

Ecological Impact Assessment



Project: Bishop Hedley Catholic School, Merthyr Tydfil

Instructed by: Wilmott Dixon Construction Ltd

Reported by: Ecological Services Ltd
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1. Introduction

The applicant is seeking planning permission to undertake a range of redevelopment works within the grounds of Bishop Hedley Catholic High School. It is proposed to seek a phased demolition of the school buildings, with the buildings to the north of Gwaunfarren Road being demolished first and a new school building complex created in the grounds. Pupils and staff will then be relocated to the new building in the northern half of the site. Once relocated, new sports pitches and car parking facilities will be created to the south of Gwaunfarren Road.

The site contains habitats including tarmac/hardstanding, buildings, semi-improved grassland, tall ruderal vegetation, woodland, hedgerows, scattered trees, tree line and short ephemeral perennial vegetation. This report will assess the potential of the land within the site boundary to support habitats and species and the implications that any future development proposals could have on them.

In order to undertake a full appraisal of the proposed development and the potential impacts and significance of impacts upon the habitats and species within the development site and adjacent habitats, an Ecological Impact Assessment (EclA) has been undertaken. An EclA helps provide a clear and methodical way to identify, quantify and evaluate the potential significant effects of a proposed plan or project.

Supporting documents and reports that provide information referred to within this report are listed below:

- *'Bats & Trees Survey Report; Bishop Hedley Catholic School'* V2 dated September 2023 by Ecological Services Ltd
- *'Bat survey: Bishop Hedley Catholic School (Southern Site), Merthyr Tydfil CF47 9AN'* V1 dated May 2023 by Ecological Services Ltd
- *'Preliminary Ecological Assessment & Bat Survey; Bishop Hedley Catholic School'* V3 dated 31st May 2023
- *'Arboricultural Report Including Tree Survey Data & Tree Constraints Plan, Arboricultural Impact Assessment, Tree Protection Plan and Arboricultural Method Statement'* dated 8th February 2023 by ArbTS

1.1 Site Description

Bishop Hedley Catholic High School comprises a number of school buildings with the site dissected by Gwaunfarren Road, splitting the site into a northern half and southern half, linked via an underground walkway.

The northern half of the site has an access road along the western edge from Galon Uchaf Road into the site. The southern half of the site has an access road from the northern boundary of Gwaunfarren Road into the site. Habitats across the proposed development site include tarmac hardstanding, semi-improved grassland, scattered trees, tree line, hedgerows, ornamental planting, tall ruderal vegetation and a small area of woodland.

The proposed development site sits to the north east of the town of Merthyr Tydfil. Allotments are present to the north east and Galon Uchaf Park is present to the north west. Residential properties are present to the east, south and west of the school.

1.2 Surveyor Experience

Aislinn Harris is a full member of Chartered Institute of Ecology and Environmental Management (CIEEM). Aislinn is an ecologist with 13 years experience undertaking a wide range of flora and fauna surveys. All survey work is undertaken following JNCC Phase 1 Survey Guidelines and CIEEM Guidelines for Preliminary Ecological Appraisal (2nd Ed 2017). Aislinn is a NRW licenced bat, Great crested newt and dormouse ecologist with a wide variety of experience undertaking ecological surveys.

Vicky is an experienced ecologist with at least eight years' experience. She has worked in larger consultancies previously completing a wide range of flora and fauna surveys, completed professional training courses and attended informal botanical meetings to gain valuable knowledge. This experience allows Vicky to assess and identify common habitats as per the JNCC Phase 1 Survey Guidelines. Vicky is also a licenced dormouse and great crested newt worker and holds licences from Natural Resources Wales for both species.

2. Legislation & Planning Policy

2.1 Legislation

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

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

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

2.1.1 Habitats

Statutory Designations

The proposed development site does not lie within or in close proximity to any statutory protected site. The closest statutory protected site is the Cwm Taf Fechan Woodlands Site of Special Scientific Interest (SSSI) and Local Nature Reserve (LNR) located approximately 1.6km away to the north west of site. The Cwm Glo a Glyndyrys SSSI is located approximately 1.9km to the south of the site.

Non-Statutory Designations

The proposed development site does not lie within or adjacent to any non statutory protected site. There are ten Sites of Importance for Nature Conservation (SINCs) within the search area. The closest such site is the Cyfarthfa SINC which lies approximately 615m to the east at its closest point. Details of other SINC sites within 2km and their approximate distance from site are listed below:

- Afon Taf (1118m)

- Morlais Hill (1599m)
- Bryniau (1079m)
- Cwm Taf Fechan (1314m)
- Cwm Taf Fawr (1672m)
- Y Graig (1556m)
- Gyrnos Wood (1384m)
- Cwm Glo (1869m)
- Cwm Taf Fields & Cefn Coed Tip (1554m)

Taff Fechan Wildlife Trust Reserve lies approximately 1.6km away to the north west of the site.

In addition approximately 83.22% of the land within the 2km buffer zone is defined as a B-Line, including the site itself. B-Lines are non-statutory protected sites which aim to restore and create wildflower habitats forming stepping stones that link existing wildlife areas together creating a network of habitats across the landscape benefiting not only pollinators but a host of other wildlife.

2.1.2 Species

Great Crested Newt

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

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

Great Crested Newts are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a great crested newt.

Bats

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

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

Schedule 5 of The Wildlife and Countryside Act (1981) also protects all species of British bat and their roosting locations. British bats are protected from intentional or reckless disturbance and or obstruction of their roosting places. Barbastelle, bechstein, noctule, brown long eared, common pipistrelle, soprano pipistrelle, greater horseshoe and lesser horseshoe bats are also listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

Otter

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

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

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

Nesting Birds

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

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

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

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

Reptiles

Reptile such as the slow worm, common lizard, adder and grass snake are protected under the Wildlife and Countryside Act 1981(as amended). They are protected from killing, injuring and sale. In Wales sand lizard, smooth snake, adder, grass snake, slow worm and common lizard are listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

Dormice

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

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

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

Badger

Badgers are protected under the Protection of Badgers Act 1992. In summary they are protected from:

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

Badgers are also listed on schedule 6 of the Wildlife and Countryside Act 1981 as amended. Badgers tend to have a variety of setts with different uses and functions within the territory for the family unit. In general there is usually a main sett which the family will use the most. There are then annex, subsidiary and or outlier setts which depending on family structures and environmental pressures may be used at different times of the year. As female badgers tend to have their cubs over winter the disturbance and damage of badger setts is prohibited between December and June inclusive.

2.2 Planning Policy

Planning Policy Wales (PPW), Edition 11 published February 2021 provides national policy relating to Sustainability and Ecology. PPW sets out the land use planning policies of the Welsh Government and is supplemented by a series of Technical Advice Notes (TANs).

Chapter 6 of PPW contains the following policies relating to ecology and biodiversity:

- 6.2 Green Infrastructure;
- 6.4 Biodiversity and Ecological Networks.

Technical Advice Note (TAN) 5

TAN 5 (Welsh Government, 2009) specifically provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN provides advice for local planning authorities on the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and development affecting protected and priority habitats and species.

Under Section 2.4 within the TAN 5, 'when deciding planning applications that may affect nature conservation local planning authorities should:

- Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;
- Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;
- Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;

- Ensure that appropriate weight is attached to designated sites of international, national and local importance;
- Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;
- Ensure that the range and population of protected species is sustained;
- Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered.

3. Preliminary Ecological Assessment

3.1 Previous Ecological Survey Work - 2022

The site was previously subject to a PEA on the **14th July 2022** by Ecological Services Ltd. The northern half of the site comprises school buildings, large areas of tarmac hardstanding, with scattered trees, semi-improved grassland, hedgerow, woodland, tree line and ornamental planting. The southern half of the site comprises school buildings, tarmac hardstanding and car park, semi-improved grassland, tall ruderal vegetation and small blocks of woodland were considered to be of local ecological significance for birds.

Bat Surveys were carried out on buildings in the northern half of the site 26th July and 23rd September 2022, by Ecological Services Ltd. **Two common pipistrelle bats were observed emerging from the main school building (B1) from two separate locations on the northern elevation of the building.**

Building, B1, in the northern half of the site is a confirmed bat roost, prior to any demolition works commencing on this building a development licence from Natural Resources Wales (NRW) must be gained.

Further surveys recommended within the 2022 report include Survey for Bats and Trees, to be carried out once details of trees to be removed is confirmed. Bat activity surveys on buildings 4,5 and 6 to be carried out prior to works commencing on the southern half of the site. Other recommendations include ensuring nesting birds were not harmed during works, a scheme of wildlife friendly lighting is implemented. Consideration to biodiversity enhancement measures to be implemented as part of future development proposals was made as well.

3.2 Ecological Survey Work 2023

An Arboricultural Impact Assessment (AIA) undertaken by Arboricultural Technician Services Ltd concluded the proposed development will require the loss of a thirty two trees, seven groups of trees and three lengths/sections of hedgerow. Some will be lost due to disease and / or damage, some will be lost to facilitate the development proposals.

Following the AIA, a Bats and Trees Survey was undertaken by Ecological Services in February 2023 to assess if any trees, groups of trees or hedgerows due for removal, had potential for use by roosting bats. Each tree was initially subject to a GBVRA, February being an optimal time for such surveys before trees start to gain leaf cover. The trees numbered below correspond to those in the Arboricultural Report.

One tree, **T7**, was assessed as having **moderate potential** for use by roosting bats.

One tree, **T11** and 4 groups of trees, **G10, G20, G47** and **G57** were assessed as having **low potential** for use by roosting bats.

Bat Surveys on buildings in the southern half of the site were undertaken by Ecological Services Ltd during May 2023. Due to the size of the buildings each survey visit was split over two consecutive nights. The first surveys were undertaken on 2nd/3rd May and the second surveys were undertaken on 22nd/23rd May 2023. No bats were observed exiting the buildings.

3.3 Likely Significant Effects

3.3.1 Bats

Bat surveys undertaken on the buildings in the northern half of the site found building B1 to be a roost for two male/non breeding female common pipistrelle bats. The demolition of building 1 will result in the loss of a bat roost of local significance.

The Bats and Trees Survey found one tree, **T7, to have moderate potential for use by roosting bats**. Trees/groups of trees with low potential to support roosting bats include **T11, G57, G10, G20** and G47. The loss of trees with bat potential across the site will be of local (?) significance.

A development licence from NRW will be required to be in place before demolition works start on the northern half of the site. Compensation for the loss of roosting opportunities will be required within the new buildings. These are detailed in Section 4 of the report.

Mitigation measures will need to be put in place for the removal of trees with moderate and low potential for use by roosting bats. These are detailed in section 4 of this report.

Mitigation measures to reduce the potential impacts of lighting on commuting and foraging bat species will be implemented as part of the development works. These are detailed in section 4 of this report.

3.3.2 Great Crested Newt

There are a small number of records for great crested newt (GCN), the nearest approximately 890m away to the south east of the site. There are no ponds within the site and none appear to be present within 500m of the site, although ponds may be present in gardens which may not be visible from aerial images. The habitats within the site boundary are considered broadly unsuitable for use by GCN. The well maintained semi improved grassland, hardstanding, tarmac and buildings are all considered to offer negligible potential for use by GCN. The vast majority of habitat within the site boundary is open and provides

little shelter from predation for GCN. No further recommendations will be made for this species.

3.3.3 Dormouse

There are no records for dormouse within 2km of the proposed development site. The habitats within the site are considered to be broadly unsuitable for dormouse. The grassland, hardstanding, tarmac and buildings offer no shelter or foraging habitat for use by dormouse. The tree lines and hedgerow could be used by dormouse however they offer limited habitat connectivity to any suitable habitat within the wider landscape. No further recommendations will be made for this species.

3.3.4 Otter

There are a small number of records for otter, the nearest approximately 915m away to the south west of the site and is for field signs along the River Taff. The vast majority of the site is considered unsuitable for use by otter as it provides no shelter or cover and has no suitable habitat connectivity to any surrounding watercourses. The site is also subject to a high level of disturbance by humans due to its use as a school. As such it is considered highly unlikely otter are present within the site. No further recommendations will be made for this species.

3.3.5 Badger

Badger has been recorded approximately 1.06km away to the south east, the only details are that it is for the A4060. record is of field signs. The development site is dominated by open grassland, tarmac, hardstanding and buildings and highly unlikely to have a sett present. The site is also subject to a high level of disturbance by humans due to its use as a school. Given the lack of local records and high levels of human disturbance the potential for badger to be within the site is considered unlikely. No further recommendations will be made for this species.

3.3.6 Birds

No direct evidence of bird nests was noted during the site survey, however the trees, hedgerows and buildings within the site have potential to be used by birds for nesting purposes. Other habitats within the site are likely to be used by a range of local birds for foraging purposes.

Precautionary measures in respect of nesting birds during site clearance will be recommended, to include timing constraints for vegetation clearance across the site. Details of mitigation measures can be found in Section 4.

3.3.7 Reptiles and Amphibians

The nearest records for the presence of reptiles are for slow worm, approximately 750m away to the north of the site. The closest amphibian record is for common frog approximately 180m away and associated with a residential property.

The vast majority of the development site is considered to have limited potential for use by reptiles as large areas of the site are covered with buildings and areas of tarmac/hardstanding and semi-improved grassland which is subject to an intense cutting regime. The majority of habitats suitable for use by reptiles are to be retained i.e. tree line along the eastern boundary of the northern half of the site and areas of tall ruderal vegetation surrounding the playing field in the south west of the southern half of the site. As suitable reptile habitat is to be retained reptile surveys are not recommended in this instance. Instead it is recommended that the presence of a small number of common reptiles and amphibians within the site is assumed. Any other areas of vegetation across the site due for clearance will undergo species deterrent measures to ensure reptiles are not harmed during works.

Precautionary measures in respect of reptiles are recommended, to include timing constraints for site clearance, and a two-stage cut of vegetation. Details of the mitigation measures can be found in Section 4 of the report.

3.3.7 Hedgerow

Hedgerow habitat is present within the site boundary. Hedgerow is a section 7 habitat of importance for protection under The Environment (Wales) Act 2016. Whilst the hedgerow has been created as part of the soft landscape proposals when the school was created, the features meet the criteria for section 7 habitat. Therefore **any impacts to hedgerow must be avoided. If impacts are unavoidable hedgerow translocation and or replacement hedgerow planting must be provided.**

4. Impact Assessment

The role of a EclA is to address significant effects which the project may have. For the purpose of this assessment significant impacts will be those that affect legally protected sites and species within and directly adjacent to the proposed development site.

The EclA process presents a hierarchy of approaches to ensure a project of plan lowers its potential impacts. The works should seek to

- **AVOID** - Consider options to avoid any potential harm to an ecological feature,
- **MITIGATE** - If negative effects are unavoidable, measures should be implemented to minimise and reduce potential effects,
- **COMPENSATE** - If negative effects are still likely to be experienced despite measures to reduce impacts being implemented appropriate compensatory measures should implemented.
- **ENHANCEMENT** - Works should always seek to provide net benefits for biodiversity to help meet the section 7 requirements of the Environment Act (Wales) 2016.

The scope of the proposed development works has been reviewed and streamlined to ensure only works necessary are to be undertaken. Section 3.3 of this report details the likely effects to protected species and within the development site. The species or features which could be impacted by the development works are discussed further.

The development proposals have the potential to negatively impact on the below features. However, mitigation and compensation measures have been considered and are included within the development to reduce the impact the development works may have. Features to consider are:

- Bats
- Nesting Birds
- Herptiles
- Habitat loss

4.1 Ecological Feature – Bats

Potential Impacts

- Loss of confirmed roost
- Disturbance to commuting and foraging bats
- Loss of habitat used for foraging purposes
- Loss of potential roosting opportunities in trees and buildings in the southern half of the site.

Measures to be implemented

- Building B1 is a confirmed bat roost, prior to demolition works on the building commencing a development licence from Natural Resources Wales (NRW) must be obtained. **A development licence can only be sought once planning consent has been granted and all pre-commencement ecology related conditions are discharged.**
- **The activity survey work used to support and inform a bat licence application to NRW must be less than 2 survey seasons old.** Bat activity surveys on the northern half of the site were completed in 2022. Should the licence application take place after summer of 2024 updated bat activity surveys will be required.
- One tree, T7, is assessed as having moderate potential for use by bats and must be felled during the winter months when bats are least likely to be present.
- T7 must be section felled and lowered to the ground using ropes. When on the ground a licenced bat ecologist will inspect the sections for the presence of bats. Providing no evidence of the presence of roosting bats or evidence of bat roost use via droppings are found the tree sections can then be removed.
- One tree, T11, and three tree groups, G57, G10 and G20, are assessed as having low potential for use by bats and must be felled during the winter months when bats are least likely to be present, under a precautionary soft fell methodology. This is where tree limbs are cut, lowered to the ground using ropes and left grounded overnight to allow any bats to escape. The limbs can be removed or ripped 24hrs later.
- If bats are found at any time during the work, NRW will be contacted for advice. This advice may include that all work stop until a development licence from NRW is gained for the tree removal.

- Tree removal during the winter months would also prevent potential issues with nesting bird use. Nesting bird season is generally accepted to be March to August inclusive.
- Demolition work of the school buildings should avoid the hibernation season of November to February inclusive. Where this is not possible, a method statement covering demolition works will be required. The method statement will require details on ecological supervision of demolition works, soft stripping of suitable bat features by hand (where possible) and work will only be permitted when temperatures are above 10°C.
- All external lighting will be kept to the bare minimum required for health and safety reasons.
- Any external light source will be directional and will only illuminate a doorway or footpath as required. A directional light source can be cowled or recessed back into the casing to prevent light spill.
- All lighting must meet the recommendations in the BCT Guidance Note 08/23 Bats and Artificial Lighting at Night in the UK document

4.2 Ecological Feature – Nesting Birds

Potential Impacts

- Disturbance of nesting birds.
- Loss of bird nesting and foraging habitat.

Measures to be implemented

- Any tree and hedgerow removal within the site boundary will be completed **outside of the bird nesting season of March to August inclusive**. If this is not achievable an ecologist must inspect any trees or ground vegetation with the potential for birds to be present, for active birds' nests prior to removal works beginning. If an active nest or activity indicating a nest might be present is identified a buffer zone of at least 5m, up to 20m depending on species, around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed.
- Nesting bird evidence has been recorded within the Caretakers building in the southern half of the development site. Given the height and features present within the school buildings across the site, consideration to the presence of nesting birds must be given when planning building demolition. Building removal should be completed **outside of the bird nesting season of March to August inclusive**. If this is

not achievable an ecologist must undertake a nesting bird check of the buildings for active birds' nests prior to removal works beginning. If an active nest or activity indicating a nest might be present is identified a buffer zone of at least 5m, up to 20m depending on species, around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed.

- Compensatory planting within the proposed development will include native species to provide a food source for local wildlife including bird species. Planting will include scattered trees, woodland, shrub planting, 2 types of wildflower mixes, rain gardens and SUDS area with species attractive to a range of invertebrate species. Details of planting will be included in a soft landscaping plan, Site Wide Planting Plan, drawing number 5202184-ATK-XX-DR-LA-423013, Rev P01, dated 16/02/2023 both issued by Willmott Dixon Construction Ltd.

4.3 Ecological Feature – Reptiles

Potential Impacts

- Damage or injury to hibernating reptiles between October – February, inclusive
- Damage or injury to commuting/foraging reptiles during the year

Measures to be implemented

- A suitably worded planning condition will be added to any planning consent the Local Planning Authority is minded to grant requesting a Reptile Mitigation Strategy to be agreed for the development work.
- All site contractors will be given a toolbox talk which covers the legal protection given to reptiles, what they look like, where they may be found, and what to do if herptiles are found on site. Information on reptiles will be included within the site induction pack.
- Areas of vegetation assessed as having potential for reptile use include tall ruderal vegetation, scrub, hedgerows and tree lines which are generally around the periphery of the site. The mown semi improved grassland and tarmac areas are considered to have limited potential for reptile use as they provide no cover.

Vegetation Clearance – Grassland and Tall Ruderal Vegetation

- Tall ruderal vegetation, scrub and any areas of longer grassland will be cut in stages and undertaken during the summer months when reptiles are active and likely to relocate of their own accord.

- **First Stage Cut** - vegetation will be cut, using hand tools or an adjustable height flail, to a height of between 100-150mm. The cut material will be raked and removed from the site to avoid potential future colonisation by reptiles. The cut material must be removed the same day it is cut. Work area must be left for 24hrs once the first stage cut is completed.
- **Second Stage Cut** - vegetation will be cut to ground level (a maximum height of 50mm) and the arisings raked and removed from the site as above. Any reptiles or other fauna will be treated as above.
- Any herptiles present should naturally move away of their own accord due to the disturbance from cutting. However, in the unlikely event that any reptiles or other fauna are encountered during this operation all cutting work will stop and the on call Ecologist will be consulted. Reptiles will either be carefully collected and moved away to the retained vegetation along the eastern boundary of the northern half of the site or ruderal vegetation along the southern boundary of the southern half of the site or be allowed to do so of its own accord.

Vegetation Clearance – Scrub, Hedgerows and Trees

- **First Stage Cut** - The first stage cut of dense scrub, trees and hedgerow will be required outside of the bird nesting season. Trees, hedgerow and dense scrub will be cut to a height of 0.5m between the months of **September to February inclusive**. All cuttings will be collected and removed from the site to prevent future colonisation by birds and or reptiles.
- Ground disturbance / works will be completed outside of reptile hibernation period which is weather dependent but is generally considered to be October to March inclusive. Any ground disturbance works must avoid the hibernation period when such animals are torpid and cannot move away from machinery. **Providing the local temperatures are above 9°C for at least 5 consecutive days and there is no snow or frosts, site clearance works in March may be allowed.** However, the project will aim to start groundworks between April and September inclusive in any given year.
- **Second Stage Cut** - tree and hedgerow roots will be grubbed up using a toothed bucket of a JCB or an appropriately sized digger. The roots will be removed under ecological supervision and any reptiles found will be captured and moved to adjacent habitat. The roots systems will be removed slowly and gently to allow any reptiles present to escape. All roots will then be removed from the proposed development site.
- Once all suitable vegetation has been cleared from within the site boundary, the construction site footprint must remain in a vegetation free state. This will help to

reduce the likelihood of reptiles using the site while construction works are underway.

4.4 Ecological Feature – Habitat Loss

Potential Impacts

- Loss of habitat used by a wide range of local fauna
- Loss of trees
- Loss of hedgerow

Measures to be implemented

- Install Heras fencing around all areas of vegetation to be retained. Heras fencing must take into account Root Protection Zones (RPZs) and arboricultural advice provided by ArbTS - Arboricultural Technician Services Ltd. A clear fence line around retained vegetation will ensure contractors do not work within or negatively affect such areas. Areas to be retained include:
 - **Northern half of site:** - the tree line and a small area of woodland along the eastern boundary
 - **Southern half of site:** - trees and grassland along the northern boundary, a small area of trees and grassland along the south boundary and an area of tall ruderal vegetation with trees around the playing field in the south west. Details of retained habitats and exclusion zones can be found in Appendix 4 of the Arboricultural Report, dated 24th April 2023, issued by Arboricultural Technician Services Ltd.
- A Landscape Plan for the development site will be agreed and implemented and will include native tree species to compensate for any trees lost across the site. The landscape strategy for the site will seek to enhance the areas of retained and created habitat within the site boundary. Details of soft landscaping for the site can be found in Landscape Genral Arrangement, drawing number BCA-ATK-XX-XX-DR-LA-423001, Rev P04, dated 16/02/2023 and Site Wide Planting Plan, drawing number 5202184-ATK-XX-DR-LA-423013, Rev P01, dated 16/02/2023 both issued by Willmott Dixon Construction Ltd.
- Hedgerow is a Section 7 habitat under The Environment (Wales) Act 2016. Any hedgerow impacts will be minimised were possible. Consideration to the translocation of hedgerow has been discussed within the design time. However there is a significant time delay between the removal of hedgerow to allow site access and engineering works and when a receptor site for the hedgerow will become available

as the work on site is likely to take a number of months. Therefore it is not anticipated that hedgerow translocation will be viable.

- For every 1m of hedgerow lost at least 2m of native hedgerow planting will be required. It is anticipated approximately 360m of hedgerow will be lost to the development, therefore 720m of native hedgerow planting will be required within the overall development site.
- A 5 year aftercare package for all soft landscaping will be required to ensure planting establishes into the required habitat type as planned.

5. Enhancement Measures

The Environment Act (Wales) 2016 places a duty on competent authorities to ensure biodiversity is not only conserved but enhanced. The proposed development works create potential features that can be improved for the benefit of biodiversity.

5.1 Provision of Bat Roosting Opportunities

A total of 7 integrated bat boxes Ibstock Enclosed Bat Box B (or similar design) will be provided within the new development. All boxes will be built into the walls no lower than eaves level of the building with the access gap left open for use and will be located as follows: -

- Main Building, East Elevation, Secondary Wing x 1
- Main Building, South Elevation, Primary Classrooms x 1
- Sports Building, Planning Elevation 1 (southern aspect) x 2
- Sports Building, Planning Elevation 3 (south west aspect) x 2
- Sports Building, Planning Elevation 5 (south aspect) x 1

No external lighting will be placed within 2m of any bat box. Photographic evidence of the boxes will be sent to the local planning authority ecologist once completed. Types of bat boxes can be found in Appendix 3 and the approximate location each box can be found in Appendix 1.

5.2 Provision of Bird Nesting Opportunities

Twelve integrated bird boxes will be provided within the new development. All bird boxes will be integrated into the walls at eaves level (a minimum height of 3m above ground level, swift boxes are ideally located 5m above ground level). The following bird boxes will be installed at least 3m from ground level: -

- 3 x Terraced Sparrow Box - Custom Facing Brick (or similar design) - Main Building, East Elevation, Primary Wing
- 2x Terraced Sparrow Box - Custom Facing Brick (or similar design) - Main Building, North Elevation 1, Primary Wing
- 3 x Starling Box - Smooth Brick (or similar design) - Main Building - North Elevation 2, Secondary Wing

- 4 x Swift Box (or similar design) -Custom Brick - Sports Building, Planning Elevation 2 (east aspect)

Photographic evidence of the boxes will be sent to the local planning authority ecologist once completed. Types of bird boxes can be found in Appendix 2 and the approximate location each box can be found in Appendix 3.

5.3 Habitat Enhancements

Soft Landscape Proposals have been provided for the site and cover all areas of the site. New habitats to be created include tree planting, native hedgerow, native woodland with understory planting, shrubs, SUDS areas, 2 x wildflower mixes to include 'Pollinators Paradise' within the orchard area and a meadow mix to SUDS Scrapes. A suitably worded planning condition will be added to any planning consent the Local Planning Authority is minded to grant requesting a Landscape and Ecological Management Plan for the site is agreed.

The majority of species used will be native species and of local provenance (at least Welsh). Tree species planted as stand alone specimens, approximately 82 in the north of the site and 18 in the south of the site to include field maple (*Acer campestre* 'Streetwise'), silver birch (*Betula pendula*), rowan (*Sorbus aucuparia*), bird cherry (*Prunus avium*) and lime (*Tilia x europaeus*) and Scots pine (*Pinus sylvestris*).

Four woodland areas are to be planted in the north of the site and six woodland areas in the southern half of the site is to include hornbeam, beech (*Fagus sylvatica*), bird cherry, English oak (*Quercus robur*) and rowan with an understory mix to include hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), wild privet (*Ligustrum vulgare*) blackthorn (*Prunus spinosa*), dog rose (*Rosa canina*), elder (*Sambucus nigra*) and guelder rose (*Viburnum opulus*).

Rain gardens and SUDS areas are to be planted up in the southern half of the site around the car park and in the north and within the amenity grassland in the south. Two mixes of planting will within the rain gardens and SUDS areas will increase biodiversity for a wide range of invertebrate species, as will the two mixes of wildflower areas.

Areas of shrub planting will be incorporated into the northern half of the site around the buildings and car parking areas. Amenity grassland and sports mix grass will be planted in areas of high usage.

A full list of proposed species and an indicative plan of the soft landscaping can be found in Landscape General Arrangement, drawing number BCA-ATK-XX-XX-DR-LA-423001, Rev P04, dated 16/02/2023 and Site Wide Planting Plan, drawing number 5202184-ATK-XX-DR-LA-423013, Rev P01, dated 16/02/2023 both issued by Willmott Dixon Construction Ltd.

A management plan for the site will be produced but is currently unavailable. On-going management of the site, past the landscape management period of 5 years post landscaping creation, will be required to ensure the habitats within the development site are managed to benefit wildlife. The school and whomsoever undertakes the onsite grounds management will be required to implement management techniques that benefit wildlife. General recommendations to be included with a site habitat management plan are below:

- All hedgerow will be cut once every 2 years between the months of November to February inclusive. Ideally different sections of hedgerow will be cut in different years to create diversity in structure. Every 10 years the hedgerow will be laid to ensure structural integrity of the feature is maintained.
- The grassland mowing regime will be diversified to create longer and shorter vegetation. Ideally around 25% of the grassland habitat on site will be cut once each year during late summer with all cuttings collected and removed from site or to an agreed compost location. It is recognised that the remaining grassland will require intensive cutting for use by pupils.

5.4 Fencing

Any close board or mesh fencing within the site boundary will incorporate features to ensure it is wildlife friendly. Such fencing will have either:

- a 13cm by 13cm gap cut at ground level every 2m or;
- a continuous gap of 13cm from the base of the fence and ground along the entire fence line. Any mesh fencing must have a continuous gap of 13cm from the base of the fence and ground along the entire fence line.

6. Management Responsibilities

The proposed development site owner will have the responsibility to ensure the measures within this document are fully and continually implemented during the life time of the project. All site sub-contractors must be fully inducted and made aware of the ecological constraints and required working methods.

Maintenance of the soft landscaping will be installed as part of the development works will be the responsibility of the site owner. The site owner will appoint and fund contractors who will undertake the work as detailed within the landscape documents and this Ecological Impact Assessment.

It is anticipated that the soft landscaping will be installed during the 2024/2025 planting season. This is considered year 0. The created habitats, bat and bird boxes will be subject to a monitoring visit by a suitably licensed ecologist 5 years from the landscape work being finished to monitor use and establishment of planting. Any changes to the management details on Section 5 of this report can be made if required, based on the findings of the monitoring visit. Any changes to management must be agreed in writing with the Local Planning Authority.

The buildings within the site will be owned by Merthyr Tydfil County Borough Council and used by the school and pupils for the foreseeable future. Merthyr Tydfil County Borough Council will have the obligation to maintain each building and all areas of soft landscaping within the development boundary.

Reference List

- Bat Conservation Trust (2016) 'Bat surveys for Professional Ecologists; Good Practice Guidelines' (2nd Edition)
- BCT Guidance Note 08/23 Bats and Artificial Lighting at Night

Appendix 1 – Location off Bat Boxes

Main Building



3 East Elevation
Scale 1:50



2 South Elevation 2
Scale 1:50

Sports Building



1 Planning Elevation 1
Scale 1:200



3 Planning Elevation 3
018001 SCALE 1 : 200



5 Planning Elevation 5
018001 SCALE 1 : 200

- Location of bat boxes Istock Enclosed Bat Box Type B or similar

Appendix 2 Location of Bird Boxes

Main Building



Sports Building



2 Planning Elevation 2
SCALE 1 : 200

Key

- Swift Box - Custom Brick
- Terraced Sparrow Box - Custom Facing Brick
- Starling Box - Smooth Brick

Appendix 3 - Bat and Bird Box Design



Ibstock Enclosed Bat Box 'C'



Habibat Bat Box 003 -
Blended Facing



Ibstock Enclosed Bat Box 'B'



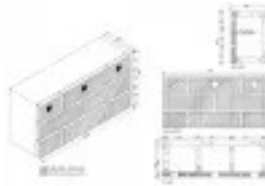
Swift Box - Custom Brick
facing



'S' Brick for Swifts (Action for
Swifts)



Terraced Sparrow Box -
Custom Brick Facing



Vivara Pro WoodStone
House Sparrow Nest Box



Starling Box - Smooth Brick

