sett, and can be classified as follows:

- Well used: These holes are in regular use and are therefore free of debris. They may have been recently excavated.
- Partially used: Debris, including leaves, twigs and other vegetation clutter the entrance to these holes, indicating they are not in regular use. The holes can be used after a minimum of clearance.
- Disused: A considerable amount of clearance is needed before these holes can be used. The holes may become so blocked that only a depression in the ground is visible where the hole used to be.

The method followed the accepted standard approach of walking across the area concerned, looking for signs of badgers, including their setts. Signs are characteristic and sometimes quite obvious and include tufts of hair caught on barbed wire fences, conspicuous badger paths, footprints, small excavated pits or latrines in which droppings are deposited, scratch marks on trees, and snuffle holes, which are small scrapes where badgers have searched for insects and plant tubers (SNH, 2001). The habitat surrounding the sett, soil type, and signs of human activity were also noted on the standard recording sheet if necessary.

1.5 Otter

The standard survey methodology for otter (SNH, 1997) was used along the watercourse within the study area. This methodology involved observing and recording the following field signs:

- Spraints;
- Food remains;
- Rolling places;
- Slides down riverbanks;
- Footprints or paths;

- Shelters (either holts or couches).

Notes were taken of riparian habitat type, suitability and quality. The survey was undertaken during favourable weather conditions, and at a time when water level was low in the watercourse, to ensure that high water levels had not removed field signs.

1.6 Water Vole

For the purposes of this survey, the entire length of the watercourse within the study area was surveyed using standard methodologies (Strachan, 1998). Signs of water voles, if present, were recorded on standard survey forms. These forms note sightings, sounds of entering water, latrines showing discrete piles of droppings, tunnel entrances (above and below water), cropped 'gardens' or 'lawns' around tunnel entrances, feeding stations of chopped vegetation, paths at waters edge, runs in the vegetation and footprints in the mud (Strachan, 1998).

The optimum time to survey for water voles is between late April and early October, and this project falls outside those times. However, the site visit determined the suitability of the watercourse for water voles, and allowed an assessment of whether mitigation measures or further survey will be required during the construction period.

1.7 Bats

An assessment of the potential a tree has to support bats formed a routine element of all tree surveys (see vegetation and habitat surveys above). Where features such as cracks, woodpecker holes, cavities, loose bark, dense ivy, bird or bat boxes were present, then closer inspection was required. Veteran trees can typically exhibit many of these features and can often be regarded as sites with clear bat roost potential. Signs of roosting bats are indicated by:

- Staining around a feature e.g. cracks, caused by natural oils in bat fur;
- Scratch marks around a feature, caused by bat claws;
- Bat droppings beneath a hole;
- Urine stains below the entrance to a hole;
- Audible squeaking from a cavity;
- Large roosts or regularly used sites may produce an odour;
- Flies around an entrance, attracted by the smell of guano.

During winter months only the potential of a tree to have a bat roost may be determined, and signs of roosting may not be obvious, and a more detailed activity survey can be required in the summer months when bats are present on roosts. If trees that have a high potential for bat roosts were found, then a bat specialist would be required for further detailed inspection at a later date. No building or emergence surveys were undertaken for existing buildings adjacent to the site as it is anticipated that the bat potential in these buildings would be covered in a separate commission.

1.8 Great Crested Newts

E3 Partnership produced a specific report: Survey for Great Crested Newts Along the Eastern Transport Corridor, Darlington. June 2005, which was referred to for information (as detailed in previous sections). As part of this report they carried out great crested newts surveys at the Arnold Road Pond and associated wetland areas, which is of particular relevance to this project.

During this walkover, these wetland areas were assessed for their potential habitat suitability for great crested newts (*Triturus cristatus*). The standard methodology for a presence/absence survey is a combination of refuge searching, egg searching, netting, torching and bottle trapping. However, it was not possible to undertake presence/absence surveys, as this should be undertaken during March to June. In addition relevant information was already in existence for the pond in question. Great crested newts prefer extensively vegetated ponds with a mix of submerged, emergent, and floating plant cover, as well as open areas. Terrestrial areas should provide refuge habitat, foraging opportunities, and dispersal opportunities.

Great crested newts need both aquatic and terrestrial habitat, and the development site was assessed for suitable areas such as rough grassland, woodland, scrub, debris etc. Great crested newts can move over considerable distances from ponds, up to 1.3km from breeding sites. The majority of newts will inhabit areas closer to their ponds, and newts commonly move between ponds that are within 250m of each other (English Nature, 2001). In other studies, 500m surrounding a newt pond can be considered “newt habitat” (Alexander 1997). Therefore as a precautionary measure, all suitable habitat within 500m of this pond is considered suitable newt habitat and should be protected as such.

Results

The results are presented below, and in Figure 1 and Appendix 1.

1.9 Desk-based information

The Local Plan classes the site as E3 “Open Land” with no specific designations. No specific designations or features of interest were noted on the MAGIC website.

The E3 Partnership Report: Survey for Great Crested Newts Along the Eastern Transport Corridor, Darlington (E3 Partnership 2005), provided background information to the great crested newt population within the Arnold Road Pond. The key findings within this report are shown below:

- Great crested newts have been recorded as present at Arnold Road since at least 1984;
- The pond contains water from late autumn to late July and averages 19m x 10m and 0.6m deep, but can increase considerably in wet weather;
- The surrounding area is dominated by unintensively managed grassland, scrub and woodland, thereby providing good foraging and hibernation habitat.
- Great crested newt surveys during 2003-2005 (refuge searching, egg searching, netting and torching) showed that the site supports a low breeding population of great crested newts with a peak count of 8 recorded during surveys.
- Within Darlington there are known to be a number of good to exceptional populations of great crested newts, therefore, the significance of this site is reduced. However it is reasonable to expect that newts will travel readily between this pond and other ponds in the locality;
- Mitigation measures were proposed to protect newts from adverse impacts during the construction period of the new link road. This includes a programme of fencing and trapping to prevent newts from entering the construction areas and to prevent legal implications in relation to this European Protected Species.

Arnold Road Pond is just over 110m from the amenity grassland and associated habitats of Hunden's Park and therefore Hunden's Park is well within the 500m perimeter, which we consider in this report to be suitable newt habitat, and as previously described in Section 2.8 (Alexander, 1997).

1.10 Vegetation & Habitat Surveys

Apart from the amenity grassland which dominates the site, the following habitats were noted in the adjacent area, as shown on Figure 1: amenity grassland, semi-improved grassland, marshy grassland, trees, broadleaved plantation, mixed plantation, scattered scrub, dense scrub, running water, open water, hardstanding and built up areas.

The amenity grassland is regularly maintained and mowed and is of negligible ecological value. The surrounding trees and woodland, mainly dominated by hawthorn (*Crataegus monogyna*), cherry (*Prunus* sp), and woodland associated with the watercourse, are of low intrinsic value, but provide potential habitat for bats and breeding birds, and the woodland sites may provide cover for great crested newts, other amphibians and possibly reptiles. The open water to the north of the site (Target Note 8) provides suitable habitat for great crested newt and other amphibians. The watercourse running along the eastern perimeter of the site is highly modified with woodland, and scattered and dense scrub providing a riparian wildlife corridor.

While these habitats are deemed to be of low quality, they do provide habitat for breeding birds, and potential habitat for bats, great crested newts, other amphibians and reptiles. The Durham LBAP includes Parks and Amenity Grasslands, Ponds, Lakes and Reservoirs, River and Streams and Urban Habitats as priority habitats.

No invasive species were observed growing on site.

1.11 Breeding Bird Habitat

Common woodland birds were observed and heard during the walkover. These included a flock of goldfinches (*Carduelis carduelis*), wren (*Troglodytes troglodytes*), blue tit (*Parus caerulea*), robin (*Erithacus rubecula*) and greenfinch (*Carduelis chloris*). The goldfinches were observed within the immature broadleaved woodland to the north of the site (Target Note 2). All of these bird species may breed within the scrub and woodland distributed throughout the study site during mid March to August. While none of the species observed are afforded particular legal protection, there is suitable habitat for Durham LBAP species within the study area, such as song thrush (*Turdus philomelos*), bullfinch (*Pyrrhula pyrrhula*) and skylark (*Alauda arvensis*). These species are also red listed (see section 4.2).

1.12 Badger

No badger signs were noted within the site or within the surrounding ecological survey area. There are suitable areas for foraging and setts in the wider area, but given the largely built-up and residential nature of the site, it does not provide optimal badger habitat.

1.13 Otter

No otter signs were noted along the watercourse on site, and it is not deemed to provide suitable habitat. The watercourse is highly modified and is largely stagnant or without perceptible flow and therefore would not provide suitable otter foraging or resting habitat.

1.14 Water Vole

No water vole signs were noted along the watercourse on site, and but it may provide sub-optimal habitat.

1.15 Bats

While no signs of bats were observed on site, trees along the northern edge of the site (Target Note 1) provided suitable habitat for bat roosts. While they would not be large enough for maternity roosts, they may provide habitat for males or as transient roost sites. Mature trees at the Retirement Home entrance will over time provide potential bat habitat but at the present time no cracks or crevices were noted.

1.16 Great Crested Newts

There was no further evidence of great crested newts on site to supplement the information provided within The E3 Partnership Report (June 2005). The pond was frozen over at the time of survey, but there is certainly suitable hibernation and foraging habitat in the wider area, including woodland and scrub surrounding Hunden's Park and the amenity grassland in Hunden's Park itself. As mentioned in previous sections, the pond is within 110m of the amenity grassland area in Hunden's Park and there is the potential for impacts upon great crested newts travelling from the pond along suitable terrestrial habitat to other suitable ponds in the wider area. The potential impacts are discussed further below.

Relevant Legislation and Potential Impacts

1.17 Vegetation and Habitats

Legislation

Priority habitats in the UK Biodiversity Action Plan are also considered to be Habitats of Principal Importance for the Conservation of Biodiversity in England under Section 74 of the Countryside and Rights of Way Act 2000. There were no specific UKBAP priority habitats present on site. The Durham Biodiversity Action Plan (LBAP) lists species and habitats of value in the local context of Co. Durham, and best reflect current trends in the populations of valued species. Local priority habitats present on and directly adjacent to the site include Parks and Amenity Grasslands, Ponds, Lakes and Reservoirs, River and Streams and Urban Habitats.

Under Section 14 of the Wildlife and Countryside Act 1981 it is an offence to cause the growth of Japanese knotweed or giant hogweed. There is an onus on developers to prevent the spread of these invasive species, and guidance is provided within Environment Agency Guidelines (2003), Code of Practice for the Management, Destruction and Disposal of Japanese Knotweed. Following the removal of invasive species, any discarded plant material is classed as "controlled waste" and requires a waste management licence under Section 34 of the Environmental Protection Act 1990.

Potential Impacts

There will be direct impacts upon the amenity grassland area in Hunden's Park. The watercourse, which runs along the western boundary of the site, may be indirectly affected through pollution incidents during construction. The works will not have any direct legal implications for habitats, but Parks and Amenity Grassland is a Durham LBAP habitat. Therefore it is considered that the impacts on these low quality habitats will be negligible.

1.18 Breeding Birds

Legislation

All wild bird species in the UK are protected from killing, injury and taking under the Wildlife and Countryside Act 1981, as amended (WCA). With certain exceptions, it is illegal to intentionally kill, injure or take any wild bird; intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; or intentionally take or destroy an egg of any wild bird.

The JNCC publish a list of Birds of Conservation Concern (JNCC, 2002). Birds on the Red list are those of high conservation concern and include common and widespread species such as the house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*) and skylark (*Alauda arvensis*). Birds on the Amber list are of medium conservation concern and include the dunnock (*Prunella modularis*) and kestrel (*Falco tinnunculus*).

Some birds of conservation concern are priority species on the UKBAP. Priority species in the UK BAP are also considered to be Species of Principal Importance for the Conservation of Biodiversity in England under Section 74 of the Countryside and Rights of Way Act 2000. UKBAP priority species include the song thrush (*Turdus philomelos*), bullfinch (*Pyrrhula pyrrhula*) and linnet (*Carduelis cannabina*). The Durham LBAP lists species and habitats of value in the local context of Co. Durham, and best reflect current trends in the populations of valued species.

Potential Impacts

Current proposals do not involve removal of trees or scrub and therefore breeding bird habitat will not be directly removed. If construction work is carried out during the breeding bird season (mid March to August inclusive) breeding birds may be disturbed through noise and vibration.

Should the proposals change to include the removal of trees, scrub and vegetation, this will need to be undertaken outside the breeding bird season of 15 March - August inclusive to avoid direct impacts upon breeding birds and their nests and legal implications.

1.19 Badger

Legislation

The badger is protected under Schedule 6 of the WCA and is also the subject of specific legislation, the Protection of Badgers Act 1992. Animals listed on Schedule 6 of the WCA are protected against trapping, snaring or netting and other means of capture. The Protection of Badgers Act, 1992 is based upon the need to protect badgers from baiting and deliberate harm or injury. It is also an offence to damage or destroy a badger sett, to obstruct access to any entrance or to disturb a badger when it is occupying a sett. Removal of significant areas of badger foraging habitat may also contravene the Act, as it could be regarded as cruelty.

A sett is defined as 'any structure or place that displays signs indicating current use by a badger'. The term current includes use within the last year. On development sites, this means that "significant" construction activities within 30m of a badger sett require a licence from Natural England – Wildlife Licensing Department. A 'closed season' for development near to a sett is imposed between 1st December and 30th June, when the badgers are breeding.

While badgers are not a UK BAP priority species, they are listed on the Durham LBAP as a priority species.

Potential Impacts

As no badger signs were seen on site, and the area provides sub-optimal habitat, it is not anticipated that there will be any implications for badgers due to this proposal.

1.20 Otters

Legislation

The otter is listed on Schedules 5 and 6 of the WCA. Under the provisions of this Act it is a criminal offence in most circumstances to intentionally kill, take or injure an otter; intentionally disturb an otter in its place of shelter; intentionally damage, destroy or obstruct access to a place of shelter. The EC Habitats Directive implemented through the Conservation (Habitats & c.) Regulations 1994 makes provisions to protect both a species and its habitat. Under these regulations, it is also an offence to damage or destroy an otter shelter, whether intentionally or not; or to deliberately disturb an otter.

The otter is a priority species in the UK BAP. It is also considered to be a Species of Principal Importance for the Conservation of Biodiversity in England under Section 74 of the Countryside and Rights of Way Act 2000 and is also listed on the Durham LBAP as a priority species.

Potential Impacts

As no otter signs were seen on site, and the area provides sub-optimal habitat, it is not anticipated that there will be any implications for otters due to this proposal.

1.21 Water Voles

Legislation

Water voles are protected under the Wildlife and Countryside Act 1981, as amended. This makes it an offence, intentionally or recklessly, to damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection. It is also an offence to disturb water voles while they are using such a place.

The water vole is a priority species in the UK BAP and as such is considered to be a Species of Principal Importance for the Conservation of Biodiversity in England under Section 74 of the Countryside and Rights of Way Act 2000. It is also listed on the Durham LBAP.

Potential Impacts

As no water vole signs were seen on site, and the area provides sub-optimal habitat, it is not anticipated that there will be any implications for water voles due to this proposal.

1.22 Bats

Legislation

All bat species are fully protected under the Conservation (Natural Habitats & c.) Regulations 1994 and the Wildlife and Countryside Act 1981, as amended. Six species of bats are priority species in the UK BAP. These species are also

considered to be Species of Principal Importance for the Conservation of Biodiversity in England under section 74 of the Countryside and Rights of Way Act 2000. All bats are also priority species in the Durham LBAP. Four bat species in the UK are included on Annex II of the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, referred to as the Habitats Directive.

Potential Impacts

As long as no trees are felled due to these proposals, there are no implications for this development. In particular, the trees identified in Target Note 1 should be retained.

Should the proposals change to include the removal of trees, a bat specialist or trained ecologist will need to inspect the trees immediately prior to felling, and remain to supervise the felling of trees to inspect for further signs as the felling progresses. This mitigation measure is to avoid direct impacts upon bats and their roosts and legal implications.

1.23 Great Crested Newts

Legislation

Great crested newts are fully protected under the Conservation (Natural Habitats & c.) Regulations 1994 and the Wildlife and Countryside Act 1981, as amended. The great crested newt is a priority species in the UK BAP and is also considered to be Species of Principal Importance for the Conservation of Biodiversity in England under section 74 of the Countryside and Rights of Way Act 2000. It is also listed on the Durham LBAP. Under the UKBAP, proposed actions include:

- Site safeguard and management: Seek to maintain the number and distribution of occupied sites through habitat restoration or creation of sufficient new sites near existing ones to compensate for local losses.
- Species management and protection: Encourage the natural dispersal of the species to new sites through habitat management and re-creation and, if necessary, consider establishing a translocation or re-introduction programme to restore populations to previously occupied or appropriate new sites.

Under the Durham LBAP, proposed targets include:

- Target 1: Maintain the population of the great crested newt above its present level. Ensure that its range does not decline from its current extent.
- Target 2: Carry out survey to discover the current state of the great crested newt population in the Durham area. Revisit Green's 1984 sites as part of this survey.
- Target 3: Ensure that all key ponds for great crested newts are in good condition for the species. Place particular emphasis on managing the land at least 250 metres around ponds suitably for the newts.
- Target 4: Use the great crested newt to raise awareness of the need to conserve pond and amphibians.

Additionally, the great crested newt is included on Annex II of Habitats Directive, and as such its conservation requires designation of Special Areas of Conservation (SACS).

Essentially it is illegal to:

- Intentionally or deliberately capture or kill, or intentionally injure great crested newts;
- Deliberately disturb great crested newts or intentionally or recklessly disturb them in a place used for shelter or protection;
- Damage or destroy a breeding site or resting site;
- Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.

Potential Impacts

While there is a small population of great crested newts in the Arnold Road Pond, and this pond is within 110m of Hunden's Park, there should be no direct impacts upon the breeding pond as a result of this proposed development. However, there is suitable terrestrial newt habitat in the wider area and therefore there is the potential to:

- Deliberately *disturb* great crested newts or intentionally or recklessly *disturb* them in a place used for shelter or protection;
- *Damage or destroy* a breeding site or *resting site*;
- Intentionally or recklessly *damage, destroy or obstruct* access to a place used for *shelter or protection*.

The potential impacts can be broken down into habitat loss, disturbance, severance, and accidental mortality as shown below:

- Habitat loss: As this proposal mainly involves the removal of amenity grassland, which is not classed as optimal newt habitat, there should not be any direct loss of newt habitat.
- Severance: The new school site may cause fragmentation of newt habitat, as newts may not be able to travel freely to other ponds south of the study area.
- Disturbance: Newts may be disturbed within the construction area, which may potentially cause newt mortality.

However, with mitigation in place as outlined below, it is anticipated that work can be carried out without significant impacts upon newts, or the newt population within the pond.

1.24 Other Species of Interest

Amphibians

The common frog (*Rana temporaria*), common toad (*Bufo bufo*), palmate newt (*Triturus helveticus*) and smooth newt (*Triturus vulgaris*) receive protection from sale and injury under WCA. Smooth newt, palmate newt, common toad and common frog are also on the Durham LBAP.

Reptiles

The adder (*Vipera berus*), grass snake (*Natrix natrix*), common lizard (*Lacerta vivipera*) and slow worm (*Anguis fragilis*) receive some protection, including from killing and injury, under WCA.

Potential Impacts

It is not considered that there will be any impacts on reptiles as a result of this project. Amphibians, other than great crested newts discussed above, should not be affected by the proposals, as there is no direct loss of suitable habitat anticipated.

Mitigation and Ecological Enhancement

1.25 Mitigation

As there are no signs of otters, badgers, water voles within the study area, no mitigation is required for these species. Mitigation is limited to that recommended for habitats, breeding birds, bats and great crested newts.

Habitats

Habitat loss should be limited to the amenity grassland within Hunden's Park and all other habitats on site, particularly trees and scrub, should be retained. The watercourse on site will need to be protected from pollution through adhering to Environment Agency EA best practice procedures during works, in particular Pollution Prevention Guidelines PPG5 (Works In, Near or Liable to Affect Watercourses) and PPG6 (Works at Construction & Demolition Sites). In particular the cherry trees along the northern perimeter of the site and the trees adjacent to the Retirement Home should be retained.

Bats and Breeding Birds

Bats and breeding birds will not be directly affected as long as scrub and trees are not directly affected. If trees and scrub are to be removed, to avoid legal implications all vegetation clearance must be undertaken outwith the bird-breeding season (15th March to August) and a bat specialist should be contracted to check trees before felling. It is recommended that all trees are retained on site, to avoid legal implications, and to enhance the nature conservation interest of the site. In particular the cherry trees along the northern perimeter of the site and the trees adjacent to the Retirement Home should be retained.

Great Crested Newts

Mitigation will need to be put in place to prevent legal implications in relation to great crested newts and to protect the newt population at Arnold Road Pond. It would also be required to propose a programme of mitigation so as to adhere to proposals and targets set out in the UKBAP and Durham LBAP as detailed in Section 4.7. Of particular relevance in the UK BAP is the requirement for "*Site safeguard and management*" and "*Species management and protection*". The Durham LBAP also has targets to "*maintain the population of the great crested newt above its present level and ensure that its range does not decline from its current extent*" and to "*ensure that all key ponds for great crested newts are in good condition for the species with particular emphasis on managing the land at least 250 metres around ponds suitably for the newts*".

An Ecologist with great crested newt experience will need to be contracted to design a newt Exclusion Programme well in advance of the works commencing. This Exclusion Programme will be required in order to ensure that newts are not affected by proposed works at Hunden's Park while travelling between ponds, or using terrestrial habitat in the vicinity of the pond.

It is anticipated that this Exclusion Programme will follow guidance within the Great Crested Newt Conservation Handbook (Froglife, 2001) and Great Crested Newt Mitigation Guidelines (English Nature, 2001). It should include the erection of newt-proof fencing along the northern perimeter of Hunden's Park, and prevent all access by newts to the construction area from this pond. A period of pitfall trapping should also be carried out to the south of the fencing under the Exclusion Programme to ensure that all newts are contained to the north of Hunden's Park and to prevent newts being disturbed or killed within the Hunden's park construction site.

Liaison will be required with Natural England regarding the need for a DEFRA licence to undertake the Exclusion Programme or the need to undertake further surveys. It would also be prudent to liaise with E3 Partnership and Darlington Borough Council regarding timing of the Eastbourne Schools project and the New Link Road so as to minimise impacts upon great crested newts, prior to designing the Exclusion Programme, so as to co-ordinate mitigation required. There is also a proposal by Darlington Council for the creation of Allotments to the north of Hunden's Park, to replace the woodland in situ at present, and it would be prudent to take account of great crested newts in the development and design of the Allotments.

1.26 Ecological Enhancement

There are opportunities for ecological enhancement on site, which should ideally be planned early in the design stage. This may involve other disciplines such as Landscape Architecture, in association with Ecology, to sensitively design the new school site in such a way as to protect species and habitat and where possible encourage new species to use the site by providing suitable habitat.

All landscape planting should be based upon native plants, of local seed mixes of local provenance as is practical. "Wildflower" meadows can require less maintenance than amenity grassland and are therefore easier to maintain in the longer term.

Creating a partnership with a local wildlife partnership (e.g. Durham Wildlife Trust, Durham Bat Group) can be a beneficial approach. This would be beneficial early in the design process, to provide additional information on species of local importance to protect, and/or provide wildlife-friendly habitats on site. A key focus could potentially be the species listed on the Durham LBAP, shown in Appendix 2.

Due to the number of proposals surrounding the Arnold Road Pond (new link road, school development, allotments) this will inevitably result in restricting the movements and possibility for dispersion of great crested newts. This will place additional pressures on an already vulnerable small great crested newt population. Steps should be taken to provide the best habitat possible in the small remaining area and possibly within the proposed Allotments and the new school site. It is noted that within the mitigation for the Link Road, new ponds are proposed adjacent to Arnold Road Pond along with enhancement of the terrestrial habitats to make them more suitable for newts, such as creating log-piles and refugia. Suitable hibernation refugia (such as log piles/earth banks) could be provided within or just outside the school premises to supplement these sites. This newt enhancement could be designed in co-ordination with the Ecologist contracted to undertake the newt Exclusion Programme or upon advice provided within the E3 Partnership Report (E3 Partnership, 2005).

The local wildlife partnership could also be engaged to provide on-going support and management of the ecological features on the school site. Possibilities include erecting bat boxes (possibly in association with Durham Bat Group), erecting bird

boxes (in association with Durham Wildlife Trust), creating pond habitats for amphibians (possibly in association with the Local Amphibian and Reptile Group or Durham Wildlife Trust).

Summary and Conclusions

Scott Wilson Scotland & Ireland Ltd. were contracted by Darlington Borough Council to undertake an ecological walkover survey and produce a survey report in relation to a proposed new Eastbourne School in Hunden's Park in Darlington (central National Grid Reference NZ 305150).

The proposed site consists of amenity grassland playing fields, with woodland, trees and scrub bordering the perimeter of the site. A minor watercourse runs along the eastern perimeter, and to the north of the study area there is an immature woodland belt, and semi-improved grassland with a pond and associated marshy grassland habitats. There have been previous reports of great crested newt (*Triturus cristatus*) populations within this pond, referred to as "Arnold Road Pond" within this report, and a series of great crested newt surveys were carried out by E3 Partnership in 2005 in relation to the proposed Eastern Transport Corridor Link Road (E3 Partnership, 2005).

Anita Hogan, an Ecologist from the Edinburgh office of Scott Wilson Scotland, undertook all site surveys on 8th February 2007. The surveys looked at: vegetation and habitats, breeding birds, badger, otter, water vole, bat and great crested newts. A habitat map was produced, along with a list of target notes and photographs to illustrate notable findings.

No habitats of significance were noted within the survey area, but trees and scrub have potential for bat roost habitat and breeding birds. It was recommended that all scrub, trees and vegetation be retained on site. A minor watercourse runs along the eastern side of the survey boundary, which will need to be protected against direct encroachment and pollution. Should trees, scrub and vegetation be removed, removal should be carried out outside the breeding bird season (mid March to August inclusive) and trees should be checked for bats immediately prior to removal by a trained Ecologist.

The Arnold Road Pond supports a low great crested newt population, based on surveys carried out for E3 Partnership for their survey along the Eastern Transport Corridor (E3 Partnership, 2005). Arnold Road Pond is just over 110m from the amenity grassland and associated habitats of Hunden's Park and therefore Hunden's Park provides potential for newt terrestrial habitat. Mitigation will need to be put in place to prevent legal implications in relation to great crested newts and to protect the newt population at Arnold Road Pond. This should include a newt Exclusion Programme, carried out in consultation with Natural England, DEFRA, Darlington Council and possible E3 Partnership so as to co-ordinate newt mitigation for this project with other schemes planned in the vicinity.

Ecological Enhancement measures were also suggested, such as landscape planting based upon native plants of local provenance, creating a partnership with a local wildlife group to provide refuges and habitat for species of interest, e.g. Species on the Durham Local Biodiversity Action Plan. Particular reference is made to possible enhancement measures for the newt population in Arnold Road Pond, to protect this low population of newts. These enhancements will need to be co-ordinated with work proposed by E3 Partnership to ensure success and best use of resources.

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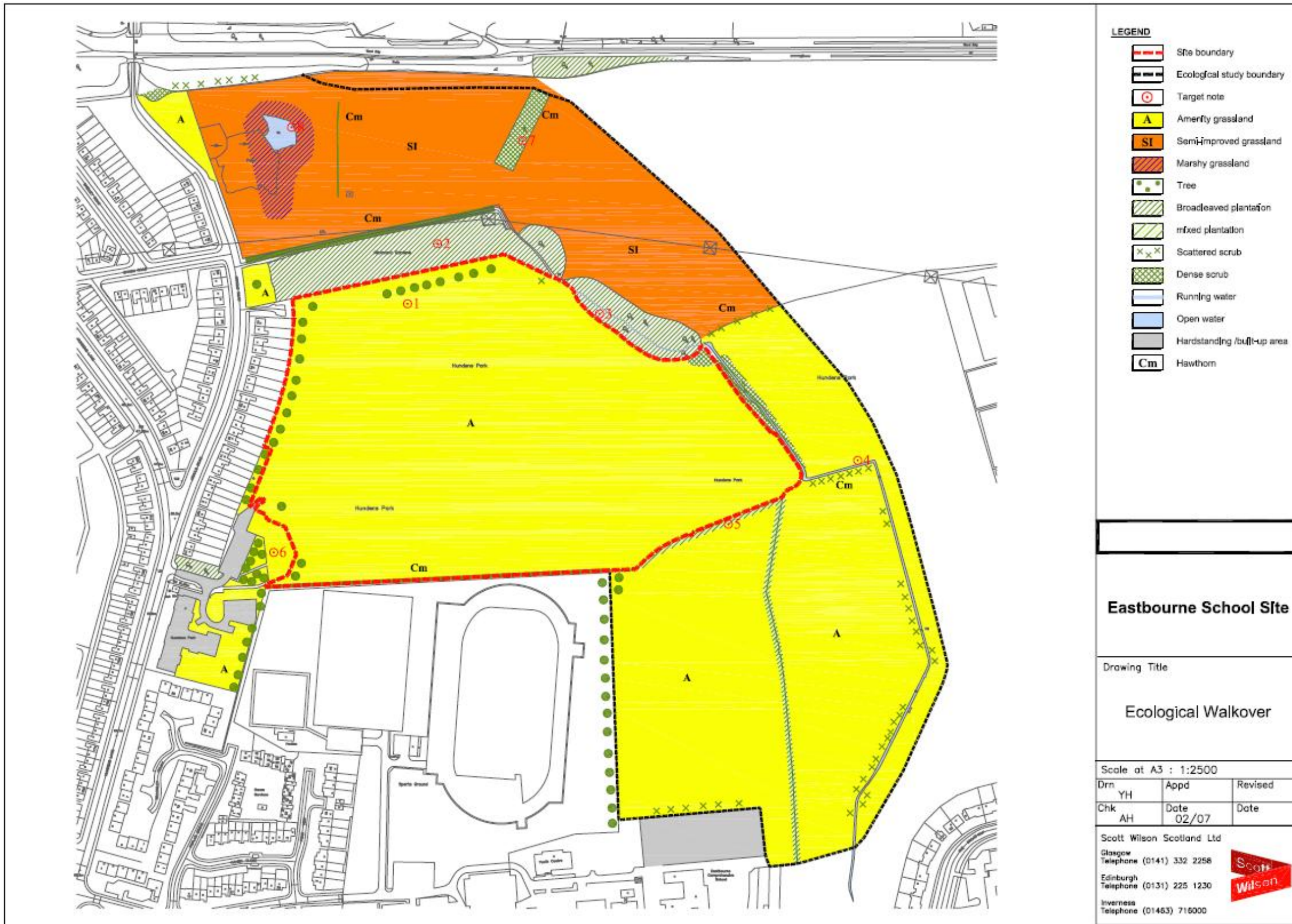
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Figure 1 - Ecological Walkover Survey Map



LEGEND

-  Site boundary
-  Ecological study boundary
-  Target note
-  Amberley grassland
-  Semi-improved grassland
-  Marshy grassland
-  Tree
-  Broadleaved plantation
-  mixed plantation
-  Scattered scrub
-  Dense scrub
-  Running water
-  Open water
-  Hardstanding / built-up area
-  Hawthorn

Eastbourne School Site

Drawing Title

Ecological Walkover

Scale at A3 : 1:2500

Drn	YH	Appd	Revised
Chk	AH	Date	Date
		02/07	

Scott Wilson Scotland Ltd
 Glasgow Telephone (0141) 332 2258
 Edinburgh Telephone (0131) 225 1230
 Inverness Telephone (01463) 716000



Appendix 1 - Ecological Walkover Target Notes

1. NZ30333.15133



Line of eight cherry (*Prunus* sp.) trees in a row along the northern boundary of the study site. From west to east, the third, fourth and eighth trees have holes/splits of **suitability for roosting bats**, though no signs were evident. A similar row of cherry trees flank the western perimeter, and while they may in time provide possible bat habitat, they do not hold any cracks or crevices of suitability for bats at the present time. Trees also provide **breeding bird habitat**.

2. NZ30222.15109

A block of immature relatively recently planted (c.10yrs) broadleaved trees, birch (*Betula* sp), beech (*Fagus sylvatica*), ash (*Fraxinus excelsior*), hawthorn, holly (*Ilex aquifolium*), bramble (*Rubus fruticosus*), with rank semi improved grassland beneath. Provides good **breeding bird habitat and habitat for small mammals**.

3. NZ30830.15122



Stagnant watercourse, with much silt and detritus, woody debris and evidence of fly tipping. There are some standing pools with potential to **provide amphibian habitat**. Common woodland birds were heard singing, wren (*Troglodytes troglodytes*), blue tit (*Parus caeruleus*), robin (*Erithacus rubecula*) and a flock of gold finches (*Carduelis carduelis*) was also observed. The watercourse was mainly fringed with riparian trees/scrub such as hawthorn (*Crateagus monogyna*), willow (*Salix* sp.), elder (*Sambucus nigra*), Poplar (*Populus* sp), dog rose (*Rosa canina*). Not suitable for water vole (*Arvicola terrestris*) or otter (*Lutra lutra*), and two brown rats (*Rattus norvegicus*) were observed running along the bank sides. Rabbit burrows (*Oryctolagus cuniculus*) along northern edge of stream. Trees also provide **breeding bird habitat**.

4. Ash tree along the watercourse with a large crack suitable for bats. The hole raises to 1.25m from the ground. No bats signs were evident at the time of survey.

5. NZ30475.14907

Narrow line of trees along the southwestern perimeter of the study area, joining a continuous hawthorn hedge to the west. Species include hawthorn, blackthorn (*Prunus spinosa*), *Prunus* spp., ash, bramble, *Populus* sp., with fly tipping in evidence. **Provides breeding bird habitat.**

6. NZ30222.15109



Some mature trees, ornamental garden shrubs/trees, and amenity grassland around Retirement Home, though no suitability for roosting bats, there is **suitability for breeding birds.**

7. Scrub/woodland belt, c.10yrs old with hawthorn, blackthorn, elder and bramble. Would provide **breeding bird habitat and possible cover for hibernating amphibians.**

8. NZ30191.15235



Pond and associated marshy grassland. This pond has been known to previously hold great crested newt (*Triturus cristatus*) populations and will be suitable for other species of amphibian. Defunct newt fencing was in evidence in the surrounding vicinity. The main species include Yorkshire fog (*Holcus lanatus*), soft rush (*Juncus effusus*), cocksfoot (*Dactylis glomerata*), common nettle (*Urtica dioica*), broadleaved dock (*Rumex obtusifolius*), black knapweed (*Centaurea nigra*), hogweed (*Heracleum sphondylium*), heath bedstraw (*Galium saxatile*), reed canary-grass (*Phalaris arundinacea*) and timothy (*Phleum pratense*). In the wider area semi-improved rank grassland, used extensively by dog-walkers and for motor-biking, with cocksfoot, Yorkshire fog, black knapweed, hogweed and occasional pignut (*Conopodium majus*).

Appendix 2 - Durham Local Biodiversity Plan Habitats and Species

Birds	Invertebrates	Mammals	Reptiles and Amphibians	Habitats
Barn Owl Black Grouse Bullfinch Corn Bunting Curlew Golden Plover Grey Partridge Hen Harrier Lapwing Linnet Little Tern Merlin Nightjar Purple Sandpiper Reed Bunting Rock Pipit Roseate Tern Sanderling Skylark Song Thrush Spotted Flycatcher Tree Sparrow	Cistus Forester Moth Dark Green Fritillary Dingy Skipper Freshwater Snails Glow Worm Green Hairstreak Honey Bee Lemon Slug Molluscs (Helicella itala & Leiostyla anglica) Northern Brown Argus Small Pearl- bordered Fritillary White-clawed Crayfish White Letter Hairstreak	Brown Hare Otter Red Squirrel Water Vole Badger Harbour Porpoise Bats Pine Marten Polecat Baleen Whales Toothed Whales	Adder & Slowworm Common Frog Common Lizard Common Toad Grass Snake Palmate Newt Smooth Newt Great Crested Newt	Arable Land Coastal Gills Coastal Grassland Coastal Lichens Coastal Sand Dunes Conifer Woodland Gardens & Allotments Hedgerows Improved Grassland Juniper Scrub Kelp Beds Lowland Heath Lowland Meadows & Pastures Magnesian Limestone Grassland Maritime Cliffs Mudflats Parks and Amenity Grasslands Ponds, Lakes & Reservoirs Reeds, Swamp, Fen & Marsh Rivers & Streams Rocky Shores Salt Marsh Strandline Sub-Littoral Sand & Gravels The Built Environment Transport Corridors Upland & Coastal Dene Ash Woodland Upland Acid Grasslands Upland Acid Grassland Upland Calcareous Grasslands Upland Hay Meadows Upland Heath & Blanket Bog Upland Oakwood Urban Habitats Vegetated Shingle Wet Woodland Wrecks & Reefs