



Preliminary Ecological Assessment



Project: Llangatwg Comprehensive School, Aberdulais
Instructed by: Morgan Sandal Construction

Reported by: Ecological Services Ltd
10 Mount Pleasant, Llanelly Hill, Abergavenny, Monmouth NP7 0NT
Reported by

Author	Checked By	Date	Version
Viv Geen	Ash Harris	October 2024	V1.0

T:07376662865

E: viv@ecologicalservices.wales

W: www.ecologicalservices.wales

Contents

1. Introduction
2. Desk Top Study
3. Phase 1 Survey
4. Recommendations and Mitigation
5. Biodiversity Enhancements & Green Infrastructure Considerations

Appendix

1. Plant Species Recorded
2. Site Photographs
3. Habitat Map
4. Aerial View of Site
5. Invertebrate Habitat Potential Assessment
6. Reptile Hibernacula
7. Legislation

1. Introduction

The development proposals are in the very early stages and detailed designs are not available. The proposals seek to demolish the current school buildings, and build new school buildings in a new location within the existing school boundary, to the south east. The remainder of the site is proposed for a variety of playing fields and car parking provision to service the new school building. The exact layout and design of the building has not been agreed. It is anticipated that the proposals will affect the majority of the site.

At present the site is a large school complex which consists of permanent and temporary school buildings (portacabins), sports pitches, car parks, access road, and associated landscaping within, and around the edge of the site centred at SS7672699322. The buildings are of a varied age ranging from old Victorian through to more recent construction. Metal palisade fencing (2m high) surrounds the site.

An unnamed watercourse flows in a south westerly direction through the school complex, and is culverted in places within the site. This unnamed watercourse connects with a second watercourse to the north which flows through the broad-leaved woodland to the northwest of the site. This broadleaved woodland forms the north west boundary of the site and connects the site with the wider landscape in the north. A small area of rough grassland is located to the north of the sports field in the north east, adjacent to a small industrial estate to the west, with a watercourse forming the northern and eastern boundary of the area.

This report will assess the potential of the land within the site boundary to support habitats and species and the implications that any future development proposals could have on them.

1.1 Site Description

The site is located to the north east of the town of Neath. The site is connected to the small settlement of Cilfrew to the north east, and Caxton to the south west, with post-industrial and agricultural land and woodland to the north of the site. Residential housing lies to the east of this area, and to the south west of the main school site. The Tennant Canal and River Neath corridor lies to the south east, with the A4230 between the school and this corridor. The A465 dual carriageway is also situated to the south of the site.

The development site is considered to be in a semi-rural location being surrounded by both housing and woodland, tree lines and riparian corridors, with post-industrial and agricultural land to the north.

1.2 Survey Constraints

The site visit was completed during October which is a sub optimal time of year to undertake habitat assessments. However, it was possible to draw broad conclusions on habitat types within the site boundary.

The absence of desk study records cannot be relied upon to determine absence of particular species/habitat. Often, the absence of records is a result of under-recording within the given search area.

The optimal time period to carry out ground-based visual assessments of trees for bat roosting potential is between December to March inclusive, when broadleaved trees are devoid of leaves and features are more readily visible. It should be noted that ground based assessments are inherently constrained and potential roosting features present upon the skyward facing surfaces of limbs and branches will most likely be missed.

1.3 Surveyor Experience

Viv Geen is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Viv is an ecologist with over 30 years experience undertaking a wide range of flora and fauna surveys. All survey work is undertaken following JNCC Phase 1 Survey Guidelines and CIEEM Guidelines for Preliminary Ecological Appraisal (2nd Ed 2017). Viv is a licensed bat (England), great crested newt and dormouse (England and Wales) ecologist with a wide variety of experience undertaking ecological surveys, including botanical surveys (Level 4 FISC rated, 2024).

2. Desktop Study

A data search was undertaken via Aderyn for the proposed development site and surrounding area (ref: 0245-550). A 2km buffer zone was searched and records returned within 500m of the site are noted below:

- Common Frog (*Rana temporaria*) - there are 5 records within 500m with the closest record 41m directly to the north of site.
- Common Toad (*Bufo bufo*) - the closest record was returned 41m directly north of the site
- Hedgehog (*Erinaceus europaeus*) - there are six records within 500m of the site with the closest being approximately 140m to the north west.
- Brown/Sea Trout (*Salmo trutta*) - closest records are within the River Dulais 310m to the west of the site
- Grass Snake (*Natrix natrix*) - closest record being approximately 300m north east of the site.
- Badger (*Meles meles*) - there are five records within 500m of the site with the closet record being approximately 200m to the south east of site.
- Common Lizard (*Zootoca vivipara*) - closest record being approximately 220m north of site.
- Otter (*lutra lutra*) - closest record being approximately 365m away to the north east.
- Records of birds listed under Section 7 of the Environment (Wales) Act 2016 (EWA 2016) within 500m of the site including:, Song Thrush (*Turdus philomeios*), Herring Gull (*Laurus argentatus*),, Common Bullfinch (*Pyrrhula pyrrhula*), Common Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*), Spotted Flycatcher (*Muscicapa striata*), Black-headed Gull (*Chroicocephalus ridibundus*), Common Linnet (*Linaria cannabina*), Northern Lapwing (*Vanellus vanellus*), Common Cuckoo (*Cuculus canorus*), and Wood Warbler (*Phylloscopus sibilatrix*).
- Records of birds listed under Schedule 1 of the Wildlife and Countryside Act 1981 within 500m of the site include: Barn Owl (*Tyto alba*), Osprey (*Pandion haliaetus*), Hobby (*Falco subbuteo*), Goshawk (*Accipiter gentilis*), Red kite (*Milvus milvus*), Redwing (*Turdus illacus*), and Kingfisher (*Alcedo attis*).
- Invertebrate records within 500m including: Small Blue (*Cupido minimus*), Wall (*Lasiommata megera*), Small Phoenix moth (*Ecliptopera silaceata*), Sallow moth (*Cirrhia icteritia*), Heath Rustic moth (*Xestia agathina*), Dot Moth (*Melanchra persicariae*), Cinnabar moth (*Tyria jacobaeae*), Oak-Hook-tip moth (*Watsonalla binaria*), Brindled Beauty moth (*Lycia hirtaria*), Blood-vein moth (*Timandra comae*), Garden Tiger moth

(*Arctia caja*), Buff Ermine moth (*Spilosoma lutea*), Rustic moth (*Hoplodrina blanda*), and Flounced Chestnut (*Anchoscelis helvola*).

Records of note returned for the rest of the 2km buffer zone are detailed below:

- Roost record for Daubenton's bat (*Myotis daubentonii*).
- Roost record for an unidentified Pipistrelle bat species.
- Slow Worm (*Anguis fragilis*).
- Smooth Newt (*Lissotriton vulgaris*).
- Palmate Newt (*Lissotriton helveticus*).
- Commuting and foraging records for Common Pipistrelle (*Pipistrellus pipistrellus*), Noctule bat (*Nyctalus noctula*), Daubenton's bat, Natterer's bat (*Myotis nattereri*), Whiskered bat (*Myotis mystacinus*)
- Roost record for Soprano Pipistrelle (*Pipistrellus pygmaeus*).
- Lesser Redpoll (*Acanthis cabaret*)
- Cetti's Warbler (*Cettia cetti*)
- Peregrine (*Falco peregrinus*)
- Willow Tit (*Poecile montanus*)
- Fieldfare (*Turdus pilaris*)
- Crossbill (*Loxia curvirostra*)
- Grasshopper Warbler (*Locustella naevia*)
- Yellow Wagtail (*Motacilla lava*)
- Reed Bunting (*Emberiza schoeniclus*)
- Skylark (*Alauda arvensis*)

2.1 Protected Sites

The search also considered statutory and non-statutory protected sites within 2km of the site boundary.

Statutory Protected Sites

There are no statutory protected sites within 2km of the site.

Non- Statutory Protected Sites

There are 10 Sites of Interest for Nature Conservation (SINCs) within 2km of the site. The NPT watercourse SINC appears to cover the entire county of Neath Port Talbot. However it is thought to be only relevant for watercourses in the local area. The closest SINC site is and area of Ancient Semi Natural Woodland along the northern boundary of the development site. The remaining SINC sites along with an approximate distance from site are listed below:

- Ffynnon Fawel (33m)
- Tennant Canal (152m)
- Catwg Wetland (182m)
- Neath Canal (445m)
- Neath Estuary (509m)
- Cilfrew Meadow (942m)
- Sarn Helen (1.7km)
- Gnoll Country Park (1.1km)
- NPT Watercourses

There is one Regionally Important Geodiversity Site (RIGS) within 2 km of the site. Aberdulais RIGS is located approximately 276m north east of the site.

There is one Wildlife Trust Reserve (WTRS) within 2 km of the site. Coed Gawdir WTR is located approximately 1.9km east of the site.

There are 45 areas of Ancient Semi Natural Woodland (ASNW) within 2km of the site. The closest area is approximately 500m to the south of site. These are broadleaf woodlands comprising mainly native tree and shrub species which are believed to have been in existence for over 400 years. The ground vegetation will reflect the naturalness of these woodlands and will frequently feature species which provide clear indication of long and

continued woodland cover. They will have been woodland for centuries and contribute substantially to our natural and cultural heritage.

There are 35 areas of Restored Ancient Woodland within 2km of the site boundary. The closest area is adjacent to the northern boundary of the site. These woodlands are predominately broadleaved now and are believed to have been continually wooded for over 400 years. They will have gone through a phase where canopy cover will have been more than 50% non-native conifer tree species and now have a canopy of more than 50% broadleaf.

There are 24 areas of Plantation on Ancient Woodland Sites within 2km of the site boundary. The closest areas is approximately 40m north of the site at the closest point. These are sites which are believed to have been continuously wooded for over 400 years. They have been replanted with native or non-native species, most commonly with conifers. They currently have a canopy cover of more than 50% non-native conifer tree species. They will have varying levels of remnant features of ASNW.

The development site is located within B-Lines designation. B-Lines are non-statutory protected sites which aim to restore and create wildflower habitats forming stepping stones that link existing wildlife areas together creating a network of habitats across the landscape benefiting not only pollinators but a host of other wildlife.

There are short sections of hedgerow habitat is present within the site boundary. Hedgerow is a section 7 habitat of importance for protection under The Environment (Wales) Act 2016. Therefore any impacts to hedgerow must be avoided. If impacts are unavoidable replacement hedgerow planting must be provided.

2.2 Potential Impacts to Protected Sites

There are no statutory designated sites within 2km of the site.

The proposed development site lies adjacent to a NPT Woodland SINC site. Figure 1 below shows the location of the SINC and proximity to the development site. Generally a suitable buffer between a SINC site and closest point of development would be recommended. However, the school site already functions adjacent to the SINC and a certain level of disturbance to the adjacent habitat is already experienced. It is recommended that steps be taken during construction and site design to reduce secondary impacts to the adjacent SINC as much as possible. For example, consideration to lighting and light spill where the site abuts the woodland must be given.

The watercourse flowing through the school site, and to the north east appears to be hydrologically connected with the Tennant/Neath Canal and River Neath/Dubai's SINC corridors to the south and south east of the proposed development site. The watercourse

flowing through the site is culverted along some sections, and where it forms an open channel it is canalised with grills in three different locations. Although it is understood that European Eel have been recorded using this riparian corridor, it is unlikely to be used by other species such as Otter as a wildlife corridor because of the obstacles present. A sustainable drainage straight will be required to inform the development proposals and ensure all water entering the water course is adequately dealt with and clean. Pollution prevention measures must be adopted as part of any construction works to prevent negative impacts to water quality.

It is noted that hedgerow is a Section 7 habitat of importance for protection under The Environment (Wales) Act 2016. Any hedgerow loss must be avoided and appropriately mitigated for if undertaken. Additional hedgerow planting within the site of native species with an appropriate aftercare regime must be provided.

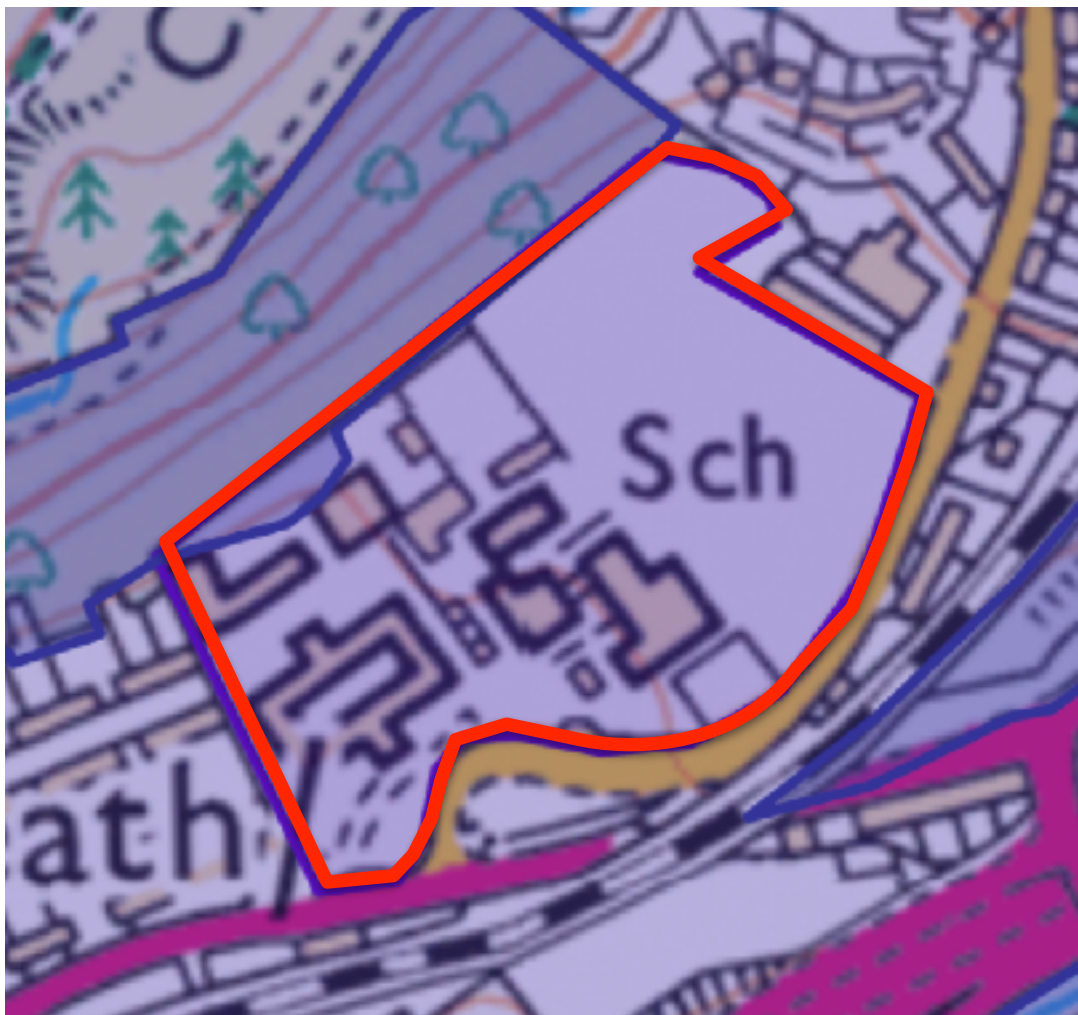


Figure 1 - Site boundary and adjacent SINC indicated by dark blue area

3. Phase 1 Survey

3.1 Habitats

A walkover survey of the site was completed on the **9th and 22nd October 2024**. A species list can be found in Appendix 1, photographs of the site can be found in Appendix 2 and a map of the habitats found within the site is provided in Appendix 3.

The site is split into two areas; the playing field and associated natural habitat is located in the east of the site. The school buildings, parking, hard standings and access road are located in the west, along with landscaped areas of vegetation. There are fourteen permanent buildings and three small portacabins on the site. The buildings vary in age from Victorian brick structures to buildings of a 1970s design, and one modern building (Canteen). One of the older Victorian buildings has been refurbished in more recent years and supports bat mitigation features in the roof. Detailed building descriptions can be found in Table 1 within section 3.4 of this report.

All of the **buildings** are connected with **hard standing**. There are two playgrounds areas, and an all terrain hockey pitch which has artificial lighting at each corner. The playgrounds pitches, parking areas and footpaths have all been mapped as hardstanding within the habitat map in Appendix 3.

There are regularly managed areas of vegetation between some of the buildings, and also in the south of the site adjacent to the school access road. These areas consist mainly of **species poor semi-improved neutral grassland** supporting species including Common Ryegrass, Creeping Buttercup, Common Daisy, Dandelion, and White Clover. The grassland south of the school access road supports four mature lime trees, two pollarded Ash, a mature Ash, and a cherry tree. There is an area of immature trees along the southern boundary south of the fenced playground area.

There are areas of more diverse grassland (semi-improved neutral grassland) on the bank in front of the Old Block (Building 1), and another grassy bank behind the canteen (Building 7). The area of **semi-improved neutral grassland** to the front of Building 1 supports species including Ribwort plantain, Yarrow, Mouse-eared Hawkweed, Rough Hawk-bit, Common Mouse-ear, Creeping Cinquefoil, Dandelion, Cock's-foot, Self-heal, Common Daisy, Creeping Buttercup, and Cuckoo-flower. The south facing shaded grassy bank between the woodland edge and Building 7 is less managed and supports shade-loving plant species associated with woodland habitat; including Herb-robert, Remote Sedge, Cock's-foot, False-oat Grass, Ribwort Plantain, Broad-leaved Dock, Yorkshire-fog, Creeping Buttercup, Ground Ivy, Dogwood saplings, Soft-rush, Perforate St.John's-wort, Agrimony, Wood Geum, Common Ivy, Creeping Jenny, Self-heal, Dandelion, Wild Strawberry, Enchanter's Nightshade, Male Fern,

Lady Fern, Angelica, Brooklime, Common Ragwort, and Willow-herb species. This area of grassland appears to be dominated by woodland flora.

There are three **garden areas** within the site; a central garden courtyard within Building 1 supporting shrubs and other ornamental species, a small garden area adjacent to the watercourse and to the west of to Building 14, with three mature ornamental conifers, and a small pond. There is also a small school allotment adjacent to the woodland boundary in the north consisting of raised beds.

There are three short sections of **hedgerow** within the built up section of the site. These hedgerows consists of species including Wild Privet, Common Ivy, *Viburnum sp.*, Hawthorn, *Rosa rugosa*, Bramble, Bracken, and Elder. Although these hedges are short sections they form well managed dense habitat ideal for nesting birds. These hedgerow sites are isolated, and do not connect with any other habitat within the site or the wider landscape.

There are several **scattered trees** amongst the school buildings including a cherry tree to the east of the portacabins (Buildings 4), a Silver Birch to the north of Building 2 adjacent to the walled courtyard area, a mature Alder within the grassy area adjacent to the watercourse north of Building 14, and two cherry trees further east of the Alder.

The sports field (to the east of site) consists of regularly managed **amenity grassland** supporting rye-grass with creeping buttercup. The perimeters and corners of the pitch to the north and west support non-ruderal herbs and grassland species associated with woodland edge, with marshy grassland species present to the eastern end of the boundary. There is an uncut margin of 15cm along the boundary fence-line which supports species such as False-oat Grass, Willow-herb species, Common Ragwort, Angelica, Bracken, Spear Thistle, Great Willow-herb, Hawk's-beard sp., Mare's-tail, Broad-leaved Dock, Black Knapweed, Ribwort Plantain, Dandelion, Common Mouse-ear, Common Daisy, Creeping Buttercup, Creeping Bent, Wood Geum, Bramble, Lady Fern, Angelica, Clover sp., Soft Rush, Greater Trefoil, Bittersweet, Cleavers, Rough Meadow-grass, and Meadow Buttercup. A Broad-leaved Helleborine plant was recorded, along the northern boundary along with one stand of **Rhododendron**.

A parcel of rough grassland to the north east of the sports field has gated access and sits outside of the playing field boundary. There are several sections of hardstanding in amongst the grassland. The area is south west facing and slopes away from the adjacent woodland to the north. The grassland appears to be transitional in nature with several marshy and neutral grassland species noted within the sward. Species noted with the sward include Sharp-flowered/Jointed Rush, Greater Trefoil, Lesser Spearwort, Hairy Sedge, Compact Rush, Soft Rush, Angelica, Ribwort Plantain, Creeping Buttercup, Meadow Buttercup, Black Knapweed, Creeping Bent, Meadow Cranesbill, Dandelion, Common Ragwort, Rough Meadow-grass, Common Sorrel, Yorkshire-fog, Common Mouse-ear, Hawkweed sp., and

Agrimony. On balance the grassland is considered to be **semi improved neutral grassland** and has been mapped as such within the habitat map in Appendix 3.

The **semi improved neutral grassland** to the north east of the sports field is fenced along the western boundary, and has a northern and eastern boundary supporting mature tree species including Sycamore, Willow species, English Oak, Alder, Hazel **Rhododendron**, and Bramble. A **watercourse** flows to the north and east of this corridor of trees. There is an area of **scrub** in the north east corner of the rough grassland, and all along the edge of the wooded boundary. **Tall ruderal** and non-ruderal herbs were recorded along the edge of the scrub. Species present include Bramble, Bracken, Willow sp., Common Ivy, Common Nettle, Rose-bay Willow-herb, Hemp Agrimony, Lesser Burdock, and Cock's-foot. The grassland, tall ruderal vegetation and scrub habitat all grade into different habitats making it difficult to identify clear habitat boundaries.

The **scrub** and **tall ruderal vegetation** continues along the eastern boundary of the sports field to the south east corner with Bracken, Bramble, Buddleja, Hemp Agrimony, Hawthorn, Tutsan, and Common Ivy present. There are **several semi-mature trees** along this boundary including an Ash, and a coppiced Sycamore. There is a large stand of **Japanese Knotweed** close to the south east corner of the field.

The southern boundary of the sports field is planted with a **linear corridor of cherry trees** with grassland of a slightly taller sward than the rest of the field. There is a single mature White Willow tree in the south west corner of the field.

There is an area of south facing but shaded **woodland edge habitat** along the northern boundary to the rear of buildings 7 and 10. This area is separated from the woodland by a hoop-top fence and has been mapped as **non-ruderal vegetation, scrub** habitat with **scattered trees**. Species present include Hart's-tongue Fern, Herb-robert, Remote Sedge, Male Fern, Common Ivy, Creeping buttercup, Broad-leaved Dock, Pendulous Sedge, Common Nettle, Willow-herb sp., Wood Germ, Cock's-foot, Bracken, Bramble, Bittersweet, Angelica, Rosebay Willow-herb, False-oat Grass, and Yorkshire-fog. There is coppiced Hazel, Beech, Holly, Wild Privet, and Hawthorn with a mature Ash, and two mature English Oak trees situated along this corridor. There are log piles and lying deadwood within this area which has good connectivity with the adjacent woodland. There are well used paths through the habitat likely made by school pupils frequenting the area.

The fast-flowing **watercourse** that flows across the site from the east is culverted beneath the sports field and enters a open canalised channel flowing in-between the school buildings in a westerly direction. The walls of the channel consist of stone, with a concrete bed. The **watercourse** continues into a culvert beneath the parking areas in the south of the site. There is very little vegetation growing along the walls, and very sparse substrate to the bed

of the watercourse. There is a grill at each end of the culvert, and additional grills along the open section of the channel.

The whole site perimeter is fenced with 2m hoop-topped **metal fencing**, with meshed metal fencing separating areas within the built area of the school.

Security lighting is present on the buildings throughout the site, with artificial lighting around the all terrain hockey pitch. There is no lighting around the sports field.

3.2 Great Crested Newts (GCN)

Great crested newts (*Triturus cristatus*) are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Deliberate taking or destroying of eggs,
- Damage or destruction of a breeding site or resting place.

Great crested newts (GCN) are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a GCN. GCN and Common toad are listed in section 7 of the Environment (Wales) Act 2016 which makes them key species to sustain and improve biodiversity.

There are no records of Great Crested Newt within 2 km of the site.

The rough grassland, tall ruderal vegetation, and scrub recorded in the east and north of the sports field are all suitable habitat for use by GCN during their terrestrial life stages. GCN generally like to have a necklace of suitable waterbodies for breeding purposes within a local area. There are no suitable ponds within the development site. The site has good habitat connectivity with woodland to the north where two ponds are present within the Craig Gwladys Country Park within 500m of the site (records of breeding toads and frogs were returned from the data search). Ponds may be present within residential gardens to the west and not visible on maps. There may also be ponds within the residential gardens to the east beyond the area of rough grassland, however the watercourse that bounds the grassland area would present an obstacle to migration. The road network to the south of the site would also form an obstacle to migration.

The lack of records within close proximity to the site, and the lack of ponds within the local area, make it unlikely that GCN will be utilising the site itself for breeding purposes. GCN could commute through the site, although this is unlikely as there is no network of suitable commuting habitat across the site. GCN are considered unlikely to be present within the site.

No further survey recommendations are made for this species.

3.3 Dormouse

The dormouse (*Muscardinus avellanarius*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Dormouse is listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a native dormouse. Dormouse is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

There are no records for dormouse within 2km of the site returned within the data search.

The broad-leaved woodland adjacent to the site to the north could potentially provide optimal habitat for this species. There is small area of woodland edge habitat within the site and in connection with this woodland that could provide habitat for dormice, however, because of the disturbance caused by school pupils within this area, it is considered unlikely that dormice would be present. It is recommended that a search of the vegetation is carried out by a dormouse licensed ecologist or accredited agent prior to the removal of this vegetation if and when this is to be carried out. **Further survey work for dormouse is not recommended.**

3.4 Bats

All British bats are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Schedule 5 of The Wildlife and Countryside Act (1981) also protects all species of British bat and their roosting locations. British bats are protected from intentional or reckless disturbance and or obstruction of their roosting places. Barbastelle, Bechstein, Noctule, Brown long-eared, Common pipistrelle, Soprano pipistrelle, Greater horseshoe and Lesser horseshoe are also listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

There are commuting and foraging records for Common Pipistrelle (*Pipistrellus pipistrellus*), Noctule bat (*Nyctalus noctula*), Daubenton's bat, Natterer's bat (*Myotis nattereri*), Whiskered bat (*Myotis mystacinus*) within 1 km of the site. A roost record for Soprano Pipistrelle (*Pipistrellus pygmaeus*) was returned 700 m west of the site. There is a roost record for Daubenton's bat (*Myotis daubentonii*) 570 m north west of the school site, and a roost record for an unidentified Pipistrelle bat species 600 m to the south west.

Tree Assessment

Trees within the site were subject to a cursory ground level assessment for the potential presence for roosting bats. The optimum time for such surveys is during the winter months when trees have lost their foliage. Should any tree be considered likely to have above low potential for roosting bat use, further detailed survey work will be recommended following the ground based visual assessment methodology provided in the BCT Survey Guidelines 2023 (4th Ed).

As the trees on site are all in leaf it was difficult to fully survey them for potential bat roosting features. Many of the trees within tree line and scrub along the northern boundary adjacent to an area of rough grassland are large specimens and appear to be of an age and structure where features suitable for roosting use by bats may be present. A small number of mature trees with suitable features for roosting bats and dense ivy around the trunks are also present within the woodland edge habitat along the the northern boundary. There are also several scattered mature trees throughout the site supporting potential bat roosting features, particularly a mature Alder adjacent to the watercourse flowing through the site.

In the first instance all tree removal should be avoided where possible and a precautionary approach to any new lighting and increased noise disturbance should be adopted. **Detailed survey work for the potential roosting use by bats may be required depending on the final designs and plans for site and if tree removal cannot be avoided.**

Habitat Assessment

The habitat within the site is considered to have **moderate** suitability for use by commuting and foraging bats. The development site sits between residential housing (to the east and west) with a corridor of broad-leaved woodland to the north which would provide excellent feeding, commuting and roosting habitat for a variety of bat species. The watercourse

flowing through the site may also be used by bats as a commuting corridor to the riparian corridors of the Neath Canal and river to the south of the site.

These watercourses, including the River Dulais to the east are likely to be important foraging and commuting routes for bats across the wider landscape.

It is currently not known which habitat is likely to be lost as part of the development works, however, **bat transect surveys are recommended to inform the future development proposals.** A period of transect survey work during the spring, summer and autumn should be sufficient to provide suitable information on bat usage of the boundary features within the site.

Building Assessment

Visual assessments were made of each building on the site from the ground. Potential bat roost features (PRFs) were recorded, and the building was given a grading of Low, Moderate or High depending on the features, or evidence of bats recorded refer to the BCT Bat Survey Guidelines, 2023 (4th Edition).

The location of all of the buildings can be found in the Appendix 1 Habitat Map.

	Building Description	Features	Bat Potential
B1	External: Large single-storey Victorian brick building with slate roof consists of four wings around a central courtyard area.	This building supported several PRFs including lifted and missing roof tiles, gaps within the roof ridge, gaps between the flashing on the chimneys, and gable window in the north wing, loose soffits, and ventilation grills. There is also a cellar with louvred door access. Security lighting was present.	Moderate
	Internal: There appears to be no attic space, and suspended ceilings were noted to be present on the interior. There is a cellar.	 	

B2	External: A two-storey Victorian brick house with a slate roof. The wooden sash windows are sealed with perspex sheets. It is surrounded by a hedge on three sides, with a garden area between the hedge and the house. This area supports stone rubble. There is an ornamental metal fence with a gate along the southern boundary. There is dense ivy on the south east corner of the house.	The building supported PRFs including gaps between the soffit, lifted roof tiles, and gaps between the chimney and flashing.	Moderate
	Internal: There may be an attic space within this building.	- 	
B3	External: A two-storey 1960s building constructed of brick with concrete cladding, and flat felted roof. The building is situated close to the watercourse to the east. Security lighting was present on this building. A single storey block of garages are connected to Building 3 to the north.	Gaps between the concrete cladding, and behind the solar panels on the southern elevation of the building. Garages: several old bat droppings were recorded on the floor at the base of the metal doors. There are gaps at the top of the doors where bats could gain access to the interior, and gaps in the plastic cladding.	Low/Moderate
	Internal: N/A 		
B4	External: Three single-storey portacabins are located to the south of the site adjacent to the parking area. They have felted flat roofs with plastic soffits and plastic weatherboarding around the top of the buildings.	Gaps between the soffit and the felt roof, and gaps in the felt.	Low

	<i>Internal:</i> N/A		
B5	<i>External:</i> This single-storey building is constructed of brick with plastic weatherboarding and a felted flat roof. It is located adjacent to the watercourse which flows through the site.	Features included gaps between the soffit and the building, and gaps in the felt. There were also ventilation holes present.	Low
	<i>Internal:</i> N/A		
B6	<i>External:</i> This is a single storey Victorian brick building with a ridged asbestos roof and wooden doors, used as a store.	It is in disrepair and as such supports numerous PRFs such as large holes in the roof, gaps beneath the roof, gaps above the doors, and between the wooden soffit which is hanging off in places.	Moderate
	<i>Internal:</i> N/A		
B7	<i>External:</i> This is most modern building on the site, and is a two-storey building constructed of steel and brick with plastic cladding, and a several ridged areas of roof. The location of the building adjacent to broad-leaved woodland which can provide excellent foraging, commuting, and roosting sites for bats.	Gaps between the cladding, ventilation grills.	Low

	<i>Internal:</i> N/A		
B8	<i>External:</i> This is a small single storey brick building with an ridged asbestos roof. There is a wooden door on the southern and northern elevations with holes along the eastern elevation where the ventilation grills have fallen out. This building lies on the western boundary adjacent to residential gardens.	A pile of fresh bat droppings were recorded at the base of the door in the southern elevation. Small flies were also recorded flying around the top of the south east corner of the building on the first visit to the site. The holes along the top of the wall would allow bats to easily access the interior of the building. There are also gaps beneath the felt of the roof.	High/Moderate
	<i>Internal:</i> N/A		
B9	<i>External:</i> This brick building is lies adjacent to the broad-leaved woodland to the north of the site. It is a modern building in a good state of repair with a one storey section with a flat felted roof, and a another section of the building with a tiled ridged roof. There is a louvred door along one section of the building.	PRFs included gaps beneath the felt to the front of the building, and between the soffit and the wall. Old bat droppings were recorded on the window sill to the rear of the building, but this is likely to be evidence of foraging bats. A large shiny bat dropping (possibly Serotine) was recorded at the base of the louvred door.	Low
	<i>Internal:</i> N/A		

B10	External: This is a single storey Victorian brick building which has been refurbished in recent years. There is a slate tile roof, and large brick chimneys. Security lighting is present. The building is adjacent to the broad-leaved woodland to the north.	PDFs include lifted and broken tiles.	Moderate
	Internal: Bat mitigation features are present along the ridge of the roof, and there is likely to be an attic space/void present.		
B11	External: This building is constructed with breeze blocks with a corrugated metal ridged roof. There is a louvred door in the southern elevation. The building sits on the edge of the sports field close to the woodland to the north.	No PRFs recorded.	Low
	Internal: N/A		
B12	External: This is a single-storey building constructed of brick with a felted flat roof and plastic weatherboarding to the tops of the walls. There is a louvred door to the western elevation.	Potential gaps beneath the felt.	Low
	Internal: N/A		

B13	External: This building is located adjacent to the hockey pitch and sports field. It is a single-storey portacabin with a flat felt roof and sides with plastic cladding around the top of the walls.	PRFs include gaps beneath the felt and cladding.	Low
	Internal: N/A		
B14	External: This 1960s building is the largest building on the site. It consists of various section of 3-storey, 2-storey, and single storey construction all with a flat felted roof. There is a covered walkway over the watercourse to the west which connects to Building 3.	PRFs include gaps between the concrete cladding, gaps beneath the plastic weather boarding, gaps beneath the felt, and gaps beneath lead flashing on the ground floor in a section to the west.	Low
	Internal: N/A		
B15	External: This small brick building with a flat felted roof, and a metal palisade gate access. It is located adjacent to the woodland in the north. This building appears to be in good repair.	The gate in the southern elevation may allow access for bats to the interior of the building.	Low
	Internal: N/A		

Given the height and complex structure of the buildings is considered possible that potential access points were missed. Internal surveys of the building were not undertaken during the October site visits. The school is in use and access to the interior of all buildings is difficult to arrange. Many of the buildings have suspended ceilings preventing access to any attic spaces above also.

In summary, the building are listed below with their bat roosting suitability:

- Low Bat Roosting Potential - Building 15, 14, 13, 12, 11, 7, 5, 4
- Moderate Bat Roosting Potential - Building 10, 9, 6, 3, 2, 1
- High Bat Roosting Potential - Building 8

Bat activity surveys were recommended on all buildings to overcome the scoping survey constraints and based on the potential roosting suitability of the structures.

3.5 Otters

The Otter (*Lutra lutra*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Otter are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale an otter. Otter is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

There were 11 records of Otter returned within 500m of the site. The closest record was of a spraint recorded in 2002 365m east on the River Dulais. The majority of the records were of spraints on the River Neath to the south, south west, east, and north east of the site. Of note, there were 3 old spraints recorded in a resting place in the undercut bank of the River Dulais 752m to the north east in 2002.

Otters tend to prefer secluded locations for their holts to help prevent them being disturbed by other animals. It is accepted that otters can travel long distances from river corridors to find acceptable holt sites.

The vast majority of the site is considered to be unsuitable for otter holt creation as much of the site is dominated by amenity grassland and built areas. However, watercourses are present within the woodland to the north, and to the east of the site. Potential mammal runs were recorded along the northern boundary of the playing field adjacent to the woodland, and within the area of rough grassland to the east of the site. Potentially, otters could be using these areas of the site as commuting corridors between the two watercourses, but these mammal runs could also be made by other mammals rather than otter.



Photo 1 Potential mammal run

The watercourse flowing across the site is unlikely to provide a corridor for otters because of the narrow grills present along the channel, the culverted sections (which otters do not like to use), and the fencing and gated access to the site; all presenting obstacles to movement across the site.

Detailed development proposals have not yet been finalised. Providing the areas adjacent to the riparian corridors to the north and east of the site can be retained, further detailed survey work for otter is unlikely to be required. **Should development proposals impact the northern boundary and the area of rough grassland to the east, then suitable commuting corridors must be included in any future designs for the site.**

Should development proposals impact the riparian corridors, a check of the vegetation for the presence of otter by an ecologist will be required prior to any vegetation removal.

3.6 Badger

Badgers (*Meles meles*) are protected under the Protection of Badgers Act 1992. In summary they are protected from:

- Taking, killing or injuring;
- Cruelty;
- Interfering with a badger sett;
- The selling and possession of badgers;
- Marking or ringing.

Badgers are also listed on schedule 6 of the Wildlife and Countryside Act 1981 as amended.

Badgers tend to have a variety of setts with different uses and functions within the territory for the family unit. In general there is usually a main sett which the family will use the most. There are then annex, subsidiary and or outlier setts which depending on family structures and environmental pressures may be used at different times of the year. As female badgers tend to have their cubs over winter the disturbance and damage of badger setts is prohibited between December and June inclusive. NRW are the licensing body for any actions which may contravene the above legislation.

Badgers favour a dry sloping site for digging their setts preferably within woodland or even under a large hedgerow bank. Badgers are creatures of habit and tend to follow regular pathways between their setts and foraging grounds.

There are a small number of badger records within 2km of the development site, the majority of the records are associated with the A465 dual carriageway to the east. The closest record is for a road traffic collision approximately 220 m to the south east.

The site is considered to be unsuitable for badger sett creation as the majority of the site is amenity grassland and built up areas, and frequently disturbed by school activities and pupils. The grassland is suitable for foraging and commuting use by badger. Mammal runs were recorded along the northern boundary of the playing field adjacent to the woodland, and within the area of rough grassland to the east of the site. Potentially, badgers could be using these areas of the site as commuting corridors travelling from the adjacent woodland, but these mammal runs could also be made by other mammal species.

Detailed development proposals have not yet been finalised. Providing the northern boundary and the area of rough grassland to the east can be retained, further detailed survey work for badger is unlikely to be required. **Should development proposals impact these areas then suitable commuting corridors must be included in any future designs for the site.**

No field signs for badger such as latrines, snagged hair or snuffle pits were noted on site. The presence of a badger sett within the adjacent woodland is considered to be possible. Badgers may use the site for commuting purposes, and as a precaution, **a visual inspection of scrub immediately prior to any vegetation clearance is recommended.**

3.7 **Birds**

All breeding birds are protected under schedule 1 of the Wildlife and Countryside Act (1981) as amended. Under this Act it is an offence to:

- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.

- Intentionally take or destroy the egg of any wild bird.

Enhanced protection is afforded to species listed on Schedule 1 of the Act, this additional protection makes it an offence to:

- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

A variety of bird species listed under Section 7 of the Environment (Wales) Act 2016 (EWA 2016) Schedule 1 of the Wildlife & Countryside Act 1981 (WCA1.1) have been recorded in the local area. There are 46 records of priority bird species, and 46 records for birds of conservation concern within 500m of the site.

The majority of the site is considered to be unsuitable for nesting use by bird species as the amenity grassland and built up area provides little shelter or cover for such use and the site is frequently disturbed by school activities. However, several species of gull were recorded on the roof tops of the buildings, and jackdaws were also noted foraging in the grounds. These species will nest on and within buildings (jackdaws are known to nest in chimney stacks).

Nesting opportunities also occur in the mature trees, scrub and woodland edge habitat around the periphery of the site. Dunnock and Robin were observed moving between the edge habitat and the woodland in the north of the site during the PEA survey. Short sections of hedgerow within the development site provide habitat for nesting birds. Dunnocks were recorded entering the hedgerow around the edge of the old Victorian house (Building 2) during the survey. A Grey Wagtail was recorded on the roof of the Victorian house during the survey. This species of bird is known to forage and nest along watercourses, and may be using the watercourse flowing through the site as a foraging site.

A precautionary approach to the removal of habitat with bird nesting potential will be required, including the demolition of any building within the site. A check of buildings and suitable vegetation ie trees, scrub, hedgerow for any active nests must be undertaken prior to demolition. **Compensation measures for the loss of any vegetation that is suitable for bird foraging or nesting will be required.**

3.8 Reptiles and Amphibians

Reptiles such as the Slow-worm, Common lizard, Adder and Grass snake are protected under the Wildlife and Countryside Act 1981 (as amended). They are protected from killing, injuring and sale. They are protected from killing, injuring and sale. They are also listed in section 6 of The Environment (Wales) Act 2016.

The four widespread species of amphibian i.e. the Smooth and Palmate newts, Common frog and Common toad, are protected under the Wildlife and Countryside Act 1981 (as amended) by Section 9(5) of the Wildlife and Countryside Act 1981. This section prohibits sale of these species. Common toad is listed in section 6 of The Environment (Wales) Act 2016.

The closest reptile records to the development site are for Common Lizard approximately 296m to the north west, and Grass Snake approximately 296m north west; both records within the woodland adjacent to the development site. Records of Grass Snake were also recorded along the Neath Canal to the south east, and to the north east at Aberdulais Falls. The closest records for common amphibian species are for Common Frog, and Common Toad, and are approximately 41m to the north of the site within the adjacent woodland where there is a breeding pond. Records of Common Newt, and Palmate Newt were recorded further away from the site at 525m, and 604m respectively. There were no records of GCN records within 2km of the site.

Reptiles prefer a mosaic of habitats with diverse vegetation structure creating open areas and nearby cover to provide protection from predators and the elements. Common amphibian species require still pools of water for breeding purposes and damp conditions with foraging habitat during their terrestrial life stages.

There is one very small within the garden area of the site itself, but it appears to hold little water and is inundated with vegetation, and therefore unsuitable for amphibians. There are two ponds to the north west within the woodland, and the Neath canal to the south within 500m of the site. The canal is separated from the development site by a road.

The scrub, and tall ruderal vegetation along the boundaries of the sports field, and the rough grassland area to the east may provide habitat for amphibians and reptiles. The woodland edge and grassy bank behind the buildings to the north of the site may provide some habitat, but is shaded. These habitat types are suitable for foraging, commuting and overwintering purposes. The remainder of the grassland within the site is regularly maintained, and therefore offers little cover for amphibians and reptiles.

There are areas of rubble and ground vegetation around the Victorian house (Building 2), and a drystone wall in the corners of a courtyard to the rear of the building. These would provide suitable reptile habitat, but because of the lack of connective habitat it is unlikely that reptiles would be present.

Due to the lack of standing water within the site it is highly unlikely that amphibians will utilise the site for breeding. However they may use it for commuting, foraging and overwintering purposes. The habitats within the site boundary provide a mosaic structure and have connectivity to green spaces to the north and east. The site is considered to have at

least moderate potential to support common reptile species. **Reptile surveys are recommended to support any future planning application for the proposed development site boundary.**

3.9 Other Mammals

Other notable mammal species listed under Section 7 of the Environment (Wales) Act 2016 which had records returned during the data search include Hedgehog.

Hedgehog - there are 24 records of Hedgehog within 1km of the site. The closest record returned is approximately 138m to the north west of the site. A large black dropping was recorded within the porch area of Building 9 which could potentially be a hedgehog dropping. Mammal runs were recorded along the northern boundary of the playing field adjacent to the woodland, and within the area of rough grassland in the east of the site. Potentially, hedgehog are using these areas of the site as commuting corridors, but it could be other species of mammal creating these corridors.

This species is considered likely to be present within the site, at least on an occasional basis, for foraging and overwintering. Hedgehog is considered to be a species of principal importance, for the purpose of maintaining and enhancing biodiversity in relation to Wales. As such **consideration must be given to this species in any plans proposed for the site.**

It is recommended that a search of all scrub and rough grassland on the site is carried out prior to its removal to check for the presence of hedgehogs and their nesting/hibernation sites.

3.10 Invertebrates

Notable invertebrate species records, those species that are listed under Section 7 of the Environment (Wales) Act 2016, returned from the data search include: Small Blue (*Cupido minimus*), Wall (*Lasiommata megera*), Small Phoenix moth (*Ecliptopera silaceata*), Sallow moth (*Cirrhia icteritia*), Heath Rustic moth (*Xestia agathina*), Dot Moth (*Melanchra persicariae*), Cinnabar moth (*Tyria jacobaeae*), Oak-Hook-tip moth (*Watsonalla binaria*), Brindled Beauty moth (*Lycia hirtaria*), Blood-vein moth (*Timandra comae*), Garden Tiger moth (*Arctia caja*), Buff Ermine moth (*Spilosoma lutea*), Rustic moth (*Hoplodrina blanda*), and Flounced Chestnut (*Anchoscelis helvola*).

The site comprises of semi improved grassland, marshy grassland, tall ruderal vegetation, scrub, woodland edge habitat, tree lines and hedgerows. Mosaic habitats are important for invertebrates as many require two or more habitats to complete their lifecycle. The variety of habitats present therefore allows the site to support a wide range of invertebrate groups.

The habitats of the site and immediately adjacent habitats were assessed for their potential to support invertebrates using the Invertebrate Habitat Potential Assessment (IHPA) as found in CIEEM in practice Issue 112, June 2021. See Table 1 for results. The IHPA protocol has been produced to allow ecologists without specialised entomological expertise to identify key habitats and features likely to support important invertebrate assemblages. Full details of habitat types can be found in Appendix 6.

Table 1. Invertebrate Habitat Potential

Habitat Element	Grade
Decaying Wood – H1	D - Minor
Rotational Management – H2	E - Negligible/Absent
Nectar Resources – H3	D - Minor
Wet Substrates – H4	E - Negligible/Absent
Other Water Habitats – H5	E - Negligible/Absent
Structural Patchwork – H6	D - Minor
Still Air (S) – H7	D - Minor
Still Air (H) – H8	D - Minor
Connectivity – H9	C - Moderate
Ecoclines – H10	C - Moderate
Bare Earth – H11	E - Negligible/Absent

Based on the Invertebrate Habitat Potential Assessment (IHPA) the site, in its current state, is considered to have low potential to support common and widespread species of invertebrate. **No further survey work is recommended for invertebrates** but considering that the site lies within a designated B-line area and steps should be incorporated into the new site design to create and enhance habitats that encourage invertebrate populations, and allow invertebrates to migrate using corridors on the site

3.11 Invasive non-native species

There were several notable invasive non-native species (INNS) of plant recorded on the site during the survey, including Rhododendron within the woodland and eastern boundary within the area of grassland. Buddleja was also recorded along the northern boundary. A large patch of Japanese Knotweed was recorded along the eastern boundary in the southern corner of the site. The approximate location is shown within the habitat map in Appendix 3. **It is recommend that an INNS management plan is written to inform the removal of these species on the site.**

4. Recommendations and Mitigation

The development proposals are in the very early stages and detailed designs are not available. The proposal seeks to demolish the existing school buildings and build new school buildings within the east of the site including parking spaces and an access road, with new sports pitches in the southern part of the site. The exact layout and design of the building has not been agreed.

It is assumed that the majority of habitats within the development site will be affected by the development proposals. Broad recommendations are made below to help inform the design process. **Once the development proposals are progressed and finalised and the considerations to development within the site are addressed, further ecological input will be required.** Our recommendations are:

Habitat

- Any loss of hedgerow habitat must be avoided where possible. If impacts to hedgerow habitat are unavoidable, replacement planting will be required on a 2:1 basis. Ideally the replacement planting will include supplementary planting.
- A root protection zone (RPZ) must be implemented around any retained trees which lie adjacent to or within the boundary of the proposed development site. British Standard BS 5837, *Trees in relation to design, demolition and construction - Recommendations* will be followed. Measures will include clear marking of the RPZ to guarantee no machinery is used or digging carried out in that area. This will ensure that there is no detrimental impact to the trees and the flora or fauna it supports.
- Pollution measures must be put in place to avoid any impacts on to the River Neath/Dulais and Neath Canal SINC. There are also minor watercourses to the north and north west of the site. All machinery used during any on-site works must be stored in an agreed location away from the south, east, north, and north west of the site. Spill kits must be kept on site at all times to deal with any fuel, oil or material spills. All machinery will be kept in a bunded, water-tight storage compound to prevent spills. The storage compound must be at least 10m away from any surrounding watercourse.
- A sustainable urban drainage plan is recommended to reduce the impact of the proposed re-development of the site on the waterbodies in the area, and determine how the existing watercourse on the site is to be incorporated into the new development.

Species

- An arboricultural assessment will identify the trees to be removed as part of the proposed development. If trees are to be lost, or the trimming or cutting back of any mature trees are required then **detailed ground based visual assessment of all trees** in question for their use by roosting bats will be required. Should any tree be found to have bat roost potential for use by roosting bats or above further detailed surveys such as aerial inspections to fully inspect any suitable feature will be required.
- **Bat transect surveys** of the development site are recommended. Bat transect surveys must follow the guidance given within the BCT Good Practice Guidelines 2023 (4th Edition). Transect surveys are recommended during the spring, summer and autumn months to provide seasonal data on how bats use features within the site boundary.
- It is recommended that **bat activity surveys of all the buildings** are carried out during May to September 2025. Internal bat roost assessments of the buildings, where practically possible, will be required.
- A **refugia survey** of the site will be required to establish the presence or likely absence of reptiles and other amphibian species within the area of rough grassland to the north of the site. Artificial refugia must be set out within suitable habitat within the site boundary following advice given in Froglife Advice Sheet 10.
- A **pre-works inspection of all grassland, woodland and scrub habitat by an ecologist is recommended immediately prior to vegetation clearance works**. The use of the site by mammal species such as badger, otter, and hedgehog within the site boundary is likely. A pre inspection check of vegetation immediately prior to clearance work will check for any mammal signs.
- Should development proposals impact the north west boundary and the area of rough grassland to the north, then **suitable commuting corridors must be included in any future designs for the site**.
- Ideally all excavations within the site will be securely covered over if left unattended. Any excavations that have a depth in excess of 0.5m and that are left open overnight will have a means of escape let for any mammals (e.g. hedgehog) that may fall into them. A wooden board or equivalent will be left from the bottom to the top of the hole at an angle no steeper than 45°. This will allow any mammal to escape and avoid increased stress from being trapped.
- A **pre-works inspection for dormice of all the woodland edge and scrub habitat around the periphery of the site, and in connection with the woodland in the north west, is**

recommended by a suitably licensed ecologist is recommended immediately prior to vegetation clearance works.

- The woodland edge, tree lines, scrub, rough grassland, ruderal vegetation, and hedgerows around the periphery and within the site have the potential for use by **nesting birds**. The buildings across the development site also appear suitable for bird nesting use with gulls observed on building 14. Any nesting bird habitat removal must be completed outside of the bird nesting season of March to August inclusive. If this is not achievable an ecologist must inspect any vegetation with the potential for birds to be present for active birds' nests prior to removal works beginning. If an active nest is identified a buffer zone of at least 5m around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed. Greater buffer zones around nests may be required depending on the species and habitat the nest is within.
- There were several notable invasive non-native species (INNS) of plant recorded on the site during the survey, including Rhododendron within the woodland and northern boundary within the area of grassland. Buddleja was also recorded along the northern boundary. A large patch of Japanese Knotweed was recorded along the northern boundary in the eastern corner of the site. It is recommend that an **INNS management plan** is written to inform the removal of these species on the site.
- **Careful consideration must be given to the use of lighting within the development site**, as this can adversely affect the activity of a variety of fauna, particularly foraging bats, nesting birds, badger, otter and dormice. Light spillage into adjacent semi-natural habitats must be avoided and brightness kept to the lowest permissible level in the areas adjacent to such habitats. All lighting must meet recommendations in the BCT Guidance Note 08/23 Bats and Artificial Lighting at Night. <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>.

5. Biodiversity Enhancements & Green Infrastructure

The Environment Act (Wales) 2016 places a duty on competent authorities and councils including Neath Port Talbot Council to conserve and enhance biodiversity. Chapter 6 of Planning Policy Wales (version 12), paragraph 6.2.5 requires Green Infrastructure considerations to be included with all planning applications. Development proposals must detail how green infrastructure considerations which are proportionate to the scale and nature of the plans are being provided.

Green infrastructure currently within the site takes the form of semi-improved grassland, poor semi-improved grassland, tall ruderal vegetation, woodland edge habitat, scrub, watercourse, tree lines, and hedgerows. The site has good direct habitat connectivity to the wider landscape via the woodland areas adjacent to the northern boundary of the site.

The River Neath and Tennant Canal are present to the south of the site, and is hydrologically connected with the watercourse flowing through the site. The River Dulais lies to the north and east. Direct habitat connectivity to the east and south east of the site is more limited due to the presence of housing and a major road. However, there are a number of habitat types in the wider area which provide biodiversity value.

General considerations to green infrastructure to be considered as part for the development include:

- Paragraph 6.4.42 of Planning Policy Wales (version 12) requires that at least 3 trees of a similar type and compensatory size are planted for every tree lost. The site layout should avoid tree loss where possible. If loss is unavoidable, space within the site boundary and development plans to allow a suitable amount of compensatory planting is required.
- Creating habitat connectivity around the site would be a positive step for biodiversity. Pulling layout and engineering boundaries away from the edge of the development site boundary and providing green areas around the periphery of the site that are managed to benefit wildlife can help wildlife continue to commute across the site.
- Wildlife friendly lighting that avoids light spill onto retained habitat and any habitat corridors created across the site will be required. By reducing light spill onto vegetated features wildlife are more likely to commute and forage across a development site.
- Should the watercourse that flows through the site be retained within the school design, the biodiversity value of the feature could be improved. The watercourse is canalised at present with a concrete bed and sides. Providing a more natural channel

design would increase the likelihood of the watercourse being more attractive to fish, invertebrates and crustaceans.

The below bullet points are some simple measures that could be achieved to enhance the overall biodiversity value of the site:

- The use of native species within the soft landscaping works on the site. Suitable long term management of soft landscaping also helps ensure spaces are useful to wildlife. Management measures will need long term funding and must reflect the different habits to be retained and created within the development site. Tree and hedgerow planting would help to create screening around individual units for privacy and also integrate the development into the landscape.
- The provision of integrated bird boxes within the new buildings created on site. At least eight integrated bird boxes should be provided within the new development proposals. A variety of box designs are suggested to provide nesting sites for a wide range of bird species. All boxes must be placed at least 2m high from ground floor.
- The provision of integrated bat boxes within the new buildings created on site. At least eight integrated bat boxes should be provided within the new development to create roosting provision for bats. Integrated bat boxes must not be placed within 2m of any external light source and should be positioned close to retained habitat or areas of soft landscaping. The exact design of the box will depend on the final finish and construction materials used within the building design.
- All fencing across the site must be hedgehog friendly in design. A friendly design is considered to allow passage of small animals across the site. Close board or mesh fencing should provide either a continuous gap between the bottom of the fence and ground of approximately 13cm, or 13cm by 13cm gaps cut every 3m along fencing.
- A reptile hibernacula can be created within the grounds of the development site using rubble and brash from on site clearance works. The hibernacula must at least measure 0.5m in depth, 2m wide and 2m long each. It will be made by creating layers of wood, brash, rubble and soil. The hibernacula will create a mound approximately 0.3m above ground level which will be covered over with soil and seeded using a native seed mix. A diagram of a Reptile Hibernacula is located in Appendix 6 for reference.
- The creation of at least one butterfly bank within the grounds of the site would be welcomed. A butterfly bank creates a range of micro climates and habitats for use by invertebrates. In simplified terms, a butterfly bank requires a mound of poor quality soil to be created ideally 30m long and 'C' shaped. At the base of the bank a gravel substrate should be spread a few metres in width. The mound can then be seeded with a native seed mix and subject to low intensity cut and collect mowing.

Appendix 1 – Species Recorded

Common Name	Scientific Name	Common Name	Scientific Name
Trees & Shrubs		Broad-leaved Dock	<i>Rumex obtusifolius</i>
Conifer sp.	<i>Conifer sp.</i>	Creeping Jenny	<i>Lysimachia nummularia</i>
Ash	<i>Fraxinus excelsior</i>	Bracken	<i>Pteridium aquilinum</i>
Silver Birch	<i>Betula pendula</i>	Angelica	<i>Angelicum sylvestris</i>
Sycamore	<i>Acer pseudoplatanus</i>	Herb-robert	<i>Geranium robertianum</i>
Willow sp.	<i>Salix sp.</i>	Hogweed	<i>Heracleum sphondylium</i>
Rhododendron	<i>Rhododendron ponticum</i>	Wood Geum	<i>Geum urban</i>
English Oak	<i>Quercus robur</i>	Common Mouse-ear	<i>Cerastium fontanum</i>
Dogwood	<i>Cornus sanguines</i>	Wild Strawberry	<i>Fragaria vesca</i>
Hawthorn	<i>Crataegus monogyna</i>	Perforate St Johns-wort	<i>Hypericum perforatum</i>
Hazel	<i>Corylus avellana</i>	Great Willowherb	<i>Epilobium hirsutum</i>
Bramble	<i>Rubus fruticosus</i>	Bittersweet	<i>Solanum dulcamara</i>
Holly	<i>Ilex aquifolium</i>	Rosebay Willowherb	<i>Chamaenerion angustifolium</i>
Lime sp.	<i>Tilia sp.</i>	Willowherb sp.	<i>Epilobium sp.</i>
Elder	<i>Sambucus nigra</i>	Dandelion	<i>Taraxacum officinale</i> agg.
Buddleja	<i>Buddleja davidii</i>	Male Fern	<i>Dryopteris filix-mas</i>
Alder	<i>Alnus glutinosa</i>	Lady Fern	<i>Athyrium filix-femina</i>
Cherry sp.	<i>Prunus sp.</i>	Ground-ivy	<i>Glechoma hederacea</i>
White Willow	<i>Salix alba</i>	Spear Thistle	<i>Cirsium vulgare</i>
Wild Privet	<i>Ligustrum vulgare</i>	Meadow Buttercup	<i>Ranunculus acris</i>
Common Ivy	<i>Hedera helix</i>	Cleavers	<i>Gallium aparine</i>
Herbaceous plants		Lesser Burdock	<i>Arctium minus</i>
Common Nettle	<i>Urtica dioica</i>	Common Daisy	<i>Bellis perennis</i>
Greater Bird's-foot trefoil	<i>Lotus pedunculatus</i>	Hawkweed sp.	<i>Hieracium sp.</i>
Common Ragwort	<i>Senecio jacobaea</i>	Common Knapweed	<i>Centaurea nigra</i>
Common Sorrel	<i>Rumex acetosa</i>	Self-heal	<i>Prunella vulgaris</i>
Creeping Buttercup	<i>Ranunculus repens</i>	Lady's-smock	<i>Cardamine pratensis</i>
Creeping Thistle	<i>Cirsium arvense</i>	Grasses, Sedges & Rushes	
Lesser Spearwort	<i>Ranunculus flammula</i>	Cock's-foot	<i>Dactylis glomerata</i>
White Clover	<i>Trifolium repens</i>	Yorkshire-fog	<i>Holcus lanatus</i>
Ribwort Plantain	<i>Plantago lanceolata</i>	Italian Rye-grass	<i>Lolium multiflorum</i>
Hemp Agrimony	<i>Eupatorium cannabinum</i>	False Oat Grass	<i>Arrhenatherum elatius</i>
Brook-lime	<i>Veronica becabunga</i>	Pendulous Sedge	<i>Carex pendula</i>
Enchanter's Nightshade	<i>Circaea lutetiana</i>	Compact Rush	<i>Juncus conglomeratus</i>
Agrimony	<i>Agrimonia eupatoria</i>	Toad Rush	<i>Juncus ranarius</i>
Hart's-tongue Fern	<i>Asplenium scolopendrium</i>	Remote Sedge	<i>Carex remota</i>
Broad-leaved Helleborine	<i>Epipactis helleborine</i>	Soft Rush	<i>Juncus effusus</i>
Mare's-tail	<i>Equisetum arvense</i>	Creeping bent	<i>Agrostis stolonifera</i>
Comfrey	<i>Symphytum officinale</i>	Rough Meadow-grass	<i>Poa trivialis</i>

Creeping Cinquefoil	<i>Potentilla replans</i>	Sharp-flowered/Jointed Rush	<i>Juncus acutiflorus/articulatus</i>
Rough Hawk-bit	<i>Leontodon saxatilis</i>	Fescue sp.	<i>Festuca sp.</i>
Mouse-eared Hawkweed	<i>Pilosella officinarum</i>	Hairy Sedge	<i>Carex hirta</i>
Common Yarrow	<i>Achillea millefolium</i>		
Birds			
Robin	<i>Erithacus rubella</i>		
Dunnock	<i>Prunella modularis</i>		
Jackdaw	<i>Coloeus monedula</i>		
Grey Wagtail	<i>Motacilla cinerea</i>		
Black-headed Gull	<i>Chroicocephalus ridibundus</i>		

Appendix 2 – Site Photographs



Photo 2 Grilled end of the culvert
south of sports field (Looking east)



Photo 3 Canalised channel flowing
south (Looking east)



Photo 4 Channel flowing west (Looking
north)



Photo 5 Channel flowing to the south
in between Buildings 3 and 4 (Looking
east)



Photo 6 Grilled entrance to the culvert beneath the car park (Looking south west)



Photo 7 Semi-improved grassland bank to the south of building 1 (Looking north)



Photo 8 Sports Field (Looking north west)



Photo 9 Poor Semi-improved grassland to the south east adjacent to the access
(Looking south east)



Photo 10 Poor semi-improved grassland to the rear of building 10 (Looking north)



Photo 11 Semi-improved rough grassland to the north of the sports field with woodland beyond (Looking north)



Photo 12 Grassland and hedgerow to the east of Building 7 (Looking west)



Photo 13 Mature ornamental conifers within a small garden area to the south of Building 14 (Looking north west)



Photo 14 Small pond within garden area shown in Photo 13



Photo 15 Allotment adjacent to the western boundary (Looking north west)



Photo 16 vegetation to the rear of Building 7
(Looking north)



Photo 17 Grassland to the north of Building 7
(Looking south east)



Photo 18 Site boundary to the west showing
residential housing (Looking north west)



Photo 19 Woodland edge habitat along the north boundary to the rear of building 9 (Looking west)



Photo 20 Woodland edge habitat on the site along the north boundary (Looking east)



Photo 21 East boundary of the site adjacent to an industrial unit showing scrub habitat (Looking north east)



Photo 22 North west boundary of the area of rough grassland showing scrub (Looking north)



Photo 23 Boundary to the south of the site showing the line of cherry trees (Looking south west)



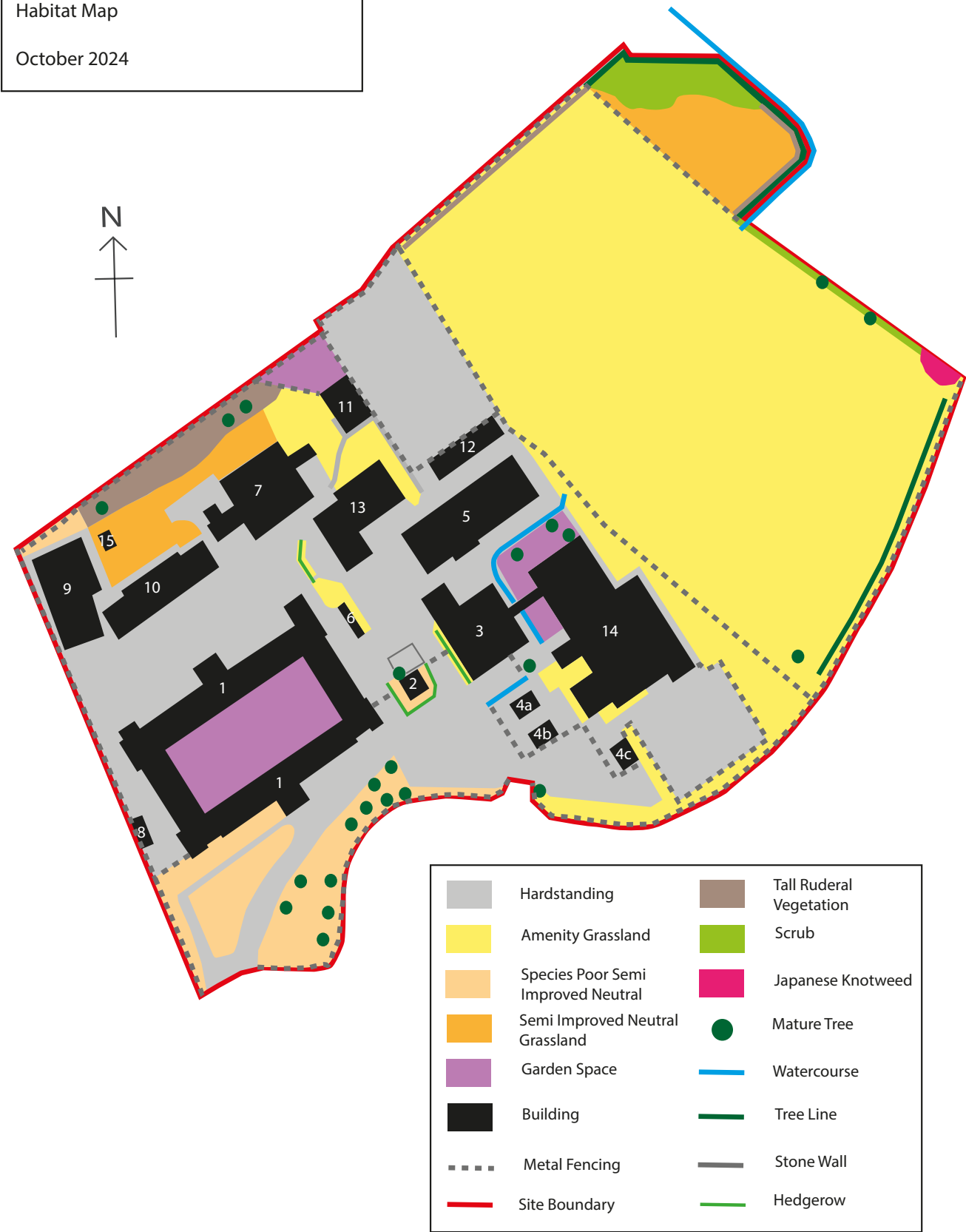
Photo 24 Mature oak tree within the woodland edge habitat along the north boundary (Looking east)

Appendix 3 Habitat Map

LLANGATWVG COMPREHENSIVE SCHOOL,
ABERDULAIS

Habitat Map

October 2024



Appendix 4 Aerial View of the Site

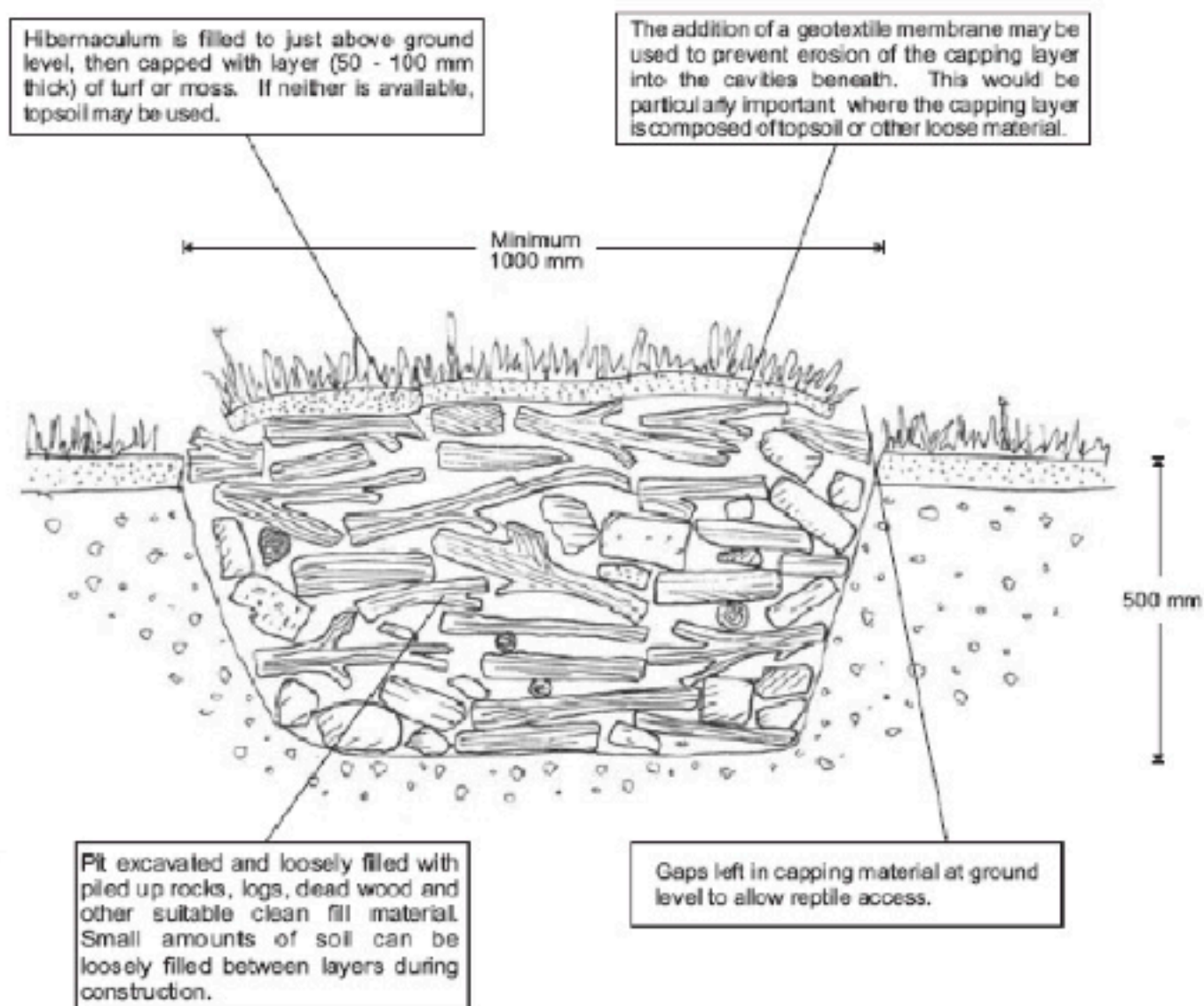


Appendix 5 Invertebrate Habitat Assessment

Table 1. Summary of the 11 habitat elements assessed by IHP survey.

Habitat element	No.	Comments
Decaying Wood	HE1	In all its forms; from decaying wood on/in large trees to woodland floor debris
Rotational Management	HE2	Planned or serendipitous; and whether for nature conservation or other purposes
Nectar Resources	HE3	As a proxy for nectar- and pollen resources, as assessment of pollen resources is impracticable on a walk-through survey
Wet Substrates	HE4	Including marginal, marshy, muddy and seasonally inundated habitats, as well as flushes
Open Water Habitats	HE5	The open water element of rivers, lakes, ponds, streams, ditches, etc.
Structural Patchwork	HE6	Habitat mosaics, including, but by no means restricted to open mosaic habitats on previously developed land
Still Air (S)	HE7	Suntraps and still-air microclimates in open situations; the term 'still air' is used in preference to 'wind breaks' as many rigid wind breaks are likely to produce turbulent air in their lee
Still Air (H)	HE8	Humid still-air microclimates in sheltered and shaded situations
Connectivity	HE9	Landscape-scale connectivity between the site and external habitats
Ecodines	HE10	A graded transition between two or more broad habitats
Bare Earth	HE11	Unshaded bare or sparsely vegetated well-drained substrate, regardless of soil type

Appendix 6 - Reptile Hibernacula



Source: Highways Agency (2005) *Design Manual for Roads and Bridges: Volume 10 Section 4 Part 7 – Nature Conservation Advice In Relation to Roads and Reptiles*

Appendix 7 - Legislation

The Habitats Directive (Directive 92/43/EEC) aims to *'contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States'*. The Directive requires the establishment and conservation of a network of sites within each member state which protect the rarest flora and fauna found across Europe. A number of species and habitats are listed in Annex 2 of the directive for which areas can be designated as a SAC. The aims of the Habitats Directive are transposed into British Law through the Conservation of Habitats and Species Regulations 2017.

The Wildlife and Countryside Act (1981) as amended provide the legislation framework and protection for SSSI. A SSSI is designated by a statutory nature conservation body such as Natural Resources Wales (NRW) for its make up of flora, fauna, geological and / or physiographical features. Each SSSI should have a citation which describes the site and its special features.

The Environment (Wales) Act 2016 is a wide reaching piece of legislation which seeks help improve the management of Wales' natural resources into the future. The Act sets out a Wales wide approach to planning and managing its natural resources at a national and local level in a sustainable manner. One main requirement for all public bodies, such as local councils, is to maintain and enhance biodiversity where possible within their duties.

The Well-Being of Future Generations (Wales) Act 2015 places a duty upon public bodies to produce well-being objectives that contribute to achieving a set of overarching well-being goals. The Resilient Wales goal is the key goal that biodiversity and geodiversity conservation, as part of the planning process, will contribute towards delivering.