



Colwyn Bay

Preliminary Ecological Appraisal Report

July 2020

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Executive summary

Mott MacDonald Limited has been commissioned by Conwy County Borough Council (CCBC) to complete a Preliminary Ecological Appraisal for two coastal defence and promenade improvement Schemes within Colwyn Bay, north Wales. The Victorian built coastal defences around Colwyn Bay from Rhos-on-Sea in the west to Old Colwyn in the east have suffered from undermining, corrosion, partial collapses and degradation with frequent overtopping events occurring at Spring Tides. Phase 1abc and 2a of the Colwyn Bay Waterfront Project have already been completed which included the construction of a 150m groyne and Porth Eirias, beach recharge and promenade improvements in the central Colwyn Bay area. Subsequent to this, CCBC are now seeking to provide a permanent upgrade of the coastal defences to protect the western and eastern areas of the bay concurrently with improvements to the promenade to facilitate active travel and regeneration. These proposed schemes are 'Colwyn Bay Waterfront Project Phase 2b' to the west and 'Old Colwyn Coastal Defence and Active Travel Scheme' to the east. The proposed works will include upgrades to the promenade, new coastal defences and beach recharge.

A desk-based assessment identified seven Statutory Designated sites within 2.0km and three non-statutory designations within 1.0km of the survey area. The closest and most relevant is the Liverpool Bay Special Protection Area (SPA) and Important Bird Area (IBA), located 45m north of the survey area, designated for important wading bird species. An assessment of the birds identified, and potential impacts is included within the Overwintering Bird Report (Mott MacDonald Limited, 2020). Due to the close proximity of this designation, a Habitats Regulations Assessment (HRA) screening is required for the scheme along with an application for a marine licence for the works. The nearest non-statutory designation is Coed Rhos Fossil Woodland, located in the west of the survey area. It is designated for its geological features and therefore not considered within the scope of this assessment. Other non-statutory designations are located over 0.6km away.

The survey area itself largely supports habitats of low ecological value save for the priority habitats 'Subtidal sand and gravels', '*Sabellaria alveolata* Reefs' (Honeycomb worm) and 'Blue mussel beds on sediment'. Further assessment for these habitats is recommended once the exact scope of works is finalised. However, based on the proposals, it is anticipated that the subtidal sand and gravels would be unaffected (beach recharge would add to this habitat) provided the sand was sourced from local areas. The '*Sabellaria alveolata* Reefs' could be damaged during construction activities or affected by changes to water quality / turbidity. In terms of the mussel beds, there are two mussel beds in the survey area (one within the west and one in the east), both on sand, which are in poor condition. The mussel bed in the west would be lost under the beach recharge works. Mussel beds are also known to be present beyond the survey area (at the toe of the groynes in the west) which could be affected by increased sediment and turbidity, albeit this would be temporary. Recommendations have been included in respect of these.

The survey area is considered to have habitats suitable to support roosting bats (two structures, namely a shelter and toilet block, both low potential), foraging bats (under street lights), badger, other mammals, nesting birds, overwintering and foraging birds (assessed in Mott MacDonald Limited, 2020), reptiles, fish and marine invertebrates. Based on the proposed scope of works, recommendations are included in the form of further survey and assessment, construction safeguards, design of landscaping and retention of habitats. Opportunities for enhancement have been highlighted.

1 Introduction

1.1 Background and Site Location

Mott MacDonald Limited has been commissioned by Conwy County Borough Council (CCBC) to complete a Preliminary Ecological Appraisal for two coastal defence and promenade improvement schemes within Colwyn Bay, north Wales (see Map 1).

Map 1: Colwyn Bay Location



Source: DigitalGlobe, Microsoft, Earthstar Geographics | Esri UK, Esri, HERE, Garmin, METI/NASA, USGS

The Victorian built coastal defences around Colwyn Bay from Rhos-on-Sea in the west to Old Colwyn in the east have suffered from undermining, corrosion, partial collapses and degradation with frequent overtopping events occurring at Spring Tides.

Phase 1abc and 2a of the Colwyn Bay Waterfront Project have already been completed which included the construction of a 150m groyne and the Porth Eirias beach recharge and promenade improvements in the central Colwyn Bay area.

Subsequent to this, CCBC are now seeking to provide a permanent upgrade of the coastal defences to protect the western and eastern areas of the bay concurrently with improvements to the promenade to facilitate active travel and regeneration.

These proposed schemes are illustrated on Map 2 (along with the Phase 1 area), namely:

- 'Colwyn Bay Waterfront Project Phase 2b' to the west; and
- 'Old Colwyn Coastal Defence and Active Travel Scheme' to the east.

These will be referred to as the Schemes within this report. These are the two areas targeted by the Preliminary Ecological Appraisal albeit the intervening area has been mapped for completeness.

Map 2: Scheme Location within Colwyn Bay



Source: 'ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community'. Note The completed Colwyn Bay Waterfront Phase 2a Scheme area straddles the Phase 1 and Phase 2 areas.

The national grid references for the western and eastern boundaries of each Scheme are approximately:

- The Colwyn Bay Waterfront Project Phase 2b west (285746, 378889) to east (287079, 378699); and
- Old Colwyn Coastal Defence and Active Travel Scheme west (284270, 380524) to east (284975, 379499).

1.2 Proposed Scope of Coastal and Promenade Works

1.2.1 Old Colwyn Coastal Defence and Active Travel Scheme

The proposed scope of work comprises a combination of coastal defence, promenade and active travel improvements:

Coastal defence improvements include:

- The construction of a rock revetment approximately 32m in cross-sectional width and 1.15km in length, with associated modifications to existing surface water outfalls on the beach to extend them through the new revetment;

- A new access build-out area to be constructed in the western half of the Scheme area which would have several functions, including providing a greater area for pedestrian access; Equality Act compliant ramp access and stepped access to the beach, along with landscaped seating steps at varying levels, to the beach access;
- New pedestrian accesses through the proposed revetment to comprise three sets of beach access steps perpendicular to the linear rock revetment;
- A dedicated fishing platform in the Splashpoint Area to keep anglers at a safe distance from active travel routes: and
- The raising of the Promenade to the west of Rotary Way and the raising of the Promenade and highway to the east of Rotary Way with associated access provision.

Active Travel improvements, to include new cycleway layouts, improved pedestrian access areas, improved lighting, new handrailing, improved picnic and outdoor spaces, improved signage and landscaping.

In addition, a series of ecological and educational enhancements have been incorporated into the proposals including new intertidal habitat creation, classification of the beach as a plastic free zone, incorporation of wildflower grassland into new amenity areas and enhancements to the network rail embankment.

1.2.2 Colwyn Bay Waterfront Project Phase 2b

The proposed scope of work is anticipated to comprise a combination of coastal defence and promenade improvements. The scope has not been finalised, however it is considered likely that the majority of the following aspects will be incorporated:

- Coastal defence works to comprise (from Horizon Shine to the southern boundary of Rhos-on-Sea Harbour):
 - Beach recharge to bring beach levels adjacent to the promenade up to those in the Phase 1 area; and
 - Modifications to the rock groyne adjacent to Rhos-on-Sea Harbour.
- Coastal defence works to comprise (from Rydal Boat store to the southern boundary of Rhos-on-Sea Harbour):
 - Repairs to the existing sea wall;
 - Removal of remaining areas of existing rock revetment located against the sea wall in recharge areas for re-use elsewhere; and
 - Modification of outfalls as appropriate to enable them to continue operating with the raised beach levels.
- Promenade improvement works currently anticipated to comprise (from Rydal Boat store to the southern boundary of Rhos-on-Sea Harbour):
 - 4.0m wide shared surface, 2.2m wide pedestrian only zone, highway alterations (one-way system), activity zones (for example seating, exercise areas, play features and garden areas), junction realignments, pedestrian links and crossings, new kiosks, planting and artwork.

1.2.3 Future Maintenance

The Schemes are also anticipated to also include future management and maintenance actions comprising:

- Maintenance and repair of coastal structures and sea wall;

- Maintenance and repair of promenade and associated features;
- Beach management;
- Reworking of structures to maintain the standard of service in line with sea level rise; and
- Beach re-nourishment if considered necessary (Colwyn Bay Waterfront project Phase 2b only).

1.2.4 Proposed Works Programme

As funding is yet to be secured for Scheme construction, the programme has not yet been confirmed. Due to the scale and funding requirements of the Schemes, the construction process may need to be split into several phases.

1.3 Purpose of this Report

The purpose of this report is to;

- Provide an initial appraisal of the ecological importance of the habitats in the areas relevant to the proposed works for the Scheme; and
- Provide an assessment of the potential for these areas to support protected ecological features and species.

This Preliminary Ecological Appraisal Report (PEAR) has been prepared in accordance with Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines.

The aims of this assessment are to:

- Carry out a Phase 1 Habitat survey (Joint Nature Conservation Committee (JNCC), 2010) to provide a description of the existing broad habitat types. To establish the presence or potential presence of any protected or notable species. The results of these surveys are presented in drawing form (Appendix A);
- To assess if the marine habitat has changed since Countryside Council for Wales (CCW) (now Natural Resources Wales) Marine Phase 1 was mapped previously;
- Undertake a desk-top 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 survey area;
- Produce a report outlining any ecological constraints to the proposed development in terms of designated sites, habitats and/or protected and notable species;
- Provide a preliminary assessment of the potential for structures within the Scheme to support roosting bats;
- Provide recommendations for further ecological survey work, if considered necessary to inform an ecological baseline for the survey area;
- Identify any high-level mitigation or compensation measures that may be required to offset potential development impacts; and
- Identify opportunities for enhancement in line with national and local planning policy.

2 Legislation Context and Policy Framework

2.1 Legislation and National Planning Policy

The key legislation relating to ecology and the environment is the Wildlife and Countryside Act (WCA) 1981, as amended, which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) in Great Britain. The WCA is complemented by the Conservation of Habitats and Species Regulations 2017 (CHSR, 2017), which implements Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive). The Regulations provide for the designation and protection of 'European sites', and the protection of 'European protected species'. The species and habitats listed by these measures are legally protected to varying degrees through the WCA. Together, the WCA and CHSR 2017 form the precedent for species and habitat protection in England and Wales.

- At national level, Chapter 6 of Planning Policy Wales (PPW), 2018 (which relates to conserving and enhancing the natural environment) requires Local Authorities (LA) to take measures to: Promote the conservation of landscape and biodiversity, in particular the conservation of native wildlife and habitats;
- Ensure that actions in Wales contribute to meeting international responsibilities and obligations for the natural environment;
- Ensure that statutorily designated sites are properly protected and managed;
- Safeguard protected species; and
- Promote the functions and benefits of soils, and in particular their function as a carbon store.

Developers must ensure that they comply with the above legislation by fully assessing the potential impacts on protected species and habitats from the proposed development. Where planning permission is required, this assessment must be finalised prior to and included with the submission of the planning application and the proposals should also be in compliance with relevant planning policy. The Planning Authority can ensure that the necessary protected species and habitats information has been provided to inform an assessment and that proposals are in full accordance with relevant legislation and policy.

Under the Environment (Wales) Act 2016 public bodies, including Local Authorities are required 'to seek to maintain and enhance biodiversity in Wales' when carrying out their normal functions. Under Section 7, a list of species and habitats of 'principle importance to the conservation of biodiversity in Wales' was drawn up which acts as an aid to guide public bodies in implementing their duty. The Local Authority must consider the impact of the proposed works on protected habitats and species.

2.2 Local Development Plan

At a local level, planning policies are set out within 'Conwy Local Development Plan' (Adopted October 2013). Supplementary documentation is in the form of 'Topic Paper 6: Natural Environment' (2018).

Three policies are of relevance to ecology:

- Policy NTE/1 – The Natural Environment;
- Policy NTE/3 – Biodiversity; and
- Policy NTE/5 – The Coastal Zone.

Policy NTE/1 states that:

“In seeking to support the wider economic and social needs of the Plan Area, the Council will seek to regulate development so as to conserve and, where possible, enhance the Plan Area’s natural environment, countryside and coastline. This will be achieved by:

- Safeguarding the Plan Area’s biodiversity, geology, habitats, history and landscapes through the protection and enhancement of sites of international, national, regional and local importance, in line with Policy DP/6 – ‘National Planning Policy and Guidance’;
- Using Green Wedges and settlement boundaries to control the identity of individual settlements, to prevent coalescence and to protect the immediate landscape surrounding urban areas in line with Policy NTE/2 – ‘Green Wedges and Meeting the Development Needs of the Community’;
- Where appropriate and necessary, improving the quality of statutory and non-statutory landscapes and areas of biodiversity value affected by development, through management agreements, habitat connectivity, improved planting, landscape and maintenance specifications, in line with the Development Principle Policies and Policy NTE/3 – ‘Biodiversity’;
- Working with developers to safeguard protected species and enhance their habitats in line with Policies DP/6 and NTE/3;
- Respecting, retaining or enhancing the local character and distinctiveness of the individual Special Landscape Areas in line with Policy NTE/4 – ‘The Landscape and Protecting Special Landscape Areas’ and as shown on the Proposals Map;
- Protecting the Coastal Zone in line with Policy NTE/5 – ‘The Coastal Zone’; and
- Preventing, reducing or remedying all forms of pollution including air, light, noise, soil and water, in line with Policy DP/6.”

Policy NTE/3 states that:

- “New development should aim to conserve and, where possible, enhance biodiversity through:
 - Sensitive siting; avoiding European protected sites or those of national or local importance;
 - Sensitive layout and design which avoids impacts or mitigates through an agreed programme for any identified adverse impact on biodiversity;
 - Creating, enhancing and managing wildlife habitats and natural landscapes including connectivity;
 - Integrating biodiversity measures into the built environment;
 - Contributing to achieving targets in the Conwy Local Biodiversity Action Plan (LBAP);
 - Providing for a management agreement with the Local Planning Authority to secure the retention and long-term future of biodiversity interests where applicable.
- All proposals should include a Biodiversity Statement detailing the extent of impact on biodiversity.
- The Council will refuse proposals which would have a negative impact on a European Site, protected or priority species or habitat unless the impact is adequately mitigated,

and appropriate remediation and enhancement measures are proposed and secured by planning conditions or obligations.”

Policy NTE/5 states that:

“A Coastal Zone is defined on the Proposals Map. Development in the Coastal Zone, outside settlement boundaries, will only be permitted where the development:

- Specifically requires a coastal location;
- Does not adversely affect the open character of the zone;
- Does not adversely affect the nature conservation value of the zone with any effects identified mitigated for;
- Does not detract from the tourism value or facilities;
- Does not interfere with natural coastal processes;
- Does not impede the function of any existing coastal defence structures;
- Accords with the Development Principles of the Plan.”

3 Methodology

3.1 Zone of Influence

The current guidance on ecological impact assessments (Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) recommends that all ecological features that occur within a 'Zone of Influence' (Zoi) for a proposed development are investigated.

The Zoi includes:

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

The Zoi is variable depending on the nature of the construction activities and the ecological receptors affected. For this assessment the following zones have been defined:

Ecological Feature	Zone of Influence
Statutory designated sites	2.0km
European designated sites for bats	10.0km
Non-statutory designated sites	1.0km
Protected species records	1.0km
Protected species evidence	Within the buffer of the scheme

Source: Mott MacDonald Limited

For the purposes of this assessment, the scheme survey area has been defined as the combined areas of both the Colwyn Bay Waterfront Project – Phase 2b Area and the Old Colwyn Coastal Defence and Active Travel areas. The Phase 1 habitat map has been drawn to show both extents along with Phase 1abc Areas (the stretch between the two) for completeness.

3.2 Desk Study

A desk study was undertaken, as recommended in the CIEEM 'Guidelines for Preliminary Ecological Appraisal' – 2nd edition (2017), to determine the presence of any designated nature conservation sites and protected or notable species within the Zoi of the Scheme. Records within 1.0km of the site for both protected species and designated sites were requested from the local records information database Cofnod. The data has been further curtailed to the nearest records for each species recorded, raw data is available on request. Information to inform the desk study was obtained from the following sources:

- Cofnod (<https://www.cofnod.org.uk/Home>);
- Multi Agency Geographical Information for the Countryside (MAGIC) website (<http://www.magic.gov.uk/MagicMap.aspx>);
- Natural Resources Wales (NRW) (<http://naturalresources.wales>); and
- Joint Nature Conservation Committee (JNCC) (<http://jncc.defra.gov.uk>).

3.3 Field Survey

Field surveys were undertaken by experienced surveyors in December 2019 and January 2020.

All habitats within the survey area, where accessible, were identified and mapped in compliance with the 'Handbook for Phase 1 Habitat Survey: a technique for environmental audit' (JNCC, 2010). Dominant plant species were noted, as were any protected, uncommon or invasive species listed on Schedule 9 of the WCA (as amended). The methodologies and assessment criteria used were based on current published guidance.

The buildings within the survey areas were inspected for bat potential. Given restrictions to survey work (see limitations), detailed photographs of the buildings including close up photographs of features where bats may be able to gain access to voids in structures were taken by a local surveyor. These photographs were then analysed by an experienced and licensed bat ecologist to assess the potential of the buildings to support roosting bats and/or signs of bat presence in accordance the table below, based on the Bat Conservation Trust Good Practice Guidelines (Collins, ed. 2016).

Table 3.1: Bat Suitability Classification

Suitability	Description Roosting Habitats	Commuting and Foraging Habitat
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site to be used by commuting or foraging bats.
Low	A structure with one or more potential roost features (PRF) that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a hedgerow with gaps or un-vegetated stream, but isolated, (i.e. not very well connected to the surrounding landscape by other habitat). Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broad-leaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Source: (Collins, ed. 2016).

For the intertidal zone, feedback received during the emergency works (Splashpoint) from the County Ecologist along with previous survey work indicated that the key concern is the presence of mussel beds. On this basis, for ease of interpretation, a separate biotope map has not been undertaken (as was completed for Splashpoint – updating the CCW biotope mapping) but instead the key intertidal habitat types have been included in the Phase 1 map along with the extent of mussel beds and location of *Sabellaria alveolata* Reefs as additional features.

3.4 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. If species records are not present it may be as a result of the area being under surveyed and as such no records have been returned, lack of species should therefore not be disregarded.

Ecological surveys are limited to factors which affect the presence of plants and animals, such as time of year, migration patterns and behaviour. 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.

Due to the Government's restriction imposed to limit the spread of the Covid-19 virus, it was necessary to assess the bat roosting potential of structures within the survey area by using detailed high-resolution photographs, rather than by assessment in the field. This was done with the aim of minimising the time spent working in publicly accessible areas.

4 Results and Interpretation

4.1 Desk Study

A desk study was undertaken to identify key species and habitats near and adjacent to the site. The results are presented in the following sections.

4.1.1 Statutory Designated Sites

There are five statutory designated sites within 2.0km of the survey area. No Special Areas of Conservation (SACs) designated for bats were returned within 10.0km of the survey area. A map of these designated sites is provided in Appendix B. Details of the designated sites are provided in Table 4.1 below:

Table 4.1: Statutory Designations within 2.0km

Name	Status	Details	Distance and Direction
Bae Lerpwl / Liverpool Bay	Special Protection Area (SPA), Important Bird Area (IBA)	The inshore area of Colwyn Bay lies within the boundary of Bae Lerpwl / Liverpool Bay SPA. The SPA regularly supports more than 1% of the British populations of red-throated diver (<i>Gavia stellate</i>), 1% of the biogeographical population of common scoter (<i>Melanitta nigra</i>) and more than 50,000 waterfowl during the non-breeding season.	Adjacent to the north
Fairy Glen	Local Nature Reserve (LNR)	Ancient broadleaved woodland along the banks of the river Colwyn, supporting species such as grey wagtail (<i>Motacilla cinerea</i>).	Approximately 0.5km south east
Upper Dingle Woods	LNR	Broadleaved woodland supporting species such as lesser celandine (<i>Ficaria verna</i>) and bluebell (<i>Hyacinthoides non-scripta</i>).	Approximately 0.6km south east
Pwllcrochan Woods	LNR	Ancient broadleaved woodland supporting species such as great spotted woodpecker (<i>Dendrocopos major</i>), treecreeper (<i>Certhia familiaris</i>) and tawny owl (<i>Strix aluco</i>).	Approximately 0.8km south west
Bryn Euryn	Site of Special Scientific Interest (SSSI) and LNR	Species rich grassland upon carboniferous limestone, with notable species such as hoary rockrose (<i>Helianthemum canum</i>), bloody cranesbill (<i>Geranium sanguineum</i>) and Nottingham catchfly (<i>Silene nutans</i>) present.	Approximately 0.8km west
Creuddyn Peninsula Woods	SAC and SSSI	A collection of semi-natural broadleaved woodlands upon carboniferous limestone hills, which are an example of <i>Tilio-acerion</i> forest on the western boundary of their range. Pockets of yew (<i>Taxus baccata</i>) dominant woodland are also present with patches of species rich calcareous grasslands. Rare flora such as spiked speedwell (<i>Veronica spicata</i>) and spring cinquefoil (<i>Potentilla neumanniana</i>) are present.	Approximately 1.9km south west

Name	Status	Details	Distance and Direction
Mynydd Marian	SSSI	Of special interest for its range of limestone (calcareous) grassland communities as well as its population of the dwarf race of silver studded blue butterflies (<i>Plebejus argus</i> ssp. <i>Caermensis</i>). Nationally scarce plant species spring cinquefoil (<i>Potentilla neumanniana</i>) (<i>P. tabernaemontani</i>) is also present within stands of calcareous grassland.	Approximately 2.0km south east

Source: MAGiC Cofnod, 2020 & JNCC

4.1.2 Non-Statutory Designated Sites

There is one non-statutory designated sites within 2.0km of the survey area. Details of this designated site is given below in Table 4.2.

Table 4.2: Non-Statutory Designations within 2.0km

Name	Status	Details	Distance and Direction
Coed Rhos Fossil Woodland	Local Wildlife Site	Candidate fossilised woodland, no survey information is currently available.	Within the Colwyn Bay Phase 2b area.
Royal Fishing Weir	Local Wildlife Site	Candidate intertidal site, no survey information is currently available.	Approximately 0.3km to the north west
Upper Dingle Woods	LWS	See LNR above	Approximately 0.6km south east
Pwllcrochan Woods	LWS	See LNR above	Approximately 0.8km south west
Bryn Eurnyn	LWS	See LNR above	Approximately 0.9km south west
Coed Sempyr	Local Wildlife Site	Candidate site consisting of broadleaved woodland, no survey information is currently available.	Approximately 2.0km south west

Source: Cofnod, 2020

4.1.3 Protected Species Records

Records of protected or notable species from within 1.0km of the survey area are listed within the following sections. Records of species such as badger and bat roosts are sensitive and should be treated as confidential.

4.1.3.1 Birds

Records of 127 species of bird were returned within 1.0km of the survey area, including the following WCA Schedule 1 species:

- Red kite (*Milvus milvus*);
- Brambling (*Fringilla montifringilla*);
- Snow bunting (*Plectrophenax nivalis*);
- Common crossbill (*Loxia curvirostra*);
- Black-throated Diver (*Gavia arctica*);
- Great Northern Diver (*Gavia immer*);

- Red-throated Diver (*Gavia 14lveolat*);
- Long-tailed duck (*Clangula hyemalis*);
- Fieldfare (*Turdus pilaris*);
- Slavonian Grebe (*Podiceps 14lveola*);
- Little Gull (*Hydrocoloeus minutus*);
- Mediterranean Gull (*Larus melanocephalus*);
- Marsh Harrier (*Circus aeruginosus*);
- Merlin (*Falco columbarius*);
- Osprey (*Pandion haliaetus*);
- Peregrine (*Falco peregrinus*);
- Leach's Petrel (*Oceanodroma leucorhoa*);
- Black Redstart (*Phoenicurus ochruros*);
- Redwing (*Turdus iliacus*);
- Purple Sandpiper (*Calidris maritima*);
- Scaup (*Aythya marila*);
- Velvet Scoter (*Melanitta fusca*);
- Common Scoter (*Melanitta nigra*);
- Whooper Swan (*Cygnus 14lveol*);
- Roseate Tern (*Sterna dougallii*);
- Little Tern (*Sternula albifrons*);
- Black Tern (*Chlidonias niger*); and
- Whimbrel (*Numenius phaeopus*).

4.1.3.2 Mammals

Records of mammals were returned within 1.0km of the survey area as follows:

Bats

The following bat species were returned within 1.0km of the survey area:

- Common pipistrelle (*Pipistrellus pipistrellus*);
- Noctule (*Nyctalus 14lveola*);
- Soprano pipistrelle (*Pipistrellus pygmaeus*);
- Long-eared bat (*Plecotus sp.*); and
- Lesser horseshoe (*Rhinolophus hipposideros*).

The closest records are that of common pipistrelle and soprano pipistrelle which were recorded 0.2km from the survey area.

Badger

Eight records of badger (*Meles meles*) were returned within 1.0km of the survey area, with the closest record approximately 0.3km to the south.

Hedgehog

A total of 25 records of hedgehog (*Erinaceus europaeus*) were recorded within 1.0km of the survey area, with the closest recorded 0.06km to the south.

Porpoise

A single record of a common porpoise (*Phocoena phocoena*) was returned within the survey area. The marine habitats off-site to the north are also occasionally used by other marine mammals including common bottlenose dolphin (*Tursiops truncatus*) and grey seal (*Halichoerus grypus*).

4.1.3.3 Herpetofauna

A single record of slow worm (*Anguis fragilis*), common lizard (*Zootoca vivipara*) and grass snake (*Natrix natrix*) were returned within 1.0km of the survey area, with the closest record of a slow worm approximately 0.9km to the south.

A single record of the non-native species Aesculapian snake (*Zamenis longissimus*) was also returned within 1.0km of the survey area. This is considered to be a zoo escape from the local Mountain Zoo.

Seven records of common frog (*Rana temporaria*) were returned within 1.0km of the survey area, with the closest record approximately 0.5km to the south.

4.1.3.4 Invertebrates

A total of 25 invertebrate species were returned within 1.0km of the survey area, with the closest record of holly blue (*Celastrina argiolus*) approximately 0.5km to the south west.

Three records of the invasive species Harlequin ladybird (*Harmonia axyridis*) were also returned within 1.0km of the survey area, with the nearest record 0.3km to the south west.

4.1.3.5 Flora

Bluebell (*Hyacinthoides non-scripta*) which is listed on Schedule 8 of the WCA 1981 was recorded approximately 0.5km away from the survey area.

4.2 Site Visit

The survey area sits on the intertidal zone with the Irish sea to the north and comprises the intertidal zone (beach and associated habitats) along with the current cycle path and adjacent amenity or re-colonising habitats on the embankments of the road and railway line.

For ease of interpretation, rather than produce separate terrestrial and marine maps, both the terrestrial and marine / intertidal survey information has been mapped onto a Phase 1 Habitat Map with specific additions of key marine features and habitat types (such as mussel beds). References to the key habitat types and biotopes are included in the text below.

4.2.1 Habitats

The habitats recorded within the survey area are described in Table 4.3 below along with reference to which areas of the scheme they are relevant to. The Phase 1 Habitat Map is provided within Appendix A. Example photographs of habitats are provided in Appendix C.

Table 4.3: Description of Habitats present in the survey area

Terrestrial / Marine	Habitat Code	Habitat Type	Description	Colwyn Bay Waterfront Project – Phase 2b Area	Old Colwyn Coastal Defence and Active Travel
Terrestrial	A2.1	Dense / continuous scrub	Dense bramble (<i>Rubus fruticosus</i>) is present on the railway embankment in the east of the survey area and on the road embankments south of the promenade behind the Phase 1abc and Phase 2b areas. As well as bramble, this habitat supported occasional ivy (<i>Hedera helix</i>), sycamore saplings (<i>Acer pseudoplatanus</i>), willow saplings (<i>Salix</i> sp.), bindweed sp. (<i>Convolvulus</i> sp.), horsetail sp. (<i>Equisetum</i> sp.) and hemp agrimony (<i>Eupatorium cannabinum</i>).	✓	✓
Terrestrial	A2.2	Scattered scrub	Scattered scrub is present within the semi-improved grassland habitat along the railway embankment in the east of the survey area. Species present include broom (<i>Cytisus</i> sp.), gorse (<i>Ulex</i> sp.) and blackthorn (<i>Prunus spinosa</i>).	✓	✓
Terrestrial	A3.3	Scattered mixed trees	Young scattered trees are present along the railway embankment in the east of the survey area and scattered along the roadside to the north west, including Scott's pine (<i>Pinus Sylvestris</i>), beech (<i>Fagus sylvatica</i>), sycamore, elm sp. (<i>Ulmus</i> sp.), pedunculate oak (<i>Quercus robur</i>), white poplar (<i>Populus alba</i>) and ash (<i>Fraxinus excelsior</i>).	✓	✓
Terrestrial	B6	Poor semi-improved grassland	Poor semi-improved grassland, parts of which were outgrown and appeared unmanaged, is found along much of the extent of the railway embankment in the east of the survey area. Scattered scrub and trees are found within the grassland, with some patches of tall ruderal. The grassland was dominated by fescue (<i>Festuca</i> sp.), with Yorkshire fog (<i>Holcus lanatus</i>) and false oat (<i>Arrhenatherum elatius</i>) found to the edges and occasional broadleaved dock (<i>Rumex obtusifolius</i>), greater plantain (<i>Plantago major</i>).	✓	✓
Terrestrial	C3.1	Tall ruderal vegetation	Patches of dense tall ruderal are found scattered within the poor semi-improved grassland and amongst the dense scrub and scattered trees in the east of the survey area. As a result, this habitat is not mapped but listed here for completeness. Species recorded in the ruderal vegetation includes rosebay willowherb (<i>Epilobium angustifolium</i>), hogweed (<i>Heracleum sphondylium</i>), knapweed (<i>Centaurea nigra</i>), bindweed (<i>Convolvulus arvensis</i>), ragwort (<i>Jacobaea</i> sp.), and nettle (<i>Urtica dioica</i>).	✓	✓
Terrestrial	G2	Running water	A culverted water course runs under the A55 and outflows at the eastern point of the Promenade in the eastern extent of the scheme. Due to the small scale of this habitat it is not specifically mapped but described here for completeness.		✓
Terrestrial	J1.2	Amenity grassland	Amenity grassland is present throughout the survey area, alongside the existing cycleway and at the base of the railway embankment in the east. The amenity grassland comprised close-mown, regularly managed	✓	✓

Terrestrial / Marine	Habitat Code	Habitat Type	Description	Colwyn Bay Waterfront Project – Phase 2b Area	Old Colwyn Coastal Defence and Active Travel
			grassland. Species recorded include perennial ryegrass (<i>Lolium perenne</i>), annual meadow grass (<i>Poa annua</i>), common daisy (<i>Bellis perennis</i>), ribwort plantain (<i>Plantago 17lveolate17</i>), dandelion sp. (<i>Taraxacum</i> sp.), creeping buttercup (<i>Ranunculus repens</i>) and yarrow (<i>Achillea millefolium</i>).		
Terrestrial	J3.6	Buildings and infrastructure	A number of buildings and structures are present throughout the survey area in the form of: • Railway bridges (stone abutments and wing walls of beam construction with a steel span, which is in a good state of repair); • Bus shelters (open with pebble dash walls and a flat roof); • Information centre (pitched tiled roof with concrete walls, artificial lighting on the external walls and a glass walled conservatory); • Kiosks (Concrete walls and a flat roof with metal fascia boards); • Restaurant (concrete structure with wooden cladding on the external walls, with a flat roof and metal fascia boards, in a good state of repair); • Water sports centre (glass and metal walls with wooden cladding and a flat roof used as an observation point. Artificial lighting is present on the external walls. The building was in a good state of repair); and • Public toilets blocks (pitched tiled roofs of concrete construction in a good state of repair, with artificial lighting on the external walls and sealed windows and doors).	✓	✓
Terrestrial	J4 and J5	Fences and Walls	Fences and stone walls are present throughout the survey area, marking boundaries of the embankments and along the existing promenades. Given the small scale of these habitats they are not specifically mapped but are described here for completeness.	✓	✓
Terrestrial	J5	Hardstanding	Hardstanding is present in the form of the existing cycleway and promenade.		✓
Marine	H1.1	Intertidal sand	The intertidal area is largely dominated by sand, which forms the main habitat type across the survey area as well as in the Phase 1abc area between the two (where a beach recharge exercise has previously been undertaken).	✓	✓
Marine	H1.1	Intertidal mud	Areas of mud are present in the west of the survey area adjacent to the sea wall.	✓	
Marine	H1.2	Shingle and gravel	Areas of shingle / gravel are present throughout the intertidal survey area, largely along the southern edge of the beach adjacent to the coastal defences and surrounding areas of mud and brackish water. Species recorded associated with these habitats include Honeycomb worm (<i>Sabellaria 17lveolate</i>) along with acorn barnacles (<i>Semibalanus balanoides</i>), periwinkle (<i>Littorina littorea</i>) and common limpet (<i>Patella vulgata</i>).	✓	✓
Marine	H1.3	Boulders / rocks (groynes and other	A number of man-made groynes are present along the length of the survey area. These comprise large boulders and a number have navigation markers (metal posts) at the end.	✓	✓

Terrestrial / Marine	Habitat Code	Habitat Type	Description	Colwyn Bay Waterfront Project – Phase 2b Area	Old Colwyn Coastal Defence and Active Travel
		man-made features)	Many of the boulders had been colonised by green algae, macroalgae and lichens including yellow lichen (<i>Xanthoria parietina</i>), a grey lichen species (<i>Lecanora</i> sp.) and black tar lichen (<i>Verrucaria maura</i>). Other species recorded in association with the boulders and sea wall include acorn barnacles, sea lettuce (<i>Ulva lactuca</i>), spiral wrack (<i>Fucus spiralis</i>), common limpet, toothed wrack (<i>Fucus serratus</i>), beadlet anemone (<i>Actinia equina</i>), dogwhelk (<i>Nucella lapillus</i>), periwinkle, Darwin barnacles (<i>Elminius modestus</i>), Hydroids (<i>Plumularia catharina</i>) and Honeycomb worm.		
Marine	G1.6	Standing water – brackish	An area of standing, brackish water is present in the west of the survey area, surrounded by gravel substrate with some rocks and shingle within it.	✓	
Marine	J3.5	Sea wall	A concrete sea wall is present along the boundary of the beach (the front), forming part of the current coastal defences, atop which is the current promenade. Boulders and gravel are present adjacent to the wall. Parts of the wall have been colonised by green algae and macroalgae along with associated invertebrates (see species list in boulders).	✓	✓
Marine	-	Dense and sparse mussel beds	Two blue mussel (<i>Mytilus edulis</i>) beds were identified as part of the survey work undertaken, one located in the west of the survey area and one in the far east of the survey area. Both comprise areas of denser and sparse mussels (albeit both relatively sparse), interspersed with brown seaweeds, fucoids and barnacles, which have colonised in the middle of the sand. Both areas appear to be in poor condition and appeared to have previously been dense (marked as 'dense' on the mapping as a relative term) but sparse at the time of survey, whilst there were many cracked and empty shells present. From surveys completed for Phase 1abc EIA and Addenda in 2010 some areas of dense blue mussel aggregations were recorded at the end of groynes within the Phase 2b area (beyond the current survey area) which were noted to be larger in extent and may extend into the subtidal zone.	✓	✓
Marine	-	<i>Sabellaria alveolata</i> patches	Small patches of Honeycomb worm were noted within shingle and gravel areas in the east of the Scheme (see Appendix A for approximate location). These were recorded to be relatively isolated and small in extent and are considered to be in poor condition.		✓

4.2.2 Protected or Notable Species

A list of bird species observed during the surveys is reported separately in the Wintering Bird Survey Report (Mott MacDonald Limited, 2020).

No evidence of any other protected or notable species was recorded during the survey work undertaken. The potential for notable species is discussed in the relevant interpretation section. The results of the bat roosting assessment of buildings are set out separately in Table 4.2 below.

Table 4.2: Summary of Structures with Potential Roost Features

Building Reference and Photo	Building Description	Features
Kiosk 	- Concrete structure clad in coated wood and metal/ composite panels. - Flat roof, supported by metal beams.	No potential roost features identified
Shelter 1 	- Concrete structure, clad in pebbledash. - Flat, hollow, wooden roof and fascia board with outer coating.	Gap under coated wooden fascia board on south west corner. This feature gives access into a hollow cavity. 
Shelter 2	- Concrete structure, clad in painted pebbledash. - Flat, wooden roof and wooden fascia board with outer coating.	No potential roost features identified

Building Reference and Photo	Building Description	Features
		
Toilet Block 	• Concrete walls with pitched, tiled roof with ridge tiles. • Exterior lighting present above doorways. • Composite material soffit box and fascia board present.	• Gaps visible under ridge tiles and other roof tiles.  

Source: Mott MacDonald

The location of the structures described in Table 4.2 above, is shown in Figure 4.1 below:

Figure 4.1: Location of structures assessed for potential roost features



Source: 'ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community'.

4.2.3 Invasive Plant Species

No evidence of any invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was recorded during the survey work undertaken.

4.3 Interpretation

4.3.1 Designations

Liverpool Bay SPA is located along the boundary of the survey area (approximately 45m from the boundary at its closest point). This is designated at an international level for the wetland bird species and assemblages present. Given the proximity of this designation, it has been scoped into the assessment of effects section below.

Coed Rhos Fossil Woodland LWS is located within the west of the survey area boundary. This is an archaeological / geological designation and therefore not addressed in this report.

All other statutory and non-statutory designations are considered sufficiently separated from the Scheme with no clear impact pathways. As such, these are considered unlikely to form a constraint to any proposals and are not considered further in this report.

4.3.2 Habitats

The following habitats within the survey area are considered to be of elevated value in the context of the site and could qualify as Priority Habitats (as listed under Section 7 of the Environment (Wales) Act):

- **Subtidal Sands and Gravels:** The majority of the survey area is dominated by sand and gravel which would be submerged during high tide;
- ***Sabellaria alveolata* Reefs:** The small patches of honeycomb worm reef (*Sabellaria alveolata*) recorded within the east of the site could meet the description of the priority habitat *Sabellaria alveolata* Reefs. This priority habitat can typically be 30 to 50cm thick and form large expanses. The patches in the site were noted to be small and isolated in extent and appear to be in decline and poor health (possibly with some sections already dead) and as a result are not a high quality example of this priority habitat. This is likely due to the exposed nature of the site;
- **Blue mussel beds on sediment (within the survey area):** The mussel beds within the survey area broadly meet the description for this priority habitat, in that blue mussel beds are present within the sand substrate. However, the beds are isolated areas of relatively sparse mussels (with areas that appeared to have previously been dense) in poor condition are now all that are present. Blue mussel beds as a priority habitat is valued as having a role in coastal sediment dynamics, acting as a food source for overwintering waders and providing an enhanced area of biodiversity (typically associated with a range of organisms including fucoids, barnacles, isopods and other fauna). The mussel beds within the survey area are small and in poor condition (many fragmented and broken shells present on site), whilst no evidence of any diverse assemblage of associated organisms was recorded during the surveys undertaken. On this basis, the habitats on site are considered to be poor examples of this priority habitat type and are not considered to be of any elevated ecological value in a local context; and
- **Blue mussel beds on sediment (outside of the survey area):** Areas of dense and sparse blue mussel aggregations recorded at the end of groynes within the Phase 2b area (beyond the current survey area) during the Phase 1abc (2013) surveys could qualify as the priority habitat.

The boulders as part of the groynes and revetments are man-made, embedded in sediment and subject to tidal scour, such that they are not considered to have sufficient gaps on the underside to support a valuable under boulder community. They are therefore not considered to represent the priority habitat 'Intertidal Underboulder Communities'.

The remaining intertidal and terrestrial habitats are largely small in extent and comprise either common and widespread species or are man-made structures, of no more than negligible-low ecological value at a site level.

4.3.3 Protected Species

On the basis of the habitats present, the site and surrounds could offer opportunities for a number of wetland bird species and marine invertebrates (although no notable species were recorded during the survey work). The marine habitats present on site could also support fish species, as a desktop search¹ shows that the wider marine area surrounding Colwyn Bay and areas further offshore to the north of the Site are considered to be a high intensity spawning ground for plaice (*Pleuronectes platessa*), cod (*Gadus morhua*), sand eel (*Ammodytes*

¹ Marine Plan Online Search Tool, 2020. Available at: <https://explore-marine-plans.marineservices.org.uk/>

tobianus) and sole (*Solea solea*), as well as a high intensity nursery ground for cod (*G. morhua*), sole (*S. solea*) and whiting (*Merlangius merlangus*).

A summary of the potential of structures within the survey area, to provide opportunities for roosting bats, is set out below in Table 4.3.

Table 4.3: Assessment of the Bat Roosting Potential of Structures

Building	Feature(s)	Assessment of Bat Roost Potential
Kiosk	No potential roost features identified	Negligible potential
Shelter 1	Gap under coated wooden fascia board on south west corner.	Low potential The shelter is located on the exposed coastal promenade with limited connectivity to wider habitat.
Shelter 2	No potential roost features identified	Negligible potential
Toilet Block	Gaps visible under ridge tiles and other roof tiles.	Low Potential Some access to foraging and commuting habitat. However, the block's overall opportunity to provide shelter is limited, being sited on the exposed coastal promenade and outward facing external lighting.

Source: Mott MacDonald

No features that would offer potential for roosting bats were noted in any of the bridges within the survey area, whilst a full survey of trees was not undertaken (this has been recommended in section 5). The existing promenade is lit and unlikely to be of value to more light sensitive species such as lesser horseshoe or myotis bats (for which records were returned) but could be used by more light tolerant species such as pipistrelle bats for foraging.

The semi-improved grassland, tall ruderal and scrub habitats (particularly the railway embankment) offer suitable opportunities for reptiles, records of which were returned from within 1.0km of the survey area. The trees, scrub and buildings could support nesting birds. The railway embankments could also offer opportunities for badger, which are known to be present in the local area from records returned, albeit as these are exposed and so are, at best, sub-optimal. Habitats in the site could also offer potential for a number of common mammal species.

No records of otter were identified within the search area whilst the habitats offer limited suitability for this species.

5 Assessment and Recommendations

5.1 Identification of Ecological Constraints

On the basis of the habitats and present and survey work completed, as identified in the interpretation section, the following potential ecological constraints have been identified:

- Liverpool Bay SPA;
- Subtidal sands and gravels (priority habitat);
- Blue mussel beds on sediment (priority habitat) – within and outside of the survey area;
- Roosting and foraging bats;
- Wintering and foraging birds;
- Nesting birds;
- Reptiles;
- Fish; and
- Marine invertebrates.

On the basis of the proposed scope of works, a high-level assessment of effects is set out below.

5.2 Initial Assessment of Effects (High-level only)

It is anticipated that an assessment of effects would be undertaken once the detailed proposals are finalised, as part of an Environmental Impact Assessment (EIA) or Ecological Impact Assessment (EcIA) (subject to the results of the screening exercise). Depending on the exact design of works, effects on these receptors could be positive or negative. However, based on the broad scope of works available, an initial assessment of potential effects is provided within Table 5.1 below.

Table 5.1: Potential Ecological Constraints and Initial Assessment of Effects

Constraint	Location		Level of Protection	Initial Assessment
	Colwyn Bay Waterfront Project – Phase 2b Area	Colwyn Bay Coastal Defence and Active Travel		
Liverpool Bay SPA	45m from survey area	45m from survey area	EC Habitats Directive, SSSIs are protected under Wildlife and Countryside Act 1981 (as amended).	No direct effects on this SPA are anticipated but given the proximity, construction and maintenance works could result in disturbance or degradation of habitat (from increased turbidity during beach recharge works) for birds using the SPA. A HRA is required along with a marine licence. An initial assessment of effects on designated interest features of the SPA is set out within the Over-wintering bird report.
Subtidal sands and gravels	Throughout the site	Throughout the site	Environment (Wales) Act 2016	The works will include recharge of the beach and an increased cover of this habitat. The quality may change depending on from where the sand is sourced.

Constraint	Location		Level of Protection	Initial Assessment
	Colwyn Bay Waterfront Project – Phase 2b Area	Colwyn Bay Coastal Defence and Active Travel		
<i>Sabellaria alveolata</i> Reefs	-	Associated with shingle and gravels (see Appendix A)	Environment (Wales) Act 2016	No direct loss of <i>Sabellaria alveolata</i> Reefs is anticipated. In the absence of mitigation, this habitat may be affected by increased sediment and turbidity, whilst the reefs could be damaged during construction in the absence of safeguards.
Blue mussel beds	Western boundary of the Scheme	Eastern edge of the Scheme	Environment (Wales) Act 2016	The works will result in the partial or complete loss of the western mussel bed located within the existing sandy habitats, which would be covered during the beach recharge works. No direct loss of mussel beds outside of the Scheme footprint is anticipated. In the absence of mitigation, mussels may be affected by increased sediment and turbidity, whilst the eastern mussel bed could be damaged during construction in the absence of safeguards. Rocky habitat will be lost but also created under the Scheme proposals and so habitat will continue to be available under the Proposed Scheme for colonisation by mussels in the future.
Roosting bats	Trees, Bridges	Trees, Bridges	Bat species and their roosts are fully protected under the Conservation of Habitats and Species Regulations 2017 and the WCA. Various bat species are also listed under Section 7 Species of Principal Importance under the Environment (Wales) Act 2016.	No bat potential features were noted in any bridges or trees during the survey, but a full assessment was not undertaken. No impacts to trees or bridges are anticipated under the current works. If this scope changes consideration would need to be given to assessing these structures for bats.
	Buildings	Buildings		Shelter 1 is to be demolished and re-built. Further survey required to ascertain presence/likely absence of bats. If present, a licence would be required.
				The Toilet Block is to be refurbished, the scope of which has not yet been confirmed. Should this work have potential to disturb bats, further surveys would be needed.
Foraging bats	Tree lines and under streetlights	Railway embankment, tree lines and under streetlights		Vegetated habitats and streetlights within the survey area may be used by foraging bats, which are known to be present in the area. Any change to these habitats, including a new lighting design, could affect availability of foraging resource. Depending on the scheme design, this could result in a betterment for bats.
Badger	-	Railway embankments	Badgers are protected under the Protection of Badgers Act 1992	No evidence of badgers was noted during the survey and the likelihood of this species being present is considered extremely low but given local records cannot be ruled out. The current scope of works does not affect the railway embankment. Should the scope change, consideration would need to be given to this species which could move into the survey area prior to works.

Constraint	Location		Level of Protection	Initial Assessment
	Colwyn Bay Waterfront Project – Phase 2b Area	Colwyn Bay Coastal Defence and Active Travel		
Over-wintering and foraging birds	Intertidal zone and off-shore	Intertidal zone and off-shore	(see SPA)	(see SPA above)
Nesting birds	Scrub, trees and buildings / structures	Scrub, trees and buildings / structures	All breeding birds are protected under the WCA 1981 (as amended) with Schedule 1 birds afforded greater protection from disturbance	Habitats within the Scheme have the potential to support nesting birds. Any works affecting these habitats could result in loss of nesting habitat and direct effects on nesting birds.
Reptiles	-	Railway embankments and verges	Reptiles are afforded varying degrees of protection under WCA. All reptiles are listed under Section 7 Species of Principal Importance under the Environment (Wales) Act 2016	The railway embankment habitats and scrub areas may provide suitable habitat for reptiles. Any works to these vegetated areas could adversely affect this species group (if present) and reduce available habitat.
Fish	In-shore	In-shore	Certain fish species are fully protected under the Conservation of Habitats and Species Regulations 2017 and the WCA.	The beach recharge works could result locally in small increases in sedimentation and turbidity which could affect small fish and invertebrates (prey). However, this would be temporary, probably in keeping with the tidal regime, and on a wider scale the bay is a large area which is available for fish and their prey. It is also anticipated that this would be undertaken at low tide above the water level, further minimising impacts.
Invertebrates and other submerged or benthic communities	In-shore	In-shore	Various species are protected under legislation and listed in planning policy	The beach recharge works could result locally in small increases in sedimentation and turbidity which could affect invertebrates, submerged seaweeds / plants and filter feeding organisms. However, this would be temporary and would not affect the entire bay (as Phases 1abc have already been completed). It is also anticipated that this would be undertaken at low tide above the water level, further minimising impacts. Settlement of larval mussels, fucoids and algal turf is anticipated to occur soon after the works have completed.

Source: Mott MacDonald Limited

In respect of over-wintering birds, an assessment of effects informed by the survey results is reported separately (Mott MacDonald Limited, 2020).

5.3 Recommendations

On the basis of the assessment of effects above, recommendations are made below for further survey and assessment along with mitigation and enhancement measures that are likely to be appropriate for the Scheme:

5.3.1 Further Survey and Assessment

Given the proximity of the Liverpool Bay SPA, it is recommended that the following is undertaken:

- A Habitats Regulations Assessment (HRA) Screening Report should be undertaken to ascertain any likely significant effects from both the Colwyn Bay Waterfront Project – Phase 2b works and the Colwyn Bay Coastal Defence and Active Travel works on the designation;
- Wintering bird surveys should be undertaken to ascertain the use of the local area by wintering birds and inform the HRA. This survey work was completed in December 2019 and January 2020 and the results are reported separately (Mott MacDonald Limited, 2020); and
- Bat emergence/return surveys are required for the structures identified with low bat roosting potential. Shelter 1 is proposed to be demolished and the toilet block is proposed for refurbishment (the scope of which has not been defined). They each require a single emergence/ return survey. These surveys will need to be undertaken between May and August.

If the scope of works changes to directly affect any trees or bridges, further survey would be required to assess bat roosting potential and, if required, ascertain the presence / likely absence of bats.

If the scope of works changes to affect the embankments, a walkover survey to check for evidence of badgers is recommended at least 8 weeks prior to commencement of works.

5.3.2 Mitigation and Licensing

As with the assessment of effects, it is anticipated that mitigation and enhancement measures would be included as part of an EIA or EcIA document, or within a bespoke mitigation report, to be completed once the design, construction methodology and programme for each Scheme is finalised. However, on the basis of the high-level assessment of effects and current proposals for each Scheme, it is anticipated that any mitigation strategy would include the below measures.

Where mitigation measures are relevant to only one of the Schemes, this is stated below. Otherwise the below are considered relevant to both.

- **Liverpool Bay SPA – Marine Licence.** A marine licence will be required from NRW for any works that could affect the SPA, including beach recharge and coastal defence upgrade works;
- **Habitats – Subtidal Sand and Gravels.** It is recommended that the sand for the beach recharge is sourced from the near vicinity of the site;
- **Habitats – *Sabellaria alveolata* Reefs.** Works should be confined to the footprint of works so as to ensure no adverse effects to *Sabellaria alveolata* Reefs outside of the survey area are affected. Safeguards such as fencing should be used to ensure this. Consideration should be given to the design of new rocky substrate habitats to maximise availability for colonisation by *Sabellaria alveolata*;
- **Habitats – Mussel Beds.** Works should be confined to the footprint of works so as to ensure no adverse effects to mussel beds outside of the survey area are affected (such as those known to be present to the north of Rhos Harbour). It is recommended that works to the beach be undertaken at low tide, where possible, to reduce the impacts of sedimentation on the marine habitats in the vicinity. The percentage of fine particles in the recharged beach material should be minimised to reduce smothering risk within subtidal aggregations by working at low tide for any methods that would be considered to increase sedimentation in

the water column. Consideration should be given to the design of new rocky substrate habitats to maximise availability for colonisation by mussel spat and inclusion of artificial rockpools at varying levels and locations along the scheme;

- **Roosting Bats.** If further surveys find evidence of roosting bats, then appropriate safeguards (including supervised soft-demolition of the buildings or strip of features) under licence by NRW would be required;
- **Foraging Bats.** Consideration should be given to bats in any new lighting design and landscape planting to ensure this is sensitive to the species known to be present in the area (in line with best practice guidance from the Bat Conservation Trust and the Institute for Lighting Professionals, 2018) and, where relevant, continues to offer the same if not enhanced opportunities for foraging bats. It is recommended that an ecologist is consulted on the lighting and planting schemes for the development;
- **Over-Wintering Birds.** Recommendations in respect of over-wintering birds are set out within a separate report (Mott MacDonald Limited, 2020);
- **Nesting Birds.** Vegetation, including scrub and trees, should be retained where possible. Where vegetation loss or management is required, this should be undertaken outside of the nesting bird season (typically March – August inclusive) or following the negative result of a nesting bird check by a suitably qualified ecologist;
- **Reptiles.** Vegetation, including scrub and long-sward grassland (particularly along the railway embankment) should be retained, where possible. Where vegetation loss or management is required, this would need to be supervised by a suitably qualified ecologist and preceded by a toolbox talk to contractors and a hand search for reptiles; and
- **General Construction Safeguards (including badgers and other mammals).** A CEMP should be produced prior to site works commencing to determine the reasonable and practicable steps to be taken to avoid pollution of the surrounding environment and safeguard wildlife. This should include measures to safeguard species such as badger (if present), hedgehog and other mammals which may be present. Such measures are anticipated to include staged strimming of long-sward grassland, ruderal vegetation and scrub; identification and avoidance of mammal burrows; and placement of arisings.

5.3.3 Enhancement

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.

In addition, during 2019 the Government produced the Environment Bill Policy Statement which, when the legislation comes into effect, will legally require developers to ensure habitats for wildlife are enhanced, with a 10% increase in habitat for wildlife compared with the pre-development baseline. This means the Councils across England will have a duty to ensure that any plans or projects provide biodiversity net gains, as opposed to 'no net loss'. Although the legislation to support this does not currently apply to Wales, it is expected to become a legal requirement from Welsh Government and clients are advised to plan accordingly.

At a local level, policy NTE/3 of the Local Plan promotes incorporating ecological enhancements into new development.

It is understood that an area of Colwyn Bay Coastal Defence and Active Travel has been identified for ecological enhancement as part of a 'Back to Nature' area. Such an enhancement would fall well in line with the above national policy objectives as well as local policy (NTE/3).

Enhancements that would be appropriate for both Schemes include the following:

- **Rocky Shore Habitat Creation** - Creation and management of new rocky shore habitat and artificial rockpools*, with options including bioblocks, drill coring, vertipools and enhanced sea walls;
- **Wildflower Grassland** – Wildflower grassland could be created on verges and embankments, planted with appropriate species**;
- **Landscaping Planting** – New or existing landscape planting could be planted to incorporate native species or species of wildlife value (i.e. fruit bearing shrubs and trees);
- **Habitat management** – retained and newly created habitats could be subject to an ecologically sympathetic management regime; including rotational or low-intensity cutting to encourage fruits and flowers; re-use of arisings for habitat piles; and avoiding use of herbicides;
- **Bat and bird boxes** - bat boxes could be integrated into, or installed on, any buildings and trees to provide enhanced roosting and nesting opportunities within the site in appropriate locations; and
- **Insect boxes** - insect boxes could be installed in retained or enhanced landscaping areas to provide enhanced nesting opportunities for invertebrates.

* careful placement to consider water depth and risk of sediment smothering would be required

** this may require initial management to reduce the nutrient load in the soil

6 Conclusions

A Preliminary Ecological Appraisal was undertaken to assess the potential constraints posed by ecological designations, protected and notable habitats and protected and notable species relating to the proposed Schemes in Colwyn Bay (Colwyn Bay Waterfront Project – Phase 2b and Colwyn Bay Coastal Defence and Active Travel).

The key constraint is the proximity of the Liverpool Bay SPA which lies 45m north of the Scheme. The survey area supports the priority habitats subtidal sand and gravels, *Sabellaria alveolate* reefs (small patches only) and blue mussel beds on sediment (two small mussel beds are present in the survey area, both of which comprise dense and sparse areas). All other habitats are considered to be of low ecological value and do not pose a constraint to any Scheme proposals. In terms of protected and notable species, the survey area has the potential to support bats, badger, other mammals, birds (nesting, foraging and overwintering), reptiles, fish and marine invertebrates. Further surveys are recommended for two buildings identified as having low bat potential.

Further surveys are also recommended in respect of wintering birds (these were undertaken in December 2019 and January 2020 and are reported separately), whilst a Habitats Regulations Assessment (HRA) screening and marine licence is recommended to assess effects on the SPA. Recommendations are made in respect of other habitats and species in terms of mitigation and opportunities for enhancement, although it is anticipated that these would be reviewed and refined once the proposals are finalised.

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Appendices

A.	Phase 1 Habitat Map	15
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A. Phase 1 Habitat Map



Key to Symbols	
	Target note
	Phase boundaries
	Trees with low bat potential
	Honeycomb Worm Reef - sparse (approximate location)
	A3.1 - Broadleaved parkland/scattered trees
	A2.1 - Scrub - dense/continuous
	A3.1 - Broadleaved parkland/scattered trees
	B6 - Poor semi-improved grassland
	C1.1 - Bracken - continuous
	G1.6 - Standing water - brackish
	H1.1 - Intertidal - mud (approximate location)
	H1.1 - Intertidal - sand
	H1.2 - Intertidal - shingles/cobbles (approximate location)
	H1.3 - Intertidal - boulders/rocks (Groynes and man-made features)
	J1.2 - Cultivated/disturbed land - amenity grassland
	J3.5 - Artificial sea wall
	J3.6 - Buildings & infrastructure
	J5 - Hardstanding
	Mussel bed - dense (approximate location)
	Mussel bed - sparse (approximate location)

Notes

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4. Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
5. Phase 1c beach recharge extended into the Phase 2b area while transitioning back to existing beach levels and Phase 2a promenade improvements straddled the Phase1 and Phase2 boundary.

P5	23/07/20	SA	For information	NJS	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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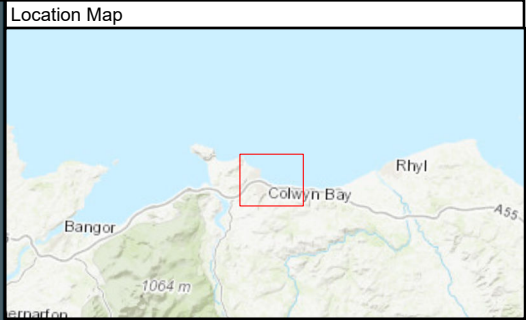
CONWY
CYNGOR BWRDEISTREF SIRIOL
COUNTY BOROUGH COUNCIL

Conwy County
Borough Council

Title					
Colwyn Bay Phase 1 Habitat Survey					
Designed	L Woolley	LW	Eng. Check	N J Spofforth	NJS
Drawn	S Anstice	SA	Coordination	L Woolley	LW
GIS Check	H Wheldon	HW	Approved	J Bates	JB
Scale at A3 1:10,000		Status INF	Rev P5	Security STD	
Drawing Number 410895-MMD-00-XX-DR-C-0004					



B. Designated Site Plan



Key to Symbols

- 2 km buffer
- RSPB Reserves
- Local Nature Reserve (LNR)
- Local Wildlife Sites (LWS)
- Important Bird Area (IBA)
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Ancient Woodland

Notes

1. Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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P2	23/07/20	SA	For information	LW	JB
P1	10/02/20	HW	For information	LW	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Title

**Colwyn Bay
Designated sites plan**

Designed	L Woolley	LW	Eng Check	L Woolley	LW
Drawn	H Wheldon	HW	Coordination	L Woolley	LW
GIS Check	G O'Donovan	GO	Approved	J Bates	JB
Scale at A3	1:25,000	Status	PRE	Rev	P1
				Security	STD

C. Habitat Photographs

Figure C.1: Mussel Beds



Source: Mott MacDonald Limited

Figure C.2: Buildings and Infrastructure



Source: Mott MacDonald Limited

Figure C.3: Hardstanding



Source: Mott MacDonald Limited

Figure C.4: Running Water (culverted)



Source: Mott MacDonald Limited

Figure C.5: Poor Semi-improved Grassland



Figure C.6: Dense Scrub



Source: Mott MacDonald Limited

Figure C.7: Intertidal Sand



Source: Mott MacDonald Limited

Source: Mott MacDonald Limited

Figure C.8: Boulders



Source: Mott MacDonald Limited

Figure C.9: Sea Wall



Source: Mott MacDonald Limited

Figure C.10: Stone Wall



Source: Mott MacDonald Limited

Figure C.11: Amenity Grassland



Source: Mott MacDonald Limited

Figure C.12: Scattered Trees



Source: Mott MacDonald Limited

Figure C.13: Intertidal Mud Habitat



Source: Mott MacDonald Limited

Figure C.14: Algal Turf, Fucoids, Intertidal mud and sand habitats



Source: Mott MacDonald Limited

Figure C.15: *Sabellaria alveolate* reefs



Figure C.16: Brackish Water



