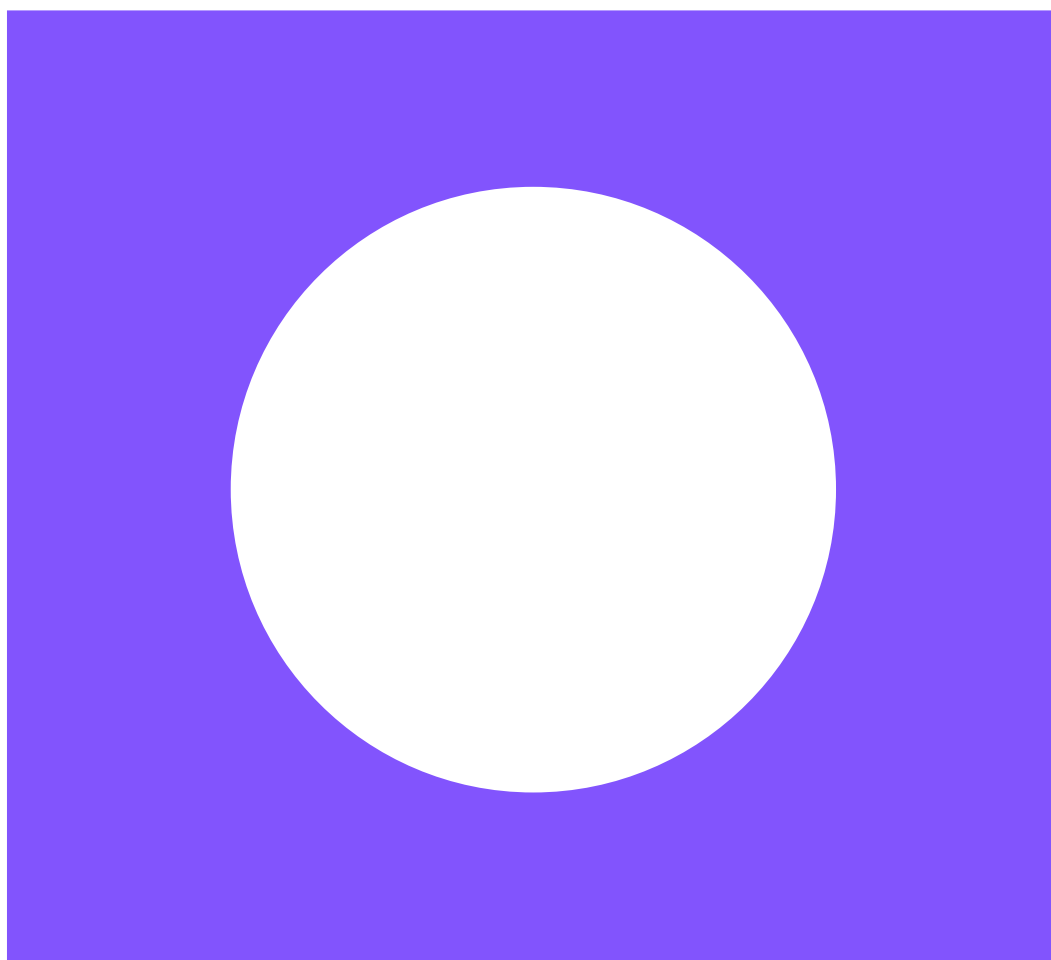




Bassaleg Bridge

Ecological Impact Assessment (EclA)

June 2025

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Ecological Impact Assessment (EcIA)

June 2025

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Executive summary

Mott MacDonald Ltd has been commissioned by Newport City Council to undertake an Ecological Impact Assessment (EclA) to support a planning application for the demolition of the existing Bassaleg bridge, and construction of a new bridge located at National Grid Reference (NGR) ST 27846 87042. The existing bridge is a three-span continuous reinforced concrete structure with a total bridge deck width of 13.25 metres.

An initial ecological walkover survey was undertaken on 5 August 2024. All habitats within the site were identified and mapped using UK Habitats Classification (2023) methodology. An assessment was also undertaken of the likely presence or absence of protected and/or notable species within the site. This was based on the known distribution of species, habitats and/or direct evidence such as field signs or observations. Several habitats were identified on site, the existing bridge spans over the River Ebbw with other neutral grassland, modified grassland, mixed scrub, rivers and streams, broadleaved and mixed woodland, built-up areas and gardens, developed land -sealed surface, artificial unvegetated, unsealed surface and line of trees recorded within, or adjacent to the site. The existing bridge spans the River Ebbw, which is a Site of Importance for Nature Conservation, the site is also hydrologically connected to the River Usk Special Area of Conservation, 6.5km downstream.

A ground level tree assessment to identify suitable bat roosting features within trees, preliminary roost assessment and night-time bat walkover survey were undertaken on 5 August 2024. Two sycamore (*Acer pseudoplatanus*) trees with potential roost features were identified within the site boundary and categorised as PRF I. One structure, the existing bridge, was noted to have moderate suitability to support roosting bats and two emergence surveys have been undertaken, one in May 2025 and one in June 2025. No emergences were confirmed.

An otter (*Lutra lutra*) survey was undertaken in September 2024 and cameras were installed on two potential otter resting sites for 6 weeks. This confirmed that one of the potential resting sites is used by a single dog otter and this resting site is likely to be disturbed by the works.

Invasive Non-Native Species were observed across the site, these include Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), buddleia (*Buddleja davidii*), cherry laurel (*Prunus laurocerasus*), Himalayan cotoneaster (*Cotoneaster simonsii*), montbretia (*Crocsmia x crocosmiiflora*) and horsetail (*Equisetum sp.*).

A Habitats Regulations Assessment (document reference:100119581-MMD-XX-XX-RP-EC-0002) for the project was undertaken by Mott MacDonald Ltd in March 2025. The HRA determined that no appreciable effects on the integrity of the habitats sites were likely as a result of the project.

Appropriate recommendations for mitigation, in line with local and national policy, include:

- Undertaking vegetation clearance outside of nesting bird season (March to August inclusive), or following a nesting bird check by an ecologist within 24 hours of removal
- Clearing vegetation in a sensitive manner, in a two-stage cut
- Installation of cameras on the active otter resting site, works to only be undertaken once an ecologist has confirmed that the resting site is vacant each day
- Implementation of a drainage scheme and Sustainable Drainage System, if appropriate
- Installation of bat and bird boxes, an otter ledge under the new bridge and coir rolls adjacent to the new bridge
- In-channel fish works restricted to (October-March), with a fish rescue to be undertaken and a navigational channel created for fish movements during dewatering works
- The rip-rap to be covered with natural bed material of equivalent size to current bed material

- Sensitive lighting design, as advised by an ecologist
- Creation and implementation of an Invasive Species Management Plan
- Creation and implementation of a Construction Environmental Management Plan

In line with CIEEM (2018) guidance on the lifespan of ecological surveys and given the nature of the habitats present on site, the survey results are considered valid for up to 12 months.

1 Introduction

Mott MacDonald has been commissioned by Newport City Council (NCC) to undertake an Ecological Impact Assessment (EclA) for the construction of a new single-span bridge across the Ebbw River in Bassaleg, Newport, and the demolition of the existing bridge.

1.1 Background

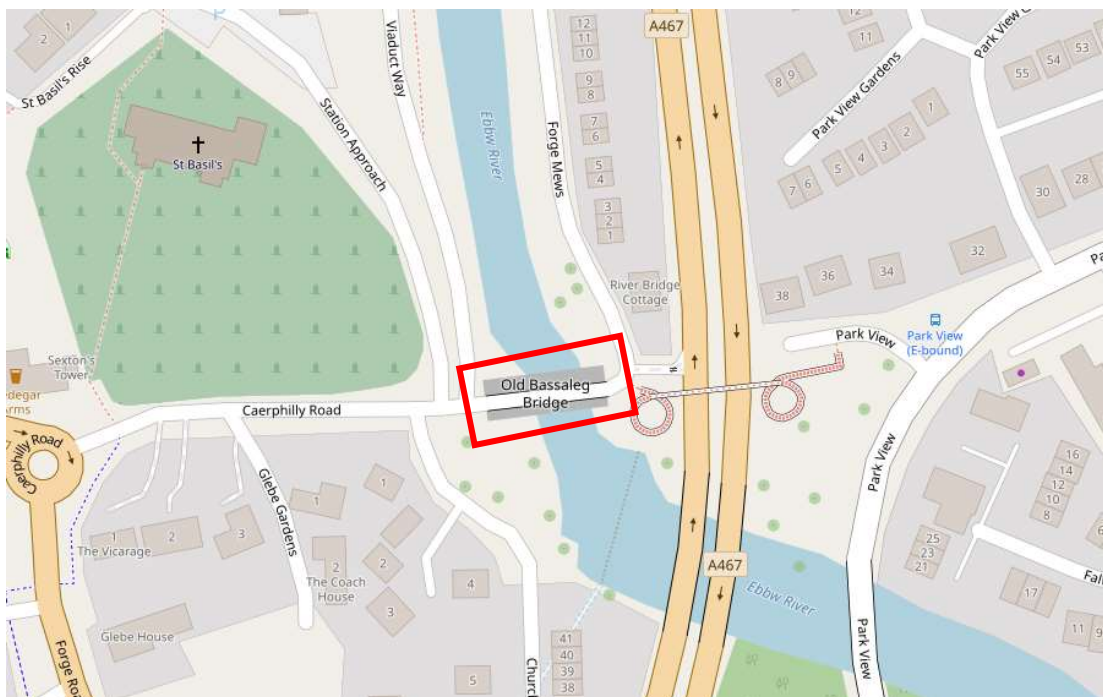
The Bassaleg Bridge ('the existing bridge') is owned by NCC and carries a single carriageway over the River Ebbw. The existing bridge is located at National Grid Reference (NGR) ST 27846 87042 and was constructed in 1943. It is a three-span continuous reinforced concrete structure with a total bridge deck width of 13.25 metres (m).

Following investigations into severe cracking in the structure in June and August 2021, emergency repairs were carried out to the bridge pier foundation in September 2021. However, the existing bridge was closed for vehicular use as it could not be confirmed as safe for bearing a live load. Further deterioration of the structure was identified in Spring 2022, and a structural assessment carried out by Mott MacDonald in January 2023 rated the structure as 'Dead Load Only'.

The existing bridge remains closed for vehicular use, and only the downstream footway remains open for pedestrian use. The existing bridge had previously provided the only vehicular access to the properties on Forge Mews, on the east side of the river; alternative access for emergency vehicles only was provided from the A467 in 2021.

The location of the existing bridge is shown in Figure 1-1 below, with the proposed structure located as shown in Appendix A.

Figure 1-1: Location of the existing bridge within red outline



Source: Map data © OpenStreetMap.org contributors

1.2 Proposed project

The provision of an offline road bridge replacement emerged as the preference from the option selection stage in March 2023. This is detailed in Appendix A. The demolition of the existing bridge will be carried out after the construction of the new bridge. Enhancement measures and planting as advised as part of the Green Infrastructure Strategy (100119581-MMD-XX-XX-RP-EC-0003) are also proposed.

1.3 Scope of the report

This Ecological Impact Assessment (EclA) has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) '*Guidelines for Preliminary Ecological Appraisal*' (2017) and '*Guidelines for Ecological Impact Assessment in the UK and Ireland*' (2018, updated in April 2022). The purpose of this report is to provide an assessment of the protected and/or notable habitats and species which occur or have the potential to occur on or near to the site, and therefore could be impacted by the proposed works.

The aims of this assessment are to:

- Undertake a desktop study to identify any existing information regarding protected or notable species and sites with a nature conservation designation within the Zone of Influence (Zoi) of the site
- Carry out a UK Habitat Classification (UKHab) survey (UKHab, 2023) to provide a description of the existing broad habitat types
- Establish the presence or potential presence of any protected or notable species
- Produce a report outlining any ecological constraints to the proposed development in terms of designated sites, habitats and/or protected and notable species
- Identify any mitigation or compensation measures that may be required to offset potential development impacts
- Identify opportunities for enhancement in line with national legislation and local planning policy

2 Legislation and policy framework

Developers must ensure the construction and operational activities for the Project comply with national nature conservation legislation and with regional and local biodiversity policies.

The following legislative and planning policy context has been used to inform the assessment of the relative ecological value of the site, potential constraints to development and recommendation for enhancements.

2.1 Legislation

The main pieces of legislation regarding the protection of species and habitats in Wales are the Wildlife and Countryside Act 1981 (as amended) ('the 1981 Act') and the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). Species-specific legislation is highlighted within this report where relevant. These pieces of legislation provide a range of protection for many species and create protected sites (including sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)). Activities which have the potential to harm protected species must be appropriately considered and mitigated, as must those with the potential to impact upon designated sites. In some instances, activities occurring some distance from a designated site have the potential to cause adverse effects and must be considered within an impact assessment.

Invasive non-native species (INNS) are regulated via a combination of the Invasive Alien Species (Permitting and Enforcement) Order (IASO) 2019 and Sections 9 and 14 of the 1981 Act respectively.

Under the Environment (Wales) Act 2016, Local Authorities and public bodies have a statutory duty 'to seek to maintain and enhance biodiversity in Wales' when carrying out their normal functions. Newport City Council (NCC) is a Public Authority as defined by Sections 6(9) and 6(10) of this Act and is therefore subject to this duty. Section 7 of this Act contains a list of species and habitats of 'principal importance to the conservation of biodiversity in Wales', which acts as an aid to guide public bodies in implementing their duty. In order to do this, the Local Authority must consider the impact of the proposed works on protected habitats and species.

2.2 National planning policy

2.2.1 Planning Policy Wales

In terms of planning policy, at a national level, Chapter 6 of Planning Policy Wales (PPW), 2024 (which relates to Distinctive and Natural Places), planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity. In doing so, planning authorities must also take account of and promote the resilience of ecosystems. The following aspects are of particular importance:

- Diversity between and within ecosystems.
- The connections between and within ecosystems.
- The scale of ecosystems.
- The condition of ecosystems including their structure and functioning.
- The adaptability of ecosystems.

In fulfilling this duty, planning authorities must have regard to:

- The list of habitats and species of principal importance for Wales, published under Section 7 of the Environment (Wales) Act 2016.
- The State of Natural Resources Report (SoNaRR) 2020, published by Natural Resources Wales (NRW).
- Any Area Statement that covers all or part of the area in which the authority exercises its functions.

2.2.1.1 Resilient Ecological Networks

The maintenance, enhancement or re-creation of Resilient Ecological Networks (RENs) are vital for nature recovery and the Natural Resources Policy in Wales (2017). RENs are defined as “... *networks of habitat in good ecological condition linking protected sites and other biodiversity hotspots across the wider landscape, providing maximum benefit for biodiversity and well-being. Such nature networks have existing or potential for healthy resilient ecosystems which provide a range of important ecosystem services as well as allowing the movement of species across landscapes in response to climate change.*”

The features of a REN will depend upon the local landscape character and the existing habitats and land-use that make them distinguishable from the wider landscape. These features can be classed as either core areas or intervening land use matrix. The core area consisting, initially and primarily, of existing high quality semi-natural habitats. The intervening land-use matrix would reinforce and connect the core areas and would include landscape features, such as buffers, corridors, stepping-stones and other permeable features, to allow the movement of organisms e.g. for foraging or migration of individuals, through dispersal of seeds and genes, to the major shifts of species' populations to adjust to a changing climate.

2.2.1.2 Technical Advice Note 5

Technical Advice Note (TAN) 5 relates to nature conservation and planning and provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN 5 provides advice for local planning authorities on:

- The key principles of positive planning for nature conservation.
- Nature conservation and Local Development Plans.
- Nature conservation in development management procedures.
- Development affecting protected internationally- and nationally- designated sites and habitats.
- Development affecting protected and priority habitats and species.

2.3 Biodiversity policy

The Wales Biodiversity Partnership (WBP) has produced biodiversity checklists for Local Authority and public authority staff in Wales. The checklists will assist public and local authorities to take account of biodiversity in their operational activities and will help organisations to comply with the requirements of the Environment (Wales) Act (2016) Biodiversity Duty, the Habitats Regulations and other biodiversity related legislation.

2.4 Local planning policy

The *UK Biodiversity Action Plan (UKBAP)* 1994 – 2010 was superseded by the *UK Post-2010 Biodiversity Framework* and covered the period 2011 – 2020 (Biodiversity 2020) and more recently the *UK Biodiversity Framework*. Whilst it has largely been superseded, many of the tools and resources originally developed under the UKBAP still remain of use. Background information on UKBAP priority habitats and species form the basis of county level biodiversity protection initiatives such as Local Biodiversity Action Plans (LBAP).

2.4.1 Local Development Plan

At a local level, planning policies are set out by Newport City Council (NCC) within the '*Newport Local Development Plan 2011-26 (Adopted 2015)*'. The key objectives and policies of relevance to this impact assessment are detailed below.

Key objectives:

- **Objective 6 – Conservation of the Natural Environment:** To protect and enhance the quality of the natural environment, including landscape, protected habitats and species of principal importance for biodiversity in Wales (regardless of greenfield or brownfield status) and the protection of controlled waters.

Strategic policies:

- **SP4 Water Resources:** '*Development proposals should minimise water consumption, protect water quality during and after construction...*'
- **SP9 Conservation of the Natural, Historic and Built Environment:** '*The conservation, enhancement and management of recognised sites within the natural, historic and built environment will be sought in all proposals*'.
 - '*Newport has a rich diversity of natural and historic sites which are recognised at the international, national and local level. Those habitats and species of nature conservation interest represent important environmental resources, and the Council has a duty under various legislation including... to ensure that they are protected from inappropriate or damaging development*'.
 - '*Planning Policy Wales and Technical Advice Note 5: Nature Conservation and Planning (2009) set out this framework identifying nature conservation as an integral part of planning... Local advice will be set out in the Supplementary Planning Guidance on Wildlife and Development*' (Newport City Council, 2010).

General development principles:

- **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*'.
 - '*...avoid, or mitigate and compensate negative impacts to biodiversity..*'
 - '*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*'.

Environmental policies:

- **CE3 Environmental Spaces and Corridors:** ‘...sites having existing importance for...as wildlife habitats...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’.
- **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’.
 - ‘Appropriate mitigation or compensatory measures can be achieved’.

2.4.2 Replacement Local Development plan

In 2020, the annual review of the local plan determined that a replacement Local Development Plan (LDP) was required. The latest draft of the replacement LDP was produced in August 2023 with formal delivery aimed by February 2026. Within the latest draft, the following objectives and policies are relevant to this impact assessment:

- **Objective 7. Biodiversity and Geodiversity:** To maintain, enhance and improve the biodiversity and geodiversity of Newport and its surrounds, including improved ecological resilience, diversity, connectivity and adaptability, whilst ensuring net benefits are facilitated from development.
- **Preferred Strategy (PS) 15 Green Infrastructure and Biodiversity:** Development will protect and enhance Newport’s green infrastructure and biodiversity assets to ensure the integrity and connectivity of this multi-functional resource is maintained and strengthened and positively managed.

A review of the adopted LDP provides the following recommendations for the existing objectives and policies detailed within Section 2.4.1:

- **GP5 Natural Environment** should be updated to strengthen policy, reflect changes to national planning policy, outcomes of environmental assessments and strategic policy changes.
- **CE3 Environmental Spaces and Corridors** and **CE8 Locally Designated Nature Conservation and Geological Sites** should be carried forward with minor amendments.

2.4.3 Newport Local Biodiversity Action Plan

The Newport Local Biodiversity Action Plan was revised by Newport Biodiversity Partnership in 2014, with the aim of actively conserving and enhancing the biodiversity of Newport. LBAPs have two main functions:

- To ensure that national action plans are translated into effective action at the local level; and
- To establish targets and actions for characteristic species and habitats of each local area.

Action plans have been created for the following broad habitats:

- Woodland, including upland mixed ash woods, wet woodland, wood pasture and parkland, lowland mixed deciduous woodland, and traditional orchards.
- Freshwater habitats, including rivers and streams, ponds, lakes and canals.
- Wetland habitats, including reedbeds, and coastal and floodplain grazing marsh.

- Farmland, including hedgerows and field margins.
- Lowland grassland and heathland, including lowland meadows, calcareous grassland, lowland dry acid grassland, purple moor-grass and rush pasture, and lowland heath.
- Brownfield and urban habitats, including open mosaic habitats on previously developed land (OMHPDL), gardens and allotments, urban open space, and churchyards.
- Marine and coastal habitats, including maritime cliffs and slopes, coastal saltmarsh, and intertidal mudflats.

The following Species Action Plans (SAPs) are also detailed within the latest revision of the LBAP:

- Dormouse (*Muscardinus avellanarius*).
- Bats, with at least nine species having been recorded in Newport and the time of publication.
- Otter (*Lutra lutra*).
- Water vole (*Arvicola amphibius*).
- Fungi.
- Small ranunculus moth (*Hecetera dysodea*).
- Shrill carder bee (*Bombus sylvarum*).

Where planning permission is required, the proposals should demonstrate that they are in accordance with the relevant local planning policy.

3 Methodology

3.1 Zone of Influence

The current guidance on ecological impact assessments (Chartered Institute of Ecology and Environmental Management (CIEEM), 2024) recommends that all ecological features that occur within a 'Zone of Influence' for a proposed scheme are investigated.

The Zol includes:

- Areas directly within the land take for the proposed scheme 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 and noise 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 zones used have been defined in Table 3.1 below.

Table 3-1: Zone of Influence for this assessment

Ecological Feature	Zone of Influence
Designated sites	Within 2.0km of the site
Internationally designated sites for bats and birds	Within 30.0km of the site
Protected species records	Within 2.0km of the site
Protected species evidence	Within the site boundary and 50m buffer (where accessible)*

Source: Mott MacDonald Limited, 2022; * unless otherwise stated for certain protected species surveys (e.g. searches for waterbodies for amphibians)

3.2 Desk study

A desk study was undertaken, as recommended in the CIEEM 'Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater, Coastal and Marine version 1.3' (CIEEM, 2024), to determine the presence of any designated nature conservation sites and protected or notable species within the Zol of the Scheme. Designated sites and protected species records within 2.0km were requested from South East Wales Biodiversity Records Centre (SEWBRc) with data supplied via Aderyn (Ref: 0245-341). The data has been curtailed in the text to the nearest record for each species recorded within the past 10 years, unless otherwise relevant. Raw data is available on request. Information to inform the desk study was obtained from the following sources:

- South East Wales Biodiversity Records Centre (SEWBRc)
- Multi Agency Geographical Information for the Countryside (MAGIC) (<https://magic.defra.gov.uk/>)
- Natural Resources Wales (NRW) (<https://naturalresources.wales>)
- DataMapWales (<https://datamap.gov.wales/maps/new#/>)
- Joint Nature Conservation Committee (JNCC) (<https://jncc.gov.uk/>)
- Lle Ancient Woodland ([Lle - Ancient Woodland Inventory 2021 \(gov.wales\)](#)) and
- Google maps for aerial assessment of waterbodies within 0.5km (<https://maps.google.co.uk>).

3.2.1 Identification of waterbodies

A desktop search for waterbodies within 0.5km of the site was conducted using Ordnance Survey (OS) and aerial mapping and aerial imagery to inform the potential for great crested newts (GCN) (*Triturus cristatus*) and other amphibians to be present on site.

3.3 Preliminary Ecological Appraisal

A field survey was undertaken by two appropriately competent ecologists on 5 August 2024. All habitats within the site were identified and mapped using UK Habitats Classification (2023) methodology. The abundance of species within each habitat is described in line with the DAFOR scale (dominant, abundant, frequent, occasional and rare) (BSBI, 2010). Invasive species listed on Schedule 9 of the 1981 Act or Schedule 2 of the Invasive Alien Species Order 2019 and any protected or uncommon species were noted.

An assessment was also undertaken of the likely presence or absence of protected and/or notable species within the site. This was based on the known distribution of species, habitats and/or direct evidence such as field signs or observations. The methodologies and assessment criteria used were based on current published guidance.

Table 3.2 details the weather conditions at the time of the survey.

Table 3-2: Preliminary Ecological Appraisal survey weather conditions

Date	Temperature (°C)	Cloud cover (%)	Wind (Beaufort scale)	Precipitation
5 August 2024	20	60	4	Nil

Source: Mott MacDonald Ltd., 2024

3.4 Bat surveys

All surveys were undertaken in accordance with the best practice guidance set out within the Bat Conservation Trust ‘Bat Surveys for Professional Ecologists: Good Practice Guidelines’ 4th Edition (2023).

3.4.1 Bat night-time walkover (NBW)

A NBW survey was undertaken on the 5 August 2024 to assess bat activity across the site by two suitably experienced, competent ecologists.

The survey consisted of ecologists being on site before sunset, stationed on potential flight lines close to potential roost sources such as buildings or trees. The ecologists observed any activity and made acoustic recordings for 30-60 minutes and then proceeded to carry out the pre-determined walkover of the site taking acoustic recordings and recording a time stamped narrative of their observations. Appendix E shows the NBW route.

All surveys were carried out by experienced bat ecologists using Elekon Batlogger M detectors to record the species of bats. The ecologists also noted observations such as the number of bats, flight direction, flight height, type of flight, apparent behaviour, appearance, response to features on site and response to any weather conditions.

The weather conditions were recorded at the beginning of the survey and a summary is included in Table 3.3.

Table 3-3 NBW survey visit and weather conditions

Date	Start Time	Finish Time	Start / End Temperature (°C)	Windspeed (Beaufort Scale)	Cloud Cover (%)	Precipitation
05/08/2024	21.10	23.09	14 / 11	2	80	Nil

Source: Mott MacDonald 2024

3.4.2 Ground-level Tree Assessment (GLTA)

A GLTA was undertaken on the 5 August 2024 by two suitably experienced, competent ecologists.

A GLTA is a detailed inspection of trees within and adjacent to the site boundary and undertaking a ground-level search for Potential Roost Features (PRFs) and describe them. The trees and any PRFs are assessed on whether they are suitable for individual bats or multiple bats and assigned a suitability based on that as shown in Table 3.4.

Table 3-4 Guidelines for categorising the potential suitability of PRFs on a proposed development site for bats, to be applied using professional judgement.

Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Source: Colins,2023

3.4.3 Preliminary Roost Assessment (PRA)

A PRA was undertaken on the 5 August 2024 by two suitably experienced, competent ecologists.

A PRA is a detailed inspection on buildings or structures within and adjacent to the site boundary. An experienced bat ecologist identifies, and records features which bats could use for roosting within, PRFs, as outlined in Table 3.5. The aim of these assessments was to determine the suitability of features within the structures for roosting bats and the need for further survey and/or mitigation. Buildings outside the site boundary were not assessed as they are not anticipated to be impacted by the works.

Table 3-5 PRFs in structures commonly used by bats for roosting and shelter, and field signs that may indicate use of structures by bats

Features used as bat roosts	Signs indicating possible use by bats*
Gaps in brickwork or stonework may allow access to cavity- or rubble-filled walls. Any potential access point beneath; windowsills, windowpanes, walls, behind peeling paintwork or lifted rendering, hanging tiles, weatherboarding, eaves, soffit boxes, fascias, lead flashing, gaps under felt (even including those of flat roofs), under tiles/slates and in existing bat boxes.	Bat droppings in, around or below a PRF Odour emanating from a PRF Audible squeaking at dusk or in warm weather Staining below the PRF Tiny scratches around PRF Flies around entry point Smoothing of surfaces around cavity

*Sometimes bats leave no visible sign of their presence on the outside of a structure or tree (and even when they do, wet or windy weather can blow or wash evidence away). +This list is not exhaustive – all suitable gaps should be searched thoroughly and systematically. Source: Colins, 2023

3.4.4 Emergence Surveys

Two emergence surveys of the existing bridge were carried out by suitably experienced bat ecologists. The surveys were carried out using full spectrum bat detectors to identify the species of bats observed. Batlogger M detectors were used by surveyors, whilst SM4 detectors were placed in proximity to the bridge. All surveys were undertaken in accordance with best practice guidelines (Collins, 2023). Each survey was carried out for a period of 15 minutes prior to sunset and 1.5 hours after. Temperature and wind speed were recorded using a handheld anemometer at the start and end of each survey.

Weather conditions, survey timings and dates are provided within Table 3.6.

Table 3.6: Emergence Survey Weather Conditions and Timings

Date	Start time	Sunset	Finish time	Start Temperature (°C)	Start Wind Speed (m/s)	Finish Temperature (°C)	Finish Wind Speed (m/s)
20/05/2025	20:50	21:05	22:35	21.5	0.0	16.6	0.0
11/06/2025	21:14	21:29	22:59	21.0	0.0	16.2	0.0

Source: Mott MacDonald, 2025

The effectiveness of traditional emergence surveys that rely solely on using the naked eye to detect bats is limited by the effects of visibility bias, in that the level of available natural light directly effects whether or not roosting bats are detected (Fawcett Williams, 2021). In order to improve the rate of detection of roosting bats, Night Vision Aids (NVAs) were used to supplement surveyors.

In line with best practice guidelines (Collins, 2023), NVAs in the form of high-definition (1080p) infra-red cameras mounted on tripods (Canon XA50), were used during the emergence surveys to cover all PRFs identified during the preliminary roost assessments.

All video recordings from infra-red cameras were reviewed to identify evidence of roosting bats using VLC Client for Windows.

3.4.5 Bat sound analysis

The recordings made during the surveys were analysed using either Wildlife Acoustics Kaleidoscope Pro or Lite packages or Titley Scientific Analook software, with appropriate quality assurance checks in place. At least 10% of all bat registrations and 100% of cryptic species registrations (considered to include *Myotis* species, long-eared bat species (*Plecotus sp.*), serotine (*Eptesicus serotinus*) and big bat species) recorded within the dataset were checked by an experienced bat ecologist. For the purposes of this report bat registrations are synonymous with bat calls.

Due to extreme similarities in their sonograms, it is difficult to separate certain species groups of bats from recordings of their calls alone. For this reason, *Myotis* species were not identified to species level without further supporting evidence such as DNA analysis of droppings. When the calls were not clear, *Plecotus* species were grouped together as long-eared bats and noctule and Leisler's were grouped together under the genus *Nyctalus*. The individual species within each group have similar requirements for roosting, foraging and commuting habitat and as such, the mitigation requirements are likely to be similar for all species within each group.

3.5 Otter surveys

Following the ecological constraints assessment in August 2024, along with previous assessments and records, the site was considered to be suitable for use by otters given the condition of the River Ebbw, the provision of suitable food resource and the connectivity to the wider landscape and catchment.

3.5.1 Identification of potential resting sites

A detailed field signs survey was undertaken on 10 September 2024 by an appropriately qualified and licenced otter ecologist (Lee Jenkins) to look for evidence of otter presence within the area. This also included comprehensive assessment of potential resting sites within the site, that may be subject to disturbance from the works.

The search for potential resting sites encompassed the entire site boundary and was extended into suitable adjacent habitats up to 100m in all directions, to identify potential resting sites which could be subject to disturbance from any future works. Disturbance to natal (breeding) sites may occur up to 200m from the source, depending on the remoteness of the project location. However, in the context of the site, including the proximity to well-used road infrastructure and regular public recreational use, the distance of 100m was considered to be appropriate; any otters which do regularly use the site and adjacent habitats are likely to be habituated to regular noise and the presence of people and dogs.

3.5.2 Camera monitoring

Two potential otter resting sites were subject to camera monitoring for a period of 6 weeks from 11 September 2024 to 22 October 2024. The approximate location of these two sites is:

- Upstream on the west bank, possible cavities within rock armour ST 27813 87163; and
- Under the existing bridge, on the east side ST 27860 87041.

3.6 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. The records are mostly provided by individuals on an *ad-hoc* basis, often meaning there are areas of deficiency in the data. Records are not often collected as a result of systematic surveys and therefore geographic, temporal (annual and seasonal) and species coverage is not often representative.

Records older than 10 years were considered on a case-by-case basis, with those less than 10 years old used as standard. This is to ensure that changes in local conditions and habitats do not skew results, for example inferring species may be present from an older record prior to development of an area, when no suitable habitats exist anymore. This has been taken into account in the assessment and recommendations.

Ordnance Survey maps do not provide a complete record of waterbodies present within a landscape such as garden ponds, which can provide an important biodiversity resource. As such examination of local aerial imagery was undertaken to provide additional insight to these potential resources.

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. Subsequent survey visits to the site

for various targeted species surveys provided supporting information to further inform the initial assessment.

A single NBW was carried out to inform the bat activity present and subsequent surveys, with no subsequent NBW survey carried out due to the small scale of the works and concerns around surveyor health and safety. Given the findings, this is not considered a limitation to the assessment made.

Whilst no emergences were recorded during the bat surveys carried out at the bridge, subsequent analysis of infra-red footage may discern emergences that were not apparent to surveyors onsite. Our assessment includes a precautionary approach should roosts be confirmed.

4 Results and evaluation

4.1 Desk study

A desk study was undertaken to identify key species and habitats within the ZoI of the site. The results are presented within the following sections. Distances are approximate and are measured from the centre of the site.

4.1.1 Ecological designations

4.1.1.1 Statutory designated sites

There are no statutory SSSIs or National Nature Reserves (NNR) within 2.0km of the site. Table 4-1 provides information on the internationally designated sites that are present within 30km (in respect of bird or bat features), or that are hydrologically connected to the site. There is one local nature reserve (Allt-yr-yn LNR, which is also a SINC – see Table 4-2) at just over 1.5km away.

Table 4-1: Internationally designated sites within 30km of the site with birds or bats as primary features, or is hydrologically linked

Name	Type	Primary features	Distance to site (and direction) at closest point
Severn Estuary / Môr Hafren	SPA	Designated as a SPA for its national and international importance for breeding, feeding, wintering and migration importance for rare and vulnerable bird species	4.38km (to south of site)
	SAC	Designated as a SAC for its subtidal sandbanks, intertidal mudflats and sandflats, Atlantic salt meadows and reefs which support three species of migratory fish	
	Ramsar	Designated as a Ramsar site due to its estuaries, assemblages of migratory fish species and internationally important assemblage of waterfowl.	
Wye Valley and Forest of Dean Bat Sites / Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena (Wales)	SAC	Exceptional breeding population (and hibernating populations) of lesser horseshoe bats (<i>Rhinolophus hipposideros</i>) and breeding and hibernating populations of greater horseshoe bat (<i>Rhinolophus ferrumequinum</i>).	21.79km (to east north east of site)
Usk Bat Sites / Safleoedd Ystlumod Wysg	SAC	Large maternity populations and important hibernacula for lesser horseshoe bat.	25.69km (to north of site)

Source: Mott MacDonald 2025

4.1.1.2 Non-statutory designated sites

A total of 14 non-statutory SINC's were identified within 2.0km of the site and are of local conservation importance. Afon/River Ebbw SINC is the designation considered of most relevance to the site, due to it being within the site boundary. Non-statutory designated sites are considered of value at a county level due to their legal and policy protection. An assessment of

likely impact pathways is set out in Section 5. Table 4.2 details the non-statutory designated sites within 2.0km of the site, including their distances from the site and qualifying features.

Table 4-2: Non-statutory designated sites within 2.0km of the site

Name	Designation	Qualifying features	Distance from site (at nearest point)
River Ebbw	SINC	H15-Major river system with associated semi-improved neutral grassland and marshy grassland, swamp, scrub and semi-neutral woodland. Associated species include: bulbous foxtail (<i>Alopecurus bulbosus</i>) near confluence with Usk, Kingfisher (<i>Alcedo atthis</i>), sand martin (<i>Riparia riparia</i>), grass snake (<i>Natrix helvetica</i>). Forms part of corridor with other SINCS. Hydrologically connected to site	0 km
Court Wood	SINC	H1-Woodlands- Ancient semi-natural woodland	0.48 km
Garth Wood	SINC	H1-Woodlands- Ancient semi-natural woodland	0.55 km
Gaer Fort	SINC	H20 - Mosaic habitat, H4 - Neutral grassland and S1 – Mammals. Large mosaic area of unimproved neutral and semi-improved acid grassland with areas of lowland heath, bracken and scrub. Large population of anthill (<i>Lasius flavus</i>)	0.76 km
Cefn Wood	SINC	H1-Woodlands. Ancient semi-natural woodland (split into 2 sites by Chartist Drive)	0.95 km
Coed Ffynon-Oer	SINC	H1-Woodlands- Ancient semi-natural woodland	1.08 km
Coed y Glasllwch	SINC	No information provided.	1.37 km
Monmouthshire & Brecon Canal (Crumlin Arm)	SINC	H15-Watercourse. Standing open water - Disused linear waterway with a variety of adjacent habitats and associated species including otter.	1.44 km
Allt-yr-Yn	SINC	H2 - Woodlands, H4 - Neutral Grasslands, H7 - Marshy Grasslands, H16 - Open Standing Water, S4 - Amphibians, S6 – Invertebrates. Mosaic of ancient semi-natural woodland, recent woodland, ponds, semi- and unimproved neutral grassland	1.55 km
Cwm Pensidan	SINC	H1-Woodlands- Ancient semi-natural woodland	1.58 km
Fourteen Locks Fields	SINC	Neutral grassland	1.60 km
Gaer Pond	SINC	H16 - Standing open water. Suburban pond with tall swamp vegetation and Nationally Scarce fly species (<i>Typhamyza bifasciata</i>)	1.87 km
Ynys-y-Fro Reservoir	SINC	H15-Watercourses, H11-Fens, reed beds and other swamps, H4- Neutral Grasslands. Large reservoir with areas of reedbed, marginal vegetation and semi-improved neutral grassland, which is identified as a key site for nesting and wintering wildfowl	1.89 km
Coed Y Fedw	SINC	H1-Woodlands- Ancient semi-natural woodland	1.94 km

Source: Mott MacDonald 2025

4.1.1.3 Other notable sites

There are 35 sites of Ancient Semi-Natural Woodland (ASNW), eight sites of Restored Ancient Woodland and five sites of NRW Priority Area (Woodland Plantation Ancient Woodland Site (PAWS)) within 2.0km of the site, however none of these are within the site. The nearest ASNW is found approximately 0.5km upstream on the River Ebbw.

Ancient woodland is considered an irreplaceable habitat which receives policy protection at a national level, however no ancient woodland is likely to be impacted by the proposed development.

The River Ebbw is also a priority habitat. There are no other habitats identified within the site that are considered a NRW Priority Habitat.

4.1.2 Protected / notable species records

Species in this assessment are included due to being notable for the following reasons:

- Species protected by legislation;
- Species of principal importance (SPI) for the conservation of biodiversity;
- Red Listed using International Union for the Conservation of Nature (IUCN) criteria;
- Birds of Conservation Concern (red or amber listing);
- Nationally Rare, Nationally Scarce or Near Threatened species;
- INNS; and/or
- Species for which the works may pose a welfare issue.

4.1.2.1 Breeding birds

A total of 39 notable bird species were confirmed within 2.0km of the site, 19 of which are listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as Amended). One species for which records were returned, redwing (*Turdus iliacus*) is reported on by the Rare Breeding Birds Panel (as scarce or rare) (RBBP, Eaton *et al.* 2022), however the record returned does not document breeding. The remaining 20 are listed under Section 7 of the Environment (Wales) Act 2016. Notable bird species are detailed in Table 4.3. This information provides records for birds within the breeding season, as well as at other times of year.

Table 4-3 Notable bird species within 2.0km of the site

English Name	Scientific Name	Schedule 1	Section 7	Record year (most recent)	Distance (nearest record) from site (m)
Fieldfare	<i>Turdus pilaris</i>	Y		2019	9
Kingfisher	<i>Alcedo atthis</i>	Y		2021	399
Dunnock	<i>Prunella modularis</i>		Y	2020	514
Brambling	<i>Fringilla montifringilla</i>	Y		2017	570
Hobby	<i>Falco subbuteo</i>	Y		2011	570
Redwing	<i>Turdus iliacus</i>	Y		2019	570
Red kite	<i>Milvus milvus</i>	Y		2015	570
Eurasian bullfinch	<i>Pyrrhula pyrrhula</i>		Y	2019	570
Eurasian skylark	<i>Alauda arvensis</i>		Y	2019	570
House sparrow	<i>Passer domesticus</i>		Y	2020	570
Linnet	<i>Linaria cannabina</i>		Y	2008	570
Starling	<i>Sturnus vulgaris</i>		Y	2020	570
Western marsh harrier	<i>Circus aeruginosus</i>	Y		2010	712
Black-headed gull	<i>Chroicocephalus ridibundus</i>		Y	2021	764

English Name	Scientific Name	Schedule 1	Section 7	Record year (most recent)	Distance (nearest record) from site (m)
Peregrine	<i>Falco peregrinus</i>	Y		2016	800
Goshawk	<i>Accipiter gentilis</i>	Y		2020	800
European herring gull	<i>Larus argentatus</i>		Y	2020	800
Song thrush	<i>Turdus philomelos</i>		Y	2021	800
Common firecrest	<i>Regulus ignicapilla</i>	Y		2006	811
Savi's warbler	<i>Locustella luscinioides</i>	Y		2016	830
Black-tailed godwit	<i>Limosa limosa</i>	Y		2019	853
Cetti's warbler	<i>Cettia cetti</i>	Y		2019	853
Common reed bunting	<i>Emberiza schoeniclus</i>		Y	2019	853
Curlew	<i>Numenius arquata</i>		Y	2019	853
Kestrel	<i>Falco tinnunculus</i>		Y	2007	853
Lapwing	<i>Vanellus vanellus</i>		Y	2019	853
Western barn owl	<i>Tyto alba</i>	Y		2021	1317
Common scoter	<i>Melanitta nigra</i>	Y		2016	1418
Common ringed plover	<i>Charadrius hiaticula</i>		Y	2016	1418
Common scoter	<i>Melanitta nigra</i>		Y	2016	1418
Marsh tit	<i>Poecile palustris</i>		Y	2000	1556
Garganey	<i>Spatula querquedula</i>	Y		2020	1581
Lesser redpoll	<i>Acanthis cabaret</i>		Y	2016	1597
Lesser spotted woodpecker	<i>Dryobates minor</i>		Y	1984	1597
Eurasian hoopoe	<i>Upupa epops</i>	Y		2002	1678
Purple heron	<i>Ardea purpurea</i>	Y		2019	1678
Mediterranean gull	<i>Ichthyaeetus melanocephalus</i>	Y		2020	1678
Spotted flycatcher	<i>Muscicapa striata</i>		Y	2017	1678
Cuckoo	<i>Cuculus canorus</i>		Y	2021	1736

Source: Adapted from Aderyn, 2024

4.1.2.2 Reptiles

Grass snake was the only reptile species recorded within 2.0km of the site. The closest record lies approximately 1.5km north of the site. It is unlikely that there is connected habitat between this location and the site, with industrial and urban areas existing between.

4.1.2.3 Amphibians

No records of great crested newt were returned within 2.0km of the site. Records of one species of common amphibian were returned. These were for common frog (*Rana temporaria*) with the closest record being approximately 1.7km north of the site.

4.1.2.4 Bats

Four species of bat were recorded within 2.0km of the site and are detailed in Table 4.4. The closest records are of noctule (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and greater horseshoe bat all identified approximately 1.0km east of the site. Four records of unspecified *Chiroptera* species were also recorded.

No confirmed roosts were found within the 2.0km within the desk study data.

Table 4-4 Bat species recorded within 2.0km of the site

English Name	Scientific Name	Record year (most recent)	Distance (nearest record) from site (m)
Bats	<i>Chiroptera</i>	2017	853
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	2018	1086
Greater horseshoe bat	<i>Rhinolophus ferrumequinum</i>	2017	1086
Noctule	<i>Nyctalus noctula</i>	2018	1086
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	2017	1086

Source: Adapted from Aderyn, 2024

4.1.2.5 Hazel dormouse

There are no records of hazel dormouse (*Muscardinus avellanarius*) in the last 10 years within 2.0km. There are two records from 2011 with the closest being 1.2km south of the site.

4.1.2.6 Otter

Fourteen records of otter were returned within 2.0km of the site since 2000 with the closest being 0.3km north of the site on the River Ebbw in 2019. Previous surveys carried out by Mott MacDonald in 2021 found otter signs and a likely resting site within the site.

4.1.2.7 Badger

Ten records of Eurasian badger (*Meles meles*) were returned in the last 10 years, the closest being 0.2km north of the site. Historic records from 1992 show a network of 12 setts found roughly 1km north of the site.

4.1.2.8 Other mammals

A total of 14 records for other priority terrestrial mammals were returned within 1.0km of the site, for Western European hedgehog (*Erinaceus europaeus*), weasel (*Mustela nivalis*) and common shrew (*Sorex araneus*). Other species recorded within 2.0km of the site are European water vole (*Arvicola amphibius*), and polecat (*Mustela putorius*).

4.1.2.9 Aquatic invertebrates

Two records for aquatic invertebrates were returned, one for Jenkin's spire snail (*Potamopyrgus antipodarum*) from 2019, recorded 2km south of the site and one record of *Crangonyx pseudogracilis/floridanus*, 0.25km north of the existing bridge, within the River Ebbw. Both species are non-native.

4.1.2.10 Terrestrial invertebrates

A total of 37 notable invertebrate species, listed under Section 7 of the Environment (Wales) Act 2016, were recorded within 2.0km of the site and are detailed in Table 4.5 below. The closest record returned was for mole cricket (*Gryllotalpa gryllotalpa*), at a location 0.3km away.

Table 4-5 Notable invertebrate species within 2.0km of the site

English Name	Scientific Name	Record Year (most recent)	Distance (nearest record) from site (m)
Mole cricket	<i>Gryllotalpa gryllotalpa</i>	2019	307 south west
Buff ermine	<i>Spilosoma lutea</i>	2016	1052 west
Autumnal rustic	<i>Eugnorisma glareosa</i>	2015	1052 west
Beaded chestnut	<i>Agrochola lychnidis</i>	2016	1052 west
Blood-vein	<i>Timandra comae</i>	2016	1052 west
Brindled beauty	<i>Lycia hirtaria</i>	2016	1052 west
Cinnabar	<i>Tyria jacobaeae</i>	2016	1052 west
Powdered quaker	<i>Orthosia gracilis</i>	2016	1052 west
Centre-barred sallow	<i>Atethmia centrargo</i>	2016	1052 west
Ghost moth	<i>Hepialus humuli</i>	2016	1052 west
Knot grass	<i>Acronicta rumicis</i>	2016	1052 west
Dot moth	<i>Melanchra persicariae</i>	2016	1052 west
Mouse moth	<i>Amphipyra tragopoginis</i>	2016	1052 west
Rosy rustic	<i>Hydraecia micacea</i>	2016	1052 west
Small phoenix	<i>Ecliptopera silaceata</i>	2016	1052 west
Shoulder-striped wainscot	<i>Leucania comma</i>	2016	1052 west
Small square-spot	<i>Diarsia rubi</i>	2016	1052 west
Dusky brocade	<i>Apamea remissa</i>	2016	1052 west
August thorn	<i>Ennomos quercinaria</i>	2016	1052 west
White ermine	<i>Spilosoma lubricipeda</i>	2016	1052 west
Dusky thorn	<i>Ennomos fuscantaria</i>	2016	1052 west
Feathered gothic	<i>Tholera decimalis</i>	2015	1052 west
Garden dart	<i>Euxoa nigricans</i>	2014	1052 west
Grey dagger	<i>Acronicta psi</i>	2016	1052 west
Oak hook-tip	<i>Watsonalla binaria</i>	2016	1052 west
Dark-barred twin-spot carpet	<i>Xanthorhoe ferrugata</i>	2016	1052 west
Mottled rustic	<i>Caradrina morpheus</i>	2016	1052 west
Rosy minor	<i>Litologia literosa</i>	2015	1052 west
Rustic	<i>Hoplodrina blanda</i>	2016	1052 west
Green-brindled crescent	<i>Allophytes oxyacanthae</i>	2016	1052 west
Small emerald	<i>Hemistola chrysoprasaria</i>	2016	1052 west
Sallow	<i>Cirrhia icteritia</i>	2016	1052 west
Large wainscot	<i>Rhizedra lutosa</i>	2016	1052 west
September thorn	<i>Ennomos erosaria</i>	2016	1052 west
Lackey	<i>Malacosoma neustria</i>	2015	1052 west
Minor shoulder-knot	<i>Brachylomia viminalis</i>	2015	1052 west

English Name	Scientific Name	Record Year (most recent)	Distance (nearest record) from site (m)
Latticed heath	<i>Chiasmia clathrata</i>	2016	1052 west
Brown-banded carder-bee	<i>Bombus humilis</i>	2018	1342 west
Small heath	<i>Coenonympha pamphilus</i>	2021	1564 south
Ghost moth	<i>Hepialus humuli</i>	2018	1719 west
Cinnabar	<i>Tyria jacobaeae</i>	2019	1877 south west
Dusky thorn	<i>Ennomos fuscantaria</i>	2015	1894 west

Source: Adapted from Aderyn, 2024

4.1.2.11 Notable plant species

No Section 7 species were found within the 2.0km buffer, and no notable plant species listed on the Newport LBAP were returned either. One Schedule 8 species, bluebell (*Hyacinthoides non-scripta*) was confirmed within the buffer, with the nearest being located 0.8km south of the site.

4.1.2.12 Fungi, bryophytes and lichen

Two Section 7 species were returned within 2.0km of the site, these were earth tongue fungi (*Microglossum olivaceum*) and the lichen (*Punctelia jeckeri*) both found 1.7km east of the site.

4.1.2.13 Fish

The following priority fish species were recorded within or directly adjacent to the site: European eel (*Anguilla anguilla*), brown/sea trout (*Salmo trutta*), Atlantic salmon (*Salmo salar*), and European bullhead (*Cottus gobio*).

4.1.3 Invasive non-native species

There are a total of 13 plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as Amended) located within 2.0km of the site (see Table 4.6).

The closest notable records are of Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*) respectively approximately 0.01km north and 0.6km south west of the site.

Additionally, records of *Crangonyx pseudogracilis/floridanus*, Jenkin's spire snail *Potamopyrgus antipodarum*, Australian flatworm *Australplana sanguinea*, Western conifer seed bug (*Leptoglossus occidentalis*), harlequin ladybird (*Harmonia axyridis*), and Canada goose (*Branta canadensis*) have been recorded within 0.3km and 1.0km of the site.

Table 4-6 Invasive Non-Native Species (botanical) within 2.0km of the site

English Name	Scientific Name	Record year (most recent)	Distance (nearest record) from site (m)
Japanese knotweed	<i>Reynoutria japonica</i>	2017	16 north
Himalayan balsam	<i>Impatiens glandulifera</i>	2018	643 south west
Virginia-creeper	<i>Parthenocissus quinquefolia</i>	2017	643 south west
Wall cotoneaster	<i>Cotoneaster horizontalis</i>	2017	643 south west
Giant hogweed	<i>Heracleum mantegazzianum</i>	2018	853 east
Montbretia	<i>Crocsmia pottsii x aurea</i> = <i>C. x crocosmiiflora</i>	2014	1345 north
Curly waterweed	<i>Lagarosiphon major</i>	2017	1449 south east

English Name	Scientific Name	Record year (most recent)	Distance (nearest record) from site (m)
Himalayan cotoneaster	<i>Cotoneaster simonsii</i>	2017	1449 south east
Yellow archangel	<i>Lamiastrum galeobdolon</i> <i>subsp. argentatum</i>	2017	1449 south east
<i>Rhododendron ponticum</i>	<i>Rhododendron ponticum</i>	2019	1582 north
New Zealand pigmyweed	<i>Crassula helmsii</i>	2015	1597 east
Water fern	<i>Azolla filiculoides</i>	2019	1597 east
Three-cornered garlic	<i>Allium triquetrum</i>	2018	1744 south

Source: Adapted from Aderyn, 2024

4.2 Field survey

4.2.1 Habitats

The habitats recorded within and adjacent to the site are described below. The UKHab classification map is provided in Appendix B.

Habitats are listed within Table 4.7 in alphabetical order of their UKHab habitat code rather than their abundance or assessed importance to the site. Photos are included in Appendix D.

Table 4-7 Description of habitats

Habitat Code	Habitat Type	Description
g3c	Other neutral grassland	On the eastern riverbank extends a section of other neutral grassland, which includes oxeye daisy (<i>Leucanthemum vulgare</i>), bird's foot trefoil (<i>Lotus corniculatus</i>), horsetail (<i>Equisetum arvense</i>), ragwort (<i>Senecio jacobaea</i>), sow thistle (<i>Sonchus oleraceus</i>), sorrel (<i>Rumex acetosa</i>), broom, hedge mustard (<i>Sisymbrium officinale</i>), lamb's ear (<i>Stachys byzantine</i>), knapweed (<i>Centaurea nigra</i>), common vetch (<i>Vicia sativa</i>), creeping thistle (<i>Cirsium arvense</i>), common comfrey (<i>Symphytum officinale</i>) and cow parsley (<i>Anthriscus sylvestris</i>).
g4	Modified grassland	On each riverbank are sections of modified grassland with this including sow thistle, broom, hedge mustard, lamb's ear, knapweed, vetch spp, creeping thistle, common comfrey and cow parsley.
h3h	Mixed scrub	Scattered scrub dominates large parcels of the site including the eastern riverbank and large sections of the western riverbank. Dominated by buddleia (<i>Buddleia davidii</i>), with willowherb spp (<i>Epilobium spp</i>), bramble (<i>Rubus fruticosus</i>), willow (<i>Salix spp</i>), ash (<i>Fraxinus excelsior</i>), hemp agrimony (<i>Eupatorium cannabinum</i>), gorse (<i>Ulex europaeus</i>), hogweed (<i>Heracleum sphondylium</i>), broom (<i>Cytisus scoparius</i>), alder (<i>Alnus glutinosa</i>), dogwood (<i>Cornus sanguinea</i>), sycamore (<i>Acer pseudoplatanus</i>), teasel (<i>Dipsacus fullonum</i>) and nettle (<i>Urtica dioica</i>). Downstream of the existing bridge also includes Japanese knotweed (<i>Reynoutria japonica</i>), Himalayan balsam (<i>Impatiens glandulifera</i>), silver birch (<i>Betula pendula</i>), horse chestnut (<i>Aesculus hippocastanum</i>), and hazel (<i>Corylus avellana</i>).
r2	Rivers and streams	River Ebbw river runs north to south through the site.
w1	Broadleaved and mixed woodland	There is a section of mixed woodland to the northeast section of the site and extending out of the site boundary. This consists of ash, sycamore, alder, Japanese knotweed, buddleia, ivy (<i>Hedera helix</i>), willowherb spp., Himalayan balsam, elder (<i>Sambucus nigra</i>), bramble, reed canary grass (<i>Phalaris arundinacea</i>), ragwort, hedge mustard, pendulous sedge (<i>Carex pendula</i>), bindweed (<i>Calystegia sepium</i>) and wood avens (<i>Geum urbanum</i>).
u1	Built-up areas and gardens	Found to the east and south of the site boundary.
u1b	Developed land -sealed surface	This habitat type is found on Viaduct Way, Caerphilly Road, Forge Mews and the pavement sections including patches of hardstanding along the river to the northwestern extent of the site.
u1c	Artificial unvegetated, unsealed surface	There are two sections of this habitat on the western extent of the site on the western riverbank.
w1, 33	Line of trees	Towards the southern extent of the site on the southern side of the old Bassaleg bridge on the west riverbank there is a line of trees made up of sycamore, alder, ash and oak spp. (<i>Quercus spp</i>). Trees on the eastern bank are silver birch, sycamore, rowan (<i>Sorbus aucuparia</i>) and honey locust (<i>Gleditsia triacanthos</i>).

Source: Mott MacDonald, 2025

4.2.2 Habitats evaluation

Of all the habitats recorded onsite or immediately adjacent, the r2 Rivers and streams (the River Ebbw) is the only one considered a priority habitat. Rivers and streams are considered a habitat of Principal Importance as listed under Section 7 of the Environment (Wales) Act 2016 (Rivers) and considered of high ecological value at a national level. The River Ebbw is located within the site therefore any anticipated indirect impacts are discussed in Section 5. This river has man-made features with the section onsite being modified through rock armour boulders and concrete sections associated with the existing bridge. The river does however have the potential to support protected species and as it feeds into the Severn Estuary SAC, SPA and Ramsar site, it is therefore considered of regional importance.

4.2.3 Protected / notable species

4.2.3.1 Bats

Potential Roost Assessment

The survey identified one structure (B1) within the Site footprint (the existing bridge). This structure was noted to have several areas of decaying concrete and masonry present, offering suitability for crevice-dwelling species within delaminated sections of the structure. There is also a cavity under the easternmost arch which could offer some opportunities for species requiring free flight (horseshoe species) however there is significant vegetation cover along the entrance way (<50cm gap at ground level) which diminishes the likelihood of its use by these species. (NB It was noted that the vegetation had become much denser partially occluding access to this feature in 2025). There is some anti-social behaviour at night under the bridge, and the features that are present appear to be relatively damp or open. Overall, the structure is considered to offer moderate suitability for roosting bats. The area with the cavity will be retained to accommodate otter resting site retention, maintaining this feature.

The A467 road bridge may offer some suitability for roosting bats, however this is located approximately 100m downstream of the proposed new bridge. The current scope of works indicate that the level of disturbance that a roost within this structure would be exposed to, if present, is unlikely to be significantly above baseline levels.

Ground-Level Tree Assessment

All trees on site or immediately adjacent were assessed for their ability to support roosting bats. Two trees (both sycamore) were found to have some minor potential roost features (one to the eastern bank had some ivy coverage; the large sycamore to the western side of the existing bridge had some broken branches and minor holes incapable of supporting more than a single bat) and were categorised as PRF-I.

An additional tree was recorded offsite to the south, on Churchmead. This tree (a pollarded sycamore) was not able to be characterised but was noted as having a tear-out feature at 4.5m, which may lead to a cavity. Whilst this tree is within 20m of the proposed flood defence measures (earthwork bund and small area of wall), it is unlikely to be disturbed significantly above baseline levels.

Night-Time Bat Walkover

During the NBW, seven bat species were recorded: common pipistrelle, soprano pipistrelle, noctule, *Nyctalus sp* and *Myotis sp*.

Bats recorded were observed particularly being associated with bankside vegetation, foraging over the river and under the bridge. There will be a loss of trees on the eastern side of the river to accommodate the new bridge, however there will remain continuity of aquatic habitat at equal or lower light levels, to provide habitat connectivity along the river north-south.

There will continue to be vegetation present to the south of the existing bridge to provide foraging resource.

The local area was noted to be fairly well illuminated, though the light spill from street lighting did not fully extend across the river, leaving a dark corridor.

Emergence surveys

No bats were observed emerging from the existing bridge during the bat surveys carried out.

High levels of *Myotis sp.* and common pipistrelle foraging activity were observed beneath the bridge and along the river corridor during both survey visits. During the June survey, occasional noctule foraging activity was observed at height above the river corridor, between the bridge and Bassaleg Viaduct.

4.2.3.2 Otter

Two separate potential resting sites were identified and subject to camera monitoring, as described in Table 4.8. Additional potential resting sites within the eastern bank flood wall could not be fully assessed at the time, due to a lack of access from the bank top. Assessment was limited to the use of binoculars from the west bank, which proved inconclusive. Multiple attempts were made to assess this area during September and October 2024, but inclement weather caused high water levels, and the use of a kayak was not considered to be safe.

In the context of the wider landscape, there are additional known resting sites both upstream and downstream of the site, within habitats which are more suitable for regular use by otters; increased woodland and scrub cover within the wider landscape provides optimal terrestrial habitat and is close enough to the site to be within the same territory of a single otter.

Camera monitoring results

Two potential otter resting sites were subject to camera monitoring for a period of 6 weeks from 11 September 2024 to 22 October 2024. The approximate location of these two sites is:

- Upstream on the west bank, possible cavities within rock armour ST 27813 87163; and
- Under the existing bridge, on the east side ST 27860 87041.

The results of the camera monitoring are summarised in 4.8.

Table 4-8: Camera monitoring results

Feature location	Date	Time	Observation	Status
ST 27860 87041	27/09/2024	01:08	Otter leaves couch under bridge.	Confirmed couch
ST 27860 87041	07/10/2024	23:52	Dog otter enters couch under bridge, leaving after 59 minutes.	Confirmed couch
ST 27860 87041	15/10/2024	04:58	Otter (probably male) leaves couch under bridge.	Confirmed couch
ST 27860 87041	17/10/2024	06:58	Otter (probably male) enters couch under bridge	Confirmed couch

Mott MacDonald, 2024 / L. Jenkins, 2024

No otter evidence was recorded on the camera located upstream on the west bank.

A total of four individual visits to the resting site located under the existing bridge were recorded during the monitoring period. These visits are all considered to be of a single individual dog otter, with no evidence of female and/or cubs present, suggesting this is not a breeding/natal holt and is used as a couch by the dog otter. Three of the visits occurred overnight, with two visits confirmed as brief based on time elapsed between entry and exit. The fourth visit was at 06:58, which was 41 minutes before sunrise.

The observation of an otter leaving the couch on the morning of 27th September 2024 showed a dry otter, indicating that the otter had been present for a longer period of time. No camera footage was recorded of the otter entering the couch. Therefore, this has introduced uncertainty as to whether there is an alternative entrance to the couch. As such, pre-works assessments and ongoing checks are required, as described in Section 5 below.

During monitoring for the works, otter was recorded on the 31/10/2024 and 06/11/2024 (three separate visits).

4.2.3.3 Nesting birds

No nesting birds were observed during surveys carried out, though grey wagtail, kingfisher and dipper were both observed moving up/downstream during the breeding season, indicating their likely breeding elsewhere in the locality.

4.2.3.4 Invasive non-native species

During the walkover seven INNS species were identified within the site boundary. These species found were Japanese knotweed, Himalayan balsam, buddleia, cherry laurel (*Prunus laurocerasus*), Himalayan cotoneaster, montbretia and horsetail (*Equisetum sp.*).

Honey locust trees were recorded to the east of the river, which are considered non-native, and which will be lost through the proposals.

The locations of these species are shown in Appendix C.

4.2.3.5 Terrestrial invertebrates

No specific survey was carried out in relation to terrestrial invertebrates, and no priority species identified incidentally during the surveys carried out. Whilst there will be some losses of habitat that could support widespread and common terrestrial invertebrates, it is unlikely that the proposals will result in the loss of any habitat that supports rarer species. Measures to enhance and mitigate will provide a richer botanical assemblage, supportive of a more diverse invertebrate community, once established.

4.2.3.6 Aquatic invertebrates

Although no aquatic invertebrates were identified during the surveys carried out, the River Ebbw provides suitable habitat for these species.

There is the potential for pollution events such as spills into the water (if unmitigated) to cause impacts to aquatic invertebrates through toxicity effects or smothering, although with industry standard best practice measures in place, this is unlikely to occur.

4.2.3.7 Fish

Although no fish species were observed during the surveys to date, the River Ebbw provides suitable habitat for fish, including migrating salmonid species, and several records were returned for fish species within the desk study.

4.2.3.8 Other species

It is not considered that other protected or notable species (e.g. lichen, fungi, bryophytes) are present within the site and are not considered further.

5 Ecological Constraints and Assessment

5.1 Assessment of potential impacts

This EclA assesses the potential impact pathways and constraints posed by the ecological habitats and species identified above, on the basis of the current scope of works, an initial assessment of the potential effects is provided within Table 5.1. Ecological receptors which are not considered to be at risk of impacts from the current scope of works are not included hereafter.

Table 5-1 Assessment of potential impacts of the proposed works

Feature	Location	Designation type/ legislative protection	Assessment and recommendation
Designated Sites			
River Ebbw	Within site boundary	SINC	Potential effects on hydrologically connected designations could arise from construction activity associated with the development of the site, including increased noise, lighting and pollution from silt mobilisation and fuel/lubricants spill. It is recommended that an appropriate drainage scheme, potentially the use of sustainable drainage systems (SuDS), and a Construction Environmental Management Plan (CEMP) be prepared to inform the proposed works to limit any potential detrimental hydrological effects on the river.
River Usk	Hydrologically connected downstream	SAC	
Court Wood	0.4km south-west	SINC	Potential effects on designations within 1.0km could arise from construction activity associated with the development of the site, including increased noise, lighting and pollution. However, due to the small scale of the works, and with the implementation of an appropriate drainage scheme and CEMP this is considered unlikely.
Gaer Fort	0.7km east	SINC	
Cefn Wood (East)	0.9km north	SINC	
Protected species			
Bats	Running water, species-rich hedgerows with trees, buildings	Bat species are protected under the Conservation of Habitats and Species Regulations 2017 (as amended), the 1981 Act and are also listed under Section 7 of the Environment (Wales) Act 2016. In summary, it is an offence to intentionally or deliberately kill, injure, disturb or capture any bats or damage, destroy or obstruct access to their roosts.	The proposed works would result in a minor effect on commuting or foraging bats through loss of some vegetation. It is anticipated that there will be some changes to lighting during construction and operation, however it is considered that this will not be above baseline levels. Whilst the vegetation to be lost may support an invertebrate source of prey, this is not anticipated to be significant in the context of the higher value habitats in the surrounding area. Effects in both the short and long-term are considered unlikely. No losses of navigational features used for commuting such as the plantation woodland and hedgerows are anticipated as part of the proposal.

Feature	Location	Designation type/ legislative protection	Assessment and recommendation
			Vehicular use of the new bridge may have the potential to disturb this species if present, particularly at night, although this is considered unlikely. Recommendations regarding lighting design are included in Section 6.
Terrestrial invertebrates	On the riverbanks and woodland (on and off-site)	Species listed under Section 7 of the Environment (Wales) Act 2016.	Vegetation removal may impact some terrestrial impact species, although due to the scale of the works, long term impacts as a result of the works are considered unlikely.
Aquatic invertebrates	Running water	Species listed under Section 7 of the Environment (Wales) Act 2016.	Potential effects on aquatic invertebrates could arise from construction activity such as pollution from dust, silt mobilisation during piling and fuel/lubricants. However, due to the small scale of the works, and with the implementation of an appropriate drainage scheme and CEMP this is considered unlikely.
Fish	Running water	Both European eel and brown/sea trout are protected under the Conservation of Habitats and Species Regulations 2017 (as amended), the 1981 Act and are also listed under Section 7 of the Environment (Wales) Act 2016. Eel movements are considered within the The Eels (England and Wales) Regulations 2009, In summary, it is an offence to wilfully kill or injure these fish species, damage, destroy or obstruct access to a habitat or breeding grounds.	Potential effects on fish could arise from construction activity such as pollution from dust, silt mobilisation during piling and fuel/lubricants. However, due to the small scale of the works, and with the implementation of an appropriate drainage scheme and CEMP this is considered unlikely. Construction of the new bridge will require in-river works. The design of the construction will allow for continued fish movements throughout the works period, and works will be timed to avoid sensitive migrational periods.
Invasive Non-Native Plant Species (INNS)	On the riverbanks within the site	Himalayan cotoneaster, Japanese knotweed, Himalayan balsam and montbretia are listed on Schedule 9 of the 1981 Act, making it an offence to plant or otherwise cause the species to grow in the wild.	If extensive vegetation clearance is necessary for access or to facilitate works within proximity to these species, then a buffer zone should be implemented around the INNS to avoid accidental spread. If this is not possible, and the removal of the plant is required to permit works, an Invasive Species Management Plan will be produced and implemented, and specialist subcontractors may be required in order to complete safe disposal.
Otter	Running water, mixed plantation woodland (both off-site)	Otters are protected under the Conservation of Habitats and Species Regulations 2017 (as	The works on the west side are located at more than 50m from the identified resting site. The evidence obtained up to this point in time, in the context of the site and

Feature	Location	Designation type/ legislative protection	Assessment and recommendation
		amended) and the 1981 Act. In summary, it is an offence to wilfully kill or injure an otter, damage, destroy or obstruct access to an otter resting place, or disturb an otter when it is occupying a resting place.	the GI activities, indicates that no disturbance is anticipated from works on the west side of the River Ebbw, so long as the task lighting required for works is oriented to ensure that there is no additional light spill on the river. The works on the east side will occur approximately 30m from the couch identified on the east side beneath the existing bridge, at the closest point. These activities will cause a temporary increase in noise and vibration above and beyond the existing baseline. Due to proximity of the activities, and the introduction of a novel noise and vibration stimuli, there is potential for disturbance to otters using the confirmed couch, which may cause displacement from a resting site. An NRW licence will be required to be in place to derogate this disturbance.
Breeding birds	Scrub, hedgerow	All wild birds are protected under the 1981 Act. It is an offence to take, damage or destroy the nest or eggs of any wild bird while it is in use or being built. Schedule 1 species are afforded additional protection from disturbance whilst breeding.	Vegetation removal should be undertaken outside of the core breeding bird season (March to August inclusive, noting some species may nest year-round). If any nests are observed, a suitable buffer will be erected by the ecologist and the vegetation will not be removed until the ecologist has confirmed that the nest is no longer in use. The existing bridge will be checked for nesting birds prior to any works, if any nests are observed, the steps above will be followed.

Source: Mott MacDonald, 2025

5.2 Summary of ecological constraints

On the basis of the habitats present and following the initial assessment of impacts above, the main ecological constraints, for which consideration would need to be given during the design of the working methodology are below:

- Non-statutory designated sites (SINC) within 1.0km - potential for pollution related construction impacts upon designation status;
- Hydrologically connected designated sites - potential for pollution related construction impacts upon designation status;
- Commuting and foraging bats – potential for noise, vibration and lighting related disturbance impacts on bat movements;
- Otter – likelihood for disturbance impact on resting site during construction;
- Aquatic invertebrates – toxicity and smothering impacts during construction;
- Fish – potential for noise, vibration and lighting related disturbance impact on migration and movements as well as toxicity and smothering impacts during construction;
- Breeding birds – disturbance impacts and potential loss of nests during vegetation clearance associated with construction works; and
- Invasive non-native species – potential for spread into off-site areas during construction.

6 Recommendations

6.1 Licensing

6.1.1 Bats

The existing bridge is not considered a bat roost following two emergence surveys in 2025. Should subsequent NVA analysis or survey determine that a roost is present, a NRW licence will be sought, with appropriate compensation features installed to effectively provide continued roost resource. This would likely include wood-crete type crevice boxes (such as the Greenwood's Eco-habitats crevice box) installed upon a nearby structure to emulate the crevices being lost, at a ratio of 1:1 for each roost to be lost.

6.1.2 Otter

An otter licence will be sought from NRW to derogate the disturbance of the resting site due to the construction of the new bridge, and partial demolition of the existing structure. The retained section of the bridge containing the resting site will be made safe, but will not be permitted to be accessed by the public, with additional landscaping potentially to occur on the deck to add enhancement value to this area.

6.2 Mitigation

As with the assessment of effects, mitigation and enhancement measures have been included as part of this impact assessment, but may require further details once the design, construction methodology and programme of works is finalised. However, based on the assessment of potential effects and current proposals, it is anticipated that any mitigation strategy would include the below measures to comply with legislative and planning requirements:

- **Ecological Clerk of Works (ECoW):** A suitably experienced ecologist will be retained to provide ECoW support throughout the construction of the new bridge, and demolition of the existing structure.
- **Otter:** A suitably qualified and licensed ecologist will be present to provide a tool-box talk to contractors in line with the requirements of the otter licence. They will supervise high-risk works (e.g. particularly around the demolition) and may install exclusion devices should this be necessary to prevent any harm to otter if the retained structure becomes at risk of collapse). The contractor should follow best practice guidance in line with CIRIA guidance for working near watercourses, including pollution prevention, dust prevention and safe refuelling of equipment and machinery. An otter ledge is incorporated into the design of the new bridge to facilitate otter movements without the need for otters to access the highway.
- **Lighting:** Night work should be avoided entirely if possible. A sensitive lighting design should be implemented to minimise light spill onto linear features within the ZoI of the site to reduce the impacts of artificial lighting upon mammal foraging/commuting corridors. Construction and operational lighting will be designed in line with the Institute of Lighting Professionals and Bat Conservation Trust, 2023, and guidance from a suitably experienced ecologist. Lighting levels should not exceed the existing baseline at the site and a dark (unilluminated above baseline levels) corridor retained along the river. The lighting design should ensure that the height of lighting columns is as low as possible and lighting hoods, cowls and shields utilised to focus light into the working areas and away from the surrounding environment during construction;

- **Construction Environmental Management Plan (CEMP):** As a general construction safeguard, a CEMP should be produced, or equivalent, prior to the commencement of site works to determine the reasonable and practical steps to be taken to avoid pollution of the surrounding environment and to safeguard wildlife. The CEMP will include an appropriate drainage scheme, implemented to prevent detrimental hydrologically mediated effects to the non-statutory designated sites (SINCs) within the Zol. All works should be carried out in accordance with the Environmental Good Practice On-site Guide (CIRIA, C741) as standard.
- **Sensitive vegetation clearance:** Where required, any vegetation clearance is recommended to be completed outside of the breeding bird season (March to August inclusive), if this is not possible, vegetation will be checked within 24 hours of removal, by an ecologist to identify any nests. If an active nest is observed, a suitable buffer will be erected and the vegetation will remain in situ until the ecologist has confirmed that the nest is no longer active. Vegetation will be removed in a sensitive manner, in a two-stage cut to encourage species out of tall vegetation before complete removal. All clearance with the potential to affect protected species is likely to require ecological supervision, with a pre-works check as a minimum.
- **In-channel works:** A fish rescue team is recommended to be in place for dewatering and in-channel works or works liable to cause disturbance are undertaken outside of the salmonid spawning season (generally Oct to March). Pumps used for dewatering will be adequately screened and a navigable channel made available for fish movements at all times. Noisy or high-vibrational output works on the bankside will be timed to outside of the fish migration/spawning periods for salmonids (October – March). The rip-rap will be covered with natural bed material of an equivalent size to the current bed material.
- **An Invasive Non-Native Species Management Plan:** This document should be produced to provide a strategy for eradication of the INNS present onsite, and a monitoring and management plan to ensure that control measures are in place for post-construction. The plan should then be implemented.

6.3 Ecological enhancements

At national level, Chapter 6 of Planning Policy Wales requires Local Authorities to take measures to promote the conservation of landscape and biodiversity. It is therefore recommended that, to comply with the above planning policy, the opportunity is taken to incorporate ecological enhancements into the development, this includes the installation of bat and bird boxes, removal of INNS and installation of coir rolls under and adjacent to the new bridge structure. Additional measures are outlined within the Green Infrastructure Statement (100119581-MMD-XX-XX-RP-EC-0003) which provides a plan of replacement native tree planting (3:1 for each tree lost).

6.4 Data validity

In line with CIEEM (2019) advice note '*On the lifespan of ecological reports & surveys*' and taking into consideration the habitats present and potential for protected species at the site, the results of this report are considered valid for up to 18 months. Following this, the survey data should be reviewed and, if appropriate, updated to ensure any assessment and recommendations remain valid.

7 Conclusions

An EclA was undertaken to assess the potential impacts on ecological designations and protected and notable habitats and species, from the demolition of the existing Bassaleg bridge, and construction of a replacement bridge. The Bassaleg Bridge ('the existing bridge') is owned by Newport City Council and carries a single carriageway over the River Ebbw.

The site is considered to have suitable habitat to support a number of protected and notable species including bats, nesting birds, Invasive Non-Native Species, resting and traversing otters, terrestrial and aquatic invertebrates and fish.

The scheme has been designed to minimise effects on biodiversity, although where unavoidable harm to important ecological receptors would occur under the proposals, appropriate mitigation and compensation measures have been advised in accordance with relevant best practice guidance and planning policy. Overall, significant harm to biodiversity is not anticipated under the proposals, whilst measures have also been recommended to benefit biodiversity.

The existing bridge spans the River Ebbw (SINC) and the River Usk (SAC) is hydrologically connected downstream. The implementation of a CEMP will ensure any significant impacts to these sites are avoided.

An NRW licence will be required in relation to impacts to otter, along with an agreed methodology and mitigation plan, prior to works commencing onsite.

An ECoW is recommended to be retained for the construction and demolition works. They will be a suitably experienced (and where appropriate, licenced) ecologist.

It is recommended that vegetation removal suitable for use by nesting birds is undertaken outside of the core nesting bird season (March to August inclusive, though some species are known to nest year-round). If an active nest is observed during works a suitable buffer will be erected and remain in situ until the ecologist has confirmed that the nest is no longer active.

An INNS Management Plan will be produced and implemented to ensure the INNS on site are managed appropriately and disposed of safely.

Finally, enhancements for biodiversity will be made to the site including the removal of INNS, installation of bat and bird boxes, along with offsite planting of trees.

In line with CIEEM (2018) guidance on the lifespan of ecological surveys and given the nature of the habitats present on site, the survey results are considered valid for up to 12 months. Following this, the survey data should be reviewed and, if appropriate, updated to ensure any assessment and mitigation approach remains valid.

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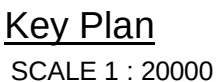
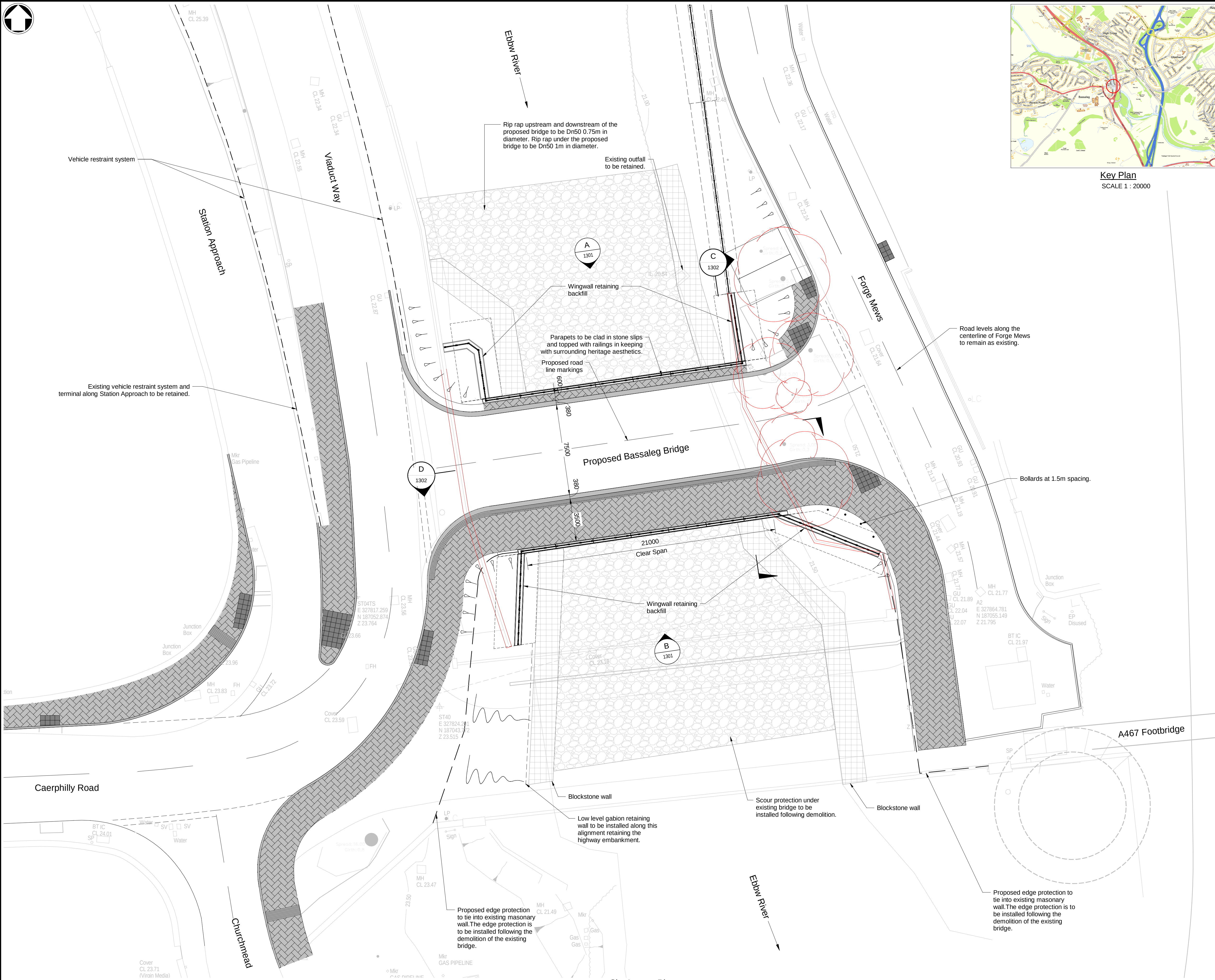
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9 Appendices

A.1.1 Appendix A – Proposed New Bridge Location



1. Drawing is to be read in colour.
2. Do not scale from this drawing.
3. This drawing is to be read in conjunction with all relevant project drawings.
4. Arrangement is based on a topographical survey undertaken on behalf of Mott MacDonald by Infomap in November 2024.
5. The existing Bassalea Bridge is to be demolished following the construction of the proposed new bridge.
6. Street lighting design is to be undertaken by Newport County Council.

	Existing - To be demolished/removed
	Tree - To be removed in RED
	Topographic Survey (Infomap, November 2024)
	Riprap scour protection
	Pavement
	Blockstone
	Indicative slope of ground level
	Hazard warning surface

100119581-MMD-XX-XX-DR-CE-0001 - Location Plan
100119581-MMD-XX-XX-DR-PL-1001 - Existing Plan & Elevation
100119581-MMD-XX-XX-DR-PL-1002 - Demolition Plan & Elevation
100119581-MMD-XX-XX-DR-PL-1301 - Proposed Elevations
100119581-MMD-XX-XX-DR-PL-1302 - Proposed Sections
100119581-MMD-XX-XX-DR-HW-0101 - Highways GA
100119581-MMD-XX-XX-DR-UT-5001 - Existing Utilities

P02	04/09/2025	SS	Addressed Client Comments	OJ	KL
P01	06/06/2025	SS	For Comment	OJ	KL
Rev	Date	Drawn	Description	Ch'kd	App'd

Preliminary Issue

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Civic Centre
Newport
South Wales
NP20 4UR



Bassaleg Bridge Detailed Design Planning Drawings Site Layout Plan

MMD Project Number	Scale at A1	Security
100119581	As indicated	STD

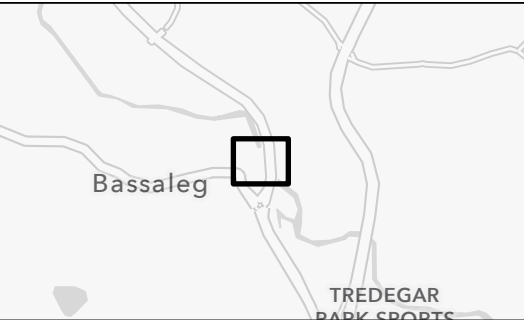
Suitability Description
Submitted for Planning Approval

Drawing Number

Security
STI

Suit. Code
S4

A.1.2 Appendix B – UKHab Drawing



- Survey area
- Scattered trees
- w1, 33 - Line of trees
- g3c - Other neutral grassland
- g4 - Modified grassland
- w1 - Broadleaved and mixed woodland
- h3h - Mixed scrub
- r2 - Rivers and streams
- u1b - Developed land – sealed surface
- u1c - Artificial unvegetated - unsealed surface

Coordinate system: British National Grid; Datum: OSGB 1936
Data sources: Maxar, Microsoft, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS

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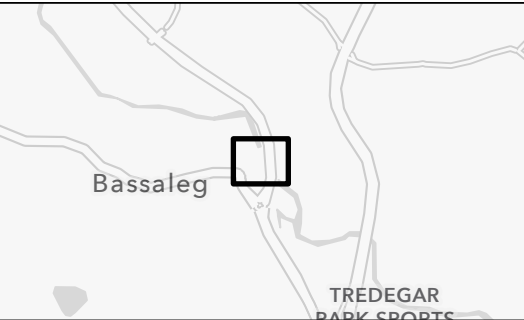


Bassaleg Bridge Habitat Map

Drawn K Toth	GIS Checked S Baldwin	Checked T Clayton	Approved A L Wilson
Scale at A3 1:1,100	Status INF	Revision 01	Security STD



A.1.3 Appendix C – Locations of INNS



- Survey area**
- INNS record**
- Buddleia
 - Cherry laurel
 - Cotoneaster
 - Himalayan balsam
 - Horsetail
 - Japanese knotweed
 - Montbretia
 - Honey locust

Coordinate system: British National Grid; Datum: OSGB 1936

Data sources: Maxar, Microsoft, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS

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**Bassaleg Bridge
Invasive Non-native Species Plan**

Drawn K Toth	GIS Checked S Baldwin	Checked T Clayton	Approved A L Wilson
Scale at A3 1:1,100	Status INF	Revision 01	Security STD



A.1.4 Appendix D - Photographs



View to south-east from bund on Churchmead



View upstream from western bank of A467 bridge



Offsite to north of viaduct, view to south-east



View downstream, from just downstream of viaduct



View of eastern bank from western bank, upstream of existing bridge



Broader view of eastern bank from western bank, from upstream of existing bridge



View of trees which will be removed, and upstream side of existing bridge from western bank.



Existing bridge, view west to east over deck and upstream side



View towards churchyard and highway from western side of existing bridge



Downstream side of existing bridge, from western bank



Upstream side of bridge, note Himalayan balsam on western bank



View downstream of existing bridge, from deck level, view over vegetation to be retained



View towards north over existing bridge, from pedestrian walkway to east of structure



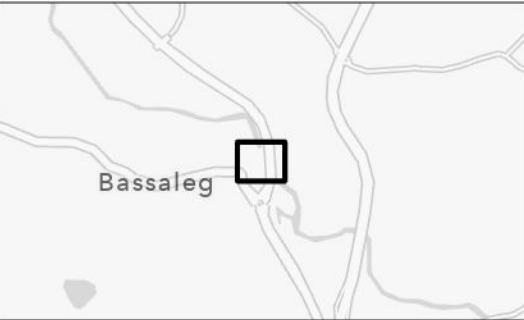
Upstream view of existing bridge from eastern bank



View of western bank from eastern bank

A.1.5 Appendix E – Roost suitability and NBW route

Please note, the drawing references the trees as “low roost suitability” which should be read as PRF-I.



- Survey area
- Night-time bat walkover transect
- Bat roost suitability
- Low
 - Moderate

Coordinate system: British National Grid; Datum: OSGB 1936

Data sources: Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



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**Bassaleg Bridge
Preliminary Roost Assessment,
Ground-level Tree Assessment and
Night-time Bat Walkover.**

Drawn S Baldwin	GIS Checked F Lastname	Checked K Thorne	Approved F Lastname
Scale at A3 1:1,000	Status INF	Revision 01	Security STD



