

Preliminary Ecological Appraisal (PEA) Report Cowbridge Comprehensive School

Vale of Glamorgan Council

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1. Executive Summary

AECOM was instructed by Vale of Glamorgan Council to carry out a Preliminary Ecological Appraisal (PEA) and BREEAM Land use and Ecology assessment of the site Cowbridge Comprehensive School, hereafter referred to as 'the Site'. The central grid reference for the Site is ST 00223 74872 and the boundary of the Site is shown on Figure 1.

The BREEAM assessment requires a detailed Site plan including proposed landscaping. These are not available at this stage. The BREEAM Assessment will be completed once the required information is received. This report includes the PEA only.

The proposed development is for a new primary school building located on an existing area of amenity grassland to the north of the existing multi-use games area (MUGA). There is no requirement for any additional access track. New landscaping is proposed around the building. There will be new external lighting associated with the building. The existing building will be retained.

The Site is an existing school and comprises buildings, sports pitches, playing fields, parking and associated areas of hardstanding and soft landscaping including amenity grassland and ornamental planting. Semi-natural habitats are located around the perimeter of the Site including broadleaved semi-natural woodland, plantation woodland, scrub, semi-improved neutral grassland, poor semi-improved grassland, rows of trees, hedgerows. Two locally designated sites (a SINC and NRW Priority Habitat Area) are present adjacent to the western boundary

Within the Site boundary there is potential for invertebrates, reptiles, common amphibians, breeding birds, foraging, commuting and roosting bats, dormouse, badger and hedgehog. Invasive non-native species cotoneaster and montbretia are present on Site.

Amenity grassland will be removed during the proposed development. All other natural habitats and semi-natural habitats will be retained.

Potential impacts are: pollution of adjacent habitats (including locally designated sites), disturbance of species caused by lighting, and entrapment of hedgehog and badger in excavations (if left open overnight).

No further surveys are recommended. Recommendations have been made with regards to mitigation including pollution control measures, lighting design, protection of retained habitats and covering excavations overnight and providing a ramp.

Recommendations for enhancement have been provided which should be considered during the detailed design process.

The Executive Summary is not a substitute for the full report. Refer to the full text for further detail.

2. Introduction

2.1 Introduction

AECOM was instructed by Vale of Glamorgan Council to carry out a Preliminary Ecological Appraisal (PEA) and BREEAM Land use and Ecology assessment of the site Cowbridge Comprehensive School, hereafter referred to as 'the Site'. The central grid reference for the Site is ST 00223 74872 and the boundary of the Site is shown on Figure 1.

This PEA was commissioned to identify whether there are known or potential ecological receptors (nature conservation designations, and protected and notable habitats and species) that may constrain or influence the design and implementation of the proposed development. The approach applied when undertaking this PEA pays due regard to the *Guidelines for Preliminary Ecological Appraisal* published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017). The PEA addresses relevant wildlife legislation and planning policy as summarised in this report.

In order to deliver the PEA, a desk study and an extended Phase 1 Habitat Survey were undertaken by an appropriately experienced ecologist, to identify ecological features within the Site and the wider potential zone of influence of the proposed development. The potential zone of influence was defined with reference to the project description provided by Vale of Glamorgan Council as shown on Figure 1. Additional details are provided in Section 3: Methodology.

The BREEAM assessment requires a detailed Site plan including proposed landscaping. These are not available at this stage. The BREEAM Assessment will be completed once the required information is received. This report includes the PEA only. The recommendations provided in this report should be used to guide the proposed development.

2.2 Site Location and Description

The Site is approximately 71,800 m² and located within a semi-rural location to the north east of Cowbridge, Vale of Glamorgan (see Figure 1 – Proposed Site Boundary).

The Site is an existing school and comprises buildings, sports pitches, playing fields, parking and associated areas of hardstanding and soft landscaping including amenity grassland and ornamental planting. Semi-natural habitats are located around the perimeter of the Site including broadleaved semi-natural woodland, plantation woodland, scrub, semi-improved grassland, poor semi-improved grassland, rows of trees, hedgerows.

2.3 Proposed Development

The proposed development is for a new primary school building located on an existing area of amenity grassland to the north of the existing multi-use games area (MUGA). There is no requirement for any additional access track. New landscaping is proposed around the building. There will be new external lighting associated with the building. Detailed designs are not yet available. The existing building will be retained.

It is understood that construction is programmed to be completed between September 2020 - August 2021.

A detailed design is not available at this stage. This PEA report will be used to guide the design and inform the final detailed design of the proposed development.

2.4 Objectives

This report is based on the findings of a Phase 1 Habitat Survey and ecological desk study. The objectives of the report are:

- To identify any designated nature conservation sites on or in the vicinity of the Site;
- To identify any known records of protected, notable or scarce species in the vicinity of the Site;

- To record and map the main habitats and features of ecological interest;
- To assess the ecological value of the Site and the surrounding area;
- To assess ecological impacts including potential change in diversity;
- To outline requirements for further surveys, if required;
- To make suggestions for mitigation, compensation and enhancement of the natural features identified on the Site; and,
- To help inform the design of the Site to minimise ecological impacts and ecological constraints.

The purpose of this report is to inform the design of the proposed development to support the submission of a planning application. The report identifies the scope of further work (where necessary) that would be required to support a planning application. High level recommendations are made on potential options for the avoidance, mitigation or compensation of the potential impacts of the proposed development (where known) on the identified ecological receptors, and of potential enhancements to the biodiversity and ecosystem services.

2.5 Wildlife Legislation and Planning Policy

2.5.1 Wildlife Legislation

There are several different acts of legislation and regulations which refer to the protection of wildlife. These are summarised in Appendix B. In particular, the legislation relating to possible Protected Species on Site is outlined. This is a brief summary of the legislation and is not to be regarded as a definitive legal opinion. When dealing with individual cases, the client is advised to consult the full texts of the relevant legislation and obtain further legal advice.

The following wildlife legislation is potentially relevant to the proposed development:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Conservation of Habitats and Species and Planning (as amended) 2017;
- Environment (Wales) Act 2016;
- The Protection of Badgers Act 1992; and,
- The Hedgerow Regulations 1997.

The above legislation has been considered when planning and undertaking this PEA, when identifying potential constraints to the proposed development, and when making recommendations for further survey, design options and mitigation. Compliance with legislation may require the attainment of relevant protected species licences prior to the implementation of the proposed development.

2.5.2 National Planning Policy

2.5.2.1 Planning Policy Wales (9th Ed. November 2016)

Planning Policy Wales (PPW) sets out the land use planning policies of Welsh Government.

Chapter 5, Conserving and Improving the Natural Heritage and the Coast, outlines Welsh Government's objectives for the conservation and improvement of natural heritage. The relevant measures in place to conserve landscape and biodiversity include:

- Statutory designations;
- Non-statutory designations;
- LANDMAP Information System (LANDMAP describes and evaluates

- aspects of the landscape and provides the basis of a consistent Wales-wide approach to landscape assessment);
- Development plans and the conservation and improvement of the natural heritage;
- Development management and the conservation and improvement of the natural heritage;
- Development management and statutory designations;
- Trees and woods; and,
- Protected Species.

Paragraph 5.3.10 states that "potential SPAs and candidate SACs (included in the list sent to the European Commission) should be treated in the same way as classified SPAs and designated SACs. Sites which the UK and the European Commission have agreed as Sites of Community Importance and which are to be designated as SACs attract the same legal protection as if they had already been designated. The same considerations should, as a matter of policy, be applied to listed Ramsar sites".

Paragraph 5.2.9 states that "Local planning authorities should seek to protect trees, groups of trees and areas of woodland where they have natural heritage value or contribute to the character or amenity of a particular locality. Ancient and semi-natural woodlands are irreplaceable habitats of high biodiversity value which should be protected from development that would result in significant damage."

Paragraph 5.5.4 states that "For all planning applications likely to result in disturbance or harm to a protected species or likely to have a significant adverse effect on sites of more than local importance, or on a designated area, local planning authorities should seek the advice of Natural Resources Wales and should always consult them before granting permission".

2.5.2.2 Technical Advice Note 5 (TAN5) Nature Conservation and Planning (September 2009)

The Planning Policy Wales (PPW) is supplemented by a series of Technical Advice Notes. TAN 5 provides guidance on how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. It provides advice on areas including the key principles of positive planning for nature conservation, nature conservation in Local Development Plans and development management procedures. It also provides advice on development affecting designated sites and habitats, in addition to Protected or Priority Habitats and Species.

Key Principles include that the town and country planning system in Wales should integrate nature conservation into all planning decisions; that the town and country planning system should look for development to provide a net benefit for biodiversity conservation with no significant loss of habitats or populations of species, locally or nationally and that they should ensure that the UK's international and national obligations for site, species and habitat protection are fully met in all planning decisions.

2.5.3 Local Planning Policy

A Local Development Plan (LDP) must be produced by every Local Planning Authority in Wales. Any development proposal will be tested against the policies within the LDP. The LDP follow the planning guidance provide in Planning Policy Wales (PPW), including biodiversity and natural heritage policies. These include protecting designated sites and other areas of importance for biodiversity conservation; safeguarding protected species and priority species, including those listed in local biodiversity action plans and retaining, creating and enhancing features of importance for biodiversity conservation where appropriate.

Relevant local planning policies for Vale of Glamorgan Council are detailed in the following document:

- Vale of Glamorgan Local Development Plan 2011-2026, Local Development Plan Written Statement. June 2017.

Appendix C provides a summary of relevant local planning policies. For the precise wording of each specific policy please refer back to the source document. This planning policy has been considered when assessing potential ecological constraints and opportunities identified by the desk study and field surveys; and, when assessing requirements for further survey, design options and ecological mitigation.

2.5.4 Quality Assurance

This survey and subsequent report were undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2015 and ISO 14001:2015 and BS ISO 45001 2018. In addition, our IMS requires careful selection and monitoring of the performance of all sub consultants and contractors.

All AECOM Ecologists who worked on this project are members of (at the appropriate level) the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2019) when undertaking ecological work.

3. Methodology

3.1 Preliminary Ecological Appraisal

3.1.1 Desk Study

A desk study was undertaken in June 2020. The objectives of the desk study were to review the existing information available in the public domain concerning species and habitats to identify the following:

- Internationally, nationally and locally designated sites, up to 2 km from the Site boundary using the Multi Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk);
- Locally designated sites, up to 2 km from the Site boundary using South East Wales Biodiversity Record Centre (SEWBRc);
- Protected and Priority Species records and records of locally designated sites up to 2 km from the Site boundary, using SEWBRc;
- Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI) designated for bats within a 10 km radius of the Site boundary in accordance with Bat Conservation Trust (Collins, 2016) recommendations;
- Section 7 list of Species and Habitats of Principal Importance for Conservation in Wales;
- Ancient Semi-Natural Woodland (ASNW), Plantation on Ancient Woodland Site (PAWS), Restored Ancient Woodland Site (RAWS) or Ancient Woodland Site of Unknown category (AWSU) within or adjacent to the Site boundary using Forestry Commission Wales 2011 Ancient Woodland Inventory data set downloaded from the Lle website (NRW, 2018);
- Vale of Glamorgan Council interactive map tool was used to identify Tree Protection Orders (TPOs) within and adjacent to the Site boundary;
- The County Ecologist, Glamorgan bat group and South and West Wales Amphibian and Reptile Group (SWWARG) were contacted for local records or knowledge about the project area; and,
- Aerial photographs and Ordnance Survey (OS) maps were reviewed to identify features of ecological interest surrounding the Site including ponds within 500 m, nearby areas of ecological interest and features connecting these habitats (hedgerows, watercourses, railway lines).

3.1.2 Extended Phase 1 Habitat Survey

A Phase 1 Habitat Survey (JNCC, 2010) of the Site was undertaken by two experienced AECOM ecologists (BSc, ACIEEM and BSc) on 27 May 2020.

The survey involved a Site walkover and preliminary assessment of habitats, land use and ecological features. The main habitats present were recorded using standard Phase 1 Habitat Survey methodology as described in the Handbook for Phase 1 Habitat Survey: A technique for Environmental Audit (JNCC, 2010). The plant species defining the habitat types on Site were recorded. Evidence of any Invasive Non-Native Species (INNS) of plant subject to legal controls was recorded.

The Phase 1 Habitat Survey was 'Extended' by including a desk study, as described above, and an assessment of the potential for the site to support Protected or Priority Species in order to identify potential ecological constraints and to guide recommendations for further surveys.

Habitat outside of but adjacent to the Site boundary was noted to aid in the determination of the zone of influence.

3.1.3 Assessment of Bat Habitat Suitability

During the Phase 1 Habitat Survey, where access allowed, trees and buildings throughout the Site were classified into categories dependent on the presence of features suitable as bat roost habitat. This was conducted via an

external appraisal from the ground using binoculars where necessary. Collins, (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines provides descriptions of the categories for buildings and trees.

Habitats on Site were classified into categories dependent on the presence of features suitable for bats to commute and forage. Collins (2016) provides descriptions for commuting and foraging habitats.

Table 3.1: Tree and Building Bat Roost Suitability Categories

Roost Suitability	Descriptions for Buildings	Descriptions for Trees
Known or Confirmed	Confirmed signs of bat presence/ occupation (droppings, oily staining around entry points, insect remains, odour, scratching) and actual bat presence.	Confirmed signs of bat presence/ occupation (droppings, oily staining around entry points, insect remains, odour, scratching) and actual bat presence.
High	<p>A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potential for longer periods of time due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat.</p> <p>Can include structures with points of access to the interior of the building and poorly maintained fabric providing ready access points for bats into structures, but at the same time not draughty. Structures of traditional stone, brick or timber construction. Structures with large (>20cm) roof timbers with mortice joints, cracks and holes. Structures of pre or early 20th century construction. Structures with large complicated and/or uncluttered roof spaces providing unobstructed flying spaces. Structures with weather boarding and/or hanging tiles with gaps. Structures with accessible south facing roofs. Structures with proximity to good foraging habitat such as woodland, wetland, water and /or good hedgerows.</p>	<p>A 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 potential for longer periods of time due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat.</p>
Moderate	<p>A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat but unlikely to support a roost of high conservation status.</p> <p>Can include structures with some potential to support roosting bats, but fewer features than a high risk building. Features may include areas suitable for crevice dwelling and/or access points into structures. Some proximity to foraging habitat.</p>	<p>A 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.</p>
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically.</p> <p>However these potential roost sites do not provide enough space, shelter protection, appropriate conditions and/or suitable habitat to be used on a regular basis or by large numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).</p>	<p>Tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen have only very limited roosting potential.</p>
Negligible	<p>No features suitable for roosting bats.</p> <p>Can include structures constructed from unsuitable materials e.g. prefabricated with steel and sheet material. Structure is draughty, light and cool buildings with no roosting opportunities. High levels of regular disturbance including external and/or internal lighting. Building is isolated from areas of foraging habitat.</p>	<p>Trees with no potential to support bats.</p>

Source: Category descriptions drawn from Collins, 2016 and Mitchell-Jones, 2004 to be applied using professional judgement

Table 3.2: Commuting and Foraging Habitat Suitability Categories

Commuting and Foraging Suitability Descriptions

High	<p>Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>
Moderate	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
Low	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small number of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Negligible	<p>Negligible habitat features on site likely to be used by commuting or foraging bats.</p>

Source: Category descriptions drawn from Collins, 2016 to be applied using professional judgement

3.2 Limitations

3.2.1 Desk Study and Phase 1 Habitat Survey

Biological records can be received from a wide variety of sources and may or may not be comprehensive and accurate. However, if assessed in conjunction with a Phase 1 Habitat survey, they can contribute to a robust ecological assessment of a site.

Where any conclusions and recommendations contained in this Report are based upon information provided by others, it has been assumed that all relevant information provided by those parties is accurate. Any such information obtained by AECOM has not been independently verified by AECOM, unless otherwise stated in the Report. AECOM accepts no liability for any inaccurate conclusions, assumptions or actions taken resulting from any inaccurate information supplied to AECOM from others.

The methodology adopted and the sources of information used by AECOM in providing its services are outlined in this Report. The work described in this Report was conducted between 27 May 2020 and 15 June 2020 and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances. AECOM disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to AECOM's attention after the date of the Report.

All areas were accessible during the survey without access limitations.

The assessment is based on information on Site design available at the time of writing and not on a detailed design. Any assessments of potential impacts and recommendations made in this report are subject to change on receipt of a detailed design.

There are deemed to be no significant limitations to this PEA.

4. Baseline Conditions

4.1 Desk Study Results

The designated habitats, sites and features within proximity to the Site are listed in Table 4.1 below.

Table 4.1: Desk Study Results

Designation / Feature	Description
Internationally and Nationally Designated Sites Within 2 km	<p><u>Cors Aberthin Site of SSSI</u> Distance and Direction: 0.2 km north west (connected via hedgerow and grassland) Description: Cors Aberthin is of special interest for its marshy grassland, much of which is base-enriched, and its species-rich neutral grassland. Cors Aberthin is located in the floodplain of the River Thaw, 1 km to the north of Cowbridge and west of the village of Aberthin. It consists of a series of enclosed pastures, separated by hedgerows and drainage ditches which flow in a westerly direction, towards the River Thaw. (CCW, 2010)</p>
Locally Designated Sites Within 2 km	<p><u>Land West of Cowbridge Comprehensive School SINC</u> Distance and Direction: Adjacent to west of Site boundary Description: Semi-natural broadleaved wet woodland.</p> <p><u>NRW Priority Area – Heathland and Grassland</u> Distance and Direction: Adjacent to west of Site boundary Description: Consists of heathland and grassland habitat.</p> <p><u>Coed Lawn SINC</u> Distance and Direction: 27 m west (separated from the Site by Aberthin Road) Description: Semi-natural broadleaved woodland on an ancient woodland site.</p> <p><u>Coed y Seler SINC</u> Distance and Direction: 0.9 km south east Description: Predominantly ancient semi-natural broadleaved which supports lesser horseshoe bat <i>Rhinolophus hipposideros</i>.</p> <p><u>Aberthin Field SINC</u> Distance and Direction: 1 km north east Description: Species-rich neutral grassland.</p> <p><u>Coed Bach SINC</u> Distance and Direction: 1 km south west Description: Semi-natural broadleaved woodland on an ancient woodland site.</p> <p><u>Long Grove SINC</u> Distance and Direction: 1.2 km south Description: Semi-natural broadleaved woodland on an ancient woodland site.</p> <p><u>Coed y Castell SINC</u> Distance and Direction: 1.3 km south east Description: Ancient semi-natural broadleaved woodland.</p>

Designation / Feature

Description

Land along Nant Aberthin SINC

Distance and Direction: 1.3 km west

Description: Pond supporting associated vegetation.

Llanblethian Hill Down SINC

Distance and Direction: 1.3 km south west

Description: Ancient semi-natural woodland and semi-natural broadleaved woodland.

Land South of Whitefield Farm SINC

Distance and Direction: 1.3 km east

Description: Three enclosed meadows supporting species-rich MG6 neutral grassland.

Coed y Grbla SINC

Distance and Direction: 1.4 km south

Description: Ancient semi-natural broadleaved woodland.

Coed y Castell SINC

Distance and Direction: 1.5 km north west

Description: Semi-natural broadleaved woodland on an ancient woodland site.

Llanquian Wood SINC

Distance and Direction: 1.6 km west

Description: Semi-natural broadleaved woodland on an ancient woodland site.

West of Trebetyyn SINC

Distance and Direction: 1.7 km north east

Description: Species-rich purple moorgrass and rush pasture with damp scrub woodland.

Land at Trerhyngyll SINC

Distance and Direction: 1.8 km north

Description: Site supporting mosaic of species-rich purple moorgrass and rush pasture, semi-improved neutral grassland, wet ditches and pond.

Beech Clump SINC

Distance and Direction: 1.8 km north west

Description: Mosaic of ancient semi-natural broadleaved woodland, semi-natural broadleaved woodland and mixed woodland, part on an ancient woodland site.

Coed Pen-Cyrn SINC

Distance and Direction: 1.9 km north

Description: Semi-natural broadleaved woodland on an ancient woodland site.

Coed y Seler SINC

Distance and Direction: 1.9 km south

Description: Ancient semi-natural broadleaved woodland.

Designation / Feature	Description
	<p><u>Coed y Pentre SINC</u> Distance and Direction: 1.9 km south west Description: Predominantly ancient semi-natural broadleaved woodland.</p> <p><u>Land to South West of Llanblethian SINC</u> Distance and Direction: 2 km south east Description: Semi-natural broadleaved woodland.</p> <p>SINC citations: Vale of Glamorgan Local Development Plan 2011-2026</p>
Designated Sites Within 10 km Designated for Bats	<p><u>Coed Y Mwstwr Woods SSSI</u> Distance and Direction: 7.6 km north west (no connectivity) Description: A fine example of a mixed deciduous woodland on limestone with a rich, ungrazed ground flora. The wood has an added speleological interest with bats recorded as inhabiting the main cave system - a rare occurrence in Mid Glamorgan. (CCW, 1983)</p>
Protected and Priority Species Records from the last 10 years within 2 km	<p>The following recent (last 10 years) species have been recorded within 2 km of the Site:</p> <p>Invasive Species: Three cornered garlic <i>Allium triquetrum</i> (0.5 km south east), Japanese knotweed <i>Reynoutria japonica</i> (0.5 km south east), Himalayan balsam <i>Impatiens glandulifera</i> (0.6 km north west), Spanish bluebell <i>Hyacinthoides hispanica</i> (0.5 km south east) variegated yellow archangel <i>Lamiastrum galeobdolon subsp. argentatum</i> (1.9 km south east)</p> <p>Invertebrates: Cinnabar <i>Tyria jacobaeae</i>, blood vein <i>Timandra comae</i>, buff ermine <i>Spilosoma lutea</i>, white ermine <i>Spilosoma lubricipeda</i>, shaded broadbar <i>Scotopteryx chenopodiata</i>, white letter hairstreak <i>Satyrrium w-album</i>, large wainscot <i>Rhizedra lutosa</i>.</p> <p>Fish: Brown sea trout <i>Salmo trutta</i> (0.6 km west).</p> <p>Amphibians: Common frog <i>Rana temporaria</i> (0.6 km west, no connectivity), common toad (1.1 km west, no connectivity), smooth newt <i>Lissotriton vulgaris</i> (1.1 km west)</p> <p>Reptiles: Common lizard <i>Zootoca vivipara</i> (0.3 km north west on boardwalks in fields behind comprehensive school), slow worm <i>Anguis fragilis</i> (0.5 km south, no connectivity), grass snake (1.3 km south west), adder <i>Vipera berus</i> (1 km north east). There are records from 2008 of slow worm and grass snake within the Site boundary.</p> <p>Birds: Dunnock <i>Prunella modularis</i>, linnet <i>Linaria cannabina</i>, tree sparrow <i>Passer montanus</i>, song thrush <i>Turdus philomelos</i>, house sparrow <i>Passer domesticus</i>, herring gull <i>Larus argentatus</i>, red kite <i>Milvus milvus</i>, bullfinch <i>Pyrrhula pyrrhula</i>, goshawk <i>Accipiter gentilis</i>, kingfisher <i>Alcedo atthis</i>, skylark <i>Alauda arvensis</i>, kestrel <i>Falco tinnunculus</i>, starling <i>Sturnus vulgaris</i>, lapwing <i>Vanellus vanellus</i>, barn owl <i>Tyto alba</i>, fieldfare <i>Turdus pilaris</i>, curlew <i>Numenius arquata</i>, redwing <i>Turdus iliacus</i>, green sandpiper <i>Tringa ochropus</i>.</p> <p>Bats: Field records: Noctule <i>Nyctalus noctula</i> (0.3 km south), soprano pipistrelle <i>Pipistrellus pygmaeus</i> (0.3 km south), common pipistrelle <i>Pipistrellus pipistrellus</i> (0.3 km south), pipistrelle agg. <i>Pipistrellus sp.</i> (1.5 km south west), Daubenton's bat <i>Myotis daubentonii</i> (1.5 km south west), serotine <i>Eptesicus serotinus</i> (1.5 km south west). Roost records: Brown long-eared bat (possible roost 0.3 km south), lesser horseshoe bat <i>Rhinolophus hipposideros</i> (possible roost 0.3 km south), unknown bat (possible roost 0.9 km south), common pipistrelle (0.7 km south west).</p>

Designation / Feature	Description
	Other Mammals: Otter <i>Lutra lutra</i> (0.6 km west), polecat <i>Mustela putorius</i> (0.7 km north), hedgehog <i>Erinaceus europaeus</i> (0.7 km south, no connectivity), badger <i>Meles meles</i> (1.9 km south east).
Priority Habitats and Species – Section 7 List	The full list of Section 7 Habitats and Species of Principle Importance in Wales has been reviewed. Those priority habitats present on Site and priority species with potential to be on site are listed in Table 4.2 and Table 4.3 respectively.
Surrounding Land Use	<p>The Site is located to the north east of Cowbridge. To the north of the Site are agricultural fields with hedgerows. Nant Aberthin flows through fields to the north and west of the Site located 0.2 km north at its nearest point. Nant Aberthin connects to the River Tawe which is located 150 m south west of the Site at its closest point and is connected to the Site by drainage ditches. A wetland area is located adjacent to the west of the Site. This connects to areas of scrub, rows of trees and hedgerows which connect to surrounding agricultural land to the west.</p> <p>Cowbridge Bypass Viaduct is located adjacent to the southern boundary, this is elevated above ground level with an area of bare ground below. Further south is the town of Cowbridge.</p> <p>To the east of the Site is Aberthin Road. A strip of broadleaved woodland is located adjacent to Aberthin Road which is connected to agricultural land to the east by hedgerows.</p>
Ancient Woodland	There are no Ancient Woodland designations within or adjacent to the Site boundary. An area of Restored Ancient Woodland Site (RAWS) is located 0.3 km east separated from the Site by Aberthin Road.
Tree Protection Orders (TPO)	There are no Tree Preservation Orders within the Site or adjacent to the Site boundary.
Ponds within 500 m	<p>There are five ponds shown on OS mapping within 500 m of the Site boundary:</p> <ul style="list-style-type: none"> • Pond 1: Partially within western area of Site and approximately 100 m² (dry and filled with scrub at time of survey) • Pond 2: Approximately 240 m north west and 325 m². No connectivity due to River Thaw. • Pond 3: 290 m south east and 50 m². No connectivity due to A48. • Pond 4: Approximately 370 m south west and 5200 m². No connectivity to Site due to A48 and River Thaw. • Pond 5: Approximately 360 m north and 700 m². Connected to Site via hedgerow and grassland.
Council Ecologist and Local Specialist Recorders	The County Ecologist and local recording groups for birds, bats and mammal were contacted. No response has been received at the time of writing.

4.2 Extended Phase 1 Habitat Survey

4.2.1 Habitats

The habitats present within the Site boundary and their descriptions are shown in Table 4.2. A plan of the Site showing the location and distribution of these habitats is shown in Figure 1.

Table 4.2: Phase 1 Habitats and Descriptions

Habitat	Description	Section 7 Habitat
Broadleaved Semi-Natural Woodland	Area along northern boundary. Dense woodland with no understorey adjacent to carpark. Species include hazel <i>Corylus avellana</i> , field maple <i>Acer campestre</i> , red campion <i>Silene dioica</i> , poplar <i>Populus</i> sp., hawthorn <i>Crataegus monogyna</i> , spindle <i>Euonymus europaeus</i> , willow <i>Salix</i> sp., oak <i>Quercus</i> sp., Wilson's honeysuckle <i>Lonicera nitida</i> , ash <i>Fraxinus excelsior</i> . Extending west the vegetation becomes less dense and is dominated by mature oak trees with an understorey including bluebell <i>Hyacinthoides non-scripta</i> , wild garlic <i>Allium ursinum</i> and dog's mercury <i>Mercurialis perennis</i> (Appendix D: Photographs 14 and 17).	Yes
Broadleaved Plantation Woodland	Several areas of broadleaved plantation woodland are located along the boundaries of the Site: <ul style="list-style-type: none"> Area along eastern boundary with a poor semi-improved grassland understorey. Species include ash, hornbeam <i>Carpinus betulus</i>, sycamore <i>Acer pseudoplatanus</i>, cherry <i>Prunus</i> sp., oak, holly <i>Ilex aquifolium</i>, lime <i>Tilia x europaea</i>, ribwort plantain <i>Plantago lanceolata</i>, meadow buttercup <i>Ranunculus acris</i>, broadleaved dock <i>Rumex obtusifolius</i>, dandelion <i>Taraxacum</i> sp., daisy <i>Bellis perennis</i>, Yorkshire fog <i>Holcus lanatus</i>, common ivy <i>Hedera helix</i>, bramble <i>Rubus fruticosus</i> agg., red clover <i>Trifolium pratense</i> (Appendix D: Photograph 9). Area along western boundary adjacent to sports courts comprises sycamore, blackthorn <i>Prunus spinosa</i>, hawthorn, nettle <i>Urtica dioica</i>, dog rose <i>Rosa canina</i>, hawthorn, bramble, ash and dock species. 	No
Row of Broadleaved Trees	Rows of broadleaved trees are located across the Site. These include ornamental trees (including native and non native species) within landscaped areas and mature trees along the boundaries. Species include willow, field maple, silver birch <i>Betula pendula</i> , oak, hazel, beech <i>Fagus sylvatica</i> , hawthorn, sycamore. A row of mature oak and beech are located along the western boundary (Appendix D: Photographs 1, 10, 13 and 16).	No
Broadleaved Trees – Scattered	Scattered broadleaved trees are located across the Site. These include trees within landscaped areas (Figure 1: Target Note 4 and 8). Species include silver birch and cherry. (Appendix D: Photographs 5 and 6)	No
Dense Scrub	Areas of bramble scrub located across the Site along boundaries. A strip of dense scrub comprised of willow, hawthorn, bramble, ash, hornbeam, field maple, beech and guelder rose <i>Viburnum opulus</i> is located along the western boundary (Appendix D: Photograph 18 and 20). A pond is marked on OS mapping along the western boundary. This is currently dry and has been encroached by scrub (Figure 1: Target Note 14).	No
Scattered Scrub	A strip of scattered scrub is located along the southern boundary and western boundary adjacent to the sports courts. Species include willow, sycamore, ribwort plantain, ragwort <i>Jacobaea vulgaris</i> , willowherb <i>Epilobium</i> sp., daisy, clematis <i>Clematis</i> sp, herb Robert <i>Geranium robertianum</i> , oxeye daisy <i>Leucanthemum vulgare</i> , lesser stitchwort <i>Stellaria graminea</i> , black medic <i>Medicago lupulina</i> , bush vetch <i>Vicia</i>	No

Habitat	Description	Section 7 Habitat
	<p><i>sepium</i>, geranium species <i>Pelargonium</i> sp, buddleia <i>Buddleja davidii</i>, forget me not species <i>Myosotis</i> sp, colt's-foot <i>Tussilago farfara</i>, false oat grass <i>Arrhenatherum elatius</i>, cocks foot <i>Dactylis glomerata</i>, hogweed <i>Heracleum sphondylium</i>, cow parsley <i>Anthriscus sylvestris</i>, dog rose, bramble, hazel. Scrub changes to ruderal comprising of nettles, bramble and hogweed as it extends south (Figure 1: Target Note 13).</p>	
Neutral Grassland - Semi-Improved	<p>A strip of neutral semi-improved grassland not subject to frequent intensive management is located adjacent to the broadleaved semi-natural woodland in the north of the Site. Species include oxeye daisy, broadleaved dock, bush vetch, colt's-foot, meadow thistle <i>Cirsium dissectum</i>, soft rush <i>Juncus effusus</i>, ground ivy <i>Glechoma hederacea</i>, germander speedway, cinquefoil <i>Potentilla reptans</i>, sedge species <i>Carex</i> sp., hard rush <i>Juncus inflexus</i>, ribwort plantain, Yorkshire fog, knapweed <i>Centaurea nigra</i>, cut leaved cranesbill <i>Geranium dissectum</i>, bramble (Appendix D: Photograph 17).</p>	No
Poor Semi-Improved Grassland	<ul style="list-style-type: none"> A strip of poor semi-improved grassland is located along the eastern boundary and western boundary. Areas not subject to intensive management. Species include oxeye daisy, cowslip <i>Primula veris</i>, creeping buttercup <i>Ranunculus repens</i>, knapweed, red campion, ribwort plantain, cocks foot, broadleaved dock, Yorkshire fog, cow parsley, common ivy, tufted vetch, bramble, cuckoo flower <i>Cardamine pratensis</i>, germander speedwell <i>Veronica chamaedrys</i>, cats ear <i>Hypochaeris radicata</i>, forget me not species, cleavers <i>Galium aparine</i>, birds foot trefoil <i>Lotus corniculatus</i>, bush vetch, hedge bindweed <i>Calystegia sepium</i>, willowherb, hawkbit <i>Leontodon</i> sp., hogweed, herb robert, common bent <i>Agrostis capillaris</i>, ragwort, nettle, meadow buttercup, teasel <i>Dipsacus fullonum</i> (Appendix D: Photograph 18 and 7). An area previously used as an allotment is located along the western boundary. This has been neglected and now comprises of grassland with some areas becoming scrub habitat (Figure 1: Target Note 11; Appendix D: Photograph 21). 	No
Hedgerows – Intact Species Rich	<p>Intact species rich hedgerows are present along the eastern boundary. Species include hawthorn, ash, sycamore, willow, geranium, ragwort, oak, herb robert, field maple, elder <i>Sambucus nigra</i>, blackthorn, hazel, common periwinkle <i>Vinca minor</i>, bramble, horsetail <i>Equisetum</i> sp., bush vetch, common ivy, holly, dogwood <i>Cornus sanguinea</i> (Appendix D: Photograph 12).</p>	Yes
Hedgerows – Intact Species Poor	<p>Intact species poor hedgerows are located along the boundaries of the Site and around the internal landscaped areas. Most comprise exclusively of hornbeam with occasional beech, field maple, hawthorn and ash (Appendix B: Photograph 5).</p>	Yes
Hedgerow with Trees – Native Species Rich	<p>A species-rich hedgerow with trees runs adjacent to the sports pitch and Public Right of Way in the south of the Site. Species include hazel, field maple, blackthorn, sycamore, greater willowherb <i>Epilobium hirsutum</i>, hornbeam and ash.</p>	Yes
Introduced Shrub	<p>Ornamental planting including native and ornamental non-native species. Species include ash, field maple, willow, hornbeam, hazel, lady's mantle <i>Alchemilla mollis</i>, willowherb sp., silver birch, cherry sp., hawthorn and</p>	No

Habitat	Description	Section 7 Habitat
	ornamental non-native species (Figure 1: Target Note 3, 5, 9 and 10; Appendix D: Photograph 3, 6, 11). Ornamental planters are present along some footpaths (Figure 1: Target Note 7).	
Bare Ground	Areas of bare ground located in the east of the Site comprise: <ul style="list-style-type: none"> A recently cleared area north of Building 1 and Building 2. A pile of garden waste is present (Figure 1: Target Note 1; Appendix D: Photograph 2). A recently cleared area around Building 3 with ruderal species emerging including willowherb and scattered mature trees including silver birch, apple species <i>Malus sp.</i>, field maple, sycamore, cherry species and ash (Appendix D: Photograph 1). 	No
Amenity Grassland	Areas of amenity grassland located across the Site including playing fields, sports pitches, grass verges and amenity areas around buildings. Species include perennial rye grass <i>Lolium perenne</i> , daisy, black medic, bristly ox tongue <i>Helminthotheca echioides</i> , dandelion, white clover <i>Trifolium repens</i> , dock species.	No
Hardstanding	Areas of hardstanding include sports courts, parking, landscaped areas and walkways. Hard standing has no ecological value.	No
Buildings	School buildings are located in the centre of the Site, these are described fully in Table 4.5.	No

4.2.2 Protected or Priority Species

The potential for Protected and Priority Species in habitats on Site is discussed in Table 4.3.

A plan of the Site showing the location and distribution of features with potential for Protected or Priority Species is shown in Figure 1. Target notes of Protected Species evidence or features that have potential to support Protected Species are shown in Figure 1 and Appendix E.

Table 4.3: Protected and Priority Species Potential

Species/ Species Group	Associated habitat	Description	Section 7 Species
Invertebrates	All vegetated habitats	The range of habitats on Site are suitable to support a range of terrestrial invertebrate species. During the Phase 1 Habitat survey large white butterfly <i>Pieris brassicae</i> , honeybee <i>Apis mellifera</i> , red-tailed bumblebee <i>Bombus lapidaries</i> and white-tailed bumblebee <i>Bombus lucorum</i> were recorded on Site. Section 7 Species were returned from the LERC within 2 km of the Site.	Yes
Amphibians	Semi-improved neutral grassland, poor semi-improved grassland, scrub,	There is a pond mapped on OS mapping located partially within the Site. At the time of survey this was dry and filled in with scrub and therefore unlikely to hold water at any time. Therefore, it is unsuitable to support breeding amphibians. There is one pond located within 500 m of the Site with connectivity to the Site (360 m north). All other ponds within 500 m are isolated from the Site by the River Thaw and A48 road. The Site includes habitats suitable to support amphibians during the terrestrial stage of their life cycle.	No

Species/ Species Group	Associated habitat	Description	Section 7 Species
	amenity grassland (edges only)	<p>This includes woodland and scrub along the north and north west boundary.</p> <p>No records of great crested newt were returned during the desk study. Great crested newt is unlikely present at the Site.</p> <p>The Site has potential to support common amphibians only.</p>	
Reptiles	Semi-improved neutral grassland, poor semi-improved grassland, scrub, amenity grassland (edges only)	<p>Semi-improved grassland, poor semi-improved grassland, scrub edge and the edge of amenity grassland adjacent to scrub along the western boundary is suitable to support reptiles. A grass mound along the western boundary provides suitable basking habitat for reptiles (Figure 1: Target Note 12). The western and northern boundaries are connected to areas of grassland and scrub outside of the Site boundary which provide suitable habitat for reptiles. Although suitable habitat for reptiles is present along the eastern boundary, connectivity with the surrounding landscape and other suitable areas of habitat within the Site is limited and therefore these areas are unlikely to support reptiles.</p> <p>During the desk study records of slow worm, common lizard, grass snake and adder were recorded within 2 km. Common lizard, grass snake and adder records have connectivity to the Site. There are historic (2008) records of common lizard and slow worm within the Site boundary along the western boundary.</p>	Yes
Breeding Birds	Semi-natural broadleaved woodland, plantation woodland, dense scrub, hedgerows, rows of trees, scattered trees	<p>Woodland, scrub, hedgerows and rows of trees are suitable to support a range of passerine species. During the survey green woodpecker <i>Picus viridis</i>, house sparrow <i>Passer domesticus</i>, blackbird <i>Turdus merula</i>, robin <i>Erithacus rubecula</i>, wren <i>Troglodytes troglodytes</i>, greenfinch <i>Carduelis chloris</i>, wood pigeon <i>Columba palumbus</i>, jackdaw <i>Coloeus monedula</i>, goldfinch <i>Carduelis carduelis</i>, chiffchaff <i>Phylloscopus collybita</i>, pied wagtail <i>Motacilla alba</i>, great tit <i>Parus major</i>, dunnock and song thrush were recorded on or over flying the Site. Approximately 20 bird boxes are present on trees along the western boundary. These are in variable condition, but most provide suitable features for hole nesting passerines.</p> <p>There was no evidence of birds nesting on buildings, the potential of buildings for nesting birds is low as all buildings are modern with limited suitable features.</p> <p>Grassland areas including amenity grassland offer foraging opportunities for breeding birds including pied wagtail which were noted foraging on the playing field but are not suitable for breeding.</p> <p>There is no habitat suitable for breeding Annex 1 or Schedule 1 birds.</p>	No
Bats	Semi-natural broadleaved woodland, plantation woodland, hedgerows, rows of trees,	<p>The range of habitats across the Site provide opportunities for foraging and commuting. Habitats have been assessed as having Moderate suitability for foraging and commuting. Rows of trees, woodland and hedgerows provide connectivity across the Site and with the surrounding landscape.</p>	Yes

Species/ Species Group	Associated habitat	Description	Section 7 Species
	scattered trees, semi-improved neutral grassland, poor semi-improved grassland, scattered scrub, dense scrub.	<p>Moderate foraging and commuting habitat is restricted to the boundaries of the Site. Amenity grassland and ornamental planting in the centre of the Site is of Low value to foraging and commuting bats.</p> <p>The LERC returned records of bats including activity and roosting records within 2 km of the Site. Closest roost and foraging records are located 0.3 km south of the Site boundary.</p> <p>Suitability for the Site to support roosting bats is discussed in Table 4.5.</p>	
Dormouse	Broadleaved semi-natural woodland, dense scrub, species rich hedgerows.	<p>Broadleaved semi-natural woodland and scrub in the north of the Site is suitable to support dormouse. The woodland has the structure and diversity to provide dormouse with foraging, nesting and commuting habitat. The Site is connected to the surrounding landscape by hedgerows which link to woodland blocks in the wider landscape.</p> <p>There were no records of dormouse within 2 km of the Site.</p>	Yes – unlikely on Site
Badger	Broadleaved semi-natural woodland, plantation woodland, scrub, hedgerows, semi-improved neutral grassland, poor semi-improved grassland, amenity grassland.	<p>Scrub, woodland, poor semi-improved grassland and semi-improved grassland along the boundaries of the Site are suitable to support foraging and commuting badgers. Woodland in the north of the provides suitable habitat to support setts, however there are several paths and some litter in the woodland suggesting it is used by students and subject to regular disturbance, therefore unlikely to be used by badgers.</p> <p>The Site is connected to habitats suitable to support badgers to the north and west including suitable habitat to support setts. Records of badger were returned from the LERC 1.9 km from the Site.</p>	Yes
Hedgehog	Broadleaved semi-natural woodland, plantation woodland, scrub, hedgerows, semi-improved neutral grassland, poor semi-improved grassland, amenity grassland.	<p>Scrub, woodland, hedgerows, poor semi-improved grassland and semi-improved neutral grassland along the boundaries of the Site are suitable to support foraging and commuting hedgehog. Woodland, scrub and mature species rich hedgerows provide habitat for sheltering hedgehog. The Site is connected to habitats suitable to support hedgehog to the north and west. Records of hedgehog were returned from the LERC 0.7 km from the Site.</p>	Yes

4.2.3 Invasive Non-Native Species Subject to Legal Controls

The following INNS plant species, identified on Site, are listed on Schedule 9 of the Wildlife and Countryside Act 1981 making it an offence to cause the spread of these species in the wild. The location of INNS is shown on Figure 1.

Table 4.4 Invasive Non Native Species Subject to Legal Controls

Invasive Species Point	Species	Description
1	Wall cotoneaster <i>Cotoneaster horizontalis</i>	Scattered along eastern boundary (Appendix D: Photograph 30).
2	Montbretia <i>Crocasmia x crocosmiiflora</i>	A 2 m strip of scattered plants along fence line (Appendix D: Photograph 29).
3	Wall cotoneaster	1 m x 10 m scattered strip. Within ornamental planting (Appendix D: Photograph 11).

4.2.4 Bat Roost Assessment

Features suitable for supporting roosting bats were assessed during the Site visit and are listed in Table 4.5. The locations of suitable roost features are shown on Figure 1.

Table 4.5 Features Assessed as Having Suitability to Support Roosting Bats

Feature	Description	Bat Roost Suitability Category
Building 1	Concrete utility building. No suitable bat roost features.	Negligible
Building 2	Metal utility building. No suitable bat roost features.	Negligible
Building 3	Modern one storey building. Apex metal roof and wood effect cladding (good condition with no rotten wood). No suitable bat roost features.	Negligible
Building 4	Concrete storage unit with flat metal roof. No suitable bat roost features.	Negligible
Building 5	Block E – Concrete, metal and glass building. Flat metal roof. One to two storeys. Modern building in good condition. Feature noted above the entrance where there is a gap (5x3 cm in the cladding). There is external lighting located on both sides of the feature making it unsuitable to support roosting bats. Cobwebs were present indicating it is not used by bats.	Negligible
Building 6	Utilities building. Brick building with flat metal roof. No suitable bat roost features.	Negligible
Building 7	Concrete garage with pitched metal roof. No suitable bat roost features.	Negligible
Building 8	Wooden porta cabin with flat felt roof. No suitable bat roost features.	Negligible
Building 9	Block C – two storey brick and metal building with metal roof. There is an ungrated louvered door giving access to a plant room. There is lighting directly above the door which reduces its suitability to support roosting bats to Negligible.	Negligible
Building 10	Block A – Metal and glass modern building. Three story with flat metal roof. No suitable bat roost features.	Negligible
Building 11	Metal garage. No suitable bat roost features.	Negligible

Feature	Description	Bat Roost Suitability Category
Building 12	Block B – two storey brick building with pitched metal roof. No suitable bat roost features.	Negligible
Building 13	Block D – one storey brick building with pitched metal roof. No suitable bat roost features.	Negligible
Tree 1	Mature ash with thick ivy cover. No features noted but ivy may be obscuring any possible features. Tree is of size and maturity that it could provide some features.	Low
Tree 2	Mature oak with thick ivy cover. No features noted but ivy may be obscuring any possible features. Tree is of size and maturity that it could provide some features.	Low
Tree 3	Mature oak with bat box.	Moderate
Broadleaved semi-natural woodland	The woodland in the north of the Site has trees of the size and age that may provide suitable features for roosting bats. No features were noted but due to the density of trees and full canopy cover at the time of survey, some features may have not been recorded. The woodland has been assigned Low suitability to support roosting bats based on the potential for these features to be present.	Low

4.3 Zone of Influence

The habitats surrounding the Site were noted when undertaking the Phase 1 Survey and as part of the desk study (see Table 4.1).

There are no watercourse connections from the Site connecting to areas of habitat outside of the Site (pond and wetland area shown on OS mapping is dried out and colonised by scrub). However, surface water from the Site is likely to drain into a watercourse that connects to a number of areas including SINC's and NRW Priority Habitat immediately to the west of the Site. These are typically designated sites, and as such the potential impacts have been addressed under the appropriate sections below.

Elsewhere, for this assessment the Zone of Influence has been defined as all areas within the Site boundary only.

5. Ecological Constraints and Potential Impacts

At present, the final design for the Site is not confirmed. A Site plan is not currently available. Potential impacts are based on a project description provided by the Client.

If the proposed design changes, the assessment of potential impacts will need to be reassessed.

5.1 Development Proposal

The proposed development is for a new primary school building located on an existing area of amenity grassland to the north of the existing multi-use games area (MUGA). There is no requirement for any additional access track. New landscaping is proposed around the building. There will be new external lighting associated with the building. The existing building will be retained.

It is understood that construction is programmed to be completed between September 2020 - August 2021.

5.2 Designated Nature Conservation Sites

5.2.1 International Nature Conservation Sites

There are no internationally designated sites within 2 km. There will be no impact on internationally designated sites.

5.2.2 National Nature Conservation Sites

Cors Aberthin SSSI

Cors Aberthin SSSI is located 0.2 km north west of the Site and connected via hedgerows. There is no watercourse connection to the Site. Due to the distance from the Site, localised nature of the works and absence of pollution pathways there will be no impacts on the SSSI.

Coed Y Mwstwr Woods SSSI

Coed Y Mwstwr Woods SSSI is located 7.6 km north west of the Site. Bats are an interest feature of the SSSI which supports roosting bats within the cave system. The species of bat is not included in the designation. Woodland and hedgerows provide connectivity between the Site and SSSI.

The Core Sustainance Zone (CSZ) refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost. Therefore, the CSZ can be used to indicate: the area surrounding a communal roost (such as a site designated for roosting bats) within which works may impact the commuting and foraging habitat of bats using that roost; and, the area within which it may be necessary to ensure no net reduction on the quality and availability of foraging habitat for the colony (Collins, 2016).

The CSZ for British bats ranges between 1 km and 6 km. The Site is outside of the CSZ of all British bat species, therefore the proposed development will have no impact on the bats at this designated site.

5.2.3 Local Nature Conservation Sites

There are twenty SINCs within 2 km of the Site. Land West of Cowbridge Comprehensive SINC is located adjacent to the western Site boundary. Land West of Cowbridge Comprehensive SINC is designated for supporting purple moor grass and rush pasture. Coed Lawn SINC is located 27 m east of the Site separated from the Site by Aberthin Road. Coed Lawn SINC is designated for supporting semi-natural broadleaved woodland on an ancient woodland site. All other SINCs are over 800 m from the Site boundary.

An area designated as NRW Priority Habitat is located immediately west of the Site.

In the absence of mitigation, there is potential for pollution and run off impacts on Land West of Cowbridge Comprehensive SINC and NRW Priority Habitat to the west. There will be no impact on any other Local Nature

Conservation Sites due to the absence of connectivity to the Site, absence of pollution pathways, the small scale and nature of the development, and the distance between the Site and the designated sites.

5.3 Habitats

The proposed development will be restricted to an area of existing amenity grassland. There will be no clearance of any other habitats. Amenity grassland is of low ecological value, removal of amenity grassland will have negligible ecological impact.

Tracking of vehicles and machinery and storage of materials on natural habitats and within root protection zones of woody habitats has potential to damage or destroy retained natural habitats. If habitats beyond the amenity grassland are required to be removed in order to facilitate the development (access, Site compounds etc.) or tracking of vehicles over retained habitats is anticipated, additional impacts may be identified, an ecologist must be consulted.

5.4 Protected or Notable Species

5.4.1 Invertebrates

Amenity grassland has limited suitability to support invertebrates due to regular intensive management. Impacts on invertebrates due to habitat loss will be negligible.

5.4.2 Amphibians

The amenity grassland (excluding the edges adjacent to scrub and woodland which will not be impacted by the works) is unsuitable to support amphibians. There will be no impact on amphibians.

5.4.3 Reptiles

The amenity grassland (excluding the edges adjacent to scrub and woodland which will not be impacted by the works) is unsuitable to support reptiles. There will be no impact on reptiles.

5.4.4 Breeding Birds

Amenity grassland is unsuitable to support nesting birds. Birds were recorded foraging on the playing fields during the survey. Alternative foraging resources are widely available on Site and in the surrounding landscape. Loss of amenity grassland will have no impact on breeding birds.

5.4.5 Bats

Foraging and Commuting: There will be no loss or severance of commuting corridors. Foraging bats may occasionally forage over amenity grassland but this is not a high value resource. Alternative foraging resources are widely available on Site and in the surrounding landscape. Loss of amenity grassland will have no impact on foraging and commuting bats.

Lighting plans have not yet been provided. If there is light spill onto commuting corridors (the woodland and vegetated boundaries of the Site) during construction or operation there is potential for disturbance of commuting bats and severance of commuting corridors.

Roosting: There are no suitable roost features within or adjacent to the proposed building. There will be no impact on roosting bats.

Lighting plans have not yet been provided. If there is light spill onto tress with suitability to support roosting bats during construction or operation there is potential for disturbance of roosting bats.

5.4.6 Dormouse

No habitat with the suitability to support dormouse is being removed by the proposed development. There will be no impacts on dormouse as a result of the proposed development.

5.4.7 Badger

Badgers may occasionally use amenity grassland for foraging. Habitats of similar or greater value are available within the Site and connected surrounding landscape. Habitat loss will have no impact on badgers.

There is no suitable habitat to create setts within 30 m of the proposed building.

There is potential for foraging and commuting badger to get trapped in excavations if left open overnight.

Lighting plans have not yet been provided. If there is light spill onto commuting corridors (the woodland and vegetated boundaries of the Site) during construction or operation there is potential for disturbance of commuting badgers.

5.4.8 Hedgehog

Hedgehogs may occasionally use amenity grassland for foraging. Habitats of similar or greater value are available within the Site and connected surrounding landscape. Habitat loss will have no impact on hedgehogs.

There is potential for foraging and commuting hedgehogs to get trapped in excavations if left open overnight.

Lighting plans have not yet been provided. If there is light spill onto commuting corridors (the woodland and vegetated boundaries of the Site) during construction or operation there is potential for disturbance of commuting hedgehogs.

5.4.9 Invasive Non-Native Species

There are no works planned within 2 m of montbretia or cotoneaster identified on Site. There is no potential for spread of invasive species during the Proposed Works.

6. Further Surveys and Recommendations for Mitigation

6.1 Further Surveys

Based on the current project description no further surveys are required. Should the design change or the lighting plan is not designed to avoid impacts on nocturnal species (see Section 6.2.3 below) then further surveys may be required. An ecologist must be consulted once the detailed design and lighting plans are issued.

6.2 Recommendations for Mitigation

The mitigation hierarchy has been considered and implemented when designing the new development. The ecological constraints at the Site have been considered at an early stage and much of the mitigation has been included by design. Recommendations for mitigation are discussed in combination with LE04. A summary is provided below.

Mitigation Hierarchy:

1. Avoidance – Alternative site or technology, or timing to eliminate impact;
2. Minimise – Actions during design construction and operation to minimise or eliminate impacts;
3. Compensation – Used as last resort to offset impacts; and,
4. Enhance positive impacts and opportunities.

6.2.1 Pollution Control during Construction

Pollution control measures must be implemented to avoid impacts on adjacent habitats including SINC's and NRW Priority Habitat. Pollution control measures as required Guidance for Pollution Prevention (GPPs) and where these have not been replaced the Environment Agencies Pollution Prevention Guidelines (PPGs) will be implemented in order to avoid and minimise adverse effects of pollution and runoff on designated sites and surrounding environment. This will be implemented via the Site Construction Management Plan (CMP).

As of the 17 December 2015 all Pollution Prevention Guidance Documents published by the UK environment agencies were withdrawn. Although they provide useful advice on the management of construction to avoid, minimise and reduce environmental impacts, they should not be relied upon to provide accurate details of the current legal and regulatory requirements and processes. They are referred to in this document alongside other current guidance and in the context of scheme and site specific mitigation measures.

Measures will be employed to ensure that dust is minimised during the construction works. Measures will be in place in order to deal with pollution incidents efficiently.

In order to avoid potential pollution effects to the sites during construction, all refuelling and servicing of vehicles will be carried out within a designated area with an impermeable base. To prevent spillages, refuelling will be carried out by pumping through a trigger delivery nozzle. Fuel, oil and other potential contaminants will be stored within bunded tanks to 110% of the volume stored and only the minimum quantity required will be stored on site. The designated area will be maintained in a secure and clean manner. An adequate quantity of oil absorbent material will be stored on site and spillages cleared up immediately. All construction equipment will be maintained in good working order and checked regularly for spillages/leaks.

Concrete will either be imported from a local batching plant or a concrete batching plant will be established on site. The final choice will depend on the chosen contractor, the availability of local supply and the time of year. If concrete is to be batched on site, appropriate containment and clean-up measures and procedures will be put in place that are in accordance with industry standards. Particular care will be taken when pouring concrete at foundations, following specific method statements to ensure there is no spillage risk or contamination of soils and vegetation.

6.2.2 Habitats

Retained habitats should be protected during construction to prevent damage. Retained habitats adjacent to the proposed development should be fenced off to avoid and reduce the impacts of direct damage or trampling and root compaction during construction by vehicles and people. Tracking of vehicles over retained habitats should be avoided. Where possible, vehicles and storage areas should be kept on existing hardstanding.

If works are required within root protection zones, works will employ special measures to avoid damage, for example, through the use of bog mats to limit the impacts of soil compaction.

6.2.3 Bats and Lighting

External lighting will be required around the new building. A lighting plan is not currently available. Lighting must be designed to avoid light spill onto retained and newly created habitat, features with the potential to support roosting bats and the vegetated boundaries of the Site. The lighting plan must be reviewed by an ecologist.

There is no legislation requiring an area or road to be lit (ILP, 2018). There are British Standards that relate to various components of lighting and there are also guidelines that relate to crime prevention, prevention of vehicular accidents and amenity use (ILP, 2018). There is legislation requiring bats are protected against disturbance, which includes light disturbance.

The following recommendations in line with best practice guidance should be incorporated into any new lighting scheme at the Site:

- Light spill onto any new bat roost boxes must be avoided;
- In the first instance, external lighting must be designed to avoid light spill onto boundary features including rows of trees, hedgerows and woodland edges; and,
- If light spill onto Site boundaries cannot be avoided, this should be limited to levels of 3 Lux or less.

Suggestions for mitigating external lighting and achieving the lighting recommendations above are outlined in the ILP Bats and Lighting Guidance Note (ILP, 2018) and best practice guidance (BCT, 2009, BCT 2014 and Gunnell et al., 2012). These include:

- Only light areas which need to be lit, and use the minimal level of lighting required to comply with guidance such as Institute of Lighting Engineers Guidance Notes for the Reduction of Obtrusive Light (2005);
- Avoid aesthetic lighting which has no other function, and up lighting of trees and buildings;
- Use the lowest level of illumination required for purpose;
- Where lighting is proposed, use lighting modelling programs to indicate where the light spill will occur;
- LED luminaires should be used where possible due to their sharp cut off, low intensity, good colour rendition and dimming capability;
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component; Avoid neutral white, cool white and blue spectrums of light;
- All luminaires should lack or have negligible UV elements. Avoid white and blue spectrums of light;
- Eliminate bare lamps and any upward pointing light;
- Luminaires should be mounted on the horizontal, i.e. no upward tilt. The spread of light should be at or near the horizontal. Flat cut off lanterns are best. Only luminaires with an upward light ratio of 0% and with good optical control should be used – See ILP Guidance for the Reduction of Obtrusive Light;
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012);
- Where lighting columns are in proximity (adjacent to) the wildlife corridors/boundary features and where light spill onto these features is predicted by the lighting models, the luminaries must be moved or fitted with back light control systems to reduce light spill onto the adjacent wildlife corridors/boundary features. This additional feature minimises light spill from the back of the luminaire to avoid intrusive light spill behind the column;

- Any external security lighting should be set to motion sensors and short (1 min) timers;
- Limit the times that the lights are on, to provide some dark periods; Limit the times that the lights are on to provide some dark periods; and/or dimming of lights during certain periods; the proposed new lighting could be dimmed or turned by 75% from 22:00 until 06:00 daily;
- Avoid using reflective surfaces under lights; and,
- Do not use a lamp greater than 150W for security lighting.

6.2.4 Badger and Hedgehog

Lighting recommendations for bats will benefit other nocturnal species including badger and hedgehog.

All excavations must be covered overnight or a ramp provided to allow animals to escape.

Any new and existing boundary fences should include small openings at ground level, to allow hedgehogs to pass through the Site and to maintain local connectivity.

6.2.5 Invasive Non-Native Species

Works are not proposed within 2 m of areas of montbretia or cotoneaster, mitigation for INNS is not required based on the current proposal.

Based on the current Project Description no further surveys are required. Should the design change or the lighting plan is not designed to avoid impacts on nocturnal species then further surveys may be required. An ecologist must be consulted once the detailed design and lighting plans are issued.

6.3 Recommendations for Enhancements

The Environment (Wales) Act 2016, requires that developments enhance biodiversity, as well as just mitigating impacts.

Recommendations have been made to make the most of proposed landscape planting on Site to benefit biodiversity. A landscape plan has not been provided at this stage.

The following enhancements should be considered and included in the landscape design:

- All landscaping should include native species of benefit to wildlife.
- An area designated for seating could incorporate a range of native scented plants to stimulate and soothe the senses whilst also providing habitat for wildlife, most notably pollinating invertebrates such as butterflies, bees and hoverflies using plants such as lavender, honeysuckle, rosemary, mint, thyme and wild garlic. The emphasis should be on plant species native to the UK to be beneficial for pollinating insects.
- Create/install invertebrate habitats including bee boxes, bee banks, and log piles.
- Reinstate the existing pond along the western boundary by removing scrub vegetation and digging out silt. This should be allowed to colonise naturally and planted with a diverse native aquatic species mix around the margins.
- Re-instate the existing allotment which can used by pupils for educational and recreational purposes.
- At least three bird boxes should be installed within the building design. Boxes suitable for swifts and house sparrows would be suitable for use on buildings as habitat suitable for these species is often lost in modern building design.
- Provision of at least two cavity wall bat boxes in the new building. Boxes should be included in the building design and not be subject to light spill.
- Design landscaping to create green corridors between bat box provisions and the existing green corridors along the Site boundaries. These should be planted with native species of benefit to wildlife.

- Create a hedgehog shelter using log piles or purpose-built structure; these should be connected to existing or newly created wildlife corridors.
- Lighting should be designed to avoid light spill on to new green corridors.

6.3.1 Ecosystem Resilience (Section 2 Environment (Wales) Act 2016)

Small, isolated populations of species are far more vulnerable to extinction than populations that can disperse and interbreed with other populations. The effects of climate change are likely to increase local extinctions among small isolated populations. It is important to maintain and enhance ecological networks of semi-natural habitats that have a high degree of connectivity.

The landscaping at the Site should be designed to promote local landscape connectivity and create a mosaic of habitats on Site.

Green corridors should be retained and enhanced where possible and external light spill onto these corridors should be avoided.

Any planting should be of native species suitable to the local context and in relation to climate change; they are likely to remain to be locally suitable within the next 25 to 50 years.

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Figure 1: Phase 1 Habitat Map

Project Title:

**VOG COWBRIDGE
COMPREHENSIVE**

Client:

**VALE OF GLAMORGAN
COUNCIL**

LEGEND

- Target note
- Broadleaved tree
- Row of Trees - Broadleaved
- ||||| Fence
- W W W W Hedge with trees - native species-rich
- V V V V Intact hedge - native species-rich
- Intact hedge - species-poor
- X X X Scrub - scattered
- Wall
- Site Boundary
- Broadleaved Woodland - Semi Natural
- ▨ Broadleaved Woodland - Plantation
- ▩ Scrub - Dense/Continuous
- ▧ Scrub - Scattered
- SI Neutral Grassland - Semi-Improved
- ST Poor Semi-Improved Grassland
- A Cultivated/Disturbed Land - Amenity Grassland
- ▨ Introduced Shrub
- Buildings
- Bare Ground
- Hardstanding
- Bat roost suitability - built structures**
- Negligible Potential
- Bat roost suitability - trees**
- ▲ Moderate Potential
- ▲ Low Potential
- Invasive non-native species**
- Cotoneaster
- Montbretia

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AECOM Internal Project No:

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Drawing Title:

**PHASE 1 HABITAT
SURVEY**

Scale at A3: 1:1,800

Drawing No: **Rev:**

FIGURE 1 003

Drawn: Chk'd: App'd: Date:

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Appendix A : Target Notes for Phase 1 Habitat Map

Target Note Description

1	Roundabout of amenity grassland and ornamental planting.
2	Garden waste but no reptiles potential due to surrounding bare ground.
3	Red-hot-poker species (<i>Kniphofia</i>).
4	Quad area, with some scattered planted trees.
5	Sitting area with planting.
6	Garden waste pile and bricks. Could be suitable for hedgehog.
7	Six planters on path.
8	Three cherry trees.
9	Introduced ornamental species bordering amenity grassland.
10	Island composed of amenity grassland and introduced shrubs.
11	Allotment with wooden fence surrounding it, currently unmanaged.
12	Mound of soil with dock and grass.
13	Scrub changes to nettles, bramble and hogweed.
14	Bat potential buildings adjacent but outside of Site.
15	Pond (on OS mapping) dry and infilled with scrub).

Appendix B : Wildlife Legislation

Legislation – Habitats

A variety of sites are designated in the UK, under Conventions, Directives and Regulations for their nature conservation importance and interest. The general aim of these designations is to conserve and protect ecological resources, as well as raising awareness and understanding. Other non-statutory sites are afforded some protection through local plans. The following outlines the most common statutory and non-statutory designations:

Designation	Brief Description
Special Areas of Conservation (SAC)	SACs are sites selected to conserve the natural habitat types and species of wild flora and fauna as stated in the Conservation of Habitats and Species Regulations. They are the best areas to represent the range and variety of habitats and species within the European Union (EU).
Special Protection Area (SPA)	SPAs are strictly protected sites for the most important habitats for rare and migratory birds within the EU.
Ramsar Sites	Ramsar Sites are wetlands of international importance. Ramsar Sites are protected, through the planning system, under the Wildlife and Countryside Act 1981 (as amended), and the Countryside and Rights of Way Act 2000 through their notification as SSSIs and through other regulatory systems addressing water, soil and air quality.
National Nature Reserve (NNR)	NNRs are nationally important areas of wildlife habitat and geological formations in Britain. NNRs are designated and protected under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). They receive additional protection under the Countryside and Rights of Way Act 2000. They are managed for the benefit of nature conservation.
Site of Special Scientific Interest (SSSI)	A SSSI is a site of at least national importance for nature conservation designated under the Wildlife and Countryside Act 1981 (as amended) due to its special interest in terms of flora, fauna or geological or physiographical features. Protection afforded to SSSI's was strengthened by the Countryside and Rights of Way Act 2000. It should be noted that under the Countryside and Rights of Way Act 2000 owners of SSSIs must give Natural Resources Wales (NRW) written notice before they begin any of the operations listed in the notification as likely to damage the special interest features, or if they allow others to carry out these activities. None of the listed operations can be carried out without NRW's consent.
County Wildlife Site (Local site)	A County Wildlife Site is a non-statutory site designated by a local authority as being of local nature conservation value.
Ancient Woodland Inventory	Ancient Woodland is a term applied to woodlands which have existed from at least Medieval times to the present without ever having been cleared for uses other than wood or timber production. A convenient date used to separate ancient and secondary woodland is about the year 1600. In special circumstances semi-natural woods of post-1600 but pre-1900 origin are also included.

Designation

Brief Description

Wildlife Trust Reserve

These non-statutory sites are managed by the Wildlife Trusts with the purpose of conserving wildlife.

Legislation – Protected Species

In addition to habitats, a number of species have been afforded protection through international/European and national law. Other species are considered to contribute to our 'quality of life'. Although these species do not benefit from legal protection, they can be material considerations in the planning process. The table below outlines the key forms of protection afforded to species. The Countryside and Rights of Way Act, the Wildlife and Countryside Act 1981 (as amended), The Protection of Badgers Act 1992 and the Conservation of Habitats and Species Regulations 2017 (as amended) are the main legislative framework for protection of wild animals in the UK. Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) covers birds, Schedule 5 covers other animals and Schedule 8 covers plants.

Species including bats, otters and great crested newts are listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. Badgers are protected under their own Act: The Protection of Badgers Act 1992. Activities affecting protected species must usually be conducted under licence obtained from the appropriate body (in Wales, this is Natural Resources Wales).

Developers must be able to show that all reasonable measures have been taken to ensure that protected species are not subject to disturbance. The habitats which regularly support the Conservation of Habitats and Species Regulations 2017 Schedule 2 species, the Wildlife and Countryside Act 1981 (as amended) Schedule 1 species and some Wildlife and Countryside Act 1981 (as amended) Schedule 5 species are also protected from disturbance and destruction. Again, all reasonable precautions should be taken to ensure that this does not happen. The Countryside and Rights of Way Act 2000 has strengthened enforcement powers and introduced a new offence of "reckless disturbance" that applies to both protected sites and species. The table below provides a summary of the relevant legislation with regards to protected and priority species.

Designation

Brief Description

Conservation of Habitats and Species Regulations, 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 are intended to remain in place for some time. This is due to the Government ceasing to have the power of consolidating regulations derived from EU law after the date of exit from the European Union.

The Regulations are designed to transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. Additionally, they transpose elements of the EU Wild Birds Directive in England and Wales.

The Conservation of Habitats and Species Regulations 2017 extend to England and Wales, including the adjacent territorial sea (12 nautical miles from the mean low-water mark of a coastal state), to a limited extent in Scotland in respect of reserved matters and Northern Ireland in respect of excepted matters.

The Conservation of Habitats and Species Regulations 2017 protects habitat sites supporting vulnerable and protected species, as listed within the Directive. The need for an assessment of impacts on Natura 2000 sites (the collective name for European designated sites, including SPAs and SACs); and provides a framework for the protection, management and control of all species of naturally occurring wild birds in the European territory of EU Member States.

Wildlife and Countryside Act (1981) (as amended)

The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and (partially) the Birds Directive and the Habitats

Designation

Brief Description

Directive are implemented in the UK. The Countryside and Rights of Way Act 2000 has strengthened this legal protection (see below).

A small number of plant species are listed under Schedule 9 of the Wildlife and Countryside Act 1981, as amended, which includes species such as Japanese knotweed (*Reynoutria japonica*), Himalayan balsam (*Impatiens glandulifera*), montbretia (*Crocoshia x crocosmiiflora*), giant hogweed (*Heracleum mantegazzianum*) and some cotoneaster species (*Cotoneaster* sp.). It is illegal to plant or to cause these plants to grow in the wild, and legal disposal methods for vegetation and soil subject to disturbance or clearance from a site must be used.

Convention on Biological Diversity and the Countryside and Rights of Way Act 2000

The Countryside and Rights of Way Act 2000 provides a statutory framework for biodiversity conservation. The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

Schedule 9 of the Act amends SSSI provisions of the Wildlife and Countryside Act 1981, including provisions to change SSSIs and providing increased powers for their protection and management. The provisions extend powers for entering into management agreements; place a duty on public bodies to further the conservation and enhancement of SSSIs; increases penalties on conviction where the provisions are breached; and introduce a new offence whereby third parties can be convicted for damaging SSSIs.

Schedule 12 of the Act amends the species provisions of the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable' and create a new offence of reckless disturbance.

The UK Biodiversity Action Plan (BAP) was published in 1994, and was the UK Government's response to the Convention on Biological Diversity (CBD), which the UK signed up to in 1992. It provides the framework for fulfilling the UK's responsibilities towards the Convention on Biological Diversity. Conservation of biodiversity (the variety of life on earth) is an essential element of sustainable development.

Environment (Wales) Act 2016

The Environment (Wales) Act puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. Part 1 relates to the sustainable management of natural resources. This ensures that the way in which the use of and the impacts on natural resources do not result in long term decline. The aim is to sustainably manage natural resources in a way and rate that meets the needs of present and current generations without compromising the needs of future generations.

The Act also contains at section 7, a duty for the Welsh Ministers prepare and publish a list of the living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This section replaces the duty in section 42 of the NERC Act 2006.

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 makes it an offence to wilfully take, kill, injure or ill-treat a badger, possess a dead badger or any part of a badger. Sett interference includes damaging or destroying a sett, obstructing access to a sett, and disturbing a badger whilst it is occupying a sett. The Act defines a badger sett

Designation

Brief Description

as 'any structure or place, which displays signs indicating the current use by a badger' and Natural England takes this definition to include seasonally used setts.

Work that may disturb badgers or their setts is illegal without a development licence from the relevant statutory body (in this case Natural Resources Wales).

The Hedgerow Regulations 1997

The Hedgerow Regulations (1997) make provision for the protection of important hedgerows in England and Wales. The regulations affect hedgerows which are 20m or more in length, or connected at both ends to another hedgerow of any length.

They relate to hedgerows which are on, or adjoining land used for the following purposes: agriculture or forestry; the breeding or keeping of horses, ponies or donkeys; common land; village greens; and SSSIs (They do not include hedges that are attached to, or marking the boundaries of a private house.

It is an offence to intentionally or recklessly remove or cause or permit another person to remove a hedgerow or intentionally or recklessly remove, or cause or permit another person to remove, a hedgerow which is the subject of a hedgerow retention notice.

Appendix C : Local Planning Policy

Local Planning Policy

The Vale of Glamorgan Local Development Plan (LDP) 2011-2026 provides the local planning policy framework for the Vale of Glamorgan and was adopted by the Council on 28th June 2017.

The Plan sets out the vision, objectives, strategy and policies for managing development in the Vale of Glamorgan, and contains a number of local planning policies and makes provision for the use of land for the purposes of housing, employment, retailing, recreation, transport, tourism, minerals, waste, and community uses. It also seeks to identify the infrastructure that will be required to meet the growth anticipated in the Vale of Glamorgan up to 2026, and provides a monitoring framework for assessing the effectiveness of the Plan.

Policies referring to nature conservation are outlined below. Full details can be found in Vale of Glamorgan Local Development Plan 2011-2026, Local Development Plan-Written Statement June 2017.

Policy	Details
Policy SP10 – Built and Natural Environment	<p>Development proposals must preserve and where appropriate enhance the rich and diverse built and natural environment and heritage of the Vale of Glamorgan including:</p> <ol style="list-style-type: none"> 1. The architectural and / or historic qualities of buildings or Forest Schools nature area s, including locally listed buildings; 2. Historic landscapes, parks and gardens; 3. Special landscape areas; 4. The Glamorgan Heritage Coast; 5. Sites designated for their local, national and European nature conservation importance; and 6. Important archaeological and geological features. <p>The Vale of Glamorgan’s natural and built environmental qualities significantly contribute to its identity and also provide valuable local recreation and tourism opportunities. These assets include areas recognised as being of European, national and local importance, including the Vale of Glamorgan’s coastline which includes the Glamorgan Heritage Coast designation and the Severn Estuary Special Protection Area.</p> <p>Policy SP10 emphasises the need to protect the Vale of Glamorgan’s natural and built environmental assets and reinforces that sensitive design and choice of location of new development can have a positive effect on the Vale of Glamorgan’s built and natural heritage. Similarly, new development will be required to minimise its impact on natural systems, landscapes, species and habitats and, where appropriate, provide opportunities for the creation of new habitats or the sensitive enhancement of existing habitats.</p> <p>The LDP provides a policy framework that seeks to preserve and enhance the Vale of Glamorgan’s important historic built environment particularly in relation to the numerous listed buildings (both statutory and local), Forest Schools nature area s, scheduled monuments and historic landscapes, parks and gardens that exist. It should be noted that statutory listed buildings are also covered under Policy MD8 and are subject to separate legislation. In addition, it recognises the importance of preserving and enhancing the natural environment, principally the countryside and the coast, which have significant landscape and nature conservation value.</p>
Policy MG17 – Special Landscape Areas	<p>The following areas are designated as special landscape areas:</p> <ol style="list-style-type: none"> 1. Castle Upon Alun; 2. Upper & Lower Thaw Valley; 3. Ely Valley & ridge slopes;

Policy

Details

4. Nant Llancarfan;
5. Dyffryn basin & ridge slopes;
6. Cwrt-yr-Ala basin.

Within the special landscape areas identified above, development proposals will be permitted where it is demonstrated they would cause no unacceptable harm to the important landscape character of the area.

Special Landscape Areas (SLA) have been designated to protect areas of the Vale of Glamorgan that are considered to be important for their geological, natural, visual, historic or cultural significance. These areas have been identified through the utilisation of a methodology devised by the former

Countryside Council for Wales (now Natural Resources Wales) in collaboration with a consortium of local authorities in South East Wales, which uses LANDMAP data. The process allows information about the landscape to be gathered, organised and evaluated into a nationally consistent, quality assured data set.

Details of the identified SLAs are contained within the Vale of Glamorgan Designation of Special Landscape Areas Background Paper (2013).

The designation of SLAs is not intended to prevent development but to ensure that where development is acceptable careful consideration is given to the design elements of the proposal such as the siting, orientation, layout and landscaping, to ensure that the special qualities and characteristics for which the SLAs have been designated are protected.

Development proposals within SLAs will be required to fully consider the impact of the proposal on the SLA through the submission of a Landscape and Visual Impact Assessment (LVIA). A LVIA will be required for any development that is likely to have a significant impact upon landscape character, or have a significant visual effect within the wider landscape (by virtue of its size or prominence or degree of impact on the locality) and will be prepared in accordance with the latest Landscape Institute and the Institute of Environmental Management and Assessment guidelines. Where applicable, this should form a key element of a planning application's design and access statement and should demonstrate that the proposal has been designed to remove or reduce any unacceptable impacts on the qualities for which the SLA has been designated. Any cumulative impacts that the proposal may have in relation to existing or planned proposals in the locality should also be considered. This is particularly the case for wind turbines or large structures and large-scale proposals such as solar farms. The level of detail required in each landscape impact assessment should be commensurate with the scale of the proposal.

Policy MG18 – Green Wedges

Green wedges have been identified to prevent the coalescence of settlements and to retain the openness of land at the following locations:

1. Between Dinas Powys, Penarth and Llandough;
2. North West of Sully;
3. North of Wenvoe;
4. South of Bridgend;
5. Between Barry and Rhoose;
6. South Penarth to Sully; and
7. Between Rhoose and Aberthaw.

Within these areas development which prejudices the open nature of the land will not be permitted.

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Land on the urban fringe particularly around the key, service and primary settlements within the South East Zone is vulnerable to speculative development that can blur the boundaries between settlement edges and the open countryside. Unchecked this development would result in the incremental loss of open land and ultimately lead to the coalescence of settlements with a resultant detrimental impact upon agriculture, the landscape and the amenity value of land.

While other policies of the LDP seek to prevent inappropriate development within the open countryside it is considered that the areas defined by the green wedges are more vulnerable and susceptible to change and require additional protection. Therefore, within the areas defined by the green wedges there will be a presumption against inappropriate development²⁰ which would contribute to urban coalescence, prejudice the open nature of the land, or have an adverse impact upon the setting of an urban area. In applying this protection, however, it is recognised that individual or small groups of dwellings exist within the designations and that activities such as agriculture, forestry and recreation, occur. Consequently, development associated with existing uses will be limited to minor structures which are strictly ancillary to existing uses. Details of each of the designations are contained within the Green Wedge Background Paper (2013).

Policy MG19 – Site and Species of European Importance

Development proposals likely to have a significant effect on a European site, when considered alone or in combination with other projects or plans will only be permitted where:

1. The proposal is directly connected with or necessary for the protection, enhancement and positive management of the site for conservation purpose; or
2. The proposal will not adversely affect the integrity of the site;
3. There is no alternative solution;
4. There are reasons of overriding public interest; and
5. Appropriate compensatory measures are secured.

Development proposals likely to have an adverse effect on a European protected species will only be permitted where:

1. There are reasons of overriding public interest;
2. There is no satisfactory alternative; and
3. 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.

Internationally designated sites comprise Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar Sites. The Vale of Glamorgan has 2 international sites: - Dunraven Bay (SAC) and Severn Estuary (SAC, SPA, Ramsar) and is directly adjacent to the Kenfig SAC in the County Borough of Bridgend. The locations of the European sites are shown on the Constraints Map.

Any development proposals that are likely to affect European designated sites or European Protected Species (EPS) will be determined in accordance with national planning policy set out in Planning Policy Wales and Technical Advice Note 5: Nature Conservation and Planning (2009) and relevant case law.

In accordance with the Conservation of Habitats and Species Regulations 2010 (as amended), any development proposals that has the potential for adverse impact on the integrity of a European site will be subject to a Habitats Regulations Assessment.

Prior to implementing any consent that may be granted which may affect species of European importance, developers will need to secure a derogation from Natural Resources Wales under the Conservation of Habitats and Species Regulations 2010 (as amended), the 'Habitats Regulations.

Policy	Details
<p>MG20 – Nationally Protected Sites and Species</p>	<p>Development likely to have an adverse effect either directly or indirectly on the conservation value of a site of special scientific interest will only be permitted where it is demonstrated that:</p> <ol style="list-style-type: none"> 1. There is no suitable alternative to the proposed development; and 2. It can be demonstrated that the benefits from the development clearly outweigh the special interest of the site; and 3. Appropriate compensatory measures are secured; or 4. The proposal contributes to the protection, enhancement or positive management of the site. <p>Development proposals likely to affect protected species will only be permitted where it is demonstrated that:</p> <ol style="list-style-type: none"> 1. The population range and distribution of the species will not be adversely impacted; 2. There is no suitable alternative to the proposed development; 3. The benefits of the development clearly outweigh the adverse impacts on the protected species; and 4. Appropriate avoidance, mitigation and compensation measures are provided. <p>For the purposes of the policy, nationally designated sites include Sites of Special Scientific Interest (SSSI). Within the Vale of Glamorgan there are 28 SSSI and these are detailed in Appendix 2 and their locations are shown on the Constraints Map. Protected species are those detailed within the Wildlife and Countryside Act 1981 (as amended) and species specific legislation e.g. the Protection of Badgers Act 1992.</p> <p>The presence of a protected species is a material consideration in the determination of planning applications. When assessing any development proposal which if carried out would be likely to result in harm to a protected species or its habitat, the Council will be guided by advice received from Natural Resources Wales.</p> <p>There will always be a presumption against development which is likely to harm a protected site or species. However, there may also be instances when the importance of a development proposal will outweigh the conservation value, either temporarily or permanently to a SSSI / protected species and in such instances, the objective will always be to ensure that the nature conservation value of the site or protected species is preserved and where possible enhanced.</p> <p>Where development is permitted, appropriate conditions or agreed planning obligations will be used to secure adequate compensation or mitigation measures</p>
<p>Policy MG21 – Sites of Importance for Nature Conservation, Regionally Important Geological and Geomorphological Sites and Priority Habitats and Species</p>	<p>Development proposals likely to have an adverse impact on sites of importance for nature conservation or priority habitats and species will only be permitted where it can be demonstrated that:</p> <ol style="list-style-type: none"> 1. The need for the development clearly outweighs the nature conservation value of the site; 2. Adverse impacts on nature conservation and geological features can be avoided; 3. Appropriate and proportionate mitigation and compensation measures can be provided; and 4. The development conserves and where possible enhances biodiversity interests. <p>Sites of Importance for Nature Conservation (SINC) are identified to protect areas of high wildlife value at a local level. Regionally Important Geological and Geomorphological Sites are locally designated sites of local, national and regional importance for geodiversity (geology and geomorphology).</p>

Policy

Details

Priority Habitats and Species for Conservation are identified in the Environment (Wales) Act 2016 Section 7. Species or habitats are important wildlife features, are rare or declining and are not protected by primary legislation.

Development which is likely to have an adverse impact on SINC, RIGS or Priority Habitats and Species will be required to demonstrate that every effort has been made to avoid and mitigate any adverse impacts and that the need for the development outweighs the nature conservation or geological value. Where on site mitigation is not possible or sufficient to prevent any adverse impact then off-site compensation will be required. Off-site compensation will be secured through planning conditions or Section 106 agreements as appropriate.

The Council will produce Supplementary Planning Guidance on 'Biodiversity and Development' to support these policies and provide advice for developers on the Council's approach to biodiversity issues.

Appendix D : Photographs



Photograph 1: Row of trees and hedgerow along eastern boundary.



Photograph 2: Area of bare ground and scattered planted trees around Buildings 3 and 4.



Photograph 3: Ornamental planting.



Photograph 4: Area of seating within courtyard in front of Building 12 (Block A).



Photograph 5: Hedgerow and tree planting within landscaped areas.



Photograph 6: Landscaped area with native and ornamental planting.



Photograph 7: Semi-improved grassland along eastern boundary.



Photograph 8: Amenity grassland sports pitch (location of new school building).



Photograph 9: Broadleaved plantation woodland along eastern boundary.



Photograph 10: Semi-improved grassland and row of trees along eastern boundary.



Photograph 11: Landscape planting adjacent to Building 12 (Block A) including cotoneaster (outlined).



Photograph 12: Hedgerow and broadleaved semi-natural woodland adjacent to car park along north and east boundaries.



Photograph 13: Row of trees along eastern boundary.



Photograph 14: Semi-improved grassland and broadleaved semi-natural woodland along eastern boundary.



Photograph 15: Scattered scrub adjacent to hardstanding sports court along southern boundary.



Photograph 16: Example of bird box in row of mature trees along eastern boundary.



Photograph 17: Semi-natural broadleaved woodland along northern boundary.



Photograph 18: Dense scrub and poor semi-improved grassland along eastern boundary.



Photograph 19: Dense scrub and semi-natural broadleaved woodland along eastern boundary.



Photograph 20: Dense scrub and scattered scrub along eastern boundary.



Photograph 21: Poor semi-improved grassland within area allocated as allotment but not maintained.



Photograph 22: Building 5.



Photograph 23: Building 1 and 2.



Photograph 24: Building 5.



Photograph 25: Building 4.



Photograph 26: Building 12 (Block A).



Photograph 27: Building 12 (Block A).



Photograph 28: Building 14 (Block B).



Photograph 28: Building 11 (Block C).



Photograph 29: Montbretia growing along fence.



Photograph 30: Cotoneaster (outlined) within area of ornamental planting.



Photograph 31: Buildings with suitability to support bats outside of the Site boundary.

