

Preliminary Ecological Appraisal for Land off Elizabeth Crescent, Whitehaven, Cumbria

Phase One Habitat Survey and Scoping Survey to identify habitats of conservation importance and potential for European Protected Species and species of conservation concern in relation to a proposed residential development.

Report commissioned by: Glen Beattie

Report for: Messrs Bowe

August 2017

To complete the objectives stated in this report, it was necessary for OpenSpace to base our conclusions on the best information available during the period of the project and within the limits prescribed by our client in the agreement.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. We therefore cannot guarantee that the investigations fully identified the degree or extent of e.g. species presence or habitat management efficacy described in this report.

Document Information

Client: Messrs Bowe

Address: Harras Park Farm
Harras Moor
Whitehaven
Cumbria
CA28 6SG

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Author(s): Patryk Gruba ACIEEM

Report QA: Diane Dobson MCIEEM

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OpenSpace, Ecological, Landscape & Tree Consultants
The Stables, Great Orton, Carlisle, Cumbria, CA5 6NA
Tel/Fax: 01228 711841. Email: jrook@openspace.gb.com Web: www.openspace.gb.com

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Phase One Habitat Survey and Scoping Survey for European Protected Species for a Proposed Residential Development on Land off Elizabeth Crescent, Whitehaven, Cumbria

1 PROJECT BACKGROUND

The general walkover survey has been commissioned by Messrs Bowe to provide general ecological information to support an outline planning application for proposed residential development on land of Elizabeth Crescent, Whitehaven, Cumbria. The proposal is for 45 dwellings and associated access and landscaping.

To assess any potential impact from the proposed works a Phase One Habitat and European Protected Species (EPS) scoping survey has been undertaken. This aims to provide information on the presence of important habitats and the presence and/or the potential for EPS or other species of principal importance present on site. There may be a requirement to identify further survey work.

To ensure no offence is committed by disturbing protected species or disturbing other species of conservation concern while undertaking new construction projects, the survey examined evidence for a number of wildlife species with special protection from death, injury or disturbance.

These are species listed under Schedule five and seven of the Wildlife and Countryside Act, 1981 (as amended) and subsequent updates, and the Conservation (Natural Habitats, & c.) Regulations 2010 (as amended).

The site was also assessed for other species and habitats with protection and interest, such those listed under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. This recognises priority species to be of principal importance for the conservation of biodiversity and includes species such reptiles, invertebrates and breeding birds (including species under the EC Birds Directive) and habitats such as Purple Moor Grass and Rush Pasture (Marshy Grassland) and Lowland Mixed Deciduous Woodland.

Any species or habitat under the EC Birds or Habitats Directive are also covered by the Environmental Liability Regulations 2009, whereby operators are required to take

preventative action in cases of imminent threat of environment damage, and to remedy environmental damage that they have caused. These Regulations apply in relation to:

- (a) damage to protected species and natural habitats if:
 - (i) it has significant adverse effects on reaching or maintaining the favourable conservation status of the protected species or natural habitat; and
 - (ii) it is caused by an activity listed in Schedule 1 or by the fault or negligence of an operator whilst carrying on any other activity.

This would include species such as all bat species, otter, salmon, birds such as merlin, hen harrier and kingfisher and habitats such as dry and wet heath and blanket bog.

See Appendix 2 for additional information on wildlife legislation and species status.

Figure 1.1. Existing site plan showing plot proposed for development (red boundary)



Figure 1.2. Proposed layout



2 SCOPE OF SURVEY

The survey aims to make a reasoned judgement as to the potential use of the site and adjacent habitat by European Protected Species and other species of conservation concern. The presence of any habitats of conservation concern was also noted. From information gathered during a general walkover survey over the site, an assessment will determine the suitability of the habitat for protected species (and note the potential conservation value of any habitats). Known habitat criteria for each protected species will form the basis for the assessment.

This survey does not include a full ecological survey or detailed population studies. To provide this information other survey techniques would be required to provide data for an informed and balanced opinion.

3 SURVEY METHODOLOGY

The survey area incorporated the site and the site boundaries. Where possible adjacent land was assessed / surveyed (see Figures 1.1 and 3.1).

The land and habitat features within and surrounding the site were assessed for potential to support protected and important species and any signs or potential were noted. The survey method involved a visual investigation within the proposed area, site boundaries and an assessment of adjacent land, hedgerows and trees.

Areas that could not be accessed were assessed for potential by observations made during the surveys and from information gathered during the desktop study. During a desktop study, aerial photographs and OS maps were used to look for water bodies and other features in the surrounding 500m.

A full Phase 1 Habitat survey (JNCC, 1990) was conducted. This was undertaken in the month of February, which is during a sub-optimal time of year; however, most plant species were still present in vegetative form. The survey identifies habitat types and the boundaries between these. Plant species nomenclature follows that of Stace (2010). On completion of the field survey, the field notes are generated into a final report map with final target notes (see Appendix Three for Phase 1 Habitat Map).

Data search

The survey employed the services of the local biological records centre at Tullie House Museum (Cumbria Biodiversity Data Centre) to provide historical data. It must be noted that the species records are not comprehensive. Any lack of a record does not necessarily constitute an absence of a species from the surveyed area.

Timing

- The survey was conducted on the 8th February 2017 between the hours of 10.00 and 11.15.

Weather conditions

- Temperature 6°C; Wind 1; 60-90% cloud; no precipitation.

Personnel

The survey was undertaken by Patryk Gruba (BSc, ACIEEM) and Diane Dobson (MSc, MCIEEM). Both are experienced ecologists with over 20 years' experience combined in conducting Phase One Habitat and Scoping Surveys.

Figure 3.1. Aerial photograph of the site (showing surveyed area and adjacent land)



Figure 3.2. Aerial photograph of the surrounding habitat



4 RESULTS AND ASSESSMENT

4.1 Site Location

The site is located within the Bleachgreen area on the northeast edge of the town of Whitehaven. The site is adjacent to Elizabeth Crescent residential area at the north; to the west, south and east the site is bordered by small patches of woodland, hedgerows and agricultural / grazed fields.

The wider surroundings comprise grazed agricultural fields to the south and east and residential areas / estates to the north and west. Whitehaven town centre and harbour is approximately 2km to the southwest; Hensingham Golf Course is approximately 800m to the southeast.

See Figure 3.1 and 3.2 for aerial photograph of the site and surrounds.

4.2 Data Search – Designated Sites

Internationally and Nationally Designated Sites:

The following statutory sites are present within 5km from the proposed development site:

- The northern edge of St Bees Head Site of Special Scientific Interest (SSSI) is approximately 2.5km southwest from the site.
- Yeathouse Quarry SSSI is approx. 5km east from the site.
- River Ehen SSSI and Special Area of Conservation (SAC) is approx. 5km southeast.

The Lake District National Park western boundary is 6km to the southeast

Local Designated Sites:

- High Park Cumbria County Wildlife Site is just over 5km to the northeast from site.

The proposed residential development does not fall within the Natural England SSSI Impact Zone Risk and therefore, the impacts on local SSSIs/SACs/SPAs & Ramsar sites are considered unlikely.

4.3 Data Search – Protected Species and Species of Conservation Concern

Species recorded within 2km include:

- Common toad *Bufo bufo*: five records, one within 1km from the site.
- Slow-worm *Anguis fragilis*: 19 records, all records from the land adjacent Corkickle Station and Parton – over 1km away from site.
- Common lizard *Zootoca vivipara*: 21 records, all from Corkickle Station and the Whitehaven Harbour – over 1km away from site.
- Adder *Vipera berus*: two records from the Walkmill Community Woodland area 1.8km east from the site.
- Brown hare *Lepus europaeus*: two records.
- Hedgehog *Erinaceus europaeus*: 29 records, 13 within 1km, the nearest record 500m southwest from the site.
- Red squirrel *Sciurus vulgaris*: 177 records, 42 records within 1km; the nearest record from a garden approximately 60m north from the site.

There are nine records for bats, eight of which are for roosts, with two records for maternity roosts. Two of the records are within 1km from site (the nearest being common pipistrelle *Pipistrellus pipistrellus* bat roost within the house approx 170m west from site). The recorded species include common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus*, Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri* and unidentified bat species.

There are a number of records for rare, notable, scarce or protected species (Cumbria Key Species, species under S41 of NERC, notable species and Red List species) of invertebrate within 2km of the proposed residential development site.

The Cumbria Biodiversity Data Centre holds a number of historical records for bird species recorded in the area. These include 134 records for 11 'sensitive species', 22 red list species and 51 amber list species.

The 'sensitive' status refers to a record for a nationally or locally sensitive species, 'Red List' species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery. Amber List species are

those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.

4.4 Habitats

The site predominantly consists of species-poor semi-improved grassland; the other habitats include hedgerows and wet ditch / inundation vegetation. The habitats immediately adjacent to site include broad-leaved woodland/plantation, dense & scattered scrub, unimproved neutral grassland and species-poor semi-improved grassland. See Appendix Three Phase One Habitat Map and Appendix One for Photos.

Grassland

The site comprises predominantly of species-poor semi-improved grassland. The species present in the sward included Perennial Ryegrass *Lolium perenne*, Red Fescue *Festuca rubra*, Yorkshire Fog *Holcus lanatus*, Creeping Bent *Agrostis stolonifera*, Crested Dog's-tail *Cynosurus cristatus*, Common Mouse-ear *Cerastium fontanum*, Daisy *Bellis perennis*, Creeping Buttercup *Ranunculus repens*, Meadow Buttercup *Ranunculus acris* and Common Sorrel *Rumex acetosa*. Several patches of Soft Rush *Juncus effusus* were scattered within the damper sections of the field.

Hedgerow and Trees

Hedgerows are present along the northern and southern boundary of the site. The hedgerows along the southern boundary are defunct and comprise of mature Hawthorn *Crataegus monogyna*. The hedgerows along the northern boundary are all within curtilage of the residential dwellings.

There are no trees within the proposed development site. The trees on / adjacent to the site boundary include Sessile Oak *Quercus petraea* in the south-eastern corner and a Sitka Spruce *Picea sitchensis* in curtilage along the northern boundary.

Other

A small section of inundation vegetation / wet ditch is present in the southwest corner of the site. Species present included Sweet-grass species *Glyceria* sp., Soft Rush, Willowherb species *Epilobium* sp., Blinks *Montia fontana* and Round-leaved Crowfoot *Ranunculus omiophyllus*.

Assessment

The species-poor semi-improved grassland and inundation vegetation are of low conservation value in terms of vegetation, with low impacts expected with their removal and no mitigation required.

There may be some indirect impact to the adjacent habitats (down the slope to the west and northwest) run off or pollution incident during construction. Pollution control measures should be put in place (see Section 5.1).

For full results and assessment relating to trees and hedgerows on site see OpenSpace Tree and Hedgerow Survey Report (OpenSpace, 2017).

See Appendix Three for the Phase One Habitat Map and Appendix One for photos.

4.5 Protected Species / Species of Conservation Concern

Great Crested Newt

There are no records for great crested newt (GCN) within 2km of the proposed development site. The nearest records for amphibians are from the ponds at Hensingham Golf Course east from site (the nearest record over 900m southeast from the site boundary).

There are no ponds present on site and therefore no breeding potential for great crested newt within the proposed development area.

From the terrestrial survey, there are no ponds or suitable areas of standing water observed present within the land immediately adjacent to the site. From the OS and aerial maps there are no ponds or areas of standing water observed present within 500m of the site.

The grazed grassland on site provides low potential for commuting / foraging great crested newt. There are very few refuge / hibernacula features on site (such as mammal burrows and hedgerow roots along the southern boundary) and it is considered that the site provides very low / negligible potential for hibernating / refuting GCN.

There are no records for GCN within the area and the site provides limited suitable features for foraging, refuting and hibernating GCN.

The proposed works will not impact on great crested newt populations, with no mitigation required.

Bats

There are no buildings on site. The trees on/adjacent to the site boundary have no features to support roosting bats.

There are nine records for bats within 2km, eight of which are for bat roosts. The species recorded include common pipistrelle, soprano pipistrelle, Natterer's bat and Daubenton's bat.

There are dwellings/structures and trees close to the site boundaries that offer potential for bat roosts. The habitat surrounding the site offers suitable conditions for foraging and commuting bats. The defunct hedge along the southern site boundary is on exposed slope and will be of limited suitability for commuting bats. The grassland that covers majority of the site offers limited foraging conditions for bats.

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The proposed works will not directly impact on roosting bats and the habitat loss on site is considered not significant for local bat populations.

Both during and post works there may be a negligible / low risk of indirect impacts on local bat populations using the habitat on and around the site to forage and commute. To reduce risk of impact the recommendations on lighting (Section 5.2) should be incorporated into the site design.

Badger

There are no records for badger within 2km of the proposed development site. There were no badger setts or other signs of badger observed within the proposed field survey area. The land adjacent at the northwest and west has some potential for badger setts but none were observed within 30m radius from the surveyed site.

Although the surroundings provide potential connectivity and foraging features for badger, the field survey area itself (predominantly cut grassland) is of low value for this species.

The proposed development will not impact on local badger setts or populations. Appropriate avoidance & good practice measures should be adhered to reduce any

low risk of impact on individual animals that may be commuting through the site (See Recommendations in Section 5.3).

Breeding Birds

The hedges and trees on site had some potential for breeding birds and offered suitable foraging habitat. The grazed grassland provided limited potential for breeding birds and limited foraging grounds. There are numerous records for bird species within 2km.

The removal of hedgerows, if required, will result in the loss of potential nesting, roosting and feeding areas.

The grassland on site provided limited potential for barn owl *Tyto alba* to hunt. The breeding potential for barn owl within the field survey area is considered nil.

There may be risk of impact on breeding birds if hedgerow/tree works are undertaken during the bird-breeding season (March-August). See Mitigation and Recommendations in Section 5.2.

Dormouse

The proposed development site was not suitable for use by dormouse *Muscardinus avellanarius* and the hedgerow / small trees present on site did not provide the extensive cover, foraging space, connectivity and food source that dormouse requires. There were no historical records for this species in the area and it is unlikely that dormouse is present on site or adjacent land.

The proposed works will not impact on dormouse, with no mitigation required.

Otter

There was one record for otter on River Keekle, 2km east from site. There are no records for otter within 2km from site. There are no features on site suitable for otter to breed or hunt.

The predominant landscape surrounding the site does not provide suitable habitat for this species to commute, hunt and rest. Therefore, it is considered the site is highly unlikely to be used by otter.

The proposed works will not impact on local otter populations, with no mitigation measures required.

Pine Marten

There were no records for pine marten within 2km from site and the proposed development site has no suitability for this species. **There is no impact expected on this species, with no mitigation required.**

Red Squirrel

Red squirrel are known to be in the general area as there are 177 records, 42 records within 1km; the nearest record from a garden approximately 60m north from the proposed development site boundary.

There were no squirrel dreys observed on site and the small trees & hedgerow on/adjacent to the site boundary offer negligible conditions for breeding red squirrels as their stems are relatively thin and the branches are too exposed to be use by nesting red squirrel.

The defunct hedgerows along the southern boundary provides low suitability for commuting / foraging red squirrel due to the large gaps in the hedges. There were no signs of foraging activity on site.

The habitats adjacent to the northwest and east (woodland, dense scrub and residential gardens) provide much better conditions for this species and the site itself is unlikely to be used by red squirrel.

There is no anticipated risk of impact to local red squirrel populations, with no mitigation required. Adherence to good practice and avoidance measures (see Section 5.3) would reduce any low risk of impact on individual animals.

Reptiles

There are a number of records for common lizard, slow-worm and adder within 2km of the proposed development site; however, no reptile species were recorded within 1km from the site. The features that offer potential refugia or hibernacula within the proposed site are limited and restricted to the hedgerows along the site boundaries.

The site and adjacent fields are largely unsuitable for use by foraging and / or commuting reptiles since they are mostly grazed to a short turf, which restricts movement by reptile species.

The site is fragmented to reptile populations by the surrounding residential dwellings and intensively managed agricultural land.

The proposed development will not impact on local reptile populations, with no mitigation required.

Other Species

As there is no fresh water habitat within the proposed area, there is no potential for water vole, white-clawed crayfish, freshwater pearl mussel or freshwater fish (river) species. There is no suitable habitat or connectivity to suitable habitat for natterjack toad, dormouse, water vole or pine marten. The risk of any of the above species being present within the proposed development site is considered nil.

There is no anticipated impact to other species listed above, with no mitigation required.

4.6 Other Species of Conservation Concern

Brown Hare (BAP Species)

There are three records for brown hare within 2km of the proposed development site. The breeding potential for brown hare within the proposed development area is considered negligible. The grassland habitat on site and the adjacent woodland, scrub and hedges provided suitable cover and food source for this species and the surrounding land offered some connectivity.

The proposed works are unlikely to impact on local brown hare populations, with no mitigation required. However, appropriate avoidance measures should be adhered to reduce any low risk of impact on individual animals (See Recommendations in Section 5.3)

Hedgehog (BAP Species)

There are 29 records for hedgehog within 2km of the proposed development site, 13 within 1km from site. The site grounds provide suitable conditions for commuting and foraging hedgehog. The hedges, scrub and woodland site boundaries may provide some potential for breeding or nesting hedgehog. The grazed species-poor grassland covering the majority of the site provides negligible breeding and foraging opportunities for this species.

The proposed works are highly unlikely to impact on local hedgehog populations, and there is no requirement for mitigation.

Polecat (BAP Species)

There are no records for polecat within 2km from site. Although there were signs of rabbits (main prey for this species) and some mammal burrows within the hedge bank (southern boundary) and bank adjacent to the east, the site in general has limited suitability for this species (lack of suitable habitat and vegetation cover).

The proposed works are unlikely to impact on local populations and there is no mitigation required.

5 MITIGATION AND RECOMMENDATIONS

5.1 Habitats

For specific methodology, mitigation and recommendations regarding trees and hedges see the OpenSpace Tree and Hedgerow Report (2017).

Any water polluted with sediments should be prevented from leaving the site into adjacent habitats. If this is not possible, appropriate treatment techniques should be applied (such as silt fences, silt traps, filter bunds or settlement ponds) in order to ensure that the run-off water does not leave the site untreated.

There is an opportunity to enhance the site biodiversity by using UK native species from reputable sources within the proposed landscape plan.

5.2 European Protected Species / Species of Conservation Concern

Bats

External lighting within the developed site should be minimal and an appropriate lighting design should be considered:

- Use of energy efficient and modern security lighting - narrow spectrum lights, low pressure sodium or warm white LEDs.
- The design of the luminaire to incorporate the use of hoods, cowls, louvers and shields to direct the light to the intended area only.
- Reducing the ecological impact of the light by directing the light at a low level, preferably an angle less than 70 degrees.

Breeding Birds – Timings & Methodology

It is recommended that tree / hedgerow clearance be undertaken outside the bird-breeding season. Should clearance works commence within the bird-breeding season (March to August inclusive) then these works should only be conducted either under the supervision of a suitably qualified ecologist or Ecological Clerk of Works (watching brief)

Any feature containing a nest must not be destroyed or disturbed until the young have fledged.

5.3 Good Practice & Harm Avoidance

Adherence to the following awareness measures will ensure that any low risk of disturbance to individual protected species will be reduced:

- Before clearance works commence any areas covered by dense vegetation should be disturbed by hand (or by the contractor walking over and disturbing the ground cover) to alert any animal.
- Tree / hedge removal should retain the stumps and vegetation at ground level – these areas should be cleared with care - following a fingertip search at least three days after the main body of the hedge has been removed.
- Equipment, tools or plant associated with the development should be secured, stored away for the overnight period.
- Any open pipes at the end of each working day should be capped off (or stopped) to prevent access to hedgehog and other small mammals.
- All open excavations left overnight should allow any animal a means of escape if they enter the excavation. This can be achieved by placing a wooden board or

plank no less than 0.5m wide and at an angle of no more than 45° or have a similar soil slope in the excavation.

- Open excavations should be checked daily before commencing works.
- All construction materials are to be stacked safely to prevent accidental collapse.
- To prevent the encouragement of pests and scavengers no food wastes are to be deposited on site.
- Works should, where possible, reduce working around sunrise and sunset.
- During works, any lighting on site should be minimal and directed away from the surrounding trees / hedgerows.

5.4 Enhancement Opportunities

There is an opportunity to increase the biodiversity of the site. The proposed landscape plan to accompany a full planning application should be produced in accordance with the National Planning Policy Framework (NPPF) in order to 'minimise impacts on biodiversity and provide net gains in biodiversity where possible...' and Local Planning Authority should take into account the policies contained in the Framework when making decision.

The proposed landscape features need to be created in a way that they are suitable for and will be used by wildlife.

The following enhancement measures are suggested:

- Bat boxes should be erected on site / incorporated into the buildings design.
- Bird boxes should be included within the scheme. House sparrow, swallow and swift nest boxes can be attached to buildings.
- Bird feeders and open water areas will benefit birds.
- Provision of wildlife areas, buffer strips and corridors within the design, including features such as log piles and habitat houses for hedgehogs / bees / invertebrates.
- Planting beds using species of benefit to wildlife, such as nectar-rich plants (not double-flowered varieties).
- Use of native tree and shrub species in the planting scheme. This can include creating new species-rich hedgerows.
- Native bulb planting using woodland species around planted trees and shrubs.
- Compost provision / grass heaps should be provided; either communally or within the grounds of each new dwelling.

- Make a hole / gap measuring approx. 25cm in all fences to allow hedgehogs to commute and forage through the gardens and the new development.
- Creation of a wildflower meadow/area. Native hay meadow plants could be used for any buffer strips.

6 SUMMARY

A Preliminary Ecological Appraisal was undertaken in relation to a proposed residential development on land off Elizabeth Crescent, Whitehaven, Cumbria.

The grassland and inundation habitat on site is of low in conservation value, with no impacts expected and no mitigation required. The hedges / trees on & adjacent the site have some conservation interest – see OpenSpace Tree and Hedgerow report (2017) for assessment and recommendations.

There are habitats on site with some suitability for use by local populations of breeding birds, red squirrel and other protected species. Recommendations on further survey work required, timing, methods, good practice / harm avoidance and habitat enhancement have been provided in this report.

All European protected species and species of conservation concern should be considered at all times during construction, and if individual animals are suspected or appear within the construction phase, works must stop and further guidance to protect from harm and disturbance should be sought by contacting an approved ecologist.

There is an opportunity to increase the biodiversity of the site. The proposed landscape plan to accompany a planning application should be produced in accordance with the National Planning Policy Framework (NPPF) in order to ‘minimise impacts on biodiversity and provide net gains in biodiversity where possible...’and Local Planning Authority should take into account the policies contained in the Framework when making decision. The proposed landscape features need to be created in a way that they are suitable for and will be used by wildlife. The proposed landscape plan should also use UK native species from reputable sources.

This report must be made available to all contractors.

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8 APPENDIX ONE: Photos



Photo 1. Grazed species-poor semi-improved grassland – main habitat on site



Photo 2. Defunct hedgerow along the southern boundary of the site



Photo 3. Earth bank, footpath and woodland adjacent east to the site



Photo 4. Residential area with gardens and hedges adjacent north to the site



Photo 5. Scrub and unimproved neutral grassland adjacent west / northwest to the site



Photo 6. Small patch of inundation vegetation in the southwest corner of the site

9 APPENDIX TWO: Legislation and Species Status

Species	Latin Name	EC Habitats Directive	Wildlife and Countryside Act	Protection of Badgers Act	Section 41, NERC Act	Cumbria BAP
Bat species (All species)		Annex IV (some Annex II)	Schedule 5		X	X
Bullhead	<i>Cottus gobio</i>	Annex II				
Dormouse	<i>Muscardinus avellanarius</i>	Annex IV	Schedule 5 and 6		X	X
Great crested newt	<i>Triturus cristatus</i>	Annex II and IV	Schedule 5		X	X
Lamprey species	<i>Lampetra/Petromyzon</i>	Annex II			X	X
Natterjack toad	<i>Epidalea calamita</i>	Annex IV	Schedule 5		X	X
Otter	<i>Lutra lutra</i>	Annex II and IV	Schedule 5 and 6		X	X
Reptile species		(some Annex IV)	Schedule 5		X	X
Salmon	<i>Salmo salar</i>	Annex II			X	X
White-clawed crayfish	<i>Austropotamobius pallipes</i>	Annex II	Schedule 5		X	X
Barn owl	<i>Tyto alba</i>		Schedule 1			X
Pine marten	<i>Martes martes</i>		Schedule 5 and 6		X	
Polecat	<i>Mustela putorius</i>		Schedule 6		X	
Red squirrel	<i>Sciurus vulgaris</i>		Schedule 5 and 6		X	X
Water vole	<i>Arvicola amphibious</i>		Schedule 5		X	X
Badger	<i>Meles meles</i>			X		
Brown hare	<i>Lepus europaeus</i>				X	X
Common toad	<i>Bufo bufo</i>				X	X
Hedgehog	<i>Erinaceus europaeus</i>				X	X

10 APPENDIX THREE: PHASE 1 HABITAT MAP

