



Dŵr Cymru
Welsh Water

Cwmwernderi Title: Preliminary Ecological Appraisal Report

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Prepared by MMB on behalf of
Welsh Water

MMB

MOTT MACDONALD
BENTLEY

Document control

Cwmwernderi Reservoir - PEA					
MMB					
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1	Planning Application for a site compound	Elliott Hughes	Katie Partington	Michael McAree	May 2021
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Executive Summary

MMB has been commissioned by Dŵr Cymru Welsh Water (DCWW) to carry out reservoir safety improvement works at Cwmwernderi Reservoir required under the Reservoirs Act 1975. Two temporary site compounds comprising of a stone/gravel base with cabins and Heras fencing are required to undertake the works.

The two proposed temporary site compound locations occupy an area of plantation woodland, which will require to be felled, and recently felled plantation woodland habitats. On completion of the works the cabins, fencing and stone will be removed, and management of the sites will be returned to Natural Resources Wales.

The habitats have the potential to support nesting birds, reptiles and common amphibians, therefore measures to avoid harm to these species groups as a result of vegetation clearance are recommended. No further species-specific surveys are recommended.

Native bluebells are present within the primary compound area, it is considered likely that these flowers would have been outcompeted by brambles in the next 2-5 years without management (the process of succession has begun within part of the site). Recommendations have been made by NRW to preserve bluebells within the site and the wider landscape.

Both sites lie within NPT Watercourses SINC, therefore best practice pollution prevention measures will be maintained to prevent pollution of the watercourses.

The results of this report are valid for 24 months from the date of issue.

Note: if the scope of works change, further surveys may be required, and the ecological impacts will need to be reassessed.

1. Introduction

1.1 Background

MMB has been commissioned by Welsh Water (WW) to carry out reservoir safety improvement works at Cwmwernderi Reservoir required under the Reservoirs Act 1975. The main works are being carried out under Welsh Water's permitted development rights and comprise of measures to increase the drawdown capacity of the reservoir, however planning permission is required for two temporary site compounds necessary to undertake the works. This Preliminary Ecological Appraisal is a supporting document for that application.

The reservoir is located approximately 3.0km to the west of Maesteg at Ordnance Survey Grid Reference SS 8169 9017, and 1.7km south of the village of Bryn. The reservoir is located within a rural area with commercial forestry plantations and areas of ancient woodland surrounding the site on all sides. The two proposed site compounds lie within Natural Resources Wales (NRW), forestry land and are accessed via existing fire roads managed by NRW. The primary compound is located at Ordnance Survey Grid reference SS 82757 90033 and is 0.257 hectares in size and the secondary compound is located at SS 81193 90313 and is 0.075 hectares in size— see figure 1.

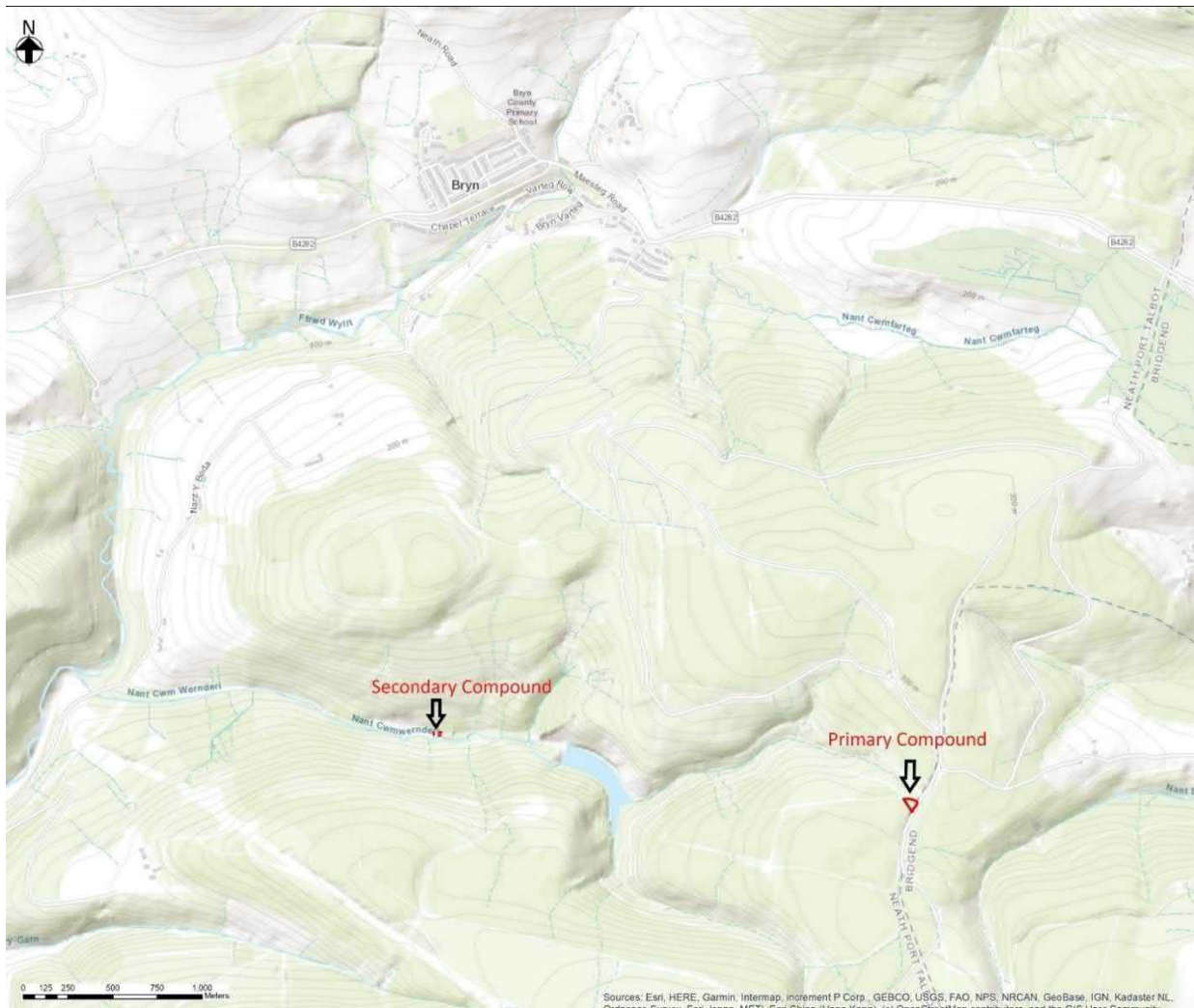


Figure 1 Site Location Plan
Source: ESRI

The reservoir is principally fed by two streams joining from the south and east of the site. The stream from the south is named the Nant-y-glo. On its western side, the reservoir discharges into the Nant Cwmwernderi stream which flows westwards down the Cwmwernderi valley and joins the Ffrwd Wyllt watercourse about 1.8 km from the reservoir. The Ffrwd Wyllt, itself discharges into Port Talbot Docks and Swansea Bay.

1.2 Proposed work

A primary and a secondary site compound are required for the Dam Safety works at Cwmwernderi.

Installation of both site compounds will involve clearing the area of vegetation, grinding down any stumps and putting down stone as a base. The compound will comprise of Heras fencing, site cabins and laydown areas. On completion the cabins, fencing and stone will be removed, and the areas left to revegetate naturally.

A sufficiently sized single site compound cannot be placed within the Welsh Water operational boundary as:

- There is insufficient space;
- There is no mobile telephone signal at the toe of the dam, hence having the larger primary compound 1 mile away. Phone signal is required to be able to communicate with design team and other services, for health and safety reasons and in case the 24-hour security required on site needs to call in case of emergency; and
- It is not possible to get deliveries of plant and machinery to the toe of the dam due to access restrictions.

The locations of the two compounds can be viewed in Appendix A.

1.3 Purpose of the Report

The purpose of this report is to support a planning application and provide an initial assessment of the ecological importance of the habitats present within and immediately adjacent to the primary and secondary site compounds and the potential to support protected or notable species.

This PEA has been written in accordance with the Guidelines for Preliminary Ecological Appraisal 2nd Edition (CIEEM 2017)¹, the key objectives of a PEA are to:

- Identify the likely ecological constraints associated with a project;
- Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy'²;
- Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EclA); and
- Identify the opportunities offered by a project to deliver ecological enhancement.

Ecological impacts relating to the main works that are being carried out under permitted development rights have been considered separately to this report.

2. Legal context and Policy Framework

The legal context for ecological survey is provided by a framework of international and domestic legislation which aims to protect specific sites, habitats and species, to conserve biodiversity and promote the resilience of ecosystem services. This report and the assessment therein have been written in accordance with the following legislation, policy and guidance.

¹ [Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-1.pdf \(cieem.net\)](#)

² The overarching aims of ecological work used to inform the planning process are to minimise harm and to maximise benefits for biodiversity resulting from development. The generally accepted way of doing this, now embedded within the planning system, is to follow the "mitigation hierarchy". This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures (BS42020:2013 Biodiversity Code of Practice for Planning and Development. BSI Standards Limited 2013).

2.1 Protected sites

Statutory protected sites include:

- European Sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) and Ramsar sites protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the International Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention);
- National Sites (Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR)) protected under the Wildlife and Countryside Act 1981 (as amended); and
- Local Sites (Local Nature Reserves (LNRs)), protected under the National Parks and Access to the Countryside Act 1949 (as amended).

These sites are protected by the relevant legislation regardless of whether planning permission is required. Where planning consent is required, they will also be protected by Planning Policy.

Non-statutory sites include Country Parks, Local Wildlife Sites (LWS) including Sites of Importance for Nature Conservation (SINC), and Ancient Woodlands are protected by Planning Policy, which will apply to schemes which require planning consent, however good practice would be to also apply due consideration as part of schemes being undertaken under Welsh Waters permitted development rights.

2.2 Protected and Priority Species and Habitats

Statutory protected species include:

- European Protected Species (EPS) protected under the Conservation of Habitats and Species Regulations 2017 (as amended); and
- Nationally Protected Species, protected under the Wildlife and Countryside Act 1981 (as amended) (WCA); Protection of Badgers Act 1992; Countryside and Rights of Way Act 2000 (CRoW); and Salmon and Freshwater Fisheries Act 1975.

This legislation protects different species to varying degrees, and in most cases their habitats also, regardless of whether planning permission is required. In addition, these species are also afforded protection through Planning Policy, which requires that they are a 'material consideration' of any planning application.

Species and habitats of conservation concern which receive non-statutory protection (protection is via planning policy) include:

- Section 7 species and habitats listed in the Environment (Wales) Act 2016 (the Environment Act) (applies to Wales only). These species and habitats are also known as 'Species and Habitats of Principal Importance for the Conservation of Biodiversity in Wales'; and
- Locally Protected Species which may be identified within County Local Biodiversity Action Plans (LBAP), the Royal Society for the Protection of Birds (RSPB) 'Birds of Conservation Concern' or Red Data books for example.

There is also specific legislation relating to the protection of biodiversity and ecosystem resilience;

- In Wales, Section 6 of the Environment (Wales) Act 2016 that requires all public bodies to seek to maintain and enhance biodiversity so far as is consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems.

- Also relevant is the Wellbeing of Future Generations (Wales) Act 2015, which requires Public Bodies listed in the Act to embed sustainable development principles, aiming at achieving the seven well-being goals, including to maintain and enhance a biodiverse natural environment. Whilst Welsh Water is not a Public Body under the Well-being Act, it is aiming to contribute to Wales achieving the well-being goals and has embedded well-being objectives in its '2050 vision'. To maintain and enhance biodiversity as part of its function will support Welsh Water's contribution to the Well-being goals, and the company's '2050 vision'.

2.3 Invasive Non-Native Species

- Invasive Non-Native species (INNS) listed in Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) may also occur within or adjacent to where schemes are to be delivered. It is illegal to plant or otherwise cause to grow in the wild any plant listed in Schedule 9 or to release or allow to escape into the wild any animal which is listed in Schedule 9.
- The Invasive Alien Species (Enforcement and Permitting) Order 2019 (the Invasive Species Order') strengthens the legislation in relation to widely spread species of European Union concern; requiring effective management measures to be put in place to minimise their impacts. It is an offence to import, keep, breed / grow, transport, sell, use, allow to reproduce, or release into the environment the species listed in Schedule 2 of this Order.

2.4 National Planning Policy

At national level, Planning Policy Wales Edition 11⁴ Chapter 6 (Distinctiveness and Natural Places) paragraph 6.4 (Biodiversity and Ecological Networks) requires Local Authorities, when formulating development plan strategies, policies and development proposals must consider the need to:

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

Planning Policy Wales is supplemented by Technical Advice Note (TAN) 5⁵ (Nature Conservation and Planning) which provides further advice and detail about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN brings together advice on sources of legislation relevant to various nature conservation topics which may be encountered by local planning authorities.

2.5 Local Planning Policy

At a local level, planning policies are set out within Neath Port Talbot County Borough Council Local Development Plan (2011-2026), adopted January 2016. Within this document, there is one strategic policy and two specific policies of relevance to biodiversity and nature conservation. These are:

³ Welsh Water 2050 Vision (March 2018) <https://www.dwrcymru.com/en/Company-Information/Business-Planning/Welsh-Water-2050.aspx>

⁴ Planning Policy Wales Edition 11 (February 2021) Welsh Government

⁵ Technical Advice Note 5 Nature Conservation and Planning (September 2009) Welsh Government

- Strategic Policy SP15 Biodiversity and Geodiversity: This policy requires the protection, conservation, enhancement and management of international, national and local sites designated for nature conservation;
- Policy EN 6 Important Biodiversity and Geodiversity Sites: This policy requires the protection and enhancement of regionally and locally important biodiversity sites and species of principal importance. Development will only be permitted where there is no alternative location and the benefits outweigh the harm, in which case mitigation and / or compensation must be agreed; and
- Policy EN 7 Important Natural Features: The policy requires the protection of ecologically important natural features such as trees, woodlands, hedgerows / field boundaries, watercourses or ponds. Planning applications should take full account of these features and proportionate mitigation agreed where loss is unavoidable.

2.6 Welsh Water Plans and Policies

Welsh Water have translated their legal obligations into several internal policies, strategies and reports including the following.

- Welsh Water 2050 (March 2018) Strategic Response 14: Supporting Ecosystems and Biodiversity which states; *"We will look for ways to help nature, enhance biodiversity and promote ecosystem resilience while we carry out our water and sewerage activities"*.
- Making Time for Nature (2020): Welsh Water's revised plan for maintaining and enhancing biodiversity under Section 6 of the Environment (Wales) Act 2016.
- Doing the right thing for nature (December 2019) Welsh Water's statutory report on the Biodiversity Duty under Section 6 of the Environment (Wales) Act 2016.

3. Methodology

3.1 Zone of Influences

The current guidance on ecological assessments⁶ recommends that all ecological features that occur within a 'Zone of Influence' (Zol) for a proposed development are investigated.

The Zol includes:

- Areas directly within the land take for the proposed development and access;
- Areas which will be temporarily affected during construction;
- Areas likely to be impacted by hydrological disruption; and
- Areas where there is a risk of pollution, noise or vibration disturbance during construction and/or operation.

The Zol is variable depending on the nature of the construction activities and the ecological receptors affected. For this assessment the following zones have been defined (Table 1).

Table 1: Zone of Influence for the Assessment

Zone of Influence for the Assessment	
Ecological Feature	Zone of Influence
Designated Sites	2.0km buffer around site boundary
Internationally Designated Sites for bats	10.0km buffer around the site boundary
Protected species records	2.0km from site boundary
Protected species evidence	Within 30m of the site boundary*

* Unless otherwise stated below for specific species (i.e. great crested newt where consideration up to 500m would be given in accordance with best practice).

The site boundary has been taken as the two temporary site compound boundaries, as shown in Appendix A. The walkover survey covered an additional 50m buffer to check for badgers and 30m for other species of concern. The wider reservoir area is not covered in this report.

3.2 Desk study

A desk study was undertaken in accordance with current guidelines for Preliminary Ecological Appraisal⁷ to determine the presence of any designated nature conservation sites and protected or notable species within the Zol of the site.

Biological records were requested from Aderyn⁸ (search number 5708549) on 11th December 2020. The data provided from this source has been curtailed to the nearest record for each species recorded, raw data is available on request, in line with record centre terms and conditions.

The desk study involved consulting the following sources:

- Multi Agency Geographical Information for the Countryside (MAGIC) website⁹
- Natural Resources Wales (NRW)¹⁰
- Joint Nature Conservation Committee (JNCC)¹¹

⁶ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, September 2018. Chartered Institute of Ecology and Environmental Management, Winchester.

⁷ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal (2nd edition), December 2017. Chartered Institute of Ecology and Environmental Management, Winchester.

⁸ <https://aderyn.lercwales.org.uk/>

⁹ <http://www.natureonthemap.naturalengland.org.uk/MagicMap;>

¹⁰ <http://naturalresources.wales;>

¹¹ [http://jncc.defra.gov.uk/;](http://jncc.defra.gov.uk/)

- Ancient Woodland Inventory 2011¹² and;
- The relevant 1:25,000 scale Ordnance Survey (OS) sheet and aerial photography were searched to check for waterbodies within 250m of the site boundary as recommended in the Great Crested Newt (GCN) Conservation Handbook¹³.

3.3 Field Surveys

A field survey was undertaken on 16 April and 9 August (secondary compound only) 2021 by Elliott Hughes, MMB Ecology Lead.

The field survey was undertaken in accordance with current guidance for habitat surveying including [Phase 1 Habitat type¹⁴. Dominant plant species were noted, as were any protected, uncommon or invasive species listed in Schedule 9 part II of the WCA. An assessment was also undertaken of the likely presence or absence of protected and notable species within the Zol of the proposed works. This was based on the known distribution of species, habitat suitability and/or direct evidence such as field signs or observations.

3.4 Bat Inspection Surveys

During the initial field survey trees within the Zol were also assessed for their potential to support roosting bats. There were no buildings within the survey area.

3.4.1 Ground-Based Tree inspection

Trees located within the identified Zol, were inspected for potential roost features (PRF) as identified within Collins (ed. 2016).

All field surveys for roosting features and habitats have been classified in accordance with best practice guidance^{15,16} which is summarised in Table 2 below;

Table 2: Bat Suitability Classification

Bat Suitability Classification		
Suitability	Description roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site to be used by commuting or foraging bats.
Low	A structure with one or more potential roost features (PRF) that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a hedgerow with gaps or un-vegetated stream, but isolated, (i.e. not very well connected to the surrounding landscape by another habitat). Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only –	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.

¹² <https://ati.woodlandtrust.org.uk/>

¹³ Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001). Great Crested Newt Conservation Handbook, Froglife, Halesworth.

¹⁴ Joint Nature Conservation Council (JNCC) (2010) Handbook for Phase 1 habitat survey – a technique for environmental audit. Peterborough: JNCC Publications.

¹⁵ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust, London.

¹⁶ Mitchell-Jones, A. J. and McLeish, A. P. (2004). Bat Workers' Manual, 3rd Edition, Joint Nature Conservation Committee.

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	the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	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. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broad-leaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Source: BCT, Collins (2016)

Potential roosting features relating to trees may include the following:

- Woodpecker holes;
- Rot holes;
- Hazard beams;
- Other vertical or horizontal cracks;
- Partially detached bark;
- Knot holes;
- Man-made holes;
- Cankers;
- Other hollows or cavities;
- Double leaders;
- Gaps between overlapping stems or branches,
- Partially detached ivy (*Hedera helix*) with stem diameters in excess of 50mm; and / or
- Bat, bird or dormouse boxes.

Any evidence of bats using potential roosting features was also noted and may include the following:

- Bat droppings in, around or below the feature;
- Odour emanating from a feature;
- Audible squeaking at dusk or in warm weather; and / or
- Staining below the feature.
- Trees were assessed as per the classification detailed above in Table 2.

3.5 Limitations

Biological records obtained from third parties and presented in the desk study do not represent a full and complete species list for the area. They are mostly given by individuals on an ad hoc basis, often meaning there are areas of deficiency in the data.

Ecological surveys are limited to factors which affect the presence of plants and animals, such as time of year, migration patterns and behaviour. With a single survey visit it is possible that certain species may have been overlooked or under-recorded during the assessment as optimal survey periods vary from species to species. The survey does however provide a “snapshot” of the ecological interest present on the day of the survey visit and is considered sufficient to identify constraints and recommendations for further survey.

There were no further limitations to the survey.

4. Results

4.1 Desk Study

The results of the desk study are presented below:

4.1.1 Statutory Designated Sites

No statutory designated sites have been identified within the zone of influence (2.0km) of the site nor any Special Areas of Conservation (SAC) designated for bats within 10.0km of the site.

4.1.2 Non-statutory Designated Sites

There are three Sites of Importance for Nature Conservation ('SINCs') which have been identified by Neath Port Talbot County Borough Council and Bridgend County Borough Council within 2.0 km of this site.

Details of the designated sites are provided in Table 3 below:

Table 3: Non-Statutory Designated Sites

Non-Statutory Designated Sites			
Name	Status	Details	Distance (km) and Directions
The Neath Port Talbot Watercourses	SINC	This habitat is defined as consisting of rivers and streams.	Both sites lie within this SINC (all watercourses within NPT are designated as SINCs) and the whole of the surrounding area is included due to the number of streams in the area.
Ancient Semi Natural Woodland(s)	Ancient Woodland Site / SINC	This habitat is classed as a SINC across the Council region.	The closest area of Ancient Semi-natural Woodland lies 0.18km north of the secondary site compound. There is also Plantation Woodland on an Ancient Woodland Site immediately to the south of the secondary site compound separated by a forestry track and stream from the compound (approx. 18m from them).
Cwm Sychbant	SINC	This area is the valley of the Nant Sychbant encompassing a range of habitats including semi-improved neutral grassland, broad-leaved semi-natural woodland, marsh/ marshy grassland, dense continuous bracken and	0.68km east of the primary site compound.

		coniferous plantation. It is Sited South West of Maesteg and 1km	
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Source: Aderyn and MMB

4.1.3 Waterbodies

There are no waterbodies within the site, however there is a dry ditch immediately to the north of the secondary compound which may hold some water following heavy rain. There is also a running watercourse (Nant Cwmwernderi) to the south of the secondary compound on the opposite side of the access track from the compound. The OS maps show there are no standing waterbodies within 250m of either site compound.

4.1.4 Protected and Notable Species

No protected species records have been returned within 500m of either site compound. Species of relevance to the scheme/habitats to be impacted which have been recorded within 2km include:

- Adder *Vipera berus*;
- Common crossbill *Loxia curvirostra*;
- Common frog *Rana temporaria*;
- Common lizard *Zootoca vivipara*;
- Common pipistrelle *Pipistrellus pipistrellus*;
- Common toad *Bufo bufo*;
- Daubenton's bat *Myotis daubentonii*;
- Dunnock *Prunella modularis*;
- Goshawk *Accipiter gentilis*;
- Grass snake *Natrix helvetica*;
- Hen harrier *Circus cyaneus*;
- Honey buzzard *Pernis apivorus*;
- Kestrel *Falco tinnunculus*;
- Natterer's bat *Myotis nattereri*;
- Nightjar *Caprimulgus europaeus*;
- Noctule *Nyctalus noctula*;
- Small pearl-bordered fritillary *Boloria selene*;
- Slow-worm *Anguis fragilis*;
- Tree pipit *Anthus trivialis*; and
- Woodlark *Lullula arborea*

No dormice (*Muscardinus avellanarius*) or great crested newt (*Triturus cristatus*) have been recorded within 2km of the site.

4.1.5 Invasive Non-native Species

36 records of the following seven invasive non-native species were recorded within 2.0km of the site:

- American Skunk-cabbage *Lysichiton americanus*.
- Himalayan Cotoneaster *Cotoneaster simonsii*;
- Indian Balsam *Impatiens glandulifera*; and
- Montbretia *Crocasmia sp.*;
- New Zealand Willowherb *Epilobium brunnescens*;
- *Rhododendron ponticum*;
- Wall Cotoneaster *Cotoneaster horizontalis*;

No records were returned from within the site.

4.2 Field Surveys

4.2.1 Habitats

The habitats recorded within the site are described individually below. Photographs accompany habitat descriptions. The Phase 1 Habitat Maps for each compound are provided in Appendix A.

Where woodlands or trees are present on or up to 30m from the site boundary these have been assessed for bat potential.

Recently Felled Plantation Woodland – Conifer (A4.2)

The primary compound area comprises entirely of felled plantation woodland habitat. Sparse bramble (*Rubus fruticosus*), brash piles and patches of soft rush (*Juncus effusus*) were present. Grass species comprised predominantly of sweet vernal (*Anthoxanthum odoratum*), wavy hair grass (*Deschampsia flexuosa*) and common bent (*Agrostis capillaris*). During a passing visit by an MMB ecologist on 4th June, 2021 it was noted that bluebells (*Hyacinthoides non-scripta*) had flowered within the area, See figure 3.



Figure 2 Primary compound area April



Figure 3 Primary compound area June – Bluebells present, with brambles beginning to outcompete them

Plantation Woodland – Conifer (A1.2)

The secondary compound area comprises predominantly of plantation woodland habitat. The area comprises predominantly of Sitka spruce (*Picea sitchensis*), self-seeded semi-mature and sapling ash (*Fraxinus excelsior*) (showing signs of ash dieback (*Hymenoscyphus fraxineus*)) and self-seeded semi-mature sycamore (*Acer pseudoplatanus*). A strip of bracken and scattered bramble (*Rubus fruticosus*) is present along the edge of the woodland either side of the access track. Ground flora is limited due to a thick layer of needles on the woodland floor. See Figure 4.



Figure 4 Secondary Compound Location (north of access track)

Gravel track

A layby associated with the access track is present within the southern section of the secondary compound area. See figure 5.



Figure 5 Gravel layby

Surrounding Habitats

The primary site compound is surrounded by plantation conifer woodland and gravel forest tracks.

The secondary site compound is surrounded by plantation conifer woodland, with a gravel track immediately to the south. A small stream (Nant Cwmwernderi) lies immediately to the south of the compound and ancient plantation woodland lies beyond the stream.

4.2.2 Protected and Notable Species

The following species were recorded as part of the assessment. Where habitats are present indicating the potential presence of a specific species these have also been noted.

Birds

No nesting birds were recorded within the two site compound locations during the survey.

The plantation woodland may support nesting birds in the canopies of the trees. The bracken and bramble in the secondary compound area are thought to be too sparse/isolated to support nesting birds. The surrounding woodland is known to support common crossbills, dunnocks, goshawks, honey buzzards, kestrels, nightjars, tree pipits and woodlarks.

The felled plantation woodland may support ground nesting birds. In addition, the bramble and brash piles may support common species of nesting bird.

Mammals

Small mammals such as wood mouse (*Apodemus sylvaticus*) are likely to utilise the site for foraging and nesting. No signs of badger were recorded within 50m of either site compound. The trees within the

plantation woodland habitat possess negligible potential for roosting bats. Neither site is likely to support protected species of mammal.

Amphibians

Juvenile common frogs were recorded on the access track during the walkover survey, it is likely that they are utilising small puddles/pools formed when the stream has burst its banks during heavy rainfall. It is likely that common toads will also be present in the area.

There are no suitable ponds for newts within 250m of the site.

Reptiles

The felled plantation woodland habitat is suitable to support adders, grass snakes, common lizards and slow-worm throughout the year, with the roost systems, brash piles and grassy areas providing a variety of foraging, basking and resting opportunities. The plantation woodland may also support these species but is less suitable due to the lack of any ground flora.

Fish

There is no suitable habitat for fish onsite; however, a stream capable of supporting small species of fish lies immediately to the south of the secondary compound location.

Invertebrates

Neither site is likely to support significant invertebrate assemblages.

4.2.3 Invasive Non-native Species

There is no evidence of invasive species at either of the proposed temporary compound locations or within 30m.

5. Discussion and Analysis of Results

The interpretation of the desk study and site visit results are discussed under the appropriate headings below. The value/importance of an ecological feature has been assigned using Ecological Impact Assessment¹⁷ guidelines.

5.1 Designated sites

Both site compounds lie within The Neath Port Talbot Watercourses SINC, the site is of County Level importance. 0.33ha of SINC designated land is being removed, however no watercourses (for which the SINC is designated) is to be directly impacted as part of the works. MMB have contacted the Neath Port Talbot Biodiversity Team (Rebecca Sharp and Laura Palmer) about the main works and they are happy that the impact on the SINC will be minimal, as long as there is standard pollution prevention measures in place no other specific mitigation is required (email dated 12.03.2021).

The Plantation ancient woodland located 18m from the secondary compound will not be directly impacted by the works, due to the physical barrier (the stream) separating the compound and the designated site. No specific mitigation is required.

Based on the size and scope of works and lack of statutory designated sites within 2km, no other designated sites will be impacted by the works.

5.2 Habitats

The habitats present on site are common, widespread locally and of local value. 0.275ha will be temporarily lost (primary compound), whilst the trees in 0.075ha (secondary compound) will be felled. The plantation woodland habitat will become felled plantation woodland and the felled plantation will be cleared and the process of succession will restart.

5.3 Protected or Notable Species

The results of the desk study and site visit determined that the following species and habitats are present or that there is potential for the following species or habitats to be present on site or adjacent to site.

5.3.1 Birds

The plantation woodland is likely to be of local importance for nesting birds, with the potential for the value to increase in the unlikely event schedule 1 birds are found to be present.

5.3.2 Amphibians

The two site locations are of local value for common amphibian species.

5.3.3 Reptiles

The felled plantation woodland habitat is likely to be of local value for reptiles. The plantation woodland is likely to be of negligible value for reptiles.

¹⁷ CIEEM (September 2019) Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater, Coastal, Marine. Chartered Institute of Ecology and Environmental Management, Winchester. [ECIA-Guidelines-Sept-2019.pdf \(cieem.net\)](https://www.cieem.net/ECIA-Guidelines-Sept-2019.pdf)

6. Assessment and Recommendations

Where protected species or habitats are considered of negligible value or unlikely to be present, as set out in section 4 above, these have been scoped out of further assessment. In addition, where habitats are only considered a constraint for the protected species they could support, this is set out in the relevant species sections only.

Table 4: Assessment and Recommendations

Assessment and Recommendations			
Location/ Feature	Level of Protection	Initial Assessment	Recommendations
Neath Port Talbot Watercourses SINC	SINC	Temporary loss of 0.33ha of habitat within the SINC. However the habitats lost are not habitats for which the SINC is designated (watercourses).	Conform to the withdrawn Pollution Prevention Guidelines ¹⁸ and Bentley's environmental best practice to ensure materials and pollutants associated with the construction of the compound do not enter the watercourse. On completion of the works all material will be removed from the two sites. The two sites will be categorised as recently felled plantation woodland on completion.
Bluebells	Bluebells are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to sell/trade wild native bluebells, their bulbs or their seeds.	The primary compound supports native bluebells.	It is considered likely that NRW will choose to replant the areas with Sitka spruce. We have yet to receive confirmation from NRW on their plans. However, if NRW wished to increase the ecological value of the site, it is recommended that bluebell seeds and bulbs of local provenance are planted. This could either be alongside coppiced scrub species such as hazel (<i>Corylus avellana</i>) and elder (<i>Sambucus nigra</i>), or trees such as oak (<i>Quercus</i> sp.). Planting these species would prevent bramble from becoming dominant in the understory and provide food for insects, birds and small mammals.
Nesting bird habitat (both sites)	All wild birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to take,	The plantation woodland may support nesting birds in the canopies of the trees. The felled plantation woodland may support	Any vegetation clearance required as part of the proposed works should be carried out during the winter months (October to February inclusive), when the risk of disturbing nesting birds is lowest.

¹⁸ [pmh01107bnkg-e-e.pdf \(publishing.service.gov.uk\)](https://www.gov.uk/publishing.service.gov.uk/pmh01107bnkg-e-e.pdf)

	damage or destroy the nest of any wild bird while it is in use or being built. In addition, species listed on Schedule 1 of the same act are afforded additional protection from disturbance whilst breeding.	ground nesting birds such as hen harriers. In addition, the bramble and brash piles may support common species of nesting bird.	If such works cannot avoid the breeding bird season, it is recommended that a nesting bird check is conducted on site no more than 48 hours prior to any works being undertaken. If an occupied nest is discovered, it must be left undisturbed (>5m cordon) until the chicks have fledged the nest and an ecologist has confirmed that the nest is no longer in use. This may take several weeks and will vary depending on the species. In the event that any Schedule 1 species or active Schedule 1 nest sites are identified during construction, all works must be suspended within that area and advice sought from a suitably qualified ecologist on the most appropriate course of action. The installation of two bird boxes within the Welsh Water site will mitigate for the loss of suitable nesting habitat in the short-term and provide additional nesting opportunities in the long-term once the temporary compound has been removed and succession has commenced.
Common amphibian habitat (both sites)	Common frogs and toads are only protected from trade and sale under the Wildlife and Countryside Act 1981 (as amended)	Juvenile common frogs were recorded on the access track during the walkover survey, it is likely that they are utilising small puddles/pools formed when the stream has burst its banks during heavy rainfall. It is likely that common toads will also be present in the area. There are no suitable ponds for newts within 500m of the site.	Common amphibians within the construction area will be humanely removed or relocated prior to any works taking place.
Reptile habitat (felled plantation woodland)	Common reptiles (slow worm, grass snake, common lizard and adder) are protected under the Wildlife and Countryside Act 1981 (as amended), making it illegal to intentionally kill or injure reptiles.	The felled plantation woodland habitat is suitable to support adders, grass snakes, common lizards and slow-worm throughout the year, with the roost systems, brash piles and grassy areas	Reptiles are typically active April to October (inclusive) (temperature dependent). Clearance of vegetation, log piles or tree stumps for both compound sites will be completed during this period under supervision of an ecologist. Any reptiles found will be moved to suitable adjacent habitat

		providing a variety of foraging, basking and resting opportunities. The plantation woodland may also support these species but is less suitable due to the lack of any ground flora.	The optimum timing is September and October which is after the main bird breeding season. Where felled trees are not utilised for forestry purposes, then they will be left as habitat piles adjacent to the site.
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In line with guidance on the lifespan of surveys and reports¹⁹, this report is valid for 24 months.

¹⁹ Advice Note on the Lifespan of Ecological Reports and Surveys (April 2019) CIEEM <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

Appendix A - Drawings



Cwmwernderi Reservoir - PEA

