

Kinmel Bay Environmental Statement Appendices

Volume 2: Appendices and Technical Reports (Part 1: Appendices A to D)

Final

November 2022

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LD&A DESIGN

ameyconsulting



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Revision history

Revision Ref / Date	Amendments	Issued to
15/11/2022	Draft Report	Internal Review
16/11/2022	Final Report	Planning – Pre-Application Consultation (PAC)

Contract

This report describes work commissioned by Amey Consulting, on behalf of Conwy County Borough Council. JBA Consulting carried out this work.

Prepared by Lydia Price MSc BSc
Assistant Analyst

Reviewed by Dorian Latham BA PhD CEnv FCIEEM

Purpose

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EIA Quality Mark

This Environmental Statement, and the Environmental Impact Assessment (EIA) carried out to identify the significant environmental effects of the proposed development, was undertaken in line with the EIA Quality Mark Commitments.

The EIA Quality Mark is a voluntary scheme, operated by IEMA, through which EIA activity is independently reviewed, on an annual basis, to ensure it delivers excellence in the following areas:

- *EIA Management*
- *EIA Team Capabilities*
- *EIA Regulatory Compliance*
- *EIA Context & Influence*
- *EIA Content*
- *EIA Presentation*
- *Improving EIA practice*



To find out more about the EIA Quality Mark please visit: <http://www.iema.net/eia-quality-mark/>

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A EIA Screening and Scoping Opinions

A.1 CCBC EIA Screening Opinion

Claire Wyn Jones
CCBC
ERF
Mochdre Offices
Conwy Rd
Mochdre

Gofynnwch am / Please ask for: **Ceri Thomas**

 **01492575391**



 **ceri.thomas@conwy.gov.uk**

Ein Cyf / Our Ref: **DC/ENQ/30107**

Eich Cyf / Your Ref:

Dyddiad / Date: **19/03/2021**

Site / Location: Llanddulas to Kinmel Bay
Conwy

Proposal: Llanddulas to Kinmel Bay
Coastal Improvements
Screening Opinion Request

Dear Claire Wyn Jones

**The Town and Country Planning (Environmental Impact Assessment)(Wales)
Regulations 2017
Regulation 6 – Request for Screening Opinion**

I refer to your email dated 18th February 2021 and the following documents:

- Llanddulas to Kinmel Bay Coastal Improvements EIA Screening Note
- Aerial images annotated Hard Option 1_3, 2_3, and 3_3
- Your email dated 10th March 2021 identifying Option 4 – Hard Option
- Email dated 15th March 2021 from Mott MacDonald identifying potential compounds locations.

The local planning authority has considered the proposal and concludes that it constitutes Environmental Impact Assessment (EIA) development, for the reasons specified in the attached Screening Opinion.

Regulation 6(8) of the above Regulations states that where an authority adopts an opinion to the effect that the development is EIA development, the person who requested the opinion may request the Welsh Ministers to make a screening direction.

Regulation 14 provides that a person who is minded to make an EIA application may request the local planning authority for a Scoping Opinion to determine the scope and level of detail of the information to be provided in the environmental statement. I consider that it would be prudent to request a Scoping Opinion prior to the submission of the environmental statement and planning application, and would be pleased to enter into discussions on the matter.

Yn ddiffuant / Yours sincerely



ppPaula Jones

Rheolwr Rheoli Datblygu ac Adeiladu / Development and Building Control Manager

**THE TOWN AND COUNTRY PLANNING
(ENVIRONMENTAL IMPACT ASSESSMENT)
(WALES) REGULATIONS 2017**

**DETERMINATION AS TO WHETHER OR NOT A DEVELOPMENT PROPOSAL IS
SUBJECT TO ENVIRONMENTAL IMPACT ASSESSMENT - SCREENING OPINION**

SECTION A

Application reference: ENQ/30107

Date of receipt of application: 18th February 2021 (further information provided on 10th March 2021 and 15th March 2021)

Address of site: Kinmel Bay to Llanddulas coastline

Applicant Name: Claire Wyn Jones

Address: ERF Department,
Conwy County Borough Council

Proposed development Coastal defence works

The applicable thresholds/criteria from column 2 of Schedule 2 of the Regulations for the type of development proposed.

Paragraph 10(m) - Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dykes, moles, jetties and other sea defence works, excluding the maintenance and reconstruction of such works; - All development

Is the proposal in a Sensitive Area as defined in Regulation 2(1) Yes (part)



Rydym yn croesawu gohebiaeth yn Gymraeg / We welcome correspondence in Welsh.
Byddwn yn ymateb i unrhyw ohebiaeth yn Gymraeg ac ni fydd hyn yn arwain at unrhyw oedi /
We will respond to any correspondence in Welsh which will not lead to a delay.

Prif Switsfwrdd / Main Switchboard: 01492 574000
www.conwy.gov.uk/cynllunio www.conwy.gov.uk/planning
BT Cyfnewid Testun / BT Text Relay Service 18001 01492 574000



SECTION B

Consideration has been given by the Local Planning Authority to the Selection Criteria in Schedule 3 of the Regulations, the general guidance contained in the EIA Circular and, as applicable, the details contained in any request for a screening opinion.

The Local Planning Authority hereby determines that:

The proposed development is not an Environmental Impact Assessment application within the Regulations and therefore you **are** required to submit copies of an Environmental Statement to the Local Planning Authority.

SECTION C

The Local Planning Authority's reasons why it has requested an Environmental Statement in this case are:-

- i) The area of land directly affected by the development is likely to exceed the threshold of 1 hectare, above which Welsh Office circular 11/99 advises that environmental assessment is more likely to be required.
- ii) The development would involve engineering works which could potentially affect water quality, for example, through sediment disturbance and contamination. The local planning authority considers that environmental assessment is required to assess the significance of these risks, and their potential impacts on marine habitats and water quality.



Date of Determination: 19th March 2021

Paula Jones
Development Control Manager
On behalf of Conwy County Borough Council.

Copy of this determination is placed on the Part 1 Register.

A.2 NRW Screening and Scoping Opinion



**Cyfoeth
Naturiol
Cymru
Natural
Resources
Wales**

Ein cyf/Our ref: SC2108
Eich cyf/Your ref:2021s1403 Scoping
Report_Issued

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10 February 2022

Dear Dorian Latham,

SCREENING AND SCOPING OPINION UNDER THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2007 (as amended)

Llanddulais to Kinmel Bay Coastal Defence Improvements Project.

I am writing further to your request for a screening and scoping opinion, dated 29 November 2021, made in accordance with The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) ("The Regulations").

The purpose of the Environmental Impact Assessment (EIA) screening procedure is to determine whether the proposed works require an Environmental Impact Assessment and submission of an Environmental Statement (ES). The purpose of the scoping procedure is to determine what information should be provided in the ES.

In reaching our Screening Opinion we have considered the proposed works against Schedule A1 and A2 of the above regulations. We have also had regard to the information provided in the "2021s1403 Scoping Report_Issued" dated November 2021 and considered the requirements of Schedule 3 of The Regulations. We have also consulted with the bodies that we consider have an interest in the project by reason of their environmental responsibilities, or local or regional competences, as required by the above regulations, and had regard to their comments.

Screening Opinion

It is our opinion that the works fall within the categories of project listed within Schedule A2, paragraph 69 of the above regulations, and therefore must be considered in terms of its size, nature and location having regard to the relevant criteria listed in Schedule 1 of the above regulations.

“69. Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dykes, moles, jetties and other sea defence works, excluding the maintenance and reconstruction of such works”

We have carefully considered the views of the consultation bodies alongside the criteria as set out in Schedule 1 of The Regulations , and have determined, based on the information provided; that the project has the potential to have a significant effect on the environment and therefore a statutory Environmental Impact Assessment is required.

We have come to this conclusion due to the scale and nature of the development and the expected impacts which include but are not limited to the potential alteration to coastal processes and impacts on protected species in the area. In addition, the proposed works are within close proximity to the following protected sites:

- Liverpool Bay SPA
- Traeth Pensarn SSSI.

Scoping Opinion

This letter sets out the additional information that we consider necessary to be included and/or assessed in the ES for this Project.

Please note our scoping opinion is based on the information available to us at this time. The information provided is not a definitive list of the ES / EIA requirements and further information may be required following an application for this project, to ensure a full assessment is carried out.

This Screening and Scoping Opinion will be provided to all those bodies that were consulted and will be publicised on our website and on our Public Register.

The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)

Scoping Opinion (SC2108)

Summary of the proposal

Location

The project area comprises the coastal frontage between the village of Llanddulas and the seaside resort of Kinmel Bay, on the North Wales coast. The proposed area is approximately 12km in length and includes the town of Kinmel Bay and surrounding areas,

a section of the river Clwyd (up to SJ 03317 76180) and also the line of sea defences stretching to Raynes Jetty in Llanddulas (SH 88703 78604).

Consultation Responses Received

In considering the scoping report, the NRW PS consulted with various consultation bodies. The consultation bodies that responded are listed below:

- Natural Resources Wales (NRW)
- Maritime and Coastguard Agency (MCA)
- Royal Yachting Association (RYA)
- Trinity House Lighthouse Service (THLS)
- Conwy County Borough Council
- Cadw
- Clwyd Powys Archaeological Trust (CPAT)
- Royal Commission of Ancient and Historic Monuments Wales (RCAHMW)
- North Western and North Wales Sea Fisheries Committee (NWIFCA)
- NERL Safeguarding

0. General comments

0.1. Marine and coastal guidance produced by NRW that may provide useful information to help with your project is available here:

<https://naturalresources.wales/guidance-and-advice/business-sectors/marine/?lang=en>

0.2. The ES submitted should demonstrate consideration of the points raised in this scoping opinion. It is recommended that a table is provided in the ES summarising the scoping opinion comments and how they are addressed in the ES.

0.3. The EIA must be undertaken by a competent person and the ES must include a competent expert statement.

0.4. Where possible, other environmental assessments should be coordinated with the EIA process. However, it is important to note that the Habitats Regulations Assessment (HRA) and Water Framework Directive assessment (WFD), and any other assessment, are separate processes to the EIA.

0.5. Throughout the ES robust evidence should be presented so that the potential environmental impacts can be properly understood and evaluated; and appropriate measures identified to avoid, reduce or where necessary compensate for those impacts.

0.6. The ES must include all aspects described in Schedule 3 of The Regulations and summarised below:

- A Non-Technical Summary (NTS);
- A chart or map identifying where the activity will be carried out;

- A description of the likely significant effects of the project, whether direct, indirect, secondary, cumulative, transboundary, short-term, medium-term, long-term, permanent, temporary, positive and negative;
- A description of the methods used to make the assessment of the significant effects and difficulties encountered in compiling the information and uncertainties involved;
- A description of measures to avoid, prevent, reduce or offset identified significant adverse effects and proposed monitoring arrangements; &
- A description of the expected significant adverse effects of the project on the environment resulting from the vulnerability of the project to risks of major accidents or disasters.

0.7. The ES must consider any potential transboundary impacts where appropriate.

0.8. Early engagement with relevant stakeholders is encouraged. You are able to obtain further advice from NRW TE through the NRW Discretionary Advice Service, please see here: <https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/advice-for-developers/our-service-to-developers/>

0.9. The UK left the EU on 31 January 2020; however, all legal obligations relating to compliance with environmental licences/permits and legislation will continue to apply. NRW on behalf of Welsh Ministers will continue to issue licenses in line with our current practice.

0.10. You must ensure that reference is made to and consideration of compliance with the UK Marine Policy Statement and the now published Welsh National Marine Plan and its associated policies within the submitted ES, alongside any further regional planning documentation. The published Welsh National Marine Plan can be found here: <https://gov.wales/welsh-national-marine-plan-document>. Implementation guidance for the Welsh National Marine Plan can also be found here: <https://gov.wales/welsh-national-marine-plan-implementation-guidance>.

1. Introduction

1.1. NRW TE note that the study area as per para 1.2 includes a section of the river Clwyd (up to SJ 03317 76180) which is at the confluence of the river Clwyd/Elwy.

2. Description of the Proposed Scheme

2.1. Section 2.1 sets the objectives; however, it does not include anything regarding the following:

- o Ensuring biodiversity is maintained and enhanced (Environment Act and Wellbeing of Future Generations Act)
- o No mention of the SSSI and its features etc.

2.2. NRW TE encourage that an objective is added to the EIA which covers the above points.

3. Preferred Option

3.1. NRW TE recommend that it is important to note that although ongoing maintenance has been minimised through the scheme selection, some ongoing maintenance will be required, i.e., beach level replenishment. NRW TE recommend the periodic beach replenishment is considered as part of the scheme management within the application.

3.2. We recommend the terminology for the preferred approach 'Hard Defences' is particularly misleading and should therefore be reconsidered as the preferred scheme has elements of 'Hard' and 'Soft' defences.

3.3. With regard to flood risk, NRW TE advise that CMU 3-2B (referred to in para 3.1.3) has a history of not only flooding from the sea but also fluvial flooding from the main river (Dulas) and surface water flooding. Therefore, it must be ensured that the scheme will not increase flood risk associated with these other sources of flood risk, nor should the outfall of the Dulas onto the beach lead to an increase in maintenance requirements.

3.4. NRW TE advise that a mixed approach (option 3) should be advocated for cells CMU 3.3 immediately west of the SSSI and 3.5c.

3.5. Sub categories of 2.2.1 and of 3.1 acknowledge that a 'mixed' hard and soft engineering approach provides a better longer term solution. However, at options appraisal, mixed engineering is rejected due to cost implications leaving option 2 (i.e. hard engineering only) as the preferred strategy. NRW PS notes that the EIA scoping report contradicts the use of option 2 as preferred strategy by suggesting (regular) beach feeding is required in cells CMU 3.3 (shingle) and CMU 3 -5c (sand). Beach replenishment is considered soft engineering and in line with the mixed approach (option 3). There may need to be some re-wording of the preferred option, as there are both hard and soft approaches described. It is important to note that NRW TE fully welcome and support a mixed approach with shingle feeding for CMU 3-3 and 3-5c.

4. Baseline Environment

4.1. Coastal Processes

4.1.1. NRW TE are concerned that there is no mention of marine or coastal physical processes being scoped into the EIA. NRW PS expects to see a standalone chapter on marine/coastal physical processes. Although physical processes are not a receptor as such, it is a fundamental pathway which will need assessing for potential impacts throughout construction, operation and maintenance. NRW guidance can be found on our website, the following links may be provide useful information:

- o [Natural Resources Wales / Marine physical processes and Environmental Impact Assessment \(EIA\)](#)
- o Evidence Report No: 243 [Guidance on Best Practice for Marine and Coastal Physical Processes Baseline Survey and Monitoring Requirements to inform EIA of Major Development Projects.](#)
- o Evidence Report No: 208 [Advice to Inform Development of Guidance on Marine, Coastal and Estuarine Physical Processes Numerical Modelling Assessments.](#)

4.1.2. NRW TE advise that that a Zone of Influence (Zoi) is identified for the ES. The Zoi identified should be based on the area in which the scheme effects can be felt by the receptor/pathway under assessment. The Zoi is typically established based on the outputs of initial assessments (i.e., modelled output results) to identify any impact pathways on sensitive features. Further information on how the Zoi has been defined must be provided within the ES. Advice on how the Zoi should be established should be sought from NRW Coastal Processes specialist.

4.1.3. Confirmation on the sediment source, mineralogy, quantity and size fraction in relation to the receiving environment would be expected as part of the ES.

4.1.4. NRW TE advise all sediment that is not used within the construction of defences and not contaminated is kept within the active marine zone.

4.1.5. NRW recommend that advice is sought on the climate change scenarios to be used within the assessment.

4.1.6. NRW PS expects that the Shoreline Management Plan is used and referenced within the ES.

4.1.7. NRW advise the schemes 'hard permanent' footprint is as small as possible to ensure minimum impact to the marine environment.

4.1.8. NRW advise direct (footprint) and indirect (scour, erosion, accretion, smothering, plume) impacts, because of the scheme, are assessed within the ES.

4.1.9. NRW TE noted that extensive monitoring is discussed within the scoping report. It is recommended that this monitoring is expanded upon within the ES to discuss what evidence there is from previous monitoring around the coastal processes and beach levels and what is proposed post construction.

4.2. **Biodiversity**

4.2.1. NRW TE note the Menai Strait and Conwy Bay SAC (circa 10km from the development) and the Dee Estuary SAC (circa 9km from the development) have not been scoped in. The outputs of the coastal processes modelling should

determine whether there are any potential impacts on these protected sites. However, in the absence of this information at present, we advise both the Menai Strait and Conwy Bay SAC, and the Dee Estuary SAC are scoped in until the ZOI is determined.

4.2.2. The potential effects of marine Invasive Non-Native Species (INNS) must be included and scoped into this section for construction and operational activities. Construction-related vessels, vehicles and equipment movements have the potential to introduce/spread marine INNS to and from the site. Operational effects related to the introduction of artificial substratum as part of the proposal may increase the likelihood of colonisation of INNS in the future (and act as a stepping-stone effect) further adding to the potential introduction and spread. We acknowledge the potential effects of marine INNS can be mitigated through robust biosecurity management and welcome the intention to undertake a biosecurity risk assessment as part of the proposal.

4.2.3. Whilst the development does not fall within an SAC, there are a number of sensitive Section 7 habitats present that are listed under the Environment Wales (Act) 2016 as habitats of principal importance for the purpose of maintaining and enhancing biodiversity in Wales. Blue mussel beds are present along the coast adjacent to Llanddulas, with smaller beds along the coast near Pensarn and Kinnel Bay. *Sabellaria alveolata* reef is also present along the coast adjacent to Llanddulas. We advise these habitats are screened into the EIA and that potential impacts on these habitats are identified and mitigated.

4.3. Marine Mammals

4.3.1. NRW TE advise that impact pathways from the project to marine mammals are assessed in the Environmental Statement (ES) and Habitats Regulations Assessment (HRA), specifically including from noise and vibration generated during construction. Also, if material is transported to site by sea, we advise that noise/vibration and collision impact pathways are assessed for this activity in relation to marine mammals.

4.3.2. NRW advise that the ES includes a chapter on marine mammals in which we recommend the following species are considered:

- o Harbour porpoise
- o Bottlenose dolphin
- o Grey seal
- o Minke whale
- o Common dolphin
- o Risso's dolphin

4.3.3. Where any impact pathways to marine mammals from the project exist, we advise sites to be included within the HRA are based on the species specific Marine Mammal Management Unit (MMMU) that the project is within.

4.3.4. For each Annex II marine mammal species, the SACs in Wales within the relevant MMMU for the project are as follows:

Harbour porpoise

Management Unit: Celtic & Irish Sea

SACs in Welsh waters with harbour porpoise as a feature within the Management Unit:

- o Gogledd Môn Forol / North Anglesey Marine
- o Gorllewin Cymru Forol / West Wales Marine
- o Dynesfeydd Môr Hafren / Bristol Channel Approaches

Bottlenose dolphin

Management Unit: Irish Sea

Welsh SACs with bottlenose dolphin as a feature within the Management Unit:

- o Pen Llŷn a'r Sarnau / Llyn Peninsula and the Sarnau
- o Cardigan Bay / Bae Ceredigion

Grey Seal

Management Unit: OSPAR Region III

Welsh SACs with grey seal as a feature within the Management Unit:

- o Pen Llŷn a'r Sarnau / Llyn Peninsula and the Sarnau
- o Cardigan Bay / Bae Ceredigion
- o Pembrokeshire Marine / Sir Benfro Forol

4.4. Marine Fish

4.4.1. NRW TE advise that impact pathways from the project to fish migrating into, and out of, the River Clwyd are assessed in the ES specifically including from noise and vibration generated during construction. NRW advise that the ES includes a chapter on fish impacts in which the following species are scoped in to the ES:

- o Atlantic salmon
- o Sea trout
- o River lamprey
- o Sea lamprey
- o European eel

4.5. Ornithology

4.5.1. NRW TE advise that both wintering and breeding birds during both construction and operational phases of the scheme are scoped into the EIA.

4.5.2. Ringed Plover are mentioned on page 9 of the EIA scoping report in relation to Traeth Pensarn SSSI. Ringed Plover are listed as a priority species on section 7 of the Environment (Wales) Act (2016). We advise that Ringed Plover should be scoped into the EIA.

4.5.3. NRW TE are in agreement that the Liverpool Bay SPA should not be scoped into the EIA. NRW TE also confirm that there would be no overlap with overwintering bird features of the Liverpool Bay SPA if works are undertaken outside of the overwintering period (September to March inclusive).

4.5.4. NRW TE advise that it would be useful to include spring and summer observations of cormorant along the stretch, to determine where this SPA assemblage feature regularly occurs.

4.6. Marine Water Quality

4.6.1. NRW TE agrees with the consideration of potential water quality effects highlighted in section 4.3 of the scoping report; and these must be considered within the ES. NRW TE advise that the Guidance for Pollution Prevention documents, particularly GPP5 (Works and maintenance in or near water) should be referred to for guidance.

4.6.2. NRW TE advise that Chemical (and bacterial) analysis of sediments may be required if the works are to disturb sediments of an appropriate size. Results of chemical analysis should be compared to CEFAS action levels for sediment. If sediments are found to be above action level 1 management actions must be proposed. Sediments above action level 2 must be disposed to land at a licenced waste disposal site. If Guidance on CEFAS action levels can be found here: [Marine Licensing: sediment analysis and sample plans - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/marine-licensing-sediment-analysis-and-sample-plans)

4.7. Water Framework Directive

4.7.1. We welcome the acknowledgement within the Scoping Report that a WFD Assessment will be required, given the potential interactions of the scheme and WFD water bodies.

4.7.2. NRW TE advise that all WFD water bodies that fall within the zone of influence of the project, when defined, or for which there are biotic/migratory pathways, must be included in the WFD assessment to understand the potential interactions of the project and WFD.

4.7.3. NRW TE advise that within the WFD assessment, both direct and indirect effects will need to be assessed, for each stage of the project, including the construction phase and the operational lifetime of the project. Any cumulative and in-combination effects will also need to be assessed.

4.7.4. In relation to Section 4.3.2 of the document, and the proceeding sections of relevance, we advise that the WFD classifications are subject to a 6-yearly review and that the Cycle 3 (2021) classifications will be released shortly. We therefore advise that the most up-to-date information is used to inform the WFD Assessment.

4.7.5. We advise that the WFD Assessment can be provided as a chapter of the ES, or as a stand-alone document. It should largely draw upon technical assessments carried out as part of the wider ES, but assessments should be contextualised in terms of potential project effects on the status and objectives of WFD water bodies.

4.8. Coastal Ecology

4.8.1. For section 4.2.2 NRW can provide previous biotope information survey data if required.

4.8.2. NRW question the statement in section 4.2.2 which states that ‘there is no mandatory requirement for biodiversity net gain (BNG) within WG statutes’ – NRW TE question this statement and draw attention that no reference is made to ensuring biodiversity is maintained and enhanced as required by the Environment Act and Wellbeing of Future Generations Act.

5. Environmental Enhancements

5.1. We advise Section 5 Environmental enhancements is expanded upon to include biodiversity enhancements to the coastal defence. These could include vertipools, tiles or other similar ecostructures to enhance and promote biodiversity where appropriate (and where they would add biodiversity value) in line with the Environment Wales (Act) 2016 and our SMNR principles. NRW would be happy to engage with the applicant in discussions on what might be the most appropriate approach.

5.2. NRW TE consider that this section doesn’t actually highlight any environmental enhancements, although it is feasible to state that the shingle and sand beach feeding is good for both biodiversity and recreation.

6. Format and ES Requirements

6.1. As identified within the Scoping Report (section 6.2 ES Requirements), the ES must include a Non-Technical Summary (NTS).

6.2. We agree that a Construction Environmental Management Plan (CEMP) will need to be developed and agreed as part of the scheme, including, but not limited to, rock storage and sediment management.

6.3. Both RCAHMW and CPAT advise that the ES contain a chapter on Archaeology. This should contain an archaeological assessment that addresses potential impacts arising from: beach/shoreline excavation for insertion of new revetments and drainage, the movement of heavy plant machinery across the beach, works compounds and material dumping areas on the beach, access routes onto the beach.

- 6.4. The information contained within the archaeological assessment should include:
- Baseline information on currently recorded and any potentially new heritage assets within the study area gathered from the National Monuments Record, RCAHMW and the Historic Environment Record at Clwyd-Powys Archaeological Trust along with documentary and cartographic sources in the archives at the National Library of Wales and Conwy County Archives where these are available. In addition, the NRW LIDAR data should be examined for any visible surface remains.
 - A systematic walkover survey of the beach and shore area where any ground disturbance will take place at each works site to identify any previously unrecorded archaeology. Features should be mapped using survey grade GPS and transcribed to scale drawings, described in detail and any appropriate mitigation suggested.
- 6.5. Sites or remains identified during the walkover survey should be recorded in such a way that the impact of the scheme on them can be assessed post-completion. This also fits into policy SOC_05 of the Welsh National Marine plan in terms of enhancing historic assets, through increasing our understanding of them.
- 6.6. CPAT have advised that Archaeological contractors must submit a WSI (written scheme of investigation) for approval before the assessment commences and the findings should be fully reported and archived in accordance with CIFA standards and guidance. The reports and digital archive will be sent to the HER, CPAT and NMR, RCAHMW. CPAT have requested that they are consulted on this report and given the opportunity to provide comments. The purpose of this report is to inform both CPAT and RCAHMW about the archaeological potential of the beach and frontage area where there may be previously unrecorded archaeology related to former prehistoric land surfaces buried by marine transgression and archaeology of all later periods related to activity on the shoreline including any ship/boat or aviation wrecks that may be present. Additional assessment may be required as a result of this report which may include geophysical survey and/or drone photogrammetry of the present beach conditions and any surface remains.
- 6.7. RCAHMW have advised that consideration will need to be given for the potential existence of maritime archaeological remains that are either currently unknown, or currently unlocated. The former of these might be in the form of prehistoric land surfaces, peat deposits, etc. that are well attested along the North Wales coast. The unlocated material is comprised of the shipwreck losses known to have taken place in the area, but which do not have a confirmed, exact location. Both of these sets of archaeological remains were highlighted in the RCAHMW consultation response for the initial ground investigation application for this scheme (RML2148).
- 6.8. In terms of shipwreck material, RCAHMW emphasise the point that the 'dots on the map' within the National Monuments Record do not, in many/most cases, represent exact shipwreck locations, and that the true shipwreck locations could be anywhere on the beach.

- 6.9. The buffer around the scheme footprint, forming the 'study area' should be quite large in a seaward direction, and to either side of the scheme on the foreshore. RCAHMW advise that a radius of 5km is used to serve to capture the widest possible dataset, from which each entry will have to be individually assessed for a likelihood as to whether or not it may have ended up in a place where it might subsequently be impacted. E.g. <https://coflein.gov.uk/en/site/515527/> which is an aircraft crash site, so given automatic statutory protection, but which is just listed as 'crashed into the sea off Towyn', and so in reality could be anywhere in the general vicinity and therefore needs to be considered.
- 6.10. RCAHMW advise that mitigation should include a clear statement on watching briefs for excavation work on the foreshore, accompanied with a clear set of protocols for archaeological discoveries. The recent [Crown Estate guidance for Offshore Wind](#) is excellent as a guide for contractors and although written for windfarms is entirely applicable to inter-tidal areas.
- 6.11. The MCA note that based on the information provided all proposed works are close inshore extending from the promenade onto the beach and would therefore expect the impact on shipping and navigation to be relatively low on this occasion.
- 6.12. The MCA would expect any works in the marine environment to be subject to the appropriate consents under the Marine and Coastal Access Act (2009) before carrying out any marine licensable works. Suitably worded conditions and advisories would likely reduce the risks to ALARP on this occasion.
- 6.13. The MCA note that the Scoping report does not detail the extent of the marine works below the mean high water level, nor the methodology or make an initial assessment of the risk to mariner users. The ES should include details of the proposed outfall arrangements; how far off the beach they would extend and any likely impact on marine users. However, on the understanding this is addressed through the marine licensing regime, with suitable consultation with local users, the MCA would have no significant concerns on this occasion.

Please note our scoping opinion is based on the information available to us at this time. The information provided is not a definitive list of the ES / EIA requirements and further information may be required following an application for this project, to ensure a full assessment is carried out.

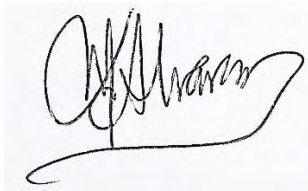
Please do not hesitate to contact me should you require any clarification or would like to discuss any aspect of this scoping opinion.

Yours sincerely



Will Cooke
Marine Licensing Team
Natural Resources Wales

Approved by:



Marine Licensing Lead Specialist

Natural Resources Wales

Cc: All Consultation Bodies

Conwy County Borough Council,
PO Box 1,
Conwy,
LL30 9GN

ebost/email:
northplanning@cyfoethnaturiolcymru.gov.uk

12/01/2022

Dear Sir/Madam,

**BWRIAD / PROPOSAL: ENVIRONMENTAL IMPACT ASSESSMENT (EIA) SCOPING
ADVICE**

LLEOLIAD / LOCATION: LLANDDULAS TO KINMEL BAY COASTAL DEFENCE

Thank you for consulting Cyfoeth Naturiol Cymru / Natural Resources Wales about the above, which we received on 7/12/2021

We are commenting because we consider that the proposals are likely to give rise to significant effects.

We advise that the likely significant effects are assessed by the applicant and we consider that they should be 'scoped in' to any future **Environmental Statement (ES)**. We have reviewed the EIA Scoping report (JBA Consulting, dated November 2021), referred to below as the 'Scoping report'.

Protected Sites

Table 2.1 states that the development is located within/adjacent the following protected sites:

- Traeth Pensarn Site of Special Scientific Interest (SSSI)
- Liverpool Bay Special Protection Area (SPA)

As explained below, we also consider that there are possible pathways for other protected sites. The ES will need to identify impact pathways for protected sites, clearly assess the possible levels of impact and, where impacts are likely, should provide full details of appropriate mitigation measures to address those impacts. In relation to SPAs or Special Areas of Conservation (SACs) we would also expect a 'Shadow' Habitats Regulations Assessment to be prepared, based on the same supporting information.

Traeth Pensarn SSSI

Traeth Pensarn SSSI is designated for its coastal vegetated shingle beach. We note and welcome the commitment to beach feeding, particularly in relation to cell CMU 3.3. We would advise that a mixed approach (option 3) should be advocated for cells CMU 3.3 immediately west of the SSSI and 3.5c.

Ornithology

We advise that both wintering and breeding birds during both construction and operational phases of the scheme are scoped into the EIA.

We agree that Liverpool Bay SPA should be scoped into the EIA. We note there would be no overlap with overwintering bird features of the Liverpool Bay SPA, if works were undertaken outside of the overwintering period (September to March inclusive).

In relation to section 4.2.2 of the Scoping report, it would be useful to include spring and summer observations of cormorant along the stretch, to determine where this SPA assemblage feature regularly occurs.

Marine mammals

We advise that impact pathways to marine mammals are assessed in the ES and Shadow HRA, including from noise and vibration generated during construction. Also, if material is transported to site by sea, we advise that noise/vibration and collision impact pathways are assessed for this activity.

We advise the following species are scoped in to the ES:

- Harbour porpoise
- Bottlenose dolphin
- Grey seal
- Minke whale
- Common dolphin
- **Rissos's dolphin**

Where any impact pathways to marine mammals from the project exist, we advise sites to be included within the HRA are based on the species specific Marine Mammal Management Unit (MMMU) that the project is within.

For each Annex II marine mammal species, the SACs in Wales within the relevant MMMU for the project are as follows:

Harbour porpoise:

Management Unit: Celtic & Irish Sea

SACs in Welsh waters with harbour porpoise as a feature within the Management Unit:

- Gogledd Môn Forol / North Anglesey Marine
- Gorllewin Cymru Forol / West Wales Marine
- Dynesfeydd Môr Hafren / Bristol Channel Approaches

Bottlenose dolphin:

Management Unit: Irish Sea

Welsh SACs with bottlenose dolphin as a feature within the Management Unit:

- **Pen Llŷn a'r Sarnau / Llyn Peninsula and the Sarnau**
- Cardigan Bay / Bae Ceredigion

Grey Seal:

Management Unit: OSPAR Region III

Welsh SACs with grey seal as a feature within the Management Unit:

- **Pen Llŷn a'r Sarnau / Llyn Peninsula and the Sarnau**
- Cardigan Bay / Bae Ceredigion
- Pembrokeshire Marine / Sir Benfro Forol

Other SACs

We note that the Menai Strait and Conwy Bay SAC (circa 10km from the development) and the Dee Estuary SAC (circa 9km from the development) have not been scoped in. The outputs of the coastal processes modelling (see our comments below) should determine whether there are any potential impacts on these protected sites. However, in the absence of this information at present, we advise both the Menai Strait and Conwy Bay SAC, and the Dee Estuary SAC are scoped in until the Zone of Influence (Zol) is determined.

Coastal Processes

We note that there is no mention of marine or coastal physical processes being scoped into the EIA. Please note, we would expect to see a standalone chapter on coastal processes. Although coastal processes it is not a receptor as such, it is a fundamental pathway which will need assessing for potential impacts throughout construction, operation, and maintenance. NRW guidance can be found on our website; [Natural Resources Wales / Marine physical processes and Environmental Impact Assessment \(EIA\)](#)

- Evidence Report No: 243 [Guidance on Best Practice for Marine and Coastal Physical Processes Baseline Survey and Monitoring Requirements to inform EIA of Major Development Projects.](#)
- Evidence Report No: 208 [Advice to Inform Development of Guidance on Marine, Coastal and Estuarine Physical Processes Numerical Modelling Assessments.](#)

We would advise that a Zone of Influence (Zol) is identified for the ES. The Zol identified should be based on the area in which the scheme effects can affect the receptor/pathway under assessment. Further information regarding how the Zol has been identified must be provided within the ES.

We note that sections 2.2.1 and of 3.1 of the Scoping report **acknowledge that a 'mixed' hard and soft engineering approach provides a better longer-term solution.** However, due to cost implications this approach is rejected with the solution being option 2 as the preferred strategy i.e. hard engineering only. However, the Scoping report then goes on to be state

that (regular) beach feeding is required in cells CMU 3.3 (shingle) and CMU 3.5c (sand), hence a mixed approach (option 3). We advise clarity in terms of wording when hard and soft approaches are described.

It is important to note that although ongoing maintenance has been minimised through the scheme selection, some ongoing maintenance will be required i.e. beach level replenishment. We recommend the periodic beach replenishment is considered as part of the scheme management within the application.

We agree that a Construction Environmental Management Plan (CEMP) will need to be developed and agreed as part of the scheme, including, but not limited to, rock storage and sediment management.

Confirmation on the sediment source, mineralogy, quantity, and size fraction in relation to the receiving environment would be expected as part of the ES. We advise all sediment is kept within the active marine zone, that is appropriate (i.e. not contaminated) and not used within the construction of defences.

We recommend that advice is sought on the climate change scenarios to be used within the assessment.

We advise the Shoreline Management Plan is used and referenced within the ES.

We advise the scheme's **'hard permanent' footprint is as small as possible to ensure** minimum impact to the marine environment.

Extensive monitoring is discussed within the scoping report. We recommend the monitoring is expanded upon within the ES to discuss what evidence there is from previous monitoring around the coastal processes and beach levels and what is proposed post construction.

We advise direct (footprint) and indirect (scour, erosion, accretion, smothering, plume) impacts, because of the scheme, are assessed within the ES.

Marine Benthic Ecology

In relation to section 4.2 (Biodiversity) of the Scoping report, we advise that a Zone of Influence (Zoi) is established for potential impacts on marine features based on the outputs of coastal process (see our comments above). The Zoi is typically established based on the outputs of initial assessments i.e. modelled output results, to identify any impact pathways on sensitive features.

The potential effects of marine Invasive Non-Native Species (INNS) must be included and scoped into this section for construction and operational activities. Construction-related vessels, vehicles and equipment movements have the potential to introduce/spread marine INNS to and from the site. Operational effects related to the introduction of artificial substratum as part of the proposal may increase the likelihood of colonisation of INNS in the future (and act as a stepping-stone effect) further adding to the potential introduction and

spread. We acknowledge the potential effects of marine INNS can be mitigated through robust biosecurity management and welcome the intention to undertake a biosecurity risk assessment as part of the proposal.

There a number of sensitive Section 7 habitats present that are protected under the Environment Wales (Act) 2016. Blue mussel beds are present along the coast adjacent to Llanddulas, with smaller beds along the coast near Pensarn and Kinmel Bay. *Sabellaria alveolate* reef is also present along the coast adjacent to Llanddulas. We advise these habitats are scoped into the EIA and that potential impacts on these habitats are identified and mitigated in the ES.

We advise Section 5 (Environmental enhancements) is expanded upon to include biodiversity enhancements to the coastal defence. These could include vertipools, tiles or other similar Ecostructures to enhance and promote biodiversity where appropriate (and where they would add biodiversity value) in line with the Environment Wales (Act) 2016 and our Sustainable Management of Natural Resources principles. We would be happy to engage with the applicant in discussions on what the most appropriate measure may be.

Fish

We advise that impact pathways from the project to fish migrating into, and out of, the River Clwyd are assessed in the Environmental Statement, specifically including from noise and vibration generated during construction. We advise the following species are scoped in to the ES:

- Atlantic salmon
- Sea trout
- River lamprey
- Sea lamprey
- European eel

We also understand that the consultants JBA undertook a report looking at removing a barrier to fish on the Nant y Fedw river near the coast. This barrier also causes gravel to back up which has to be cleared by NRW Operational Teams. We consider that any improvements that could be made to that structure to enable fish passage and gravel to move downstream should be included in the scope of the coastal defence options.

Water Quality

We agree with the consideration of potential water quality effects highlighted in section 4.3 of the Scoping report and advise that these must be considered within the ES. The applicant should take note of the Guidance for Pollution Prevention documents, particularly GPP5 (Works and maintenance in or near water) for guidance. We welcome the development of a CEMP as detailed in section 6.4.1 of the scoping report, however we note that it also states **that the CEMP “would not be prepared at the time of the ES and developed by the Contractor post approval”**. We advise that mitigation measures should be specified in sufficient detail at the time of the planning application.

Chemical (and bacterial) analysis of sediments may be required if the works are to disturb sediments of an appropriate size. Note that results of chemical analysis should be compared to CEFAS action levels. Further information can be found [here](#).

Water Framework Directive (WFD)

We welcome the **applicant's** confirmation that a WFD Assessment will be required, given the potential interactions of the scheme and WFD water bodies.

We advise that all WFD water bodies that fall within the zone of influence of the project, when defined, or for which there are biotic/migratory pathways, must be included in the WFD assessment to understand the potential interactions of the project and WFD.

We advise that both direct and indirect effects will need to be assessed, for each stage of the project, including the construction phase and the operational lifetime of the project. Any cumulative and in-combination effects will also need to be assessed.

In relation to Section 4.3.2 of the document, and the proceeding sections of relevance, we advise that the WFD classifications are subject to a 6-yearly review and that the Cycle 3 (2021) classifications will be released shortly. We therefore advise that the most up-to-date information is used to inform the WFD Assessment.

We advise that the WFD Assessment can be provided as a chapter of the ES, or as a stand-alone document. It should largely draw upon technical assessments carried out as part of the wider ES but assessments should be contextualised in terms of potential project effects on the status and objectives of WFD water bodies.

Land Contamination

We advise that land contamination should be scoped in to the EIA due to a historic landfill being present (Llandulas Beach Landfill). The CEMP would not adequately cover this.

Flood Risk

We note that the study area, as specified in section 1.2, includes a section of the river Clwyd (up to SJ 03317 76180) which is at the confluence of the river Clwyd/Elwy. We note that this study area is to inform the EIA only.

We would also advise that CMU 3-2b (section 3.1.3 of the Scoping reprot) has a history of not only flooding from the sea but also fluvial flooding from the main river (Dulas) and surface water flooding. Therefore, it must be ensured that the scheme will not increase flood risk associated with these other sources of flood risk. The outfall of the Dulas onto the beach should not lead to an increase in maintenance requirements.

Protected Species

We advise the site is subject to assessment to determine the likelihood of protected species and that targeted species surveys are undertaken for all species scoped in. These should comply with current best practice guidelines and in the event that the surveys deviate or there are good reasons for deviation that full justification for this is included within the ES.

Should protected species be found during the surveys, information must be provided identifying the species-specific impacts in the short, medium and long term together with any mitigation and compensation measures proposed to offset the impacts identified.

The ES will need to demonstrate that the development would not be likely to be detrimental to the maintenance of the population of the protected species concerned at a favourable conservation status in its natural range. We also advise in relation to European Protected Species that, in addition to consideration of significance, the assessments also considers:

- current conservation status of all local populations; and
- favourable conservation status of all local populations

The submitted information should also detail biosecurity measures, which should include measures to control, remove or for the long-term management of invasive species both during construction and operation.

Other matters

Our advice is made without prejudice to comments we may subsequently wish to make when consulted on any planning application, the submission of more detailed information or an Environmental Statement.

Our comments above only relate specifically to matters included on our checklist, *Development Planning Advisory Service: Consultation Topics* (September 2018), which is published on our [website](#). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests.

If you have any queries on the above, please do not hesitate to contact us.

Yours faithfully,

Bryn Griffiths

Uwch Gynghorydd - Cynllunio Datblygu / Senior Advisor - Development Planning
Cyfoeth Naturiol Cymru / Natural Resources Wales

A.3 Cadw Consultation Response

Planning
Conwy County Borough Council

Sent by email

Eich cyfeirnod
Your reference

ENQ30815

Ein cyfeirnod
Our reference

Dyddiad
Date

8 December 2021

Llinell uniongyrchol
Direct line

0300 025 6007

Ebost
Email:

Cadwplanning@gov.wales

Dear Sir / Madam,

Pre App Enquiry Consultation - ENQ 30815 - EIA Scoping Opinion - Llanddulas to Kinmel Bay Coastal Defence

Thank you for your email of 7 December 2021 asking for Cadw's view on the above.

Cadw, as the Welsh Government's historic environment service, has assessed the characteristics of this proposed development and its location within the historic environment. In particular, the likely impact on designated or registered historic assets of national importance. In assessing if the likely impact of the development is significant Cadw has considered the extent to which the proposals affect those nationally important historic assets that form the historic environment, including scheduled ancient monuments, listed buildings, registered historic parks, gardens and landscapes.

These views are provided without prejudice to the Welsh Government's consideration of the matter, should it come before it formally for determination.

Advice

This advice is given in response to scoping opinion as to the contents of an Environmental Impact Assessment (EIA) that will be submitted in support of an application for Llanddulas to Kinmel Bay Coastal Improvements

The request for a scoping opinion is accompanied by an Environmental Impact Assessment Scoping Report produced by JBA Consulting, which includes section 8 on Cultural Heritage. This states that:

'The ES will be supported by stand-alone Desk Based Assessment (DBA) cover the Historic / Cultural Resource. The DBA will determine the requirements for any further, more detailed assessment including geo-physics. This will be provided as a Technical Appendix to the ES.'

However, it fails to provide any details as to the methodologies that will be used to produce the DBA.

We recommend that the initial work should be carried out in accordance with the "Standards and Guidance for Desk-Based Historic Environment Assessment" produced by the Chartered Institute for Archaeologists and this should include consulting documentary, cartographic, aerial photographic and Lidar information as well as the detailed information held in the Historic Environment Record. A walkover survey should also be carried out after the desk-based work in order to clarify the evidence produced during that phase of the study. There may also be a need for geophysical survey and archaeological watching briefs to be maintained during any geotechnical test pitting, in order to identify any buried archaeological features.

The impact of the proposed development on the settings of the designated historic assets (attached) should be assessed in accordance with the guidance given in the Welsh Government document "The Setting of Historic Assets in Wales". It is expected that a stage 1 assessment will be carried out for all of the designated heritage assets identified above as being inside 3km of the proposed development, which will determine the need, if necessary, for stages 2 to 4 to be carried out for specific heritage assets. The results of the stage 1 assessment should be included in the DBA as an appendix.

Yours sincerely

Nichola Davies
Casework Manager

ENQ 30815

Designated Assets

Scheduled Monuments

DE008 Pen-y-Corddyn Camp

DE031 The Mount, Abergele

DE114 Castell Cawr Hillfort

Registered Parks and Gardens

PGW (Gd) 54(CON) Kinmel Park (grade II*)

PGW (Gd) 58(CON) Gwrych Castle (grade II*)

Listed Buildings

Within the application area:

18703	Abergele and Pensarn Railway Station Booking Hall	II
18704	Abergele and Pensarn Station, 'Up' Platform Building.	II
18705	Abergele and Pensarn Station, 'Down' Platform Building	II
18706	Signal Box at Abergele and Pensarn Railway Station	II
19024	Parish Church of St Cynbryd	II*
19025	Memorial Cross at St Cynbryd's Church	II
21855	Ynys-wen	II
21856	Pont Penllyn (partly in Llanddeiniolen community)	II
21862	Glyn Padarn	II
21863	Entrance Lodge at Glyn Padarn	II
	Dinorwic Slate Quarry Workshops (Welsh Slate Museum	
22656	Buildings)	I
22657	Locomotive Shed	II
22660	Pont Penllyn (partly in Llanberis Community)	II
22789	Footbridge	II

Within application area buffer:

142	Parish Church of St. Cynfran	II*
148	Old Telegraph House	II
157	Teyrdan Hall	II
166	Pant Idda	II
168	Nant Fawr	II
179	Quadrangular Agricultural Complex at Teyrdan	II
180	Pen-y-Dared	II
	Gwrych Castle including attached walls and towers and	
231	Stable Block.	I
	Tan-yr-Ogof Lodge including adjoining walls and towers to	
232	S, E and W	II*
233	King's Lodge, also known as Abergele Lodge	II*
235	Tyddyn-Morgan	II
236	Pentre-mawr	II
237	Church of St Michael	II*

239	Abergele Community Centre	II
240	Morfa Lodge	II*
250	Church of St Mary, with churchyard walls	II*
251	Ty'n Llan Nursing Home	II*
252	Towyn and Kinmel Bay Youth Club	II*
269	Ty Ucha	II
	Telephone Call-box in forecourt of Post Office Building	
270	(01492 517471)	II
271	Telephone Call-box outside the Harp Inn	II
273	Telephone Call-box outside Post Office Stores	II
	Barn, Agricultural Range and associated garden walls and	
275	towers at Hen Wyrch Farm	II
276	The Tower in Tan-y-Coed Gardens	II
277	Former Medical Hall	II
1422	Parish Church of St Thomas	II*
1423	Ty'n Rhyl	II
1498	Town Hall	II
1502	Plas Gwyn	II
1510	Lookout tower in Boundry Wall	II
1511	Apollo Cinema & Bingo Club	II
1514	Rhyl No.2 Signal Box	II
1515	Rhyl No.1 Signal Box	II
1516	Midland Bank	II
1521	Sussex Street Baptist Church	II
1522	Bee and Station Hotel	II
	Telephone Call-box on the up platform at Rhyl Railway	
1524	Station	II
1526	Rhyl Railway Station, Main Building	II
14136	The Gables	II
14137	Boundry Wall and Gate Piers at The Gables	II
14138	40 BATH STREET (E SIDE),,,,,CLWYD,	II
14139	42 BATH STREET (E SIDE),,,,,CLWYD,	II
14140	44 BATH STREET (E SIDE),,,,,CLWYD,	II
14141	46 BATH STREET (E SIDE),,,,,CLWYD,	II
14142	48 BATH STREET, (E SIDE),,,,,CLWYD,	II
14143	50 BATH STREET, (E SIDE),,,,,CLWYD,	II
14144	52 BATH STREET, (E SIDE),,,,,CLWYD,	II
14145	Bellevue Terrace	II
14252	English Methodist Church with former Sunday School	II
14253	Tan-Lan	II
14254	Springfields	II
14255	NO 2, BODFOR STREET (E SIDE),,,,,CLWYD,	II
14258	Main Building and Footbridge, Rhyl Railway Station	II
14259	Down-Platform Canopy, Rhyl Railway Station	II
14261	Former Manse to English Methodist Church	II
14262	Church House	II
14263	Gate Piers and Gated to Church House Side	II
14264	Welsh Presbyterian Church	II
	Gate Piers, Gates and Railings at Welsh Presbyterian	
14265	Church	II

14266	NO 2 CLWYD STREET (W SIDE),,,,,CLWYD,	II
14267	NO 3 CLWYD STREET (W SIDE),,,,,CLWYD,	II
14268	NO 4 CLWYD STREET (W SIDE),,,,,CLWYD,	II
14269	NO 5 CLWYD STREET (W SIDE),,,,,CLWYD, NO 6 CLWYD STREET (W SIDE)	II
14270	,,,,,CLWYD,	II
14271	NO 7 CLWYD STREET (W SIDE),,,,,CLWYD,	II
14272	NO 8 CLWYD STREET (W SIDE),,,,,CLWYD,	II
14273	Marine Villa	II
14274	NO 13 CRESCENT ROAD (E SIDE),,,,,CLWYD,	II
14275	NO 15 CRESCENT ROAD (E SIDE),,,,,CLWYD,	II
14276	War Memorial	II
14279	Crescent Public House	II
14280	Grafton Lodge	II
14281	Grafton Lodge	II
14282	New Inn	II
14283	NO 90 HIGH STREET (W SIDE),,,,,CLWYD,	II
14285	NO 135, HIGH STREET (E SIDE),,,,,CLWYD,	II
14286	NO 137, HIGH STREET (E SIDE),,,,,CLWYD,	II
14287	NO 139, HIGH STREET (E SIDE),,,,,CLWYD,	II
14288	NO 141 HIGH STREET (E SIDE),,,,,CLWYD,	II
14289	Cynval Villas	II
14290	Royal Alexandra Hospital	II
14292	NO 12, PARADISE STREET (N SIDE),,,,,CLWYD,	II
14293	NO 14, PARADISE STREET (N SIDE),,,,,CLWYD,	II
14294	Plas Penydeuglawdd	II
14295	Plas Penydeuglawdd	II
14296	Pendyffryn	II
14297	NO 40-42, QUEEN STREET (W SIDE),,,,,CLWYD,	II
14298	NO 44-46, QUEEN STREET (W SIDE),,,,,CLWYD,	II
14299	Church of the Holy Trinity	II
14301	The Swan P H	II
14303	NO 31, RUSSELL ROAD (NSIDE),,,,,CLWYD,	II
14304	NO 33, RUSSELL ROAD (N SIDE),,,,,CLWYD,	II
14305	NO 35, RUSSELL ROAD (N SIDE),,,,,CLWYD,	II
14306	NO 37, RUSSELL ROAD (N SIDE),,,,,CLWYD,	II
14307	NO 39, RUSSELL ROAD (N SIDE),,,,,CLWYD,	II
14308	NO 41, RUSSELL ROAD (N SIDE),,,,,CLWYD,	II
14309	Bath Street	II
14310	Bath Street	II
14311	Bath Street	II
14312	Bath Street	II
14314	Bethel Calvinistic Methodist Church	II
14315	Former Schoolroom	II
14316	Manse	II
14317	NO 14, WATER STREET (W SIDE),,,,,CLWYD,	II
14318	NO 14A, WATER STREET (W SIDE),,,,,CLWYD,	II
14319	NO 16, WATER STREET (W SIDE),,,,,CLWYD,	II
14320	Ellis's Bar	II

14321	Ellis's Bar	II
14322	Foryd Bridge	II
14323	Church of Saint John	II
14324	Christchurch United Reformed Church	II
14325	NO 47, WATER STREET (E SIDE),,,,,CLWYD,	II
14326	NO 49, WATER STREET (E SIDE),,,,,CLWYD,	II
14327	NO 46 WATER STREET (W SIDE),,,,,CLWYD,	II
14328	NO 48, WATER STREET (W SIDE),,,,,CLWYD,	II
14329	NO 50, WATER STREET (W SIDE),,,,,CLWYD,	II
14330	NO 52, WATER STREET (W SIDE),,,,,CLWYD,	II
14331	NO 54, WATER STREET (W SIDE),,,,,CLWYD,	II
14332	NO 56, WATER STREET (W SIDE),,,,,CLWYD,	II
14333	NO 71, WEST PARADE (S SIDE),,,,,CLWYD,	II
14334	NO 72, WEST PARADE (S SIDE),,,,,CLWYD,	II
14335	NO 73, WEST PARADE (S SIDE),,,,,CLWYD,	II
14336	NO 74, WEST PARADE (S SIDE),,,,,CLWYD,	II
14337	NO 75, WEST PARADE (S SIDE),,,,,CLWYD,	II
14544	Glan Aber	II
14545	Stables and Coach-house Range at Glan Aber	II
14665	Llety'r Dryw	II
14666	Civic Centre (Former Glan y Don Hall)	II
14769	The Pen-y-bont Inn	II
14844	Church of St Catherine	II
14845	,432,Abergele Road,Old Colwyn,,CLWYD,	II
14846	Midland Bank	II
14847	Nos 399 & 401 Abergele Road	II
14848	Nos 403 & 405 Abergele Road	II
14849	Nos 407 & 409 Abergele Road	II
14850	,411,Abergele Road,Old Colwyn,,CLWYD,	II
14851	,413,Abergele Road,Old Colwyn,,CLWYD,	II
14852	,415,Abergele Road,Old Colwyn,,CLWYD,	II
	Nos 417, 419, 421, 423 & 425 Abergele Road and No 1	
14853	Princess Road	II
14854	St John's Church House	II
14855	Hillside	II
14856	Celynog	II
14857	Outbuildings adjoining Celynog	II
14858	,1,Llawr Pentre,Old Colwyn,,CLWYD,	II
14859	,3,Llawr Pentre,Old Colwyn,,CLWYD,	II
14860	Peulwys	II
14861	Entrance Gate to Saint John's Churchyard	II
14862	Western Portal of Penmaen Rhos Railway Tunnel	II
14863	Church of Saint John	II*
18472	Bodoryn Cottages	II
18473	Bodoryn Cottages	II
18474	No 3, Bodoryn Cottages	II
18475	No 4, Bodoryn Cottages	II
18576	Sundial at St. Cynfran's Church	II
18577	Church House	II
18578	Ty Mawr	II

18658	Tower on Tower Hill	II
	Estate Boundary Wall to Gwrych Castle Park (part in	
18659	Abergele Community)	II
18660	Betws Lodge	II
18661	Lych Gate to Church of St Michael	II
18662	Eglwys Mynydd Seion	II
18663	Bowden House	II
18664	Church of St Teresa of Lisieux	II
18676	Roberts Monument at Eglwys Mynydd Seion	II
18683	St Paul Addoldy yr Eglwys Fethodistiadd	II
18684	Eglwys Crist Addoldy'r Annibynnwyr	II
18695	Toll Bar Cottage	II
18696	English Presbyterian Church	II
	Monument to the great rail disaster of 1868 in the	
18697	Churchyard of Church of St Michael	II
18698	The Castle, Y Castell	II
18699	National Westminster Bank	II
18700	Ty-mawr Terrace	II
18701	Ty-mawr Terrace	II
	Schoolmaster's House to the former Abergele Church	
18702	School, with outbuildings to the E.	II
18703	Abergele and Pensarn Railway Station Booking Hall	II
18704	Abergele and Pensarn Station, 'Up' Platform Building.	II
18705	Abergele and Pensarn Station, 'Down' Platform Building	II
18706	Signal Box at Abergele and Pensarn Railway Station	II
18711	Bryngwenallt	II
18712	Tyddyn-uchaf Old Farmhouse	II
18713	Hendre-fawr	II*
18714	Outbuilding at Hendre-fawr including yard walls.	II
18715	Hendre-uchaf	II
18716	Lodge to Bryngwenallt	II
18720	Shop adjoining former Medical Hall	II
19024	Parish Church of St Cynbryd	II*
19025	Memorial Cross at St Cynbryd's Church	II
19026	Lychgate at St Cynbryd's Church	II
19027	Ty Ucha	II
19028	Ty Ucha	II
19029	Ty Ucha House	II
19030	Ty Ucha Bach	II
19031	Ty Ucha Cottage	II
19032	Church Hall including Tool Shed to S	II
	Boundary Stone at junction of Rhyd-y-Foel and Clipterfyn	
19033	Roads	II
19034	Bryn Tirion	II
19035	Ty Gwyn	II
19036	Lady Eleanor's Tower	II
19037	Nant-y-Bella Lodge	II
19038	Hen Wrych	II
	Hen Wrych Lodge including adjoining crenellated boundary	
19039	walls and towers	II*

19040	Plas Tan-yr-Ogof including adjoining walls and arches to E and W	II*
19041	Tan-yr-Ogof Farmhouse including adjoining arch and walls to E	II*
19042	Stable and Cart House Range at Tan-yr-Ogof Farm	II
19043	Northern Towers	II
19044	Gwrych Estate Boundary Wall from Tan-yr-Ogof to Gwrych Lodge	II
19045	Gwrych Estate Boundary Wall to S side of Abergele Road	II
20108	Carthouse at Teyrdan	II
20113	Cefn Castell	II
20114	Agricultural Range at Cefn Castell	II

A.4 CPAT Consultation Response

Re: SC2108 Llanddulas to Kinmel Bay Scoping Opinion Request

Mark Walters <mark.walters@cpat.org.uk>

Wed 08/12/2021 15:41

To: Cooke, William [REDACTED]

Cc: Dr Julian Whitewright (Marine Investigator RCAHMW) [REDACTED]

Dear William

Thank you for the consultation on this scoping document submitted by JBA Consulting.

We were previously consulted by the LPA at the EIA screening stage and advised a desk-based assessment and walkover survey. At present there are a number of poorly located wreck sites recorded along this stretch of the coast on the National Monuments Record, RCAHMW and 15 sites of varying type and date on the beach and frontage area recorded in the Historic Environment Record. We note that the cultural heritage scope in 4.5.2 is not particularly detailed and does not include a walkover survey, so our requirements are set out below:

An archaeological assessment should address potential impacts arising from: beach/shoreline excavation for insertion of new revetments and drainage, the movement of heavy plant machinery across the beach, works compounds and material dumping areas on the beach, access routes onto the beach.

The archaeological assessment should include:

1) Baseline information on currently recorded and any potentially new heritage assets within the study area gathered from the National Monuments Record, RCAHMW and the Historic Environment Record at Clwyd-Powys Archaeological Trust along with documentary and cartographic sources in the archives at the National Library of Wales and Conwy County Archives where these are available. In addition, the NRW LIDAR data should be examined for any visible surface remains.

2) A systematic walkover survey should be completed of the beach and shore area where any ground disturbance will take place at each works site to identify any previously unrecorded archaeology. Features should be mapped using survey grade GPS and transcribed to scale drawings, described in detail and any appropriate mitigation suggested.

Archaeological contractors will need to submit a WSI (written scheme of investigation) for approval before the assessment commences and the findings should be fully reported and archived in accordance with CIFA standards and guidance. The reports and digital archive will be sent to the HER, CPAT and NMR, RCAHMW with a copy sent to me for comment.

The resulting report will inform us about the archaeological potential of the beach and frontage area where there may be previously unrecorded archaeology related to former prehistoric land surfaces buried by marine transgression and archaeology of all later periods related to activity on the shoreline including any ship/boat or aviation wrecks that may be present. Additional assessment may be required as a result of this report which may include geophysical survey and/or drone photogrammetry of the present beach conditions and any surface remains.

It should be noted that Dr Julian Whitewright (Marine Investigator) at RCAHMW julian.whitewright@rcahmw.gov.uk should be consulted for his specialist comments on this scheme in relation to marine and foreshore archaeology of all periods as he may have additional requirements with regard to the assessment.

Please forward these comments to the EIA consultants so that they are fully informed of the requirements.

Kind regards

Mark Walters

Mark Walters

Development Control Archaeologist / Swyddog Rheoli Datblygiad

Ffôn / Tel: 01938 553670/552035 [REDACTED]

E-bost / E-mail: mark.walters@cpat.org.uk

Ymddiriedolaeth Archaeolegol Clwyd-Powys, Y Swyddfeydd, Coed y Dinas, Welshpool, SY21 8RP,
Swyddfa Gofrestredig fel yr uchod. Rhif Cwmni 1212455, Rhif Elusen 508301, Sefydliad Cofrestredig ClfA.

Clwyd-Powys Archaeological Trust, The Offices, Coed y Dinas, Welshpool, SY21 8RP.
Registered Office as above. Company No 1212455, Charity No 508301. Chartered Institute for Archaeologists Registered
Organisation No 6.

Please note that I do not work Fridays

A.5 CCBC Countryside Response

Gemma Laing (Regulatory)

From: Ceri Thomas
Sent: 13 December 2021 15:56
To: CynllunioPlanning
Subject: FW: ENQ 30107 - Llanddulas to Kinmel Bay Coastal Defence Scoping Report

Switch-MessageId: 0bf9e269d98143a98d89213a4d3bf0a3

Please record response.

Ceri

From: Kate Surry <kate.surry@conwy.gov.uk>
Sent: 10 December 2021 22:13
To: Ceri Thomas <Ceri.Thomas@conwy.gov.uk>
Subject: ENQ 30107 - Llanddulas to Kinmel Bay Coastal Defence Scoping Report

Hi Ceri

With regard to the submitted EIA Scoping Report, Llanddulas to Kinmel Bay Coastal Defence Improvements, JBA November 2021, I have the following comments and recommendations:

1. Biodiversity is Scoped-In to the Environmental Statement (ES) for the construction, operational and maintenance / decommissioning (where practical) stages. I recommend that the transport routes for supply of constructional materials and equipment are also included within impact assessments within an ES whether routes are proposed by sea or land.
2. I further recommend a biosecurity risk assessment is included within the scope of the Environmental Statement (ES).
3. Planning Policy Wales (PPW) 10 sets out that "planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity" (para 6.4.5 refers). Appropriate measures that provide a net benefit for biodiversity and go beyond simply mitigating impacts therefore need to be incorporated, specified and located within the proposals detailed in the ES.
4. The entire stretch of the proposals from Llanddulas jetty to the Clwyd Estuary fall within the North Wales Coast Important Bird Area, important for wintering water birds, and *Tadorna tadorna* and *Charadrius hiaticula* breed along the shoreline. This designated site and its features therefore need to be included within the scope of the environmental statement.
5. The *EIA Scoping Report, Llanddulas to Kinmel Bay Coastal Defence Improvements, JBA November 2021* submitted cites the following base line ecological survey requirements:
 - I. **A walk-over baseline survey** : I recommend that this includes a preliminary ecological assessment of all structures, trees and/or vegetation that may be used by roosting bats or nesting birds and a habitat map of all terrestrial coastal habitats within the areas to be impacted. This would capture areas of priority habitat e.g. vegetated shingle outside the boundaries of the Traeth Pensarn SSSI.
 - II. **Intertidal biotope survey.**
 - III. **Over-Wintering Bird surveys:** As per the report recommendation I advise undertaking monthly wintering bird surveys, from October 2021 to March 2022 with high and low tide counts carried out at eastern, western and central coastal defence locations. These surveys will be supplemented by the latest available years' data from the BTO, including any WeBs data for the lower Clwyd Estuary.
 - IV. **An assessment of impacts to fish will utilise information from available data and discussions with statutory bodies:** I recommend an assessment of impacts on marine cetaceans as designated features of North Wales Special Areas of Conservation, bottle nose dolphin, seals, harbour porpoise are also considered and scoped in as advised by NRW Marine specialists.

- V. I further recommend an assessment of impacts on terrestrial protected species and any notable plants is included within the ES this would include but need not be restricted to breeding birds, reptiles, hedgehog

Kind regards
Kate

Kate Surry
Ecologydd / Ecologist
Yr Amgylchedd, Ffyrdd a Chyfleusterau / Environment, Roads and Facilities
Cyngor Bwrdeistref Siriol CONWY County Borough Council

E-bost / E-mail: kate.surry@conwy.gov.uk
Tel: 01492 575106

Normal Working Days :Monday,Thursday, Friday

www.conwy.gov.uk/cefnngwlad
www.conwy.gov.uk/countryside



Sefyllfa Bresennol Gwasanaethau'r Cyngor | Council Services Current Situation

Rydym yn croesawu gohebiaeth yn y Gymraeg a'r Saesneg fel ei gilydd. Ni fydd gohebiaeth yn yr un iaith na'r llall yn arwain at unrhyw oedi. We welcome correspondence in both Welsh and English. We will respond to correspondence in either language without delay.



A.6 CCBC Highways Consultation Response

MEMO

At / To	Development and Building Control Manager Regulatory Services
Copi / Copy To	
Oddi Wrth / From	Head of Service Environment, Roads & Facilities
Ffôn / Tel	01492 575438
E-Bost / E-Mail	ewan.ellis@conwy.gov.uk
Fy Nghyf / My Ref	ENQ 30815
Eich Cyf / Your Ref	
Dyddiad / Date	16 th December 2021



Pre-Application Ref: ENQ 30815
EIA Scoping Opinion Request.
Llanddulas to Kinmel Bay Coastal Defence

I refer to the above application and have the following comments to make from a traffic and highway perspective.

Given the scale of the proposed development we would require that as part of the process the applicant should submit a Transport Statement (TS) generally to support the application at this time to be included as part of any EIA.

Additionally, the applicant should produce a Construction Traffic Management Plan (CTMP) that should be agreed with CCBC. The CTMP should be prepared to ensure that the management and measures contained within the document minimise the impact of the construction traffic on existing users of the public highway network. Overall the CTMP should set out agreed routing, timing, signing, access locations and access routes relating to the proposal.

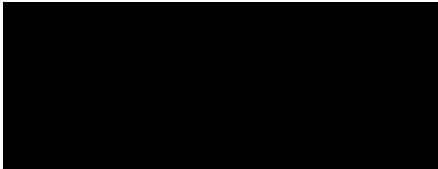
The Construction Traffic Management Plan shall include, but not be limited to:

- (i) Construction traffic routes, including provision for access to the site
- (ii) Entrance/exit from the site for visitors/contractors/deliveries
- (iii) Location of directional signage within the site
- (iv) Siting of temporary containers
- (v) Parking for contractors, site operatives and visitors
- (vi) Identification of working space and extent of areas to be temporarily enclosed and secured during each phase of demolition/construction
- (vii) Temporary roads/areas of hard standing
- (viii) Schedule for large vehicles delivering/exporting materials to and from site
- (ix) Storage of materials and large/heavy vehicles/machinery on site
- (x) Measures to control noise and dust
- (xi) Details of street sweeping/street cleansing/wheelwash facilities
- (xii) Details for the recycling/disposing of waste resulting from demolition and construction works
- (xiii) Hours of working
- (xiv) Phasing of works including start/finish dates

These details are required in order to ensure that adequate provision is made for construction traffic, including allowance for the safe circulation, maneuvering, loading and unloading of vehicles, as well as parking, and to reduce the impact on the general amenity of surrounding occupiers during construction.

The above information must be included within the EIA.

For or on behalf of



Andrew Wilkinson

Pennaeth Gwasanaethau Cymdogol/
Head of Neighbourhood Services

A.7 Welsh Government Transport Consultation Response

Gemma Laing (Regulatory)

From: Richard.Evans-Snarr@gov.wales
Sent: 17 December 2021 17:22
To: CynllunioPlanning
Cc: DevControl@nmwtra.org.uk
Subject: FW: Pre App Enquiry Consultation - ENQ 30815 - EIA Scoping Opinion - Llanddulas to Kinmel Bay Coastal Defence
Attachments: Pre App Enquiry Consultation - ENQ 30815 - EIA Scoping Opinion, Llanddulas to Kinmel Bay Coastal Defence (WG - Transport).pdf; 2021s1403 Scoping Report_Issued.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Annwyl Cynllunio,

Dyma ymateb / sylwadau Llywodraeth Cymru am cais cynllunio a'r cyfeirnod isod:

- ENQ 30815

Please find below Welsh Government response to pre-planning application referenced above.

Dear Developer,

This project is likely to require a Transport Assessment, below is some information that may assist. Please note that appropriate traffic surveys (as agreed in writing with Welsh Government by contacting NorthandMidWalesDevelopmentControlMailbox@gov.wales) must be carried out to enable a review to be executed out correctly. Assessments will only be accurate if the correct data is collected at the relevant time. Multiple data sets may be required depending if the proposals require road closure periods etc. especially if they coincide with trunk road embargo periods. This is why it is very important that the TA highlights the most probable period of works and clarifies if road closures, lane closures, contraflow working or any traffic signals will be required. Some developments state that this will be the Principal Contractors responsibility at the relevant time, this is no longer an appropriate way to address these types of issues/risks as this does not provide adequate time for collection of traffic data where required.

We would also highlight to the developer that other applications have been replied to by Welsh Government Highways Development Control in recent weeks, combining traffic surveys for the schemes for Conwy CBC would provide a much more comprehensive traffic survey data set which would provide greater detail of the surrounding network.

Generic Scope for Developer reading:

Dear Developer,

Please find below our standard generic briefing scope requirements for a Transport Assessment (TA) for a range of different development. The scope is quite generic and extensive to cover all aspect of all types of development. The developer must review the scope and suggest alterations (if any) to align specifically with the proposed development they wish to bring forward, which must be agreed in writing prior to production with the Strategic Road Network Highway Authority (SRNHA) via the email

NorthandMidWalesDevelopmentControlMailbox@gov.wales . If the development does not merit a TA, a Transport Statement (TS) might be acceptable, however, this must also be to the written approval of the Strategic Road Network Highway Authority (SRNHA) prior to production. The following is the starting position for any assessment or statement. Developers must also liaise with the highway authority for the county roads whom may have different requirements to the Strategic Road Network Highway Authority (SRNHA).

Please note that failing to consult fully with the Strategic Road Network Highway Authority (SRNHA) at specific points in the process as directed will delay a review and/or invalidate works executed:

1. As a minimum the TA study area must include classified counts at the below agreed junctions and include surveys (including queue lengths) of the junctions on two separate days. Surveys periods must be agreed in writing with the SRNHA prior to execution and generally be carried out in a neutral month (unless specifically agreed in writing with the SRNHA prior to execution). The surveys must be undertaken on suitable days and at suitable times that the development will impact the highway network (individual developments must gain written approval from SRNHA of their proposals prior to execution). As an example, residential developments would require surveys in the following form; Tuesday one week and Thursday on a separate week (all junctions to be surveys on individual days i.e. Junctions A, B, C, D and E on week one and Junctions A, B, C, D and E on week two). Manual turning counts should be conducted at 15 minute intervals to identify relevant highway network peak periods and should cover at least an additional 45 minutes either side of assumed peak times when surveys are executed e.g. if a peak period of 8:30 to 9:30 was assumed, minimum survey period on site should be 7:45 to 10:15.
 - a. Junction A;
 - b. Junction B;
 - c. Junction C;
 - d. Junction D; and
 - e. Junction E.

2. 24 hours automatic traffic counts (ATC) using loop detection (or similar approved) must be carried out at locations to be agreed in writing by the SRNHA (prior to installation) to supplement and validate the traffic survey data from section one. Surveys periods must be agreed in writing with the SRNHA prior to execution and generally be carried out in a neutral month on a number of highways within the study area over a period of circa three weeks to provide supplementary traffic data for the proposed development for analysis by the SRNHA. The ATC must also gain speed survey information along with vehicle classification data (please see notes at end of this scope for further information). ATC information should also be used to establish peak periods of the highway network as well as establish and review off-peak periods against development traffic as greater impact on the existing highway network from development related traffic could be at different period to that assumed. If ATC are carried out in a neutral month, the developer should also carry out additional surveys during a holiday period, as agreed in writing by the SRNHA, for a minimum period of 7 complete days for comparison purposes.

3. 24 hours automatic traffic counts (ATC) using loop detection (or similar approved) must be carried out at the junction mouth of a similar local sized existing development to provide local data to inform persons of the possible traffic generated by a development, this will also be valuable to ratify the multi-modal trips calculated using data bases that could be generated by the proposed development. On sensitive sites, additional ATC may be required to further assist with the distribution and assignment of the vehicular trips on the local highway network. If the development is an educational establishment, specialist retail etc. local in this context could be in excess of twenty or more miles away from proposed development site. Where there is no local similar development a comparable development next to the Trunk Road elsewhere in Wales must be identified and agreed.

4. TA must review year of application (as base assessment, with and without development) along with future assessment year for the detailed junction capacity assessment of year of application + 10 years (as a general principle). Therefore if an application was submitted in 2024 the future assessment year would be 2034. Applicant must propose what growth rates are to be used which the SRNHA must approve in writing prior to use. Applicant must also carry out a sensitivity check due to seasonal traffic growth (percentage increase to be agreed in writing with the SRNHA prior to executing the review).

5. Detailed capacity assessments must be carried out on the junctions within the TA study area in both the 'with' and 'without' development scenarios in the suggested future assessment year as well as the year of application (opening year). Electronic base data/drawings for all assessments must be submitted with TA i.e. base survey / speed data for capacity assessments, road width flares etc.

6. TA must include a review of the accident record for the most recently-available 5 year period, the developer must propose the study area for written approval from the SRNHA prior to executing this work. The Developer must also include a separate developer prepared safety assessment of the local highway within a specific radius of the development site or on specific route from the development which must consider aspects such as visibility, pinch points and existing non-motorised user network constraints which would assist the SRNHA in reviewing a proposed development impact on the area.

7. Privately owned highway boundary features and/or new development works near to the trunk road may have a bearing on road safety. TA must therefore clarify works within this area (minimum of 15m from the trunk road as a guide) along with any trunk road accommodation works required to bring the site forward. The developer will be responsible for a review of the risks this may have on trunk road users and therefore the TA must include a report (risk assessment) in line with DMRB CD 377. The outcome of this report may show that the developer is to provide a Road Restraint System. When the apparatus is for road safety purpose, it may be delivered through a S278 agreement (inc. commuted sums) and usually be adopted by the Highway Authority. When a review indicates that no system is required on highway grounds, risks of developing next to the trunk road will be for the developer to address within the development, this will include administering supposed risks that future occupiers/owners may have due to the development proximity to a trunk road. TA must include a review of how the development will manage supposed risks in the future once development has been constructed. Welsh Government DMRB CD377 specific processes can be obtained by emailing RRRAP@gov.wales .

8. TA must take account of all approved but as yet unbuilt committed developments within the traffic flow calculations of the TA, simple table detailing these traffic flows should be included within TA. Review of the current LDP must also be completed as traffic impacts from allocated land within the LDP, but not yet subject to planning applications, might also need to be broadly included within the TA. The developer must identify these areas for discussion with the Highway Authority to agree in writing the fully scope.

9. The TA must include a detailed description of the existing conditions around the site and the local highway network including highway details of primary routes from development to Trunk Road Highways. Assessment must also highlight if capacity issues or other shortcomings are observed and if traffic associated with the development would pass sensitive locations (e.g. a school, college, industrial estate).

10. The TA must include an appraisal of the scheme in the context of current local and national transport planning policy.

11. The TA must include a review of the accessibility of the site by non-motorised modes and a review of facilities in the vicinity of the development site (exact area / routes to be agreed in writing by all Highway Authorities prior to production of TA). This will include route assessments of non-motorised users to local schools, amenities, bus stops and the like highlighting locations where existing highway crossing facilities are below current standards or not in place which the majority of non-motorised user traffic generated by the development will use. Review must also take into account Active Travel Wales Act Duties/Design requirements along with links to Existing Route Maps and Integrated Network Maps routes (Please review relevant local authority Active Travel maps for further information). Each and every development must work with all Highway Authorities in line with Active Travel Wales Act and provide a lasting legacy to the area to improve non-motorised modes in the area (regardless of distance from development). For further reading see [Active Travel Act guidance | GOV.WALES](#);

12. Public Transport Assessment: The TA must review the different public transport available locally to the proposed development site. The facilities available must be clearly labelled on a simple map with a complimentary table details all elements of the service which must include as a minimum: distance from agreed location within the proposed development to a facility (along with maximum distance), what services are available, their frequency, start and end times, at what time would the development generate the highest level of demand for public transport use / indication of anticipated development modal split to confirm demand for public transport etc. Review must identify clear routes to the service link e.g. bus stops/train stations detailing the actual distance to the facility from an agreed location within the proposed development along existing route and not in a direct line over third party land (as agreed with SRNHA). Review must suggest direct route to these facilities identifying any lack of highway crossing facilities to non-motorised users along the proposed routes and/or other hazards/highway safety issues the routes might have which may impact non-motorised users.

13. The TA must include a full appraisal of the proposed development and its intended operation, including details of: the level of proposed parking facilities for the proposed development (for mobility scooters, cycles, commercial vehicles, cars, motorbikes, vans etc.), servicing arrangements and swept path analysis plans (as appropriate, including for refuse vehicle and fire tender). Parking numbers, ratio and dimensions/details of facilities must adhere to Active Travel Wales and local authority parking standards, this information must be clearly identified within the TA for transparency.

14. A full parking assessment must be supplied, as an appendix, complying with the requirements/specifications detailed in Active Travel Wales and local authority parking standards. Clarity to what the SRNHA will accept as “local facilities” within a sustainability review must be agreed in writing prior to producing a parking assessment, as a guide these facilities will be where persons will regularly visit for a prolonged period, such facilities may include foodstore, schools, large employment areas.

15. The TA must include an estimate of the number of multi-modal trips generated by the proposed use of the site, along with the distribution and assignment of the vehicular trips on the local highway network to the trunk road. Trip rates may be based on TRICs-based developments of a similar scale and in a similar location to that proposed (Trip rates proposed by applicant must be approved by SRNHA prior to use as the authority may require a number of proposed data to determine the rates to be used within this TA, distribution proposals must also be approved prior to development of the TA along with 85th Trip rate data use). The TA should also include the production of a 'Transport Implementation Strategy' (TIS) for the development complying with TAN 18. This should set objectives and targets relating to managing travel demand for the development and set out the infrastructure, demand management measures and financial contributions necessary to achieve them. The TIS should set a framework for monitoring the objectives and targets, including the future modal split of transport to development sites.

16. If any off-site works are required to make the development satisfactory in highway terms, the TA must identify them and put forward suitable plans for consideration as well as cost estimate for their design, construction, supervision of works and administration of the contracts.

17. Schemes with obvious long term construction periods, where it is probable that: road closures; lane closures; contraflow working; temporary traffic signals; or any other traffic management are required; must form part of the assessment as a standalone section. It is no longer acceptable for temporary traffic management, clearly known to be required in advance of the construction, not to be reviewed and risk assessed appropriately at an advance stage of a scheme development where it could impact the traffic on the network. High level review of the network with worse case traffic management scenarios evaluated will enable disruption to the strategic road network to be minimised and when required accommodation works provided (in advance) as well as enabling the development to minimise disruptions to local residents and businesses. Collation of multiple traffic surveys, at the appropriate times, at an advance stage of any development will serve as a benefit to all parties and is the only way for traffic patterns/volume knowledge of the specific area of the network to be gained. The scheme development must take responsibility for this stated element, this advance works will also benefit the Principal Contractors who can take ownership of the assessments and refine as required. Developers that wish to condition that the administration of the whole traffic management element of a development fails to address known advance risks.

18. Refuse Collection: Confirmation from LA on refuse collection must also be clarified as well as waste bin collection location details, this is because some LPA have SPG's similar to: "Refuse Collection, Waste Storage and Collections in New Developments - Developer must note that "in new developments, recycling and refuse collection vehicles will not reverse into/from or along a highway to undertake collections. Where collection vehicles do have to enter a development, there must be sufficient on site turning circles or hammerheads to allow safe manoeuvring and exit from the development". Under Section 46(4) of the Environmental Protection Act, 1990, the Council has specific powers to stipulate where receptacles must be placed for the purpose of collecting and emptying and the steps to be taken by occupiers of premises to facilitate the collection of waste, such as transporting receptacles to the collection point and keeping all access and carriageways free of obstruction. It should be noted that the Council's policy for waste collection is to collect waste and recycling at the boundary of a property at the nearest kerbside. The kerbside is defined as the nearest adopted highway to the property (typically the pavement or highway verge), where the safe storage of waste containers can take place. The collection point for householders with private roads will be the nearest safe storage location point where their road meets the adopted highway or at an alternative collection point agreed by the Council. The precise location of any collection point will be the Council's decision, as specified in the Environmental Protection Act, 1990."

19. Construction Traffic and Site Compound: *the following will be required for a development if it gains planning approval and may be advantageous to include within a TA* - a review of the impact of the construction traffic on the surrounding highway traffic noting when peak periods will occur and what traffic will be generated by the construction works (as a whole and during peak periods). The review must also consider the proposed site compound location ensuring it's appropriately located for its intended use along with a parking assessment to ensure no vehicles connected with the development park on the public highway/local streets, assessment must also detail: amount of parking required and details of oversized parking bays to accommodate likely construction vehicles such as large vans etc. Site compound must also have appropriate turning facilities for vehicles to ensure that they can enter and exit in a forward gear (if applicable).

20. Monitoring: If granted planning permission, monitoring by the developer and future occupiers is an important tool to allow highway authorities to check how accurate assumptions stated within the TA were and whether improvements in future TA's are required. The TA must therefore detail how this proposed development will survey traffic generated by this development and how it is to report the findings to the Local Authority (traffic to include all modes of transport). This review must be carried out at two intervals after completion of construction of the development, the survey period will be six months and one year after said completion in the next available neutral month (as agreed in writing with the SRNHA). For vehicle movement surveys, the SRNHA would require that 24 hours automatic traffic counts (ATC) are installed on the access road into the development and on both approach ends of the main highway so that traffic approaching from either directions are recorded (speed/classification etc.). ATC should be installed for a minimum of two week and be carried out using loop detection or similar approved system (exact locations and number of location to be agreed in writing with SRNHA, report findings and data to be provided in electronic format to the SRNHA).

21. Supplementary plans must also be included as appendices to the TA, these shall be detailed as follows:

- a. Plans showing the geometric measurements/dimensions and visibility data inputted into any capacity assessments, i.e. widths of carriageways/lanes at specific points, width of other lanes/hatched areas etc., flare information, forward visibility, ghost island details, visibility splays left/right and any other highway details measured/calculated which have been used within the capacity assessment (note must be provided to detail origin of plans i.e. topographically surveyed or other);

- b. Design of proposed highway access ensuring it complies with Active Travel Wales Act e.g. most new simple junction development accesses will need to comply with a non-segregated layout broadly complying with DE602 (or similarly approved by all Highway Authorities);

- c. Visibility splay drawing detailing: junction and private accesses visibility splays, forward visibility splay, pedestrian crossing visibility splays etc. in both the vertical and horizontal plane;

- d. All detail designs must include Swept Path analysis showing all vehicles can execute manoeuvres at turning locations, tight corners or other locations agreed with the all Highway Authorities [N.B. swept path analysis must show that vehicles can carry out required manoeuvres with a minimum horizontal clearance of 500mm between the outer body of the vehicle and any object such as kerbs/street furniture/parked vehicles/boundaries (invisible or physical [such as walls/fences/hedges]) and alike to allow for different driving styles and future vehicle size enlargement];

- e. Plan detailing the vehicle parking locations showing the dimensions of parking facilities proposed e.g. 2.6m x 4.8m for standard parking bays, garages adhering to parking standards must also be highlighted (minimum internal clearance of 3m x 6m with appropriate driveway of same dimension) along with visitor parking arrangement. Parking bays at the end of a row of parking bays or bays next to walls/structures/obstructions, which are greater in height than 150mm above the parking bay surface level, must be increased in width when compared to a standard bay width of 2.6m. The reason for this is that shared space between standard bays, which allow vehicle doors to open to a greater extent, can't be achieved next to walls/structures/obstructions (exact bay widths will be subject to swept path analysis as vehicle approach roadway width will also impact the requirement). Cycle parking, visitor spaces (vehicles) and motorcycle bays must also be detailed. Developers must be aware that the Highway Authority will not accept parking provision of a new development that does not comply with the parking bay dimensions, parking provision underneath structures/buildings must comply with requirements regardless of structural supports, it is vitally important that parking layout/design is an integral part of the design and not an afterthought to a development. Where used, excessive lengths of series (nose to tail) parking provision should be minimised. Within residential developments with turning heads, parking provision of the immediate dwellings accessed from a turning head must meet or exceed parking requirements to minimise the risk of residents parking within turning facilities and blocking their use.

- f. Drawing detailing where waste bins/recycling apparatus are to be stored within individual unit/plot boundaries on waste collection days and non-collection days as well as communal waste bin/recycling apparatus storage areas.

To ensure that a comprehensive review of the TA can be carried out in a timely manner, each TA submitted must be done in the following format and be available electronically to the SRNHA, documents must be provided in their original state i.e. in word, excel, etc. as well as in PDF format:

- Electronic PDF of TA and appendices (not scanned copy);
- Raw electronic information for traffic count data etc. in both PDF and original compiled software i.e. excel;
- Electronic copy of topographical surveys (CAD);
- Electronic copy of capacity assessment input data file(s) carried out by software such as LinSig, Picady, Arcady etc.

General Notes to Developers:

The aims of a TA / TIS are to:

- understand the transport impacts of the development;
- clearly communicate the impacts to assist the decision making process;
- demonstrate the development is sited in a location that will produce a desired and predicted output (for example in terms of target modal split);
- mitigate negative transport impacts through the design process and secured through planning conditions or obligations;
- maximise the accessibility of the development by non-car modes (Active Travel Wales Act);
- contribute to relevant development plan and RTP objectives relating to accessibility of services and modal share.

SRNHA scheme/development specific notes to be included here at the relevant time.....

Traffic Data should reflect the normal traffic flow conditions on the transport network (e.g. non-school holiday periods, typical weather conditions etc.) in the vicinity of the site, and should be valid for the intended purposes. It should also take account of holiday periods in tourist areas, where peaks could occur in periods that might normally be considered non-neutral. The recommended periods for data collection are spring and autumn, which include the neutral months of April, May, June, September and October as described in DMRB CA 185. Please note that different school term times, Easter Holidays etc. could further impact neutral months and no traffic data should be collected a week either side of these times unless otherwise agreed with the SRNHA. Prior to collecting Traffic Data, the applicant must agree the survey requirements in writing with the SRNHA.

Speed Surveys, when required, must be carried out to calculate the 85th percentile speeds of a highway if a proposed access visibility splays do not adhere to the posted speed limit requirements of a road as detailed in DMRB. Speed surveys might also be required to provide information to designers/road safety auditors. Speed surveys must be carried out in neutral months as detailed in above paragraph with measurements taken at both ends of the scheme so that traffic approaching from both directions are recorded. Surveys must be carried out by loop detectors (or similar approved) for a minimum period of 7 days with the raw data issued to the SRNHA for scrutiny, in electronic format (excel), before visibility splay requirements are determined. In addition to the above please ensure you liaise with the SRNHA prior to installing any loop detection (or similar approved) systems to ensure that their location is to SRNHA approval i.e. not too far or too close to a proposed development site access, not within other junction locations which could adversely misrepresent traffic speeds in normal free flowing traffic conditions or not on a section of carriageway affected by its layout (bend, blind summit or other features). Speed surveys should generally be carried out at two locations, either side to an access, at a distance equating to the stopping sight distance for the posted speed limit of the road. If an access is proposed within 150m of a speed limit termination/change location the Highway Authority may request a speed survey regardless.

Shared Footway/Cycleway: To encourage person to travel by means other than by motor vehicles, any new development must have a spine footway/cycleway route in Line with Active Travel Wales Act (determined by Local Authority). The shared route provision must comply with Active Travel Wales requirements and if the route is next to a vertical feature of a certain height, the width may need to be increased.

Access / Junction Visibility Splays: The minimum visibility distances available for vehicles emerging from a proposed access / junction shall be “y” metres in each direction at a height of 1.05 metres, measured to a point 0.26 metres above the nearer running edge of the main carriageway. These visibility distances shall be available from a point 2.4m metres from the nearer running edge of the main road, measured along the centreline of the access road / junction, to all intervening points along the running edge of the main carriageway. Junction visibility measured from 15m from the running edge of the main carriageway is also required along with visibility to the back of the footway or shared route. On bends, “X” to “V” visibility splay will also be required. The whole of all visibility splay envelopes so formed shall be free of any growth or obstruction, which would interfere with the minimum visibility requirements. For full and up to date specifications see current DMRB documents.

For information the below has been recently issued to Conwy CBC for the Phase 2b Waterfront, you may wish to consider these comments also:

At full planning application stage we would likely direct a condition approval to include conditions similar to:

- 1. A Construction Site & Traffic Management Plan (CSTMP) shall be submitted and approved in writing by the Local Authority, in conjunction with Welsh Government, prior to the commencement of any site works including demolition. The CSTMP scope must be agreed prior to its development. The approved CSTMP, including any agreed improvements or works to accommodate delivery vehicles where required along the route, shall be implemented as agreed in writing prior to the commencement of any site works. The CSTMP must include (as a minimum):*
 - a. Site compound location details;*
 - b. Proposals on delivery vehicle routes (for materials and plant) from origin to site;*
 - c. Scheduling and timing of deliveries taking account of WG embargo periods;*
 - d. Details of on site wheel washing facilities;*
 - e. Cleansing proposals of the Public Highways due to the development;*
 - f. Storage of plant and material used in constructing the development;*
 - g. Information on the safe management of junctions for continued use by non-motorised users;*
 - h. Temporary lighting proposals;*
 - i. Bilingual (Welsh above English) traffic management signs schedule and locations.*
- 2. Detailed review of J22 of the A55 to determine actual traffic movements and HGV % increase, [Traffic surveys would be expected to be completed in the period between PPA and commencement of the works in the next available neutral month and/or as agreed with WG];*
- 3. If road closures are proposed, lane closures, contraflow working or any traffic signals required a Traffic Note must be produced to assess the diverter trips of the normal traffic flow to audit the safety impact for all modes of transports on Junctions 20 to 22 of the A55 – any required mitigation works must be provided and maintained by the development until free flow traffic conditions return to the county roads (LHA might also request such a review?) ;*

As you can see we have included number 2 and 3 above and therefore would expect further traffic counts/surveys to be carried out in the correct manner to determine if there is a material increase use of HGV at J22 (or other vehicle movements) and what impact could be at other junctions depending on construction methods. The reason for this is because the TA portrays that all vehicle movements are through junction 22 and therefore is not sufficiently detailed to determine the actual % / turning movements. 51,765 AADT in the TA is the main A55 carriageway traffic volume not the slip roads. 10,915 vehicle movements on West Promenade is not the volume of traffic that use Ffordd Y Rotary and hence not the volume that use the slip roads of the A55.

TA also suggests that 30 vehicle movements will occur as a worst-case, if 600 vehicles are the usual morning AM peak this would equate to 5% increase in traffic on the network during this period. If deliveries, design team, RE, inspectors, Client representatives or other associated traffic movements are accounted for in the peak AM this would increase the stated %, TA only accounts for construction workers.

If we can be of any further assistance please do not hesitate to contact us.

Diolch,

Richard Evans-Snarr *BEng (Hons) GMICE*
Peiriannydd Prosiect / Project Engineer

Llywodraeth Cymru / Welsh Government
Trafnidiaeth - Seilwaith yr Economi / Transport - Economic Infrastructure
Sarn Mynach, Cyffordd Llandudno, Conwy, LL31 9RZ
richard.evans-snarr@llyw.cymru | www.llyw.cymru



From: Gemma Laing (Regulatory) <gemma.laing@conwy.gov.uk>
Sent: 08 December 2021 11:25
To: North and Mid Wales Development Control Mailbox
<NorthandMidWalesDevelopmentControlMailbox@gov.wales>
Subject: Pre App Enquiry Consultation - ENQ 30815 - EIA Scoping Opinion - Llanddulas to Kinmel Bay Coastal Defence

Good morning

Please find attached pre app enquiry consultation.

Kind regards
Gemma

Gemma Laing
Swyddog Gweinyddol / Administrative Officer
Cynllunio / Planning
Cyngor Bwrdeistref Sirol CONWY County Borough Council
Ffon/Tel: 01492 575121
Ebost / Email gemma.laing@conwy.gov.uk
We / Web: www.conwy.gov.uk

[Sefyllfa Bresennol Gwasanaethau'r Cyngor](#) | [Council Services Current Situation](#)

Rydym yn croesawu gohebiaeth yn y Gymraeg a'r Saesneg fel ei gilydd. Ni fydd gohebiaeth yn yr un iaith na'r llall yn arwain at unrhyw oedi. We welcome correspondence in both Welsh and English. We will respond to correspondence in either language without delay.



Mae'r neges e-bost hon ac unrhyw ymgysylltiadau yn gyfrinachol, ac wedi eu bwriadu ar gyfer yr un sy'n cael ei h/enwi yn unig. Gallent gynnwys gwybodaeth freintiedig. Ar gyfer yr amodau llawn ynglŷn â chynnwys a defnyddio'r neges e-bost hon ac unrhyw atodiadau, gweler www.conwy.gov.uk/ebost_ymwadiad

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Sganiwyd y neges hon am bob feirws hysbys wrth iddi adael Llywodraeth Cymru. Mae Llywodraeth Cymru yn cymryd o ddifrif yr angen i ddiogelu eich data. Os cysylltwch â Llywodraeth Cymru, mae ein [hysbysiad preifatrwydd](#) yn esbonio sut rydym yn defnyddio eich gwybodaeth a sut rydym yn diogelu eich preifatrwydd. Rydym yn croesawu gohebiaeth yn Gymraeg. Byddwn yn anfon ateb yn Gymraeg i ohebiaeth a dderbynnir yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi. On leaving the Welsh Government this email was scanned for all known viruses. The Welsh Government takes the protection of your data seriously. If you contact the Welsh Government then our [Privacy Notice](#) explains how we use your information and the ways in which we protect your privacy. We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

A.8 CCBC Environmental Health

Julia Anne Jones

From: Ceri Thomas
Sent: 23 December 2021 15:44
To: CynllunioPlanning
Subject: FW: ENQ 30815 - Llanddulas to Kinmel Bay Coastal Defence

Switch-MessageId: 2d17b9026afb4df38ea872c1200ef423

**CONWY COUNTY BOROUGH
COUNCIL
DEVELOPMENT CONTROL**

RECEIVED: 23/12/2021

APPLICATION NO: ENQ/
30815

From: Huw Robat Williams <Huw.Williams@conwy.gov.uk>
Sent: 23 December 2021 15:40
To: Ceri Thomas <Ceri.Thomas@conwy.gov.uk>
Subject: ENQ 30815 - Llanddulas to Kinmel Bay Coastal Defence

Ceri

I have had the opportunity to read the documents associated with the above planning enquiry.

I have no comment or observations to make

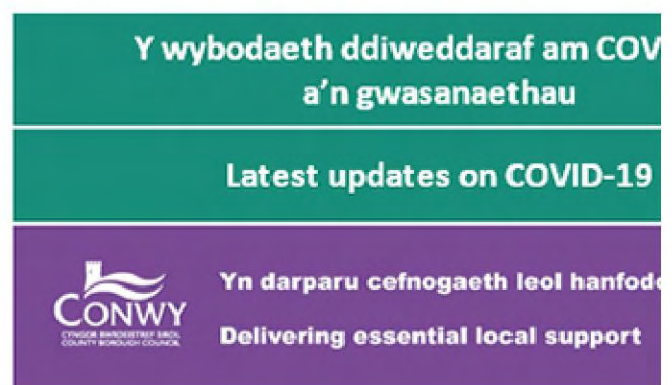
Regards

Huw

Huw R Williams
Pen Swyddog Iechyd yr Amgylchedd / Principal Environmental Health Officer
Gwasanaethau Rheoleiddio a Thai / Regulatory and Housing Services
Cyngor Bwrdeistref Sirol CONWY County Borough Council
E-bost/E-mail: huw.williams@conwy.gov.uk
Gwe/Web: www.conwy.gov.uk/gorfodaethai / www.conwy.gov.uk/housingenforcement
Ffon/Tel (01492) 574180

Sefyllfa Bresennol Gwasanaethau'r Cyngor | Council Services Current Situation

Rydym yn croesawu gohebiaeth yn y Gymraeg a'r Saesneg fel ei gilydd. Ni fydd gohebiaeth yn yr un iaith na'r llall yn arwain at unrhyw oedi. We welcome correspondence in both Welsh and English. We will respond to correspondence in either language without delay.



A.9 Summary of comments raised in the Scoping Responses and where the comment is addressed in the ES

Table 3-1: Summary comments raised in the EIA Scoping Opinion Response and where the comment is addressed in the ES.

Consultee	Summary of comment	Where in the ES
Natural Resources Wales – Biodiversity and Nature Conservation	Identify impact pathways for protected sites, clearly assess the possible levels of impact and, where impacts are likely, should provide full details of appropriate mitigation measures to address those impacts. In relation to Special Protection Areas or Special Areas of Conservation, a 'Shadow' Habitats Regulations Assessment to be prepared, based on the same supporting information.	Chapter 4: Ecology
	Both wintering and breeding birds during both constructional and operational phases of the scheme are scoped in.	Chapter 4: Ecology
	Include spring and summer observations of cormorant along the stretch, to determine where this Special Protection Area assemblage feature regularly occurs.	Chapter 4: Ecology
	Impact pathways to marine mammals are assessed in the ES and Shadow HRA, including from noise and vibration generated during construction. If material is transported to site by sea, noise/vibration and collision impact pathways are assessed.	Chapter 4: Ecological
	The following species are scoped into the ES: Harbour porpoise, Bottlenose dolphin, Grey seal, Minke whale, Common dolphin, and Rissos's dolphin.	Chapter 4: Ecology
	Where any impact pathways of marine mammals from the project exist, sites to be included within the HRA are based on the species-specific Marine Mammal Management Unit that the project is within.	Chapter 4: Ecology
	The Menai Strait, Conwy Bay SAC, and the Dee Estuary SAC are scoped in until the Zones of Influence is determined.	Chapter 4: Ecology
	Zol is established for potential impacts on marine features.	Chapter 4: Ecology
	Potential effects of marine Invasive Non-Native Species (INNS) must be included and scoped into this section for construction and operational activities.	Chapter 4: Ecology
	Intention to undertake a biosecurity risk assessment as part of the proposal.	Chapter 4: Ecology
	Impact pathways from the project to fish migrating into, and out of, the River Clwyd as assessed in the Environmental Statement, specially including from noise and vibration generated during construction.	Chapter 4: Ecology
	The following species are scoped in to the ES: Atlantic salmon, Sea trout, River lamprey, Sea lamprey, and European eel.	Chapter 4: Ecology
	Any improvements that could be made to the structure to enable fish passage and gravel to move downstream should be included in the scope of the coastal defence options.	Chapter 4: Ecology
	The site is subject to assessment to determine the likelihood of protected species and that targeted species surveys are undertake for all species scoped in.	Chapter 4: Ecology
	Should protected species be found during the surveys, information must be provided identifying the species-specific impacts in the short, medium and long-term together with any mitigation and compensation measures proposed to offset the impacts identified.	Chapter 4: Ecology

Consultee	Summary of comment	Where in the ES
	In relation to European Protected Species that, in addition to consideration of significance, the assessments also considers current conservation status of all local populations; and favourable conservation status of all local populations.	Chapter 4: Ecology
	Detail biosecurity measures, which should include measures to control, remove or for the long-term management of invasive species both during construction and operation.	Chapter 4: Ecology
Natural Resources Wales – Coastal Processes	A standalone chapter on coastal processes which identifies the Zones of Influence (Zoi) based on the area in which the scheme effects can affect the receptor/pathway under assessment. Further information regarding how the Zoi has been identified must be provided.	Chapter 6: Coastal Processes
	Periodic beach replenishment is considered as part of the scheme management within the application.	N/A
	A Construction Environmental Management Plan (CEMP) will need to be developed and agreed as part of the scheme, including, but not limited to, rock storage and sediment management.	Appendix H
	Confirmation on the sediment source, mineralogy, quantity, and size fraction in relation to the receiving environment would be expected as part of the ES.	N/A
	All sediment is kept within the active marine zone, that is appropriate (i.e. not contaminated) and not used within construction zones.	Outline construction methodology
	The Shoreline Management Plan is used and referenced within the ES.	Chapter 6: Coastal processes
	The scheme's 'hard permanent' footprint is as small as possible to ensure minimum impact to the marine environment.	Section 2.6
	Monitoring is expanded upon within the ES to discuss what evidence there is from previous monitoring around the coastal processes and beach levels and what is proposed post construction.	Chapter 6: Coastal processes
	Direct (footprint) and indirect (scour, erosion, accretion, smothering, prime) impacts, because of the scheme are assessed within the ES.	Chapter 6: Coastal processes
Natural Resources Wales – Water Environment	The consideration of potential water quality effects highlighted must be considered within the ES.	Chapter 7: Hydrology and Hydrogeology
	Mitigation measures should be specified in sufficient detail at the time of the planning.	Chapter 7: Hydrology and Hydrogeology
	Chemical (and bacterial) analysis of sediment may be required if the works are to disturb sediments of an appropriate size. The results of chemical analysis should be compared to the CEFAS action levels.	N/A
	All WFD water bodies that fall within the zone of influence of the project, when defined, or for which there are biotic/migratory pathways must be included in the WFD assessment to understand the potential interactions of the project and WFD.	Appendix E.1
	WFD Assessment can be provided as a chapter of the ES, or as a stand-alone document. It should draw upon technical assessments carried out as part of the wider ES but assessments should be contextualised in terms of potential project effects on the status and objectives of WFD water bodies.	Appendix E.1

Consultee	Summary of comment	Where in the ES
	It must be ensured that the scheme will not increase flood risk associated with these other sources of flood risk.	Appendix E.2
Conwy County Borough Council – Countryside	Transport routes for supply of constructional material and equipment is included in the impact assessments whether routes are proposed by sea or land.	Section 2.7
	Biosecurity risk assessment is included within the scope of the Environmental Statement.	Chapter 4. Ecology
	Appropriate measures that provide a net benefit for biodiversity and go beyond simply mitigating impacts, therefore, need to be incorporated, specified, and located within the proposals detailed in the ES.	Chapter 4: Ecology
	The stretch of proposals from Llanddulas jetty to the Clwyd Estuary fall within the North Wales Coast Important Bird Area, important for wintering water birds, and <i>Tadorna tadorna</i> and <i>Charadrius hiaticula</i> breed along the shoreline. This designated site and its features, therefore, need to be included within the scope of the ES.	N/A
	A preliminary ecological assessment of all structures, trees and/or vegetation that may be used by roosting bat or nesting birds and a habitat map of all terrestrial coastal habitats within the areas to be impacted.	Chapter 4: Ecology
	An assessment of impacts on marine cetaceans as designated features of North Wales Special Areas of Conservation, bottle nose dolphin, seals, harbour porpoise are also considered and scoped in.	N/A
	Assessment of impacts on terrestrial protected species and any notable plants to be included in the ES, include but not restricted to breeding birds, reptiles, and hedgehog.	Chapter 4: Ecology
Conwy County Borough Council – Highways	A Transport Statement will be submitted to support the application.	Chapter 11: Traffic and Transportation
	A Construction Traffic Management Plan (CTMP), agreed with the CCBC should be prepared to ensure that the management and measures contained within the document minimise the impacts of the construction traffic on existing users of the public highway network. It should set out agreed routing, timing, signing, access locations and access routes relating to the proposal.	Chapter 11: Traffic and Transportation
Cadw	Initial work should be carried out in accordance with the “Standards and Guidance for Desk-Based Historic Environment Assessment” produced by the Chartered Institute of Archaeologists, and this should include consulting documentary, cartographic, aerial photographic and Lidar information as well as the detailed information held in the Historic Environment Record.	Chapter 7: Cultural Heritage
	A walkover survey should also be carried out after the desk-based work to clarify the evidence produced during that phase of the study. There may also be a need for geophysical survey and archaeological watching briefs to be maintained during any geotechnical test pitting, to identify any buried archaeological features.	Chapter 7: Cultural Heritage
	The impact of the proposed scheme on the settings of the designated historic assets should be assessed in accordance with the guidance given in the Welsh Government document “The Setting of Historic Assets in Wales”. It is expected that the stage 1 assessment will be carried out for all the designated heritage assets identified above as	Chapter 7: Cultural Heritage

Consultee	Summary of comment	Where in the ES
	being inside 3km of the proposed scheme, which will determine the need, if necessary, for stages 2 to 4 to be carried out for specific heritage assets. The results of the stage 1 assessment should be included in the DBA as an appendix.	
CPAT	Baseline information on currently recorded and any potentially new heritage assets within the study area gathered from the National Monuments Record, RCAHMW and the Historic Environment Record at Clwyd-Powys Archaeological Trust along with documentary and cartographic sources in the archives at the National Library of Wales and Conwy County Archives where these are available. In addition, the NEW LIDAR data should be examined for any visible surface remains.	Chapter 7: Cultural Heritage
	A systematic walkover survey should be completed of the beach and shore area where any ground disturbance will take place at each works site to identify any previously unrecorded archaeology. Features should be mapped using survey grade GPS and transcribed to scale drawings, described in detail and any appropriate mitigation suggested.	Chapter 7: Cultural Heritage
	Archaeological contractors will need to submit a written scheme of investigation for approval before the assessment commences and the findings should be fully reported and archived in accordance with CIFA standards and guidance. The reports and digital archive will be sent to the HER, CPAT and NMR, RCAHMW for comment.	Chapter 7: Cultural Heritage and Outline CEMP.
	The resulting report will inform us about the archaeological potential of the beach and frontage area where there may be previously unrecorded archaeology related to former prehistoric land surfaces buried by marine transgression and archaeology of all later periods related to activity on the shoreline including any ship/boat or aviation wrecks that may be present. Additional assessment may be required as a result of this report which may include geophysical survey and/or drone photogrammetry of the present beach conditions and any surface remains.	Chapter 7: Cultural Heritage
County Borough Council – General	The ES should identify all the parcels comprised in the development, including any areas to be used as construction compounds and areas used for the movement of vehicles, irrespective of whether they are included in the planning application.	Section 2.7
Welsh Government - Transport	Transport Assessment may be required, using the correct data collected at the relevant time. Multiple data sets may be required depending on if the proposals require road closure periods etc, especially if they coincide with trunk road embargo periods.	Chapter 11: Traffic and Transportation
	Transport Assessment should highlight the most probable period of works and clarifies if road closures, lane closures, contraflow working, or any traffic signals will be required.	Chapter 11: Traffic and Transportation
Natural Resources Wales – Marine Licensing	Ensure that reference is made to and consideration of compliance with the UK Marine Policy statement and the now published Welsh National Marine Plan and its associated policies, alongside further regional planning documentation.	Section 2.2.5
	Add an objective to the EIA which covers the Environment Act and Wellbeing of Future Generations Act to ensure biodiversity is maintained and enhanced and mentions the SSSI and its features.	Section 2.2

Consultee	Summary of comment	Where in the ES
	Recommend it is important to note that some ongoing maintenance will be required (i.e., beach level replenishment) although it has been minimised through scheme selection.	Chapter 6: Coastal Processes
	Advise that CMU 3-2B has a history of not only flooding from the sea but also fluvial flooding from the main river and surface water flooding. It must be ensured that this scheme will not increase flood risk associated with these other sources of flood risk, nor should the outfall of the Dulas onto the beach lead to an increase in maintenance requirements.	Appendix E.1
	Advise a mixed approach should be advocated for CMU 3.3 immediately west of the SSSI and CMU 3.5c.	N/A
	Expectation to see a standalone chapter on marine/coastal physical processes.	Chapter 6: Coastal Processes
	Expect a Zone of Influence is identified in the ES, based on the area in which the scheme effects can be felt by the receptor/ pathway under assessment. Advice on how the ZOI should be established should be sought from NRW Coastal Processes specialist.	Chapter 6: Coastal Processes
	Confirmation on the sediment source, mineralogy, quantity and size fraction in relation to the receiving environment is expected as part of the ES.	N/A
	Advise all sediment that is not used with construction of defences and not contaminated is kept within the active marine zone.	Section 2.7
	Expects that the Shoreline Management Plan is used and referenced within the ES.	Section 2.2
	Advise direct (footprint) and indirect (scour, erosion, accretion, smothering, plume) impacts, because of the scheme are assessed within the ES.	Chapter 6: Coastal Processes
	It is recommended that this monitoring is discussed within the scoping report is expanded upon within the ES to discuss what evidence there is from previous monitoring around the coastal processes and beach levels and what is proposed post construction.	Chapter 6: Coastal Processes
	The outputs of the coastal processes modelling should determine whether there are any potential impacts on these protected sites. However, in the absence of this information at present, we advise both the Menai Strait and Conwy Bay SAC, and the Dee Estuary SAC are scoping in until the ZOI is determined.	Chapter 6: Coastal Processes
	The potential effects of marine Invasive Non-Native Species (INNS) must be included and scoped into this section for construction and operational activities.	Chapter 4: Ecology
	There a number of sensitive Section 7 habitats present that are listed under the Environment Wales (Act) 2016 as habitats of principle importance for the purpose of maintaining and enhancing biodiversity in Wales. Blue mussel beds are present along the coast adjacent to Llanddulas, with smaller beds along the coast near Pensarn and Kinmel Bay. <i>Sabellaria alveolate</i> reef is also present along the coast adjacent to Llanddulas. We advise these habitats are screened into the EIA and that potential impacts on these habitats are identified and mitigated.	Chapter 4: Ecology
	Advise that impact pathways from the project to marine mammals are assessed in the ES and HRA specifically including from noise and vibration generated during construction.	Chapter 4: Ecology and Appendix B.6.

Consultee	Summary of comment	Where in the ES
	If material is transported to site by sea, we advise that noise/vibration and collision impact pathways are assessed for this activity in relation to marine mammals.	N/A
	Advise that the ES includes a chapter on marine mammals in which we recommend the following species are considered: Harbour porpoise, Bottlenose dolphin. Grey seal, Minke whale, Common dolphin and Rissos's dolphin.	Chapter 4: Ecology
	Any impact pathways to marine mammals from the project exist, we advise sites to be included within the HRA are based on the species specific Marine Mammal Management unit (MMMU) that the project is within.	Chapter 4: Ecology
	Advise that impact pathways from the project to fish migrating into and out of, the River Clwyd are assessed in the ES specifically including from noise and vibration generated during construction. NRW advice that the ES includes a chapter on fish impact sin which the following species are scoped into the ES: Atlantic salmon, Sea trout, River lamprey, and European eel.	Chapter 4: Ecology
	Advise that both wintering and breeding birds during both construction and operational phases of the scheme are scoped into the EIA.	Chapter 4: Ecology
	Ringed Plover mentioned in the scoping report, are listed as a priority species on Section 7 of the Environment (Wales) Act (2016. We advise that Ringed Plover should be scoped into the EIA.	N/A
	Advise it would be useful to include spring and summer observations of cormorant long the stretch, to determine where this SPA assemblage feature regularly occurs.	Chapter 4: Ecology
	Advise that the Guidance for Pollution Prevention documents, particularly GPP5 (Works and maintenance in or new water) should be referred to for guidance.	Chapter 4: Ecology
	Advise that Chemical (and bacterial) analysis of sediments may be required if the works are to disturb sediments of an appropriate size. Results of chemical analysis are found to be above level 1 management actions must be proposed. Sediments above action level 2 must be disposed to land at a licenced waste disposal site.	N/A
	Advise that all WFD water bodies that fall within Zol of the project, when defined, or for which there are biotic/migratory pathways must be included in the WFD assessment to understand the potential interactions of the project and WFD.	Appendix E.1
	Within the WFD assessment, both direct and indirect effects will need to be assessed, for each stage of the project. Any cumulative and in-combination effects will also need to be assessed.	Appendix E.1
	Advise that WFD classifications are subject to a 6-yearly review and that Cycle 3 (2021) classifications will be released shortly, which should be used to inform the WFD assessment.	Appendix E.1
	Advise that the WFD Assessment can be provided as a chapter of the ES, or as a stand-alone document. It should largely draw upon technical assessments carried out as part of the wider ES, but assessments should be contextualised in terms of potential project effects on the status and objectives of WFD water bodies.	Appendix E.1

Consultee	Summary of comment	Where in the ES
	NRM draw attention that no reference is made to ensuring biodiversity is maintained and enhanced as required by the Environment Act and Wellbeing of Future Generations Act.	Section 2.2.6
	Advice that Section 5 Environmental enhancements is expanded upon to include biodiversity enhancements to the coastal defence.	Chapter 4: Ecology
	ES should contain a chapter on archaeology, including archaeological assessment which addresses potential impacts arising from: beach/shoreline excavation for insertion of new revetments and drainage, the movement of heavy plant machinery across the beach, works compounds and material dumping areas on the beach, access routes onto the beach.	Chapter 8: Cultural Heritage

B Ecology

B.1 Legislative and Planning Context

Planning Policy Wales

Planning Policy Wales is the national land-use planning policy document for Wales. PPW sets out the land use policies of the Welsh Government and provides context for land use planning in Wales. In light of the Well-being of Future Generations (Wales) Act 2015, PPW has been restructured into policy themes which reflect the well-being goals and policy updated where necessary to reflect Welsh Government strategies and policies. The revision to PPW are currently under consultation. The draft of PPW Edition 10 has been reviewed during the production of this report to ensure that any changes to PPW likely to take place in the coming months are considered and this report remains current.

PPW sets out the land use planning policies of the Welsh Government and provides the context for land use planning in Wales. It is supplemented by a series of Technical Advice Notes and policy clarification letters. National planning policy should be taken into account in the preparation of all tiers of a development plan. PPW will sit alongside the National Development Framework which will set out where nationally important growth and infrastructure is needed and how the planning system at a national, regional and local level can deliver it by providing direction for Strategic Development Plans and Local Development Plans. The suite of documents translates the commitment to sustainable development into the planning system so that it can play an appropriate role in maximising the contribution towards the achievement of the well-being goals and ways of working set out in the Well-being of Future Generations (Wales) Act 2015.

The Natural and Distinctive Places policy theme covers: landscape, historic environment, biodiversity and habitats, coastal characteristics, air quality, soundscape, water services, flooding and other environmental risks.

Section 5.13 states that "Development plan strategies, policies and development proposals should be formulated to look to the long-term protection and enhancement of the special characteristics and intrinsic qualities of places, be these of natural, historic or built environments, ensuring their longevity in the face of change. This means both protecting and enhancing landscapes, habitats, biodiversity and the historic environment in their own right as well as other components of the natural world, such as water resources or air quality. Problems should be prevented from occurring or getting worse. Biodiversity loss should be reversed, pollution reduced, environmental risks addressed, and overall resilience of ecosystems improved. When appropriate development is proposed, it must be taken forward in an integrated way to ensure common issues are considered and accommodated early on and multiple benefits secured, such as safeguarding or securing green infrastructure."

Section 5.19 states that "Sites designated for their landscape or nature conservation importance are fully considered and their special characteristics and features protected and enhanced, whilst the network of sites should be recognised as being at the heart of improving the resilience of ecosystems."

Section 5.42 highlights the role the planning system performs in reversing the decline in biodiversity and increasing the resilience of ecosystems by ensuring appropriate mechanisms are in place to protect against loss and secure enhancement.

Development proposals must take into account the need to:

- Promote the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- Ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;

- Ensure statutorily designated sites are properly protected and managed;
- Safeguard protected species; and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil; and
- Seek enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

Section 5.57 details the protection for non-statutory designated sites and acknowledges that although the designation carries less weight than statutory designated sites, they make a significant contribution to delivering an ecological network for biodiversity and resilient ecosystems and should be given adequate protection in policy and decision making.

Planning authorities should follow a step-wise approach to protecting and enhancing biodiversity and building resilient ecological networks by ensuring that any adverse environmental effects are minimised and mitigated. Firstly, by retaining biodiversity and green-infrastructure features wherever possible. Secondly, where significant effects are predicted, alternative sites that would result in less or no harm have been considered. Thirdly, attaching planning conditions, obligations or advisory notes to a permission to secure beneficial biodiversity outcomes. And when all options have been exhausted and are insufficient to secure beneficial environmental outcomes, offsite compensation for unavoidable damage should be sought. Finally, where the adverse effect on the environment clearly outweighs other material considerations, the development should be refused.

Environment (Wales) Act 2016

The Environment (Wales) Act 2016 delivers a programme for the Welsh Government's commitment to introduce new legislation for the environment. Part 1 of the Act, regarding sustainable management of natural resources, includes provisions for Biodiversity and Resilience of Ecosystems Duty. This duty replaces and enhances the Natural Environment and Rural Communities (NERC) Act 2006, by requiring all public authorities to not only "maintain and enhance biodiversity" when carrying out their functions in Wales but also to "promote the resilience of ecosystems". This links biodiversity with the long-term health and functioning of Welsh ecosystems, aligning the biodiversity duty with the framework for sustainable natural resource management, also provided within the Environment Wales Act.

The Act also provides a list of the living organisms and types of habitat which are of principal importance for the purpose of maintaining and enhancing biodiversity in Wales (Section 7). This list replaces the habitats and species of principal importance from Section 42 of the NERC Act 2006.

Statutory designated nature conservation sites

Sites with statutory designations receive varying degrees of legal protection under UK statute. There are several statutory designations used for sites of high nature conservation value in the UK, which are applied depending upon the importance of the site in a local, regional, national or international context. This includes:

- Ramsar Sites (International designation)
- Special Areas of Conservation (SAC) and Special Protection Area (SPA) (European designations)
- National Nature Reserves (NNR) and Site of Special Scientific Importance (National designations)
- Local Nature Reserves (LNR) (Local designation)

Non-statutory designated sites

Non-statutory sites are afforded no statutory legal protection, but are normally recognised by local planning authorities and statutory agencies as being of local nature conservation value. The protection afforded to such sites is usually discretionary, through Local Plan policies. Non-statutory sites are designated by the local authority, usually in partnership with the County Wildlife Trust (or equivalent).

Protected species

Several species are protected under UK and international legislation. In the UK, primary protection is provided under the Wildlife and Countryside Act 1981 (as amended). Species of European importance receive additional protection in Wales under the Conservation of Habitats and Species Regulations 2017 (as amended); others may receive protection through specific legislation. Further details on specific species and their levels of protection are provided below.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built
- take, destroy or possess the egg of any wild bird.

Certain species, such as the Barn Owl *Tyto alba*, receive additional protection under Schedule 1, which makes it an offence to intentionally or recklessly disturb birds and also their young at, on or near an active nest.

Badger

Badgers *Meles meles* are protected by the Protection of Badgers Act 1992 and the Wildlife and Countryside Act 1981 (as amended), Schedule 6. Under the Protection of Badgers Act, it is illegal to intentionally kill, capture, injure or ill-treat any Badger. It is also an offence to obstruct, destroy or damage a Badger sett or disturb Badgers within a sett. Disturbance is defined, for development purposes, as any activity that could damage a sett or be greater than what Badgers commonly tolerate.

Bats

All UK bat species are European Protected Species (EPS), protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitat and Species Regulations 2017 (as amended). This makes it an offence to:

- deliberately capture, injure or kill a bat
- intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- intentionally or recklessly obstruct access to a bat roost.

Great Crested Newt

The Great Crested Newt *Triturus cristatus* is an EPS under the Conservation of Habitats and Species Regulations 2017 (as amended). This makes it an offence to:

- kill, capture or disturb a Great Crested Newt
- take or destroy the eggs of a Great Crested Newt
- damage or destroy the breeding or resting places of Great Crested Newt.

It also receives additional protection under the Wildlife and Countryside Act 1981 (as amended) making it illegal to possess or control any Great Crested Newt, living or dead.

Reptiles and other amphibians

Legal protection varies considerably for different species. Smooth Snake *Coronella austriaca*, Sand Lizard *Lacerta agilis* and Natterjack Toad *Epidalea calamita* are EPS, and it is an offence to:

- deliberately kill, capture or disturb these species
- deliberately take or destroy the eggs of these species
- damage or destroy the breeding or resting places of these species.

Under the Wildlife and Countryside Act 1981 (as amended) Adder *Viperus berus*, Grass Snake *Natrix natrix*/*Natrix helvetica*, Common Lizard *Zootoca vivipara* and Slow Worm *Anguis fragilis* are protected from intentional killing or injuring, additionally Common Frog *Rana temporaria*, Common Toad *Bufo bufo* and other newt species are prohibited from sale.

Invertebrates

Numerous invertebrate species receive international under the following legislation:

- The Conservation of Habitats and Species Regulations 2017 (as amended); Annex IIa, Annex Iva and Annex Va
- Council of Europe Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II and III
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- EU CITES Regulations

Approximately 70 species of invertebrate species receive legal protection through Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). There are various levels of protection according to the rarity of the species. Offences include combinations of the following:

- Sale, or offering / exposing for sale
- Possession
- Intentional taking, killing or injuring
- Intentionally / recklessly damaging or destroying its place of shelter / protection
- Intentionally / recklessly disturbing it whilst occupying its place of shelter / protection
- Intentionally / recklessly obstructing access to its place of shelter / protection

Species with full protection under the Act include the Marsh Fritillary *Euphydryas aurinia*, Southern Damselfly *Coenagrion mercuriale* and Violet Click Beetle *Limoniscus violaceus*.

There are also over 400 invertebrate species listed under Section 7 of the Environment (Wales) Act 2016.

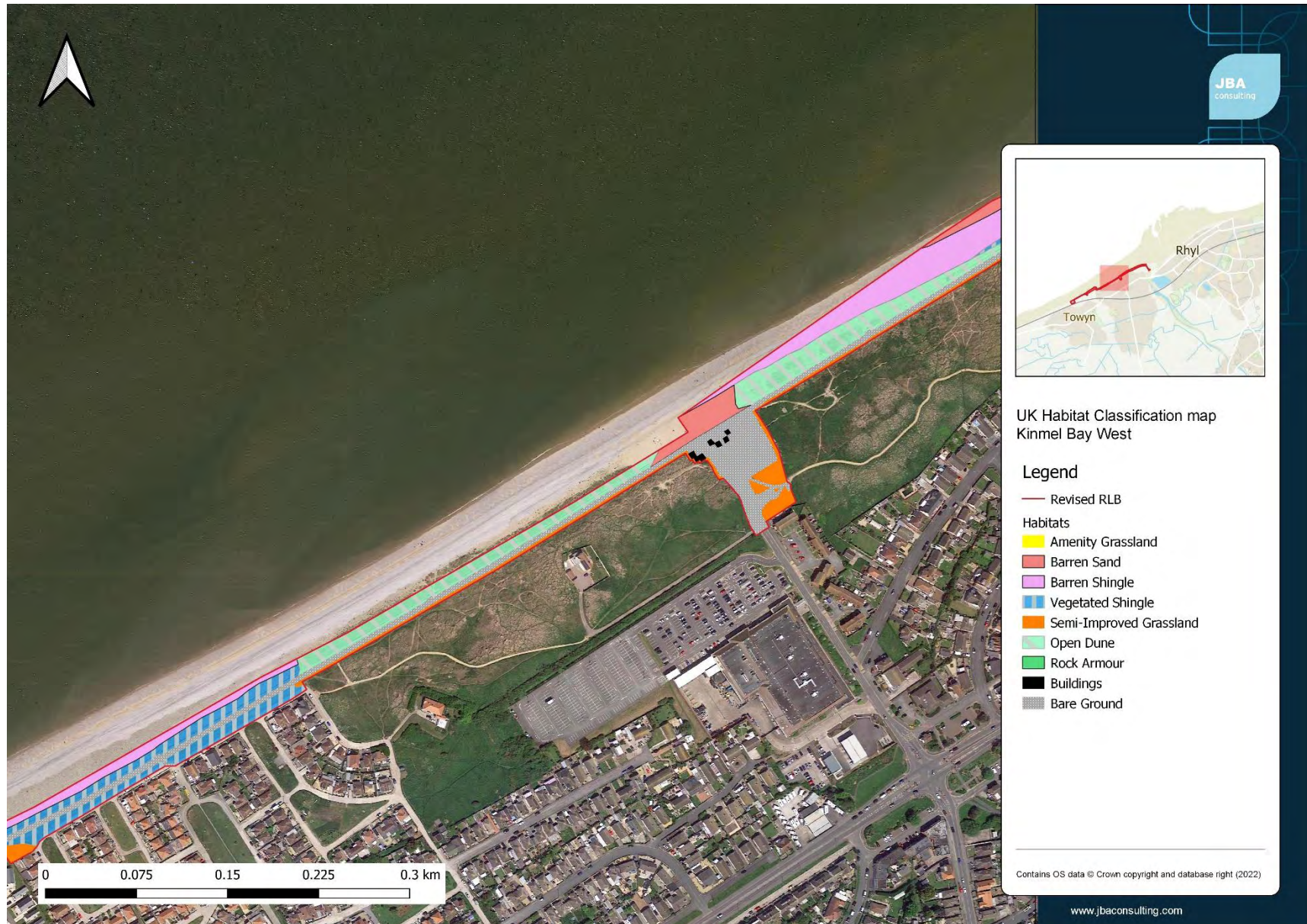
Invasive non-native species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) lists plant species, groups of plants and animal species for which it is illegal to plant, release, allow to escape or cause to spread into the wild. Examples of species listed on Schedule 9, include Japanese Rose *Rosa rugosa*.

Some species are also classed as 'controlled waste' under the Environmental Protection Act 1990 and must be disposed of properly (i.e. Japanese Knotweed *Fallopia japonica* and Giant Hogweed *Heracleum mantegazzianum*). These provisions mean that, if these species occur on a site proposed for development or other work which may disturb the ground, control of these species is likely to be required.

B.2 Phase 1 Habitat Map – Towyn Revetment





B.4 Phase 1 Habitat Map – Kinmel Bay East



B.5 Species mix for grassland enhancement

The below mix of species will be suitable for these areas.

- 5% *Achillea millefolium* – (Yarrow)
- 8% *Anthyllis vulnearia* – (Kidney Vetch)
- 0.5% *Armeria maritima* – (Thrift)
- 5% *Centaurea scabiosa* – (Greater Knapweed)
- 7% *Daucus carota* – (Wild Carrot)
- 4% *Echium vulgare* – (Viper's Bugloss)
- 7% *Galium verum* – (Lady's Bedstraw)
- 2% *Hypericum perforatum* – (Perforate St John's Wort)
- 2% *Hypochaeris radicata* – (Common Cat's-Ear)
- 8% *Leucanthemum vulgare* – (Ox-Eye Daisy)
- 3% *Linaria vulgaris* – (Yellow Toadflax)
- 10% *Lotus Corniculatus* – (Bird's-Foot Trefoil)
- 2% *Ononis repens* – (Common Restharrow)
- 1% *Plantago coronopus* – (Buck's-Horn Plantain)
- 1% *Plantago maritima* – (Sea Plantain)
- 5% *Plantago media* – (Hoary Plantain)
- 7% *Prunella vulgaris* – (Selfheal)
- 7% *Rumex acetosa* – (Common Sorrel)
- 5% *Sanguisorba minor* – (Salad Burnet)
- 0.25% *Sedum album* – (Biting Stonecrop)
- 0.25% *Sedum anglicum* – (English Stonecrop)
- 3% *Silene maritima* – (Sea Campion)
- 4% *Silene vulgaris* – (Bladder Campion)
- 1% *Thymus praecox* – (Wild Thyme)
- 1% *Tragopogon pratensis* – (Goat's Beard)
- 1% *Tripleurospermum maritimum* – (Sea Mayweed)
- 2% *Agrostis stolonifera* – (Creeping Bent)
- 1% *Briza media* – (Quaking Grass)
- 4% *Bromus erectus* – (Upright Brome)
- 32% *Cynosurus cristatus* – (Crested Dog's-Tail)
- 30% *Festuca ovina* – (Sheep's Fescue)
- 25% *Festuca rubra ssp rubra* – (Red Fescue)
- 1% *Koeleria macrantha* – (Crested Hair Grass)
- 4% *Phleum bertolonii* – (Small Timothy)
- 1% *Trisetum flavescens* – (Yellow Oat Grass)

B.6 Habitat Regulations Assessment

Kinmel Bay Coastal Defence Improvements Scheme

Habitats Regulations Screening
Assessment

October 2022

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LDĀ DESIGN
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Revision History

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October 2022	Draft report	Internal review
October 2022	Final report	Amey Consulting

Contract

This report describes work commissioned by Amey Consulting, on behalf of Conwy County Borough Council. Hannah Bard and Jonathan Harrison of JBA Consulting carried out this work.

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Purpose

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Carbon Footprint

JBA is aiming to reduce its per capita carbon emissions.

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Abbreviations

COSHH	Control of Substances Hazardous to Health
HRA	Habitats Regulation Assessment
OBC	Outline Business Case
SAC	Special Area of Conservation
SCI	Sites of Community Importance
SMP	Shoreline Management Plan
SPA	Special Protection Area

1 Project Details

1.1 Introduction

JBA Consulting are currently working with Conwy County Borough Council (CCBC) to deliver the Kinmel Bay Coastal Defence Improvements scheme. Part of the requirements of the scheme is to undertake an assessment of impacts on sites designated under the 'Habitats Directive' (See section 1.3). If any designs change, an additional assessment of the detailed design stage will be required.

1.2 Project Summary

The proposed scheme seeks to improve the standard of coastal flood protection of Kinmel Bay, on the coast of North Wales. Figure 1-1 shows the proposed location of the scheme.

The coastal frontage of the study area consists of a wide shingle beach, creating a popular tourist destination. The section of beach to be developed is designated under the EU Bathing Waters Directive with the sub-tidal area designated as part of the Liverpool Bay Special Protection Area (SPA).

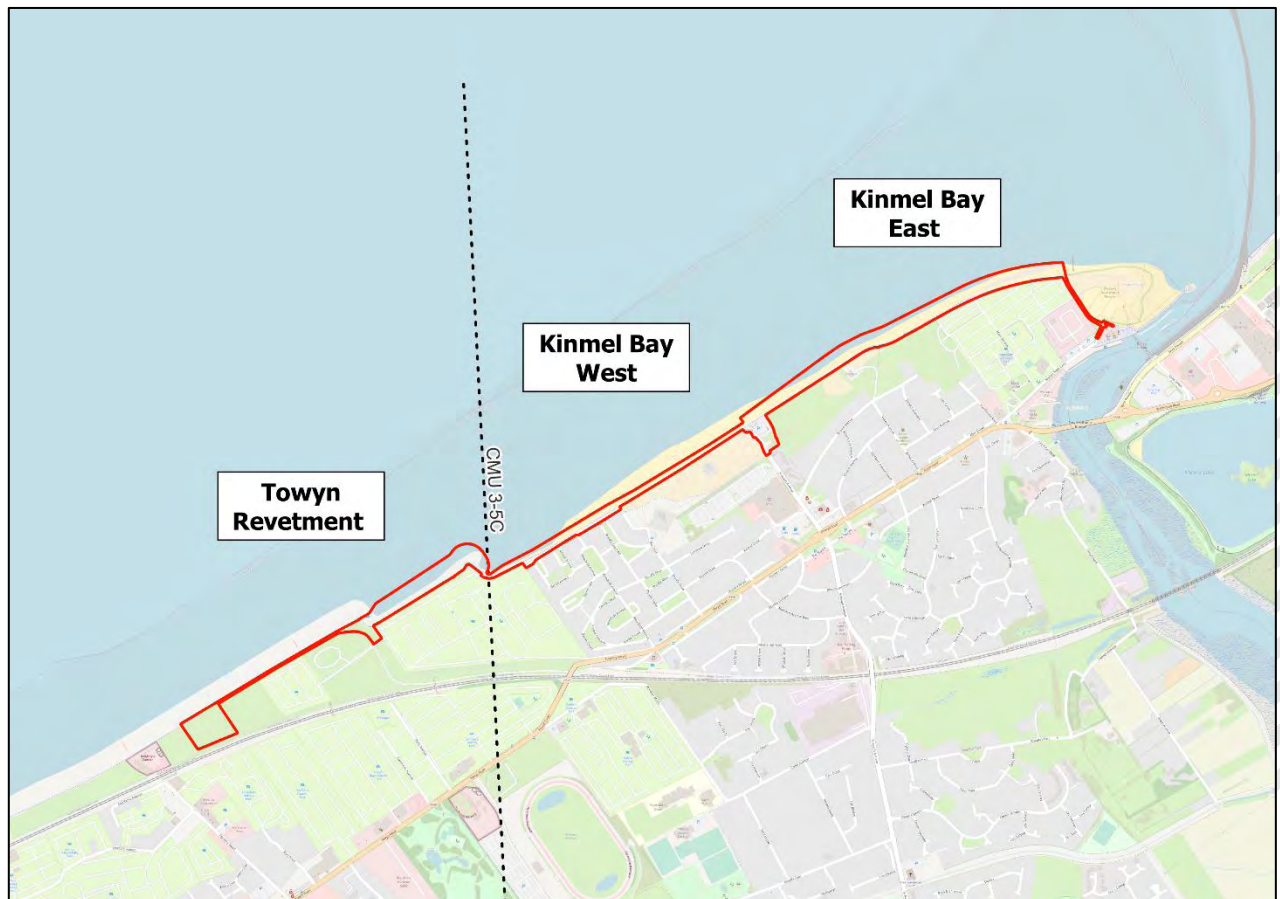


Figure 1-1 Site location and extent

The existing coastal defences comprise of a combination of timber groynes, rock revetment, cobbled beaches, sea walls and floodgates. The stretch is

subject to frequent wave over-topping of the primary defences leading to flooding of nearby homes and local infrastructure.

The preferred option has been sub-divided into 2 sections, as shown in Figure 1-1. The proposed works for each section are shown in Table 1-1 below.

Table 1-1 Proposed works

Reference	Location	Proposed works
CMU 3-5B	Towyn Revetment	Increase the crest width and height of current rock armour unit. Raise existing sea wall. Public realm improvements, including enhancing the existing meadows and a parklet at the eastern end of Towyn Revetment.
CMU 3-5C	Kimnel Bay Beach	Increase the height of the seawall crest along the entire unit. Upgrade/ replace the flood gate at the carpark to be the same level as the wall. Reprofile the level of the entrance of the car park at St Asaph Avenue. Enhance the rock revetment at the western end. Re-instate the sand dunes where necessary. Periodical recharge at the western end of the unit. Public realm enhancements including: a parklet at Sandy Cove, widening the footpath between Sandy Cove and Baysville Grill, enhancements to St Asaph Avenue car park and beach access improvements.

At the eastern extent of the study area, at the mouth of the River Clwyd, lies an extensive system of sand dunes forming the Kimnel Dunes LNR.

1.3 Relevant Legislation

European Union (EU) Directive 92/43/EEC on the conservation of habitats and of wild flora and fauna (known as the 'Habitats Directive') protects habitats and species of European nature conservation importance. Together with Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive'), the Habitats Directive establishes a network of internationally important sites designated for their ecological status. Special Areas of Conservation (SACs) and Sites of Community Importance (SCIs) are designated under the Habitats Directive and promote the protection of flora, fauna and habitats. Special Protection Areas (SPAs) are designated under the Birds Directive to protect rare, vulnerable and migratory birds. These sites combine to create a Europe-wide Natura 2000 network of designated sites, which are generally (and hereafter in this report) referred to as 'European Sites'.

The Conservation of Habitats and Species Regulations 2017 (the 'Habitats Regulations') incorporate all SPAs into the definition of 'European Sites' and, consequently, the protections afforded to European Sites under the Habitats Directive apply to SPAs designated under the Birds Directive.

In addition to sites designated under European nature conservation legislation, UK Government policy (ODPM Circular 06/2005) states that internationally important wetlands designated under the Ramsar Convention 1971 (Ramsar sites) are afforded the same level of protection as SPAs and SACs for the purpose of considering development proposals that may affect them.

A Planning Application and Marine Licence will be required to consent the scheme at a future stage of the project's development.

1.4 Precautionary Principle

The Habitats Regulations Assessment (HRA) process is underpinned by the precautionary principle, especially in the assessment of potential impacts and their resolution. Following recent case law, screening does not consider mitigation measures. If there is any uncertainty, and it is not possible, based on the information available, to confidently determine that there will be no significant effects on a site, then the precautionary principle will be applied, and the project will be subject to an Appropriate Assessment (HRA Stage 2). This represents a precautionary approach to the assessment.

If the Appropriate Assessment cannot determine without reasonable scientific doubt that there will be no adverse effects on site integrity, if no feasible alternative solutions can be found with no or reduced adverse effects, and if there are imperative reasons of overriding public interest (IROPI), compensatory measures are considered. These are distinct from mitigation measures and are required to ensure the coherence of the Natura 2000 network is protected, where adverse effects on site integrity cannot be discounted.

2 Habitats Regulations Assessment Methods

2.1 Overview

Habitat Regulations Assessment follows a four-stage process as outlined in the Habitats Regulations Assessment Handbook (DTA, 2019) and summarised in Table 2-1. Error! Reference source not found. below.

This report provides evidence to support Stage 1 and Stage 2 of the HRA process, to provide the Competent Authority(s) with information to make their assessment.

Table 2-1. The HRA Process

HRA stage	Description
Stage 1: Screening	This process identifies the likely significant effects upon a European site of a project or plan, either alone or in-combination with other projects or plans and determines whether these impacts are likely to be significant. Following the recent ECJ judgement in the case of "people over wind" (Case C-323/17). Measures that are necessary to avoid or reduce impacts on the European site, even when considered standard environmental best-practice, can only be at Stage 2. If no likely significant effect is determined, the project or plan can proceed. If a likely significant effect is identified, stage 2 is commenced.
Stage 2: Appropriate	Stage 2 is subsequent to the identification of likely significant effects upon a European

HRA stage	Description
Assessment	site in stage 1. This assessment determines whether a project or plan would have an adverse impact on the integrity of a European site, either alone or in combination with other projects or plans. This assessment is confined to the effects on the internationally important habitats and species for which the site is designated (i.e. the interest features of the site). Appropriate Assessments, in line with ECJ Case C-461/17 Holohan v An Bord Pleanála, must also consider impacts upon habitats and species within or outside of a site boundary if they support a qualifying feature and could impact upon the conservation objectives of the site. If no adverse impact is determined, the project or plan can proceed. If an adverse impact is identified, stage 3 is commenced.
Stage 3: Assessment where no alternatives and adverse impacts remain	Where a plan or project has been found to have adverse impacts on the integrity of a European site, potential avoidance/mitigation measures or alternative options should be identified. If suitable avoidance/mitigation or alternative options are identified, that result in there being no adverse impacts from the project or plan on European sites, the project or plan can proceed. If no suitable avoidance/mitigation or alternative options are identified, as a rule the project or plan should not proceed. However, in exceptional circumstances, if there is an 'imperative reason of overriding public interest' for the implementation of the project or plan, consideration can be given to proceeding in the absence of alternative solutions. In these cases, compensatory measures will have to be put in place to offset any negative impacts.
Stage 4: Compensatory measures	Stage 4 comprises an assessment of the compensatory measures where, in light of an assessment of imperative reasons of overriding public interest, it is deemed that the project should proceed.

2.2 Guidance

The methodology used for this assessment is based on guidance in The Habitats Regulations Assessment Handbook (DTA, 2019). In addition, the following guidance documents were also consulted:

- European Commission Notice: Managing Natura 2000 sites. The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018)

- UK Government Guidance on the Use of Habitats Regulations Assessment (UK Government, 2019).

2.3 Assumption and Limitations

Information on the works and conditions on site are based on current knowledge at the time of writing.

Cumulative impacts are based on published documentation. If other projects with the potential for cumulative impacts are identified, it may be necessary to re-assess this project.

3 European Sites

3.1 Identification of European Sites

European sites within a 5km radius of the proposed were screened.

The following site was identified in this process:

- The Liverpool Bay SPA

This European site is shown in relation to the proposed works in Figure 3-1 below.

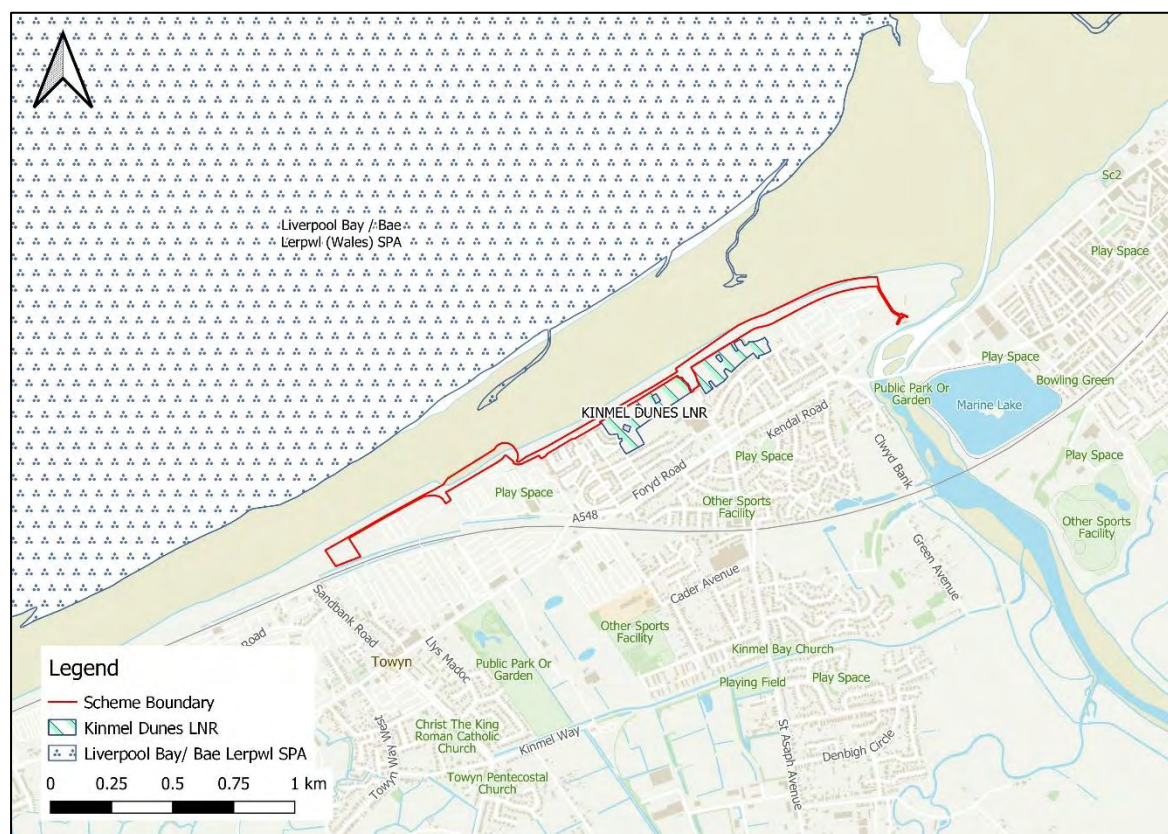


Figure 3-1: European and other statutory designated sites identified.

3.2 Liverpool Bay (Bae Lerpwl) SPA

3.2.1 Qualifying Features

- The site qualifies under Article 4.1 of the Birds Directive (2009/147/EC) as it is used regularly by 1% or more of the Great

Britain populations of the following species listed in Annex I in any season:

- o Red-throated diver *Gavia stellata* (non-breeding)
- o Little gull *Hydrocoloeus minutus* (non-breeding)
- o Little tern *Sternula albifrons* (Breeding)
- o Common tern *Sterna hirundo* (Breeding)
- The site qualifies under Article 4.2 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed in Annex I) in any season:
 - o Common scoter *Melanitta nigra* (non-breeding)
- The site qualifies under SPA selection stage 1.3 as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season:
 - o In the non-breeding season, the site regularly supports at least 69,687 (2004/05 – 2010/11) individual waterbirds.
- The main components of the assemblage include all of the non-breeding qualifying features listed above, as well as an additional two species present in numbers exceeding 1% of the GB total:
 - o Red-breasted merganser *Mergus serrator* (non-breeding) and
 - o Great cormorant *Phalacrocorax carbo*. (non-breeding).

3.2.2 Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

4 Determining the need for a Habitats Regulations Assessment

Is the whole of the project directly connected with or necessary to the management of one or more Natura 2000 sites, for the purposes of conserving the habitats or species for which the Natura 2000 site(s) is/are designated?	No
Is there a possibility that the project could affect a different Natura site to the one(s) the project is intended to conserve?	N/A
Is it necessary to carry out an HRA?	Yes

5 Considering the likelihood of a significant effect (LSE)

Table 5-1. Likelihood of significant effects

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
Screening assessment			
	Assessment of likelihood of significant effect		
	The screening assessment should indicate the possible pathways through which the project may impact upon relevant Natura 2000 site features. Each designated feature (taken from the official Natura 2000 designation documents) should be recorded in the left-hand column below.		
	Column II should indicate whether there is a potential impact pathway that would result in significant effects upon a Natura 2000 site.		
	Column III proposes any mitigation that could remove the impact pathway or reduce the significant effects. If there are no impact pathways, then mitigation is labelled as N/A.		
	There is no impact pathway for significant effects to occur		
	There is an impact pathway in principle, but there are likely no significant effects		
There is an impact pathway and significant effects cannot be ruled out			
	I Potential Hazards	II Potential impact pathway	III Proposed mitigation
Liverpool Bay SPA			
Interest Feature: Annex I species (non-breeding) Red-throated diver Little Gull	Land-take during construction and operation	The works will result in loss of terrestrial habitat; however, this habitat is seen as low value to birds listed as qualifying features of the SPA. No loss of intertidal habitat is expected that could impact upon the designated site. All works will be undertaken in the dry and therefore no impacts to	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
		offshore bird assemblages are foreseen.	
	Noise and visual disturbance during construction	Several overwintering bird surveys have been completed within the scheme area during which no significant numbers of Red-throated diver or Little Gull were recorded. There is already regular noise generated from the sea front at Kinmel Bay and the caravan parks, and additional noise from construction is unlikely to be significant. Given the number of birds recorded within the scheme area and the amount of intertidal habitat available it is considered that in the unlikely event that disturbance occurs, birds have the ability to move and therefore there will be no significant impact to bird species listed as qualifying features of the SPA as part of the proposed works.	N/A
	Release of harmful chemicals from machinery or works during construction	Appropriate pollution prevention measures (as outlined below in section 5.2) will be carried out as part of the works with standard	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
		procedures to be outlined and followed as part of the CEMP. Any harmful chemicals will be stored in accordance with COSHH within the secure construction compounds. Most chemicals entering the tidal zone will be contained within vehicles, and therefore of small volume. With the appropriate pollution prevention measures put in place it is not considered that any pollution events will occur and cause a significant impact to bird species within the SPA.	
	Alteration of coastal morphology processes during operation	A detailed coastal processes study has been undertaken and concluded that the changes to the morphology of the coastline as a result of the proposed scheme will have no foreseen impact on the longshore coastal processes within the site boundary or the wider area.	N/A
Interest Feature: Annex I species (Breeding) Little Tern	Land-take during construction and operation	The works will result in loss of terrestrial habitat; however, this habitat is seen as low value to birds listed as qualifying features of the SPA. No loss of intertidal	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
Common Tern		habitat is expected that could impact upon the designated site.	
	Noise and visual disturbance during construction	Several breeding bird surveys have been completed within the scheme area during which no significant numbers of Little tern or Common were recorded. There is already regular noise generated from the sea front at Kinmel Bay and the caravan parks, and additional noise from construction is unlikely to be significant. Given the number of birds recorded within the scheme area and the amount of intertidal habitat available it is considered that in the unlikely event that disturbance occurs, birds have the ability to move and therefore there will be no significant impact to bird species listed as qualifying features of the SPA as part of the proposed works.	N/A
	Release of harmful chemicals from machinery or works during construction	Appropriate pollution prevention measures (as outlined below in section 5.2) will be carried out as part of the works with standard procedures to be outlined and	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
		followed as part of the CEMP. Any harmful chemicals will be stored in accordance with COSHH within the secure construction compounds. Most chemicals entering the tidal zone will be contained within vehicles, and therefore of small volume. With the appropriate pollution prevention measures put in place it is not considered that any pollution events will occur and cause a significant impact to bird species within the SPA.	
	Alteration of coastal morphology processes during operation	A detailed coastal processes study has been undertaken and concluded that the changes to the morphology of the coastline as a result of the proposed scheme will have no foreseen impact on the longshore coastal processes within the site boundary or the wider area.	N/A
Interest Feature: Migratory Species: Common scoter	Land-take during construction and operation	The works will result in loss of terrestrial habitat; however, this habitat is seen as low value to birds listed as qualifying features of the SPA. No loss of intertidal habitat is expected that could impact upon the designated site.	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
		All works will be undertaken in the dry and therefore no impacts to offshore bird assemblages are foreseen.	
	Noise and visual disturbance during construction	Several overwintering bird surveys have been completed within the scheme area during which no significant numbers of Common scoter were recorded. There is already regular noise generated from the sea front at Kinmel Bay and the caravan parks, and additional noise from construction is unlikely to be significant. Given the number of birds recorded within the scheme area and the amount of intertidal habitat available it is considered that in the unlikely event that disturbance occurs, birds have the ability to move and therefore there will be no significant impact to bird species listed as qualifying features of the SPA as part of the proposed works.	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
	Release of harmful chemicals from machinery or works during construction	Appropriate pollution prevention measures (as outlined below in section 5.2) will be carried out as part of the works with standard procedures to be outlined and followed as part of the CEMP. Any harmful chemicals will be stored in accordance with COSHH within the secure construction compounds. Most chemicals entering the tidal zone will be contained within vehicles, and therefore of small volume. With the appropriate pollution prevention measures put in place it is not considered that any pollution events will occur and cause a significant impact to bird species within the SPA.	N/A
	Alteration of coastal morphology processes during operation	A detailed coastal processes study has been undertaken and concluded that the changes to the morphology of the coastline as a result of the proposed scheme will have no foreseen impact on the longshore coastal processes within the site boundary or the wider area.	N/A
Interest Feature:	Land-take during construction and operation	The works will result in loss of terrestrial habitat; however, this	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
Waterbird assemblage		habitat is seen as low value to birds listed as qualifying features of the SPA. No loss of intertidal habitat is expected that could impact upon the designated site. All works will be undertaken in the dry and therefore no impacts to offshore bird assemblages are foreseen.	
	Noise and visual disturbance during construction	Several overwintering bird surveys have been completed within the scheme area during which no significant numbers of overwintering birds were recorded. There is already regular noise generated from the sea front at Kinmel Bay and the caravan parks, and additional noise from construction is unlikely to be significant. Given the number of birds recorded within the scheme area and the amount of intertidal habitat available it is considered that in the unlikely event that disturbance occurs, birds have the ability to move and therefore there will be no significant impact to bird species listed as qualifying features	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
		of the SPA as part of the proposed works.	
	Release of harmful chemicals from machinery or works during construction	Appropriate pollution prevention measures (as outlined below in section 5.2) will be carried out as part of the works with standard procedures to be outlined and followed as part of the CEMP. Any harmful chemicals will be stored in accordance with COSHH within the secure construction compounds. Most chemicals entering the tidal zone will be contained within vehicles, and therefore of small volume. With the appropriate pollution prevention measures put in place it is not considered that any pollution events will occur and cause a significant impact to bird species within the SPA.	N/A
	Alteration of coastal morphology processes during operation	A detailed coastal processes study has been undertaken and concluded that the changes to the morphology of the coastline as a result of the proposed scheme will have no foreseen impact on the longshore coastal processes within	N/A

Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: Liverpool Bay SPA.		
		the site boundary or the wider area.	

5.1 Pollution Prevention Measures

Appropriate pollution prevention measures will be implemented to ensure that the habitats within proximity of the works, including the Liverpool Bay SPA are not degraded as a result of pollution events during the construction phase. This mitigation will include:

- Following relevant guidance e.g. CIRIA Guidance: Control of water pollution from construction sites. Guidance for consultants and contractors (C532D) (Masters-Williams, 2001), including the delivery of toolbox talks to site staff.
- Any chemical, fuel and oil stores will be located on impervious bases within a secured bund with a storage capacity 110% of the stored volume.
- Biodegradable oils and fuels will be used where possible.
- Drip trays will be placed underneath any standing machinery to prevent pollution by oil/fuel leaks. Refuelling of vehicles and machinery will be carried out on an impermeable surface in one designated area well away from any watercourse or drainage (at least 10m) with capture of any spillages.
- Emergency spill kits will be available on site and staff trained in their use.
- Operators will check their vehicles on a daily basis before starting work to confirm the absence of leakages. Any leakages will be reported immediately.
- Daily checks will be carried out and records kept on a weekly basis and any items that have been repaired/replaced/rejected noted and recorded. Any items of plant machinery found to be defective will be removed from site immediately or positioned in a place of safety until such time that it can be removed.
- This mitigation is industry standard practice and as a result will be incorporated into the project through the Environmental Management Plan (EMP).

6 Cumulative Impacts

Table 6-1. Assessment of Cumulative Impacts

Development	Description	Potential for cumulative effects
East Rhyl Coastal Defence Scheme	The East Rhyl Coastal Defence Scheme is a proposed development to add a rock armour revetment to strengthen the East Rhyl area from coastal flooding. The rock armour would be approximately 600m long and 30m wide. It is also proposed that the current sea wall be replaced with a larger structure. It is expected that the construction phase of the site would be completed by the time any work on this scheme would begin.	Works should be completed by time works start, so unlikely for cumulative impact
Central Rhyl Coastal Defence Scheme	The Central Rhyl Coastal Defence Scheme is a proposed development to add rock armour revetment, stepped concrete revetment and other defences along 3km of Rhyl's coastline. There is the potential for the construction phase of this project to occur at the same time as this project.	Potential for cumulative effect of noise and visual impacts upon designated sites. Given the number of birds recorded within the scheme area and the amount of intertidal habitat available it is considered that in the unlikely event that disturbance occurs, birds have the ability to move and therefore there will be no significant cumulative impact to qualifying features of the SPA.
Former Interleisure site, Abergele, housing development	The proposal consists of erecting 131 new dwellings at the coastal frontage of Abergele, between Harts Caravan Park and Lyndale Holiday Park. This development is currently in the planning process. If approved, works may coincide with the Kinmel Bay Coastal Improvement Scheme.	Potential for cumulative effect of noise and visual impacts upon designated sites. Given the number of birds recorded within the scheme area and the amount of intertidal habitat available it is considered that in the unlikely event that disturbance occurs, birds have the ability to move and therefore there will be no significant cumulative impact to qualifying features of the SPA.

7 Conclusions

This assessment has found that no significant effects are likely to impact the qualifying features of the Liverpool Bay SPA as part of the proposed scheme.

A cumulative impact assessment was also carried out as part of the HRA screening process. Whilst three other developments were identified as taking place in proximity to the proposed scheme, given the nature of each development no cumulative effects are foreseen to impact upon the qualifying features of the Liverpool Bay SPA during construction works as part of the proposed scheme.

In conclusion, as the scheme is currently understood, the proposed scheme will not have an adverse impact upon the Liverpool Bay SPA either alone or in combination with any other plans or projects

References

JBA (2018) *Environmental Impact Scoping Report*. JBA Consulting, unpublished.

JNCC (2017) *Liverpool Bay Special Protection Area (SPA)* [Online] Available at: <http://jncc.defra.gov.uk/page-7507> [Accessed 26th August 2022].

Natural England & Countryside Council for Wales (2012). *Liverpool Bay / Bae Lerpwl Special Protection Area. Advice under Regulation 35(3) of The Conservation of Habitats and Species Regulations 2010 (as amended). Version 6.5 (October 2012).* [Online] Available at: <http://publications.naturalengland.org.uk/publication/3236717> > [Accessed 26th August 2022].

Natural England (2019) *European Site Conservation Objectives for Liverpool Bay / Bae Lerpwl Special Protection Area Site Code: UK9020294* [Online] Available at: <http://publications.naturalengland.org.uk/publication/5089733892898816> > [Accessed 26th August 2022].

Conwy County Borough Council (2022) *Planning Explorer* [Online] Available at: <https://www.conwy.gov.uk/en/Resident/Planning-Building-Control-and-Conservation/Planning-Applications/Planning-Explorer.aspx> > [Accessed 26th August 2022].

Denbighshire County Council (2022) *Planning* [Online] Available at: <https://planning.denbighshire.gov.uk/planning/> > [Accessed 26th August 2022].

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C Landscape and Visual

C.1 Figure 5.1 – Site Location Access



Kinmel Bay Coastal Defence Improvements Scheme Environmental Statement

- | | |
|-----------------------------------|------------------------------------|
| Site Boundary | Public Rights of Way (PROW) |
| Distance from Site boundary (2km) | Footpath |
| District boundary | Wales Coast Path |
| Local Nature Reserve | National Cycle Network Route |
| Open Access Land | National Cycle Network Link Route |
| Greenspace | |
| Travel Routes | |
| Active travel shared route | |
| On-road route | |
| Traffic-free route | |
| Active travel cycle route | |

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Checked By: RK **Date:** 20/10/2022 **Original at A3**
Approved By: RK **Date:** 20/10/2022
Status: S1 **Revision:** P01
Figure Title: Figure 5.1: Site Location and Access
File Name: 8113_001_Site_Location_Oct.mxd

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Sources: Esri, Ordnance Survey, Natural England, Sustrans

0 1km

Sir Ddinbych - Denbighshire

Conwy - Conwy

C.2 Figure 5.2 Policy



Kinmel Bay Coastal Defence Improvements Scheme Environmental Statement

- Site Boundary
- Distance from Site boundary (2km)
- - - District boundary
- Local Nature Reserve
- Conservation Areas
- Scheduled Monument
- Wales Coast Path
- Listed Building (grade indicated)
I II* II

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Figure Title: Figure 5.2: Landscape Policy Context
File Name: 8113_002_Policy_Oct.mxd

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Sources: Esri, Ordnance Survey, Natural England, Historic England

0 1km

C.3 Figure 5.3 - Topography



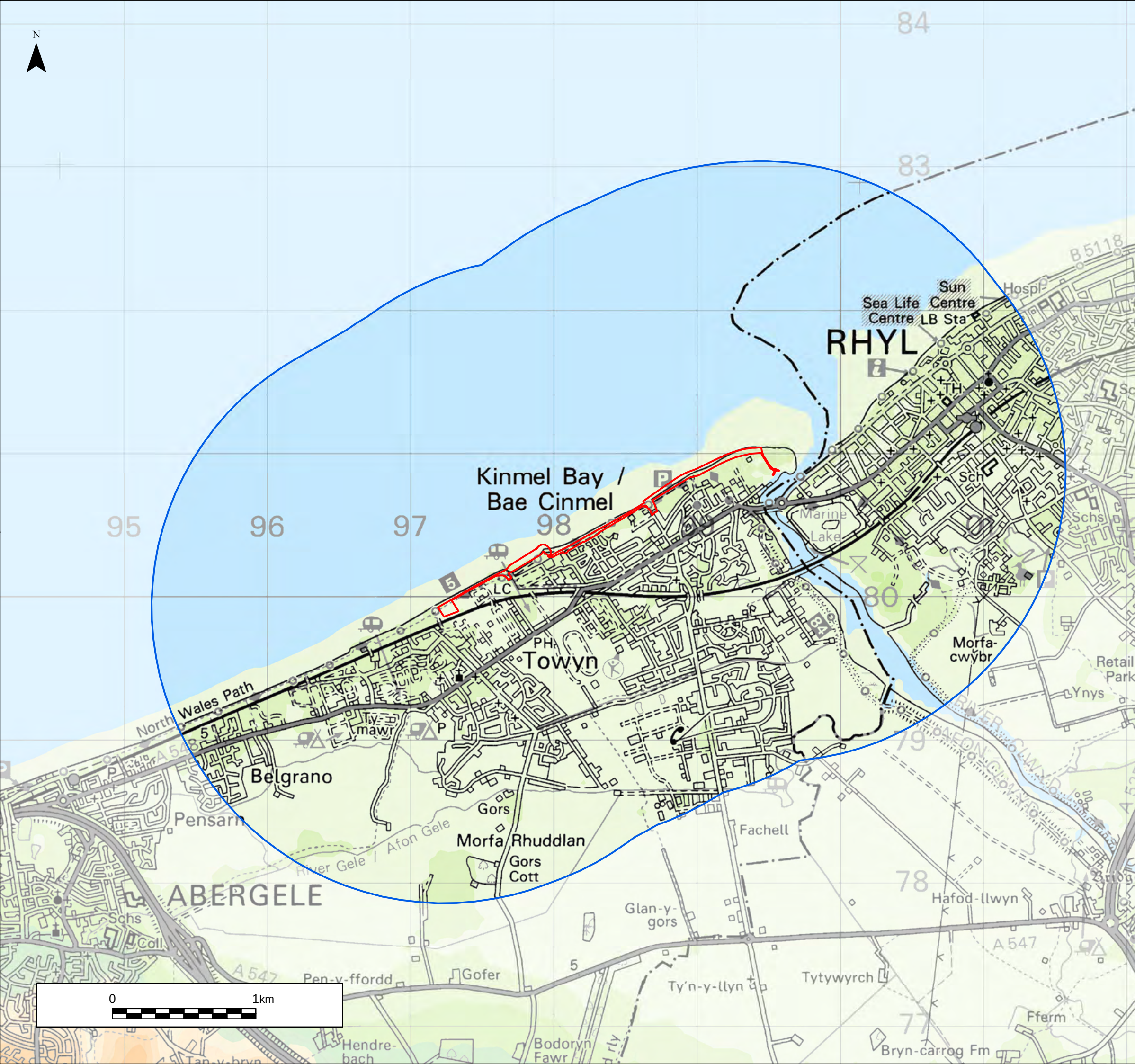
Kinmel Bay Coastal Defence Improvements Scheme Environmental Statement

- Site Boundary
- Distance from Site boundary (2km)

Elevation (m AOD)			
50 - 55	45 - 50	40 - 45	35 - 40
30 - 35	25 - 30	20 - 25	15 - 20
10 - 15	5 - 10	0 - 5	Below 0

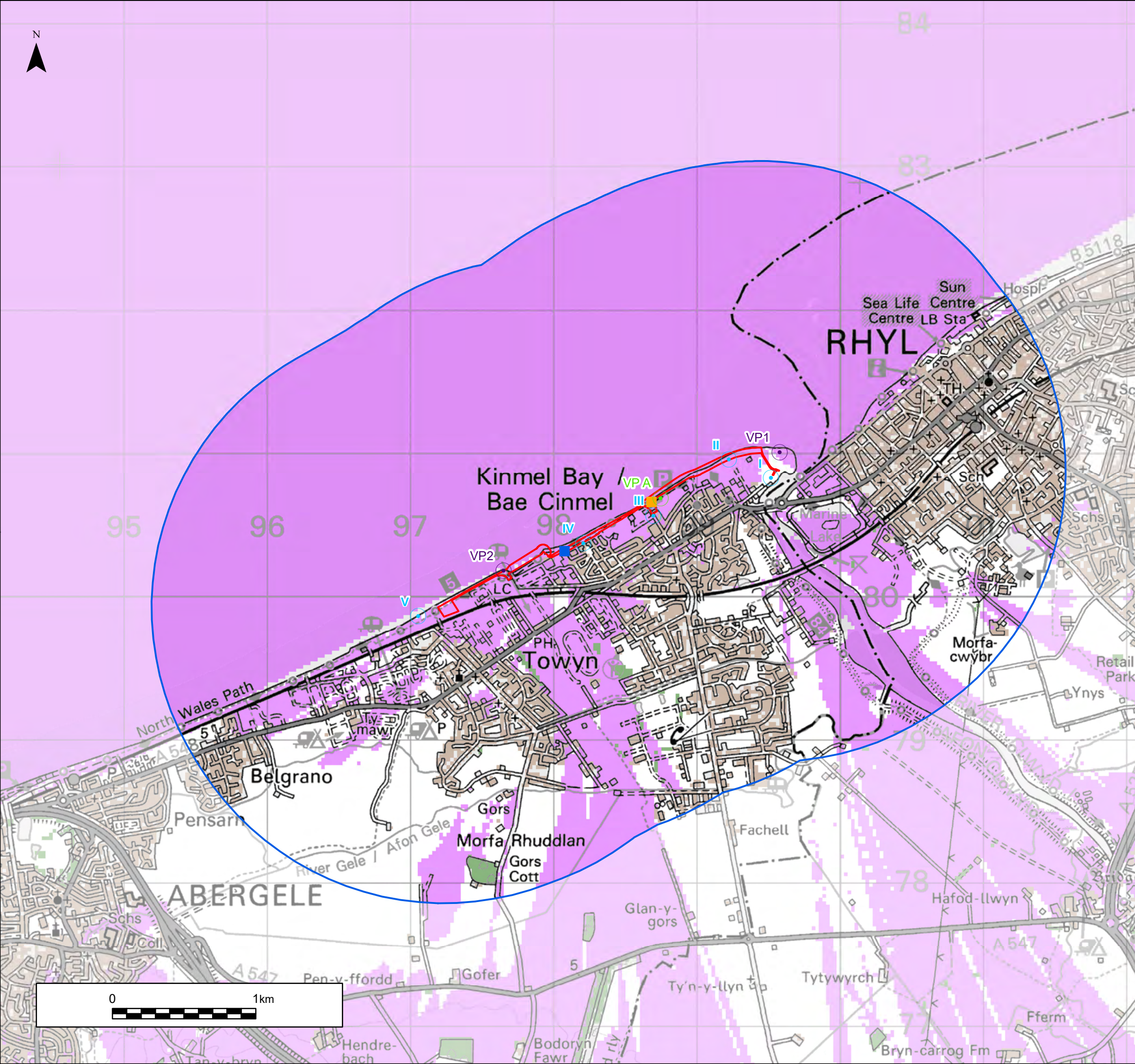
Drawn By: MSO Date: 20/10/2022 Scale: 1:25,000
Checked By: RK Date: 20/10/2022 Original at A3
Approved By: RK Date: 20/10/2022
Status: S1 Revision: P01
Figure Title: Figure 5.3: Topography
File Name: 8113_003_Topo_Oct.mxd

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Sources: Ordnance Survey, NextMap25



0 1km

C.4 Figure 5.4 – Zone of Theoretical Visibility



Kinmel Bay Coastal Defence Improvements Scheme Environmental Statement

- | | | | |
|--|--------------------------------------|--|---|
| | Site Boundary | | Viewpoint |
| | Distance from Site boundary (2km) | | Additional Viewpoint requested by Conwy Council |
| | Urban Area | | Illustrative Viewpoint |
| | Woodland | | Proposed Shelter |
| | Zone of Theoretical Visibility (ZTV) | | Proposed Toilet Facility |

This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the viewshed routine in the ESRI ArcGIS Suite. The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and settlements, which have been included in the model with the heights obtained from Nextmap 25. It should be noted that in some areas woodlands included within the ZTV may comprise active forestry, resulting in the felling and replanting of some areas modelled in the ZTV study. The ZTV study reflects this pattern at a specific point in time, as it is based on real height information. Whilst the felling cycle will alter the heights of different areas of forestry over time, altering localised visual effects, the wider pattern will remain relatively constant.

The model does not take into account any localised features such as small copses, hedgerows or individual trees and therefore still gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground will be less than that suggested by this plan.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. It is based on Nextmap 25 terrain data and has a 25m² resolution.

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Status:	S1	Revision:	P01		
Figure Title:	Figure 5.4: Zone of Theoretical Visibility (ZTV) Study including woodlands and settlements				
File Name:	8113_004_ZTV_Oct.mxd				

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Sources: Ordnance Survey, NextMap25

C.5 Figure 5.5 – Landscape Character Assessment

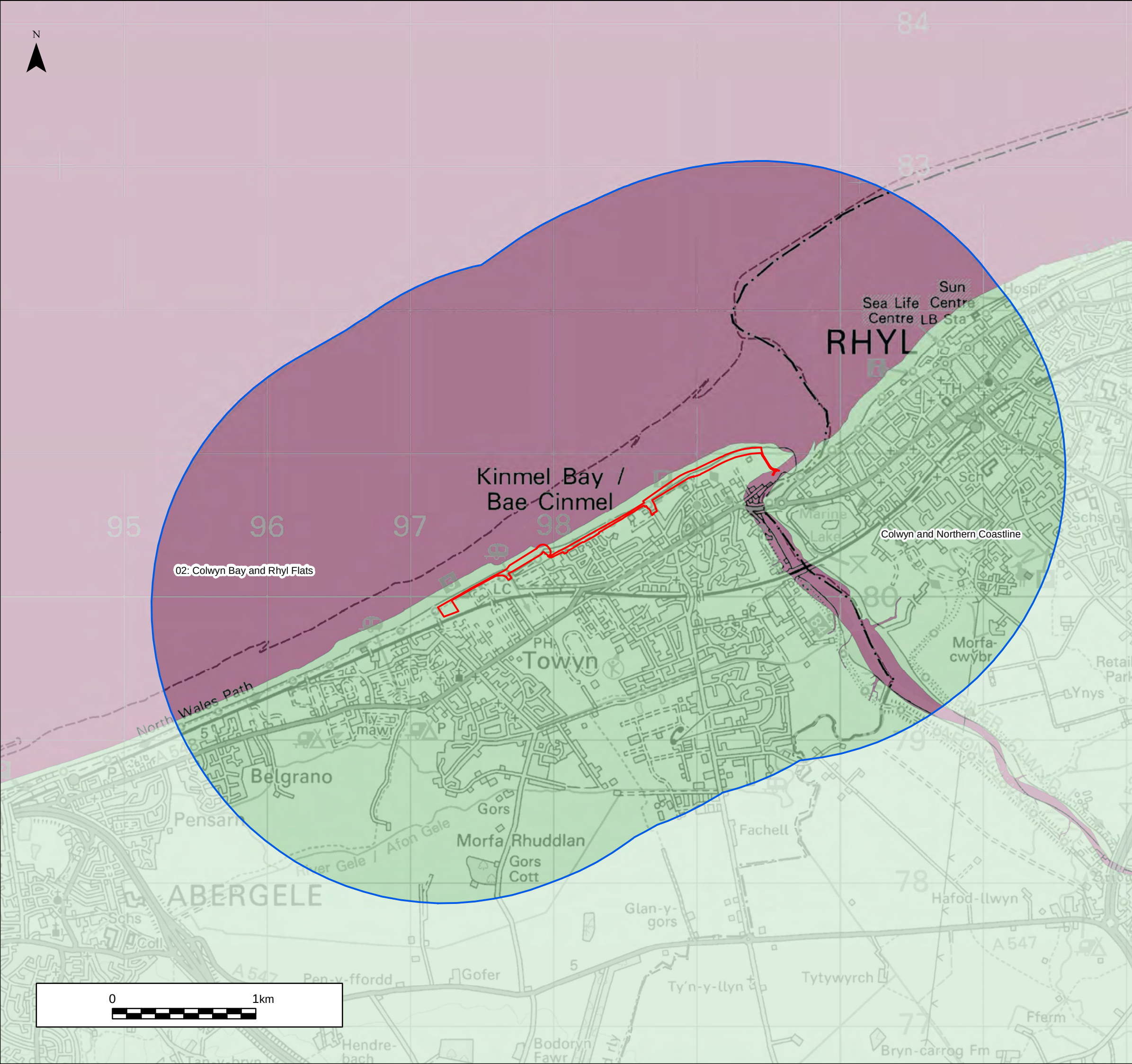


Kinmel Bay Coastal Defence Improvements Scheme Environmental Statement

- Site Boundary
- Distance from Site boundary (2km)
- District boundary
- Natural Resources Wales Landscape Character Areas
 - Colwyn and Northern Coastline
- Natural Resources Wales Marine Character Areas
 - 02: Colwyn Bay and Rhyl Flats

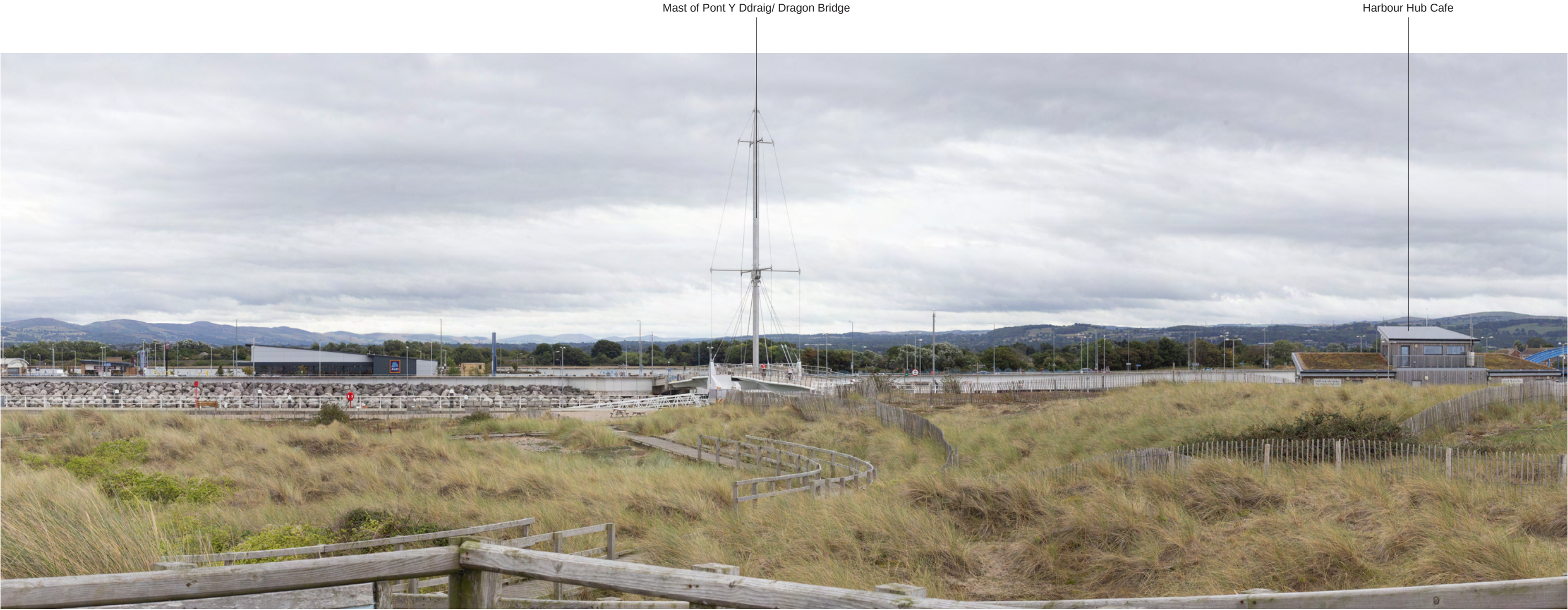
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Checked By: RK **Date:** 20/10/2022
Approved By: RK **Date:** 20/10/2022 **Original at A3**
Status: S1 **Revision:** P01
Figure Title: Figure 5.5: Landscape/Seascape Character
File Name: 8113_005_LCA_Oct.mxd

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Sources: Ordnance Survey, Natural Resources Wales



0 1km

C.6 Figure 5.6 – Viewpoint 1



Specific Viewpoint 1 (Left) - Viewpoint at Horton’s Nose close to Wales Coast Path

ISSUED BY	Peterborough	t: 01733 310471	
DATE	Nov 2022	DRAWN	SK
PAGE SIZE	420mm x 297mm	CHECKED	RK
STATUS	Draft	APPROVED	RK

DWG. NO. 8113_PP_001_L

PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME

DRAWING TITLE
Figure 5.6: Photograph Panel 1 (Left)
Specific Viewpoint 1

Proposed enhanced footpath and pedestrian crossing would be located behind the dunes and not visible from this viewpoint



Specific Viewpoint 1 (Centre) - Viewpoint at Hortons Nose close to Wales Coast Path

This specific viewpoint is located within Horton’s Nose nature reserve, which is an area of sand dunes adjacent to the River Clwyd. A boardwalk has been created through the nature reserve to allow public access and the viewpoint is located on a viewing platform along the boardwalk. The main direction of view from the viewing platform is out to sea, but there are panoramic views in all directions. The existing dune landscape forms the foreground to the views, with the seafront, a holiday caravan park, a boat repair and storage facility, and Rhyl Harbour Car Park are prominent beyond the dunes. To the south, the Harbour Hub Café and car park are visible, with the River Clwyd lined with rock armour and B5118 beyond and a view of largely commercial development in Rhyl. The Proposed Development in the vicinity of this specific viewpoint would comprise the introduction of rock armour on the sea side of the existing sea wall, raising the height of the existing sea wall by 0.75m, new access point over the rock armour to the beach, widening of the existing coast path to 4.5m along the eastern edge of Sunnyvale Holiday Park and an upgraded zebra crossing to the north of the Harbour Hub Café..

The existing sea wall is a minor component within the view. Therefore the enhanced height, although perceptible, would be of a small scale. The most perceptible change would be the new rock armour which is considered to be in keeping with the existing character of the Site and Study Area, where rock armour regularly forms a feature of the coastal environment. Although the enhanced footpath and upgraded pedestrian crossing are in proximity to the western extent of Hortons Nose, the change would be barely perceptible beyond the existing dune landscape. The proposed raised sea wall and new rock armour would be most perceptible changes in the vicinity of Horton’s Nose, further west the proposal would diminish in view. There may be views of the closest access points crossing the rock armour, in particular the stepped access but this would only form a minor component within the view. Moving closer to the holiday park or Harbour Hub Café along the boardwalk, there would be some visibility of the proposed widening of the coast path and the upgraded zebra crossing. Overall, there would be a minor change to the existing view, with majority of the visual baseline largely unchanged despite a few discernible differences. The effects would be Small scale and, on balance, Neutral.

ISSUED BY				Camera Location (OS Grid Reference):		Enlargement Factor:		PROJECT TITLE	
Peterborough				299579 E 381009 N		TBC		KINMEL BAY COASTAL DEFENCE IMPROVEMENTS	
t: 01733 310471				Ground Level (mAOD):		Type 1 (for context)		SCHEME	
DATE				0.0m		Photo Date / Time:		24/08/2022 09:55	
Nov 2022				Direction of View: bearing from North (0°):		280°		Camera Model and Sensor Format:	
PAGE SIZE				110.1m		Canon EOS 6D, FFS		Lens Make, Model and Focal Length:	
420mm x 297mm				Horizontal Field of View:		Canon EF50mm f/1.8 STM		Height of Camera Lens above Ground (mAOD):	
CHECKED				180° (Cylindrical projection)		1.5m		DRAWING TITLE	
STATUS				Paper Size:		420mm x 297mm (A3)		Figure 5.6: Photograph Panel 1 (Centre)	
Draft								Representative Viewpoint 1	
APPROVED									
RK									
RK									
DWG. NO. 8113_PP_001_C									

Approximate location of proposed increase in width of promenade to 4.5m, new rock armour on the coast side of the wall with a stepped beach access and existing sea wall increased in height by 0.5m



Specific Viewpoint 1 (Right) - Viewpoint at Horton’s Nose close to Wales Coast Path

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DWG. NO. 8113_PP_001_R

PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME

DRAWING TITLE
Figure 5.6: Photograph Panel 1 (Right)
Specific Viewpoint 1

C.7 Figure 5.7 – Viewpoint 2

Kinmel Bay Beach (Sandy Cove)



Representative Viewpoint 2 (Left) - Towyn Beach

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PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME

DRAWING TITLE
Figure 5.7: Photograph Panel 2 (Left)
Representative Viewpoint 2

Existing Rock Armour

Existing coast path along the top of the sea wall

Approximate location of enhanced access points

Proposed enhancement of existing rock armour (crest width and height increased)

Approximate location of proposed Parklet Type B (Look-out), eastern portion of parklet



Representative Viewpoint 2 (Centre Left) - Towyn Beach

This viewpoint is located on the Wales Coast Path adjacent to Golden Sand Holiday Park. The Coast Path follows the top of the sea wall in this location, with an access on to the beach over existing rock armour located to the north east of the viewpoint. There are open views north-eastward along the beach, with the existing rock armour a feature of the view. Two further existing access points over the rock armour are also visible in this direction, to north of the Golden Sands Holiday Park. To the south west of the viewpoint, the Coast Path continues along the sea wall, adjacent to a wider stretch of rock armour with further access points on to the beach. To the south east, there are views across the North Wales Coast railway line to Towyn along the A548. The Proposed Development in the vicinity of this representative viewpoint would comprise an increase in the width and height of the current rock armour, with associated alterations to the beach accessible points. There would also be the introduction of a Type B lookout parklet and additional proposed coastal grassland. The proposed increase in width and height of the rock armour would be a change to the existing view but would be in keeping with its existing character, as would the revised beach access points. The proposed increase in the height of the

sea wall would be largely screened by the proposed rock armour, and would form a minor part of the view. The proposed parklet and associated coastal grassland planting would be a new feature proposed directly south of Towyn Beach and north-west of the Golden Sands Holiday Park, and would form a noticeable new feature in the view, but one that is in keeping with a costal promenade. The proposed coastal grassland ould also be in keeping with areas of grassland in the vicinity. Although the changes would be noticeable, it is considered that the proposed land use is appropriate within the context of the existing recreational coastal landscape. The majority of the existing panoramic view, including the view of Towyn beach to the north and views east of Golden Sands Holiday Park and of the wider settlement of Towyn and the rising landscape beyond, would remain unchanged. The proposed new features and enhancements are considered to improve the baseline conditions and be consistent with the existing nature of the views. The effects would be Medium-Small scale and, on balance, Positive.

ISSUED BY	Peterborough	t: 01733 310471	
DATE	Nov 2022	DRAWN	SK
PAGE SIZE	420mm x 297mm	CHECKED	RK
STATUS	Draft	APPROVED	RK

DWG. NO. 8113_PP_002_CL

Camera Location (OS Grid Reference):	297650 E 380184 N
Ground Level (mAOD):	2.8m
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Distance to Site:	5.5m
Horizontal Field of View:	240° (Cylindrical projection)
Paper Size:	420mm x 297mm (A3)

Enlargement Factor:	TBC
Visualisation Type:	Type 1 (for context)
Photo Date / Time:	24/08/2022 15:54
Camera Model and Sensor Format:	Canon EOS 6D, FFS
Lens Make, Model and Focal Length:	Canon EF50mm f/1.8 STM
Height of Camera Lens above Ground (mAOD):	1.5m

KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME

Figure 5.7: Photograph Panel 1 (Centre Left)
Representative Viewpoint 2



Representative Viewpoint 2 (Center Right) - Towyn Beach

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DATE	Nov 2022	DRAWN	SK
PAGE SIZE	420mm x 297mm	CHECKED	RK
STATUS	Draft	APPROVED	RK

DWG. NO. 8113_PP_002_CR

PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME

DRAWING TITLE
Figure 5.7: Photograph Panel 2 (Center Right)
Representative Viewpoint 2

Wales Coast Path



Representative Viewpoint 2 (Right) - Towyn Beach

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DATE	Nov 2022	DRAWN	SK
PAGE SIZE	420mm x 297mm	CHECKED	RK
STATUS	Draft	APPROVED	RK

DWG. NO. 8113_PP_002_R

PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME

DRAWING TITLE
Figure 5.7: Photograph Panel 2 (Right)
Representative Viewpoint 2

C.8 Figure 5.8 – Viewpoint A



Specific Viewpoint A (Left) - Viewpoint at Kinmel Dunes close to Wales Coast Path

ISSUED BY	Peterborough	t: 01733 310471	
DATE	Novt 2022	DRAWN	SK
PAGE SIZE	420mm x 297mm	CHECKED	RK
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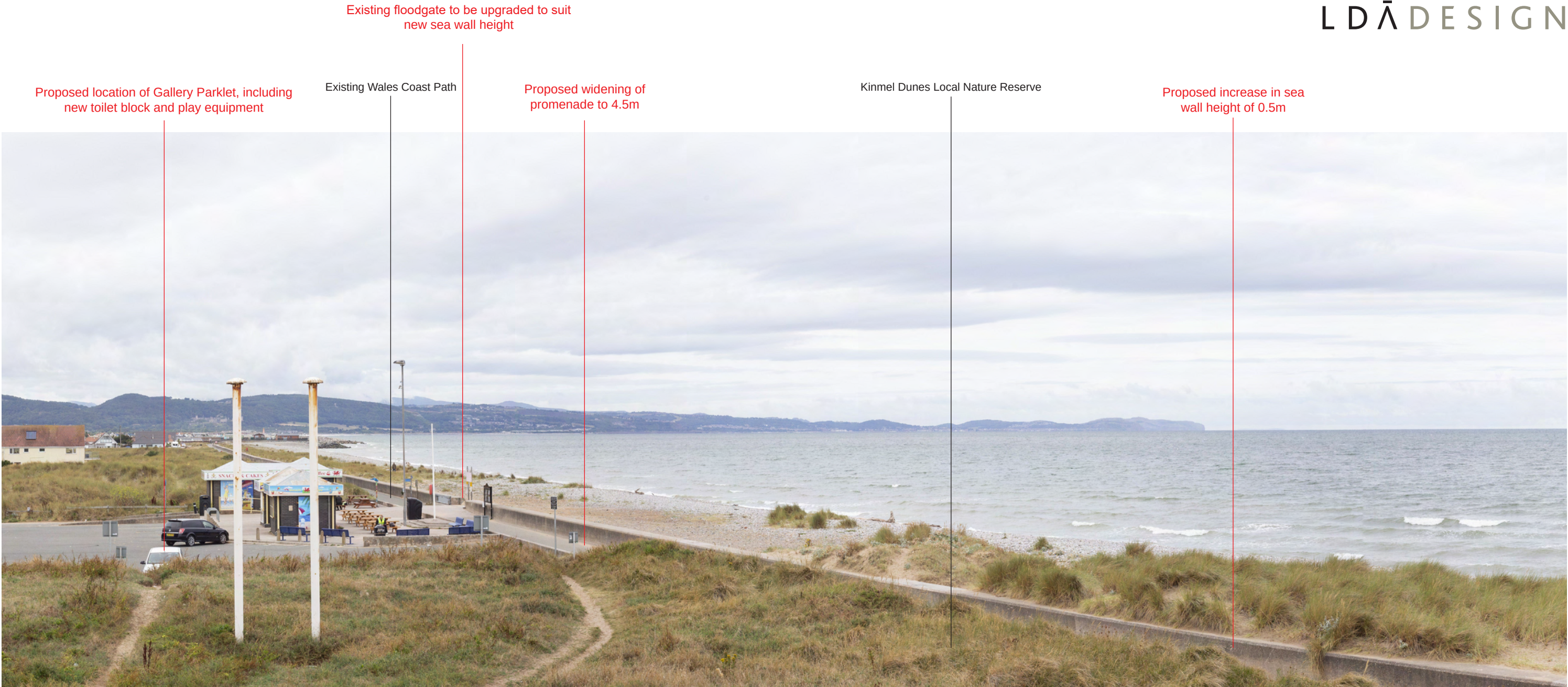
PROJECT TITLE

KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME

DRAWING TITLE

Figure 5.8: Photograph Panel 3 (Left)
Specific Viewpoint A

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Specific Viewpoint A (Centre Left) - Viewpoint at Kinmel Dunes close to Wales Coast Path

ISSUED BY				Peterborough		t: 01733 310471		PROJECT TITLE	
DATE				Novt 2022		DRAWN		KINMEL BAY COASTAL DEFENCE IMPROVEMENTS	
PAGE SIZE				420mm x 297mm		CHECKED		SCHEME	
STATUS				Draft		APPROVED		DRAWING TITLE	
DWG. NO. 8113_PP_A_CL								Figure 5.8: Photograph Panel 3 (Centre Left)	
								Specific Viewpoint A	



Specific Viewpoint A (Center Right) - Viewpoint at Kinmel Dunes close to Wales Coast Path

ISSUED BY	Peterborough	t: 01733 310471	
DATE	Novt 2022	DRAWN	SK
PAGE SIZE	420mm x 297mm	CHECKED	RK
STATUS	Draft	APPROVED	RK

DWG. NO. 8113_PP_A_CR

PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME

DRAWING TITLE
Figure 5.8: Photograph Panel 3 (Center Right)
Specific Viewpoint A

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Specific Viewpoint A (Right) - Viewpoint at Kinmel Dunes close to Wales Coast Path

This specific viewpoint is located within Kinmel Dunes Local Nature Reserve, which is an area of sand dunes adjacent to Kinmel Bay. A viewing platform has been created on top of one of the sand dunes, close to the Promenade Car Park. The viewing platform has panoramic views in all directions, although the focus of views on signage for the nature reserves indicates that the primary direction of the viewpoint is out to sea. The existing dune landscape forms the foreground to the views, with the sea wall and coast path visible to the north west, with the beach beyond, and Promenade Car Park with associated kiosks and café visible to the south west. The coastline to the west curves round to Colwyn Bay and the higher ground beyond, whilst the coast to the east is more linear and largely obscured by the sand dunes. To the south, there are open views of residential development in Kinmel Bay, with higher ground beyond. The Proposed Development in the vicinity of this representative viewpoint would comprise of the following changes: upgrades to Promenade Car Park, including new parking bays and rain gardens; new Gallery Parklet proposed directly south of the promenade/Coast Path; proposed widening of the promenade/Coast Path to 4.5m; raising the existing sea wall by 0.5m; upgrade of the current floodgate to suit the new wall height; upgraded access point (stepped and ramped) north-

east of the Promenade Car Park and a proposed new kerb (150mm upstand to act as secondary defence wall). and. The most perceptible change from the Kinmel Dunes Local Nature Reserve (looking west) would be the introduction of the new proposed Galley Parklet and associated toilet block as a new feature. The extension of Promenade Car Park into the grassland area to the south of it will also be a noticeable change to the view. The changes to the width of the promenade, and the height of the sea wall and flood gate would also be perceptible, but these are alterations to existing features and would be in keeping with the existing characteristics of the view. The upgraded access point (north-east of the car park) would also be visible from this viewpoint when looking north east, but would again be replacement of an existing similar feature. Views north towards the sea would remain largely unchanged as the sea wall would not be raised to a height that restricts the existing views. Similarly, views looking south across the settlements and rising landscapes beyond would be retained. The proposed new features and enhancements are considered to improve the baseline conditions and be consistent with the existing nature of the views. The effects would be Medium-Small scale and, on balance, Positive.

ISSUED BY				Peterborough		t: 01733 310471		Camera Location (OS Grid Reference):		298746 E 380690 N	Enlargement Factor:		TBC	PROJECT TITLE		KINMEL BAY COASTAL DEFENCE IMPROVEMENTS	
DATE				Novt 2022		DRAWN		Ground Level (mAOD):		4.25m	Visualisation Type:		Type 1 (for context)			SCHEME	
PAGE SIZE				420mm x 297mm		CHECKED		Direction of View: bearing from North (0°):		353°	Photo Date / Time:		24/08/2022, 10:24				
STATUS				Draft		APPROVED		Distance to Site:		16.9m	Camera Model and Sensor Format:		Canon EOS 6D, FFS				
								Horizontal Field of View:		240° (Cylindrical projection)	Lens Make, Model and Focal Length:		Canon EF50mm f/1.8 STM				
								Paper Size:		420mm x 297mm (A3)	Height of Camera Lens above Ground (mAOD):		1.5m			DRAWING TITLE	
																Figure 5.8: Photograph Panel 3 (Right)	
																Specific Viewpoint A	

C.9 Figure 5.9 – Illustrative Viewpoints

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Illustrative Viewpoint I: Horton Nose Lane



Illustrative Viewpoint II: Wales Coast Path near Sunnyvale Caravan Park

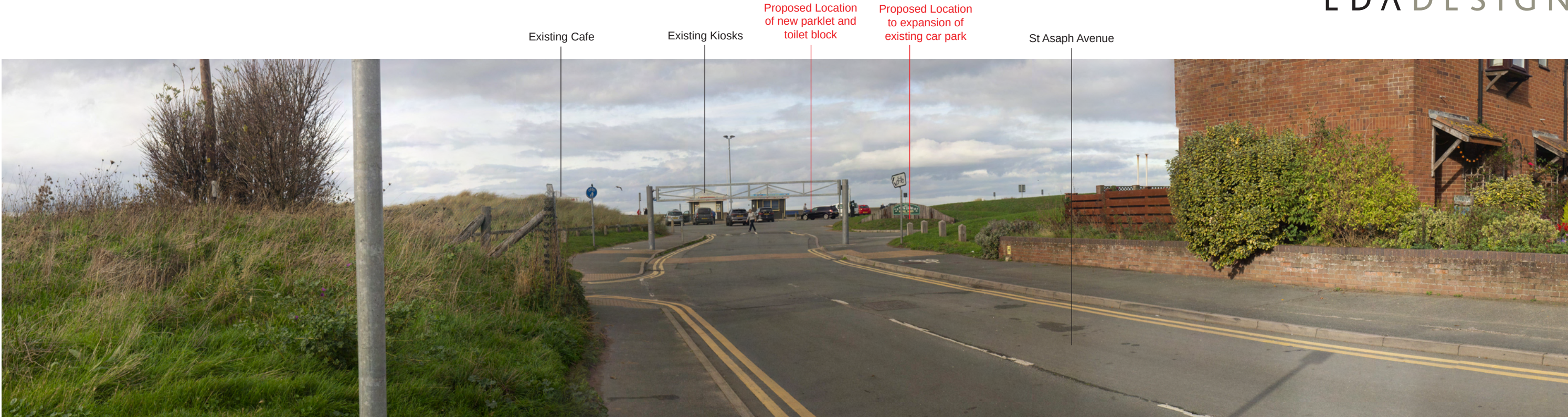
ISSUED BY	Peterborough	t: 01733 310471	
DATE	Nov 2022	DRAWN	SK
SCALE@A3	NTS	CHECKED	RK
STATUS	Draft	APPROVED	RK

DWG. NO. 8113_PP_Illu

PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME ENVIRONMENTAL STATEMENT

DRAWING TITLE
Figure 5.9 : Illustrative Photograph Panels

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Illustrative Viewpoint III: St Asaph Avenue



Illustrative Viewpoint IV: Wales Coast Path near The Promenade

ISSUED BY	Peterborough	t: 01733 310471	
DATE	Nov 2022	DRAWN	SK
SCALE@A3	NTS	CHECKED	RK
STATUS	Draft	APPROVED	RK

DWG. NO. 8113_PP_Illu

PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME ENVIRONMENTAL STATEMENT

DRAWING TITLE
Figure 5.9 : Illustrative Photograph Panels

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Illustrative Viewpoint V: Wales Coast Path near Knightly's Fun Park

ISSUED BY	Peterborough	t: 01733 310471	
DATE	Nov 2022	DRAWN	SK
SCALE@A3	NTS	CHECKED	RK
STATUS	Draft	APPROVED	RK

DWG. NO. 8113_PP_Illu

PROJECT TITLE
KINMEL BAY COASTAL DEFENCE IMPROVEMENTS
SCHEME ENVIRONMENTAL STATEMENT

DRAWING TITLE
Figure 5.9 : Illustrative Photograph Panels

C.10 Viewpoint Agreement

Correspondence with Conwy County Borough Council

NB. Correspondence includes reference to viewpoints positioned for a scheme covering a wider area than the final scheme.

From: [REDACTED]
Sent: 02 August 2022 14:34
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Viewpoints (Llanddulas and Kinmel Bay)

Good afternoon [REDACTED],

The selected viewpoints are broadly acceptable, but there could be difficulties in getting access to Viewpoint 5 as the woodlands around Gwrych Castle have been fenced off. I'm not sure whether access into this area is still possible. An alternative viewpoint will need to be selected unless the Gwrych Castle Trust can arrange access. I would also suggest an additional viewpoint in Kinmel Bay between Viewpoints 1 and 2.

As previously discussed, I would also stress the need for the visualisations to indicate a range of tidal conditions.

Regards,

[REDACTED]

Pen Swyddog Cynllunio, Cyngor Bwrdeistref Sirol Conwy
Principal Planning Officer, Conwy County Borough Council

From: [REDACTED]
Sent: 26 July 2022 10:21
To: [REDACTED]
Cc: [REDACTED]
Subject: FW: Viewpoints (Llanddulas and Kinmel Bay)

Hi [REDACTED]

Hope you are keeping well. We spoke the week before last about viewpoint locations for the LVIA. Attached proposed viewpoint location plan and summary sheet. Can you confirm by receipt email if these are acceptable?

Kind regards

[REDACTED]
[REDACTED]

JBA Consulting, Newcastle

C.11 Extracts from Landscape Character Assessment
Extracts from Natural Resources Wales National Landscape and Seascape Character Assessments



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Arfordir Gogledd Cymru – disgrifiad cryno

Am lawer o'r ffordd rhwng Pen y Gogarth a'r Parlwr Du, mae brynau calchfaen yn gwahanu glan môr y gogledd rhag y cefnfro. Yn y gorllewin, mae eu clogwyni serth yn agos iawn at y lan, lle mae datblygu trefi gwyliau glan môr, a'r prif gysylltiadau trafniadaeth, wedi ymwsgu i hynny o dir gwastad cyfyng sydd ar gael, ac yn dechrau dringo rhai gelltydd. Yn y rhan ganol, mae'r brynau'n cilio o'r glannau, gan ganiatáu i ddyffryn eang Clwyd, sy'n gwahanu Bryniau Clwyd a Mynydd Hiraethog, gyrraedd y môr rhwng Tywyn a'r Rhyl.

Mae llawer o'r glannau wedi'u datblygu ar gyfer twristiaeth, o drefi gwyliau cynlluniedig Fictoraidd fel Llandudno, Bae Colwyn a'r Rhyl, i westai ac iechydfeydd gwledig, i ddatblygiadau, gwersylloedd gwyliau a meysydd carafanau mwy diweddar a llai ffurfiol. Yma. Yn draddodiadol, y treuliau pobl gogledd-orllewin Lloegr eu gwyliau: ac er i natur gwyliau newid, mae'r ardal eto'n adnabyddus am ei chyrchfannau gwyliau glan môr: ac ymddengys bod rhai, Llandudno a Bae Colwyn yn neilltuol, yn goroesi ac yn ymaddasu yn ôl y gofyn.

Yn y cefnfro ceir ystadau a pharciau coediog Bodysgallen, Gloddaeth, Bodelwyddan, Cinmel, Castell Gwrych a Bodrhyddan. Yn hyn o lawer mae tirweddau Pen y Gogarth, canolbwynt anheddu ers miloedd o flynyddoedd, lle ceir tystiolaeth y bu pobl yn byw yno

ers dechrau Hen Oes y Cerrig (10,000CC a rhagor), a lle darganfuwyd cloddfeydd copr helaeth Oes y Pres, sydd bellach yn atyniad ymwelwyr.

Summary Description

Limestone hills back the northern coastline and hinterland for much of its length between the Great Orme and Point of Ayr. Their steep sides run close to the coast in the western half, where the development of seaside resorts and main transport links have squeezed into the limited available flat land, and started to spread up some hillsides. The hills run back from the coast in the central section, allowing the broad Vale of Clwyd to reach the sea, flanked to the east by the distinctive line of the Clwydian Range of hills, and finally issuing its river between Rhyl and Towyn. Much of the coastal strip has been developed for tourism, from planned Victorian seaside resorts, notably Llandudno, Colwyn Bay and Rhyl, through country hotels and sanatoria, to more recent and less formal sea-front developments, holiday camps and caravan parks. Traditionally this was where the folk of the north west of England took their holiday, and although the nature of holidays has changed, the area is still known for its seaside holiday destinations and some, notably Llandudno and Colwyn Bay, appear to be surviving and adapting accordingly.

Inland are the estates and wooded parklands of Bodysgallen, Gloddaeth, Bodelwyddan, Kinnel, Gwyrch Castle and Bodrhyddan. Far older are the landscapes of the Great Orme, a focus of settlement for millennia, with evidence for occupation extending back to the Upper Palaeolithic (10,000BC+) and where extensive underground, Bronze Age copper workings were discovered and opened as a visitor attraction.

Key Characteristics
Carboniferous limestone hills and coastal headlands - resulting in distinctive light-coloured rocky escarpments with cliffs and scree, including most prominently Great Orme's Head, with characteristic clints, grykes, stepped crags and scree slopes.
The mouth of the Vale of Clwyd – a broad flat coastal plain centred on Rhyl, including the small estuary of the River Clwyd, including a network of medium scale pastoral fields of regular pattern, with ditches and, to a lesser extent mixed, managed hedgerows, and occasionally interspersed with small stands of mixed farm woodland.
Seaside resort towns - urban development and arterial road and railway routes along coast, constricted in places by topography and rising hills. Much 19th century development with more recent suburbia. Some caravan parks and holiday camps between Llanddulas to Prestatyn coalesce settlements.
Steep sided hill back drop to coastal towns - wooded, or exposed limestone and sheep pasture.
A generally man-made coastal edge – promenades, sea walls, groynes, rock armour and other forms of protecting the coastal edge run for most of the length of the coastline.
Limestone quarrying – a number of old and active limestone quarries have left holes and scars, coastal quarries having used sea ships for transportation.
Hinterland away from the coast – with intervening hills makes for a quiet, sheltered, inland, rural feel, with some classic limestone outcrops, notably south of Llanddualas.
Ecological importance - Great Orme is ecologically important for its concentration of calcareous grassland, while elsewhere, there is a diversity of habitat types, including the coastal dunes at Gronant and remaining areas of coastal habitat such as sandbanks, marshland and tidal river flats.
Archaeology - Great Orme has a range of archaeological features illustrating a variety of historic land uses, including prehistoric caves, extensive evidence of underground, Bronze Age copper mining, ritual and funerary monuments, and hillforts.
Rhuddlan Castle is strategically sited at a crossing point over the Clwyd, at what was once the eastern boundary of the Medieval kingdom of Gwynedd.

A number of historic parklands - lie within the area, while the estate architecture of Gwrych Castle and wooded parkland is a locally prominent feature.

Iconic image of historic Llandudno and its famed natural setting – between two rocky headlands, with its pier, grand sweeping promenade and Victorian building façades, arguably the finest of their type in Wales, the town is known as the ‘Queen of resorts’ and is known nationally for seaside holidays.

Visual and Sensory Profile

This distinct coastal landscape is characterised by activity and bustle, though there are more quiet and tranquil areas, even in and amongst the sea-side developments, for example, at Gronant in the east of the area, the dunes remain undeveloped. South of Prestatyn the foothills of the Clwydian Hills are steep-sided, from which panoramic views across the area are possible. Elsewhere, rocky limestone hills reach to the coastline with the result that resort developments and transport routes become squeezed into a tight corridor near the coast. Both the A55 Expressway and the Chester to Holyhead railway traverse the area, with much night lighting along the former, along the coastal edge, and from the towns. At Llandudno, the combination of the historic seaside resort town and its dramatic open limestone and coastal setting has created a very distinctive sense of place; the Great Orme and Little Orme reach the coastline abruptly, as bare, windswept, and highly craggy headlands. Generally, the hills and high ground that provide the backdrop for the resort towns are wooded and enclosed, but have areas of scrub and open ground, revealing limestone rock exposures.

Inland, the area is hilly, rural and tranquil in complete contrast to the busy coastal edge. Rolling hills, further limestone outcrops, and a number of small valleys provide much seclusion and shelter only a short distance from the coast. This inland landscape also provides a significant buffer and transition zone with the appreciably more rural and quieter landscape of the Rhos Hills to the south. The operational limestone quarries at Llanddulas are relatively hidden from view, though the loading jetty on the coast adjacent is a prominent feature.

This area remains a gateway to Wales for visitors from England; to descend Rhualt Hill along the A55 Expressway and to pass the marble church at Bodelwyddan is to leave Merseyside and the Dee estuary behind, and to experience the beginnings of a distinctively Welsh landscape, with the Vale of Clwyd to the south and Eryri in distant prospect.



Limestone hills and headlands: the Little Orme. © John Briggs



The Victorian resort town of Llandudno: a grand sweep of building facades in a grand natural setting between limestone headlands. © John Briggs



Urban edges as seen from near Penrhynside, looking inland the rural Rhos Hills area in the far distance. © John Briggs



One of a number of small valleys that run north to the sea, this one emerging at Colwyn Bay. © John Briggs



As the Vale of Clwyd meets the sea it opens into broad coastal levels, yet Rhyddlan Castle (middle distance) has found a slightly elevated position adjacent to the River Clwyd. © John Briggs

Geological Landscape influences

The soft, low-lying coastal fringe is constrained in width by steeply rising limestone hills inland. These hills occasionally meet the coastline, most famously as the Great Orme headland, (207m in height), with a chain of coastal hills in the western half of the character area reaching 300m in height. The hills draw back in the central section, opening into the Vale of Clwyd with its extensive coastal levels. The main river is the Clwyd, issuing between Rhyl and Towyn, but others include the Gele and Dulas.

The most prominent rock today is Carboniferous limestone (350 million years old), deposited in shallow tropical seas. This rock characterises the Ormes and other hills around Llandudno, the cliffs at Llanddulas and the Prestatyn hillsides of the adjacent Clwydian Range in the east. The stepped topography of the Great Orme and other areas reflect cyclical changes in deposition from marine to shoreline.

Till deposited during the final phase of glaciation reflects the meeting of ice-sheets from Snowdonia and the Irish Sea. The respective tills differ in character and join more or less parallel along the coast from Llandudno to Prestatyn, producing drumlin and meltwater features. Of note is the Mochre meltwater diversion, the River Conwy being blocked by sea ice and diverted to issue near Penrhyn for a time.

Today's coastline is strongly influenced by both geology and human interventions. The Great and Little Orme headlands have high, steep, coastal cliffs, while the Silurian rocks at Colwyn Bay and the Permo-Triassic rocks at the mouth of the River Clwyd form low-lying coastal areas. Human influence on the coast is particularly evident at Llandudno, Colwyn Bay and Rhyl, with their long promenades and hard coastal defences. Even the high limestone cliffs have not escaped human influence with numerous quarries. The only significant area of natural coast where coastal processes are allowed to continue unhindered is to the east of Prestatyn where sand dunes extend towards Talacre and Point of Ayr. Metal mining has also been historically important with examples of Bronze Age mining on the Great Orme and small-scale lead/zinc mining near Abergele. The copper mining on the Great Orme in particular has left a legacy of spoil heaps and disused shafts, which pepper the landscape.

Landscape Habitats influences

The low lying soft coast and levels contrast with the hard, craggy limestone hills, providing the settings for very different soils and habitat types.

Large sections of the soft coastline have been heavily modified or developed. Behind the seawalls, remnants of sandbanks and dune habitats survive in places, and some interesting shingle ridge habitats have developed along the beach itself at Traeth Pensarn. The most extensive section of active sand dune habitats are at Gronant Dunes to the east, a remains of a once much larger system along this coastline. These dunes support a rich flora, including rare liverworts, and associated invertebrates, with five Red Data Book species of moths and bees. The shingle spits support the largest colony of breeding little terns in Wales.

Inland from the coast in the central section are levels. Once marshes and fen, these areas have been reclaimed to farmland, with large fields bounded by straight drainage ditches and much improvement.

The stepped, rocky limestone landscapes and coastal headlands of the Great Orme support calcareous grassland as well as acidic heath in places, and include a variety of rare plants, including the endemic wild cotoneaster (part of the Aber Afon Conwy SSSI).

The headland also supports a diverse invertebrate population, with a range of seabirds on their coastal cliffs. Limestone pavements in the west support rich scrub woodland flora. In addition to the Great Orme, there are a series of important limestone grassland habitats running through the western half of the area, which support calcareous grassland communities. These include the Little Orme, Gloddaeth, Bryn Euryn, Mynydd Marian, Pydew and the Llanddulas scarps and woods. Mynydd Marian also supports an important population of the dwarf race of silver-studded blue butterfly. Llanddulas is an area of both limestone rock and associated ancient broadleaved woodland near Abergele, important for a diverse range of plants, bryophytes, butterflies, moths and bats.

Lack of grazing is often a management concern on calcareous grassland, with consequent scrub encroachment, as evident in many places. However the Great Orme benefits from a resident population of feral goats, which help to maintain the grassland habitats.

Historic Landscape influences

Archaeological and historic sites in the area demonstrate a long history of human intervention and settlement spanning the last 12,000 years from the Upper Palaeolithic period to the recent past. The Great Orme is particularly notable for its sequence of early archaeological remains, including Upper Palaeolithic caves such as Kendrick's Cave, the Neolithic burial chamber at Llety'r Filiast, Bronze Age cairns and extensive copper mines, and the Iron Age hillfort at Pendinas. Mining for copper on the Great Orme continued during Roman, Medieval and later periods, while coal was mined near Prestatyn.

Ecclesiastical sites are represented by the site of the medieval chapel at Penrhyn Old Hall, but the main medieval settlement in the area was the town of Abergele, still an important sub-regional centre.

The pre-Victorian village of Llandudno lay some way up the slopes of the Great Orme, and was sustained by farming, mining and fishing. From 1846 the low-lying common land between the Great and the Little Orme was let out by the Mostyn estate on a system of controlled leasing, which led to the growth of what has become a classic (and very well-preserved) example of a British seaside resort town. Similar processes brought into being the other resort settlements along the coastal strip. The area is also rich in historic parks and designed landscapes – Gwrych, with its extraordinary towers perched on cliff-tops, Pwllcrochan, and Gloddaeth, now St David's College, as well as the urban parks in the resorts, of which Happy Valley in Llandudno is a notable example.

The steeply rising hills and resort nature of much development has resulted in a concentration of development along the coastline, with road and rail transport routes occupying key coastal positions in Colwyn Bay and routing along the old Mochre meltwater channel in the west.

Cultural Landscape influences

The cultural identity of this area remains closely tied to its development in the C19th and C20th as a holiday area, centred around Llandudno, Llandrillo ('Rhos-on-Sea'), Colwyn Bay, Rhyl and Prestatyn. In the mid-19th century, and with the spread of railways, the area became a fashionable place where people of influence from London came for sea-air: Gladstone sea-bathed at Rhyl, whilst Matthew Arnold pondered on the nature of Celtic identity at Llandudno. Llandudno remains the most prominent resort, helped with its well-conserved historic and spectacular natural setting.

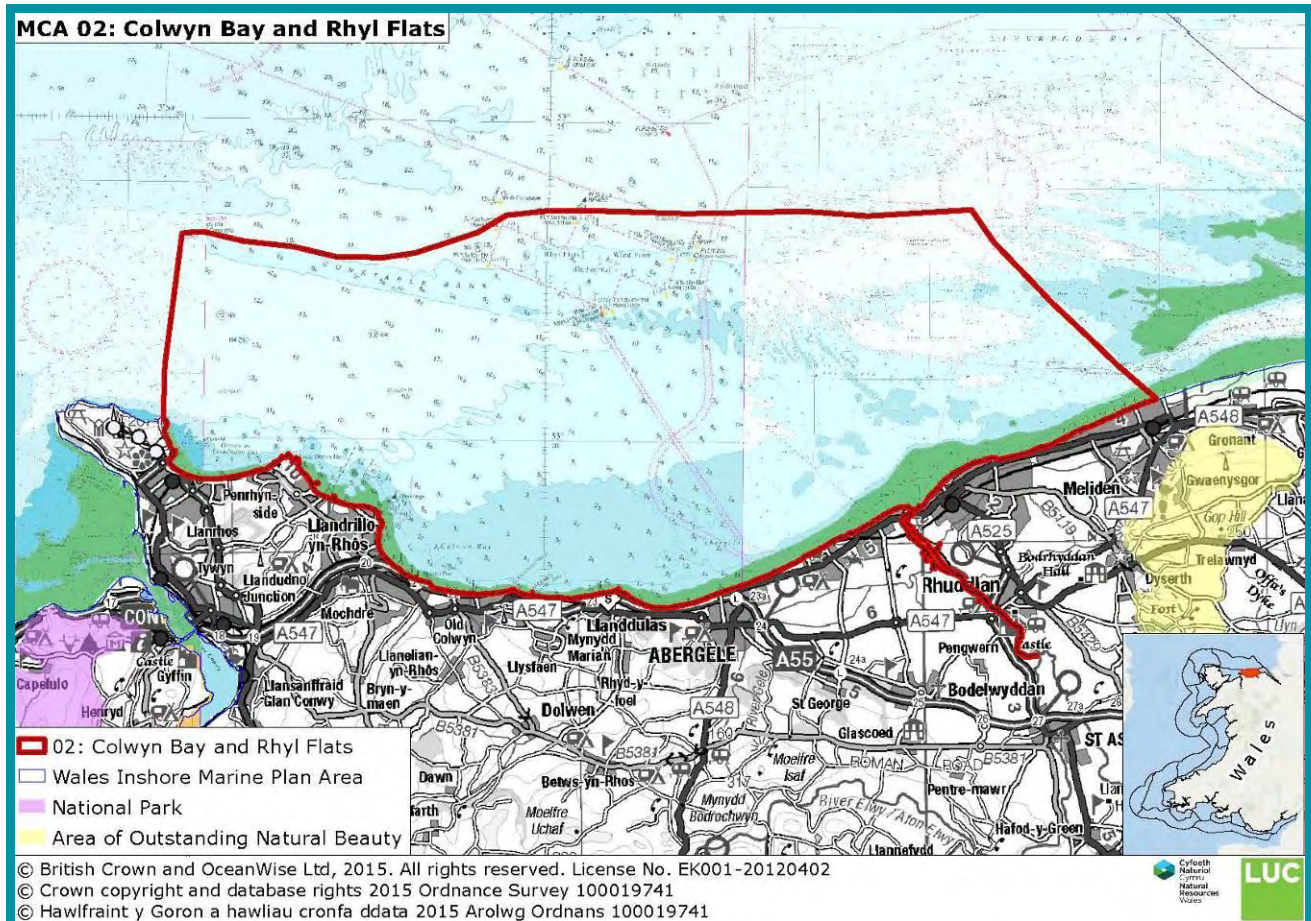
The result was, and partly continues to be, opulent hotels (Llandudno), wide streets, promenades, piers, caravan parks, lidos, the Mountain Zoo and numerous other visitor attractions and infrastructure.

Llandudno is well known for its association with Alice in Wonderland (1865) but less so for Matthew Arnold's Oxford lecture of the same year, 'On the Study of Celtic Literature', inspired by seeing an Eisteddfod being set up in the previous summer. Later published, its significance was that it opened the way to a wider appreciation of all things Celtic.

The area has also contributed to the expression of performing arts and events, with theatres and venues in resorts hosting many iconic shows and well-known stars, from large events, conferences and gatherings, to the small 'Punch and Judy' kiosk on Llandudno's North Shore promenade.

The area has many mentions in C20th literature, a few being: Arnold Bennett's 'The Card' (1911); Stanley Houghton's 'Hindle Wakes' (1912); Evelyn Waugh's 'Decline and Fall' (1928). Much earlier references in literature include: the Creuddyn Peninsula (the Llandudno area) forming the setting for the tales of Taliesin and Elphin; Mochdre is mentioned in the fourth branch of the Mabinogion, where the place-name element ('pig-township') is explained as the resting place of the magic swine of the story. Based more on fact than fiction, 'Y Drych Christianogawl' (a Roman Catholic tract) was secretly printed by Robert Puw of Perhyn Creuddyn, in a cave on the Little Orme in 1587.

Kinmel camp was the scene of a mutiny in 1919, when Canadian soldiers refused to obey orders, fearing that they were to be sent to fight the Bolsheviks.



Location and boundaries

This Marine Character Area (MCA) is located in North Wales, covering the shallow coastal and inshore waters of Colwyn Bay and the extensive sand banks of Rhyl Flats, Chester Flats and Constable Bank.

- It takes in the full extent of Constable Bank and its associated shallow waters, as marked on the Marine Chart.
- The MCA's landward boundary extends from the eastern limits of Prestatyn, taking in the coastal settlements of Rhyl, Abergele and Colwyn Bay as far west as Little Orme's Head.
- The outer offshore boundary encloses the Rhyl Flats offshore windfarm and separates the shallow waters associated with the banks and flats from the deeper water further offshore (MCA 04).

Key Characteristics

Key Characteristics
Low-lying coastline backed by coastal levels associated with the broad mouth of the Vale of Clwyd to the eastern half of the area.
High, exposed, rocky limestone hills and open headlands with intermediate developed bays to the western half of the area. Little Orme and Great Orme headlands form dramatic rugged landmarks.
Long sandy beaches and shingle storm beaches. All the soft coastline is protected by various coastal defences including groynes, rock armour, beach recharging, walls and traditional promenades.
Shallow waters (<20m) with gently shelving beaches and extensive network of offshore sandbank and flats .
Significant peat exposures off Rhyl and at Rhos on Sea attesting to inundated land surfaces dating to the end of the last Ice Age.
Extensive marine sediments of sand and gravel extending from the neighbouring Dee Estuary MCA and forming long, linear sandbanks running roughly parallel to the shore.
Constantly shifting sandbanks with changing depths; hazards marked by numerous buoys , lights and fog horns.
South Hoyle Channel and Inner Passage provided the approaches to Roman port of Chester. The present day navigation channels are maintained regularly by dredging.
Most of the area is included in the Liverpool Bay SPA , designated for its international importance to overwintering populations of red-throated diver and common scoter.
The flats, sand banks, bays and rocky shores are important for biodiversity, extensively designated including SPA, SAC and SSSI .
Wave exposure generally low closer to shore, increasing in more open waters where the sheltering effect of Great Orme's Head (in MCA 03) diminishes.
Developed coastline with many seaside resort towns , notably Llandudno (and pier), Colwyn Bay (and pier), Rhyl and Prestatyn, the latter having many caravan and chalet parks on their fringe. The coast serves as a traditional holiday destination .
Recreational activity includes water sports such as jet skiing and speed boating . Tourist pleasure trips run from the pier at Llandudno, usually heading westwards around Great Orme's Head.
Wales Coast Path and a popular cycleway run the length of the coastline. Collectively, the A55, A548 and main Holyhead to Chester railway line follow close to the coastline.
Concentrations of documented shipwrecks in the approaches to Rhyl and Foryd harbours , also in locations where they were blown ashore from traditional anchorages.
Both Colwyn Bay and Rhyl are popular shore and boat angling areas . Rhyl includes the main harbour along this stretch of coast.
Historic military use of the seascape at Rhyl providing the last coastal fix for aircraft operating out of Hawarden and Sealand.
Rhyl Flats Offshore Wind Farm forms a dominating offshore feature. The moving turbines are supplemented by further turbines beyond (in MCA 29).
Limestone hills form a backdrop , in the east linking to the adjacent slopes of the Clwydian Range AONB. From further out to sea, views reach beyond to the mountains of Snowdonia National Park.

Natural Influences

The Colwyn Bay and Rhyl Flats MCA comprises the north facing bays, wide sandy beaches and shallow sand banks of Colwyn Bay. It extends between the extensive sandy shoreline at Prestatyn in the east, taking in the bays of Penrhyn, Colwyn and Kinmel and Llandudno North Shore and includes the dramatic rocky headlands of Little Orme and Great Orme in the west, the latter bounding the MCA.



The cliffs of Great Orme, flanking the western part of the MCA

In the eastern half of the area, the MCA is backed by low lying coastal levels. The coastline is protected by extensive man-made coastal defences, providing some physical and visual separation between the foreshore and the development behind at Prestatyn, Rhyl and Towyn. The mouth of River Clwyd cuts across the sandy beach between Kinmel Bay and Rhyl. At Prestatyn, land gently rises up and then steepens dramatically to the craggy Clwydian Range peaks of Graig Fawr (153m AOD) and Y Foel (265m). In the west, the Carboniferous limestone headlands of Little Orme (141m) and Great Orme (207m) jut out into the sea but are perhaps more remarkable for their dramatic steep sea cliffs and their open heath and classic exposed limestone ruggedness. Internationally important coastal heathland provides rich habitat for higher plant communities including hoary rock-rose and spiked speedwell. These coastal and upland landscapes provide a dramatic backcloth to the MCA.

The large open Colwyn Bay shelves very gradually north out to the Irish Sea, fronted by a vast expanse of flat sandy beaches constantly fed and modified by Longshore drift, as well as exposed and partially exposed sand banks. This area experiences a low tidal range and low to moderate wave stress. Offshore, the seas become rougher with areas of high wave stress where there are shallow waters over Constable Bank and Rhyl Flats. At low tide part of Rhyl Flats is less than half a metre below the water surface, forming a particular hazard to navigation. The constantly shifting sand creates an intricate network of sandbanks, including Chester Flats, connected to Rhyl Flats by the Tail of Middle Patch, and an extensive area of very shallow water in the east of the MCA.

Coastal waters in the west gradually deepen to approximately 16 metres; Constable Bank cuts across this area reducing the depth along the outer MCA boundary. A yellow and black banded cardinal buoy marks the western extent of the bank at West Constable.

All of the MCA falls within the Liverpool Bay SPA, designated for its large populations of overwintering red throated divers and common scoters which feed in the rich waters around the network of sandbanks. Other biodiversity designations include part of the Menai Strait and Conwy Bay SAC in the west and several SSSIs reflecting the biodiversity importance of the area's extensive intertidal sands (comprising the wide beaches); sand banks, exposed calcareous rocks and limestone reefs also support important populations of shellfish, sponges and worms. The area's importance for its range of birdlife is also reflected in a large proportion designated by the RSPB as an Important Bird Area.

There are significant areas of peat exposures off Rhyl and at Rhos-on-Sea attesting to inundated land surfaces dating to the end of the last Ice Age.

Cultural/social influences

The north coast's rich historic past is acknowledged as a Landscape of Outstanding Historic Interest at Little Orme's Head and Llandudno Bay, the area forming part of a medieval commote of Creuddyn. Evidence of early human habitation and exploitation of the sea's rich natural resources has been proven with the recording of post medieval (and earlier) fishtrap complexes at Rhos-on-Sea and Llandudno, the latter linked to the origins of the settlement as a small fishing village.

More recent maritime history details relatively few wrecks in this seascape compared to neighbouring MCAs – perhaps reflecting its historic character as one of transit. Historic vessels passing through tended to hug the coast to anchor before continuing into the Mersey or the Dee when the tide was right. Documented shipping losses cluster around the approaches to Foryd or Rhyl harbours, as well as the entrance of the Inner Passage heading towards the mouth of the Dee. There are also losses linked to vessels driven ashore from the traditional anchorages such as Abergele Road by north or north-westerly gales. These have included large steamships as well as traditional coasting schooners, sloops, and flats. Local folklore states that a ghost ship, the boat of Prince Madoc a Welsh explorer, was spotted off the coast at Abergele Road. It is claimed that Madoc discovered the Americas 300 years before Christopher Columbus.

The pre-industrial settlement of Rhuddlan is located at the upper tidal extent of the Clwyd, and is the site of Rhuddlan Castle, which was established by Edward I in 1277 along with a new town on the site of earlier settlement. The concentric design of the castle represents an innovative masterpiece of medieval military architecture comparable to the more famous coastal castles further along the coast to the west, also constructed for Edward. The castle retains significant views into the estuary and along the coastal communication routes that served it, and the buried remains of docks and landing bays are likely to be preserved alongside the ruins. The whole site is designated as a Scheduled Monument.

The seascapes of Rhyl were used by the military during WWII with the coastal flats associated with several forced landing and crashes, such as *Boulton Paul Defiant* which belly-landed on the beach in 1941. During the same period the area provided the last coastal fix for aircraft operating out of Hawarden and Sealand.



Llandudno Bay framed by Little Ormes Head

The sandy beaches along this north coast of Wales have long been popular with visitors from the industrial towns of north-west England and from across Wales. The “*little village of Llandudno*” was visited by Daniell and Ayton on their voyage around the Welsh coast in 1814. The coastal towns of Llandudno (known as ‘*The Queen of Resorts*’), Colwyn Bay, Rhyl and Prestatyn provide a wealth of traditional seaside recreational opportunities and attractions including the Grade II Listed Victoria Pier at Colwyn Bay and the Grade II* Llandudno Pier – the longest in Wales, opened in 1877 as a major draw for Victorian holiday-makers. The surrounding coastal waters provide a range of further recreational opportunities, including water sports such as jet skiing and speed boating.

Rhyl boasts the main harbour along this stretch of coast, however, access is limited due to the tides (drying heights of six metres) as well as the wreck of the sailing ship *Ottowa* which lies buried beneath the sand and mud obstructing the channel. A small harbouring area has also been created with the help of a breakwater at Rhos-on-sea. North Rhyl anchorage is situated within the Outer Passage offshore. Small charter boats can be seen strung along the South Hoyle Channel fishing in the shallow waters for whiting, plaice and dab. Inner Passage and South Hoyle Channel are used by craft approaching Welsh Channel and the Dee Estuary (MCA 01). Fishing activity is extensive throughout the MCA with the deeper waters being identified as an area for light otter trawling and light beam trawling. The network of shallower channels is used by fisherman with set nets. Waters off Llandudno are used for lobster and crab potting, whilst the shelving beaches are exploited by people hand gathering mussels and periwinkles. Llandudno Bay, Rhos Point and Llanddulas are also popular for beach net fishing.

The 25 turbines of Rhyl Flats Offshore Wind Farm are situated approximately five miles off the coast, covering nearly four square miles within the shallow waters around Constable Bank and Rhyl Flats. To help mariners negotiate the turbines and shallow water the wind farm is marked by several buoys and horns. Submarine power cables cross the MCA linking the offshore windfarms to the land, connecting the electricity generated to the National Grid.

The Wales Coast Path hugs the shoreline following the extensive promenade coastal defence at Llandudno, Rhos-on-sea, Colwyn Bay, Pensarn, Towyn, Rhyl and Prestatyn.

The A55, A548 and main Holyhead to Chester railway line also collectively follow close to the coastline.

Aesthetic and perceptual qualities

Development has a strong influence on the character of this MCA. In views from the sea, tall structures appear above the coastal defences; church spires, aerial masts, and Rhyl's iconic 240 feet high Sky Tower, all feature in views back to shore. Views of the impressive Grade I Listed 19th century Gwrych Castle nestled on the wooded slopes above Abergele can also be gained from the sea, adding a contrasting sense of time depth behind the more modern developments and infrastructure below. The rising hills of the Clwydian Range and Dee Valley AONB feature as a dramatic backdrop to the south-east of the MCA, whilst views to the imposing mountains of Snowdonia National Park – often shrouded in low cloud/mist – feature to the south-west.

The area's long-standing popularity as a holiday destination results in a busy seascape with activities along the coast and out to sea creating much movement and colour. The lithograph below from 1850 captures this scene particularly effectively. The coastline is brought to life particularly in the summer months, whilst the scene can be dramatically different in mid-winter, with facilities closed down and beaches relatively empty with natural influences, notably bracing winds, replacing human activity.



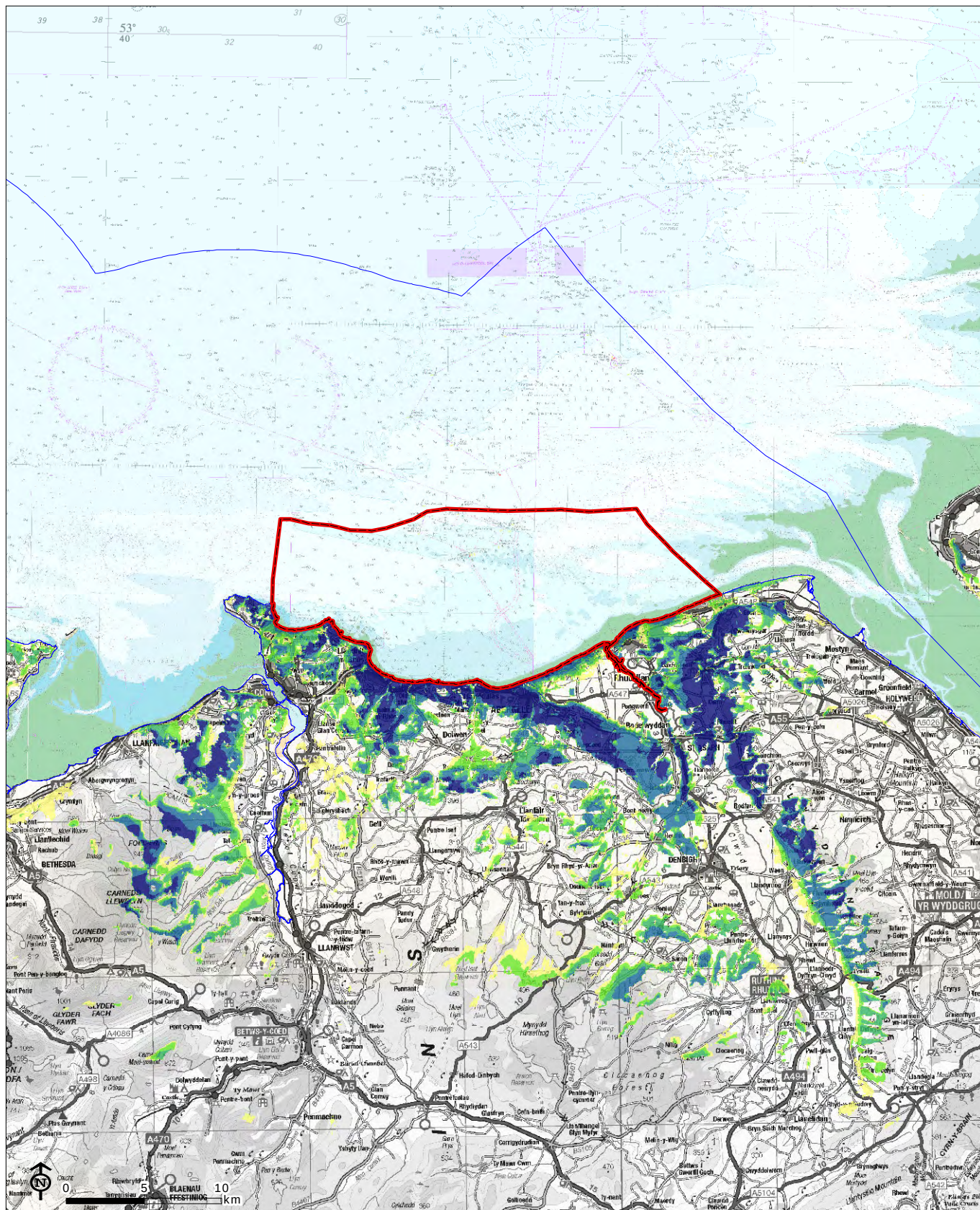
'Rhyl from the sea'; a lithograph c.1850, (© Crown Estate, 2013).

The 25 offshore turbines (134 metres to blade tip) which make up the Rhyl Flats Wind Farm often dominate offshore views, seen in conjunction with further offshore turbines at Gwynt-y-Mor Wind Farm and North Hoyle Wind Farm to the east. The visual distinction between individual offshore wind farm developments is blurred as turbine fields overlap. These further add to the developed northern coast and define the character of the waters at the outer extent of the MCA. The presence of the turbines reduces the overall sense of tranquillity and remoteness but does not affect the feeling of exposure associated with the vast open sandy beaches.

The Visual Resource Maps (VRM) that follow provide a more detailed spatial representation of the visibility of this MCA from the surrounding land in Wales. Please refer to the technical report for an explanation of how these maps were generated and how they should be interpreted.

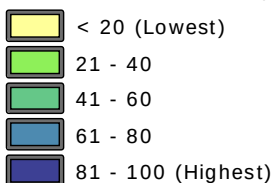
The first map shows land with views to this MCA, the darker shading indicating land where from which more of this MCA is visible.

The second map shows sea visible from land, the warmer colours being areas of sea that are visible from more places on land. This comes from a national assessment of Wales so the results do not relate specifically to this MCA, whose boundary is overlaid for location only. The four individual versions show how the results vary depending on how far inland hypothetical viewers are located.



- 02: Colwyn Bay and Rhyl Flats
- Wales Inshore Marine Plan Area

Land with sea views (Percentile)



Wales National Seascape Assessment

Land with Views of:
MCA 02: Colwyn Bay and Rhyl Flats

Source: LUC, NRW, OceanWise



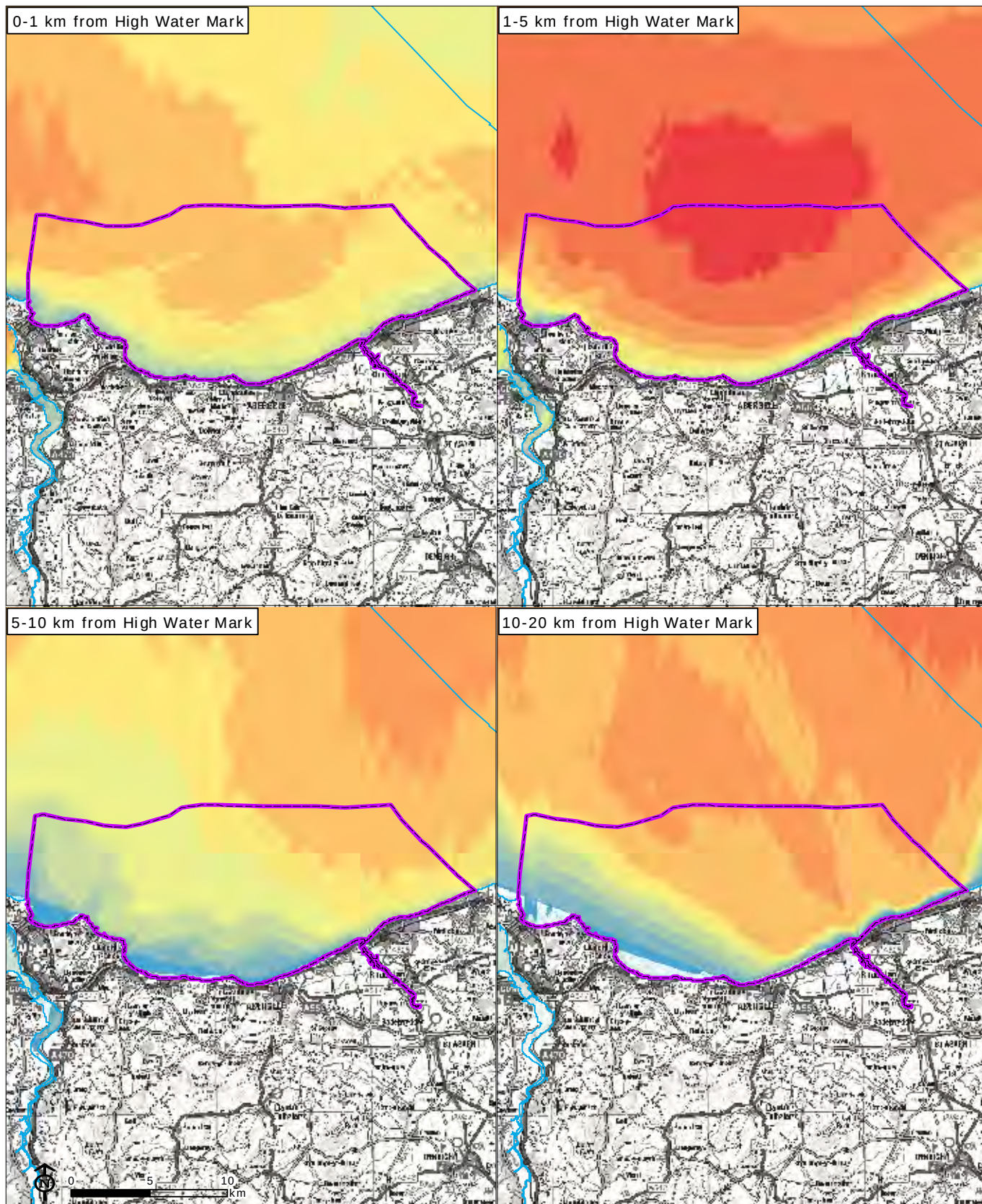
Map Scale @ A4: 1:350,000

CB: EB:Goosen_V LUC/LON 6262-00_021_VRM_Maps_DDP_LandWithSeaViews_export_map_1 25/03/2015

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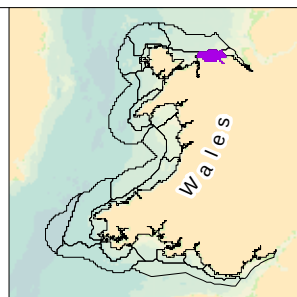
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- 02: Colwyn Bay and Rhyl Flats
- Wales Inshore Marine Plan Area

Visibility of sea from land (percentile)

 <10 (Lowest)	 51-60
 11-20	 61-70
 21-30	 71-80
 31-40	 81-90
 41-50	 91-100 (Highest)



Wales National Seascape Assessment

Relative Visibility of the Sea Surface from Viewers on Land
MCA 02: Colwyn Bay and Rhyl Flats



Map Scale @ A4: 1:350,000

CB: EB:Goosen_V LUC/LON 6262-00_022_VRM_Maps_DDP_Sea_Visibility_ 27/05/2015

C.12 Landscape and Visual Impact Assessment Methodology

Introduction

This appendix contains additional detail regarding the assessment methodology, supplementing the information provided within the LVIA text. This appendix sets out a standard approach – specific matters in terms of the scope of assessment, study area and modifications to the standard approach for this assessment are set out within the LVIA.

The methodology has the following key stages, which are described in more detail in subsequent sections, as follows:

- Baseline – includes the gathering of documented information; agreement of the scope of the assessment with the EIA co-ordinator and local planning authority; site visits and initial reports to the EIA co-ordinator of issues that may need to be addressed within the design.
- Design – input into the design / review of initial design / layout / options and mitigation options.
- Assessment – includes an assessment of the landscape and visual effects of the scheme, requiring site based work and the completion of a full report and supporting graphics.

Cumulative Assessment – assesses the effects of the proposal in combination with other developments, where required.

Baseline

The baseline study establishes the planning policy context, the scope of the assessment and the key receptors. It typically includes the following key activities:

- A desk study of relevant current national and local planning policy, in respect of landscape and visual matters, for the site and surrounding areas.
- Agreement of the main study area radius with the local planning authority.
- A desk study of nationally and locally designated landscapes for the site and surrounding areas.
- A desk study of existing landscape character assessments and capacity and sensitivity studies for the site and surrounding areas.
- A desk study of historic landscape character assessments (where available) and other information sources required to gain an understanding of the contribution of heritage assets to the present day landscape.
- Collation and evaluation of other indicators of local landscape value such as references in landscape character studies or parish plans, tourist information, local walking & cycling guides, references in art and literature.
- The identification of valued character types, landscape elements and features which may be affected by the proposal, including rare landscape types.
- Exchanging information with other consultants working on other assessment topics for the development as required to inform the assessment.
- Draft Zone of Theoretical Visibility (ZTV) studies to assist in identifying potential viewpoints and indicate the potential visibility of the proposed development, and therefore scope of receptors likely to be affected. The methodology used in the preparation of ZTV studies is described within Appendix 12.4.
- The identification of and agreement upon, through consultation, the scope of assessment for cumulative effects.

- The identification of and agreement upon, through consultation, the number and location of representative and specific viewpoints within the study area.
- The identification of the range of other visual receptors (e.g. people travelling along routes, or within open access land, settlements and residential properties) within the study area.
- Site visits to become familiar with the site and surrounding landscape; verify documented baseline; and to identify viewpoints and receptors.
- Input to the design process.

The information gathered during the baseline assessment is drawn together and summarised in the baseline section of the report and reasoned judgements are made as to which receptors are likely to be significantly affected. Only these receptors are then taken forward for the detailed assessment of effects (ref. GLVIA 3rd edition, 2013, para 3.19).

Design

The design and assessment stages are necessarily iterative, with stages overlapping in parts. Details of any mitigation measures incorporated within the proposals to help reduce identified potential landscape and visual effects are set out within the LVIA.

Assessment

- The assessment of effects includes further desk and site based work, covering the following key activities:
- The preparation of a ZTV based on the finalised design for the development.
- An assessment, based on both desk study and site visits, of the sensitivity of receptors to the proposed development.
- An assessment, based on both desk study and site visits, of the magnitude and significance of effects upon the landscape character, designated and recreational landscape and the existing visual environment arising from the proposed development.
- An informed professional judgements as to whether each identified effect is positive, neutral or adverse.
- A clear description of the effects identified, with supporting information setting out the rationale for judgements.
- Identification of which effects are judged to be significant based on the significance thresholds set out within the LVIA.

Site

The effect of physical changes to the site are assessed in terms of the effects on the landscape fabric.

Landscape and Townscape Character Considerations

The European Landscape Convention (2000) provides the following definition:

"Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors."

And notes also in Article 2 that landscape includes *"natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas"*.

An Approach to Landscape Character Assessment (Natural England, 2014) defines landscape character as:

"a distinct and recognisable pattern of elements, or characteristics, in the landscape that make one landscape different from another, rather than better or worse."

The susceptibility of landscape character areas is judged based on both the attributes of the receiving environment and the characteristics of the proposed development as discussed under 'susceptibility' within the methodology section of the LVIA. Thus, the key characteristics of the landscape character types/areas are considered, along with scale, openness, topography; the absence of, or presence, nature and patterns of development, settlement, landcover, the contribution of heritage assets and historic landscape elements and patterns, and land uses in forming the character. The condition of the receiving landscape, i.e. the intactness of the existing character will also be relevant in determining susceptibility. The likelihood of material effects on the landscape character areas can be judged based on the scale and layout of the proposal and how this relates to the characteristics of the receiving landscape.

The introduction of any development into a landscape adds a new feature which can affect the 'sense of place' in its near vicinity, but with distance, the existing characteristics reassert themselves.

The baseline is informed by desk study of published landscape character assessments and field survey. It is specifically noted within An Approach to Landscape Character Assessment (Natural England, 2014) that:

"Our landscapes have evolved over time and they will continue to evolve – change is a constant but outcomes vary. The management of change is essential to ensure that we achieve sustainable outcomes – social, environmental and economic. Decision makers need to understand the baseline and the implications of their decisions for that baseline."

At page 51 it describes the function of Key Characteristics in landscape assessment, as follows:

"Key characteristics are those combinations of elements which help to give an area its distinctive sense of place. If these characteristics change, or are lost, there would be significant consequences for the current character of the landscape. Key characteristics are particularly important in the development of planning and management policies. They are important for monitoring change and can provide a useful reference point against which landscape change can be assessed. They can be used as indicators to inform thinking about whether and how the landscape is changing and whether, or not, particular policies – for example - are effective and having the desired effect on landscape character."

It follows from the above that in order to assess whether landscape character is significantly affected by a development, it should be determined how each of the key characteristics would be affected. The judgement of magnitude therefore reflects the degree to which the key characteristics and elements which form those characteristics will be altered by the proposals.

Landscape value - considerations

Paragraph 5.19 of GLVIA states that "A review of existing landscape designations is usually the starting point in understanding landscape value, but the value attached to undesignated landscapes also needs to be carefully considered and individual elements of the landscape- such as trees, buildings or hedgerows -may also have value. All need to be considered where relevant."

Paragraph 5.20 of GLVIA indicates information which might indicate landscape value, including:

Information about areas recognised by statute such as National Parks, Areas of Outstanding Natural Beauty;

Information about Heritage Coasts, where relevant;

Local planning documents for local landscape designations;

Information on features such as Conservation Areas, listed buildings, historic or cultural sites;

Art and literature, identifying value attached to particular areas or views; and

Material on landscapes of local or community interest, such as local green spaces, village greens or allotments.

An assessment of landscape value is made based on the following factors outlined in Table 1 of the Landscape Institute's 'Technical Guidance Notes 02-21: Assessing landscape value outside national designations': natural heritage; cultural heritage; landscape condition; associations; distinctiveness; recreational; perceptual (scenic); perceptual (wildness and tranquillity); and functional.

In addition to the above list, consideration is given to any evidence that indicates whether the landscape has particular value to people that would suggest that it is of greater than Community value.

Viewpoints and Visual Receptors - considerations

A wide variety of visual receptors can reasonably be anticipated to be affected by the proposed development. Within the baseline assessment, the ZTV study and site visits are used to determine which visual receptors are likely to be significantly affected and therefore merit detailed assessment. In line with guidance (GLVIA, 3rd Edition, 2013); both representative and specific viewpoints may be identified to inform the assessment. In general, the majority of viewpoints will be representative – representing the visual receptors at the distance and direction in which they are located and of the type(s) that would be present at that location. The representative viewpoints have generally been selected in locations where significant effects would be anticipated; though some may be selected outside of that zone – either to demonstrate the reduction of effects with distance; or to specifically ensure the representation of a particularly sensitive receptor.

The types of visual receptors likely to be included with the assessment are:

- Users of walking routes or accessible landscapes including Public Rights of Way, National and Regional Trails and other long distance routes, Common Land, Open Access Land, permissive paths, land held in trust (e.g. Woodland Trust, National Trust) offering free public access, and other regularly used, permitted walking routes;
- Visitors to and residents of settlements;
- Visitors to specific valued viewpoints;
- Visitors to attractions or heritage assets for which landscape and views contribute to the experience; and
- Users of roads or identified scenic routes.

Visual receptors are grouped for assessment into areas which include all of the routes, public spaces and homes within that area. Groups are selected as follows:

- Based around settlements in order to describe effects on that that community – e.g. a settlement and routes radiating from that settlement; or
- An area of open countryside encompassing a number of routes, accessible spaces and individual dwellings; or
- An area of accessible landscape and the routes within and around it e.g. a country park; and
- such that effects within a single visual receptor group are similar enough to be readily described and assessed.

With the exception of specific viewpoints, each route, settlement or location will encompass a range of possible views, which might vary from no view of the

development to very clear, close views. Therefore, effects are described in such a way as to identify where views towards the development are likely to arise and what the scale, duration and extent of those views are likely to be. In some cases, this will be further informed by a nearby viewpoint and in others it will be informed with reference to the ZTV, aerial photography and site visits. Each of these individual effects are then considered together in order to reach a judgement of the effects on the visual receptors along that route, or in that place.

The representative viewpoints are used as 'samples' on which to base judgements of the scale of effects on visual receptors. The viewpoints represent multiple visual receptors, and duration and extent are judged when assessing impacts on the visual receptors.

For specific viewpoints (key and sometimes promoted viewpoints within the landscape), duration and extent are assessed, with extent reflecting the extent to which the development affects the valued qualities of the view from the specific viewpoint.

	High	Medium	Low
National/International	1	4	8
Local/District	2	5	8
Community	3	6	9
Limited		7	10
1) Visitors to valued viewpoints or routes which people might visit purely to experience the view, e.g. promoted or well-known viewpoints, routes from which views that form part of the special qualities of a designated landscape can be well appreciated; key designed views; panoramic viewpoints marked on maps. 2) People in locations where they are likely to pause to appreciate the view, such as from local waypoints such as benches; or at key views to/from local landmarks. Visitors to local attractions, heritage assets or public parks where views are an important contributor to the experience, or key views into/out of Conservation Areas. 3) People in the streets around their home, or using public rights of way, navigable waterways or accessible open space (public parks, open access land). 4) Users of promoted scenic rail routes. 5) Users of promoted scenic local road routes. 6) Users of cycle routes, local roads and railways. 7) Outdoor workers. 8) Users of A-roads which are nationally or locally promoted scenic routes. 9) Users of sports facilities such as cricket grounds and golf courses. 10) Users of Motorways and A-roads; shoppers at retail parks, people at their (indoor) places of work.			

Preparation and use of Visuals

The ZTVs are used to inform the field study assessment work, providing additional detail and accuracy to observations made on site. Photomontages may also be produced in order to assist readers of the assessment in visualising the proposals, but are not used in reaching judgements of effect. The preparation of the ZTVs (and photomontages where applicable) is informed by the Landscape Institute's Technical Guidance Note 06/19 'Visual Representation of development proposals' and SNH

'Visual Representation of Wind Farms Best Practice Guidance' (both the 2007 and 2017 editions).

The following points should be borne in mind in respect of the ZTV study:

- Areas shown as having potential visibility may have visibility of the development obscured by local features such as trees, hedgerows, embankments or buildings.

A detailed description of the methods by which ZTVs are prepared is included in Appendix 5.3.

In addition to the main visualisations, illustrative views are used as appropriate to illustrate particular points made within the assessment. These are not prepared to the same standard as they simply depict existing views, character or features rather than forming the basis for visualisations.

Residential Amenity

Paragraph 6.17 of GLVIA, 3rd edition notes that:

"In some instances it may also be appropriate to consider private viewpoints, mainly from residential properties.... Effects of development in private property are frequently dealt with mainly through 'residential amenity assessments'. These are separate from LVIA although visual effects assessment may sometimes be carried out as part of a residential amenity assessment, in which case this will supplement and form part of the LVIA for a project. Some of the principles set out here for dealing with visual effects may help in such assessments but there are specific requirements in residential amenity assessment"

The guidance also notes that:

"In respect of private views and visual amenity, it is widely known that, no one has 'a right to a view.' This includes situations where a residential property's outlook / visual amenity is judged to be 'significantly' affected by a proposed development, a matter which has been confirmed in a number of appeal / public inquiry decisions."

It is important to note:

"Judgements formed in respect of Residential Visual Amenity should not be confused with the judgement regarding Residential Amenity because the latter is a planning matter. Nor should the judgment therefore be seen as a 'test' with a simple 'pass' or 'fail'.

... The final judgement regarding effect on Residential Amenity ... requires weighing all factors and likely effects (positive as well as negative) in the 'planning balance'."

The guidance notes that many appeal decisions in which residential visual amenity is considered relate to wind farms. Wind farms are unusually tall developments with a greater chance that they could have such an effect. Most forms of development are unlikely to cause effects of such a high magnitude to render a property an unattractive place in which to live unless in very close to the property and occupying a large proportion of views.

Residential properties closest to the site are viewed on site and from aerial photography to consider whether a residential amenity assessment is required. Where such an assessment is required, it is provided as an appendix to the LVIA and in accordance with the guidance provided in LI TGN 02/2019.

C.13 ZTV Studies

ZTV Studies

ZTV studies are prepared using the ESRI ArcGIS Viewshed routine. This creates a raster image that indicates the visibility (or not) of the points modelled. LDA Design undertake a ZTV study that is designed to include visual barriers from settlements and woodlands (with heights derived from NEXTMAP 25 surface mapping data). If significant deviations from these assumed heights are noted during site visits, for example young or felled areas of woodland, or recent changes to built form, the features concerned will be adjusted within the model or the adoption of a digital surface model will be used to obtain actual heights for these barriers.

The model is also designed to take into account both the curvature of the earth and light refraction, informed by the SNH guidance. LDA Design undertake all ZTV studies with observer heights of 2m.

The ZTV analysis begins at 1m from the observation feature and will work outwards in a grid of the set resolution until it reaches the end of the terrain map for the project.

For all plan production LDA Design will produce a ZTV that has a base and overlay of the 1:50,000 Ordnance Survey Raster mapping or better. The ZTV will be reproduced at a suitable scale on an A3 template to encompass the study area.

Ground model accuracy

Depending on the project and level of detail required, different height datasets may be used. Below is listed the different data products and their specifications:

Table 1 Ground model accuracy

Product	Distance Between Points	Vertical RMSE Error
LiDAR	50cm – 2m	up to +/- 5cm
Photogrammetrically Derived Heights	2m – 5m	up to +/- 1.5m
Ordnance Survey OS terrain 5	5 m	up to +/- 2.5m
NextMap25 DTM	25 m	+/- 2.06m
Ordnance Survey OS terrain 50	50 m	+/- 4m

C.14 Glossary

Cumulative effects. The additional changes caused by a proposed development in conjunction with other similar developments or as the combined effect of a set of developments, taken together.

Illustrative Viewpoint. A viewpoint chosen specifically to demonstrate a particular effect or specific issues, which might, for example, be the restricted visibility at certain locations.

Landscape Character Areas These are single unique areas which are the discrete geographical areas of a particular landscape type.

Landscape Character Type. These are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation, and historical land use, and settlement pattern, and perceptual and aesthetic attributes.

Landscape effects. Effects on the landscape as a resource in its own right.

Landscape character. A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.

Landscape quality (or condition). A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.

Landscape receptors. Defined aspects of the landscape resource that have the potential to be affected by a proposal.

Landscape value. The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.

Magnitude (of effect). A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term, in duration.

Mitigation. Measures which are proposed to prevent, reduce and where possible offset any significant adverse effects (or to avoid, reduce and if possible remedy identified effects).

Representative Viewpoint. A viewpoint selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ.

Sensitivity. A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.

Specific Viewpoint. A viewpoint because it is key and sometimes a promoted viewpoint within the landscape, including for example specific local visitor attractions, viewpoints in areas of particularly noteworthy visual and/or recreational amenity such as landscapes with statutory landscape designations, or viewpoints with particular cultural landscape associations.

Susceptibility. The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.

Visual amenity. The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the

enjoyment of activities of people living, working, recreating, visiting or travelling through an area.

Visual effect. Effects on specific views and on the general visual amenity experienced by people.

Visual receptor. Individuals and/or defined groups of people who have the potential to be affected by a proposal.

Zone of Theoretical Visibility (ZTV). A map, usually digitally produced, showing areas of land within which a development is theoretically visible.

Definitions from Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Landscape Institute with the Institute of Environmental Management and Assessment, 2013

D Coastal Processes

D.1 Tidal Diamond data

Table 8 Tidal diamond data: SN045

1. SN045D

53°25.71'N 3°26.48'W

Data Area 1-4. Europe, Northern Waters & Mediterranean - Version 19,0,0,520

Predictions are based on Liverpool (Gladstone Dock)

Time	Direction	Spring rate	Neap Rate
-06 h	057°	0.3 kn	0.2 kn
-05 h	088°	0.7 kn	0.4 kn
-04 h	100°	1.2 kn	0.7 kn
-03 h	104°	1.4 kn	0.8 kn
-02 h	092°	0.9 kn	0.5 kn
01 h	079°	0.4 kn	0.1 kn
HW	289°	0.2 kn	0.1 kn
01 h	268°	1.1 kn	0.6 kn
02 h	270°	1.4 kn	0.8 kn
03 h	271°	1.1 kn	0.6 kn
04 h	275°	0.7 kn	0.3 kn
05 h	313°	0.4 kn	0.2 kn
06 h	020°	0.2 kn	0.1 kn

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Table 9. Tidal diamond data: SN045J

2. SN045J

53°25.21'N 3°21.38'W

Data Area 1-4. Europe, Northern Waters & Mediterranean - Version 19,0,0,520

Predictions are based on Liverpool (Gladstone Dock)

Time	Direction	Spring rate	Neap rate
-06 h	027°	0.2 kn	0.1 kn
-05 h	089°	0.9 kn	0.5 kn
-04 h	098°	1.6 kn	0.9 kn
-03 h	102°	1.8 kn	1.0 kn
-02 h	109°	1.5 kn	0.8 kn
01 h	127°	0.7 kn	0.4 kn
HW	215°	0.3 kn	0.1 kn
01 h	270°	0.9 kn	0.4 kn
02 h	280°	1.3 kn	0.8 kn
03 h	282°	1.7 kn	0.9 kn
04 h	286°	1.5 kn	0.8 kn
05 h	293°	1.0 kn	0.5 kn
06 h	327°	0.3 kn	0.2 kn

Table 10. Tidal diamond data: SN045F

3. SN045F

53°29.02'N 3°49.88'W

Data Area 1-4. Europe, Northern Waters & Mediterranean - Version 19,0,0,520

Predictions are based on Liverpool (Gladstone Dock)

Time	Direction	Spring rate	Neap rate
-06 h	343°	0.2 kn	0.1 kn
-05 h	083°	0.7 kn	0.4 kn
-04 h	101°	1.5 kn	0.8 kn
-03 h	105°	1.7 kn	1.0 kn
-02 h	105°	1.4 kn	0.7 kn
01 h	099°	0.7 kn	0.4 kn
HW	N/A	0.0 kn	0.0 kn
01 h	280°	0.5 kn	0.3 kn
02 h	277°	1.0 kn	0.6 kn
03 h	280°	1.4 kn	0.8 kn
04 h	286°	1.4 kn	0.8 kn
05 h	283°	1.0 kn	0.5 kn
06 h	308°	0.4 kn	0.2 kn

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