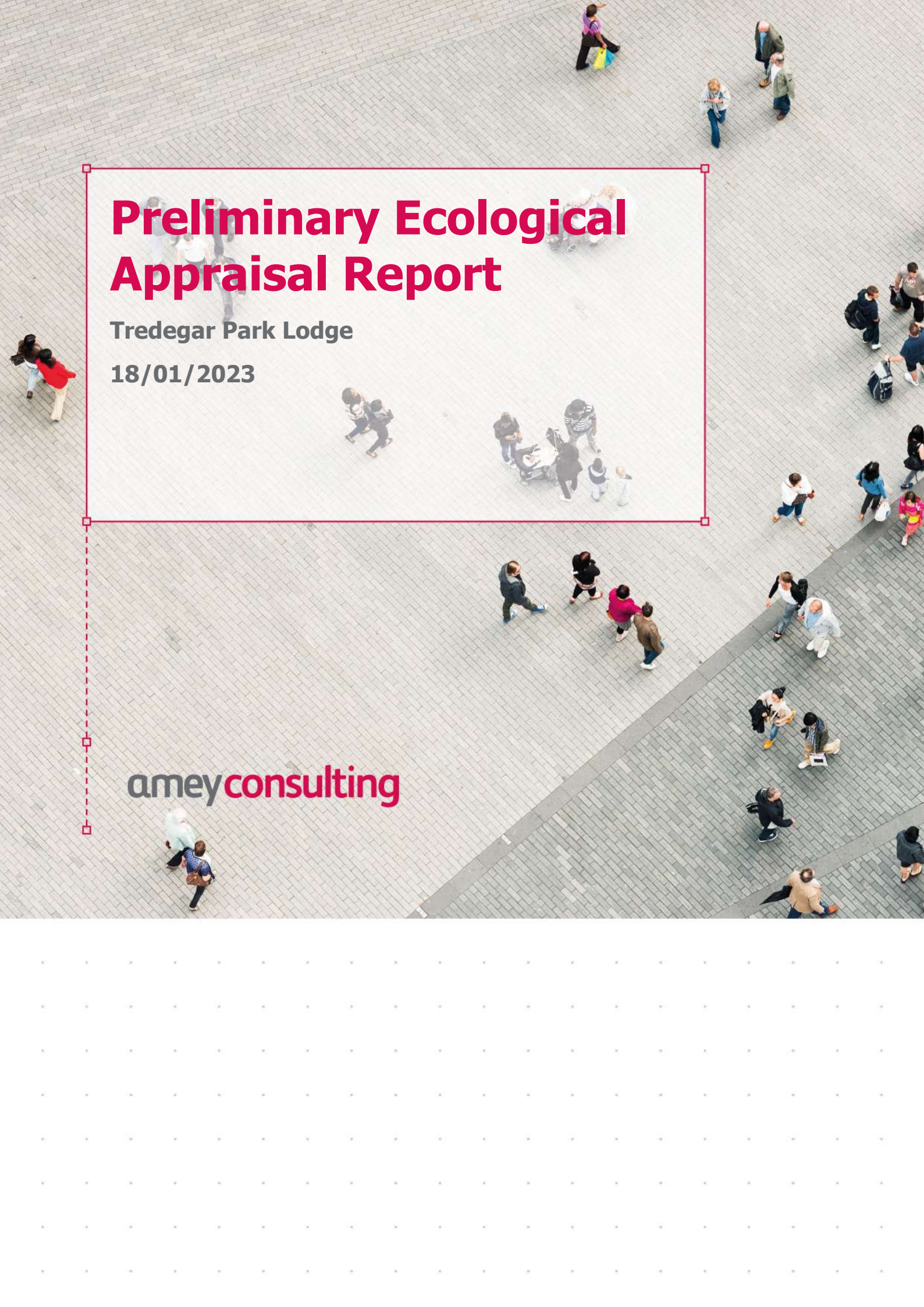




Preliminary Ecological Appraisal Report

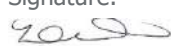
Tredegar Park Lodge

18/01/2023

ameyconsulting

Document Control Sheet

Project Name:	Tredeggar Park Lodge
Project Number:	COWCH0122
Report Title:	Preliminary Ecological Appraisal Report
Report Number:	CH0122-AMEY-EGN-XX-IE-LE-01

Issue Status/Amendment	Prepared	Reviewed	Approved
First Issue	Name: Bethan Hill Signature:  Date: 16/12/2022	Name: Andrew Bone Signature:  Date: 09/01/2023	Name: Zoë Costas-Michael Signature:  Date: 16/01/2023

Executive Summary

Purpose	In November 2022, Amey was commissioned by Newport City Council ('the client') to undertake a Preliminary Ecological Appraisal (PEA) of the Tredegar Park Lodge along the A48, hereafter referred to as 'the site' (located centrally at OS grid reference: ST 29245 85982). Proposals include refurbishment of the structures to a café.
Methods	The methods used comprised a desk study including a records centre data search (South East Wales Biodiversity Records Centre) and a field survey on 8 December 2022 to identify habitats on site and the potential for presence of protected species. The survey followed the Chartered Institute of Ecology and Environmental Management's (CIEEM) Guidelines for Preliminary Ecological Appraisal (2017) and the Phase 1 Habitat survey protocol (JNCC, 2010). The Preliminary Roost Assessment (PRA) for structures and Preliminary Ground Level Roost Assessment (PGLRA) for trees followed the guidance set out in 'Bat Surveys: Good Practice Guidelines' (Collins, 2016).
Key Issues / Interpretation	- One statutory site designated for nature conservation importance were recorded within 2km of the site. The Gwent Levels – St. Brides Site of Special Scientific Interest (SSSI) is located 1.08km to the south-east of the site at its nearest point. Due to the scope of the works, it is considered unlikely that this SSSI will be affected. - There are three non-statutory sites recorded within 1km of the site, River Ebbw Site of Importance for Nature Conservation (SINC) located approximately 0.13km to the north which is considered hydrologically connected to River Usk SSSI and Special Area of Conservation (SAC). Dependent on the works scope, this site may be negatively impacted by pollution created during the works. Gaer Fort SINC, located 0.2km to the north of the site and Gaer Pond SINC, located 0.65km to the north east of the site are unlikely to be affected by the proposals and all other designated sites are sufficiently separated from the site such that no negative impacts are expected. - The habitats recorded on site are mainly comprised of A3.1 scattered broad-leaved trees, J1.2 Amenity Grassland, A2.1 dense scrub, A3.3 line of coniferous trees, J2.4 fence, J3.6 buildings and hardstanding. The scattered broad-leaved trees and dense scrub present on site offer suitable habitat for nesting birds. - Two structures (S1 and S2) and one tree (T1) within the survey area were assessed as having bat roost potential. If works to these are required, this may negatively impact on any bats that may be roosting. - No evidence of hazel dormouse was identified and suboptimal habitat for this species was recorded onsite. - No evidence of otter was identified during the survey, however there are records of otter using the Ebbw River to the north of the site which may also be suitable for otter to establish holts and resting places. - No field evidence of badger was identified during the survey, however the habitat within the site is suitable for foraging and commuting badger. The habitat to the north may be suitable for badger sett creation. - Hedgehogs are highly likely to be present within the site boundary due to the suitability of the habitat and the presence of records. Vegetation clearance works may negatively impact on this species if present. - Habitat (grassland and scrub) and refugia (log pile) with the potential to support common reptile species were recorded within the site boundary. In the absence of mitigation any clearance of these habitats or refugia may cause the killing and/or injury of reptiles. - No invasive non-native species were recorded on site, however recent records of Himalayan balsam (<i>Impatiens glandulifera</i>) and Japanese knotweed (<i>Reynoutria japonica</i>) were recorded within 100m to the north of the site. If these species colonise the site, then in the absence of mitigation clearance of habitat containing this species may lead to the spread within the site and constitute an offence under the legislation.
Recommendations	- The removal trees on site should be minimised where possible, ideally the removal of such habitats will be avoided completely by using alternative access. If tree removal can't be avoided, then it's recommended that any trees are replaced on a 'one for one' basis as a minimum within the site or within a compensation area if not possible. - If any clearance of vegetation with the potential to support nesting birds is to be undertaken during the breeding bird season (March-August inclusive) then a suitably qualified/experienced ecologist will be required to carry out a nesting bird check before works can proceed. - If the removal of the tree with moderate bat roost potential is required (T1), then one dusk emergence and one dawn re-entry survey on the tree will be required between May and September to determine the presence / likely absence of roosting bats. Prior to refurbishment of the structures with high roosting potential (S1 and S2) on site, then bat hibernation surveys will be required (November-March inclusive). - The use of artificial lighting should be avoided in order to minimise disturbance to bats, otter and badger which may be using the site. If artificial lighting is unavoidable, then a sensitive lighting scheme shall be designed and implemented for the proposed development. - Should hedgehogs be discovered during the works then they should be moved to a safe and suitable location and covered over. General construction safeguards for otter, badger and other mammals are also recommended. - If the clearance of habitat and refugia piles with potential to support common reptile species is required, then it must be carried out under a precautionary method statement under the supervision of an ecologist. - Recommended enhancements comprise planting native trees and shrubs of local provenance on site after construction, creation of refugia piles and installation of bat and bird boxes within suitable retained trees. These recommendations are considered proportionate for the proposed development and will maximise opportunities to achieve a net gain in biodiversity.

Contents	
Tables	4
1. Introduction	5
1.1. Background	5
1.2. Site Description	5
1.3. Proposed Works.....	5
1.4. Purpose of this Report.....	5
2. Legislation and Policy Framework	5
2.1. Relevant Legislation	5
2.2. National Planning Policy	6
2.3. Local Planning Policy	6
3. Methods.....	7
3.1. Desk Study.....	7
3.2. Field Survey	7
3.3. Limitations	9
4. Results	10
4.1. Desk Study.....	10
4.2. Field Survey	13
5. Interpretation and Assessment	14
5.1. Ecological Designations	14
5.2. Habitats	14
5.3. Protected Species	15
5.4. Invasive Non-Native Species	18
6. Recommendations	18
6.1. Ecological Designations	18
6.2. Habitats	18
6.3. Protected Species	19
6.4. Invasive Non-Native Species	21
6.5. Enhancements.....	21
7. References	21
Appendix A: Wildlife Legislation	23
Nesting Birds	23
Bats	23
Dormouse.....	24
Otter	24
Water Vole.....	25

Badger	25
Reptiles	25
Great Crested Newt	26
White-clawed Crayfish	26
Appendix B: Figures	27
Appendix C: Target Notes	28
Appendix D: Species Lists	29
Appendix E: Photographs.....	31

Tables

Table 1: Summary of Relevant Local Planning Policy - Newport City Council	7
Table 2: BCT Guidelines for Assessing the Potential Suitability of Trees or Structures for Roosting Bats.....	9
Table 3: Statutory Designated Sites within 2km of the Site.....	10
Table 4: Non-statutory Designated Sites within 1km of the Site	10
Table 5: Waterbodies within 0.25km of the Site	11
Table 6: Phase 1 Habitat Classifications (JNCC, 2010).....	13
Table 7: Structures and Trees with Bat Roost Potential within the Site	14
Table 8: Recommendations for Structures and Trees with Bat Roost Potential	20

1. Introduction

1.1. Background

In October 2022, Amey was commissioned by Newport City Council ('the client') to undertake a Preliminary Ecological Appraisal (PEA) of Tredegar Park Lodge, Newport, hereafter referred to as 'the site'. Proposals include renovation of the current structures for the change of use to a café.

This report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) guidance document 'Guidelines for Preliminary Ecological Appraisal - Second Edition' (CIEEM, 2017). It provides an initial ecological overview of the site, including a description of the ecological receptors within the Zone of Influence (ZoI) (see Section 3). The potential ecological impacts of the current proposals are assessed, and recommendations are made for further surveys and/or mitigation where necessary.

1.2. Site Description

The site is situated to the west of Newport in an area named Maesglas and is located centrally at grid reference: ST 29245 85982. The site comprises a section of the existing Tredegar Park, north of the A48 Dock's Way road.

The site is bordered to the east by Tredegar Park sports grounds and to the west by a hardstanding car park. To the north of the site lies Tredegar Park and further afield the Ebbw River.

1.3. Proposed Works

The proposed works involve the renovation of the onsite buildings for change of use as a café. The renovation will include replacing existing doors and windows and repairs to the masonry walls. The existing roofs may be replaced subject to structural investigation.

The works are anticipated to require vegetation clearance within the site which will include the area of scrub to the east of building B1. No removal of trees or works within the root protection zones (RPZ) of trees on site will be required.

1.4. Purpose of this Report

This report aims to provide a preliminary ecological assessment of the proposed development based on current design plans with the purpose of informing the detailed design stage of any potential ecological issues.

2. Legislation and Policy Framework

2.1. Relevant Legislation

The Wildlife and Countryside Act 1981 (WCA) (as amended) is a significant piece of legislation within the UK which consolidates (and amends) existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Birds Directive in the UK. It is complemented by The Conservation of Habitats and Species 2017 (as amended) which consolidates all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994. These are transposed into UK law by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the European Union Withdrawal Act 2018 following Brexit. These regulations transposed the Habitats Directive listed above into National Law. Under the Regulations, Competent Authorities have a general duty in the exercise of any of their functions to have regard to the EC Habitats Directive. The Habitats Regulations define a "Competent Authority", as a Minister, a government office, a statutory undertaker or public body.

Under the Environment (Wales) Act 2016 public bodies, including Local Authorities are required 'to seek to maintain and enhance biodiversity in Wales' when carrying out their normal functions. Under Section 7 a list

of species and habitats of 'principal importance to the conservation of biodiversity in Wales' was drawn up which acts as an aid to guide public bodies in implementing their duty.

Further species-specific legislation is provided in Appendix A.

2.2. National Planning Policy

Planning Policy Wales (PPW) Edition 11 (2021) outlines the land use planning policy for Wales set out by the Welsh Government. It provides a framework for the effective preparation of Local Planning Authorities' development plans. This is supplemented by twenty-one topic based Technical Advice Notes (TAN). In particular TAN 5 - Nature Conservation and Planning provides advice about how the land use planning system should underwrite the protection and enhancement of biodiversity and geological conservation.

PPW 11 seeks to sustain and create places in which:

- The role which landscapes, the historic environment, habitats and biodiversity, the characteristics of coastal, rural or urban environments play in contributing to Distinctive and Natural places are identified, understood, valued, protected and enhanced;
- Further fragmentation of habitats is avoided, wherever possible, and green networks, corridors and connecting habitat within developed areas is protected, and enhanced;
- Sites designated for their landscape or nature conservation importance are fully considered and their special characteristics and features protected and enhanced, whilst the network of sites should be recognised as being at the heart of improving the resilience of ecosystems; and
- Opportunities in all areas to improve the resilience of ecosystems are taken by addressing building on floodplains, diffuse pollution, soil compaction and sealing, ensuring the protection of peat resources and improving approaches to coastal flood defence in urban areas and coastal margins.

2.3. Local Planning Policy

Newport City Council's Local Development Plan 2011-2026 (adopted January 2015) details policies which will be used to determine the planning framework throughout the County Borough. Table 1 details policies which are relevant to the proposed development.

Policy	Description
Policy GP5 – Natural Environment	Development will be permitted where, as applicable: ▪ The proposals are designed and managed to protect and encourage biodiversity and ecological connectivity, including through the incorporation of new features on or off site to further the UK, Welsh and/or Newport Biodiversity Action Plans; ▪ The proposals demonstrate how they avoid, or mitigate and compensate negative impacts to biodiversity, ensuring that there are no significant adverse effects on areas of nature conservation interest including international, European, national, Welsh Section 42 and local protected habitats and species, and protecting features of importance for ecology; ▪ The proposal will not result in an unacceptable impact on water quality; ▪ The proposal should not result in the loss or reduction in quality of high quality agricultural land (Grades 1, 2 and 3a); ▪ There would be no unacceptable impact on landscape quality; ▪ The proposal includes an appropriate landscape scheme, which enhances the site and the wider context including green infrastructure and biodiversity networks; ▪ The proposal includes appropriate tree planting or retention where appropriate and does not result in the unacceptable loss of or harm to trees, woodland or hedgerows that have wildlife or amenity value.
Policy CE3 – Environmental	In and adjoining the urban and village areas, and in areas identified for comprehensive development, sites having existing importance for their visual qualities, as wildlife habitats or

Policy	Description
Spaces and Corridors	for recreational or amenity purposes, will be safeguarded as “environmental spaces and corridors”. Development in these spaces will be permitted only where: ▪ The existing or potential environmental qualities of the site will be improved or complemented; ▪ There is no adverse impact on international, European, national, regional or local nature conservation interest; ▪ There is not a loss, without appropriate replacement, of a recreational, open space, or amenity resource for the immediate locality unless it can be demonstrated that there is an excess of provision or facilities can be enhanced through development of a small part of the site. Proposals to enhance or improve existing environmental space provision will be encouraged where practicable. Additional provision will be sought in areas where a deficit has been identified.
Policy CE8 – Locally Designated Nature Conservation and Geological Sites	Proposals affecting locally designated sites will only be permitted where: ▪ There would be no overall loss of the nature conservation resource for which the site has been designated; ▪ There would be no significant adverse effect on the geological interest of the site; ▪ Appropriate mitigation or compensatory measures can be achieved.

Table 1: Summary of Relevant Local Planning Policy - Newport City Council

3. Methods

3.1. Desk Study

A desk study providing a review of existing information about the habitats and protected species present was undertaken. This involved a data search request to South East Wales Biodiversity Records Centre (SEWBReC) on 9 December 2022 for protected and priority species and statutory designated sites present within 2km of the site boundary and non-statutory designated sites and invasive species present within 1km.

These search buffers are considered to be sufficient to cover the potential zone of influence of the proposed works. The relevance of the reasons for designation of the protected sites within 2km of the site boundary have been considered during subsequent assessment of whether the proposed development will have any impact upon the biological integrity of such sites and species.

The desk study also included the following sources:

- Multi-Agency Geographic Information for the Countryside (MAGIC) (<http://www.magic.gov.uk>);
- Lle.gov.wales (Ancient Woodland Inventory 2011);
- Joint Nature Conservation Committee (JNCC) (<http://jncc.defra.gov.uk>); and
- A review of OS mapping for waterbodies within 0.25km of the site.

3.2. Field Survey

Phase 1 Habitat Survey

An Extended Phase 1 Habitat survey of the site was conducted by Amey Ecologists Oscar Sizer BSc (hons) and Dylan Owen BSc Msc on 8 December 2022. Weather conditions on the day of survey were dry and cool (10°C).

The Phase 1 survey was conducted following the methods outlined in the Joint Nature Conservation Committee (JNCC)'s 'Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit' (JNCC, 2010). Habitats within the site were classified and mapped, and species lists were taken for each habitat. Plant species

nomenclature follows Stace (2019). Species identified from each habitat type within the survey area were recorded and their abundance assessed using the DAFOR scale:

D – Dominant;

A – Abundant;

F – Frequent;

O – Occasional; or

R – Rare.

All habitats with the potential to support rare, protected, or otherwise notable species of flora or fauna (together with any direct signs) were noted. A habitat map was drawn up including target notes that highlight any features of ecological interest.

Additionally, plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and/or Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019, were searched for during the survey.

Preliminary Roost Assessment / Preliminary Ground Level Roost Assessment

The Preliminary Roost Assessment (PRA) for structures and the Preliminary Ground Level Roost Assessment (PGLRA) for trees were carried out in accordance with best practice guidance set out in 'Bat Surveys - Good Practice Guidelines' (Collins, 2016). This survey assessed the potential of a structure or tree to support a bat roost. This involved a systematic search of structures for potential or actual bat access points and/or any evidence of bats. Suitable features that bats may use within structures include:

- gaps or cracks in stone or masonry (missing mortar or bricks / stones);
- gaps between two adjoining structures (i.e. new and old bridge sections);
- gaps underneath parapets;
- externally accessible void space; and
- any other crevices such as beneath lights, signs or pipework.

Within trees, this involved an external inspection of Potential Roost Features (PRFs) and/or any evidence of bats. PRFs that may be used by bats include:

- woodpecker holes;
- rot holes;
- hazard beams;
- partially detached bark;
- knot holes arising from naturally shed branches;
- other holes or cavities, including butt rot;
- double leaders forming compression forks;
- gaps between overlapping stems or branches;
- cankers; and
- partially detached ivy with stem diameter in excess of 50mm.

Signs of a bat roost, besides the actual presence of bats includes:

- bat droppings;
- odour;
- audible squeaking at dusk or in warm weather; and
- staining.

Using the above, the trees or structures were then evaluated and assessed as negligible, low, moderate or high suitability to support roosting bats as per the BCT guidelines (Collins, 2016) described in Table 2 below.

Suitability	Description of Roosting Habitats
Negligible	Negligible potential roost sites within a tree or structure likely to be used by roosting bats.
Low	A tree or structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A tree or structure 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 – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A tree or 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 potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Table 2: BCT Guidelines for Assessing the Potential Suitability of Trees or Structures for Roosting Bats

3.3. Limitations

The extended Phase 1 Habitat survey was undertaken in December, which is outside the peak flowering season for some plant species. Therefore, the species list provided should not be considered exhaustive. However, this is not considered to be a significant limitation, as sufficient numbers of species were identified to appropriately assess the habitat types on site.

SEWBrEC can only provide information based on the biological records that they hold. The absence of records for a species does not necessarily indicate that the species itself is absent, merely that the biological records centres have not received records for it.

The Chartered Institute of Ecology and Environmental Management (CIEEM) issued advice on the lifespan of ecological reports and surveys in 2019. Whilst this will vary on a case-by-case basis, this survey report is likely to be valid for 18 months. After this time, a professional ecologist should be consulted on the validity of this report.

4. Results

4.1. Desk Study

Sites Designated for Nature Conservation Importance

There is one statutory site designated for nature conservation located within 2km of the site boundary, as described in Table 4 below (refer to Appendix B Figure, Designated Sites).

Site Name	Designation	Reason for Designation	Distance from Site (km)
Gwent Levels – St. Brides	Site of Special Scientific Interest	St Brides area supports a number of interesting plant species notably thread-leaved water-crowfoot (<i>Ranunculus trichophyllus</i>) and small pondweed (<i>Potamogeton berchtoldii</i>). This area also supports rich invertebrate communities with a number of nationally notable and notable marshland species, e.g. the true fly (<i>Chrysogaster macquarti</i>) and the beetle (<i>Hydaticus transversalis</i>). It's the only area on the Gwent Levels where the rare fly (<i>Stenomicroa coganii</i>) has been recorded.	1.08km to the south-east

Table 3: Statutory Designated Sites within 2km of the Site

There are three non-statutory sites designated for nature conservation located within 1km of the site boundary, as described in Table 4 below (refer to Appendix B Figure, Designated Sites).

Site Name	Designation	Reason for Designation	Distance from Site (km)
Ebbw River / Afon Ebbw	Site of Importance for Nature Conservation (SINC)	This river has been designated due to its H15 – major river system with associated semi-improved neutral grassland and marshy grassland, swamp and semi-neutral woodland. Species associated with the river include bulbous foxtail (<i>Alopecurus bulbosus</i>) near confluence with Usk, kingfisher, sand martin (<i>Riparia riparia</i>) and grass snake (<i>Natrix helvetica</i>).	0.13 km to the north
Gaer Fort	SINC	Large mosaic area of unimproved and semi-improved acid grassland with areas of lowland heath, bracken and scrub. Large population of yellow meadow ant (<i>Lasius flavus</i>).	0.2km to the north
Gaer Pond	SINC	Suburban pond with tall swamp vegetation and Nationally Scarce fly species (<i>Typhamyza bifasciata</i>)	0.65m to the north east

Table 4: Non-statutory Designated Sites within 1km of the Site

Ancient Woodland Inventory

A search of the ancient woodland inventory indicates that there are 11 ancient woodlands within 1km of the site, comprising 10 Ancient Semi-Natural Woodlands (ASNW) and one Plantation on Ancient Woodland Site (PAWS). The nearest such site is an ASNW located 0.15km north of the site.

Waterbodies

A search of OS mapping indicates that there are four waterbodies located within 0.25km of the site, as described in Table 5 below.

Waterbody	Description	Distance from Site (km)
Tredegar Park pool	A childrens pool located to the west of the site named 'peanut bowl'.	0.07km to the west of the site
Lake Feeder stream	A small stream which runs adjacent to the north of the A48 which runs to the Tredegar Park Lake.	0.1km to the west of the site
Ebbw River / Afon Ebbw	A section of the Ebbw River which runs to the north of the site.	0.13km to the north of the site
Unnamed Stream	A small stream which runs to the east feeding into a small section of land to the south of the A48 roundabout.	0.15km to the south of the site

Table 5: Waterbodies within 0.25km of the Site

There is one waterbody identified within 0.25km which comprises a children's swimming pool.

Biological Records

Birds

Records of 11 bird species listed on Schedule 1 of the WCA 1981 (as amended) were recorded within 1km of the site comprising: garagney (*Anas querquedula*), kingfisher, Mediterranean gull (*Larus melanocephalus*), redwing (*Turdus iliacus*), fieldfare (*Turdus pilaris*), purple heron (*Ardea purpurea*), brambling (*Fringilla montifringilla*), peregrine (*Falco peregrinus*), black-tailed godwit (*Limosa limosa*), Cetti's warbler (*Cettia cetti*) and barn owl (*Tyto alba*). The closest records are for kingfisher, Mediterranean gull and fieldfare, located approximately 0.5km to the south of the site associated with Tredegar Park.

Records of a further 14 bird species listed as Species of Principal Importance under Section 7 of the Environment Wales Act (2016) were recorded within 1km of the site and included: Eurasian bullfinch (*Pyrrhula pyrrhula*), house sparrow (*Passer domesticus*), dunnock (*Prunella modularis*), black headed gull (*Chroicocephalus ridibundus*), spotted flycatcher (*Muscicapa striata*), starling (*Sturnus vulgaris*), song thrush (*Turdus philomelos*), lapwing (*Vanellus vanellus*), curlew (*Numerius arquata*), reed bunting (*Emberiza schoeniclus*), herring gull (*Larus argentatus*), skylark (*Alauda arvensis*) and kestrel (*Falco tinnunculus*). The closest records are for black headed gull, starling and herring gull, located approximately 0.5km to the south of the site associated with Tredegar Park.

Bats

There were 21 records of bat species returned within 1km of the site. Species comprised: bat species (*Chiroptera sp*), soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*), nathusius pipistrelle (*Pipistrellus nathusii*), noctule bat (*Nyctalus noctula*), Daubenton's bat (*Myotis daubentonii*), brown long-eared bat (*Plecotus auritus*) and whiskered bat (*Myotis mystacinus*). The closest record was a Soprano Pipistrelle located approximately 0.25km to the north of the site.

No records of bat roosts were returned from within 1km of the site.

Hazel Dormouse

No records of hazel dormouse (*Muscardinus avellanarius*) within 1km of the site were returned from the data search.

Otter

Six records of otter were returned within 1km of the site, with the closest records dating from 2022 recorded 0.6km south west of the site. Records included otter sightings, spraints and slides.

Water Vole

No records of water vole (*Arvicola amphibius*) were returned within 1km of the site.

Badger

No records of badger (*Meles meles*) were returned within 1km of the site.

Hedgehog

There were 14 records of west European hedgehog (*Erinaceus europaeus*) from within 1km of the site. The closest record is located approximately 0.48km to the south of the site dated from 2016.

Reptiles

There were 30 records for reptiles returned within 1km of the site. These included slow worm (*Anguis fragilis*) and common lizard (*Zootoca viviparus*) returned within 1km of the site. The closest record was a slow worm located approximately 0.26km to the north of the site, recorded in 2021.

Amphibians

No records of great crested newt (*Triturus cristatus*) were returned within 1km of the site.

Two records of common amphibian species were returned within 1km of the site which included common frog (*Rana temporaria*) and common toad (*Bufo bufo*) were returned within 1km of the site.

White-clawed Crayfish

No records of white-clawed crayfish (*Austropotamobius pallipes*) were returned within 1km of the site.

Fish

There were records of one fish species returned within 1km of the site; European eel (*Anguilla anguilla*) which is listed as a Species of Principal Importance under Section 7 of the Environment Wales Act (2016). The closest record was located approximately 0.16km to the north of the site.

Invertebrates

There were records of 12 species of terrestrial invertebrate within 1km of the site which are listed as Species of Principal Importance under Section 7 of the Environment Wales Act (2016). These species were comprised: small heath (*Coenonympha pamphilus*), brown-banded carder bee (*Bombus humilis*), blood vein (*Timandra comae*), goat moth (*Cossus cossus*), dusky thorn (*Ennomos fuscantaria*), small square-spot (*Diarsia rubi*), cinnabar (*Tyria jacobaeae*), autumnal rustic (*Eugnorisma glareosa*), sallow (*Cirrhia icteritia*), mottled rustic (*Caradrina morpheus*), small emerald (*Hemistola chrysoprasaria*) and oak hook-tip (*Watsonalla binaria*). The closest of which is for small heath located approximately 0.18km to the north west of the site recorded in 2021.

Flora

Two records of bluebell (*Hyacinthoides non-scripta*) were returned within 1km of the site, the closest record returned approximately 0.5km to the north of the site which is listed under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended).

No records were returned of plants listed as Species of Principal Importance under Section 7 of the Environmental Wales Act (2016) within 1km of the site.

Invasive Non-native Species

There were records of three invasive non-native species plant species within 1km of the site which comprised: Japanese knotweed (*Reynoutria japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*). Both Himalayan balsam and giant hogweed are listed on The Invasive Alien Species Order 2019. Whilst Japanese knotweed is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The closest record of which is Japanese knotweed located 0.1km to the northwest of the site recorded in 2012.

4.2. Field Survey

Phase 1 Habitat Survey

The habitats found on site are described in Table 6 below, and the distribution of these habitats is shown on the Phase 1 Habitat Map (refer to Appendix B). This map includes a red indicative site boundary and a blue extended survey area boundary, which shows the habitats adjacent to the site that may be impacted by works and were therefore included in the survey. Target notes are available in Appendix C, with species lists and photographs of each habitat type provided in Appendices D and E.

JNCC Code	Habitat Classification	Description
A2.1	Dense Scrub	Dense scrub (Photo 1-2) constituted a large section of the site to the east and south. The area was dominated by bramble (<i>Rubus fruticosus</i>) and included occasional species such as cherry laurel (<i>Prunus laurocerasus</i>), holly (<i>Ilex aquifolium</i>), ivy (<i>Hedera helix</i>) and rowan (<i>Sorbus aucuparia</i>).
A3.1	Scattered Broadleaved Trees	There were a number of scattered broadleaved trees present on site (Photo 3-8). Species on site comprised of silver birch, crab apple (<i>Malus sylvestris</i>) (see Table 7), Portuguese laurel (<i>Prunus lusitanica</i>) and wild cherry (<i>Prunus avium</i>).
A3.3	Line of Coniferous trees	To the north east of the site lies a line of coniferous tree comprising <i>Cypress sp.</i> (Photo 9).
J1.2	Amenity Grassland	There was a small, sparse section of amenity grassland to the west of the site (Photo 10). Species present included chickweed (<i>Stellaria media</i>), red deadnettle (<i>Lamium purpureum</i>) and dandelion sp. There were four areas of amenity grassland present on site. All areas were comprised of the same species composition (Photo 11). The parcels were dominated by perennial ryegrass (<i>Lolium perenne</i>) with abundant white clover (<i>Trifolium repens</i>), frequent common daisy (<i>Bellis perennis</i>), dandelion (<i>Taraxacum agg.</i>), yarrow (<i>Achillea millefolium</i>) and cow parsley (<i>Anthriscus sylvestris</i>) and occasional red dead nettle (<i>Lamium purpureum</i>), sun spurge (<i>Euphorbia helioscopia</i>), creeping buttercup (<i>Ranunculus repens</i>), pineappleweed (<i>Matricaria discoidea</i>), ribwort plantain (<i>Plantago lanceolata</i>), broadleaved plantain (<i>Plantago major</i>), Yorkshire fog (<i>Holcus lanatus</i>) and silver birch (<i>Betula pendula</i>).
J2.4 / J2.5	Fence / Wall	To the south west corner of the site, a brick wall approximately 0.2m high with a metal fence above was present (Photo 12).
J3.6	Buildings and hardstanding	Two buildings were present on site structures S1 and S2. S1 (TN1) (Photo 13-16) is located to the south west of the site and is a disused gate keepers lodge. S2 is located to the north of the site and is a disused park rangers storage room.

Table 6: Phase 1 Habitat Classifications (JNCC, 2010)

Incidental Records

Incidental record during the survey included a magpie (*Pica pica*). Two unidentified bird nests (TN3) (Photo 21-22) were also recorded within a crack in the wall on the northern aspect of building S2.

A large pile of logs (TN4) was recorded within the amenity grassland to the north west of the site, which could act as refugia for reptiles, amphibians and mammals.

Preliminary Roost Assessment / Preliminary Ground Level Roost Assessment

The PRA/PGLRA identified two structures and one tree within the site with suitability to support roosting bats, as described in Table 7 below and shown in Appendix B (Phase 1 Habitat Map). Photographs are provided in Appendix E.

Structure/ Tree ID	Grid Reference	Description and Potential Roost Features (PRF's)	Bat Roost Potential
S1	ST 29214 85964	Two-storey brick detached structures with concrete pitched roof tiles. The bottom windows were covered with metal panelling and the top windows covered by cork panels. Potential Roost Features included a lifted tile above the door on the east facing aspect, on the south facing aspect tiles were missing on the right-hand side and corner tiles missing on the left hand side which may lead up into the roof void. West facing, there were two large gaps from missing ventilation systems which provided access directly through to the rooms and a wall cavity. Facing north a gap was present behind the drainage with missing tiles. Loft space present with open hatch, unable to be accessed.	High
S2	ST 29243 85991	Single-storey brick structure with concrete tiles on the pitched roof. The western facing aspect has a number of lifted tiles and a gap in the brick work. Ivy heavily covers sections of the roof, which could be concealing potential bat roosting features. The southern facing aspect additionally has lifted tiles and gaps in the brickwork. The eastern facing aspect includes lifted tiles, ivy coverage. Two disused birds nests were identified within gaps in the brickwork.	High
T1	ST 29215 85963	The tree is a single-stemmed, semi-mature crab apple. The feature of interest is a pruning cut caused from a potential tear out located approximately 4m high and faces towards the south west. The cavity extends into the trunk, with the opening approximately 15cm in length and 30cm deep.	Moderate

Table 7: Structures and Trees with Bat Roost Potential within the Site

5. Interpretation and Assessment

5.1. Ecological Designations

The Ebbw River / Afon Ebbw is located 0.13km to the north of the site and is designated as a non-statutory SINC. The river connects to the River Usk / Afon Wysg SAC & SSSI, located to the south east of the site. Given the nature of the proposals it is unlikely that the SINC will be affected, however any potential run off from construction could impact the river in the absence of mitigation.

All other statutory and non-statutory designated sites are sufficiently separated from the site that no negative direct or indirect impacts on their reasons for designation are expected as a result of the proposed works.

5.2. Habitats

No habitats within the site qualify under Section 7 as Habitats of Principal Importance.

No waterbodies or watercourses are present onsite, however there are two located within 100m of the site as such any potential run off from construction could affect the watercourses in the absence of mitigation. See section 6.1 for pollution prevent measures from chemical, silt or dust pollution.

5.3. Protected Species

Birds

The scattered broadleaved trees, scattered coniferous trees, dense scrub and buildings within the site all provide suitable habitat for common species of nesting birds. In addition, two disused passerine birds nests located where cement has chipped away creating gaps in the soffits of structure S2 at the time of survey. Therefore, the works may have a negative impact of any birds that are nesting if vegetation clearance or works to the structures is required during the nesting bird season (March to August inclusive). If repair works to S2 are to be undertaken during the nesting bird season then mitigation will have to be undertaken by a competent ecologist. Though it should be noted that some species of bird could use to building to nest year round such as pigeon.

No evidence of Schedule 1 bird species was recorded on the day of the survey. The nearest record of Schedule 1 bird species was for fieldfare, Mediterranean gull and kingfisher located approximately 0.5km to the south of the site associated with Tredegar House. Due to the composition of the site, it is considered unlikely that this Schedule 1 species would be nesting within the site, although other common species may be present.

All wild birds, their nests, eggs and dependent young are afforded protection under the Wildlife and Countryside Act 1981 (as amended). Bird species listed on Schedule 1 of this legislation are afforded additional protection which makes it an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest.

Bats

The scattered broad-leaved trees within the site boundary all provide an excellent foraging resource for bats, with the Ebbw River to the north of the site acting as a linear corridor for commuting bats and a foraging resource. The adjacent habitat to the north, east and west are mostly unlit and are connected to suitable foraging habitat in the wider landscape, such as the grassland within Tredegar park sports ground and the woodland and river present to the north. The A48 to the south of the site is mostly lit and some species of bat may make use of the lighting for foraging such as pipistrelle species. A total of 30 records of bats were returned within 2km of the site, with the nearest record for soprano pipistrelle bat located approximately 0.25km to the north of the site.

There were a total of two structures (S1, S2) and one tree (T1) recorded within the survey area that were assessed as having suitability to support roosting bats (refer to Table 7). Therefore, works to any of the structures may negatively impact on this species group and any bat roosts that may be present. If artificial lighting is required for the proposed development, this could have a long-term direct impact on bat commuting, feeding and emergence behaviour in the area (Mitchell-Jones, 2004), though as above, some species may use this to their advantage when foraging.

All UK bat species are protected under Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2017. This makes it an offence to deliberately capture, injure or kill a bat or to intentionally or recklessly disturb bats. It is also illegal to damage, destroy or intentionally or recklessly obstruct access to a breeding or resting place used by a bat.

Any activity that would result in a contravention of the above legislation would likely require a European Protected Species Licence (EPSL) from Natural Resources Wales (NRW). Works and/or mitigation activities involving disturbance to bats or bat roosts must be carried out by a licensed bat worker or accredited agent.

Hazel Dormouse

No records of hazel dormouse were returned within 2km of the site boundary. The habitats on site are suboptimal for dormouse and lack connectivity to surrounding arboreal habitats with offsite habitats such as the river to the north acting as dispersal barriers for this species. As such it is considered unlikely that dormouse is present on site and will be impacted by the proposed works and as such this species will not be considered further in this report.

The hazel dormouse is protected under Schedules 5 and 6 of the Wildlife and Countryside Act (1981) as amended and Schedule 2 of the Conservation of Habitats and Species (EU Exit) Regulations (2017) as amended. This makes it an offence to deliberately capture, injure or kill a dormouse or to intentionally or recklessly disturb a dormouse. It is also illegal to damage, destroy or intentionally or recklessly obstruct access to a breeding or resting place used by a dormouse.

Any activity that would result in a contravention of the above legislation would likely require an EPSL from NRW. Works and/or mitigation activities involving disturbance to dormouse or dormouse nests must be carried out by a dormouse survey licence holder or accredited agent.

Otter

No evidence of otter was recorded within the site boundary; however the offsite Ebbw river is considered suitable to support foraging and commuting otter. A total of 10 records of otter were returned within 2km of the site, with the nearest record located approximately 0.6km to the south west of the site. Two of which were returned on the Ebbw River.

The Ebbw River SINC within 1km of the site is known to support otter. Though the river is located 0.13km to the north of the site. The River acts as a foraging resource and commuting site for otter. The dense scrub on site may provide suitable habitat for otter to establish holts and resting places, though this is unlikely due to the sites location within an active park and being located adjacent to the A48.

The otter is protected under Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2017). This makes it an offence to intentionally or recklessly capture, injure or kill an otter or to intentionally or recklessly disturb an otter. It is also illegal to intentionally damage, destroy or obstruct access to a breeding or resting place used by an otter. Any activity that would result in a contravention of the above legislation would likely require an EPSL from NRW.

Water Vole

No evidence of water vole was recorded within the site boundary. No recent records were returned from within 2km of the site. Although the River Usk / Afon Wysg SAC & SSSI located 2.4km east of the site is known to support populations of water vole. The Ebbw River lacks bank vegetation required for water vole populations, additionally no data records of water vole were returned from the Ebbw River. The habitats identified on site are unsuitable for water vole due to the lack of a water source and steep banks for burrows. Due to the distance from the River Usk and the lack of suitable habitat on site, it is considered unlikely that water vole will be impacted by the proposed works and this species will not be considered further in this report.

The water vole is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure or take a water vole; possess or control a live or dead water vole; intentionally damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection, or disturb water voles using such a place. Any activity that would result in a contravention of the above legislation would likely require a development licence from NRW.

Badger

No badger setts or evidence of badger was recorded within the site boundary. One record of badger was returned within 2km of the site, located approximately 1.8km to the north west of the site. Suitable habitat is located to the south and north of the site in the form of woodland and parkland. The areas of amenity grassland on site are considered suitable for commuting and foraging badger as well as using edge habitat for sett creation. Additional suitable areas of woodland for sett creation are present outside of the site located to the north of the Ebbw river, which is considered a major barrier for badger to commute and forage within the site.

Badgers are protected under the Protection of Badgers Act 1992. This makes it an offence to wilfully capture, injure, kill or ill-treat a badger, or possess a dead badger or any part of a badger. It is also illegal to damage, destroy or obstruct access to their setts or disturb a badger whilst it is occupying a sett. Any activity that would result in a contravention of the above legislation would likely require a development licence from NRW.

Hedgehog

There were 108 records of hedgehog returned within 2km of the site, with the nearest record located approximately 0.48km to the south of the site dated from 2016. The neutral semi-improved grassland recorded within the site offers suitable habitat for foraging and commuting hedgehogs, while the scrub and log pile (TN4) (Photo 23) identified on site also offer suitable refugia and nesting habitat. The site is also connected to the wider area to the west, north and east comprising woodland and amenity grassland present within Tredegar park sports ground. As such, it is considered likely that hedgehog are present within the site. In the absence of mitigation, vegetation clearance works or the use of machinery may negatively impact on this species should they be present.

Hedgehog is listed as a Section 7 Species of Principal Importance under the Environment (Wales) Act 2016. This species is listed for the purpose of conservation of biodiversity in Wales.

Reptiles

A total of 48 records of reptiles returned within 2km of the site, including common lizard, grass snake and slow-worm, with the nearest record for slow worm located approximately 0.26km to the north of the site. The amenity grassland and dense scrub recorded on site provide suitable habitat for common reptile species during the active season, while the dense scrub and a log pile (TN4) recorded within the amenity grassland habitat to the north west of the site may also provide shelter and hibernacula for reptile species. Therefore, common species of reptile are likely to be present within the site boundary. In the absence of mitigation, any clearance of these habitats and/or removal of potential refugia piles may negatively impact on this species group.

All UK reptile species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to kill or injure any wild reptile listed on this Schedule including the common reptile species slow-worm, common lizard, grass snake and adder.

Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) receive additional legal protection under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2017). This makes it an offence to deliberately capture, injure or kill either of these species or to disturb, damage, obstruct access to or destroy any place used for shelter or protection. Smooth snake and sand lizard do not occur in this part of Wales and are not considered further in this report.

Amphibians

There were no records of great crested newt returned within 2km of the site. The section of the Ebbw River which runs 0.13km to the north of the site is fast flowing, contains fish and likely waterfowl which is unsuitable for great crested newt. Although there are other watercourses present within 0.25km of the site (Table 6) located to the south, they are separated from the site by the A48 which is considered as a major barrier for dispersal and additionally are flowing deeming them unsuitable for great crested newt. There is one waterbody present approximately 0.07k to the west of the site, though in the form of a children's pool. This pool is likely to be chlorinated and therefore unsuitable for great crested newts or other amphibians. No standing water is present within the site, therefore it is unlikely that great crested newt are present within the site.

The clearance of vegetation on site required to facilitate the works is anticipated to be minimal and will mostly include the neutral semi-improved grassland and dense scrub adjacent to the structures S1 and S2. It's considered highly unlikely that great crested newt are present within the site. Therefore, this species will not be considered further in this report. Common amphibian species however may be present within the grassland, scrub within the site boundary.

The great crested newt is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2017) This makes it an offence to intentionally or recklessly capture, injure or kill a great crested newt or to intentionally or recklessly disturb a great crested newt. It is also illegal to intentionally damage, destroy or obstruct access to a breeding or resting place used by a great crested newt. Any activity that would result in a contravention of the above legislation would likely require an EPSL from NRW. Works and/or mitigation activities involving disturbance to great crested newt or its habitat must be carried out by a great crested newt survey licence holder or accredited agent.

Common toad is listed as a Section 7 Species of Principal Importance under the Environment (Wales) Act 2016. This species is listed for the purpose of conservation of biodiversity in Wales.

Fish

There were records of fish returned within 2km of the site, the closest record for European eel located approximately 0.13km to the north of the site. It is considered that fish are present within the Ebbw River as along its length it runs into other waterbodies and is connected to the River Usk. Any works which may cause disturbance or pollution run-off into the river could negatively impact fish populations should they be present in the absence of mitigation.

Invertebrates

Records of 17 invertebrate species listed as Section 7 Species of Principal Importance under the Environment (Wales) Act 2016 were returned within 2km of the site, with the nearest record located approximately 0.18km to the north west of the site. The grassland and scrub within the site boundary provide habitats which may support a range of invertebrate species. Vegetation clearance is required within the dense scrub however, there are a number of other suitable habitats adjacent to the site which can support these species, including woodland, a river, scrub and grassland habitats. Therefore, invertebrates listed under Section 7 of the Environment (Wales) Act 2016 are unlikely to be negatively impacted by the development at a population level and as such will not be considered further in this report.

Flora

There were no species protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) or Section 7 of the Environment Act Wales (2016) recorded on site. Therefore, flora is not considered further in this report.

5.4. Invasive Non-Native Species

Japanese Knotweed and Himalayan Balsam

Japanese knotweed and Himalayan balsam are not present within the site boundary, however, a total of 18 records of Himalayan balsam and 465 records of Japanese knotweed were returned within 2km of the site with the nearest record for both species located approximately 0.14km to the north of the site along the Ebbw River. Japanese knotweed is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and Himalayan balsam is listed on the Invasive Alien Species (Enforcement and Permitting) Order 2019, making it an offence to cause or allow the plant to spread in the wild. In the absence of mitigation, any works within the areas containing these species including vegetation clearance and machine tracking, risks spreading this species within or outside of the site which would constitute an offence under the legislation.

6. Recommendations

6.1. Ecological Designations

Any chemical, silt or dust pollution from machinery that occurs during the works has the potential to negatively impact the River Ebbw SINC, which runs 0.13km north of the site, as well as other designated sites which are hydrologically connected to the river. These include the River Usk / Afon Wysg SAC & SSSI. Pollution prevention measures are recommended for inclusion within a Construction Environmental Management Plan (CEMP).

6.2. Habitats

A3.1 Scattered Broadleaved Trees

No removal of trees located on site is listed within the proposals. Though if this changes, then it is recommended that they are replaced on a 'one for one' basis as a minimum within the site or within a compensation area if this is not possible as native species are of value to biodiversity.

6.3. Protected Species

Birds

It is recommended that any clearance of dense scrub habitat be avoided or minimised through design where possible. If any clearance of dense scrub habitat is to take place during the breeding bird season (March - August inclusive) then a suitably qualified/experienced ecologist will be required to carry out a nesting bird check before works can proceed. The two disused bird nests identified within structure S2 will be removed under the proposals therefore a nesting bird check will be required. The buildings provide suitability for species that nest all year round such as pigeons. Nesting bird checks must be undertaken ideally on the day of, and no more than 48 hours prior, to any clearance works taking place. If works are delayed such that more than 48 hours has passed since the nesting bird check took place, then an update nesting bird check will be required. If any active nests are identified, then a 5m buffer (or as defined by the site ecologist, depending on the species present and site conditions) should be set around the nest and clearance works stopped within this buffer until an ecologist has determined that the nest has become inactive (which may take up to six weeks depending on the species).

If Schedule 1 species are found to be nesting on site, a buffer (to be determined by an ornithologist) would be required around active nests to avoid potential disturbance. This is to be agreed with a suitably qualified ecologist.

Bats

A total of two structures (S1, S2) and one tree (T1) with bat roost potential were recorded within the survey area. The existing two-storey building (S1) and one-storey building (S2) will be refurbished, but it is anticipated that the works will involve repairing old brickwork on the stone walls in areas where the mortar has become damaged and replacing the concrete roofs as roof tiles were identified to be lifting. These features were identified as potential roost access points, and therefore it is recommended that these crevices are left open where possible. If the above is not possible, then the recommendations provided in Table 7 below must be followed.

The removal of trees on site is not anticipated to be required to facilitate the works under the current design, however if this should change and removal of trees be required then recommendations with regards to tree T1 is provided in Table 10 below.

Tree / Structure Number	Grid Reference	Bat Roost Potential	Recommendations
Structure S1 and Structure S2	ST 29214 85964 ST 29243 85991	High	If it is not possible to avoid filling in the gaps in the brickwork of the building and lifted roof tiles which have been identified as potential roost access points, then hibernation surveys should be undertaken between November and March by a bat licenced ecologist. These surveys include an internal inspection of the structure by the ecologist and deployment of automated bat detectors which should be deployed for a minimum of two weeks in each month from December to February. Two surveys will be undertaken, the first conducted in January and the second in February. The structure additionally has suitability for summer roosts to be present. Three separate survey visits are required, at least one dusk emergence and separate dawn re-entry survey with the third visit either dusk or dawn required to determine the presence / likely absence of roosting bats within the structure. The surveys must be carried out between May and September with at least two of the three surveys carried out between May and August to account for the maternity

			period. Surveys should be spaced a minimum of 2 weeks apart.
Tree T1	ST 29215 85963	Moderate	If this tree requires removal, then one dusk emergence and one dawn re-entry survey on the trees will be required to determine the presence / likely absence of roosting bats. The surveys must be carried out between May and September with at least one survey carried out between May and August to account for the maternity roosting period. Surveys should be spaced a minimum of two weeks apart.

Table 8: Recommendations for Structures and Trees with Bat Roost Potential

It is recommended that the use of artificial lighting is avoided, particularly in areas of bat activity and close to structures or trees with potential roost features, as this can have a long-term impact on the emergence behaviour of bats. If artificial lighting is unavoidable, then a sensitive lighting scheme should be designed and implemented for the proposed development in consultation with a bat specialist. Ideally, lighting would be directed away from any known roosts, if present, and habitat used for foraging or commuting, such as the scattered broadleaved trees. The implementation of a sensitive lighting scheme will also prevent disturbance to other species which may be using the site, such as otter and badger.

Otter

No evidence of otter activity was recorded during the survey, however there are records of otter using the Ebbw River which runs to the north of the site, however the habitats present on site are considered suitable for commuting, and it is possible that otter may pass through the site opportunistically. The habitat present adjacent to the river may also be suitable for otter to establish holts and resting areas.

The following general construction safeguards should also be implemented to protect otter and other mammals which could be using the site. These general construction safeguards shall include as a minimum:

- Open excavations should be fenced off and/or covered to avoid animals becoming trapped or injured. A mammal ladder (e.g. wooden plank) should be erected to allow any animals that may become trapped to escape. All excavations should be checked each morning to ensure no animals have become trapped overnight and an ecologist contacted for advice should any animals be encountered;
- Consideration should be given to where spoil is stored, otter proof fencing should be considered if spoil is to be stored on site for long periods of time;
- Where lighting is required, hoods should be used, and lights directed at works and away from the surrounding environment; and
- No equipment should be stored within suitable otter habitat.

Badger

No evidence of badger activity was recorded during the survey, however the habitats present on site are considered suitable for badger foraging and commuting, and it is possible that badger may pass through the site opportunistically. Furthermore, the areas of woodland and scrub adjacent to the west of the site may also provide suitable habitat for badger sett creation. General construction safeguards for otter, detailed above, will also be relevant for badger.

Hedgehog

There is potential for hedgehog to be present within the site and so it is recommended that caution should be exercised in areas of suitable habitat. Should any hedgehogs be discovered during the works then they should be moved out of the works area to a safe and suitable location and covered over. If hoglets are discovered, where possible they should be left *in-situ* with their mother to avoid abandonment.

Reptiles

The grassland and scrub habitats present on site, while a log pile (TN4) may also provide suitable refugia for reptiles. The clearance of such habitats and the removal of the log pile may be required to facilitate plant access to the site. Any vegetation clearance or removal of potential refugia piles must be carried out following a precautionary method statement under ecological supervision to avoid the killing and/or injury of this species group.

This will involve a two-phased cutting of suitable reptile habitat (e.g. grassland and hedgerow) using hand tools, careful dismantling of refugia piles and careful stripping of topsoil using a toothed bucket excavator under the supervision of an ecologist. Works shall be undertaken within the reptile active period (March to early October). If this is not possible due to construction timescales, an ecologist on site will dismantle any hibernation features by hand. Any reptiles discovered during this period will be moved to suitable habitat outside of the works area, with hibernacula used to shelter them.

If this is not possible due to construction timescales, an ecologist on site will dismantle any hibernation features by hand. Any reptiles discovered during this period will be moved to suitable habitat outside of the works area, with hibernacula used to shelter them.

Following a precautionary method statement for reptiles will also aid in the prevention of killing or injury of common amphibian species, including common toad.

Fish

Any chemical, silt or dust pollution created from machinery that occurs during the works could negatively impact fish populations in the river should they be present. As discussed in Section 6.1, pollution prevention measures are recommended for inclusion within a CEMP.

6.4. Invasive Non-Native Species

No invasive non-native species were recorded on site. But if these species colonise the site prior to works being undertaken, then the works must be carried out under an invasive species method statement. This is necessary to avoid spreading this species within and beyond the site which would constitute an offence under the relevant legislation.

6.5. Enhancements

The following recommendations are made for enhancing the biodiversity of the site. Such measures would support Newport City Council in fulfilling their duty to maintain and enhance biodiversity under Section 6 of the Environment (Wales) Act (2016) and to create new 'green infrastructure' as required under paragraph 6.4.5 of Edition 11 of Planning Policy Wales (2021):

- Re-planting of native species to provide a biodiversity gain for the site;
- Creation of refugia piles for hedgehogs, reptiles, common amphibians and small mammals by using un-chipped material from vegetation clearance works; and
- Provision of bat and bird boxes in suitable retained habitat.

7. References

CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal – Second Edition*.

CIEEM (2019) *Advice Note on the Lifespan of Ecological Surveys and Reports*. [online] Available at: <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf> [Accessed 25 April 2022].

Collins (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. London: The Bat Conservation Trust.

Joint Nature Conservation Committee (2010) *Handbook for Phase 1 Habitat Survey; A Technique for Environmental Audit*.

Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. Peterborough: English Nature.

Newport City Council (2015) *Newport Local Development Plan 2011-2026*. [online] Available at: <https://www.newport.gov.uk/en/Planning-Housing/Planning/Planning-policy/Local-Development-Plan/Local-Development-Plan.aspx> [Accessed 25 April 2022].

Stace, C. A. (2019) *New Flora of the British Isles (4th ed.)*. Suffolk: C & M Floristics.

Appendix A: Wildlife Legislation

Nesting Birds

Breeding wild birds are protected under the WCA 1981 (as amended). Under the WCA, a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds however are not included in this definition (except for limited parts of the Act). They are covered by the Game Acts, which fully protect them during the close season.

All birds, their nests and eggs are protected and it is thus an offence, with certain exceptions, to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built;
- intentionally take or destroy the egg of any wild bird;
- have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- use traps or similar items to kill, injure or take wild birds; and
- have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations.

Additionally for some species listed in Schedule 1 of the WCA 1981 (as amended) it is an offence to intentionally or recklessly disturb the adults while they are in and around their nest or intentionally or recklessly disturb their dependent young.

Bats

Bats are fully protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the WCA 1981 (as amended). Under this legislation it is an offence to:

- kill or injure bats;
- cause disturbance at their resting places; or
- to block access to, damage or destroy their roost sites.

Under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 it is an offence to:

- deliberately capture or kill a bat;
- to damage or destroy a breeding site or resting place of any bat. (this is an absolute offence and intent or recklessness does not have to be proved); and
- deliberately disturb a bat (this applies anywhere, not just at its roost).

To undertake activities that would otherwise be an offence under the above legislation, a European Protected Species Licence (EPSL) must be applied for from the statutory authority; in this case NRW.

Dormouse

Dormice and their resting places are fully protected by UK law under Schedule 5 of the WCA 1981 (as amended) and under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 making it an offence to:

- Deliberately capture, injure or kill dormice;
- Intentionally or recklessly disturb dormice while occupying a structure or place used for shelter or protection;
- Deliberately disturb, in particular affecting breeding, abundance or distribution;
- Intentionally or recklessly obstruct access to a structure or place used for shelter or protection; and
- Damage or destroy a breeding site or resting place.

Dormice are also listed as a Section 7 species of Principal Importance of the Environment (Wales) Act 2016 for the purpose of maintaining and enhancing biodiversity. Dormice are also incidentally protected by the Hedgerow Regulations 1997, which are intended to prevent the removal of important hedgerows. Important hedgerows are defined by certain criteria which includes the presence of any species protected by Schedule 5 of the WCA 1981 (as amended) within the 5 years before the passing of the Act (the period from March 1992 to March 1997).

Otter

Otters are protected under Schedule 5 and 6 of the WCA 1981 (as amended), and under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The otter is also listed as a Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016.

The legislation makes it an offence to:

- intentionally or deliberately kill, injure or take an otter;
- possession or control (live or dead, part or derivative);
- intentionally or deliberately damage, destroy or obstruct access to any structure or place used for shelter or protection by an otter;
- to intentionally or deliberately disturb an otter while it is occupying a structure or place which it uses for that purpose; and
- selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative).

Any activity that would result in a contravention of the above legislation would likely require a EPSL from NRW.

Water Vole

Water vole are listed as a Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016, and are fully protected under Schedule 5 of the WCA 1981 (as amended). It is an offence to:

- intentionally capture, kill or injure a water vole;
- damage, destroy or block access to their places of shelter or protection (intentionally or recklessly);
- disturb them in a place of shelter or protection (intentionally or recklessly);
- possess, sell, control or transport live or dead water voles or parts of them (except water voles bred in captivity);

Any activity that would result in a contravention of the above legislation would likely require a licence from NRW.

Badger

Badgers, including their setts, are protected under the Protection of Badgers Act 1992, in England and Wales. It is an offence to:

- wilfully kill, injure or take a badger (or attempt to do so);
- cruelly ill-treat a badger;
- dig for a badger;
- intentionally or recklessly damage or destroy a badger sett, or obstruct access to it;
- cause a dog to enter a badger sett; and
- disturb a badger when it is occupying a sett.

Reptiles

Adder (*Vipera berus*), slow worm (*Anguis fragilis*), grass snake and common lizard (*Zootoca vicipara*) are protected under the WCA 1981 (as amended). It is illegal to kill or injure them.

Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) also receive legal protection under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This makes it an offence to deliberately capture, injure or kill either of these species or to disturb, damage, obstruct access to or destroy any place used for shelter or protection.

Great Crested Newt

Great crested newts and their habitats are strictly protected by UK and European legislation. Great crested newts are protected under Schedule 5 of the WCA 1981 (as amended) and The Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019 making the great crested newt a European Protected Species. Together, the Act and Regulations make it illegal to:

- intentionally or deliberately capture or kill, or intentionally injure great crested newt;
- deliberately disturb great crested newt or intentionally or recklessly disturb them in a place used for shelter or protection;
- damage or destroy a breeding site or place used for shelter;
- intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; possess a great crested newt, or any part of it, unless acquired lawfully; and
- sell, barter exchange or transport or offer for sale great crested newt or parts of them.

This legislation covers all life stages equally, including eggs, tadpoles, and adult newts. If proposed development work is likely to result in any of the above offences, then a European protected species development licence will need to be obtained from the relevant Statutory Nature Conservation Organisation, in this case NRW. It should be noted that the offences of disturbance of great crested newt whilst occupying places used for shelter/protection and obstruction of access to such places are additional offences to those described under the Habitat Regulations, and the protection afforded under both sets of legislation needs to be considered.

White-clawed Crayfish

White-clawed crayfish are listed under Annexes II and V of the EU Habitats Directive and Appendix III of the Bern Convention. White-clawed crayfish are protected under Schedule 5 of the WCA 1981 (as amended). It is an offence to:

- intentionally capture, kill or injure white-clawed crayfish;
- damage, destroy or block access to their places of shelter or protection (intentionally or recklessly);
- disturb them in a place of shelter or protection (intentionally or recklessly);
- possess, sell, control or transport live or dead white-clawed crayfish or parts of them;

Any activity that would result in a contravention of the above legislation would likely require a licence from Natural Resources Wales. White-clawed crayfish are also listed as a Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016.

Appendix B: Figures



Legend

 Survey Area

Building Bat Roost Potential

 High

Tree Bat Roost Potential

 Moderate

Phase 1 Habitats

 A2.1 - Scrub - Dense/Continuous

 J1.2 - Cultivated/Disturbed Land - Amenity Grassland

 J3.6 - Buildings

 Hardstanding

 A3.2 Coniferous Parkland/scattered trees

 J2.4 Fence

 J2.5 Wall

 A3.1 Broadleaved Parkland/scattered trees

 A3.2 Coniferous Parkland/scattered trees

 Target Note

Rev	Revision Details	Drwn	Chkd	Appd	Date:
	Designed: AC				Date: 22/12/2022
	Drawn: AC				Date: 22/12/2022
	Checked: HB				Date: 22/12/2022
	Approved : ZCM				Date: 22/12/2022

ameyconsulting



Project Name :

Tredegar Park Lodge

Drawing Title :

Phase 1 Habitat and Bat Roost Suitability Plan

Original Drg Size : A3	Scale : 1:300
Dimensions :	Page : 1 of 1

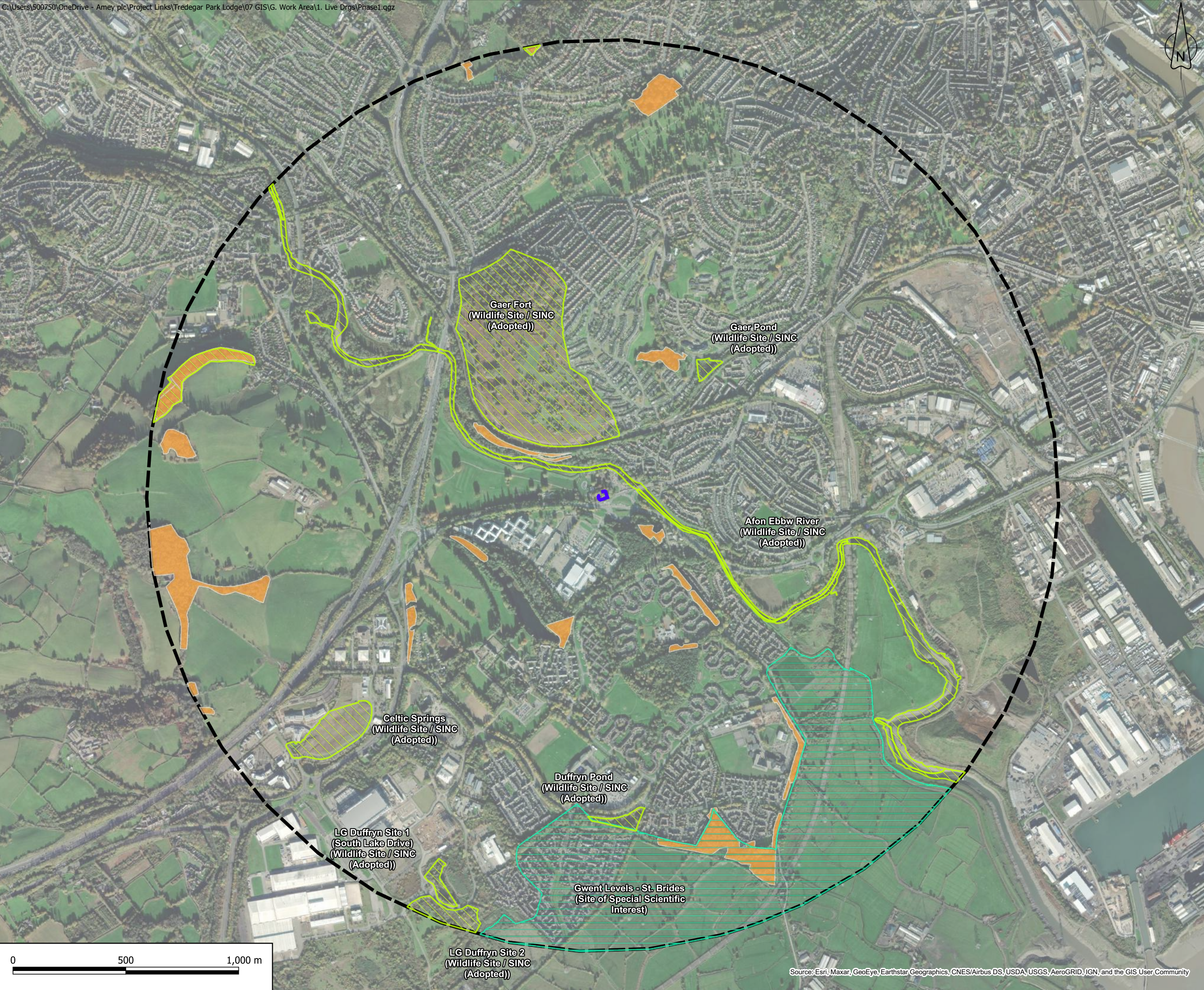
Drawing Status : Fit for Construction Approval	Suitability S4
---	-------------------

Figure No :
-

Drawing No : -	Rev P01
-------------------	------------



- Legend
-  Survey Area
 -  2km Buffer
 -  Site of Special Scientific Interest (SSSI)
 -  Ancient Woodland
 -  Wildlife Site / SINC (Adopted)



Rev	Revision Details	Drwn	Chkd	Appd	Date:
	Designed: AC				Date: 22/12/2022
	Drawn: AC				Date: 22/12/2022
	Checked: HB				Date: 22/12/2022
	Approved: ZCM				Date: 22/12/2022



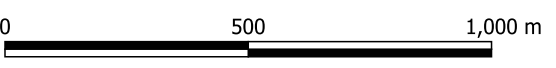
Project Name :

Tredegar Park Lodge

Drawing Title :

Designated Sites

Original Drg Size : A3	Scale : 1:400
Dimensions :	Page : 1 of 1
Drawing Status : Fit for Construction Approval	Suitability S4
Figure No : -	
Drawing No : -	Rev P01



Appendix C: Target Notes

Target Note Number	Description	Grid Reference	Photographs in Appendix E
TN1	Two-storey, detached building (S1) constructed from brick with a concrete tiled roof.	ST 29214 85964	Photo 13-16
TN2	One-storey, detached building (S2) constructed from brick with a concrete tiled roof.	ST 29243 85991	Photo 17-22
TN3	Two birds nests within the cracks in Structure S2s wall.	ST 29243 85991	Photo 18 & 22
TN4	Pile of logs providing potential refugia.	ST 29232 85978	Photo 23

Appendix D: Species Lists

B2.2 Neutral Semi-improved Grassland

Latin Name	Common Name	DAFOR
<i>Trifolium repens</i>	Perennial Ryegrass	D
<i>Trifolium repens</i>	White Clover	A
<i>Taraxacum sp.</i>	Dandelion	F
<i>Bellis perennis</i>	Daisy	F
<i>Achillea millefolium</i>	Yarrow	F
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Betula pendula</i>	Silver Birch	F
<i>Holcus lanatus</i>	Yorkshire fog	O
<i>Laminum purpureum</i>	Red Deadnettle	O
<i>Euphorbia helioscopia</i>	Sun Spurge	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Matricaria discoidea</i>	Pineappleweed	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Plantago major</i>	Broadleaved Plantain	O

A2.1 Dense Scrub

Latin Name	Common Name	DAFOR
<i>Rubus Fruticosus</i>	Bramble	D
<i>Hedera helix</i>	Ivy	A
<i>Illex aquifolium</i>	Holly	F
<i>Prunus laurocerasus</i>	Cherry Laurel	F
<i>Sorbus aucuparia</i>	Rowan	O

A3.1 Scattered Broad-leaved Trees

Latin Name	Common Name	DAFOR
<i>Betula pendula</i>	Silver Birch	F
<i>Malus sylvestris</i>	Crab Apple	R

<i>Prunus avium</i>	Wild Cherry	R
---------------------	-------------	---

J4 Bare Ground

Latin Name	Common Name	DAFOR
<i>Stellaria media</i>	Chickweed	A
<i>Laminum purpureum</i>	Red Deadnettle	A
<i>Taraxacum sp.</i>	Dandelion sp.	R

Appendix E: Photographs



Photograph 1: Dense scrub habitat to the east of the site. Comprising a large percentage of the site.



Photograph 2: Dense scrub habitat to the east of the site. Comprising a large percentage of the site.



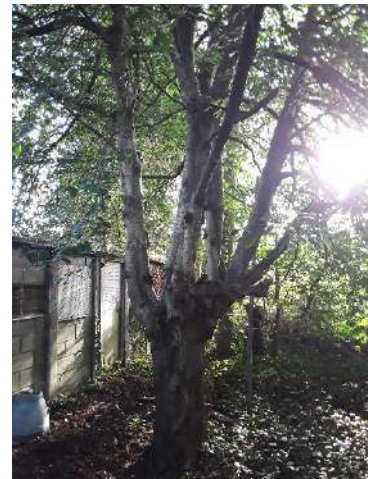
Photograph 3: Scattered broadleaved tree – silver birch



Photograph 4: Scattered broadleaved tree – silver birch.



Photograph 5: Scattered broadleaved tree – silver birch.



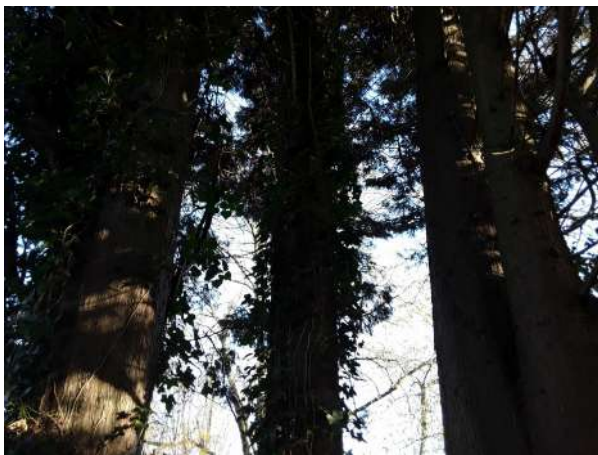
Photograph 6: Scattered broadleaved tree – silver birch



Photograph 7: Scattered broadleaved tree – wild cherry



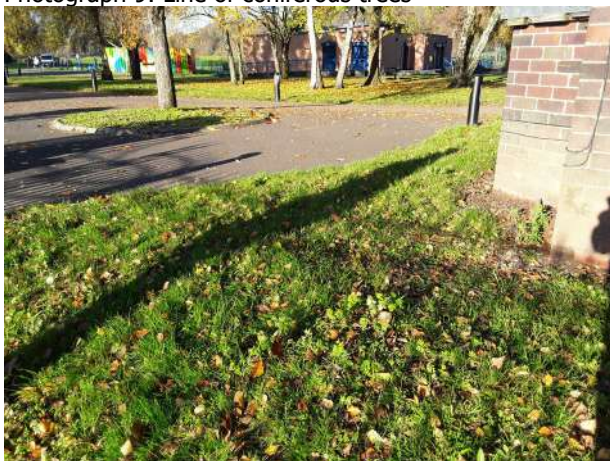
Photograph 8: Crab apple tree with moderate bat roosting potential



Photograph 9: Line of coniferous trees



Photograph 10: Area of amenity grassland to the west of the site.



Photograph 11: Amenity Grassland to the southeast of the site, surrounding structure S1.



Photograph 12: Wall and fence along the south of the site



Photograph 13: Building S1 with high bat roost potential.



Photograph 14: Building S1 with high bat roost potential.



Photograph 15: Building S1 with high bat roost potential.



Photograph 16: permanently open loft hatch of building S1 leading into loft space.



Photograph 17: Building S2 with high bat roost potential.



Photograph 18: Birds nest and crack within brickwork of Building S2.



Photograph 19: lifted roof tiles and within brickwork of Building S2.



Photograph 20: Building S2 with high bat roost potential



Photograph 21: Ivy covering building S2's roof



Photograph 22: Birds nests identified within building S2.



Photograph 23: Log pile identified to the north west of the site.