

Appendix 8.19

Invasive Plant Species Survey Report

Abergelli

Abergelli Power Project

Invasive Plant Species Survey Report

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| Client | Stag Energy |
| Job | Abergelli Power Project |
| Report title | Invasive Plant Species Survey Report |
| Draft version/final | FINAL |
| File reference | 7399_InvasiveSpecies_APPR (4)_011014.docx |

| | Name | Position | Date |
|---------------------------------------|---------------|---------------------|-------------------|
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| Reviewed | Jim Gillespie | Partner | 28 July 2014 |
| 2nd Draft | Niall Lusby | Senior Ecologist | 28 July 2014 |
| Approved for issue to client | Jim Gillespie | Partner | 15 August 2014 |
| Issued to client | Jim Gillespie | Partner | 15 August 2014 |
| 2nd issue to client | Matt Hobbs | Principal Ecologist | 02 September 2014 |
| 3rd issue to client | Matt Hobbs | Principal Ecologist | 08 September 2014 |

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1 Summary

- 1.1 Abergelli Power Limited (APL) is promoting a new Power Generation Plant with its associated Gas and Electricity Connections (the 'Project') on agricultural land within Abergelli Farm, north of Swansea in the City and County of Swansea (approximately at National Grid Reference 265284, 201431).
- 1.2 The preliminary ecological appraisal¹ identified that invasive species of plants, as listed under Part II of Schedule 9 of the Wildlife and Countryside Act (WCA), 1981 (as amended) (specifically Japanese Knotweed *Fallopia japonica* and Himalayan balsam *Impatiens glandulifera*), are present on the Survey Site in a number of areas. The report recommended that a detailed survey to map the distribution of any invasive species should be carried out to inform any management measures that would need to be implemented to remove or control the spread of these species during the construction and operation of the Project.
- 1.3 APL commissioned BSG Ecology to undertake an invasive survey of streams and wet ditches within the 150 ha of pastoral farmland at and around Abergelli Farm in June 2014 within the Survey Site, to inform and support an application for Development Consent for the Project.
- 1.4 The Survey Site was surveyed in July 2014 by an ecologist from BSG Ecology. All accessible areas of the Survey Site were walked with areas of dense scrub assessed from the perimeter of the scrub, and the presence of five species included under Part II were recorded within the Survey Site: Japanese knotweed, Himalayan balsam, rhododendron *Rhododendron ponticum*, floating pennywort *Hydrocotyle ranunculoides* and montbretia *Crocasmia x crocosmiiflora*.
- 1.5 Of the five species Himalayan balsam and Japanese knotweed were the most widespread within the Survey Site.

¹ BSG Ecology (2014). Abergelli Power Project: Preliminary Ecological Appraisal.

2 Introduction

- 2.1 APL commissioned BSG Ecology to undertake an invasive species survey in May 2014 to inform and support an application for Development Consent for the Power Generation Plant.

Site Description

- 2.2 The Survey Site consists of approximately 150 ha of pastoral farmland, primarily grazed by horses. The extent of the Survey Site is shown in Figure 1 in Appendix 1 and is centred at National Grid Reference 265284, 201431. The nearest settlement is Felindre, which is located approximately 2 km to the north of the Survey Site, with Swansea approximately 5 km to the south.
- 2.3 The Survey Site is largely agriculturally improved pasture with several areas of marshy grassland, particularly in the north, south and north-western ends of the Survey Site. The fields are bounded by fences, running along the line of defunct hedgerows, and often accompanied by ditches. There is a block of broadleaved woodland on the eastern boundary of the Survey Site and other areas of woodland around the marshy grassland to the west of the Survey Site, and around Felindre Gas Compressor Station and the two National Grid 400 kV electrical substations that lie at the south-west end of the Survey Site. The habitats in the surrounding landscape are similar to those within the Survey Site boundary – a mixture of improved and marshy grassland interspersed with occasional patches of woodland.

Description of Project

- 2.4 APL is promoting a new Power Generation Plant with associated Gas and Electricity Connections within Abergelli Farm. The Power Generation Plant would operate as a Simple Cycle Gas Turbine (SCGT) peaking plant and would be designed to provide an electrical capacity of up to 299 Megawatts (MW). It would be fuelled by natural gas, supplied by a new underground gas pipeline connecting Power Generation Plant to the existing National Grid Gas (NGG) National Transmission System (NTS). It would also connect to the National Grid Electrical Transmission System (NETS) via underground cable or overhead lines.
- 2.5 BSG Ecology has been appointed as the ecological consultant to undertake an ecology survey, which incorporates a desk study and Extended Phase 1 Habitat Survey as well as a range of Phase 2 surveys, including a survey for invasive species. The methods and results of baseline surveys will be provided as appendices to an ecology chapter of an Environmental Statement, which is intended for submission, in support of the application for Development Consent.

Background to Survey

- 2.6 For the purposes of this survey, invasive plant species are defined as those species of non-native plants included in part II of Schedule 9 of the WCA 1981 (as amended).
- 2.7 Since its creation in 1981, part II of Schedule 9 of the WCA (as amended) 1981, pertaining to invasive plants, has undergone many revisions, to the extent that the original four species has now been expanded to include over 30 invasive plant species.
- 2.8 The Phase 1 survey of the Survey Site was carried out in three phases, in February 2014 and updated in April 2014, and July 2014. The timing of the first two surveys during the winter and early spring meant that the presence of some of the Schedule 9 species was missed as the vegetative parts of the plants (growing above ground) can be absent during the colder months of the year, with the plant persisting, over winter, below ground as rhizomes or lying dormant in the seed bank. Because of this it was recommended in the Phase 1 survey report that a dedicated invasive species survey should be undertaken within the main botanical survey season (May to September) to attempt to map the distribution and extent of Schedule 9 species within the Survey Site.

Aims of Study

- 2.9 The aim of the survey is to confirm the presence and identify the locations of species of plant included under Schedule 9 of the WCA (as amended) 1981.

3 Methods

- 3.1 No standard method exists for invasive plant species survey; and the survey was based on an ecological walkover survey approach, whereby all accessible areas of the Survey Site were walked by the surveyor in daylight hours, with a visual search for the target species undertaken.
- 3.2 Particular focus was also given to areas where the target species were most likely to be found, for example water courses, areas of disturbed ground and tracks where imported material may have been used or where fly-tipping or movements of vehicles or machinery could have led to the spread of these species.
- 3.3 Where found to be present, the species and location were recorded using a handheld GPS. The locations of individual plants, small clusters and large clusters of plants found during the walkover survey are provided in Figure 1. The locations are representative and do not necessarily provide mapping of the exact extent of each species or the precise location of each individual plant.

Limitations of Study

- 3.4 The scale of the Survey Site and the presence of dense areas of scrub or woodland understorey in some areas mean that it is possible that small stands or individual plants of invasive species could have been missed during the walkover survey. In addition, the presence of horses in some fields restricted access to some areas of the Survey Site although these areas were assessed using binoculars and it is likely, given the heavily grazed nature of these fields, that most invasive plant species would have been visible using binoculars. It is considered that the majority of the Survey Site was surveyed adequately and that overall the distribution of invasive species across the Survey Site has been mapped accurately.
- 3.5 The mapping produced in support of the report is based on point locations taken using a handheld GPS device which is subject to varying degrees of accuracy depending on satellite coverage and other factors. Further to this the GPS locations recorded were for the main aggregation of each plant species at each location. Each point therefore does not represent full coverage of the species at each point. Any invasive plant management plan should take account of this with up to date, detailed surveying by a qualified land surveyor undertaken to provide accurate extents of species coverage. The distribution of each invasive plant species will, inevitably, change from year to year to a greater or lesser extent and these locations should be re-checked as necessary.

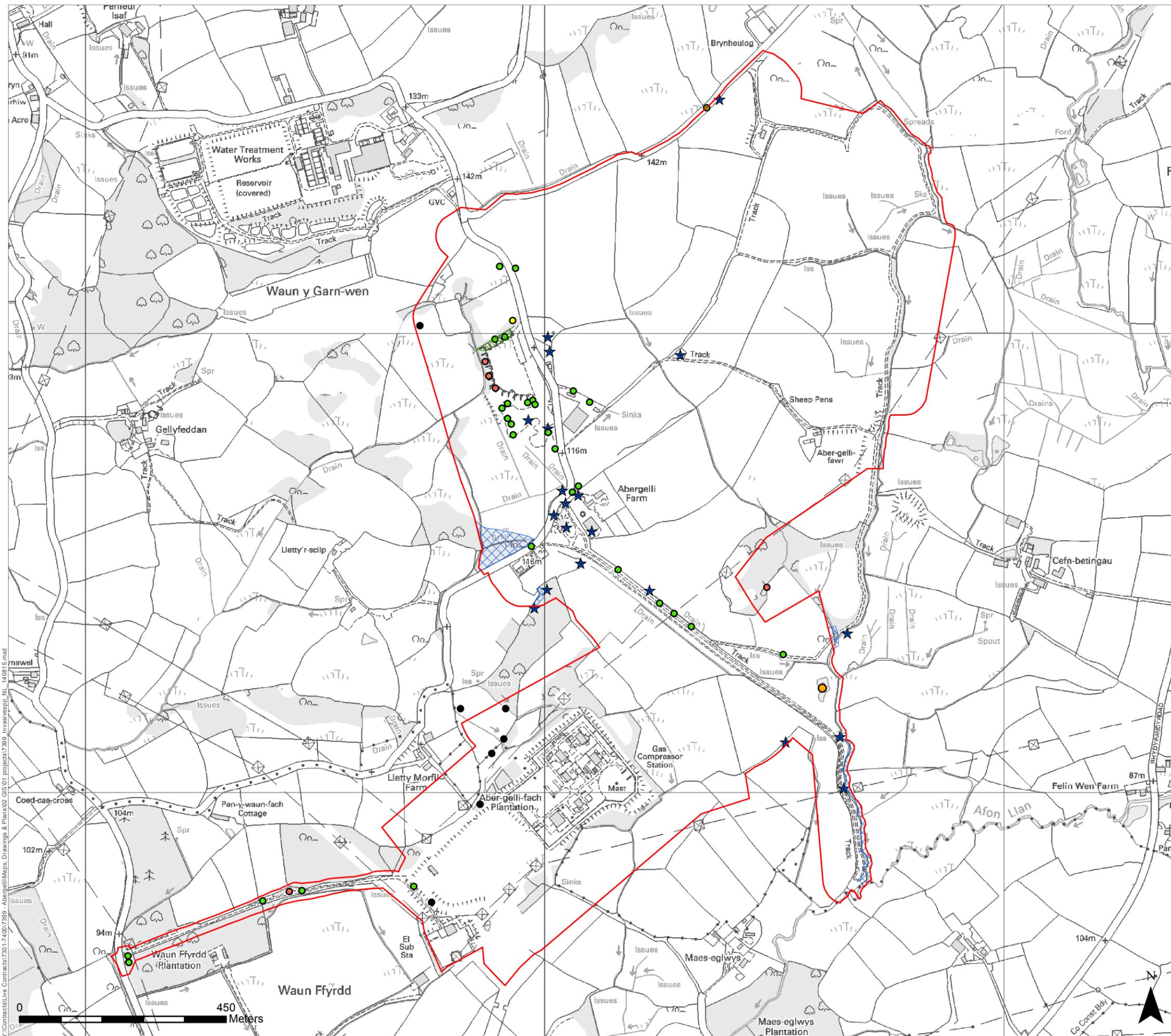
4 Results

- 4.1 Five species of plant included on Part II of Schedule 9 of the WCA 1981 were recorded during the survey: Japanese knotweed; Himalayan balsam; rhododendron; floating pennywort; and montbretia. The locations and extents of these species are shown on Figure 1.
- 4.2 The most frequently recorded species were Japanese knotweed and Himalayan balsam.
- 4.3 Japanese knotweed was found to be strongly associated with roads and trackways on the Survey Site as well as the area of inert landfill in the north-west half of the Survey Site. This perennial species is typically spread through the movement of contaminated soils or through spreading of vegetative parts through flailing of hedges or movement of other machinery.
- 4.4 Himalayan balsam is an annual plant that is typically found in wetter habitats, although it will tolerate drier conditions. It is strongly associated with woodland, stream corridors and ditches across the Survey Site.
- 4.5 Rhododendron is restricted to woodlands with a small patch occurring in the marshy grassland area in the north-west of the Survey Site. Montbretia was recorded in two locations alongside roads, which is a typical location for this species to be found in given that it is often spread from the fly tipping of garden waste.
- 4.6 Floating pennywort was found in one of the Survey Site ponds in the south-east of the Survey Site².

² Pond 16 as referred to in the great-crested newt survey report.

Appendix 1: Figures

(overleaf)



LEGEND

Survey site boundary

Larger area of invasive species

- Himalayan Balsam
- Japanese knotweed

Small area of invasive species

- Floating Pennywort
- Himalayan Balsam
- Japanese knotweed
- Montbrecia
- Montbrecia and Japanese knotweed
- Rhododendron



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PROJECT TITLE
ABERGELLI POWER PLANT

DRAWING TITLE
Figure 1 - Invasive Plant Species Survey

DATE: 22.07.2014 CHECKED: MH SCALE: 1:8,000
 DRAWN: RT APPROVED: JG STATUS: Final

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 No dimensions are to be scaled from this drawing. All dimensions are to be checked on site. Area measurements for indicative purposes only.
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APPENDIX 8.12 - SPECIES SPECIFIC LEGISLATION

1.1 Badgers

1.1.1 Badgers are protected under the Protection of Badgers Act (1992) on animal welfare grounds rather than nature conservation value. It is an offence to wilfully take, kill, injure or ill-treat a badger, or possess a dead badger or any part of a badger. Under the Act their setts are also protected against obstruction, destruction or damage.

1.2 Otters

1.2.1 Otters are fully protected under Schedule 2 of the Habitats Regulations which define “European protected species of animals” and also receive partial protection under the WCA.

1.2.2 Taken together the Act and Regulations make it illegal to: deliberately kill, injure, capture, disturb otters (whether in a resting place or not); damage, destroy or obstruct access to a resting place used by an otter; possess or transport an otter or any part of an otter, unless acquired legally; sell, barter or exchange or advertise for such purposes an otter

1.2.3 Activities that could result in impacts on otters should be modified to avoid/minimise the likelihood of an impact occurring in the first instance. If impacts are unavoidable then the works may need to be carried out under a European Protected Species development licence, granted under the Habitats Regulations.

1.2.4 Otters are also a Species of Principal Importance in Wales as identified under Section 42 of the NERC Act 2006.

1.3 Water voles

1.3.1 Water voles are fully protected under the WCA. It is an offence to possess, control or sell water voles or to intentionally or recklessly kill, injure or take water voles. It is also an offence to intentionally or recklessly damage, destroy or obstruct access to a place that water voles use for shelter or protection or disturb water voles whilst using such a place. No licensing regime exists for development activities that may result in an infringement of the legislation.

1.3.2 Current guidance from NRW states that where development activities may result in unavoidable impacts on water voles, developers will need to be confident that their activities are “the incidental result of an otherwise lawful operation”, and that all steps that could reasonably be taken to avoid, minimise, mitigate and (if necessary) compensate for impacts have been taken.

1.4 Dormice

- 1.4.1 Dormice are protected under the WCA (in respect of section 9(4)(b) and (c) and (5) only) and are listed in Schedule 2 of the Habitats Regulations. Under the current legislation it is illegal to intentionally or deliberately kill, injure or capture dormice, deliberately disturb dormice (whether in a nest or not); or to damage, or destroy dormouse breeding sites or resting places.
- 1.4.2 Any activity that would result in a contravention of the above legislation would likely require a European Protected Species (EPS) licence from the relevant statutory body (NRW).

1.5 Bats

- 1.5.1 All native UK bat species are protected by UK law under Schedule 5 and 6 of the WCA, and under Schedule 2 of the Habitats Regulations. It is illegal to deliberately capture, injure or kill a bat or to intentionally or recklessly disturb bats. It is also illegal to damage, destroy or intentionally or recklessly obstruct access to a breeding or resting place used by a bat. Under Part 2 of the Habitats Regulations, SACs can be designated to further protect barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), lesser horseshoe (*Rhinolophus hipposideros*) and greater horseshoe bats (*Rhinolophus ferrumequinum*).
- 1.5.2 Several species of bats are listed under Section 42 of the NERC Act 2006 as Species of Principal Importance. Species include the greater horseshoe bat, lesser horseshoe bat, barbastelle, common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus noctula*), Bechstein's bat and brown long-eared bat (*Plecotus auritus*). Furthermore, five bat species (common pipistrelle, barbastelle, Bechstein's bat, greater horseshoe bat, lesser horseshoe bat) are listed as priority species in the Swansea BAP.

1.6 Breeding birds

- 1.6.1 All birds, their nests and eggs are protected by the WCA. It is an offence to intentionally kill, injure, or take any wild bird, or take or destroy an egg of any wild bird. It is also an offence to damage or destroy the nest of any wild bird (whilst being built, or in use).
- 1.6.2 Birds listed under Schedule 1 of the WCA are afforded additional protection with regard to intentional or reckless disturbance while nest building, or at a nest containing eggs or young, and disturbance of the dependent young of such a bird is also an offence away from the nest.

1.7 Great crested newts

- 1.7.1 GCN are fully protected under Schedule 2 of the Habitats Regulations, and receive partial protection under the WCA Schedule 5. It is illegal to deliberately capture, injure or kill GCN, to intentionally disturb GCN or to otherwise disturb them in their place of shelter, or to deliberately take or destroy the eggs of GCN. It is also illegal to damage, destroy or intentionally or recklessly obstruct access to a breeding site or resting place used by GCN. All life stages of GCN are afforded the same level of protection. The legislation also makes it an offence to possess, transport, sell or exchange, or offer to sell or exchange GCN.

1.8 Reptiles

- 1.8.1 The four common reptile species, adder, grass snake (*Natrix natrix*), common lizard and slow worm, are protected under Schedule 5 of the Wildlife and Countryside Act (1981, as amended) against intentional killing, injuring and trade. All species of reptile are listed as Species of Principal Importance in Wales.
- 1.8.2 The natural range of the rarer species (smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) does not include this part of South Wales, and thus they are not considered further in this assessment. Sand lizard is listed as priority species under the Swansea BAP (coastal areas).

1.9 Terrestrial and Aquatic Invertebrates

- 1.9.1 The WCA lists around 70 invertebrate species on Schedule 5 with various levels of protection according to the rarity of the species. Species with full protection under the Act include the marsh fritillary butterfly, southern damselfly, mole cricket, fairy shrimp, medicinal leech and freshwater pearl mussel, amongst many others. Three invertebrate species are protected under the Conservation of Habitats and Species Regulations (2010, as amended) large blue butterflies, Fisher's estuarine moths and little whirlpool ramshorn snails. Section 42 of the NERC Act (2006) also lists several invertebrate species as species of principal importance in Wales.