



Salt Island Bridge Replacement, Holyhead Port Preliminary Ecological Appraisal (PEA)

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Reviews

Name	Title	Date	Version
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Approvals

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Introduction

YGC were commissioned to undertake a Preliminary Ecological Appraisal (PEA) for the Salt Island bridge replacement in Holyhead (SH 25077 82951).

During 2024 Principle bridge Inspections, the salt Island Bridge was in very poor condition, high levels of corrosion on the metal works and damage to the concrete. The PBI concluded that based on the bridge's current condition it was not possible to provide adequate use for cars/HGV's and abnormal loads. Therefore, it was recommended that the bridge usage be reduced to limit load until a solution could be developed, traffic is being redirected over the bridge directly adjacent to this bridge with the use of traffic lights.

Installation of replacement bridge. The existing bridge will need to be demolished prior to any installation works.

The preferred option is to replace the bridge section with a modern prefabricated bridge structure, maintaining the bridge crossing in the current arrangement.

All main elements of works are currently scheduled to take place from dry land. As part of the works, existing debris that has embedded in the seabed under the bridge will be removed. Minor works will be carried out on the abutments.

An outline method statement has been provided and includes indicative cross sections of the proposed bridge. The main elements of work included in the method statement are:

- Installing piles into the substructure to provide reinforcement.
- Installing precast beams to form the bridge deck.
- Carrying out finishing works to the deck, tie –ins to existing pavements and works to existing abutment
- Debris clearance from under the bridge.

See location plan below and design drawings in appendix.

Map Gwynedd



Figure 1. Location plan for the proposed works (black square).

1.0 Background and Purpose of the Report

1.1 Report Aim

As a PEA, the purpose of this report is as follows:

- to identify key ecological constraints to the proposal;
- to make recommendations to allow significant ecological effects to be avoided or minimised wherever possible;
- to recommend further ecological surveys needed to inform an ecological impact assessment to be identified and appropriately designed if required;
- to inform the development of potential mitigation and/or compensation measures; and
- to form a basis for the scope of an ecological impact assessment if required.

2.0 Planning Policy and Legislation

2.1 Policy

The national and local policies described below may be relevant to the proposal:

2.1.1. Technical Advice Note (TAN) 5: Nature Conservation and Planning (2009)

TAN 5 provides advice to local planning authorities on the application of the law relating to planning and nature conservation and its impact within the land use planning system. The most recent revision of TAN 5 brings it in line with the strategic policy in Planning Policy Wales (PPW) 2016 and advises how planning policy with regard to ecology needs to be interpreted to comply with Planning Policy Wales. It provides advice on the following:

- 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.

2.1.2. Wales Environment Strategy (2006 to 2026)

The Environment Strategy is the Welsh Government's long-term strategy for the environment of Wales setting the strategic direction for the next 20 years. The strategy has five main themes:

- Addressing climate change;
- Sustainable resource use;
- Distinctive biodiversity, landscape and seascapes;
- Our local environment; and
- Environmental hazards.

2.1.3. Local Biodiversity Action Plans (LBAPs)

In 1992 the UK signed the Convention on Biological Diversity at the Rio summit pledging to develop national strategies for the conservation and sustainable use of biological diversity. The UK government subsequently produced Biodiversity: The UK Biodiversity Action Plan in 1994 which described the biological resources of the UK as a whole and in turn led to the production of the Biodiversity Action Plans for individual habitats and species. Biodiversity: The UK Biodiversity Steering Group Report was published in 1995. This recognised that to successfully implement the UKBAP at the local level and translate national policy into action, it would be necessary to produce Local Biodiversity Action Plans across the UK. In response to this, local authorities throughout the UK produced LBAPs. Priority species for the Isle of Anglesey have been discussed in this report.

2.1.4. Wales Action Plan for Pollinators (2013)

The Action Plan for Pollinators in Wales recognises that:

‘Pollinators are an essential component of our environment. Honeybees and wild pollinators including bumblebees, solitary bees, parasitic wasps, hoverflies, butterflies, moths and some beetles are important pollinators in Wales for crops such as fruit and oilseed rape, clovers and other nitrogen-fixing plants that are important to improving the productivity of pasture systems for livestock grazing and wildflowers.’

The Welsh Government has worked with industry and stakeholders to look in more detail at the evidence and issues around pollinators and their conservation in Wales. The action plan produced aims to reduce and reverse the decline in the wild and managed pollinator populations.

2.2 Legislation

The following legislation is likely to be relevant to the proposal:

2.1.1. Environment (Wales) Act (2016)

- This Act became law in Wales on the 21st March 2016 and includes legislation that supersedes the Natural Environment and Rural Communities (NERC) Act 2006. Part 1 of the Act sets out Wales’s approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory ‘principles of sustainable management of natural resources’ defined within the Act.
- Section 6 of the Act places a duty on public authorities to ‘seek to maintain and enhance biodiversity’ so far as it is consistent with the proper exercise of those functions. In doing so, public authorities must also seek to ‘promote the resilience of ecosystems.’ Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience.
- Section 7 replaces the duty in Section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of principal importance for the conservation and enhancement of

biodiversity in Wales. The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organism and habitats included in any list published under this section and encourage others to take such steps. A number of habitats and species included under section 7 of this Act have been recorded in the vicinity of the scheme and are therefore considered in the assessment.

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

- The Conservation of Habitats and Species Regulations 2017 transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the EC Habitats Directive) into national law. The Regulations provide for the designation and protection of European sites and the protection of European protected species and habitats as listed in the EC Habitats Directive and EC Birds Directive (Council Directive 2009/147/EC). The regulations provide guidance on undertaking assessment of impacts on European and Protected Sites (Special Areas of Conservation – SACs, Special Protection Areas- SPAs and Ramsar sites) through the Assessment of Implications on European Sites (AIES) process. The survey area provides habitat with potential to provide foraging and resting habitat for bats and otters, which are European Protected Species under this legislation.

2.2.3. Wildlife and Countryside Act (1981, as amended)

- The Wildlife and countryside Act governs the designation and protection of Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR), and protection of various plant and animal species. Schedule 1 of the Act lists protected bird species, Schedule 5 lists other protected animal species, and Schedule 8 lists protected plant species. Schedule 9 of the Act lists invasive alien species which it is an offence to introduce or allow to spread in the wild. There are records of otter and red squirrel in the vicinity of the proposed scheme, both of which have full protection under Schedule 5 of this Act.

2.2.4. The Protection of Badgers Act (1992)

- This legislation protects badgers against wilful killing, injury or ill-treatment, and disturbance in their setts, and also prohibits interference with or obstruction of badger setts. Although primarily intended to protect badgers against deliberate persecution, the legislation is also relevant in the context of development work. This Act is relevant to the scheme because there is habitat suitable for badgers within the survey area and historic records of badgers in the vicinity.

3.0 Methodology

A Preliminary Ecological Appraisal (PEA) comprises an extended Phase 1 Habitat Survey, including an assessment for protected species and habitats with the aim of identifying ecological constraints and opportunities, as well as the need for more specific habitat or species survey.

3.1 Desk Study

A desktop study was undertaken to inform the baseline conditions, impact assessment and scoping process, including data from the following sources:

- A search of biodiversity records held by the North Wales Environmental Information Service (Cofnod) was undertaken in May 2025, providing records of sites, habitats and priority species within a 2km buffer of the survey area;
- Gwynedd Council's GIS system (Map Gwynedd) provided information on statutory¹ and non-statutory designated sites (within a 2km or greater buffer, as appropriate);
- Detailed information about protected sites was obtained from the Joint Nature Conservation Committee (JNCC) and Natural Resources Wales (NRW) websites; and
- Information about drainage and watercourses was obtained from Map Gwynedd².
- Supporting information was gathered through Google Maps.

3.2 Field Survey

An extended Phase 1 Habitat Survey of the site was undertaken on 28/05/2025 by Principal Ecologist/ Environment Officer David Harries (MSc CEnv MCIEEM) and Environment Officer Charlotte Kersey (MZool (Hons)) AIEEMA) in order to identify the habitats present and record any signs of protected species within the survey area. Information regarding protected species and habitats and invasive plant species has been provided on a Habitat Plan provided in Figures 6 and a species list was compiled of species recorded during the survey (included in Appendix II). Habitat survey methodology was based on the standard Phase 1 provided in the Nature Conservancy Council's 'Handbook for Phase 1 Habitat Survey' (1990).

With respect to legally protected species, the following characteristics were specifically searched for:

- Suitable habitat for roosting bats including buildings and/or trees with cracks, crevices, holes and/or substantial growth of ivy that may potentially provide roosting locations and field signs of roosting bats (e.g. droppings, fur oil and urine staining, scratch marks and feeding remains);
- Suitable habitat for and field signs of otter (*Lutra lutra*) activity (e.g. holts, resting places, spraints, tracks, feeding remains, runs and pathways);

¹ Statutory sites data originally sourced from NRW.

² Watercourse data originally sourced from NRW

- Suitable habitat for and field signs of reptile and amphibian species such as common lizard (*Lacerta vivipara*), slow worm (*Anguis fragilis*), grass snake (*Natrix natrix*), adder (*Vipera berus*), common toad (*Bufo bufo*) and common frog (*Rana temporaria*);
- Intertidal habitat assessment highlighting any species or habitats of importance; and;
- Suitable habitat for and field signs of badger (*Meles meles*) activity (e.g. setts, footprints, trapped hairs, dung-pits/latrines, foraging scrapes, runs and pathways).

In addition to the protected species mentioned above and in accordance with the guidelines of the Chartered Institute of Ecology and Environmental Management (CIEEM), evidence of invasive species and evidence or suitable habitat for any other protected or priority species found during the course of the survey has been highlighted in this report. Data was collected by QGIS for map production.

3.2.1 Survey Conditions and Limitations

The weather was dry during the site visit on the 28/05/2025.

4.0 Baseline Ecological Conditions

4.1 Designated Sites

4.1.1 Internationally Designated Sites

Internationally designated sites (as protected under the Conservation of Habitats and Species Regulations 2017) considered to be potentially affected by the proposal include all those within 2km of the survey area boundary, as it is not anticipated that the proposal would have significant effects on sites located further away due to the scale and nature of the proposed works, unless they are designated for mobile species such as lesser horseshoe bats, or otters.

Internationally designated sites identified within 2km of the proposed scheme are detailed in Table 1 below as well as internationally designated sites designated for otters within 30 km respectively, according to best practice guidance, there were no bat sites within 25 km (see Figure 2).

Table 1. International sites within 2km and international sites designated for otters within 25km of the proposed scheme.

International site	Approximate distance	Qualifying features
Anglesey Terns / Morwenoliaid Ynys Môn SPA	Directly under bridge	• Common Terns <i>Sterna hirundo</i> • Artic Terns <i>Strena paradisea</i> • Roseate Tern <i>Strena dougalli</i>

		Sandwich Tern <i>Strena sandvicensis</i>
North Anglesey Marine / Gogledd Môn Forol SAC	20m north-west.	Harbour porpoise <i>Phocoena phocoena</i>
Glannau Ynys Gybi / Holy Island Coast SAC	1.7km north- west at the closest point.	- Vegetated sea cliffs of the Atlantic and Baltic Coasts. - European dry heaths - Northern Atlantic wet heaths with <i>Eric tetralix</i>
Glannau Ynys Gybi / Holy Island Coast SPA	1.7km north-west at the closest point.	Chough <i>Pyrrhocorax pyrrhocorax</i>

Due to the nature and scale of the proposed works, the distance of the Glannau Ynys Gybi / Holy Island Coast SAC and Glannau Ynys Gybi/ Holy Island Coast SPA and due to direct fluvial links to the sites significant impacts could be expected.

As such, a Habitat Regulations Assessment has been completed on the *North Anglesey Marine / Gogledd Môn Forol SAC* and *Anglesey Terns / Morwenoliaid Ynys Môn SPA* to determine the impact on the sites from the proposed works.

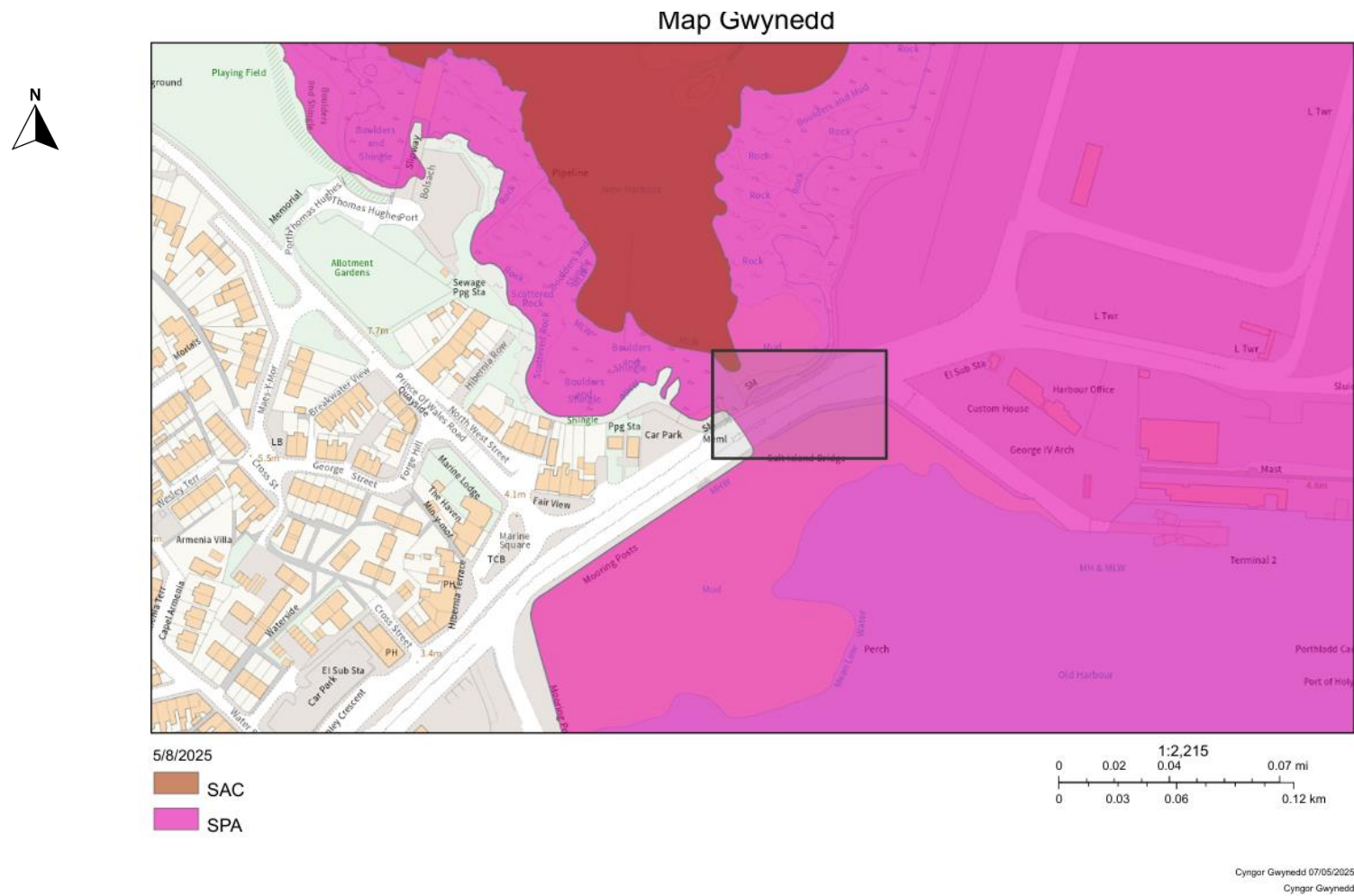


Figure 2. Location plan of the proposed bridge repair (black square) in relation to surrounding European Designated sites within 2km (Anglesey Terns / Morwenoliaid Ynys Môn SPA (pink shading) and North Anglesey Marine / Gogledd Môn Forol SAC (brown shading)).

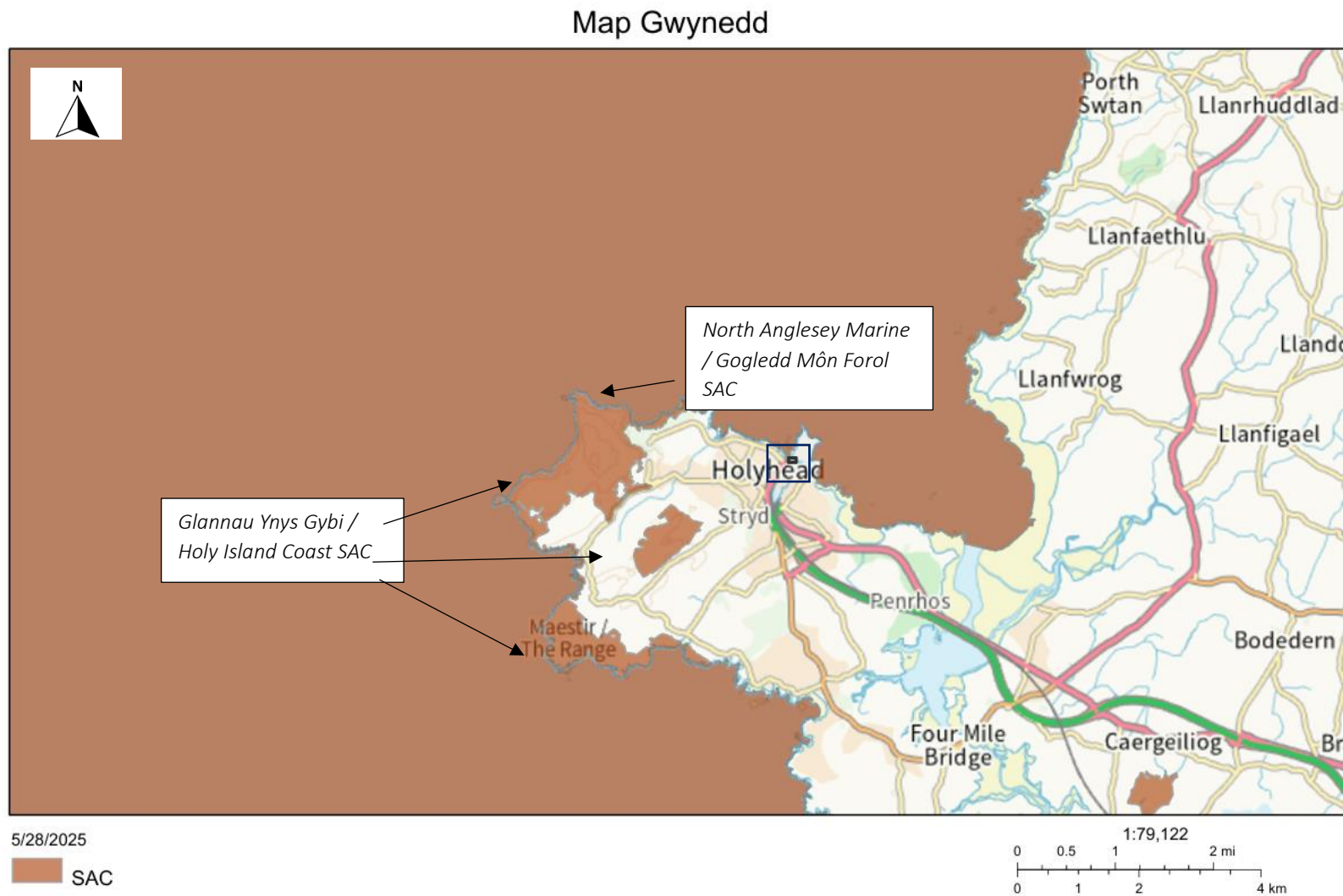


Figure 4. location of North Anglesey Marine / Gogledd Môn Forol SAC (brown shading) and Glannau Ynys Gybi / Holy Island Coast SAC (brown shading) in relation to the proposed site (black square).

4.1.2 Nationally Designated Sites

Nationally designated sites (as protected under the Wildlife and Countryside Act 1981, as amended) considered to be potentially affected by the proposal include all those within 2km of the survey area boundary, as it is not anticipated that the proposal would have any significant effects on sites beyond this distance.

Glannau Ynys Gybi / Holy Island Coast SSSI is located 1.9km north-west to the proposed works. It is designated for its geological and biological features, including heathland and maritime grassland communities, coastal cliffs and ledges, its assemblages of vascular plants and birds, invertebrates and its solid geology. Due to the nature and scale of the proposed works, the distance of these sites and lack of direct fluvial links flowing to the sites significant impacts are considered very unlikely (see Figure 5).

Tre Wilmot SSSI is located 1.9km south-west to the proposed works. It is designated for large areas of acidic, lowland heath overlying a series of rocky ridges and intervening depressions, which give rise to a range of heathland vegetation communities. The well drained heath on the ridges is dominated by ling *Calluna vulgaris* and western gorse *Ulex gallii*, with spring squill *Scilla verna* and, on rock outcrops, English stonecrop *Sedum anglicum*. The lower-lying areas support wet heath or peatland communities, with species such as crossleaved heath *Erica tetralix*, purple moor-grass *Molinia caerulea*, common cotton grass *Eriophorum angustifolium* and creeping willow *Salix repens*. Of particular note is a very large population of marsh gentian *Gentiana pneumonanthe* and, in small open water areas, pillwort *Pilularia globulifera*. Due to the nature and scale of the proposed works, the distance of these sites and lack of direct fluvial links flowing to the sites significant impacts are considered very unlikely (see Figure 5).

Map Gwynedd

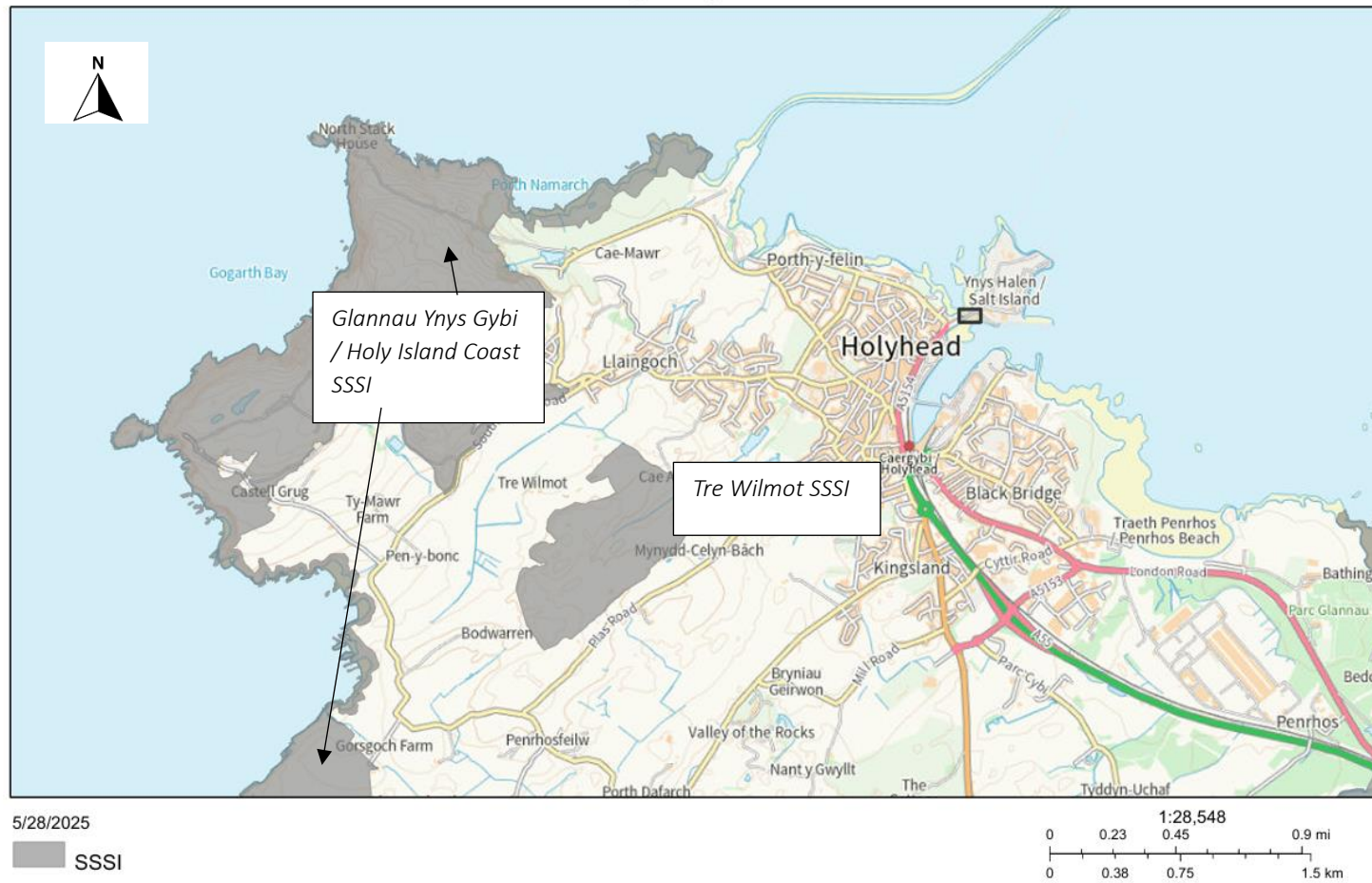


Figure 5. Glannau Ynys Gybi / Holy Island Coast SSSI and Tre Wilmot SSSI (grey shading) in relation to the proposed works (black square).

4.1.3 Other Sites

Other sites that could potentially be affected by the proposal are shown in Figures 3 and 4. Although not protected by national or international legislation, local sites are considered to be of local to regional importance. Locally designated sites considered to be potentially affected by the proposal include all those within 500m of the survey area boundary, as it is not anticipated that the proposal would have any significant effects on sites beyond this distance.

There are no other sites within 500m of the proposed scheme.

4.2 Habitats

Habitats which make up the survey area include (see Habitat Plan, Figures 6 below):

- Upper shore Intertidal brown algae
- Scattered scrub

The habitats that are presented within the survey area that are of importance to nature conservation either locally or on a wider geographical scale, are described below.

4.2.1 Upper shore intertidal

Area either side of the bridge and upper wing walls and revetment

The characteristics of the habitat here resemble predominant areas of intertidal shingle and cobbles. The higher rock abutments and wing walls have been colonised by sparse lichen and patches of green alga. Lower down on the shore, small intertidal rocks and boulders are present, colonised by brown and green algae with common plant species found in the upper shore habitat (See species list). Although not section 7 habitat, access should be avoided from underneath to reduce disturbance on this habitat.

A relatively broad range of commonly occurring species were observed; including the following, SACFOR abundance denoted as [#]:

- Algae - Chlorophyta (green seaweeds): *Ulva enteromorpha* [O] (gutweed).
- Algae- Ochrophyta: Phaeophyceae (brown seaweeds): *Fucus spiralis* [C] (spiral wrack), *Pelvetia canaliculata* [C] (channelled wrack), *Fucus vesiculosus* (bladderwrack) [C], *Fucus ceranoides* (horned wrack) [O], *Ascophyllum nodosum* [O] (egg wrack).
- Crustacea- Semibalanus balanus [A] (acorn barnacle), Austrominius modestus [R] (Darwin's barnacle – Invasive Non-Native Species).
- Chordata: Pisces: Osteichthyes (fish) – Lipophrys pholis [P] (shanny)
- Mollusca- Littorina littorea [C] (common periwinkle).

Stone Walls of the bridge

Consists of:

- This section is characterised by a seawall. It was observed that missing mortar between the wall stones created water retaining features (artificial rockpools), increasing species abundance in these areas
- The section is colonised by common algae species (see list below) with a muddier stone substrate at the base. Access was possible under the bridge by timing the visit with low tide. A relatively broad range of commonly occurring species were observed on the wall; including the following, SACFOR abundance denoted as [#]:
 - Algae – Ochrophyta: Phaeophyceae (brown seaweeds): *Fucus vesiculosus* [F] (bladder wrack), *Fucus spiralis* [O] (spiral wrack), *Ascophyllum nodosum* [A] (egg wrack).
 - Cnidaria – *Actinia equina* [R] (beadlet anemone).
 - Crustacea- *Ligia oceanica* [O] (common sea slater), *Carcinus maenas* – in artificial rock pool [O] (common shore crab), (acorn barnacle), *Austrominius modestus* [O] (Darwin's barnacle – Invasive Non-Native Species).
 - Chordata: Pisces: Osteichthyes (fish) – *Lipophrys pholis* [P] (shanny) in artificial rock pool in face of wall
 - Mollusca- *Littorina littorea* [C] (common periwinkle), *Littorina obtusata* [C] (flat periwinkle), , *Gibbula umbilicalis* [F] (flat top shell), *Gibbula cineraria* [O] (grey top shell), *Patella vulgata* [C] (common limpet), *Mytilus edulis* [R] (common mussel)
 - Porifera: Porifera sp.[O] (orange sponge).

Biotopes Present

Zonation	Biotope Code	Biotope	Location
Supralittoral Fringe	LR.FLR.Lic.YG	Yellow and grey lichens on supralittoral rock	Area either side of the bridge and upper wing walls and revetment
Supralittoral Fringe	LS.LCS.Sh	Shingle (pebble) and gravel shores	Area either side of the bridge and upper wing walls and revetment
Lower Littoral Fringe	LR.MLR.BF.PelB	<i>Pelvetia canaliculata</i> and barnacles on moderately exposed littoral fringe rock	Area either side of the bridge and upper wing walls and revetment And Stone Walls of the bridge
Mid-Eulittoral	LR.LLR.F.Fspi	<i>Fucus spiralis</i> on moderately exposed to very sheltered upper eulittoral rock	Area either side of the bridge and upper wing walls and revetment and Stone Walls of the bridge

Mid-Eulittoral	LR.LLR.F.Fves.X	<i>Fucus vesiculosus</i> on mid eulittoral mixed substrata	Area either side of the bridge and upper wing walls and revetment and Stone Walls of the bridge
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4.2.2 Scrub

The higher level (bridge deck level) areas either side of the bridge comprises of common salt tollerant plant species and other common scrub species (see species list). Some of these species are growing out of the deck of the bridge include some young tree species such as silver birch *Betula pendula* and goat willow *Salix caprea*.

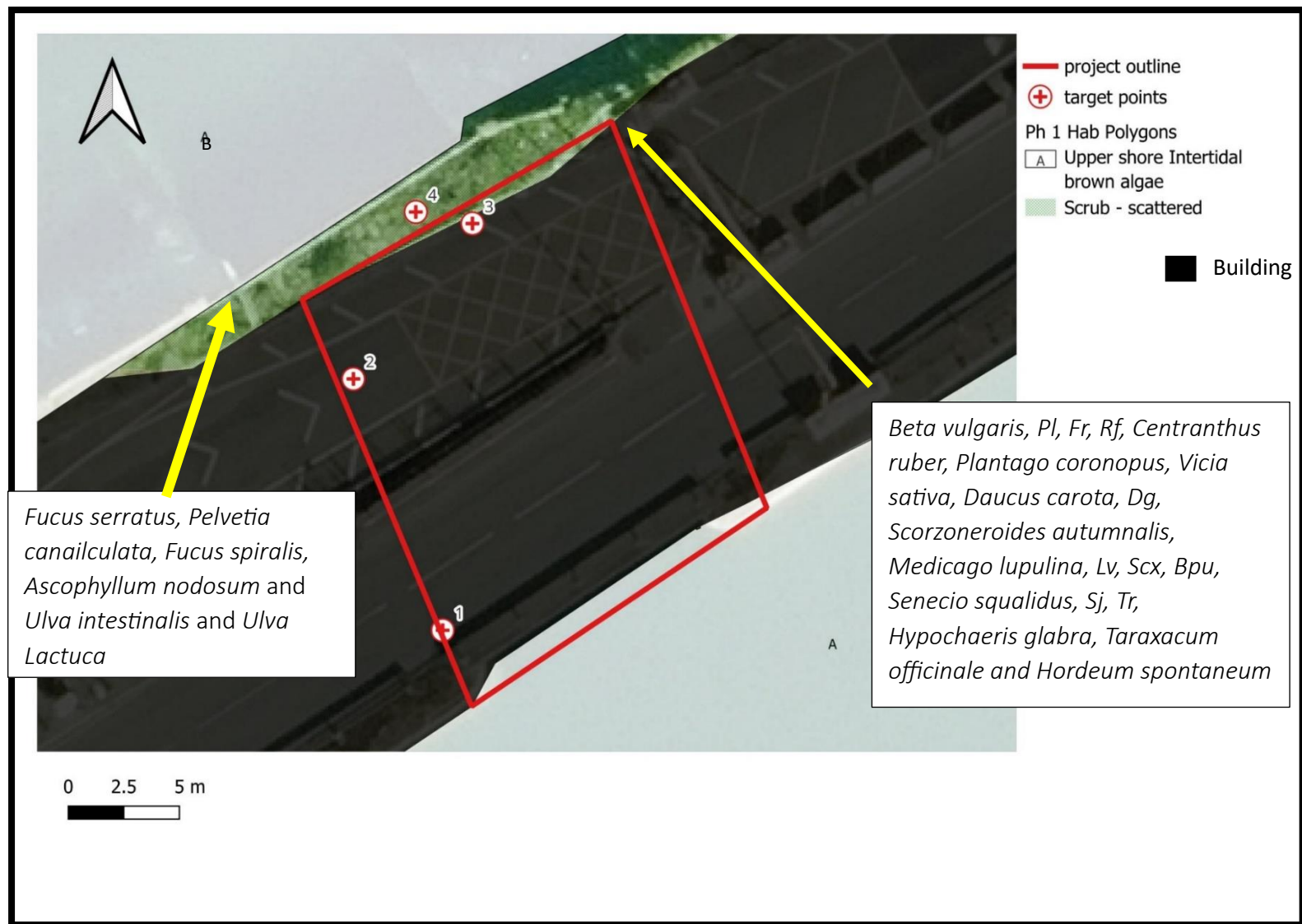


Figure 6. Results from phase 1 habitat survey of the proposed works and surrounding area

Table 3. Target Notes

Target Note Number	Notes
1	Feral pigeons potentially nesting underneath the bridge
2	Common shore crabs and breeding male blenny's in small gaps in the wall
3	Debris recorded underneath of the bridge possible old trash screen
4	Ragwort recorded on top of deck.

4.2.3 Scrub and Coastal Plant List

Sea beet *Beta vulgaris*, ribwort plantain *Plantago lanceolata*, red fescue *Festuca rubra*, brambles *Rubus fruticosus*, red valerian *Centranthus ruber*, Buck's-horn plantain *Plantago coronopus*, Common vetch *Vicia sativa*, Wild carrot *Daucus carota*, Cock's foot grass *Dactylis glomerata*, hawkbit *Scorzonoides autumnalis*, black medic *Medicago lupulina*, Oxeye daisy *Leucanthemum vulgare*, goat willow *Salix caprea*, downy birch *Betula pubescens*, Oxford ragwort *Senecio squalidus*, Common ragwort *Senecio jacobaea*, white clover *Trifolium repens*, smooth cat's ear *Hypochaeris glabra*, dandelion *Taraxacum officinale* and wild barely *Hordeum spontaneum*.

4.3 Species

4.3.1 Mammals

Bats (Order: *Chiroptera*)

There are Cofnod records of multiple bat species within 2km of the proposed works including: soprano and common pipistrelle species, Brown Long-eared *Plecotus auritus*, Leister bat *Nyctalus leisleri* and Noctule *Nyctalus noctule*. There were gaps identified within the walls of the bridge structure however due to the habitat being tidal it is unlikely that bats will be using the holes. In addition, there are gaps under the bridge deck (see photograph 7) that bats could use as a roost feature.

All bat species are protected as European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended) and are also fully protected under the Wildlife and Countryside Act 1981 (as amended). Several species, including common and soprano pipistrelle noctule *Nyctalus noctula* brown long-eared (*Plecotus auritus* listed as priority species under Section 7 of the Environment (Wales) Act 2016.

Otter (*Lutra lutra*)

There are 3 records of otters within 2km of the proposed works, with the closest record 702m south-east. The closest watercourse that links with the sea is 1.2km north-west, it is unlikely that the works will impact otters. During the site visit no evidence of otter was found.

Otters are European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended) as well as being protected under the Wildlife and Countryside Act 1981 (as amended) and listed on Section 7 of the Environment (Wales) Act 2016 as a priority species for conservation in Wales. They are also included on the Anglesey Local Biodiversity Action Plan (LBAP).

It is an offence to deliberately kill, injure or take an otter without a licence to disturb, damage or destroy holts or other places of shelter. Therefore, an EPS licence would be required if an otter holt or resting site would be disturbed or destroyed by the proposed works. No resting sites were found on site during the survey therefore no further action is required regarding this species.

Badger (*Meles meles*)

There are multiple records of badgers within 2km of the proposed works, with the closest record 1km west from the proposed works. However, there is no suitable habitat for badgers in the proposal area therefore badgers will be unaffected by the works.

Badgers and their habitat are afforded protection on a domestic level through the Protection of Badgers Act 1992. They are also included on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), and Appendix III of the Bern Convention. It is illegal to kill, injure or take any badger or intentionally or recklessly damage, destroy or obstruct access to any part of a badger sett.

Other Mammals

Grey Seals (*Halichoerus grypus*)

There are 4 records of grey seals within 2km, with the closest record 486m west of the proposed works. There will be limited access below the bridge during high tide and due to existing disturbance from the busy working port, any additional disturbance from the proposed works will be negligible.

It is an offence to deliberately kill, injure or take grey seals without a licence to disturb and are protected under the Wildlife and Countryside Act 1981 (as amended) and under the Conservation of Seals Act 1970 as well as to capture or kill grey seals are under the Conservation of Habitats and Species Regulations 2017 (as amended).

Harbour porpoise (*Phocoena Phocoena*)

There are no records of harbour porpoises within 2km of the proposed works however the *North Anglesey Marine / Gogledd Môn Forol* SAC is designated for harbour porpoises. Due to the existing disturbance from the port and restricted access under the bridge to complete the works, harbour porpoises will not be affected by the proposal. Anthropogenic noise projection will also be minimised by carrying out potentially disturbing works such as piling or drilling in the dry, either side of low tide or when there is no water at the foot of the bridge abutment.

It is an offence to deliberately kill, injure or take harbour porpoise without a licence to disturb. Harbour porpoise are protected under the Wildlife and Countryside Act 1981 (as amended) as well as under the Conservation of Habitats and Species Regulations 2017 (as amended).

4.3.2 Birds

Schedule 1 Species

Schedule 1 of the Wildlife and Countryside Act (1981) provides protection for certain bird species while they are nesting, including intentional or reckless disturbance while they are building a nest or are in, on or near a nest containing eggs or young; and also the intentional or reckless disturbance of dependent young of such a species.

Schedule 1 bird species within 500m, barn owl *Tyto alba*, chough *Pyrrhocorax pyrrhocorax* and peregrine *Falco peregrinus*

The recommended disturbance buffers for these species are as follows:

- Barn owl – 50-100m disturbance buffer (nests in barns, old buildings and hollows in trees)
- Peregrine 200- 500m disturbance buffer (nest on bridges and old buildings)
- Chough (nests in small colonies in crevices and fissures, on rock ledges and cliff faces, and even in abandoned buildings).

If this cannot be avoided, then all works adjacent to suitable nesting habitat should be undertaken outside of the bird nesting season of March to August inclusive. If this is not possible then a check for active nests will be required by an ecologist immediately prior to commencement of the work. If active nests are found, then works may need to be postponed until broods have fledged.

Any loss of potential bird nesting habitat will need to be compensated for by either replanting habitat features and / or providing nest boxes.

The Anglesey Terns / Morwenoliaid Ynys Môn SPA is designated for terns and is directly under the bridge. No terns were seen during the site visit. The busy nature of the port environment also leads to a habituated level of disturbance to these mobile species, therefore there is not expected to be any impact on terns.

Section 7 and LBAP Species

Numerous bird species listed on Section 7, have been recorded in the vicinity of the proposal area. There are gaps under the deck of the bridge and feral pigeons *Columba livia* were the only birds recorded, but other bird species could be nesting in these areas.

All bird species (with certain exceptions) are protected from intentional killing, injuring or taking and intentional taking, damaging or destruction of an active nest or eggs under the Wildlife and Countryside Act (1981, as amended).

4.3.3 Reptiles and Amphibians

There are 2 records within 1km of the proposal including common lizard *Zootoca vivipara* and slow worm *Anguis fragilis*. There are also records of Great Crested Newts *Triturus cristatus* 1.2km west of the proposed works. However, due to the location, north facing wall, lack of suitable habitat for amphibians and disturbance from the port and Holyhead town; no reptiles or amphibians will be impacted by the scheme.

Great Crested Newts and slow worms are protected under the Section 7 of the Environment (Wales) Act 2016 and Great Crested Newts are a European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended) as well as being protected under the Wildlife and Countryside Act 1981 (as amended).

4.3.4 Fish, crustaceans and molluscs

There are no records of fish within 1km of the scheme location however there will be fish present in harbour. During the site visit, 3 male breeding shanny *Lipophrys pholis* and 2 common shore crabs *Carcinus maenas* were found within gaps in the bridge walls (See Target note 2 and Photograph 6). Other species found under the bridge include: limpets *Patella vulgate*, thick top shell *Phorcus linetus*, *Littorina littorea*, grey top shell *Steromphala cinariam*, chitons *Lepidochitona cinerea*, Beadlet anemone *Actinia equina*, orange encrusting sponge *Porifera sp.*, dog whelk *Nucella lapillus* and barnacles *Semibalanus balanoides*.

Adherence to the Guidelines for Pollution Prevention will be essential to avoid impacts on sensitive marine habitats in the event of a pollution incident. Mitigation measures are also recommended to avoid access to sensitive habitats where trafficking of vehicles may directly impact marine habitats. A Coastal Water Framework Directive (WFD) Compliance Assessment will be undertaken to confirm the design and construction methods will not lead to a deterioration in WFD status or prolong the attainment of targeted objectives. Despite the record of marine INNS, this is not considered to represent a significant risk. However, since works are proposed within the marine environment with known INNS, it is recommended that

a Biosecurity Risk Assessment and method statement is prepared in advance to avoid the risk of introduction of marine INNS or transfer of known INNS to other sites.

4.3.5 Plants and Fungi

There are no records of any notable plants and fungi species listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) or Section 7 of the Environment (Wales) Act 2016 or Anglesey LBAP within the Cofnod data results. No notable plants or fungi were recorded during the site survey. Therefore, plants and fungi are not considered further within this assessment, other than as part of the vegetation communities forming part of the habitats described in Section 4.2 above.

4.3.6 Invertebrate

There is a record for Cinnabar moth *Tyria jacobaeae* 438m south-west, wall butterfly *Lasiommata megeria* 513m south-west, However, due to the common nature of the species locally, the impacts from works will be low.

Both of these species are listed on the Section 7 of the Environment (Wales) Act 2016.

4.3.7 Invasive Non-Native Species (INNS)

During the site visit common ragwort *Jacobaea vulgaris* was observed on the top deck of the bridge, which is on the schedule 9 INNS. There are multiple records Japanese Knotweed *Fallopia japonica* within 1km of the proposed site, with the closest record 399m south-east. However, no Japanese knotweed was observed during the site visit.

If possible, works shall avoid disturbing areas with invasive non-native species (INNS) otherwise INNS will need to be removed / treated in accordance with relevant legislation and best practice.

INNS species are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), making it illegal to cause its spread in the wild. Measures should therefore be taken to avoid spreading this species within or between sites. If the works can avoid this invasive species this is advised or otherwise the ragwort should be hand pulled before it sets seed and placed in strong animal feed bags or similar to die down.

No marine INNS were recorded during the survey but the biosecurity measures proposed in 4.3.4 above will ensure no spread of INNS to or from the work area.

5.0 *Ecological Constraints and Opportunities*

This section will therefore consider potential impacts and identify if further surveys and assessment required.

5.1.1 International Sites

The Anglesey Terns / Morwenoliaid Ynys Môn SPA is located directly under the bridge and the North Anglesey Marine / Gogledd Môn Forol SAC is located 20m north-west. A Habitat Regulations Assessment (HRA) has been conducted.

Mitigation

Mitigation/compensation measures should include the following:

- Implementation of a range of measures to ensure working practices and good environmental site management are secured, minimising the risk of pollution or other incidents. These would include the adoption of best practice guidelines including GPP and CIRIA guidance, particularly GPP 5: Works and maintenance in or near water for construction or maintenance works near, in or over water. The mechanism for ensuring the delivery of these would be via a Construction Environmental Management Plan (CEMP) and associated Method Statements for the works, to be agreed in advance with the Authority and Natural Resources Wales where necessary, beforehand. Typical examples would comprise ensuring the use of spill kits and refuelling in designated areas away from the intertidal area and ensuring an Emergency Pollution Response Plan is put in place;
- All materials stored on site shall be located more than 10m away from the intertidal zone at all times;
- Ensure that any fuels or chemicals required for machinery/equipment are safely stored in an appropriately bunded compound/container, at least 10m from the intertidal zone;
- All concrete works will only be undertaken when there is no chance of heavy rain before the concrete has set;
- When undertaking any demolition/removal operation precautions shall be adopted to ensure that any debris is prevented from entering any intertidal or marine habitat. Contractor shall submit a method statement which will be subject to approval from the site supervisor/engineer;
- Pollution spill kits to be readily available on site and in plant/machinery at all times, with staff suitably trained in how to deploy;
- Contractor to adhere to pollution prevention best practice guidelines, including;
 - GPG1: Understanding your environmental responsibilities.
 - GPP5: Works and maintenance in or near water.
 - GPG6: Working at construction and demolition sites.

- GPP21: Pollution response planning.
- GPP22: Dealing with spills.
- Plant machinery shall use a biodegradable hydraulic oil;
- No dewatering water from on-site excavations shall be discharged directly to the intertidal zone, and should receive sufficient settlement to settle out all solids before being discharged;
- Tracking of vehicles / machinery within the intertidal habitat must be minimised;
- All works to be supervised by an Environmental Manager or Environmental Clerk of Works, as appropriate;
- Site personnel to follow good practice guidelines and be briefed with a toolbox talk on the ecological issues relevant to the site to ensure they comply with environmental protocols;
- Works to be completed at or around low tide, with all works within the intertidal area taking place within 3 hours either side of low tide to minimise the risk of pollution entering the marine environment;
- Best practical biosecurity measures (check, clean, dry protocol) must be applied during the operations, including cleaning of equipment and footwear before deployment to site.
- There should be no works including storage of materials and refuelling within 10m of the sea.
- During demolition, debris netting should be placed under the bridge and any other debris that has already fallen (see photograph 5) should be removed and disposed of.

5.1.2 Other Sites

Due to the distance from the Tre Wilmot SSSI and Glannau Ynys Gybi / Holy Island Coast SSSI and the lack of fluvial links to the sites there will be no impact on either of these SSSI.

5.2 Habitats

5.2.1 Potential Impacts

The following important habitats could be affected by a scheme proposed within the survey area:

- Intertidal rock shore communities

Direct Impacts

- at the time of writing, no direct impacts to any important habitats are anticipated due to avoidance measures and design. Recommendations to manage any potential impacts shall be kept under review as the project progresses.
- The spread of invasive plant species within the site could also be detrimental to wider habitats outside of the work area however the isolated nature of the site and minimal marine work means impacts will be low.

5.2.2 Mitigation/ Compensation

The draft scheme design can be seen in the Appendix C. The following measures are likely to be required:

- Biosecurity measures must be incorporated via a Biosecurity Risk Assessment and Method Statement to prevent the spread of non-native invasive plant species within and between sites from areas where they are known to be located.
- Ragwort found on site should be handpicked before the seeds develop and left to die down in strong plastic feed bags or similar, the eradication must continue for up to five years or until no further Ragwort is seen growing on site.
- Utilise pollution prevention and good practice measures on site during construction, such as:
 - GPG1: Understanding your environmental responsibilities
 - GPP5: Works and maintenance in or near water
 - GPG6: Working at construction and demolition sites;
- Use of standard dust and air pollution prevention measures during the construction period; and
Contractors to supply a Construction Phase Environmental Management Plan (CEMP) detailing how they will implement measures to protect environmental / biodiversity features during construction.

5.2.3 Enhancement

The following enhancement measures would help to ensure compliance with Section 6 of the Environment (Wales) Act 2016 Act:

It is recommended that enhancement measures are considered for integration into the detailed design to conserve and enhance development locations. Ecoengineering enhancements can be incorporated into existing structures as part of remedial works. They can also be retrofitted, with the aim to enhance biodiversity of existing coastal structures. They can be installed to enhance a niche habitat, for example, microhabitats such as rock pools, crevices and holes. These can be drilled, cut or cast into structure surfaces, or 'bolted on' in the form of prefabricated habitat units such as verti pools below. There should be a minimum of 10 Sandown vertipool units or 5 of the larger Bouldnor vertipools, installed following the completion of construction. If it is not possible to retrofit the vertipools to the abutment an array of reef cubes could be deployed under the bridge. This will have the same mitigation and enhancement function but are stand alone units.



/ DESIGNED FOR TIDAL REGIONS

INTERTIDAL REEF CUBE WITH ROCK POOLS

Near identical to the original design, it contains all the original features but has the added benefit of incorporated rock pools to the top and sides. The bottom passageway has also been adapted with a rock pool in the base of the Reef cube. Available only in the larger models for stability reasons – it provides further shelters and habitats for a variety of additional marine life to take refuge and create homes in these areas.

In particular – these rock pool features are designed for tidal regions where the cubes may not be fully submerged at all times. This provides continuously pooled areas for the use and growth of certain species.

5.3 Species Recommendations

5.3.1 Bats

Potential Impacts / Further works and mitigation.

There are gaps underneath the bridge that could be PRF's. A bat ecologist should check the gaps with an endoscope before the works begin. Any mitigation proposals following the check are to be adhered to.

5.3.2 Otter

Potential Impacts / Further works and mitigation.

There were no signs of otter found during the survey. However, it is possible that otters could use the area around the port for commuting to the sea during the night.

Mitigation for otter to include:

- Night-time working to be kept to a minimum and any proposed task lighting should be angled away from the marine environment. Existing lighting will give a habituated level of light pollution so further disturbance is unlikely.

5.3.3 Badgers

During the site survey no evidence of badger was found on site therefore no impacts are likely on the local badger populations.

5.3.4 Other Mammals - Grey Seals and harbour porpoise

Potential Impacts / Further works and mitigation.

Grey seals and harbour porpoise may be using the surrounding area however due to existing disturbance from the port the proposal is unlikely to impact grey seals and harbour porpoise populations. To ensure reduced levels of anthropogenic noise projection any pilling or major drilling works will need to be done over low tide or when water is not in contact with the abutments or training walls.

5.3.5 Birds

Potential Impacts / Further works and mitigation.

There are multiple Schedule 1 bird species that have been recorded in the vicinity of the proposal area and could potentially breed within the habitats present. However, no suitable habitat will be removed or impacted during this scheme.

Several Section 7, Anglesey LBAP and other bird species have been recorded in the vicinity that could potentially use habitat within the area of proposed works for nesting and foraging. Although loss of potential nesting/foraging habitat within the area of proposed works is unlikely to represent a significant impact to the local bird population given the abundance of suitable habitat in the surrounding landscape, mitigation is required to ensure that there is no breach of legislation. As all nesting birds are protected under the Wildlife and Countryside Act 1981.

- The works should be completed outside of nesting bird season (March to August). If this is not possible a nesting bird check should be carried out by a suitably experienced ecologist prior to works.

5.3.6. Reptiles and Amphibians

Potential Impacts / Further works and mitigation.

There will be no impact to either reptile or amphibians due to unsuitable habitat.

5.3.7. Fish, crustaceans and molluscs

Potential Impacts

There were blenny's and shore crabs found in the gaps within the side walls of the bridge abutment, if pressure grouting occurs to any voids this habitat and species will be lost.

Mitigation/ Compensation/ Enhancement

- If any grouting works to the abutments are to be carried out, a pre-start fish rescue from the gaps in the wall, including manual extraction and relocation if mobile species are present would be required.
- The addition of vertipools or bioblocks will provide both compensatory habitat and also form an enhancement function due to the scale of the proposed measures which are over and above the scale of loss of habitat.

5.3.8 Invasive Non-Native Species (INNS)

Potential Impacts / Further works and mitigation

- Prior to construction, a marine and terrestrial Biosecurity Method Statement should be prepared to ensure that Schedule 9 or other INNS are not spread within or between sites;
- The location of any invasive non-native species should be marked out on site prior to works commencing, with signage to inform site staff not to enter these areas;

- All ragwort or other INNS within terrestrial works areas should be removed via hand pull. All soil could be contaminated with invasive plant species and should be disposed of using appropriate, widely accepted methodology;
Contractors to adhere to the approved bio security RAMS

Enhancement

As an enhancement measure, all Schedule 9 non-native invasive species should be treated/removed from the site to improve the retained habitat.

6.0 Summary

To summarise, the following **further work** is required/recommended before the proposed works can commence:

- Potential roost features (PRF's) recorded under the bridge. A licenced bat ecologist to check the gaps with an endoscope before the works begin. Any mitigation recommendations from the inspection are to be adhered to.
- Pre start fish rescue with manual extraction and translocation if mobile species are present.
- Toolbox talk with the operatives to ensure the INNS RAMS and pollution prevention methods are understood and implemented.

7.0 References

[Natural Resources Wales / Anglesey Terns / Morwenoliaid Ynys Môn potential SPA](#)

[North Anglesey Marine / Gogledd Môn Forol - Special Areas of Conservation](#)

[Glannau Ynys Gybi/ Holy Island Coast - Special Areas of Conservation](#)

Glannau Ynys Gybi / Holy Island Coast SPA

cdn.cyfoethnaturiol.cymru/632245/SPA_UK9013101_Register_Entry_EN001.pdf

NRW TRE WILMOT SSSI [GWYNEDD](#)

NRW GLANNAU YNYS GYBI/HOLY ISLAND COAST SSSI [CYNGOR CEFN GWLAD CYMRU](#)

Gwynedd LBAP website: <https://www.gwynedd.llyw.cymru/en/Council/Strategies-and-policies/Environment-and-planning/Natur-Gwynedd-Biodiversity-Acion-Plan.aspx>

Handbook for Phase 1 habitat survey, *JNCC*, **2016**

Section 7 Priority Species and Habitats Lists, Available from: Wales Biodiversity Partnership website:

<https://www.biodiversitywales.org.uk/Environment-Wales-Act>

UK Biodiversity Action Plan: Priority Habitat Descriptions, *BRIG (ed. Ant Maddock)*, **2008 (updated 2011)**

Appendix A: Photographs



Photograph 1: View of the vegetation on the top of the deck of the bridge facing east.



Photograph 2: Vegetation including birch and willow saplings growing from the deck.



Photograph 3: Vegetation growing from the east side of the bridge at the top of the retaining wall.



Photograph 4: Viewing facing south-west looking underneath the bridge.



Photograph 5: Viewing from underneath the bridge facing North East and view of debris to be removed.



Photograph 6: View of a common shore crab from inside the west wall underneath the bridge. Target point 2.



Photograph 7: View of underneath the deck with gaps that could be bat PRF's.



Photograph 8: View of a male shanny guarding eggs from inside the west wall underneath the bridge. Target point 2.

Appendix B: Species List

Upper shore intertidal brown algae

Channelled wrack *Pelvetia canaliculata*

Egg wrack *Ascophyllum nodosum*

Green algae Gutweed *Ulva intestinalis*

Sea lettuce *Ulva Lactuca*

Serrated wrack *Fucus serratus*

Spiral wrack *Fucus spiralis*

Scrub and coastal plants

Brambles *Rubus fruticosus*

Black medic *Medicago lupulina*

Buck's-horn plantain *Plantago coronopus*

Cock's foot grass *Dactylis glomerata*

Common ragwort *Senecio jacobaea*

Common vetch *Vicia sativa*

Dandelion *Taraxacum officinale*

Silver birch *Betula pendula*

Goat willow *Salix caprea*

Hawkbait *Scorzoneroide autumnalis*

Oxford ragwort *Senecio squalidus*

Oxeye daisy *Leucanthemum*

Red fescue *Festuca rubra*

Red valerian *Centranthus ruber*

Ribwort plantain *Plantago lanceolata*

Sea beet *Beta vulgaris*

smooth cat's ear *Hypochaeris repens*

Wild carrot *Daucus carota*

wild barley *Hordeum spontaneum*

white clover *Trifolium glabra*

Appendix C: Current design plans and site layout

