CSA environmental

Penygawsi Primary School,
Llantrisant, Pontyclun

Ecological Impact Assessment

Prepared by
CSA Environmental

on behalf of
Welsh Education Partnership Company

Report No: CSA/4387/03a

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This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

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EXECUTIVE SUMMARY

Planning permission is being sought for the redevelopment and expansion of Penygawsi Primary School.

CSA Environmental was instructed by the Welsh Education Partnership Company to undertake an Ecological Impact Assessment (EcIA) of the Site. To inform this assessment, a desktop study followed by a suite of targeted habitat and species surveys were undertaken, including for bats and badgers.

Penygawsi Primary School is located in the south of Llantrisant, Pontyclun, in the County Borough of Rhondda Cynon Taf. The Site comprises of one main school building and two small cabin classrooms, in addition to parking, hard play areas, a sports field and other areas of amenity grassland. The Site is bordered by dense scrub, linear belts of trees and shrub, and a pocket of broadleaved woodland.

Habitats present within the Site are dominated by buildings, hardstanding and amenity grassland of generally low ecological value, with some areas of greater diversity. The greatest ecological interest is associated with the mature broadleaved woodland in the west of the school, as well as scattered mature trees, linear belts of trees and shrubs and dense scrub. No roosting bats were identified but suitable foraging habitat is present. On-site habitats provide suitable bird nesting habitat, and there is potential for other notable species such as hedgehogs.

Precautionary working measures are described herein to avoid impacts to key habitats and protected species. It is proposed these measures are included within a Construction and Environmental Management Plan (CEMP) which could be secured via planning condition.

The development proposals will require loss of some amenity grassland and a small number of shrubs and trees. However the landscape strategy seeks to provide additional tree planting, shrub planting and improved grassland management. Prescriptions for ongoing management of new and retained habitats can be detailed within a Landscape and Ecology Management Plan (LEMP). Opportunities for ecological enhancement are included herein, such as the installation of bat and bird boxes, insect hotels and a hedgehog house.

Based on successful implementation of the proposed avoidance, mitigation and enhancement, the proposed school redevelopment is not anticipated to result in any significant residual negative effects on important ecological features.

1.0 INTRODUCTION

1.1 This report has been prepared by CSA Environmental on behalf of the Welsh Education Partnership Company (WEPCo). It sets out the findings of an Ecological Impact Assessment (EcIA) of Penygawsi Primary School, Llantrisant, Pontyclun (hereafter referred to as 'the Site') where redevelopment of the existing school is proposed, for which planning permission will be sought.

1.2 The scope of this assessment has been determined with consideration of best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and the Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013).

1.3 The Site occupies a total area of c. 2.5ha and is located around central grid reference ST 047 827, in the south of Llantrisant, Pontyclun, in the County Borough of Rhondda Cynon Taf. One large school building and two porta-cabin style buildings, with associated parking, play areas and access roads, lie within a large area of amenity grassland bounded by linear tree and shrub belts, broadleaved woodland, dense scrub, residential gardens and a perimeter fence (see Habitats Plan in Appendix A).

1.4 An initial desk study and extended Phase 1 Habitat survey were undertaken for the Site in August 2019 as part of a Preliminary Ecological Appraisal and updated in April 2021, the findings of which are presented herein. In addition, the following further survey work has been undertaken by CSA Environmental:

- Preliminary Roost Assessment (April 2021)
- Badger survey (April 2021)

1.5 As the Preliminary Roost Assessment identified bat roosting potential within one of the buildings on-site, further roost surveys were recommended. These have been completed by TACP UK Ltd during June and July 2021 and the results are presented within a separate report (TACP, 2378, P1, August 2021), with reference made herein where applicable.

1.6 This EcIA aims to:

- Establish baseline ecological conditions at the Site.
- Determine the importance of ecological features which could be affected by the proposed scheme.
- Identify any likely significant impacts or effects of the proposed development on important ecological features, in the absence of mitigation, including cumulative impacts.

- Set out any measures necessary to effectively avoid or mitigate likely significant effects, and identify residual impacts.
- Identify any compensation measures required to offset residual impacts.
- Set out potential ecological enhancement measures that may be secured by the proposed scheme, and quantify the overall net change in biodiversity using a BREEAM assessment.
- Confirm how proposed mitigation, compensation and enhancement measures could be secured.
- Provide sufficient information to determine whether the project accords with relevant nature conservation policies and legislation, and where appropriate, to allow conditions or obligations to be imposed by the relevant authority.

1.7 An EcIA can be used for the appraisal of projects of any scale. This is a best practice evaluation process, recommended by CIEEM (2018). It is intended that the evaluation of findings presented here-in will aid Rhondda Cynon Taf County Borough Council in their review of the planning application.

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

Legislation

2.1 Legislation relating to wildlife and biodiversity of particular relevance to this EcIA includes:

- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Protection of Badgers Act 1992
- Environmental (Wales) Act 2016

2.2 This above legislation has been addressed, as appropriate, in the production of this report. Further information on the above legislation is provided in Appendix B.

Planning Policy Wales

2.3 The Planning Policy Wales 11 (Welsh Government, 2021) sets out the government planning policies for Wales and how they should be applied. Chapter 6: Distinctive and Natural Places, is of particular relevance to this report as it relates to ecology and biodiversity. Further details are provided in Appendix B.

2.4 Technical Advice Note 5: Nature Conservation and Planning (Welsh Assembly Government, 2009), which is referred to by the PPW, provides further guidance in respect of statutory obligations for protecting and enhancing biodiversity and geological conservation and their effects within the planning system.

2.5 The Environment (Wales) Act 2016 sets out the requirements for the 'sustainable management of natural resources' together with new ways of working to achieve this. Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales. The S6 duty requires that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and promote the resilience of ecosystems.

Local Planning Policy

2.6 There are local planning policies which relate to ecology, biodiversity and/or nature conservation. These are summarised in Table 1 of Appendix B. Further supplementary planning guidance on Nature Conservation is also provided by Rhondda Cynon Taf. These policies have been addressed, as appropriate, in the production of this report.

Standing Advice

2.7 Natural Resources Wales Standing Advice (Natural Resources Wales, 2015) regarding bats and planning, aims to support local authorities and forms a material consideration in determining applications. Standing Advice has therefore been given due consideration, alongside other detailed guidance documents, in the production of this report.

3.0 METHODS

Desk Study

3.1 The Multi-Agency Geographic Information for the Countryside (MAGIC) online database was reviewed in August 2019, and updated in June 2021, to identify the following ecological features (based on the Site's likely 'zone of influence' in respect of such features):

- Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites within 10km of the Site (including possible/proposed sites)
- Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR)
- Other relevant data e.g. Ancient Woodland Inventory within 1km of the Site

3.2 Local Nature Reserves for Wales within 3km of the Site are taken from the Lle Geo-Portal for Wales.

3.3 A review was undertaken of the location of any such designations, their distance from and connectivity with the Site, and the reasons for their designation. This information was used to determine whether they may be within the Site's zone of influence.

3.4 South East Wales Biodiversity Records Centre (SEWBRC) was contacted for details of any non-statutory nature conservation designations and records of protected/notable habitats and species. This information was requested for an area encompassing the Site and adjacent land within c. 2km of its central grid reference. This search area was selected to include the likely zone of influence upon non-statutory designations and protected or notable habitats and species.

3.5 The Lle Geo-Portal for Wales and Woodland Trust's online Ancient Tree Inventory was reviewed for known ancient or veteran trees within the Site and adjacent land. Interactive online mapping provided by the charity 'Buglife' was used to determine whether the Site falls within an Important Invertebrate Area.

3.6 A desktop search was undertaken to identify ponds within 500m of the Site which may have potential to support breeding great crested newts *Triturus cristatus*, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography, in line with standard sources of guidance on survey and assessments for great crested newt (English Nature, 2001; Froglife, 2001; Gent and Gibson, 2003). Whilst it is recognised this is Natural England guidance, no equivalent is available in Wales and is taken to be the most relevant guidance available.

3.7 Where possible under the terms of the data provider, relevant desk study data are presented in Appendix C.

Field Surveys

Extended Phase 1 Habitat Survey

3.8 An extended Phase 1 habitat survey was carried out in out in warm and dry weather conditions on 02 August 2019 by Cerian Thomas ACIEEM and Dr Helen Gath, encompassing the Site and immediately adjacent habitats that could be viewed. An updated Phase 1 habitat survey was subsequently undertaken by Cerian Thomas on 06 April 2021 to determine any changes to the baseline habitats prior to completing this assessment.

3.9 Phase 1 Habitat survey is a method of classification and mapping wildlife habitats in Great Britain. It was originally intended to provide "*…relatively rapidly, a record of the semi-natural vegetation and wildlife habitat over large areas of countryside.*" The Phase 1 Habitat Survey method has been widely 'extended' beyond its original purpose to allow the capture of information at an intermediate level between Phase 1 and Phase 2 Habitat surveys. Here, the standard survey method has been 'extended' in this report to include the following:

- More detailed floral species lists for each identified habitat
- Descriptions of habitat structure, the evidence of management and a broad assessment of habitat condition
- Mapping of additional habitat types (e.g. hardstanding)
- Identification of Habitats of Principal Importance in respect of Section 7 of the Environment (Wales) Act 2016
- Identification of Habitats Directive Annex I habitat types
- Evidence of, or potential for, European Protected Species (EPS) (including bats, great crested newt, dormouse and otter)
- Evidence of, or potential for, other protected species (including birds, reptiles, water vole, badger and certain invertebrates)
- Evidence of, or potential for, other notable species (including Section 7 Priority Species of the Environment (Wales) Act 2016, as well as notable, rare, protected or controlled plants and invertebrates)

3.10 Results of the extended Phase 1 Habitat survey are presented on the Habitats Plan in Appendix A. Appendix D provides a list of floral species recorded in each habitat.

Further Survey Work

3.11 The following detailed field survey work was carried out in April 2021, with full methods and results provided in the relevant Appendices:

- Preliminary Roost Assessment - Structures (Appendix F)
- Badger Survey (Appendix F)

Limitations

3.12 There were no specific limitations to the desktop study or extended Phase 1 habitat survey, which was conducted at an optimum time of year and in good conditions. The SEWBReC have confirmed that the deskstudy results remain valid for use until 01 August 2022.

Evaluation and Assessment

3.13 Ecological features are identified, evaluated and assessed in accordance with the CIEEM Guidelines for Ecological Impact Assessment (2018), with detailed methods provided in Appendix E.

3.14 It is an established principle (CIEEM, 2018) that EcIA is an iterative process. Specialist advice on the avoidance and mitigation of the potential negative effects of the proposed development has been input from an early design stage.

4.0 BASELINE ECOLOGICAL CONDITIONS

Nature Conservation Designations

Statutory

4.1 There are no statutory designations covering any part of the Site.

4.2 One international statutory designation was identified within 10km of the Site; Cardiff Beech Woods SAC (c. 6.2km to the east of Site), which is described in Table 1 below.

4.3 Cardiff Beech Woods contains one of the largest concentrations of *Asperulo-Fagetum* beech forests in Wales, and represents the western limit of its past native range. It is also important for supporting populations of lesser and greater horseshoe bats (*Rhinolophus ferrumequinum* and *Rhinolophus hipposideros*) and European bullhead *Cottus gobio*. In consideration of the special interest features of the Cardiff Beech Woods SAC and its vulnerabilities, threats are primarily associated with invasive species and inter-specific relations within the site, as well as the threat from recreational pressure. Given the nature of the proposals to redevelop and expand existing educational facilities, there are considered to be no likely impact pathways between the Site and the SAC, and it is scoped out of further assessment.

4.4 Four national statutory designations were identified within 3km of the Site; Llantrisant Common and Pastures SSSI (c. 0.8km north), Ely Valley SSSI (c. 2.1km south), Brofiscin Quarry Groes Faen SSSI (c. 2.5km south-east of the Site), and Rhos Tonyrefail SSSI (c. 2.5km north-west). Brofiscin Quarry SSSI is a geological SSSI and is not of relevance to the Site. As above, with reference to the nature of the development proposals and the distance of these SSSIs from Pontyclun School, there is not considered be any mechanism for potential impacts on the SSSIs.

4.5 These statutory designations are described in Table 1 below. Due to the geographical context in which these sites have been designated, Cardiff Beech Woods SAC is valued to be of importance at the International level whilst the two SSSIs are of National level importance.

Non-Statutory

4.6 No local non-statutory designation were identified within 2km of the Site.

Table 1. Statutory and non-statutory designations within search radii

Site Name & Designation	Distance & Direction from Survey Area	Special Interests or Qualifying Features
International Designations within 10km		
Cardiff Beach Woods (SAC)	c. 6.2km east	Cardiff Beech Woods contains one of the largest concentrations of Asperulo-Fagetum beech forests in Wales. The

		area also includes of more acidic beech woodland, oak *Quercus* and ash *Fraxinus excelsior* woodland. Characteristic and notable species in the ground flora include ramsons *Allium ursinum*, sanicle Sanicula europaea, bird's-nest orchid *Neottia nidus-avis* and yellow bird's-nest *Monotropa hypopitys*.
National Designations within 3km		
Llantrisant Common and Pastures (SSSI)	c. 0.8km north	These mixed habitats support a diverse plant community including one nationally rare plant (liverwort *Scapania paludicola*) and one nationally scarce plant species (Cornish moneywort *Sibthorpia europaea*). An extensive area of predominantly acidic marshy grassland in a lowland setting, with slightly heathy areas and drier grassland, with smaller areas of species-rich neutral and acidic grassland and soligenous flush.
Ely Valley (SSSI)	c. 2.1km south	Ely Valley is noted for its strong population of Monk's hood *Aconitum anglicum*, a rare plant which stretches several miles along the river banks. In addition, the River Ely is important for otters *Lutra lutra*, which have re-colonised the Vale of Glamorgan in recent years
Brofiscin Quarry, Groes Faen (SSSI)	c. 2.5km south-east	The quarry comprises of an important type of limestone which evidences changing environmental conditions around 340-million years ago.
Rhos tonyrefail (SSSI)	c. 2.5km north-west	Hosts an important population of marsh-fritillary butterfly *Euphydryas aurinia*. Mixed habitats throughout the designation host a number of uncommon plants and supports several declining flora and fauna.

Habitats and Flora

Ancient Woodland

4.7 Information from Lle Geo-Portal for Wales did not identify any designated Ancient Woodland on any part of the Site. However, pockets of restored ancient and ancient semi-natural woodland were identified in all directions surrounding the Site. The closest woodlands are located c. 0.5km south, 0.5km south-west and 0.58km north-east. At these distances, no direct or indirect impacts are anticipated upon these ancient woodlands as a result of the proposals.

Notable Flora Records

4.8 The SEWBReC provided 203 records of 53 notable plant species from within the search area. Many of the species recorded are associated

with sand dunes, marshes, damp river edges and ditches, habitats which do not occur on-site or directly adjacent to the Site and are not of relevance. Those of potential relevance to the Site include bluebell *Hyacinthoides non-scripta,* daffodil *Narcissus pseudonarcissus* and sweet briar *Rosa rubiginosa.* The remains of bluebell was recorded within the mature section of woodland on-site during the August 2019 survey and confirmed during the April 2021 survey, as well as daffodil *Narcissus* sp.

4.9 Given the management of the Site and habitat types present, botanical species diversity was generally limited on-site to the woodland and mature pockets of shrub and no other notable species were identified.

Habitats

4.10 The following habitats were recorded on-site and classified in line with current Phase 1 Habitat species guidance (JNCC, 1990), as illustrated in Appendix A. Detailed species lists for each habitat are provided in Appendix D.

4.11 One invasive non-native plant species was incidentally identified during the extended Phase 1 Habitat surveys, as discussed further below. Some garden plants are spreading into the northern perimeter of the Site from adjacent properties, and the potential for garden escapes should be monitored.

Amenity and Semi-Improved Grassland

4.12 The school grounds at Penygawsi encompass a substantial area of grassland, the majority of which is regularly mown as amenity for use in school play and sports. A 'landscaped bank' is present in the north of the Site, where grassland is under a more relaxed regime under a canopy of young planted trees. Grasses were dominated by Yorkshire fog *Holcus lanatus,* creeping bent *Agrostis stolonifera,* perennial rye grass *Lolium perenne,* cock's-foot *Dactylis glomerata* and annual meadow-grass *Poa annua.* Despite the regularly mown nature of the grassland, a number of herb species tolerant of mowing were recorded, including: thyme leaved speedwell *Veronica serpyllifolia,* common field-speedwell *Veronica persica,* common mouse-ear *Cerastium fontanum,* selfheal *Prunella vulgaris,* ribwort plantain *Plantago lanceolata,* dandelion *Taraxacum officinale* agg.*,* daisy *Bellis perennis,* creeping buttercup *Ranunculus repens,* cat's ear *Hypochaeris radicata,* yarrow *Achillea millefolium,* common bird's-foot trefoil *Lotus corniculatus* and white clover Trifolium repens. A shaded area to the south-west of the linear belt of trees and shrubs along the school frontage supported a few additional species including field wood-rush *Luzula campestris,* ox-eye daisy *Leucanthemum vulgare,* creeping cinquefoil *Potentilla reptans,* mouse-ear hawkweed *Pilosella officinarum* and wild strawberry *Fragaria vesca.*

4.13 Whilst mown regularly and generally limited in diversity, the grassland forms quite a significant space in the local area, with some areas of additional diversity, and in the local context is considered to be of importance at the Local level.

Trees and Woodland

4.14 A dominant landscape feature within the Site is a pocket of mature broadleaved woodland located in the western corner. Mature crack willow *Salix fragilis* forms the north-eastern frontage, with a frontage of bramble and semi-mature goat willow *Salix caprea*, with the southern end comprising a cluster of mature English oak *Quercus robur* and alder *Alnus glutinosa,* with an understorey of hazel *Corylus avellana*, holly *Ilex aquifolium,* cherry *Prunus* sp., privet *Ligustrum* sp. and bramble *Rubus fruticosus* agg. Ground flora within the mature area includes bluebell, daffodil, wood avens *Geum urbanum,* lesser celandine *Ranunculus ficaria*, lords and ladies *Arum maculatum,* but also common nettle *Urtica dioica,* hogweed *Heracleum sphondylium,* dock *Rumex* sp. and false oat-grass *Arrhenatherum elatius.* The topography of the ground suggests it possibly supported a pond in the past. A set of steps leads down into a small clearing with an 'insect hotel' and stumps indicating use as an outdoor educational feature.

4.15 The western half the woodland appears to have been planted within the previous 10 years as an extension to the existing mature trees, and was dominated by young oak but also hawthorn *Crataeus monogyna*, holly, blackthorn *Prunus spinosa*, rose *Rosa* sp., silver birch *Betula pendula* and sycamore *Acer pseudoplatanus*. A grassy bank remains along the south-west edge of the woodland, with similar species to the grassland described in Section 4.17, dominated by dandelion, cat's-ear, ribwort plantain and selfheal.

4.16 Other mature trees were located around the southern perimeter of the school grounds, within a linear line of trees and shrubs, with additional standalone trees within the grassland edge. Species recorded include silver maple *Acer saccharinum*, sycamore *Acer pseudoplatanus,* oak, Norway maple *Acer platanoides* and Japanese cherry *Prunus serrulata*.

4.17 Lowland mixed deciduous woodland is a priority habitat and with other mature stands of trees and shrubs offer opportunities for supporting a range of wildlife, including birds, bats and invertebrates. Woodland and mature trees are therefore considered to be of importance at the Local level.

4.18 A 'landscaped bank' in the north of the Site has been planted with young cherry, birch and rowan *Sorbus aucuparia* in the previous 5-6 years and are establishing well. Given their young age, they are not considered to form a significant resource and are not included within the above group for importance.

Hedge, Scrub and Tall Ruderal

4.19 A perimeter of dense and scattered scrub is present along the southern, eastern and northern boundaries, where hedgerow and garden boundaries have encroached into the site. A particularly dense 2-3m wide belt of scrub is present along the south-eastern boundary of the school, comprising a mix of garden escapes such Stag's horn sumach *Rhus typhina* and cotoneaster, but also bramble, hazel, hedge bindweed *Calystegia sepium*, honeysuckle *Lonicera* sp., elder *Sambucus nigra*, great willowherb and bracken *Pteridium aquilinum*. This scrub edge runs into a lower lying hazel, blackthorn, hawthorn and holly hedge adjacent to the public footpath along the southern boundary.

4.20 Scrub is dominated by bramble, with some buddleia *Buddleja davidii, Cotoneaster* sp., hawthorn and hedge bindweed. Low bramble scrub forms the eastern frontage of the woodland.

4.21 Occasional scattered ruderal is present with scrub along garden boundaries. A small area of dense bracken and willowherb *Epilobium* sp. was present in the northern corner of the school grounds, and a dense area of bracken and rosebay willowherb *Chamaenerion angustifolium* was present at the southern end of the woodland, but by April 2021 both areas had been cleared.

4.22 A short section of tall leylandii hedge forms part of the eastern boundary, within an adjacent residential garden.

Buildings and Hardstanding

4.23 Three school buildings are present on-site. The main school building (B1) is a single storey concrete structure, with a fine gravel textured finish, uPVC window panels and a flat bitumen felt roof. In the centre is a raised flat roof section provided an additional first floor area, incorporating uPVC window panels on the southern and western aspects, and hanging tiles on the southern, northern and north-eastern aspects.

4.24 Two porta-cabin style buildings lie to the north-east of the main building (B2 and B3), used as external classrooms. These are slightly raised, with ramped entrances, with a fine gravel textured exterior, a flat roof, plastic surrounds and uPVC windows.

4.25 Hardstanding areas of parking, access routes, play and sports surround the buildings, with associated small structures such as storage sheds, greenhouse, metal containers, wooden shelters and 'play houses'.

Ornamental Planting

4.26 Some small wooden planters and plant beds are present in seating areas around play areas to the south of the school and near the school entrance on the western aspect. These support a range of ornamental

plants, such as roses, variegated ivy *Hedera* sp., *Hebe sp.,* montbretia *Crocosmia x crocosmiiflora, Cotoneaster* sp., tutsan *Hypericum androsaemum,* currant *Ribes* sp. and ornamental grasses.

4.27 A formal landscaped area is present in the east of the school grounds, with gravelled and paved walkways and scattered ornamental trees and shrubs surrounding a kidney shaped grassed area with bench seating. Species recorded include, but not limited to, common medlar *Mespilus germanica,* bamboo *Poaceae* sp., fig tree *Ficus carica* and bay tree *Laurus nobilis.*

4.28 Ornamental planting is scoped out of further assessment within this report, except for montbretia in relation to legislation controlling its spread in the wild.

Other Features

4.29 Seven 'insect hotels' created out of recycled materials were scattered around the school grounds.

4.30 A small gardening area is located next to the school car park, with a small greenhouse, compost bins and seating area, surrounded by a wooden fence.

Fauna

Bats

4.31 A total of 107 bat records were identified within the search area, dating from 1977 to 2019. These include the following six species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, noctule *Nyctalus noctula*, brown long-eared *Plecotus auritus,* lesser-horseshoe *Rhinolophus hipposideros* and whiskered *Myotis mystacinus*. Thirteen of the records were only identified to *Pipistrellus* genus, four assigned to long-eared *Plecotus* genus, and 21 were only recorded to the level of *Chiroptera*.

4.32 An extensive number of the records originate from residential areas, with the closest records relating to a brown long-eared bat found within a large store c. 200m south, unidentified bats within residences c. 320m and c. 420m west of the Site, unidentified bats using a loft within a residence c. 400m north-west, and flight records of two *Pipistrellus* bats, possibly from a roost, c. 460m east. The majority of records relate to roosts within residential buildings and large public or private estate buildings. The closest record of a horseshoe bat is located over 2.9km west of the Site in Llan Haran.

4.33 The broadleaved woodland with mature trees, linear tree and shrub features, scattered trees and boundary gardens provide good foraging habitat for common and widespread species of bats, with connectivity

to small pockets of habitat to the north and south along tree-lined road verges, which otherwise lies in a built up residential area with adjacent major roads and industrial units and external sources of lighting. Mature trees within the woodland and along the edge of the Site are potentially suitable to support roosting bats.

4.34 The central school building has a first floor section with hanging tiles on exterior walls that was considered to provide roosting opportunities for bats. As such, Preliminary Roost Assessments (PRAs) of the three buildings within the Site, were undertaken in April 2021 inclusive of internal and external inspections, in order to look for direct evidence of bats and to fully assess the potential of the buildings, to support roosting. Full methods and results are provided in Appendix F.

4.35 In summary, the main building was found to have moderate potential for roosting bats, associated with hanging tile features, and the other two negligible potential, with no features identified for roosting.

4.36 Bat activity survey work undertaken by TACP UK Ltd on building B1 in June 2021 did not identify any behaviour to suggest roosting in the building, though common pipistrelle, soprano pipistrelle and noctule bat were observed making wider use of the Site. Full methods and results are provided in Appendix F.

4.37 Bat roosting potential was noted within mature oak trees in the woodland area and a mature oak and ash tree on the southern boundary of the Site, which are being retained within the scheme.

4.38 No bat roosts have been identified within on-site buildings. The three bat species recorded on-site are common and widespread species within Wales and Great Britain. There is no suggestion of notable populations making use of the Site. However, due to population declines and other pressures, bats are Priority Species identified under the Environment (Wales) Act, 2016 as well as within the Local Nature Recovery Plan for Rhondda Cynon Taf. Bats at the Site are therefore valued to be of importance at the Local level.

<u>Badger</u>

4.39 The SEWBReC have provided five records of badger *Meles meles* from within the 2km search area, the most recent being 2016. The closest record is c. 0.6km north of the Site. Two relate to road traffic mortalities along the A473.

4.40 The woodland on-site superficially provides suitable sett building opportunities for badgers, although no signs of badgers were incidentally noted during the survey. Given suitable woodland habitat is present, a full badger survey was conducted in April 2021, with no signs such as setts, latrines, hairs or snuffle pits recorded. Full methods and results are provided in Appendix G.

4.41 The school grounds are fenced around the entire perimeter by a variety of fence structures, including metal palisade fencing, metal post and welded mesh fencing, concrete post and chain link garden fencing and wooden close-board fencing. A secure gate is provided at each of the three school entrances. This may inhibit dispersal of badgers onto the Site from corridors of habitat to the north and south which connect to other small belts of woodland and scrub. In addition, given the small size of the woodland and the high disturbance from school children, it is considered that badgers would regularly utilise habitats on-site, with optimal habitat present off-site further south. As a result, badgers are considered to be absent from Site and are discounted from further assessment.

Dormouse

4.42 A total of 15 records of dormouse *Muscardinus avellanarius* were identified within the search area, dating from 1998 to 2016. The closest record of a dormouse occurred c. 1.2km east of the Site from near the A473 in 1998, but the majority of records originated from Coed Trecastell, a woodland located 2km south-west of the Site, across residential housing, the railway line, industrial areas and the River Ely.

4.43 Again, superficially the on-site woodland appears suitable to support dormice. However, the western half of the woodland is newly planted within the past 5-6 years, with mature flora restricted to the east. Other sections of mature linear vegetation are present but have limited direct connectivity to other vegetation. The Site has some tenuous connectivity to woodland belts in the surrounding landscape, via tall narrow hedges and tree belts along main roads and footways which form green corridors, but on the whole the School is set within a fairly suburban environment. On balance, it is considered that habitats on-site are very unlikely to sustain any population and dormice are scoped out of further consideration.

Water Vole

4.44 No records of water vole *Arvicola amphibius* were identified within the search area, and given the absence of any suitable habitat on-site or adjacent to it, water vole are considered to be absent.

Otter

4.45 A total of 12 records of otter *Lutra lutra* were identified within the search area, dating from 1991 to 2014, and were limited to field signs recorded along the River Ely.

4.46 Otters can occupy a wide home range encompassing major watercourses, their associated tributaries and marginal habitats. The River Clun runs c. 360m south of the Site at its closest point, beyond the A473. Given the absence of suitable terrestrial habitat on-site and the barrier formed by major roads, otter are considered absent from the Site.

Other Mammals

Brown Hare

4.47 Two records of brown hare *Lepus europaeus* were identified within the search area, but these related to historical records from 1973. Considering the immediate landscape on and around the Site, set with a suburban environment, and the habitat preferences for hare, this species is considered absent.

Hedgehog

4.48 The SEWBReC returned 38 records of hedgehog *Erinaceus europaeus* from within the search area, dating from 1970 to as recently as 2019. These records originated from several sources, including the People's Trust for Endangered Species (PTES) and the SEWBReC's own recording group, SEWBReCORD. Records were widely distributed across the search area, often from residential gardens within Talbot Green, Llantrisant, Pontyclun and Brynteg, with a number of records of deceased individuals from along the A473. The closest was recorded from a garden c. 280m north-east.

4.49 The Site incorporates substantial coverage of open grassland, with mature pockets of vegetation and woodland, bounded by residential gardens and dense scrub, providing movement corridors and foraging and sheltering opportunities for hedgehogs. Adjacent gardens bordering the Site are likely to support hedgehogs, and may disperse onto Site where gaps in the perimeter security fencing would enable movement. Given the scale of the Site, this is not considered to form a significant resource for hedgehogs and therefore unlikely to be of Local level importance. However, they are a local and national priority species for conservation (listed on Section 7 of the Environment (Wales) Act 2016) and provision for hedgehog within the proposed development is included in Section 5.0.

Other Mustelids

4.50 Three species of Mustelids were recorded from within the search area comprising three records of polecat *Mustela putorius*, three records of weasel *Mustela nivalis* and one record of a pine marten *Martes martes.* Two are historical records from 1977 for Miskin Iron Mine, and three are associated with road casualties.

4.51 Weasels are common throughout the UK, whilst pine martens are classed Priority Species under the UK Post-2010 framework due to their decline. Given the suburban nature of the Site, with only a small pocket of woodland and mature vegetation, and no obvious evidence of use by rabbits, habitats within the Site are considered largely unsuitable to support pine marten and polecat and are scoped out of further assessment. Such habitats with adjacent gardens may however be suitable to support the more widespread weasel, as part of a wider

home range and suitable habitats will be retained alongside the proposals.

Birds

4.52 The SEWBReC provided 995 records of 71 notable species from with the 2km search area, dating from 1902 to 2019 comprising priority and protected species, species listed on the Birds of Conservation Concern in Wales lists and Local Biodiversity Action Plans. Those of particular relevance to habitats within the Site and the Rhondda Cynon Taf County Borough include Amber List (Wales) swift *Apus apus*, song thrush *Turdus philomelos,* long-tailed tit *Aegithalos caudatus,* goldcrest *Regulus regulus* and house sparrow *Passer domesticus* and Red List (Wales) bullfinch *Pyrrhula pyrrhula,* willow warbler *Phylloscopus trochilus* and starling *Sturnus vulgaris*. Seventeen records were returned for Schedule 1 species barn owl *Tyto alba,* however the Site is located within the residential area of Talbot Green and on-site grassland is kept short for amenity purposes and does not provide suitable foraging habitat for barn owl. Willow warbler was incidentally recorded during the survey within the mature woodland on-site.

4.53 The pocket of broadleaved woodland with its mature trees and mixed canopy levels, with adjacent gardens, is likely to provide the most valuable nesting and foraging habitats for birds, including Red List species, and will be retained within the proposals. The semi-improved grassland habitat may also present a foraging resource for some ground feeding species, such as song thrush, whilst the peripheral scrub and mature linear vegetation offer further foraging and nesting opportunities. Similarly, the majority of existing nesting and foraging habitat will be retained, with some loss of grassland foraging. The site is unlikely to support a notable assemblage of birds on account of its small size and residential location. However, nesting birds are legally protected under the Wildlife and Countryside Act 1981 (as amended) so are taken forward for further assessment herein.

Reptiles

4.54 A total of 56 records of four reptile species were identified within the search area, including slow-worm *Anguis fragilis*, grass snake *Natrix helvetica*, adder *Vipera berus* and common lizard *Zootoca vivipara*. No records occurred on-site, however, two adult slow worms were recorded c. 320m south-west of the Site along the roadside in 2013, and grass snakes have been recorded c. 380m south along the River Clun. The closest record of adder is located at another school Site, c. 850m south-west, which lies adjacent to scrub and woodland habitat. The majority of records relate to woods and nature reserves within the local area, including Llantrisant common, Y Gweira Nature Reserve and Coed Trecastell.

4.55 Habitats on-site have low potential for reptiles due to the managed nature of the grassland resulting in low structural diversity for basking and foraging reptiles. Areas of scrub encroachment are present along the eastern and northern boundaries, adjacent to gardens, which provide some limited cover and edge features suitable for basking if present in garden habitats however given the limited extent and fragmented nature of this habitat, is considered unlikely to support a population. Reptiles are considered likely absent and not considered further in this assessment.

Amphibians

4.56 A total of 236 records of five amphibian species were identified within the search area, including common toad *Bufo bufo,* common frog *Rana temporaria,* palmate newt *Lissotriton helveticus*, smooth newt *Lissotriton vulgaris* and great crested newt *Triturus cristatus*. The closest records were of common frog, originating from long grass in a garden c. 470m east of the Site, with a further 10 records of adults and spawn in a garden pond, possibly from the same address. All other sightings were distributed throughout the wider landscape, beyond the settlements of Talbot Green and Llantrisant, separated from the Site by significant ecological barriers, such as major roads and dwellings. Of the 236 amphibian records returned by SWEBReC, 90 were attributable to great crested newt (GCN), however many were historical records from 1869 to 1975, with the closest record c. 1.7km east of the Site.

Great Crested Newt

4.57 Despite spending much of their annual lifecycle within the terrestrial environment, great crested newts are dependent upon the presence of suitable aquatic breeding habitat in order for a population to persist. No ponds are present on-site and an aerial search of the search area using OS mapping did not identify any ponds within the 500m dispersal range for GCN, with only a drain feature present c. 200m south. This does not eliminate the potential for unidentified ponds in the local residential gardens, particularly given that several amphibian records originated from residential pond within 500m of the School boundary. However, with the Site bounded by barriers to dispersal (dense residential housing and roads), and the absence of suitable breeding habitat on-site, GCN have been scoped out of further assessment.

Invertebrates

4.58 A total of 214 records of 21 priority and protected invertebrate species were identified within the search area. A further seven other species of Conservation Concern were also reported, and 14 species of local importance. One third of these were of historical records, pre-dating 1980. None are considered to be of potential relevance to habitats on-site, with many associated with woodland scrub mosaics, flower-rich grasslands, heathland or coastal sites. The majority of records relate to

the marsh fritillary butterfly *Euphydryas aurinia* (151 total records) and associated woodland, scrub and mosaic sites around the periphery of the existing settlement areas, with a large number relating to Erw Hill, Llantrisant Common and Forest Fach.

4.59 Given the regular management regime and disturbance of on-site habitats, with some woodland and scrub habitats providing additional structural and botanical diversity, the Site is likely to support a range of common and widespread species but unlikely to support a notable assemblage and the Site does not lie within an Important Invertebrate Area. Invertebrates are scoped out of further assessment within this report, however opportunities to enhance the Site for invertebrates have been considered within the development proposals, as discussed below.

Future Baseline

4.60 This Site is currently under constant, active management as a school site. Whilst usage of some parts of the Site may change over time, the overall ecological value of the Site is likely to be relatively stable.

Summary of Ecological Features

4.61 Table 2 below summarises all important ecological features identified within the respective zones of influence, together with the geographic context of their importance:

Table 2. Summary of important ecological features and their geographic context

Ecological Feature	Geographic Context of Importance and/or Protection Status
Cardiff Beech Woods SAC	National
Llantrisant Common and Pastures SSSI	National
Ely Valley (SSSI)	National
Brofiscin Quarry, Groes Faen (SSSI)	National
Rhos tonyrefail (SSSI)	National
Woodland and Mature Trees	Local
Invasive species	Wildlife and Countryside Act, 1981
Bats	Local
Nesting birds	Wildlife and Countryside Act, 1981

5.0 ASSESSMENT OF EFFECTS

The Proposed Development

5.1 Detailed planning permission is sought for the redevelopment of the existing school site at Penygawsi Primary School. The following impact assessment is based on the Landscape Illustrative Masterplan prepared by Ares Landscape Architects Ltd.

5.2 The construction phase of the proposed development will comprise the following:

- Phased demolition of the existing school buildings, whilst the school remains operational.
- Construction of one large school building, with associated outbuildings, parking, access infrastructure and amenity areas.
- The establishment of new landscape planting, including amenity play areas, new bulb and new tree planting and longer sward areas.
- Establishment of Sustainable Urban Drainage Systems (SUDS) including swale/dry attenuation areas.

5.3 The operational phase of the proposed development will comprise the following:

- Occupation of new school buildings
- Increase in human activity, as a result of increased school capacity
- Ongoing management of new habitats

Assumptions

5.4 The following assumptions have been made during the assessment of potential effects of the proposed development on important ecological features. Although 'assumed' and therefore taken as part of the pre-mitigation scenario, these measures are referenced in the proceeding sections where integral to the mitigation strategy.

5.5 In accordance with BS42020:2013, it is assumed that a Construction Environmental Management Plan (CEMP) will be secured by planning condition and prepared at the detailed design stage. In addition to the construction phase impact avoidance and mitigation measures identified in the following sections, the CEMP will detail standard environmental control measures, including though not limited to the following:

- Implementation of strict protection measures for the root protection areas of retained trees and hedgerows, in accordance with BS5837:2012
- Standard best practice construction phase pollution prevention and control measures to prevent deterioration of retained or neighbouring habitats

- Sensitive working methods and timing to avoid direct impacts to nesting birds (generally vegetation removal outside nesting season of March through August or carrying out works after a nesting bird check/survey)
- Sensitive working methods and supervision of vegetation clearance where required to avoid impacts to hedgehogs
- Not leaving open trenches overnight to avoid trapping wildlife such as hedgehogs and amphibians, unless otherwise providing a means of escape
- Avoiding implementing any lighting during the temporary construction activities except where absolutely necessary
- Utilising designated vehicle access routes to avoid unnecessary damage to retained habitats

5.6 In accordance with BS42020:2013, it is assumed that a Landscape and Ecology Management Plan (LEMP) will be secured by planning condition and prepared at the detailed design stage. The LEMP will set out measures for the establishment and long-term management of newly created and retained habitats to maximise benefits for biodiversity.

Potential Impacts and Ecological Effects

5.7 It is an established principle (CIEEM, 2018) that, wherever possible, potential negative effects should be avoided through 'Mitigation by Design', as this gives greater certainty over deliverability, demonstrates a well-designed scheme and ensures the correct application of the 'Mitigation Hierarchy' (as advocated by BS42020:2013. Ecological input has been sought at an early stage in the design and throughout the design stage to ensure that ecological issues are carefully considered and addressed in a sensitive, practical way alongside the proposed scheme.

5.8 Rhondda Cynon Taf County Borough Council provided comments on the initial landscape strategy for the Site within a landscape workshop on 17 September 2021. The landscape proposals for the Site have been updated to reflect these comments where appropriate.

Invasive Species

5.9 Ornamental plant beds that support some small areas of montbretia at the Site would be cleared to make way for parking, landscaping and sports facilities in the centre of the Site. The presence of montbretia at the Site is not in itself a problem, as the law applies to its spread in the wild. However, to avoid a potential offence, any removed montbretia plants or soil containing bulbs and root fragments is classified as controlled waste and would need to be disposed of at a licensed landfill.

Woodland and Trees

5.10 A parcel of mature woodland is present with the western corner of the Site. In the absence of mitigation, the woodland could be subject to development edge effects, including direct damage to root protection areas (RPAs) and component trees, compaction of the soil, and pollution during the construction phase and increased artificial lighting during the operational phase. The majority of trees are retained within open space areas. However other trees also have the potential to be accidentally harmed during the construction period and affect their long term survival. These potential routes of impacts could result in a significant negative effect at the Local level.

5.11 One silver maple tree T12 and part of G10 will be removed to facilitate the construction of new parking and sprinkler tank area. The new MUGA sports courts will fall partially within the RPA of T11.

Avoidance and Mitigation Measures

5.12 The development will be set back from the woodland edge to respect the woodland and the associated root protection areas to protect the woodland and component trees as a key ecological resource. An appropriate buffer (as informed by the tree survey) has been provided, incorporated into the school amenity area. This will be protected with heras fencing for the duration of construction works, where no vehicle tracking or storage of materials will be permitted, to avoid compaction of soils, damage to surface roots and accidental damage to component trees. Protection measures will be detailed within a CEMP and Arboricultural Impact Assessment (AIA) to ensure the long term survival of the on-site tree resource.

5.13 The woodland edge will be managed in the long term with a more relaxed mowing regime to create better ecotones along the woodland edge. Appropriate management of retained and new planting will be outlined within a Landscape and Ecology Management Plan (LEMP).

5.14 Where the MUGA will encroach upon the RPA of T11, a cellular no-dig construction method will be used to retain the root system of the tree.

Residual effects

5.15 Subject to adherence to sensitive design measures and construction avoidance measures as detailed within the CEMP and AIA, no adverse residual effects are anticipated.

Amenity Grassland

5.16 Whilst the on-site grassland is largely mown as amenity, some areas supported additional diversity, and in the context of the local residential area, forms a significant area of open grassland habitat. In the absence of mitigation, a significant proportion of the grassland habitat will be lost or damaged by construction activities.

Avoidance and Mitigation Measures

5.17 Retained grassland areas along the western, southern and eastern boundaries will be protected as far as possible during the construction period to retain the existing flora. Vehicle routes will be limited to working areas to avoid unnecessarily disturbing retained habitats.

5.18 Where existing buildings and structures are removed in the second phase of works, grassland will be reinstated for use as amenity and play.

5.19 Some areas will be brought under a more relaxed mowing regime, particularly around the periphery of the Site, with one cut per year in late August/September, to allow plants in the seed bank to establish and flower and local species to naturally colonise, to improve floral and structural diversity, in line with Rhondda Cynon Taf County Borough Council's biodiversity policies on managing grassland for wildlife. This helps support important habitat for bees, butterflies, moths and hoverflies, and encourages engagement with the public with the natural environment. Arisings will be removed as part of a 'cut and collect strategy' to prevent nutrients being recycled in the soil, which results in vigorous grass growth, outcompeting wild flowers. Each year as the nutrients in unmown areas decrease, floral and invertebrate diversity should increase and become even more valuable.

Residual effects

5.20 Subject to adherence to construction avoidance measures as detailed within the CEMP, no adverse residual effects are anticipated. With an improved management regime, the quality of grassland habitats are anticipated to improve with time and results in overall gains for biodiversity.

Bats

5.21 Whilst no bat roosts have been identified within on-site buildings to be demolished, opportunities existing within trees to be retained, with suitable foraging and dispersal habitat in the form of mature woodland, individual tree canopies and tree and shrub belts. In the absence of mitigation, the proposals could result in an increase in artificial light spill on retained features and reduce their suitability for bats.

5.22 A sensitive lighting strategy will be prepared that minimises any light spill from new light sources and reduces overall light spill onto retained features, with particular respect to the mature woodland and any new bat roosting features incorporated into the new building and existing trees, to allow bats to use new roost locations undisturbed and continue to move through the local landscape.

5.23 With the planting of new 51 new trees and relaxation of grassland management to encourage floral and structural diversity, there will be

an overall enhancement of available foraging habitat, with measures seeking to boost invertebrate diversity.

Nesting birds

5.24 Clearance of shrubs, trees and buildings could result in an offence under the Wildlife and Countryside Act, 1981 (as amended) if they take place whilst birds are actively nesting. Whilst no birds were incidentally seen nesting in Building B1, there is potential for the building to support nesting.

5.25 Impacts to nesting bird habitat should occur during the period September to February (inclusive) to avoid impacts to nesting birds wherever possible. Should works be required outside this period, a pre-commencement nesting bird check will be completed by a suitably qualified ecologist to confirm whether any nesting birds are present. Where this is the case, the works would need to be delayed until the nesting attempt has naturally concluded.

5.26 The relaxation of mowing in peripheral habitats to encourage floral and structural diversity, and therefore invertebrate diversity, will benefit foraging birds.

Summary of Effects

5.27 Table 3 below summarises the assessment of potential impacts on each important ecological feature, proposed mitigation and the assessed residual effects.

Table 3. Summary of effects

Important Ecological Feature	Potential Impacts and Effects	Avoidance & Mitigation Measures	Mechanism by which Measures are Secured	Residual Effects
Invasive species	Risk of spread, breach of legislation	Controlled removal of contaminated soil where applicable	CEMP secured through planning condition	No significant effect
Woodland, hedgerows and trees	Potential impacts to mature woodland in western corner and other retained trees; damage to root areas, compaction of soil, pollution	Appropriate buffer zone to woodland edge, impact avoidance under a CEMP and AIA	CEMP secured through planning condition	No significant effect
Grassland	Loss and damage to existing grassland habitats	Impact avoidance under a CEMP, reinstatement and enhancement through	LEMP secured through planning condition	No significant effect

		improved management		
Bats	Disturbance as a result of increased artificial lighting	Sensitive lighting strategy,	Mitigation measures will be can be secured by planning condition	No significant effect
Nesting birds	Risk of impacts to nests, legislative breach	Timed clearance works/pre-commencement check	CEMP	No significant effect

5.28 Subject to the implementation of the above mitigation, no significant residual effects on any important ecological features are anticipated to result from the construction or operation of the proposed development.

Cumulative Effects

5.29 Due to the scale and nature of the proposed development, a detailed assessment of potential cumulative effects has not been undertaken.

Compensation

5.30 No significant residual negative effects on important ecological features are anticipated to result from the proposed development, following the inclusion of impact avoidance and mitigation measures described above. As such, no compensatory measures are proposed.

5.31 A BREEAM 'change in ecological value' calculation will be prepared for the school to determine the ability of the scheme to deliver net gains for biodiversity.

Enhancement

5.32 To promote adherence to the PPW and Policy AW 8 of the Rhondda Cynon Taf Local Development Plan, the following opportunities for ecological enhancement have been identified for inclusion within the proposals, to increase the overall biodiversity value of the Site and encourage further engagement with the natural environment, sustainability and education, in line with the Biodiversity Duty in Rhondda Cynon Taf:

- Enhance woodland edge buffer with long grassland under lower maintenance regime to create a graded edge.
- Incorporation of native plants and those of wildlife importance in to landscaping scheme to provide foraging opportunities for birds, invertebrates and bats
- Introduce a more varied sward and encourage self-naturalisation and colonisation of local spaces through relaxing mowing regimes within perimeter grassland areas, to encourage floral and invertebrate diversity. Cut and collect will be used on long grassland

areas to maintain low soil fertility, thus reducing the frequency of cuts and benefiting diversity, with longer areas indicated on the landscape masterplan

- Support/replace existing provision of 'insect hotels' with creation of four new 'insect' hotels in selected locations around the woodland edge and in longer grassland margins, in sunny open positions, to provide overwintering/nesting opportunities for a range of species,
- Hedgehogs have been scoped out of detailed assessment and no specific mitigation is proposed, however it is important that opportunities for hedgehogs to move through the landscape are preserved, through provision of hedgehog-highways or access gaps around the perimeter of the Site. One hedgehog box will be provided in the eastern corner of the Site within longer grassland habitat, to provide a new sheltering opportunity, as well as an educational resource for school pupils
- A range of bird and bat boxes will be provided at the Site to provide new nesting and roosting opportunities, to comprise:
    - Six bird boxes on existing retained trees and woodland (e.g Schwegler 1B or Vivara Pro products)
    - Four bat boxes on retained trees and woodland (e.g Schwegler or equivalent woodstone product)
    - Sixteen swift bricks on northern and southern elevations built into gable ends (e.g Habibat/Ibstock product)
    - Four house martin nest cups on the north eastern elevation of the plant enclosure (e.g Vivaro Pro house martin covered nest cups)
    - Four bat boxes built in on northern, western and southern elevations (e.g Habibat/Ibstock product).
- Proposed locations for wildlife features will be provided in an Ecological Enhancements Plan and appended to a LEMP.

Monitoring

5.33 No post-development monitoring of important ecological features is proposed. However, there will be ongoing monitoring of newly established and enhanced habitats as prescribed within a LEMP.

6.0 CONCLUSIONS

6.1 In the absence of any mitigation measures, the proposed development would have the potential to result in negative effects significant at up to the Local level. However, with the implementation of some straightforward mitigation and precautionary measures as proposed here, the development is not anticipated to result in any significant residual negative effects on important ecological features.

6.2 The proposed scheme seeks to retain or replace the extensive areas of greenspace under improved management, and provide new areas of trees and landscape planting, with scope to provide net benefits for biodiversity overall. Several ecological enhancement features are also proposed for inclusion to provide additional opportunities for wildlife and education benefits.

6.3 The measures set out herein can be secured through appropriate conditions attached to any planning consent, and the development may therefore be delivered without harm to nature conservation interests. Specifically, it is anticipated that planning conditions would be used to secure:

- Construction Environmental Management Plan (CEMP): In addition to wider environmental controls and best practice construction management, the CEMP will set out construction-phase impact avoidance measures with respect to invasive species, retained trees and woodland and nesting birds.
- Landscape and Ecology Management Plan (LEMP): The LEMP will detail the establishment and long term management of retained and newly created habitats to maximise benefits for wildlife. It will include a graphical Ecological Enhancement Plan, setting out the number, type and position of enhancement features.
- Lighting Strategy: A sensitive lighting strategy will accompany the detailed layout, ensuring that dark corridors are maintained along retained vegetation, and minimising light spill on newly created habitats to allow bats to continue to move through the landscape.

6.4 Based on the successful implementation of avoidance, mitigation and enhancement measures set out herein, the scheme is considered to accord with all relevant nature conservation legislation, as well as with the provisions of Rhondda Cynon Taf County Borough Council and the Environment (Wales) Act 2016.

7.0 REFERENCES

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Appendix A

Habitats Plan & Photographs

- Site boundary
- A — Amenity grassland
- Woodland
- SI — Semi-improved grassland
- Dense scrub
- Tall ruderal scrub
- Ornamental planting
- Tree
- Scattered scrub
- Non-native hedge
- Building
- Bn — Building number
- Hardstanding
- Fence
- Gate

N

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Project	Penygawsi Primary School, Pontyclun	Date	August 2019	Drawing No.	CSA/4387/100
Drawing Title	Habitats Plan	Scale	Refer to scale	Rev	-
Client	Welsh Education Partnership Company	Drawn	HG	Checked	CT

Photograph 1. Linear line of trees and shrubs in the south of the Site.

Photograph 2. Wooden planters on the edge of play area, with scattered trees and amenity behind.

Photograph 3. 'Insect hotel' along edge of mature linear line of trees and shrubs in south of the Site.

Photograph 4. Surfaced play area and adjacent amenity and scattered trees in the south.

Photograph 5. Formal landscaped area with paving, gravel and ornamental planted areas and amenity grass.

Photograph 6. North eastern boundary with wide scrub frontage and mown amenity.

Photograph 7. Garden boundary edge along north-east boundary.

Photograph 8. Buildings B2 and B3, cabin style structures.

Photograph 9. Pathway to northern school entrance, with ‘landscaped bank’ on the left.

Photograph 10. View of south-eastern aspect of the woodland from access road.

Photograph 11. Northern edge of the woodland, with scrub and willow frontage and mown grassland.

Photograph 12. Entrance road to school with scattered daffodils, trees and mown amenity

Appendix B

Legislation and Planning Policy

1.1. The **Conservation of Habitats and Species Regulations 2017** (as amended) make prescriptions for the designation and protection of Sites of Community Importance ('European sites', i.e. Special Areas of Conservation and Special Protection Areas) and European Protected Species (EPS). The latter include all native bats, great crested newts, dormice, otters and certain reptiles, listed under Annex II of the Regulations. Following the UK's departure from the European Union, the provisions of the Regulations have been retained through enactment of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which came into force on 31 December 2020.

1.2. The **Wildlife and Countryside Act 1981** (as amended, principally by the Countryside and Rights of Way Act 2000) forms the basis for protection of statutory designated sites of national importance (e.g. Sites of Special Scientific Interest; SSSIs) and native species that are rare and vulnerable in a national context. Additionally, badgers are protected under the **Protection of Badgers Act 1992**.

1.3. The **Environment (Wales) Act 2016** sets out the required for the 'sustainable management of natural resources' together with new ways of working to achieve this. Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales. The S6 duty requires that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and promote the resilience of ecosystems. Section 7 of Part 1 replaces the duty in section 42 of the NERC Act 2006, to publish and revise lists of living organisms and types of habitat in Wales of key significance, to sustain and improve biodiversity.

1.4. **The UK Post-2010 Biodiversity Framework (2011-2020)** lists the UK's most threatened species and habitats and sets out targets and objectives for their management and recovery. The UK Biodiversity Action Plan (BAP) has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant. Local BAPs continue to influence biodiversity management and conservation effort, including through the spatial planning system, at the local scale.

1.5. The **Planning Policy Wales 11 (Welsh Government, 2021)** sets out the government planning policies for Wales and how they should be applied. With regards to ecology and biodiversity, Chapter 6: Distinctive and Natural Places, states that development plan strategies, policies and development proposals should be formulated to look at the long term protection and enhancement of special characteristics and intrinsic qualities of places, be these of natural, historic and built environments, ensuring their longevity in the face of change. This means both protecting and enhancing landscapes, habitats, biodiversity,

geodiversity and the historic environment in their own right, as well as other components of the natural world, such as water resources or air quality. Biodiversity loss should be reversed, pollution reduced, environmental risks addressed and overall resilience of ecosystems improved.

1.6. The PPW recognises the planning system has a key role to play in helping to reverse the decline in biodiversity and increase the resilience of ecosystems. Paragraph 6.4.3 sets out the principles that local planning authorities should apply when determining planning applications:

- Support the conservation of biodiversity, in particular the conservation of wildlife and habitats; and must provide a net gain in biodiversity
- Ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- Ensure statutorily and non-statutorily designated sites are properly protected and managed;
- Safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- Secure enhancement of and improvements to ecosystem resilience, by ensuring any adverse environmental effects are firstly avoided, then minimised, mitigated and as a last resort compensated for, and by improving diversity, condition, extent and connectivity of ecological networks.

7.1 **Technical Advice Note 5: Nature Conservation and Planning** (Welsh Assembly Government, 2009), which is referred to by the PPW, provides further guidance in respect of statutory obligations for protecting and enhancing biodiversity and geological conservation and their effects within the planning system and is a material planning consideration.

1.7. Local planning policies of relevance to ecology, biodiversity and/or nature conservation have been set out in Table 1 below.

1.8. As well as Policy AW8, Rhondda Cynon Taf have Supplementary Planning Guidance on Nature Conservation, setting out further objectives and detail on the consideration of the natural environmental within planning applications.

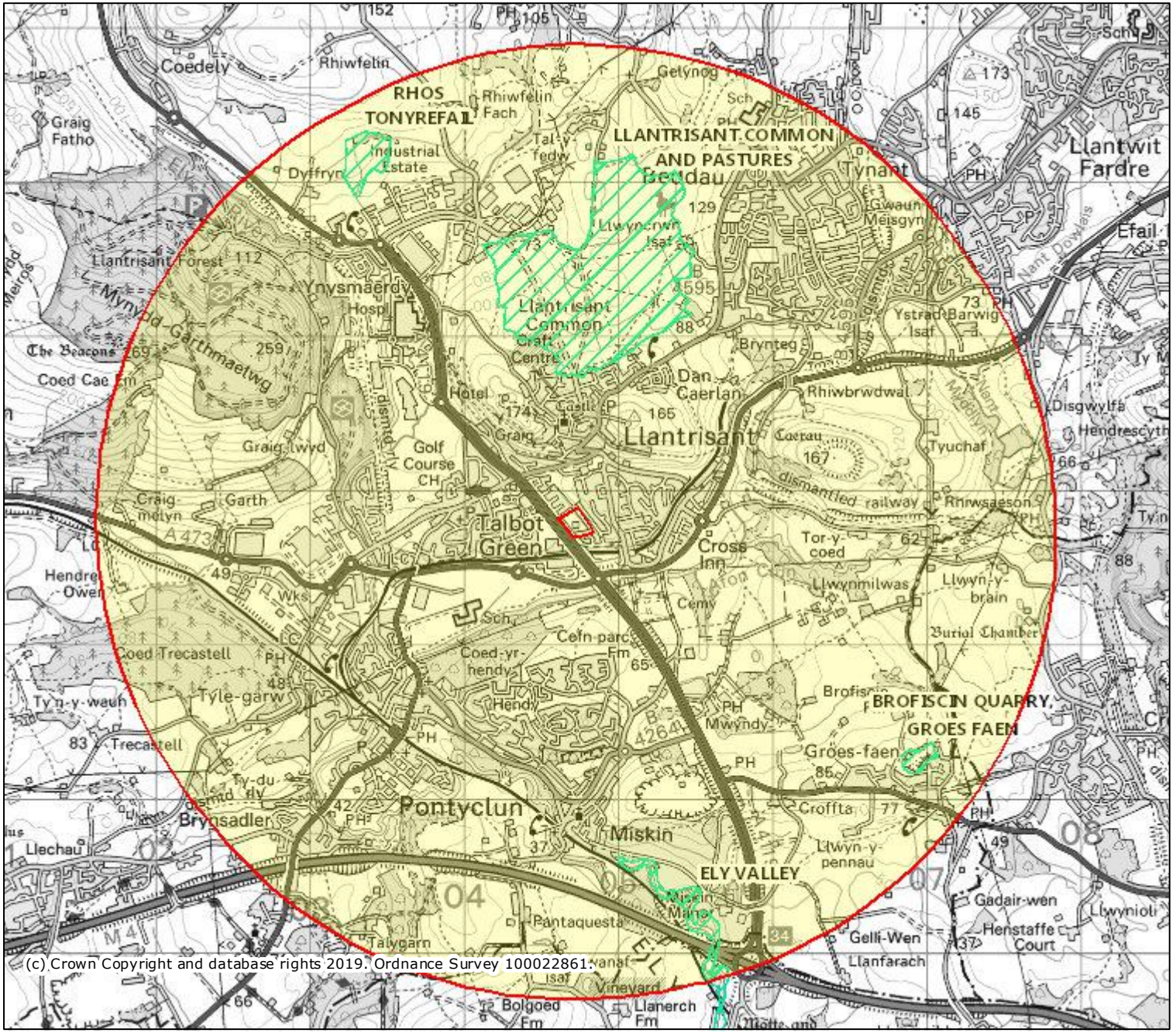
Table 1. Summary of regional and local planning policy relating to ecology

Policy	Summary
Rhondda Cynon Taf Local Development	
Policy AW 8: Protection and Enhancement of the Natural Environment	Rhondda Cynon Taf's distinctive natural heritage will be preserved and enhanced by protecting it from inappropriate development. Development proposals will only be permitted where:- 1. They would not cause harm to the features of a Site of Importance for Nature Conservation (SINC) or Regionally Important Geological Site (RIGS) or other locally designated sites, unless it can be demonstrated that:- a) The proposal is directly necessary for the positive management of the site; or b) The proposal would not unacceptably impact on the features of the site for which it has been designated; or c) The development could not reasonably be located elsewhere and the benefits of the proposed development clearly outweigh the nature conservation value of the site. 2. There would be no unacceptable impact upon features of importance to landscape or nature conservation, including ecological networks, the quality of natural resources such as air, water and soil, and the natural drainage of surface water. All development proposals, including those in built up areas, that may affect protected and priority species will be required to demonstrate what measures are proposed for the protection and management of the species and the mitigation and compensation of potential impacts. Development proposals must be accompanied by appropriate ecological surveys and appraisals, as requested by the Council. Development proposals that contribute to the management or development of Ecological Networks will be supported.

Appendix C

Desk Study Information

4387_3km search map



Legend

- National Nature Reserves (Wales)
- Sites of Special Scientific Interest (Wales)

Projection = OSGB36
xmin = 295100
ymin = 178400
xmax = 314400
ymax = 187300

0 0.7 1.4
km

Map produced by MAGIC on 3 September, 2019.

Site Check Report Report generated on Tue Sep 03 2019
You selected the location: Centroid Grid Ref: ST04718280
The following features have been found in your search area:

Sites of Special Scientific Interest (Wales)

Name	BROFISCIN QUARRY, GROES FAEN
Eastings	306954
Northings	181267
First Notified	05/08/1987
Last Notified	Null
Confirmation Date	13/04/1988
LAST_EDIT	06/03/2007
Cartesian Area (Ha)	2.562279
REG_AREA	Spherical
SPHER_AREA	2.55
OSMM_DATE	15/06/2006
STATUS	Confirmed

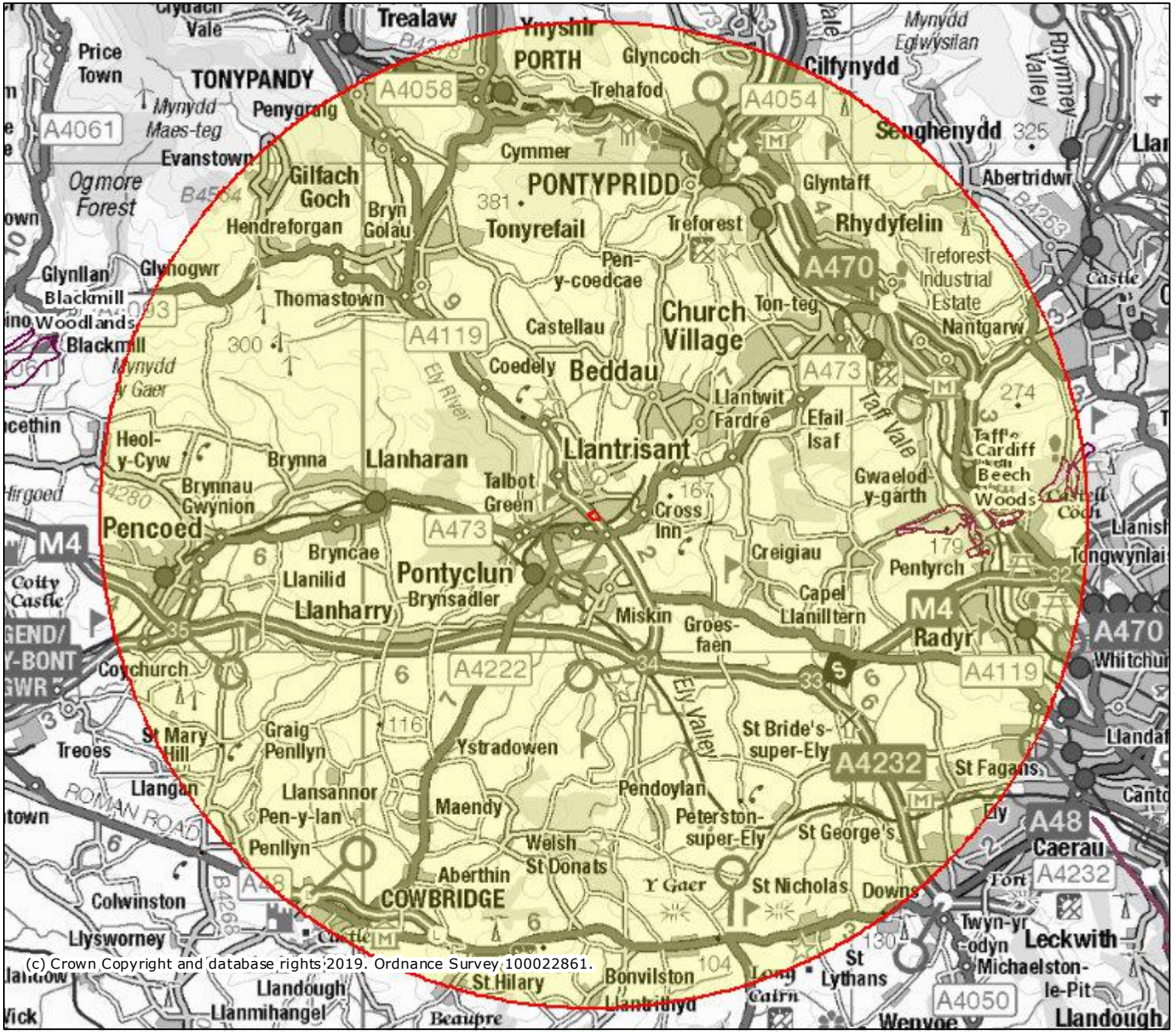
Name	ELY VALLEY
Eastings	306672
Northings	178271
First Notified	01/01/1959
Last Notified	07/09/1983
Confirmation Date	Null
LAST_EDIT	15/03/2009
Cartesian Area (Ha)	69.222249
REG_AREA	Spherical
SPHER_AREA	69.02
OSMM_DATE	15/06/2006
STATUS	Re-notified

Name	LLANTRISANT COMMON AND PASTURES
Eastings	304807
Northings	184458
First Notified	31/05/2000
Last Notified	Null
Confirmation Date	21/02/2001
LAST_EDIT	06/03/2007
Cartesian Area (Ha)	113.440482
REG_AREA	Spherical
SPHER_AREA	113.1
OSMM_DATE	15/06/2006
STATUS	Confirmed

Name	RHOS TONYREFAIL
Eastings	302106
Northings	187497
First Notified	03/10/2007
Last Notified	Null
Confirmation Date	20/05/2008
LAST_EDIT	09/04/2008
Cartesian Area (Ha)	244.708737
REG_AREA	Cartesian
SPHER_AREA	243.97
OSMM_DATE	15/06/2006
STATUS	Confirmed

National Nature Reserves (Wales)
No Features found

4387_10km_search map



Legend

- Ramsar Sites (Wales)
- Special Areas of Conservation (Wales)
- Special Protection Areas (Wales)

Projection = OSGB36
xmin = 274100
ymin = 168700
xmax = 335100
ymax = 196900

0 2 4
km

Map produced by MAGIC on 3 September, 2019.

Site Check Report Report generated on Tue Sep 03 2019
You selected the location: Centroid Grid Ref: ST04718280
The following features have been found in your search area:

Special Areas of Conservation (Wales)

Name	Cardiff Beech Woods
Reference	UK0030109
Marine	n
Date Notified	13/12/2004
Cartesian Area (Ha)	115.707247

Ramsar Sites (Wales)
No Features found

Special Protection Areas (Wales)
No Features found

BIODIVERSITY INFORMATION SEARCH (DESIGNATED SITES):

LAND AT PENYGAWSI PRIMARY SCHOOL ST0470082700

RHONDDA-CYNON-TAFF

LLANTRISANT: CEFN PARC

LLANTRISANT: LLANTRISANT BY-PASS

BUTE IRON MINE

LLANTRISANT: RHIWSAESON (PART I)

LLANTRISANT: RHIWSAESON (PART II)

MWYNDY MINE TIP

Centre of Search Area

2km Search Buffer

Regionally Important Geological Site

Unitary Authority Boundary

Plot produced on 01/08/2019 on behalf of CSA Environmental by

SEWBReC

SOUTH EAST WALES BIODIVERSITY RECORDS CENTRE

CANOLFAN GOFNODION BIOAMRYWIAETH DE DDWYRAIN CYMRU

Appendix D

Habitats and Flora Species List

Flora Species List

SITE ref. & NAME	4388 Pontyclun Primary School						
DATES OF SURVEY AND SURVEYORS	1. 02/08/2019 CT & HG	2. 04/06/2021 CT					
Latin name	Common Name	Amenity	Semi-improved grassland	Trees	Scrub and Tall ruderal	Pond	Ornamental planting
Herb species							
Asteraceae sp.	Daisy sp.		X				
Bellis perennis	Daisy	X	X				
Calystegia sepium	Hedge bindweed				X		
Capsella bursa-pastoris	Shepherd's purse		X				
Cardamine sp.	Bitter-cress	X	X				
Cerastium sp.	Mouse-ear		X				
Clematis sp.	Clematis						X
Crocosmia x crocosmiiflora	Montbretia						X
Epilobium hirsutum	Great willowherb				X		
Epilobium montanum	Broad-leaved willowherb				X		
Equisetum sp.	Horsetail					X	
Geranium molle	Cut-leaved crane's-bill		X				
Hebe sp.	Hebe sp.						X
Humulus lupulus	Hop				X		
Hyacinthoides non-scripta	Bluebell		X				
Hypochaeris radicata	Cat's-ear		X				
Narcissus sp.	Daffodil		X				
Nymphaeaceae sp.	Water-lily					X	
Plantago lanceolata	Ribwort plantain	X	X				
Primula sp.	Primrose		X				
Pulicaria dysenterica	Common fleabane		X				
Ranunculus repens	Creeping buttercup	X	X				
Rumex obtusifolius	Broad-leaved dock		X				
Senecio vulgaris	Groundsel	X					
Sonchus oleraceus	Smooth sow-thistle		X				
Taraxacum officinale agg.	Dandelion	X	X				
Trifolium repens	White clover		X				
Veronica persica	Common field speedwell		X				
Sedges and rushes							
Luzula campestris	Field wood-rush	X					
Carex pendula	Pendulous sedge						X
Grasses							
Arrhenatherum elatius	False oat-grass		X				
Cortaderia selloana	Pampas grass						X
Dactylis glomerata	Cock's-foot		X				
Festuca rubra	Red fescue		X				
Lolium perenne	Perennial rye grass		X				
Poaceaea sp	Bamboo		X				
Poa annua	Annual meadow-grass		X				
Woody species							
Coniferous							
Chamaecyparis lawsoniana	Lawson's cypress			X			
Picea abies	Norway spruce			X			
Pinus nigra	Black pine			X			
Broadleaved							
Acer platanoides	Norway maple			X			
Aesculus hippocastanum	Horse chestnut			X			
Betula pendula	Silver birch			X			
Betula pubescens	Downy birch			X			
Buddleja spp.	Buddleia				X		
Cupressus × leylandii	Leylandii			X			
Fraxinus excelsior	Ash			X			
Ilex aquifolium	Holly			X			
Prunus avium	Cherry			X			
Prunus laurocerasus	Cherry laurel				X		X
Prunus spinosa	Blackthorn				X		
Rubus fruticosus agg.	Bramble				X		
Salix caprea	Goat willow			X			

*** Domin Score:** 1<4% (few individuals), 2 <4% (several individuals), 3 <4% (many individuals), 4 (4-10%), 5 (11-25%), 6 (26-33%), 7 (34-50%), 8 (51-75%), 9 (76-90%), 10 (91-100%)

Appendix E

Evaluation & Assessment Methods

1.1. Ecological features are evaluated and assessed in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) 2018 Guidelines for Ecological Impact Assessment (EcIA). For clarity, the evaluation and assessment process adopted within this EcIA is set out below.

Establishing Potentially Important Ecological Features

1.2. Ecological features are assessed where they are considered to be important, and where they may be impacted by a proposed development. A feature may be considered important for a variety of reasons, such as quality, extent, rarity and/or statutory protection. Table 1 below sets out a non-exhaustive list of ecological features that are typically considered, along with key examples:

Table 1. Potentially important ecological features (adapted from CIEEM 2018)

Potentially Important Ecological Features	**Typical examples**
Statutory designated sites under international conventions or European Legislation	Wetlands of International Importance (Ramsar sites), Special Areas of Conservation (SAC), Special Protection Areas (SPA)
Statutory designated sites under national legislation	Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR, Local Nature Reserves (LNR)
Non-statutory, locally designated wildlife sites	Local Wildlife Sites (LWS), County Wildlife Sites (CWSs), Sites of Importance for Nature Conservation (SINCs)
National biodiversity lists	Habitats or Species of Principal Importance for the Conservation of Biodiversity (Section 41, NERC Act 2006), Ancient Woodland Inventory
Local biodiversity lists	Local Biodiversity Action Plan (BAP) priority species or habitats
Red Listed / Rare Species	Species of conservation concern, Red Data Book (RDB) species, Birds of Conservation Concern, nationally rare and nationally scarce species
Legally Protected Species	E.g. species listed under Sch.5 of the W&C Act 1981, or Sch.2 of the Hag. Regs. 2017
Legally Controlled Species	E.g. species listed under Sch.9 of the W&C Act 1981

1.3. It should also be noted that the social, community, economic or multi-functional importance attributed to ecological features are not assessed as they fall outwith the scope of this assessment.

Establishing Likely Zone of Influence

1.4. The 'zone of influence' for a project is the area over which ecological features may be subject to significant effects as a result of the project and associated activities. The project's zone of influence varies across different ecological features, which have different vulnerabilities and

sensitivities. For the purposes of this assessment, the following zones were considered:

- International statutory nature conservation designations up to 10km from the Site
- National and local statutory nature conservation designations up to 3km from the Site
- Non-statutory locally designated wildlife sites up to 1km from the Site

1.5. These arbitrary distances are considered sufficient for identifying the nature conservation designations which could be subject to significant effects. However, it is acknowledged that in certain circumstances effects beyond these distances are possible and should be considered as far as is reasonably practicable to do so.

1.6. For other ecological features, such as habitats and species, the appropriate zone of influence is described and justified as appropriate within the report, depending on their respective sensitivity to an environmental change.

1.7. The results of professionally accredited or published scientific studies have been used and referenced, where available, to establish the spatial and temporal limits of the biophysical changes likely to be caused by specific activities, and to justify decisions about the zone of influence.

Geographic Context and Significance Criteria

1.8. The importance of ecological features, as well as the significance of any likely impacts and their effects, are considered here within a defined geographic context:

- International
- National
- Regional
- County
- Local

1.9. The size, conservation status and the quality of features are all relevant in determining their importance and assigning this to the geographic scale. Where the importance of a feature is considered to fall below the Local scale, they are scoped out of detailed assessment.

1.10. Impacts and their effects are taken to be significant where they support or undermine biodiversity conservation objectives, with the scale of significance defined according to the above geographic context. Where an impact or effect is unlikely to be perceptible at a Local scale, this is taken to be not significant.

Characterising Ecological Impacts and their Effects

1.11. Where likely significant ecological impacts and effects are identified in connection with the proposed project, these are considered and described with reference to the following characteristics (where this is helpful in accurately portraying the ecological effect and determining the scale of significance):

- Positive or negative (i.e. does the anticipated change accord with nature conservation policies and objectives?)
- Extent (i.e. the spatial area over which the impact or effect may occur)
- Magnitude (i.e. the quantified size, amount, intensity or volume)
- Duration (i.e. the timeframe over which the impact or effect may occur, in both human and ecological terms)
- Frequency and timing (i.e. the number of times an activity occurs, where this is likely to influence the effect)
- Reversibility (i.e. is spontaneous recovery possible or may the effect be counteracted by mitigation?)

Appendix F

Bat Survey Report

Bat Survey Report

Penygawsi Primary School, September 2021

1.0 Introduction

1.1 The following report sets out the findings of a series of bat surveys undertaken at Penygawsi Primary School, Pontyclun (hereafter referred to as 'the Site'), to inform proposals for redevelopment and expansion of the existing school site. The surveys were undertaken by CSA Environmental and TACP UK Ltd on behalf of the Welsh Educational Partnership Company (WEPCo).

1.2 The Site occupies a total area of c. 2.5ha and is located around central grid reference ST 047 827, in the south of Llantrisant, Pontyclun, in the County Borough of Rhondda Cynon Taf. One large school building and two cabin style buildings, with associated parking, play areas and access roads, lie within a large area of amenity grassland bounded by linear tree and shrub belts, broadleaved woodland, dense scrub, residential gardens and a perimeter fence.

1.3 Further to the findings of a Preliminary Ecological Appraisal (PEA) (CSA/4387/01) undertaken in August 2019 and updated in April 2021, in which local records and suitable habitats were identified, further surveys were recommended in relation to bats. The following surveys and assessments were carried out, and are reported here-in:

- Desk study (August 2019, updated in part in April 2021)
- Preliminary Roost Assessment by CSA Environmental (April 2021)
- Bat roost surveys by TACP UK Ltd (June 2021)

1.4 The purpose of surveys was to determine the level of bat activity across the Site, as well as identify any evidence of, or potential for roosting. The content of this report has been determined with due consideration for best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017) and the Bat Conservation Trust (Collins et al. 2016).

2.0 Legislation

2.1 All British bat species are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These Regulations make it an offence to:

- Deliberately capture, injure, or kill a bat

- Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young, or which significantly affects the local distribution or abundance of the species
- Damage or destroy a breeding site or resting place used by bats

2.2 All bats and their roosts in the UK were previously fully protected under the Wildlife & Countryside Act 1981 (as amended). Amendments to the Act have removed most provisions as they relate to bats, however it remains an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection

2.3 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place is subject to 'strict liability', i.e. an offence is commented irrespective of whether the causal act was deliberate or otherwise.

2.4 Where development is proposed that would result in an offence under the Regulations, a European Protected Species (EPS) statutory derogation licence (often termed 'EPS Mitigation Licence') will need to be secured from Natural Resources Wales to permit an act that would otherwise be unlawful. Such a licence can only be granted following receipt of planning permission with all relevant conditions discharged, and where it has been demonstrated that specific statutory derogation tests have been met.

3.0 Methods

3.1 The following survey methods, design, data analysis and interpretation have been undertaken with due consideration of the Bat Conservation Trust (BCT) guidelines 3rd Edition (Collins, 2016).

Preliminary Roost Assessment (PRA)

Structures

3.2 A detailed external inspection of buildings on-site was completed on 06 April 2021 by Cerian Thomas MCIEEM of CSA Environmental, along with an internal inspection of the limited roof space within building B1 where accessible, using high-powered torches, binoculars and ladder as appropriate.

3.3 External inspection focused on identifying potential bat access points to the interior of each structure and any external features that could potentially be used by crevice-dwelling species. Particular attention was given to window sills, window panes, weatherboarding, and pitch/ridge tiles; as evidence is typically found in these locations.

3.4 The internal inspection involved a systematic search for bats or any evidence of their activity, in particular droppings and/or feeding remains within the roof voids of accessible buildings.

3.5 A description of the structures was made, including construction, condition and age (where known).

3.6 The aim of this inspection is to record direct (i.e. actual roosting bats) or indirect evidence of roosting bats (e.g. droppings), as well as the nature and number of features with 'potential' to support roosting bats. This includes consideration of structures to support bats whilst in hibernation.

Assessing 'Potential'

3.7 All structures were assigned to one of four categories in respect of their 'potential' to support roosting bats, or the confirmation of any bat roosts identified. 'Potential' in this context is taken to be the broad suitability of features to support roosting bats, based upon the nature, condition or structure of such features, in the absence of confirmed evidence of roosting.

3.8 Assigning the following categories is intended to determine the effort of any further targeted survey or inspections which are necessary to prove presence or likely absence of roosting bats, rather than to assign importance to such features.

3.9 The following categories are assigned to structures and/or trees herein, Either:

- ***Confirmed roost*** – where one or more bat roosts are identified during PRA inspections, either through direct sightings of bats, and/or indirect evidence such as bat droppings, Or;
- ***High*** – A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
- ***Moderate*** – A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, assessments at this stage are made irrespective of species conservation status).
- ***Low*** – A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
- ***Negligible*** – Negligible habitat features on site likely to be used by roosting bats.

Limitations

3.10 The majority of the buildings could only be inspected externally due to absence of accessible internal roof spaces and as such a precautionary approach to the assessment of their potential was used. Building B1 was the only structure which could be partially surveyed internally.

Roost Surveys

3.11 Following the findings of the PRA, two roost presence/absence surveys, comprising one dusk emergence and one pre-dawn re-entry survey were undertaken to confirm the presence/likely absence of roosting bats in association with building B1 in line with moderate potential. The surveys aim to determine the character of any identified roosts, namely species present, number of roost bats and roost type (i.e. day, night feeding, maternity and transitory). Surveys were conducted by TACP UK Ltd, with full methods and results presented in the RCT Primaries Bat Survey Report (ref 2021-08-12_2378_REP_P1_S3) in Appendix F.2.

3.12 The surveys were led by Samantha Shove (BSc, MCIEEM, CEcol, CEnv) of TACP UK Ltd in suitable weather conditions, with an extract confirming dates, timings and conditions outlined in Table 1 below. Surveyors were positioned to give good coverage of the whole building.

Table 1. Roost survey details at Penygawsi Primary School (taken from TACP survey report)

Building	Date	Period	Time	Weather Conditions
B1	07/06/2021	Dusk	21:15 – 23:15	14°C (start) 13°C (end), cloudy, gentle to moderate breeze
B1	29/06/2021	Dawn	03:15 – 05:15	14°C (start) 13°C (end), overcast, light breeze

Limitations

3.13 Security lighting is present on the Site, however, it was not seen to reflect directly on the building and is thus not considered to be a significant limitation.

4.0 Results

Preliminary Roost Assessment

Structures

4.1 Three buildings within the Site were assessed for external features for bat roosting potential, with a small roof void of B1 also assessed for internal evidence and suitability. The majority of the building and B2 and B3 could not be accessed internally.

4.2 Full descriptions of each building and a discussion of the bat roosting features and evidence is given in Appendix F.1, with a summary below.

4.3 Building B1 was a single storey main school building, with a bitumen felt flat roof, and limited features suitable for roosting. In the centre of the building is a raised flat roof section providing an additional first floor area of the building, which incorporates hanging tiles on the southern, northern and north-eastern aspects with potential to support crevice dwelling bats. The internal roof space was very narrow and cluttered, with corrugated metal walls and housed the decommissioned water tanks and no suitable roosting locations were identified. Given the presence of the hanging tiles, the building was considered to have moderate roosting potential.

4.4 Building B2 and B3 were modular cabin style buildings with no obvious gaps or access points and considered to have negligible potential for roosting bats.

Roost Surveys

4.5 No bats of any species were seen by the surveyors to emerge or return to roost in association with the school buildings, during the dusk and dawn re-entry surveys.

4.6 Three bat species were recorded foraging or commuting at low levels during the survey: common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus* and noctule *Nyctalus noctula.* Whilst it is noted that infrequent roosting behaviour can be difficult to identify, given the low level of wider activity, it is considered unlikely that the buildings are used for roosting purposes. The on-site woodland and trees groups offer suitable foraging opportunities for bats in the local vicinity, although lighting on area adjacent to the building may affect their suitability.

4.7 Full details of the roost survey results is provided in the appended Bat Survey Report (Appendix F.2).

5.0 Summary

5.1 No bats were identified roosting within the on-site buildings. No specific mitigation in relation to bat roosts is required but the Ecological Impact Assessment outlines measures in relation to a sensitive lighting strategy and enhancements for bats alongside proposals.

Appendix F.1

Preliminary Roost Assessment Results

Table 2. Preliminary Roost Assessment Results

Building reference	Description, bat roosting features and evidence	Bat roost suitability	Photograph
B1	Large school building in constant use. Flat roof structure with fine gravelled exterior concrete and UPVC panels and a flat felt roof. A central 1st storey section is constructed largely of UPVC windows and sections of hanging clay tiles along southern and northern aspects. The building was generally in good condition but with potential for bats where gaps between concrete panels run up to the roofing felt edge at the top of the wall plate and under exterior hanging tiles on the central section. The interior of the raised section of roof is formed of a trussed structure, lined with corrugated metal walls and some sections of wall insulation, unsuitable surfaces for bats to access and cling to. A boarded walkway is present, but is not accessible, blocked by stacked chairs and decommissioned water tanks. Internal space is not considered suitable for bats owing to its cluttered structure, narrow space and lack of features on which bats could hang.	**Moderate**	 

B2	Modular cabin style classroom, with fine gravelled exterior panels, plastic fascia and guttering, and plastic corrugated roofs, with no obvious features suitable for bats.	**Negligible**	
B3	Modular cabin style classroom, with fine gravelled exterior panels, plastic fascia and guttering, and plastic corrugated roofs, with no obvious features suitable for bats.	**Negligible**	

Appendix F.2

TACP Bat Survey Report

RCT PRIMARIES SURVEY REPORT

Fulcrum Group

August 2021

TACP

Fulcrum Group

RCT PRIMARIES SURVEY REPORT

August 2021

TACP
10 PARK GROVE
CARDIFF
CF10 3BN

Project Number: **2378**

Written by: Samantha Shove

Revision: **P1**

Revision No.	Date of Revision	Checked by	Date	Approved by	Date
P1	**11/08/2021**	**SS**	**11/08/2021**	**PMcC**	**12/08/2021**

CONTENTS

EXECUTIVE SUMMARY

TACP were commissioned to undertake the required emergence and re-entry surveys on three primary school sites within Rhondda Cynon Taf County Borough. This document reports the findings of the bat surveys including categorisation of confirmed roosts, observations of non-roosting bat behaviour on each site, and broad recommendations in terms of implications for future works.

The aims of the report are to:

- Evaluate the presence of roosting bats within each of the buildings with roost potential.
- Estimate the size and status of any bat roosts identified.

Preliminary roost assessments were undertaken for all of the buildings on all three sites by CSA Environmental. These surveys involved external inspections of the buildings in accordance with Collins (2016) with some buildings subject to internal inspections. Evidence of bat activity were found in building B5 on the Pontyclun Primary School site only. However, several potential roost features / access points were identified, and the buildings were assessed as having the potential to support roosting bats to varying degrees.

Dusk emergence and dawn re-entry surveys were conducted by TACP in accordance with the identified roosting potential and in accordance with Collins (2016). A single bat was observed emerging from building B5 on the Pontyclun Primary School site during the third survey. No bats were observed entering or existing any of the other buildings on this site or from any of those on the Penygawsi or Llanilltud Primary School sites.

It was therefore concluded that Pontyclun building B5 is used by roosting bats and a European Protected Species Licence (EPSL) from Natural Resources Wales (NRW) may be required for works to take place, with appropriate working methodologies and mitigation measures. The remaining Pontyclun buildings and those on the Penygawsi or Llanilltud sites would not require an EPSL, but works should be undertaken with consideration that roosting activity may be uncovered.

To demonstrate compliance with the Environment (Wales) Act 2016 and the RCT Nature Recovery Action Plan, ecological enhancements for bats should be included and implemented. Such measures could include:

- Retention of existing access points and roost features.
- Improved access to internal roost features using appropriate access points/panels.
- Creation of bat specific spaces within lofts and other roof voids that are separate from the main spaces.
- Installation of bat tubes, bat panels, and/or bat bricks within refurbished or new buildings.
- Installation of varied bat boxes within mature trees to provide additional roosting opportunities.
- Consideration of reduced security lighting or the use of motion triggered lighting.
- Increased planting with native and species rich mixes within the sites to increase invertebrate availability and therefore improve foraging potential.

Any measures to be included should be discussed with a suitably experienced ecologist and agreed with NRW, even where licences are not considered necessary.

1 INTRODUCTION

1.1 Purpose of this report

1.1.1 TACP were commissioned in May 2021 by the Fulcrum Group to undertake the required emergence and re-entry surveys on three primary school sites within Rhondda Cynon Taf County Borough, namely Pontyclun Primary School, Penygawsi Primary School, and Llanilltud Primary School.

1.1.2 This document reports the findings of the bat surveys undertaken in June and July 2021 including categorisation of confirmed roosts, observations of non-roosting bat behaviour on each site, and broad recommendations in terms of implications for future works.

1.1.3 The aims of this report are to:

- Evaluate the presence of roosting bats within each of the buildings with roost potential.
- Estimate the size and status of any bat roosts identified.

1.1.4 The results of these surveys will be used to inform ecological impact assessments for each of the sites.

1.2 Site location

1.2.1 Pontyclun Primary School is located in Pontyclun, Rhondda Cynon Taf (RCT), CF72 9EG. This site is set within the village with connectivity to the wider countryside limited to residential gardens, small parks, and small patches of woodland. The Afon Ely is located to the north, west and south as it meanders around the village, which has wooded banks and connectivity to larger woodland areas to the south. There is also a railway line to the north which also provides potential connectivity.

1.2.2 Penygawsi Primary School is located in Llantrisant, RCT, CF72 8PZ. This site is set within the town adjacent to the Ely Valley Road (A4119) with some connectivity to the north and south through small woodland patches and amenity areas. Connectivity to the east is more limited with residential gardens providing the main habitats, while to the west the A4119 and retail park creates a potential partial barrier to bat movements.

1.2.3 Llanilltud Primary School is located in Church Village, Pontypridd, RCT, CF38 1DA. This site is set towards the centre of the village with connectivity limited to residential gardens to the west, south and east, although it is noted that there are wooded areas a short distance beyond these to the south of the site. The Nant yr Aran and associated woodland and scrub habitats provide some connectivity to the north, although this is limited by the developments up and downstream that have resulted in sections of the watercourse being culverted.

1.3 Legislation and planning policy

1.3.1 Legislation

Conservation (Natural Habitats &c.) Regulations (Amendment) (EU Exit) 2019

1.3.2 All UK bat species are protected under the Conservation (Natural Habitats &c.) Regulations (Amendment) (EU Exit) 2019. Under regulation 41(1): '*a person who*:

- *Deliberately captures, injures, or kills any wild animal of a European Protected Species*
- *Deliberately disturbs wild animal of any such species*
- *Deliberately takes or destroys the eggs of such an animal or*
- *Damages, destroys a breeding site, or resting place of such an animal.*

Is guilty of an offence'.

1.3.3 However, under Regulation 53 (1 & 2), '*the relevant licencing body may grant a European Protected Species (EPS) licence for the purposes specified*' below:

- *Scientific or educational purposes*
- *Ringing or marking, or examining any ring or mark on, wild animals*
- *Conserving wild animals or wild plants or introducing them to particular areas*
- *Protecting any zoological or botanical collection*
- *Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment*
- *Preventing the spread of disease or*
- *Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property to fisheries.*

1.3.4 Under Regulation 53(9) '*the relevant licensing body must not grant a licence under this regulation unless they are satisfied*:

- *That there is no satisfactory alternative and*
- *That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'*.

1.3.5 The following four UK bat species are also listed on Annex II of Council Directive 92/43/EEC, and are therefore species for which Special Areas of Conservation (SAC) can be designated and are of significant conservation concern:

- Great horseshoe (*Rhinolophus ferrumequinum*)
- Lesser horseshoe (*Rhinolophus hipposideros*)
- Bechstein's bat (*Myotis bechsteinii*) and
- Barbastelle (*Barbastella barbastellus*).

Wildlife and Countryside Act 1981 (as amended)

1.3.6 Bats are also protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation is less significant since the implementation of the Conservation (Natural Habitats &c.) (Amendment) (EU Exit) Regulations 2019.

The Environmental Damage (Prevention and Remediation) Regulations 2009

1.3.7 The Environmental Damage (Prevention and Remediation) Regulations 2009 (as amended) applies in relation to prevention and remediation of environmental damage to protected species, natural habitats, SSSIs, surface and ground water and land. In the case of damage to species and habitats the regulations have the power to make the operators of activities which have caused damage carry out:

- Primary remediation (clean up)
- Complementary remediation (cleaning up an alternative site if the damaged site cannot be fully restored) and
- Compensatory remediation (carry out other measures to provide alternative natural resources to compensate for the time during which the damaged site remains in its damaged state).

Proceeds of Crime Act (2002)

1.3.8 On the 7th March 2016 a landmark case was heard where the first Proceeds of Crime Order was made for offences relating to destruction of a bat roost. Iscar Enterprises Ltd. was fined £3000 and ordered to pay £2000 costs. In addition, a Proceeds of Crime Order of £5737 was made as the company had finically benefited from destroying a bat roost without proper surveys, licences, and mitigation.

1.3.9 Several other successful prosecutions have been made since this case.

Environment (Wales) Act 2016

1.3.10 Section 7 of the Environment (Wales) Act 2016 lists Species of Principal Importance for Nature Conservation in Wales, which include the following bat species:

- Soprano pipistrelle
- Greater horseshoe
- Lesser horseshoe
- Bechstein's bat
- Barbastelle
- Noctule (*Nyctalus noctule*)
- Brown long-eared (*Plecotus auritus*).

1.3.11 The Environment Act requires all public authorities, when carrying out their functions in Wales, to seek to "*maintain and enhance biodiversity*" where it is within the proper exercise of their functions. In doing so, public authorities must also seek to "*promote the resilience of ecosystems*". This applies to a range of public authorities such as the Welsh Ministers, local authorities, public bodies, and statutory undertakers.

1.3.12 Planning Policy

Planning Policy Wales (Edition 10)

1.3.13 Chapter 6 of Planning Policy Wales (Distinctive and Natural Places) covers and range of topics including biodiversity and habitats. Section 6.4 states that '*development plan strategies, policies and development proposals must consider the need to:*

- *Support the conservation of biodiversity, in particular the conservation of wildlife and habitats*
- *Ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats*
- *Ensure statutorily and non-statutorily designated sites are properly protected and managed*
- *Safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat and*
- *Secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks*'.

Technical Advice Note (TAN) 5: Nature Conservation and Planning

1.3.14 Technical Advice Notes provide advice to local planning authorities on the application of Planning Policy Wales and legislation to the planning system. TAN 5 provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. In summary the TAN:

- Sets out the key principles of planning for nature conservation
- Provides advice about the preparation and review of development plans, including the relevant statutory requirements
- Addresses nature conservation in development control procedures
- Addresses the conservation of internationally and nationally designated sites and habitats and also local sites
- Provides advice about the conservation of protected and priority species.

Action for Nature: Local Nature Recovery Action Plan for RCT (2008)

1.3.15 Part 2 of the RCT Local Nature Recovery Action Plan includes an action plan for Pipistrelle bat / all bats which acknowledges that there are issues, concerns, and actions required for all bat species known or believed to be present within RCT.

1.3.16 These species include:

- Brown long-eared (*Plecotus auritus*)
- Noctule (*Nyctalus noctula*)
- Natterer's (*Myotis nattereri*)
- Whiskered (*Myotis mystacinus*)
- Brandt's (*Myotis brandtii*)
- Daubenton's (*Myotis daubentonii*)

- Serotine (*Eptesicus serotinus*)
- Leisler's (*Nyctalus leisleri*)
- Greater Horseshoe (*Rhinolophus ferrumequinum*)
- Lesser Horseshoe (*Rhinolophus hipposideros*)

2 EXISTING INFORMATION

2.1 Preliminary Roost Assessment and Internal Inspections (2021)

2.1.1 CSA Environmental undertook update ecological surveys in April 2021, which included preliminary roost inspections of structures on all three sites. Internal inspections were undertaken of certain buildings only, as described below.

2.1.2 All eight buildings on Pontyclun Primary School were externally assessed for bat roost potential with an internal inspection undertaken in the loft spaces of building B5. These surveys identified bat droppings within two of the loft spaces within building B5. The remaining buildings were determined to be of low to moderate potential for roosting bats.

2.1.3 All three buildings on Penygawsi Primary School were externally assessed for bat roost potential with an internal inspection undertaken in the small roof void within building B1. These surveys did not identify evidence of bat activity and determined that building B1 had moderate roosting potential. The other two buildings on site were noted to have no obvious features suitable for bats.

2.1.4 All three buildings on Llanilltud Primary School were externally assessed for bat roost potential with no internal inspections undertaken. These surveys identified some limited potential within building B1 with the other two buildings on site lacking obvious features suitable for bats.

3 SURVEY METHODS

3.1 Emergence and re-entry survey method

3.1.1 Dusk emergence and dawn re-entry surveys were conducted in accordance with the BCT 2016 survey guidelines at the three sites as specified by the CSA Environmental Update Ecology Surveys Report (April 2021). This report identified the following survey requirements:

- Pontyclun Primary School – 3 roost surveys on building B5, 2 roost surveys on buildings B1, B3, B6, B7, and B8.
- Penygawsi Primary School – 2 roost surveys on building B1.
- Llanilltud Primary School – 1 roost survey on building B1.

3.1.2 The surveyor locations were identified on the CSA Environmental Habitats Plans, as included in Appendix A.

3.1.3 Dates on which the surveys were conducted, weather conditions and other survey details are shown in Table 3.1 below:

Table 3.1 – Dusk emergence and dawn re-entry survey details

Survey Site	Building	Date	Period	Time	Weather Conditions
Pontyclun	B1, B3	21/06/2021	Dusk	21:35 - 23:35	14°C (start) 12°C (end), gentle breeze with occasional moderate gusts, overcast, short period of spotting rain 21:59 to 22:09
	B5, B6, B7, B8	22/06/2021	Dusk	21:20 - 23:20	15°C (start) 11°C (end), light to gentle breeze, partly cloudy
	B6, B7, B8	08/07/2021	Dawn	03:15 - 05:15	13°C (start) 12°C (end), light breeze, partly cloudy
	B5	09/07/2021	Dawn	03:15 - 05:15	14°C (start) 12°C (end), light breeze, partly cloudy
	B5	19/07/2021	Dusk	21:05 - 23:05	24°C (start) 20°C (end), clear skies, calm
	B1, B3	21/07/2021	Dawn	03:35 - 05:35	17°C (start) 16°C (end), clear skies, calm
Penygawsi	B1	07/06/2021	Dusk	21:15 - 23:15	14°C (start) 13°C (end), cloudy, gentle to moderate breeze
	B1	29/06/2021	Dawn	03:15 - 05:15	14°C (start) 13°C (end), overcast, light breeze
Llanilltud	B1	24/06/2021	Dusk	21:20 - 23:20	16°C (start) 15°C (end), overcast, moderate breeze, brief light rain at 21:56 to 22:00 and at 22:03 to 22:04

3.1.4 Surveyors with bat detectors were positioned at the identified locations to observe bats potentially entering or exiting the buildings.

3.1.5 The dusk emergence surveys commenced fifteen minutes before sunset and continued for an hour and forty-five minutes after dusk. The dawn re-entry surveys commenced an hour and forty-five minutes before dawn and continued for fifteen minutes after sunrise.

3.1.6 Where necessary, bat recordings were later analysed using BatSound software and species identified with reference to Russ, (2012) and Middleton et. al. (2014).

3.1.7 Equipment used

- Head torches
- Hand-held detectors: Echo Meter 2, Elekon BatScanner, and Pettersson D-240X Bat Detector
- Additional Roland recorders as required

3.2 Surveyor information

3.2.1 Surveys were led and conducted by Samantha Shove (BSc, MCIEEM, CEcol, CEnv) who has over 15 years' experience conducting bat surveys on a wide variety of projects including roost emergence/re-entry of buildings, other structures, and trees, walked activity surveys, and stationary crossing point activity surveys. Sam also has significant experience in managing survey requirements and programmes, organising appropriate resources, and ensuring high standards in data recording.

3.2.2 Sam was assisted by the following surveyors:

- Matt Levan
- Marie Pugh
- George Mee
- Fiona Day
- Peter McComiskey
- Hilary Davies
- Yolanda Li

3.2.3 Additional recording equipment was also deployed for later analysis to confirm species identification and clarify any calls that could not be identified in the field.

3.3 Constraints and Limitations

3.3.1 As noted in Table 3.1 above, the weather conditions were on the whole suitable for undertaking surveys. However, short periods of light rain did occur during two of the surveys. Given the nature of this rainfall and the short duration of occurrence this is not considered to be a significant limitation or to have had an effect on the results obtained.

3.3.2 Security lighting was on during some of the surveys at the Pontyclun Primary School, particularly in relation to buildings B3, B5, and B7, and at the Llanilltud Primary School. Street lighting was also on during the dusk survey on building B1 at Pontyclun Primary School, although this was noted to be off during the dawn survey. This lighting would reduce the roosting potential even for less light sensitive species such as Common and Soprano Pipistrelle.

3.3.3 Lighting was present at Penygawsi Primary School although this did not reflect on the building itself as was more focused on adjacent areas, therefore is not considered a significant limitation on the survey results.

4 SURVEY RESULTS

4.1 Pontyclun Primary School Survey Results

4.1.1 The results of the three surveys on building B5 are shown in Table 4.1 below.

Table 4.1 – Results of the surveys on building B5

Date	Building	Roosting	Species - Activity	
22/06/2021	B5	None	Pipistrelle	Commuting
			Soprano Pipistrelle	Commuting, foraging
			Noctule	Commuting
09/07/2021	B5	None	Pipistrelle	Commuting
19/07/2021	B5	Common Pipistrelle Emerged from central grille into the loft space (survey location 2)	Common Pipistrelle	Commuting, foraging
			Noctule	Commuting
			Soprano Pipistrelle	Commuting, foraging

4.1.2 The results confirm the presence of an active roost with building B5 with the emergence of a Common Pipistrelle from the central grid at location 2. Given the low number of bats identified and the limited evidence of roosting activity identified during the previous CSA internal inspections and the surveys detailed above, it is considered that building B5 constitutes a night roost for Common Pipistrelle bats.

4.1.3 It should also be noted that given the presence of foraging and commuting Soprano Pipistrelle on site, this species may also utilise building B5 as a night roost.

4.1.4 Noctule bats are primarily tree dwellers and are unlikely to utilise any of the buildings on site for roosting purposes, although this should not be ruled out completely.

4.1.5 The results of the two surveys on buildings B1, B3, B6, B7, and B8 are shown in Table 4.2 below.

Table 4.2 – Results of the surveys on buildings B1, B3, B6, B7, and B8

Date	Building	Roosting	Species - Activity	
21/06/2021	B1	None	Soprano Pipistrelle	Commuting
	B3	None	Common Pipistrelle	Commuting, foraging
			Soprano Pipistrelle	Commuting, foraging
22/06/2021	B6	None	Common Pipistrelle	Commuting, foraging
	B7	None	Noctule	Commuting
			Soprano Pipistrelle	Commuting
	B8	None	Common Pipistrelle	Commuting, foraging
08/07/2021	B6	None	None	None
	B7	None	None	None
	B8	None	None	None
21/07/2021	B1	None	Common Pipistrelle	Commuting, foraging
			Soprano Pipistrelle	Commuting, foraging
	B3	None	Pipistrelle	Commuting
			Common Pipistrelle	Commuting

4.1.6 The surveys did not identify any roosting activity within buildings B1, B3, B6, B7, or B8 although it should be noted that infrequent roosting behaviour can be difficult to identify. The confirmation of a night roost in building B5 and the level of foraging and commuting activity recorded on site, along with the roosting potential identified within these structures, suggests that these structures could be used in a similar manner on an infrequent basis.

4.2 Penygawsi Primary School Survey Results

4.2.1 The results of the two surveys on building B1 are shown in Table 4.3 below.

Table 4.3 – Results of the surveys on building B1

Date	Roosting	Species - Activity	
07/06/2021	None	Common Pipistrelle	Commuting, foraging
		Soprano Pipistrelle	Commuting, foraging
		Noctule	Foraging
29/06/2021	None	Soprano Pipistrelle	Commuting, foraging
		Common Pipistrelle	Commuting, foraging
		Noctule	Foraging

4.2.2 The surveys did not identify any roosting activity within building B1. While it is noted that infrequent roosting behaviour can be difficult to identify, given the low level of wider activity, it is considered unlikely that the building is used for roosting purposes.

4.3 Llanilltud Primary School Survey Results

4.3.1 The results of the single survey on building B1 are shown in Table 4.4 below.

Table 4.4 – Results of the survey on building B1

Date	Roosting	Species - Activity	
24/06/2021	None	Common Pipistrelle	Commuting, foraging

4.3.2 The surveys did not identify any roosting activity within building B1. While it is noted that infrequent roosting behaviour can be difficult to identify, given the low level of wider activity, it is considered unlikely that the building is used for roosting purposes.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1.1 The preliminary roost assessments identified bat roost potential within all eight of the buildings on the Pontyclun Primary School site, and within single buildings on the Penygawsi and Llanilltud Primary School sites.

5.1.2 A likely Common Pipistrelle night roost was identified within building B5 on the Pontyclun Primary School site. Therefore, any works that may directly or indirectly affect this roost or use of this roost would need to be subject to ecological assessment and may require a European Protected Species (EPS) development licence from Natural Resources Wales (NRW). This would quantify and assess the likely impacts of identified works, detail the necessary avoidance and mitigations measures, and set out the necessary methodologies to be applied.

5.1.3 As there was no evidence to show that buildings B1, B3, B6, B7 or B8 on the Pontyclun Primary School site, building B1 on the Penygawsi Primary School site or building B1 on the Llanilltud Primary School site were being used by roosting bats no mitigation is anticipated. However, any works affecting these structures should be considerate of the roosting potential and should evidence of roosting bats be found those undertaking any such works should contact an ecologist with an NRW bat survey licence for advice.

5.1.4 To demonstrate compliance with the Environment (Wales) Act 2016 and the RCT Nature Recovery Action Plan, it is recommended that appropriate ecological enhancements for bats are included and implemented as part of any proposed works. Such measures could include:

- Retention of existing access points and roost features.
- Improved access to internal roost features using appropriate access points/panels.
- Creation of bat specific spaces within lofts and other roof voids that are separate from the main spaces.
- Installation of bat tubes, bat panels, and/or bat bricks within refurbished or new buildings.
- Installation of varied bat boxes within mature trees to provide additional roosting opportunities.
- Consideration of reduced security lighting or the use of motion triggered lighting.
- Increased planting with native and species rich mixes within the sites to increase invertebrate availability and therefore improve foraging potential.

5.1.5 Any measures to be included should be discussed with a suitably experienced ecologist and agreed with NRW, even where licences are not considered necessary.

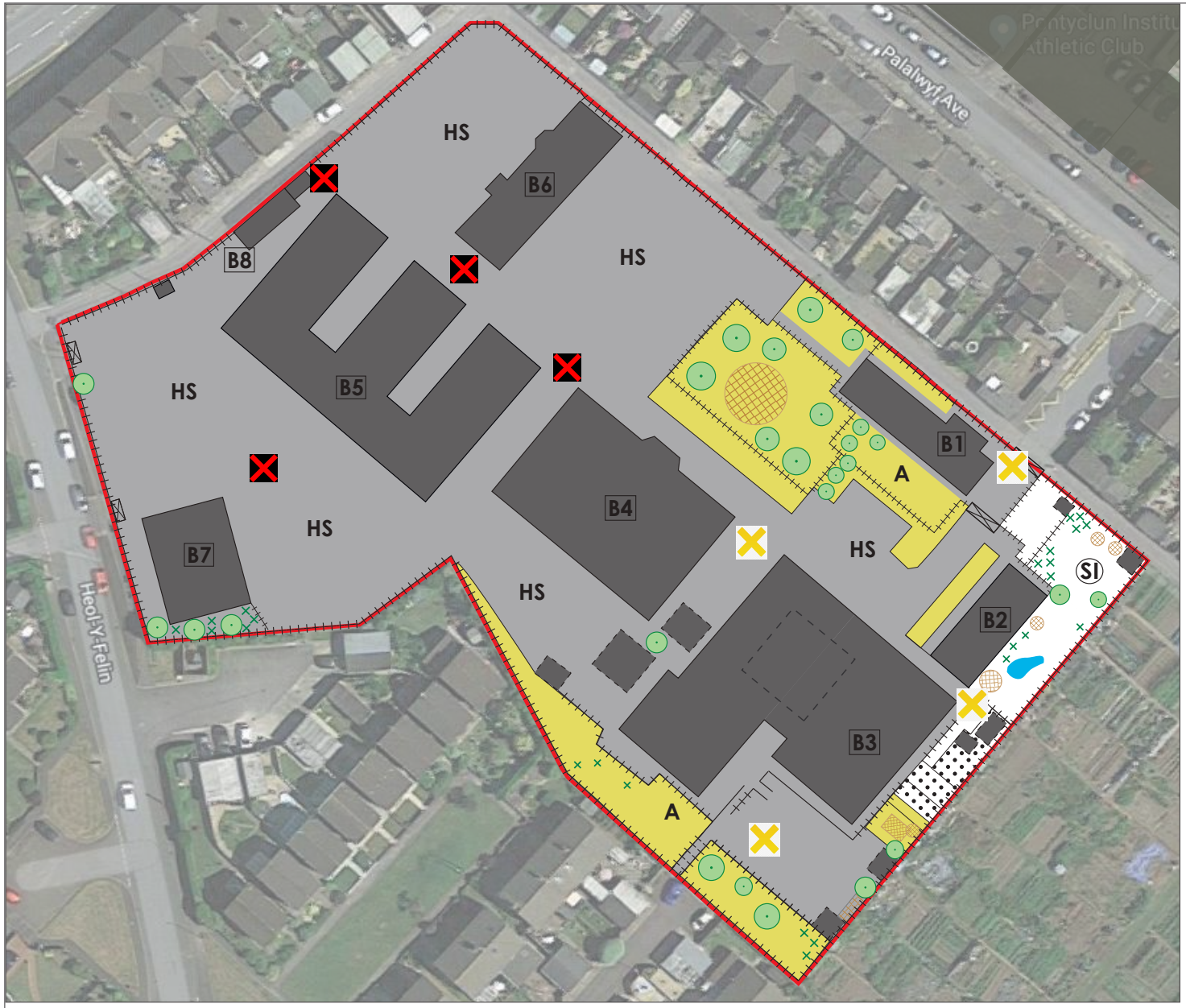
6 REFERENCES

Collins, J. (ed) (2016). *Bat Surveys for Professional Ecologist: Good Practice Guidelines, (3rd edition)*. The Bat Conservation Trust, London ISBN-13 978-1-872745-96-1

Middleton, N., Froud, A. & French, K (2014). Social Calls of the Bats of Britain and Ireland. Pelagic Publishing ISBN 978-1-907807-97-8

Russ, J. (2012). *British Bat Calls – A Guide to Species Identification.* Pelagic Publishing ISBN 978-1-907807-25-1

APPENDIX A – BAT SURVEY MAPS



- Site boundary
- Building
- Building number (Bn)
- Hard standing (HS)
- Amenity grassland (A)
- Semi-improved grassland (SI)
- Ornamental shrub
- Bare ground - mixed habitat of bare soil, paving slabs, gravel, mixed scrub, bark chippings, greenhouse, shed buildings, raised beds.
- Tree
- Scattered scrub
- Pond
- Gate
- Fence

N

0 25 50metres

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Project	Pontyclun Primary School, Pontyclun	Date	August 2019	Drawing No.	CSA/4388/100
Drawing Title	Habitats Plan	Scale	Refer to scale	Rev	-
Client	HSP Consulting	Drawn	HG	Checked	CT

N

- Site boundary
- A — Amenity grassland
- Woodland
- SI — Semi-improved grassland
- Dense scrub
- Tall ruderal scrub
- Ornamental planting
- Tree
- Scattered scrub
- Non-native hedge
- Building
- Bn — Building number
- Hardstanding
- Fence
- Gate

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Project	Penygawsi Primary School, Pontyclun	Date August 2019	Drawing No. CSA/4387/100
Drawing Title	Habitats Plan	Scale Refer to scale	Rev -
Client	HSP Consulting	Drawn HG	Checked CT

N

- Site boundary
- A — Amenity grassland
- Scattered scrub
- Hedgerow
- Tree
- Ancient woodland
- Pond
- Hard standing
- Fence
- Gate
- Building
- Bn — Building reference number

0 25 50metres

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Project	Llaniltud Faerdref Primary School, Pontypridd	Date	August 2019	Drawing No.	CSA/4386/100
Drawing Title	Habitats plan	Scale	Refer to scale	Rev	-
Client	HSP Consulting	Drawn	MS	Checked	CT

Appendix G

Badger Survey Report

Badger Survey Report

Penygawsi Primary School, September 2021

1.0 Introduction

1.1 The following report sets out the findings of a badger survey undertaken at Penygawsi Primary School, Pontyclun (hereafter referred to as 'the Site'), to inform proposals for the redevelopment and expansion of the existing school site. The survey was undertaken by CSA Environmental on behalf of the Welsh Education Partnership Company.

1.2 The Site occupies a total area of c. 2.5ha and is located around central grid reference ST 047 827, in the south of Llantrisant, Pontyclun, in the County Borough of Rhondda Cynon Taf. One large school building and two cabin style buildings, with associated parking, play areas and access roads, lie within a large area of amenity grassland bounded by linear tree and shrub belts, broadleaved woodland, dense scrub, residential gardens and a perimeter fence.

1.3 Further to the findings of a Preliminary Ecological Appraisal (PEA) (CSA/4387/01) in August 2019 and the update survey in April 2021, in which local records and suitable habitats were identified, further survey effort was recommended in relation to badgers. A badger survey of the woodland area within the Site was undertaken in April 2021, as well as boundary habitats, to identify any setts or signs of activity within, or adjacent to, the application boundary.

1.4 Badgers and their setts receive legal protection under the Protection of Badgers Act 1992. It was therefore necessary to determine their presence or likely absence from the Site and wider survey area, and whether they would likely be impacted by the proposed development.

2.0 Legislation

2.1 Badgers and their setts are protected under the Protection of Badgers Act 1992 which, in part, makes it an offence to:

- Kill, injure or take a badger
- Destroy or damage a badger sett or any part of it
- Obstruct access to, or any entrance of, a badger sett
- Disturb a badger whilst it is occupying a sett

2.2 Impacts to badgers and their setts should be avoided in the first instance by retaining setts and implementing an appropriate buffer distance to

limit disturbance. Where this is not possible, a Natural Resources Wales licensing system exists to permit certain works that would otherwise be illegal. This can include direct or direct impacts which may result in any of the above offences. Where a licence has been granted, permitted impacts to a badger sett can only be carried out between the months of July and November (inclusive) and following an agreed method statement.

3.0 Methods

3.1 A dedicated badger survey was conducted on 06 April 2021 by Cerian Thomas MCIEEM, using standard survey methods, searching the Site and immediately adjacent areas for field signs of badger and mapping any present such as:

- Feeding signs such as snuffle entrances made during foraging
- Hairs caught on vegetation or fences
- Latrines, usually positioned on territorial boundaries
- Foraging tracks through vegetation or under fences
- Badger setts

3.2 When badger setts are found the number of entrances are recorded as well as the level of usage. Recording this information gives an indication of the type of sett by categorising it according to the criteria listed in Table 1 below (Harris *et al*. 1989, Cresswell *et al*. 1990, Wilson *et al*. 1997).

Table 1. Badger sett categories.

Sett Type
Main Setts - These usually have a large number of entrances with large spoil heaps, and the sett generally looks well used. There will be well-used paths to and from the sett and between sett entrances. Although normally the breeding sett is in continuous use, it is possible to find a main sett that has become disused due to excessive digging or some other reason; it should be recorded as a disused main sett. In the first survey, the average size of an active main sett was twelve entrances (including all categories of use).
Annexe setts - They are often close to a main sett, usually less than 150 metres away, and are usually connected to the main sett by one or more obvious well-worn paths. They usually have several entrances, but may not be in use all the time even if the main sett is very active. In the first survey the average size was five entrances (including all categories of use).
Subsidiary setts - These often only have a few; four (including all categories of use) was the average number in the first survey. They are usually at least 50 metres from a main sett, and do not have an obvious path connecting with another sett. They are not continuously active.
Outlying setts - These usually have only one or two entrances, often have little spoil outside the entrance, have no obvious path connecting with another sett, and are only used sporadically. When not in use by badgers, they are often taken over by foxes or even rabbits. However, they can still be recognised as badger setts by the shape of the tunnel (not the actual entrance entrance), which is usually at least 250mm in diameter, and is rounded or a flattened oval shape. Fox and rabbit tunnels are smaller and often taller than broad.
Entrance Type

Well used entrances - These are clear of any debris or vegetation, are obviously in regular use, and may or may not have been excavated recently.
Partially used entrances - These are not in regular use and have debris such as leaves and twigs in the entrance, or have moss and/or other plants growing in or around the entrance. Partially used entrances could be in regular use after a minimal amount of clearance.
Disused entrances - These have not been in use for some time, are partially or completely blocked, and could not be used without a considerable amount of clearance. If the entrance has been disused for some time, all that may be visible is a depression in the ground where the entrance used to be, and the remains of the spoil heap, which may be covered in moss or plants.

3.3 There were no limitations to the survey which was conducted an optimal time of year for badger survey.

4.0 Results

4.1 No evidence of badgers were identified, such as setts, latrines, mammal paths or hairs.

4.2 The Site is enclosed by residential housing on the north, east and southern perimeters, with a variable fenced boundary. The western boundary provides the only means of entry onto the school grounds, from the adjacent A4119 highway. There are considerable areas of higher quality habitat in the local area to the south, beyond the A473, with tracts of woodland and agricultural land, which are more likely to support badgers.

5.0 Summary

5.1 No evidence of badgers was identified during the survey and, in the context of the wider area, it is considered that badgers are unlikely to make any regular use of on-site habitats.

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