

FINAL

# Cardigan Tidal Flood Risk Management Scheme Environmental Constraints and Opportunities Record – Part A

Project no. 123666



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## i. Crynodeb gweithredol

Paratowyd y Cofnod Cyfyngiadau a Chyfleoedd Amgylcheddol (ECOR) hwn er mwyn dogfennu'r asesiad amgylcheddol sy'n gysylltiedig â'r gwaith o ddylunio Cynllun Rheoli Perygl Llifogydd Llanwol Aberteifi.

Mae ardaloedd isaf y cei yn Aberteifi wedi bod dan ddŵr y llanw, sy'n effeithio ar ardal isaf y Strand. Effeithir ar eiddo preswyl a masnachol ar dir isel gan gyfnod dychwelyd y llanw o oddeutu 1 mewn 1 flwyddyn o Debygolrwydd Gormodiant Blynnyddol (AEP). Credir bod dechreuad llifogydd mewn eiddo yn agos at, neu ar y lefel hon o debygolrwydd, gyda sawl eiddo â throthwy 3.100m Uwchlaw'r Datwm Ordans (AOD) neu'n is. Cynigir y Cynllun er mwyn rheoli'r perygl hwn o lifogydd i eiddo.

Bydd y Cynllun yn cynnwys cyfres o strwythurau amddiffyn rhag llifogydd wedi'u dylunio i weithio o fewn y gwahanol gyfyngiadau ar hyd ffryntiad Afon Teifi rhwng Pont Aberteifi a Maes Parcio Rhes Gloster (tua 300 i 400m o hyd). Bydd angen i'r amddiffynfeydd rhag llifogydd sicrhau lefel gyson o 4.95m AOD er mwyn cyrraedd safon dylunio'r cynllun o 1 mewn 200 mlynedd AEP, gan ganiatáu am newid hinsawdd, a fydd yn golygu y bydd y strwythurau hyd at 2m o daldra uwchlaw lefel gyffredinol y ddaear (er yn is mewn rhai mannau). Bydd aliniad yr amddiffynfa yn dilyn yn fras aliniad wal bresennol yr afon o Bont Aberteifi, yna bydd yn camu allan i ymylon Afon Teifi. Yna mae'r aliniad yn parhau o fewn yr afon gan fynd heibio i'r adeiladau masnachol a chadw mor agos â phosibl at wal bresennol yr afon. Yna, yng nghwt cychod y sgowtiaid bydd yr aliniad unwaith eto yn dilyn wal bresennol yr afon neu, os bydd digon o le mewn mannau penodol, caiff ei leoli ychydig tua'r tir. Bydd yr aliniad yn parhau ar y tir ym maes parcio Gloster Row. Bydd yr amddiffynfa yn cwmpasu polion dalen, a rhoddir wal goncrit wedi'i hatgyfnerthu ar ei phen mewn rhai mannau. Bydd y polion dalen yn cael eu gosod o'r afon mewn rhai mannau ac o'r tir mewn eraill. Caiff gwaith tyllu ei wneud ar gyfer y polion dalen ymlaen llaw er mwyn cyfyngu ar unrhyw ddirgrynu. Mae darn o dir ar lan ddeheuol yr afon yn debygol o gael ei ddefnyddio fel compownd adeiladu, ac i drosglwyddo deunyddiau ar draws yr afon.

Mae'r Cynllun wedi cael ei sgrinio yn erbyn Rheoliadau Cynllunio Gwlad a Thref (Asesu Effeithiau Amgylcheddol) (Cymru) 2017 a Rheoliadau Gwaith Morol (Asesu Effeithiau Amgylcheddol) 2017. Mae'r Cynllun yn cynnwys gwaith datblygu Atodlen 2 / Atodlen A2, felly rhoddwyd ystyriaeth i'r tebygolrwydd y bydd y Cynllun yn cael effaith sylweddol ar yr amgylchedd yn sgil ei faint, ei natur neu ei leoliad. Rhoddwyd yr ystyriaeth hon ar sail ragofalus. Efallai y bydd modd diystyru'r potensial am effeithiau sylweddol tebygol ar gyfer rhai pynciau unwaith y bydd asesiadau pellach a gwaith dylunio mesurau lliniaru wedi'i wneud. Nodwyd effeithiau sylweddol tebygol ar gyfer y pynciau canlynol:

- Poblogaeth ac Iechyd Pobl (yn ystod y cyfnod adeiladu)
- Bioamrywiaeth a Chadwraeth Natur (yn ystod y cyfnod adeiladu)
- Hinsawdd (yn ystod y cyfnod adeiladu)
- Yr Amgylchedd Hanesyddol (yn ystod y cyfnod adeiladu a gweithrediad y Cynllun)
- Tirwedd a Gweledol (yn ystod y cyfnod adeiladu a gweithrediad y Cynllun)

Ystyrir y bydd angen Asesiad o'r Effaith Amgylcheddol statudol, ynghyd â Datganiad Amgylcheddol ategol. Gofynnir am farn sgrinio ffurfiol gan Gyngor Sir Ceredigion a Thîm Trwyddedu Morol Cyfoeth Naturiol Cymru gyda'r bwriad o ganfod a ydynt yn cytuno ag ymarfer sgrinio yr Asesiad o'r Effaith Amgylcheddol a gynhaliwyd.

## ii. Executive summary

This Environmental Constraints and Opportunities Record (ECOR) has been prepared to document the environmental assessment associated with the design of the Cardigan Tidal Flood Risk Management Scheme.

The lower quayside areas of Cardigan have been inundated by the tide, which affects the Lower Strand area. Low lying residential and commercial properties are affected by a tidal return period of approximately 1 in 1 year annual exceedance probability. It is thought that the onset of property flooding is near or at this level of probability with several properties having threshold levels of 3.100m above ordnance datum (AOD) and below. The Scheme is proposed to manage this risk of property flooding.

The Scheme will comprise a series of flood defence structures designed to fit within the various constraints along the Afon Teifi frontage between Cardigan Bridge and Gloster Row Car Park (approximately 300 to 400m in length). The flood defences will need to achieve a consistent level of 4.95m above ordnance datum to provide the scheme design standard of 1 in 200 years annual exceedance probability (AEP) with allowance for climate change, which will make the structures up to approximately 2m tall above general ground level (though lower in some sections). The alignment of the defence will broadly follow the existing river wall alignment from Cardigan Bridge, then will step out into the margin of the Afon Teifi. The alignment then remains within the river past the commercial buildings while keeping as close to the existing river wall as possible. Then, at the scout boathouse the alignment will once again follow the existing river wall or, if space allows for certain areas, it will be located slightly landwards. The alignment will remain on land in Gloster Row car park. The defence will be formed of sheet piles, topped with a reinforced concrete wall for certain sections. The sheet piles will be installed from the river in some sections and from the land in others. Pre-augering of the sheet piles will be undertaken to reduce vibration. An area of land on the south bank of the river is likely to be used for a construction compound, and to transfer materials across the river.

The Scheme has been screened against the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 and the Marine Works (Environmental Impact Assessment) Regulations 2017. The Scheme constitutes Schedule 2 / Schedule A2 development, therefore, consideration of whether the Scheme is likely because of its size, nature or location to have significant effects on the environment has been undertaken. This consideration has been undertaken on a precautionary basis, it may be possible to rule out the potential for likely significant effects for topics once further assessment and mitigation design has been undertaken. Likely significant effects have been identified for the following topics:

- Population & Human Health (during the construction phase)
- Biodiversity & Nature Conservation (during the construction phase)
- Climate (during the construction phase)
- Historic Environment (during the construction phase and operation of the Scheme)
- Landscape & Visual (during the construction and operation of the Scheme)

It is considered that a statutory Environmental Impact Assessment (EIA), and supporting Environmental Statement (ES), will be required. A formal screening opinion will be sought

from Ceredigion County Council and the Natural Resources Wales Marine Licencing Team with a view to determine whether they agree with the EIA screening exercise that has been undertaken.

# 1 Introduction

## 1.1 Background

Natural Resources Wales (NRW) is currently progressing designs for a scheme to reduce the risk of tidal flooding from the Afon Teifi to the town and community of Cardigan, the Cardigan Tidal Flood Risk Management Scheme (henceforth referred to as the Scheme). The Scheme is located in the county of Ceredigion in West Wales.

In accordance with NRW's environmental assessment procedures, this Environmental Constraints and Opportunities Record (ECOR) has been prepared to document the environmental assessment being integrated into the Scheme. It will be used to provide internal and external stakeholders, regulators and approvers with a summary of the environmental assessment undertaken.

Environmental assessment is an iterative process that begins at the inception of a project and continues through options appraisal, detailed design, construction, and operation. Good environmental assessment is an integrated process that influences and challenges scheme options and design, rather than being a standalone exercise. However, there is a need for transparency and justification in the decisions and actions taken, which need to be documented.

A first iteration of the ECOR was produced in October 2020 to document the environmental baseline and the intended scope of environmental assessment. The ECOR has been reviewed and updated as the scheme and environmental assessment has developed to its current stage of Outline Design which followed selection of the preferred option. This ECOR provides an environmental assessment of the preferred option, which may be subject to change as Outline Design progresses. The ECOR will be reviewed and updated as the scheme continues to progress to detailed design.

Consultation on the first iteration of this ECOR was completed within NRW and with other external consultees and the responses can be found in Appendix B. Public consultation has also been undertaken for the Scheme in November 2022 and the stakeholder responses to the Scheme have been included within Appendix C.

The ECOR is structured as follows:

- Section 1: Introduction – background to the proposed Scheme and environmental assessment;
- Section 2: Environmental Baseline – a description of the baseline scenario for each environmental topic and an overview of the studies undertaken to date;
- Section 3: Options Appraisal – summary of the options appraisal process and identification of the concept design;
- Section 4: Environmental Assessment Screening and Scoping – scope of environmental assessment to be undertaken and consideration of potential consenting routes; and
- Section 5: Environmental Enhancements – a description of the environmental enhancements which could be achieved as part of the proposal.



## 1.2 NRW responsibilities under the Environment Act 2016 and the Well-being of Future Generations Act

NRW are required to pursue the Sustainable Management of Natural Resources (SMNR) and Sustainable Development (SD) as well as demonstrate the application of the principles of both. NRW consider that the environmental assessment process is well aligned with these principles as demonstrated in Table 1. The environmental assessment process provides a systematic and transparent way of managing the environmental risks, avoiding, reducing or mitigating environmental impacts and identifying opportunities for delivery of multiple benefits.

**Table 1 – The role of environment assessment in demonstrating the principles of sustainable management of natural resources**

| SMNR (SD Principle)                                                                     | Role of Environmental Assessment                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Manage adaptively</b>                                                                | Monitoring and audit of projects and their environmental effects feedback into future projects. Continual improvement.                                                                                                                                                    |
| <b>Appropriate spatial scale</b>                                                        | The options appraisal or consideration of alternatives determines the study area. Economic, technical and environmental aspects feed into this to ensure that the options/alternatives and their effects are considered at the appropriate scale.                         |
| <b>Collaboration and engagement (Collaboration)</b>                                     | Internal and external stakeholder engagement starts early and continues throughout project development.                                                                                                                                                                   |
| <b>Public participation in decision making (Involvement)</b>                            | Public engagement through drop in sessions at key stages in the project or engagement with community or user groups. Consenting route publicises project proposal.                                                                                                        |
| <b>Relevant evidence</b>                                                                | Considers broad environmental baseline and trends with and without project implementation.                                                                                                                                                                                |
| <b>Take account of benefits and intrinsic value of natural resources and ecosystems</b> | Identify ecosystem services provided by the natural resources in the study area through internal and external stakeholder engagement. The environmental assessment should seek to maximise wider benefits provided by ecosystems and natural resources in the study area. |
| <b>Short, medium and long-term consequences (Long term)</b>                             | Consider environmental effects throughout the life of the project. Planning, construction, operation & decommissioning. Taking into account the evolution of the baseline e.g. climate change.                                                                            |
| <b>Prevent significant damage to ecosystems (Prevention)</b>                            | Identify ecosystem services provided by the natural resources in the study area through internal and external stakeholder engagement. The environmental assessment should aim to avoid, reduce or mitigate any negative effects.                                          |
| <b>Building resilience of ecosystems</b>                                                | The environmental assessment must consider the effects of a project on the resilience of ecosystems. Then, through options appraisal and input to design, aim to avoid, reduce or mitigate negative effects and maximise positive effects (multiple benefits).            |



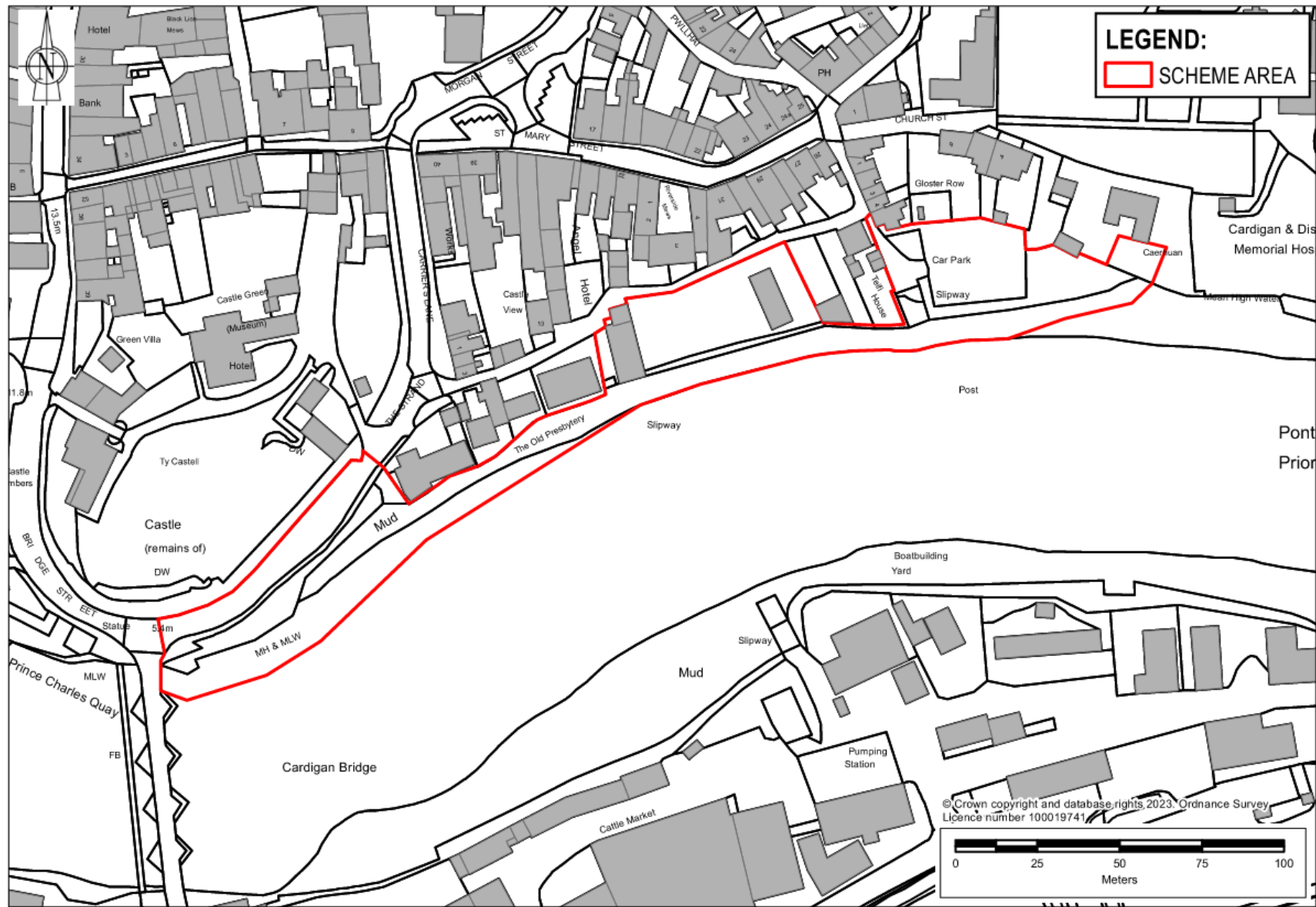
By applying these principles throughout the development of its projects, NRW can maximise its contributions to the Well-being Objectives, towards its duty to enhance biodiversity (Section 6 of the Environment Act) and the water environment (Water Framework Directive).

The NRW Well-being Objectives are:

1. Champion the Welsh environment and the sustainable management of Wales' natural resources
2. Ensure land and water in Wales is managed sustainably and in an integrated way
3. Improve the resilience and quality of our ecosystems
4. Reduce the risk to people and communities from environmental hazards such as flooding and pollution
5. Help people live healthier and more fulfilled lives
6. Promote successful and responsible business, using natural resources without damaging them
7. Develop NRW into an excellent organisation, delivering first-class customer service

### 1.3 Scheme description

The Scheme is located towards the centre of Cardigan town in west Wales, the permanent works will be located on the north bank of the Afon Teifi. The Scheme is bound to the west by Castle Street (SN177458) and to the east by Gloster Row car park (SN180459). The locations of the proposed works are shown on Figure 1 and in the Outline Design Site Boundary Drawing 123666-BUK-ZZ-DR-C-00020 provided in Appendix D.



**Figure 1 Site Location Plan**

The lower quayside areas of Cardigan have been inundated by the tide, which affects the Lower Strand area. Low lying residential and commercial properties are affected by a tidal return period of approximately 1 in 1 year annual exceedance probability. It is thought that the onset of property flooding is near or at this level of probability with several properties having threshold levels of 3.100m above ordnance datum (AOD) and below. The Scheme is proposed to address this risk of property flooding.

The Scheme will comprise a series of flood defence structures designed to fit within the various constraints along the Afon Teifi frontage between Cardigan Bridge and Gloster Row Car Park (approximately 300 to 400m in length). The flood defences will need to achieve a consistent level of 4.95mAOD to provide the scheme design standard of 1 in 200 years annual exceedance probability (AEP) with allowance for climate change, which will make the structures up to approximately 2m tall above general ground level (though lower in some sections). The defence will be composed of sheet piles, topped with a reinforced concrete wall for certain sections.

The approximate alignment of the flood defence is shown on Outline Design Site Boundary Drawing 123666-BUK-ZZ-DR-C-00020 in Appendix D, and comprises four discrete sections):

- Section 1: The alignment of Section 1 will follow the existing river wall alignment from Cardigan Bridge creating an area usable for public open space (generally this area already exists, but is inaccessible and derelict), then step out into the margin of the Afon Teifi from the existing river wall to avoid a Welsh Water discharge chamber and outfall headwall.
- Section 2: The alignment selected in Section 2 will avoid impacts to the commercial buildings while keeping the new alignment as close to the existing river wall as possible to minimise land take in the river. There are technical feasibility concerns associated with the building being too close to the existing river wall, as the wall is currently in very poor condition and there is a risk of destabilisation. For the purposes of this ECOR, as a worst-case, it has been assumed that the alignment will be offset a nominal 5m from the existing river wall. The flood defences will extend across the existing slipway.
- Section 3: The alignment selected in Section 3 will follow the existing river wall or, if space allows for certain areas, it will be located slightly landwards. There is a potential requirement for demolition of buildings in Section 3, including the Old Forge Crafts, Scout Boathouse/ Workshop, Scout Hut and garage/ office to the eastern side of the Old Foundry site. The slipway next to the Scout Boathouse is proposed to be removed and replaced with a pedestrian access to the river for small vessels. The location of the existing slipway next to Gloster Row Car Park will be retained.
- Section 4: The flood defence alignment proposed in Section 4 will follow the existing gabion river wall along the car park edge for the length of this section.

The anticipated construction methodology comprises:

- Installation of a temporary construction compound on the northern riverbank, although it is currently uncertain where this will be located. Options include the derelict area adjacent to Cardigan Bridge, Gloster Row Car Park (with a new access required), or potentially at the Bathroom Centre warehouse.
- Provision of a secondary compound on the southern bank of the Afon Teifi in order to deliver materials across the river to the compound on the northern side of the channel.
- Delivery of plant and equipment on site directly to the compound area. There is likely to be a requirement for road closures and traffic management during the establishment of the site compound and for service diversions at a minimum. Sheet piles are likely to require abnormal load delivery and therefore require road closures; approximately 20 deliveries could be required.
- A temporary access ramp will need to be constructed from the site compound to the foreshore to enable access for vehicles and equipment, although the existing slipways will be utilised wherever feasible.
- For Sections 1 and 2, construction of the sheet piles and reinforced concrete wall is anticipated to be undertaken on the foreshore immediately in front of the existing river wall, as access from the landward side is expected to be too complex. For Sections 3 and Section 4, construction from either the landward side or the foreshore may be appropriate.
- Pre-augering of the ground on the foreshore will be required prior to the installation of sheet piles, which will assist in avoiding unnecessary vibration affecting local people and ecology.
- Installation of sheet piles is likely to be undertaken by a Movax piling rig. For all piling options along the foreshore (Sections 1 and 2) a 1m high temporary piling platform of clean rip-rap stone will be required. The piling platform will extend 3m further into the river than the flood defence wall, and then grade down to meet the existing river bed.
- For piling options from land (Sections 3 and 4), temporary works would be required to enable access from the landward side and temporary works will be required from the foreshore to stabilise the existing river wall. A piling platform comprising a 600mm layer of crushed stone will be situated on the landward side.
- For Sections 2, 3 and 4 the piled wall will act as a seepage cut off and foundation for the reinforced concrete wall.
- Construction of a replacement slipway will involve localised working along the margin of the river. The form of construction will involve creating reinforced concrete slipway ramps. The objective for replacing the slipways would be to match as close as possible the existing provisions. The slipway is assumed to not extend significantly beyond the alignment of the new flood defences.

- Completion of the works will additionally involve creation of public open space to the landward side of the wall in Section 1 and green space enhancements to the open space surrounding Gloster Row Car Park. This will involve landscaping, including installation of enhancement measures along the sheet piles, such as selecting an appropriate finish, and seeking to incorporate 'greening the grey' and biodiversity enhancements wherever feasible.

The anticipated construction duration will be between 12 months and 24 months. Standard working hours will be adopted from 8am to 6pm Monday to Friday, and 8am to 10am on Saturday (no work on Sunday or Bank Holidays). It is assumed that not all in-river works can be undertaken at low tide, therefore some piling works will be completed in the river.

The Scheme Area employed to inform this environmental assessment is shown on Drawing 123666-BUK-ZZ-00-DR-C-00020, the area includes both the area likely to be required for the permanent works and an outline of the potential area required for temporary works on the south bank of the Afon Teifi. It is noted that the temporary works area required will be a smaller area within the area shown, not the whole area.

#### 1.4 Scheme Objectives and Critical Success Factors

The Scheme objectives as set out in the Cardigan Flood Risk Management Scheme Outline Business Case (OBC) (NRW, 2021) are:

1. Reduce the risk of tidal flooding to the town and community of Cardigan, taking account of predicted sea level rise.
2. Maintain and enhance the natural environment, and the well-being of the community. Helping to achieve NRW's Well-Being Objectives and satisfy Environment (Wales) Act duties.
3. Provide a solution that is sensitive to Cardigan's important historic and landscape interest.
4. Apply green-grey estuarine infrastructure to deliver a multi-functional Flood and Coastal Erosion Risk Management (FCERM) asset.
5. Engage the community and deliver a publicly acceptable solution.
6. Provide a solution that is cost-beneficial.
7. Work with Dŵr Cymru Welsh Water (DC/WW) and Ceredigion Council to discuss their responsibilities, in terms of different types of flooding within the area.

The Critical Success Factors (CSF) can be defined as attributes essential to the successful delivery of the Scheme and against which options can be assessed. NRW and the project team have defined the following CSF's for the Cardigan Tidal FAS:

1. Reduce present day and future flood risk to people and property in Cardigan, to improve the quality of life to the local community.
2. Provide an economically viable option to manage flood risk, with a benefit cost ratio of greater than one.

3. Develop a technically feasible option to manage flood risk, with consideration of site-specific constraints and the needs of the community.
4. Minimise impacts on habitat and biodiversity and seek to provide enhancements.

## 2 Environmental Baseline

### 2.1 Baseline of Environmental Topics

Table 2 provides a description of the baseline environmental conditions for environmental topics relevant to the Scheme. Section 2.2 portrays strategic environmental aspirations and challenges associated with the area. An Environmental Constraints and Opportunities Plan (ECOP) has been prepared to portray key data within the study area and can be found in Appendix A.

The assessment has included a review of various strategic and local level evidence bases including the following:

- Local Environmental Policies, Plans and Programmes (see Appendix E for full list);
- Ceredigion Rights of Way map<sup>1</sup>;
- NRW/Welsh Government Lle Geo-Portal;
- DataMapWales<sup>2</sup>;
- Ordnance Survey maps;
- Core Management Plan for Afon Teifi SAC (SSSI designation is included in the same management plan)<sup>3</sup>;
- UK Climate Projections<sup>4</sup>;
- Met Office Climate Average<sup>5</sup>;
- Teifi Boating Club Website<sup>6</sup>;
- Planning Environmental Decisions Wales register of projects<sup>7</sup>;
- Ceredigion Council Planning Portal<sup>8</sup>;
- Pembrokeshire County Council Planning Portal<sup>9</sup>; and

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<sup>1</sup> Ceredigion Rights of Way Map. <https://www.ceredigion.gov.uk/resident/coast-countryside/public-rights-of-way/the-definitive-map-public-right-of-way-registers/rights-of-way-map/> Accessed 20/06/2023.

<sup>2</sup> DataMapWales. <https://datamap.gov.wales/> Accessed 20/06/2023.

<sup>3</sup> Natural Resources Wales (September 2022) Core Management Plan Including Conservation Objectives for Afon Teifi/River Teifi SAC. <https://naturalresources.wales/media/682845/afon-teifi-river-teifi-management-plan.pdf> Accessed 20/06/2023.

<sup>4</sup> Met Office. UK Climate Projections (UKCP). <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp> Accessed 20/06/2023.

<sup>5</sup> Met Office, Date Unknown. UK Climate Averages <https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages> Accessed 09/06/2023.

<sup>6</sup> Teifi Boating Club, date known. The Teifi Boating Club. <https://www.teifiboatingclub.co.uk/> Accessed 14/06/2023.

<sup>7</sup> Planning Environmental Decisions Wales register of projects. Available online: <https://infrastructure.planninginspectorate.gov.uk/> Accessed 23/06/2023.

<sup>8</sup> Ceredigion Council Planning Portal. Available online: <https://www.ceredigion.gov.uk/resident/planning-building-control-and-sustainable-drainage-body-sab/planning-applications/> Accessed 23/06/2023.

<sup>9</sup> Pembrokeshire County Council Planning Portal. Available online: <https://planning.agileapplications.co.uk/pembrokeshire> Accessed 20/06/2023.



- Natural Resources Wales Public Register: environmental permitting, water resources and marine licensing information<sup>10</sup>.

There are a number of reports and documents that were produced to inform this updated assessment of the baseline. These are available upon request and include:

- Cardigan FRMS Preliminary Ecological Appraisal (123666-BUK-ZZ-00-RP-EN-00010) (Binnies, 2023)
- Landscape Character Assessment (123666-BUK-ZZ-00-RP-L-00001) (Binnies, 2022)
- Historic Environment Desk-Based Assessment (DBA) (Dyfed Archaeological Trust, 2021)
- Understanding Populations and Communities Report (123666-BUK-ZZ-00-EP-EN-0004) (Binnies, 2021)
- Water Framework Directive Scoping Assessment (123666-BUK-ZZ-00-EP-EN-00013) (Binnies, 2023)
- Cardigan Tidal Flood Risk Management Scheme - Habitats Regulation Assessment. APEM Report P00011055 (APEM, 2023)
- Ground Investigations Report and Seepage Assessment (123666-BUK-ZZ-00-RP-GE-00001)(Binnies, July 2021).
- Wintering Bird Survey (Wyndrush Wild, October 2022 – February 2023)

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<sup>10</sup> Natural Resources Wales Public Register. Available online: <https://publicregister.naturalresources.wales>  
Accessed 20/06/2023

**Table 2 – Environmental Baseline**

| Topic – receptor / resource        | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Population and human health</b> | <ul style="list-style-type: none"> <li>• The Scheme sits in the Aberteifi/Cardigan-Teifi Lower Super Output Area (LSOA), in which the scheme sits, is ranked 125 of 1909 LSOAs and is therefore among the 10% most deprived LSOAs in Wales.</li> <li>• Cardigan has a population of approximately 5,301 (2011 census) with age groups, 25-44 and 45-64 accounting for the highest levels of the population.</li> <li>• English is widely spoken as a main language in Cardigan; however, the Welsh language is also in use, in both spoken and written form. A relatively high percentage of Ceredigion residents can speak, read and write Welsh (38.8%).</li> <li>• The amount of green space available for households in Ceredigion is relatively low, with only 55% of households in proximity to accessible green space compared to 77% nationally.</li> <li>• National Cycle Network Route 82 runs along a section of the Afon Teifi at Cardigan on the southern landward bank, before heading southwest towards Fishguard.</li> <li>• There are a number of public rights of way (PRoW) located within Cardigan with the following routes located near the Scheme Area: <ul style="list-style-type: none"> <li>- Route 78/23 (coastal path) runs along the southern landward bank for approximately 930m before joining St Dogmaels Road to the west of Castle Street bridge. This also links to Route 78/27 (bridleway) which runs for 1,020m and connects to other public rights of way to the south west of Cardigan.</li> <li>- Route 78/49/C (footpath) runs for approximately 100m in the southeast corner of the High Street, off Quay Street on the northern landward bank.</li> <li>- Route 78/16 (footpath) runs for approximately 100m off Middle Mwldan, across the River Mwldan, to the north of Route 78/49/C.</li> <li>- Route 78/17 (footpath) runs along the northern landward bank for approximately 790m to link up with Route 78/16/C.</li> </ul> </li> </ul> |

| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|                             | <ul style="list-style-type: none"> <li>- Claimed public right of way Route 78/63M. Short length of path which is being ‘claimed’ by the Town Council under the Wildlife and Countryside Act 1981. This is to be investigated and a decision made on its public status.</li> <li>• Ceredigion County Council have defined a number of active travel routes, there are existing routes located along the Strand (CCC-CAR10-FW, walking route) and along the southern bank of the Afon Teifi (CCC-CAR02-SUP, walking and cycling routes). There are also aspirational routes in the same locations to include a cycle route on the strand (CER-FR-CA-021) and upgrade the route on the southern bank of the Afon Teifi.</li> <li>• There is a proposal for a recreational pathway, known as the Aberteifi Otter Walk<sup>11</sup>, to improve Aberteifi’s connection with the Afon Teifi, increase the quality of the greenspace along the riverfront and to encourage walking to local green space. The key elements proposed are: <ul style="list-style-type: none"> <li>- Enhancing ribbon of green spaces along the river (Prince Charles Quay, the Strand and Quay Street car park).</li> <li>- Creating green connections</li> <li>- Riverside planting for biodiversity</li> </ul> </li> <li>• The Afon Teifi is used for recreational activities such as racing, sailing, power boating, canoeing and yachts.</li> <li>• Recreational groups located near to the Scheme Area include: <ul style="list-style-type: none"> <li>- The Cardigan and District Ramblers</li> <li>- Sea Scouts</li> <li>- The Teifi Boating Club</li> <li>- The Llandysul Angling Association.</li> <li>- Outdoor activities business: Cardigan Bay Active and sister company Adventure Beyond (these businesses use the scout buildings)</li> </ul> </li> </ul> |

<sup>11</sup> Ceredigion County Council, 2023. Aberteifi Otter Walk. <https://lucmaps.co.uk/CeredigionGBIDigitalReport/the-cardigan-otter-walk/> Accessed 24/05/2023.

| Topic – receptor / resource          | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|                                      | <ul style="list-style-type: none"> <li>In addition to the recreational business set out above the Old Forge Crafts shop is located within the Scheme Area. The Bathroom Centre showroom, office and two warehouses are located outside of but adjacent to the Scheme Area.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Biodiversity and nature conservation | <ul style="list-style-type: none"> <li><u>Afon Teifi Special Area of Conservation (SAC)</u>. This site is within the Scheme area and is designated for the following Annex I habitats: Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation; and Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea. The latter is present as a qualifying feature but is not a primary reason for selection of this site. These habitats are associated with the upper catchment of the River Teifi and are not found within or in close proximity to the proposed Scheme area. The Scheme will therefore not have an impact on these interest features. Annex II species include: brook lamprey Lampetra planeri; river lamprey Lampetra fluviatilis; sea lamprey Petromyzon marinus; Atlantic salmon Salmo salar; bullhead Cottus gobio; otter Lutra lutra; and floating water-plantain Luronium natans. The Annex II species, sea lamprey Petromyzon marinus is also present as a qualifying feature but is not a primary reason for selection of this site.</li> <li><u>Afon Teifi Special Site of Scientific Interest (SSSI)</u>. This site within Scheme Area and concurrent with the SAC and is of special interest for a range of river types and associated riverside habitats; flowering plants; bryophytes; otter; Cetti's warbler Cettia cetti; bottlenose dolphin Turiops truncatus; brown hairstreak butterfly Thecia betulae; fish; dragonflies; invertebrates; breeding and wintering birds and geomorphological features at Cenarth and Cors Caron.</li> <li><u>Cardigan Bay SAC</u>. This site is located 3.5km downstream of the Scheme Area and is hydrologically linked by the Teifi Estuary. The SAC is designated for the following Annex 1 Habitats: Sandbanks; Reefs; and Submerged Caves. Annex II species include: bottlenose dolphin; sea lamprey and grey seal Halichoerus grypus.</li> <li><u>West Wales Marine SAC</u>. This site is located 3.5km downstream of the Scheme Area and is hydrologically linked by the Teifi Estuary. The SAC is designated the Annex II species harbour porpoise Phocoena phocoena.</li> <li><u>Teifi Marshes Nature Reserve</u>. This site is located approximately 200m upstream of the Scheme Area and is within the boundary of the Afon Teifi SSSI. The reserve is situated on the</li> </ul> |

| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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|                             | <p>floor of the wide pre-glacial channel left by the former course of the Teifi and now occupied by the river Piliau, which meanders through the marshes in a narrow but deceptively deep cut. A range of habitats is supported, from open pasture and well wooded hedgerows, through Alder and Willow carr, freshwater marsh with open pools and reedbeds to tidal mudbanks.</p> <ul style="list-style-type: none"> <li>• A Phase 1 Habitat Survey of the Scheme Area undertaken in August 2021 (reported in the Preliminary Ecological Appraisal) identified 3 Habitats of Principal Importance (HPI) which are protected under Section 7 of the Environment (Wales) Act 2016. These are reedbed, intertidal mudflats and saltmarsh.</li> <li>• The survey did not record any notable plant species or invasive non-native species (INNS). As the Scheme is located on a riparian corridor, in an urban area frequently used by the public, there is a risk that INNS will colonise.</li> <li>• The Scheme Area has the potential to support populations of: <ul style="list-style-type: none"> <li>- bats;</li> <li>- birds (a wintering bird survey has been undertaken and has identified that the site is of local significance for waterfowl);</li> <li>- terrestrial and aquatic invertebrates;</li> <li>- otter;</li> <li>- reptiles;</li> <li>- hedgehog;</li> <li>- fish species (including European eel <i>Anguilla anguilla</i>, Atlantic salmon <i>Salmo salar</i> and brown trout <i>Salmo trutta</i>); and</li> <li>- marine mammals.</li> </ul> </li> </ul> |
| Water                       | <ul style="list-style-type: none"> <li>• The Afon Teifi within the Scheme area is estuarine and tidally controlled. The following Water Framework Directive (WFD) waterbodies are located within the Scheme Area:</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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|                             | <ul style="list-style-type: none"> <li>- Teifi Estuary (GB511006206900): Overall Status is Moderate.</li> <li>- Piliau (GB110062039070) – headwaters to confluence with Teifi: Overall Status is Moderate.</li> <li>- Teifi – Afon Ceri to estuary (GB110062043563) – Overall Status of Moderate.</li> <li>- Teifi and Coastal Ceredigion groundwater waterbody (GB41002G203300) - Overall Status of Poor.</li> <li>• There are no groundwater source protection zones within 1km of the Scheme area.</li> <li>• The Scheme is located in Flood Zone C2 of the Development Advice Map. There is currently no formal flood defence in the Scheme Area.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Land Use &amp; Soil</b>  | <ul style="list-style-type: none"> <li>• Land use within the Scheme Area is urban with a mixture of residential, commercial, recreation and amenity uses. Land use surrounding Cardigan comprises mainly agricultural (livestock grazing and pasture) and small-scale urban.</li> <li>• Historical mapping identifies the gradual expansion of the town focussed on a maritime port, agriculture and ironwork and brickwork industries. It was not until the late 20th century that significant change occurred with the major urban development plans where housing extended into the agricultural lands and industrial activity moved out to new estates on the periphery of urban development, with former industrial sites towards the centre being redeveloped.</li> <li>• The soils within the Scheme Area, on both the northern and southern landward banks, predominantly comprise slowly permeable seasonally wet acid loamy and clayey soils. On the northern landward bank further west, the soil comprises freely draining slightly acid loamy whilst to the east of the main urban area the soil is classified as permeable seasonally wet slightly acid but base-rich loamy and clayey. On the southern landward bank, to the east of the industrial area the soils are loamy and clayey floodplain soils with naturally high groundwater. The Agricultural Land Classification (ALC) of the Scheme Area is Urban.</li> <li>• The underlying geology comprises superficial deposits of Alluvial or Tidal Creek Deposits and Devensian Till, the Nantmel or Netpool Mudstone Formation. Made Ground has been encountered in previous ground investigations and ground investigations have identified</li> </ul> |

| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                             | <p>potential asbestos contaminated material in bound cement tiles on the foreshore of the Scheme Area.</p> <ul style="list-style-type: none"> <li>No contaminated land assessment has been undertaken to date, however, given the industrial history of the Scheme Area there is the potential for contaminants to be present.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Air</b>                  | <ul style="list-style-type: none"> <li>There are no Air Quality Management Areas within 1km of the Scheme Area.</li> <li>Annual mean concentrations (<math>\mu\text{g m}^{-3}</math>) for air quality in Ceredigion are NO<sub>2</sub>: 4, PM<sub>10</sub>: 10, PM<sub>2.5</sub>: 6. Average concentrations for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are lower in Ceredigion than the average for Wales (NO<sub>2</sub>: 9, PM<sub>10</sub>: 12, PM<sub>2.5</sub>: 7). Air quality indicators in Ceredigion are within the thresholds set out by the Air Quality Standards Regulations (2010) of 40 <math>\mu\text{g m}^{-3}</math> NO<sub>2</sub>, 40 <math>\mu\text{g m}^{-3}</math> PM<sub>10</sub>, and 20 <math>\mu\text{g m}^{-3}</math> PM<sub>2.5</sub>.</li> </ul>                                                                                        |
| <b>Climate</b>              | <ul style="list-style-type: none"> <li>Based on the UKCP18 predictions, it is widely accepted that on average, the UK will experience hotter and drier summers, and warmer, wetter winters. Additionally, it is likely that climate change will increase the intensity and frequency of extreme weather events such as storms, heavy rainfall and heatwaves. There are no Air Quality Management Areas within 1km of the Scheme.</li> <li>The carbon emissions associated with the Scheme Area are unknown.</li> </ul>                                                                                                                                                                                                                                                                                                                                                             |
| <b>Material Assets</b>      | <p><b>Road Network:</b></p> <ul style="list-style-type: none"> <li>Critical infrastructure in Cardigan includes the core national A487 route between Fishguard and Bangor which passes through the town in a north-east south-west alignment as well as the principal county A484 road which provides links to South Wales and the M4 motorway. The A478 approaches Cardigan from the south and connects to the B4546/Castle Street leading into Cardigan and the Scheme Area, and provides further links to south-west Wales.</li> <li>The Strand and Castle Street located within the Scheme Area provide access for local traffic and will both be impacted by the works. The Strand is a narrow road constrained by Cardigan Castle Scheduled Monument and the Afon Teifi. Castle Street is also a narrow road crossing Cardigan Bridge, also a Scheduled Monument.</li> </ul> |



| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|                             | <p><b>Rail Network:</b></p> <ul style="list-style-type: none"> <li>There are no railway assets within the Scheme Area, the nearest station is located approximately 20 miles to the south-west in Fishguard.</li> </ul> <p><b>Water Navigation:</b></p> <ul style="list-style-type: none"> <li>The Afon Teifi runs through Cardigan in an approximate east-west alignment and is navigable via small recreational boats including racing, sailing, cruising, power boating, canoes and yachts, however only certain stretches are open all year round. The Teifi Boating Club is located approximately 3km north-west of the Scheme Area however the club utilises the Afon Teifi within the Scheme Area for recreational purposes. Additionally, small boats are launched from the scout hut within the Scheme Area for recreational purposes.</li> </ul> <p><b>Building Infrastructure:</b></p> <ul style="list-style-type: none"> <li>Within the Scheme Area the buildings comprise a Scout Hut, Scout boathouse/workshop and Old Forge Crafts business. Directly adjacent to the Scheme Area are residential properties and commercial properties. The commercial properties include the Bathroom Centre showroom, office, and warehouse and residential properties (refer to Outline Design Site Boundary Drawing 123666-BUK-ZZ-00-DR-C-00020 in Appendix D).</li> </ul> <p><b>Services:</b></p> <ul style="list-style-type: none"> <li>Within the Scheme Area the following services have been identified: <ul style="list-style-type: none"> <li>A Welsh Water (DCWW) outfall discharge chamber from a recently built combined sewer and a pumping station house located adjacent to the east side of the Bathroom Centre discharging outfalling into the Afon Teifi.</li> <li>A below ground electricity cable (unspecified voltage) within the disused area adjacent to Cardigan Bridge</li> </ul> </li> </ul> |

| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|                             | <ul style="list-style-type: none"> <li>- A number of services within the Strand including electricity (HV, LV, street lightning and unspecified voltage lines), telecoms and highway drainage (surface water and combined network) and gas.</li> <li>- At Cardigan Bridge, a gas main, electricity lines (street lightning and unspecified voltage) a telecoms are present.</li> <li>- At the east side of the Sea Scout Boathouse and at the Gloster Row car park slipway surface water outfalls from the highway drainage have been identified, discharging to the Afon Teifi. At the car park slipway a DCWW surface water outfall is present.</li> <li>- At the Gloster Row car park, there are several utilities including, a DCWW combined sewer pumping station (the Mart SPS) and rising main crossing north to south and west to east, a water main, electricity line both underground (LV unspecified voltage and street lightning), and overhead (LV).</li> </ul> <p><b>Minerals and Waste:</b></p> <ul style="list-style-type: none"> <li>• There are no minerals and waste allocated areas in the Scheme Area.<sup>12 13</sup> The nearest aggregate safeguarding area is 500m west of the Scheme Area.</li> </ul> |
| <b>Historic Environment</b> | <ul style="list-style-type: none"> <li>• CD003 Cardigan Bridge is located within the Scheme Area. CD123 Cardigan Castle Scheduled Monument is located outside of but adjacent to the Scheme Area. CD141 Cardigan Town Walls; the remains of 2 stretches of defensive town wall, potentially built in the 13<sup>th</sup> century is located within 100m of the Scheme Area.</li> <li>• Cardigan Bridge Grade II* Listed Building (LB Ref. 10456) which is also a Scheduled Monument is located within the Scheme Area. Cardigan Castle Grade I Listed Building (LB ref.10458),</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

<sup>12</sup> Ceredigion County Council, 2013. Local Development Plan 2007 – 2022. <https://www.ceredigion.gov.uk/media/6223/ceredigion-local-development-plan-ldp-volume-1-strategy-and-policies-english.pdf> Accessed 24/05/2023.

<sup>13</sup> Ceredigion County Council, 2013. Local Development Plan 2007 – 2022 Proposals Map including inset maps. <https://www.ceredigion.gov.uk/media/6225/ceredigion-local-development-plan-ldp-volume-2b-proposals-maps-including-inset-maps-bilingual.pdf> Accessed 24/05/2023.

| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                             | <p>which is also a Scheduled Monument is located outside of but directly adjacent to the Scheme Area.</p> <ul style="list-style-type: none"> <li>• There are a further 31 listed buildings within 100m of the proposed development area, with an additional 8 structures identified in potentially sensitive areas associated with the scheme.</li> <li>• Four buildings are Grade II* listed. These include Castle Green House (LB Ref.10459) approximately 80m north of the Scheme Area, The Parish Church of St Mary (LB.Ref.10476), a church with 12<sup>th</sup> century origins lying 70m to the northeast of the Scheme Area, No.7 St Mary's Street (LB Ref. 10529), a late 18<sup>th</sup> or early 19<sup>th</sup> century gentry house, which lies 90m to the northwest of the Scheme Area, and Avondale (LB.Ref. 10539) which fronts St Mary's Street 60m to the north of the Scheme Area.</li> <li>• The remainder of the listed buildings are Grade II listed, the majority being post-medieval structures along Bridge Street, St Mary's Street and Church Street associated with the expansion in the town during the 18<sup>th</sup> and 19<sup>th</sup> centuries.</li> <li>• The Scheme Area, and much of the historic core of Cardigan lies within the Lower Teifi Valley Landscape of Special Historic Interest (HLW(D)14). This area encompasses the lower Teifi valley from the estuary to the confluence with the Afon Cych and area around Cenarth 16.5km upriver.</li> <li>• The Scheme Area lies within Historic Landscape Character Areas (HLCA) 410 Cardigan, a character area drawn around the urban extent of Cardigan.</li> <li>• The grade II listed Cardigan Castle Registered Historic Park and Garden (Parks and Gardens Register Number: PGW (Dy) 72(CER)) is located outside of but adjacent to the Scheme Area. The area is also a Scheduled Monument.</li> <li>• With the exception of the Gloster Row Car Park the proposed development area lies within the Cardigan Conservation Area, the boundary of which runs along the mean high water mark on the Afon Teifi (including Cardigan Bridge).</li> <li>• A search for non-designated historic assets via the DAT Historic Environment Record (HER) within a 100m radius area around the Scheme identified 43 assets. Additionally, the National Monuments Record (MNR) records 30 sites within this search area, most of which are recorded</li> </ul> |

| Topic – receptor / resource   | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                               | <p>on the HER search, but with an additional 7 sites. Only one site is recorded within the Scheme Area, that of NPRN 40392, a late 19<sup>th</sup> to mid-20<sup>th</sup> century iron foundry named St Mary's Street Foundry.</p> <ul style="list-style-type: none"> <li>There is a high potential for unknown archaeology to be identified within the Scheme Area. The archaeological assessment showed that the Scheme lies within an archaeologically and historically significant area of Cardigan, with known remains associated with the medieval castle and settlement as well as the development of the port and associated expansion of the town in the 18th and 19th centuries</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Landscape &amp; Visual</b> | <ul style="list-style-type: none"> <li>LANDMAP is the all-Wales landscape resource for recording landscape characteristics, qualities and influences on the landscape and evaluating landscape in a nationally consistent data set. This data set informs the Welsh National Landscape and Marine Character assessments, described below. The LANDMAP data set will be reviewed in detail when establishing the Landscape and Visual Impact Assessment (LVIA) baseline but has already informed landscape character assessment work carried out to date. The LANDMAP evaluations of Cardigan comprised: <ul style="list-style-type: none"> <li>Visual and sensory: Moderate value</li> <li>Geological landscape: Low value</li> <li>Landscape habitats: Moderate value</li> <li>Historic landscape: Outstanding value</li> </ul> </li> </ul> <p>(The above LANDMAP landscapes habitat evaluation excludes the estuary/Afon Teifi. The estuary is noted to bisect the area with its range of important species leaving the town itself having moderate/low landscape habitat valuation.)</p> <ul style="list-style-type: none"> <li>Cardigan is sited in National Landscape Character Area (NLCA) 40: Dyffryn Teifi /Teifi Valley. The Afon Teifi is in National Marine Character Area (NMCA) 16: Bae Ceredigion (de)/Cardigan Bay (South). The Scheme sits on the border of the two different types of character areas. <ul style="list-style-type: none"> <li>National Landscape Character Area (NLCA) 40: Dyffryn Teifi /Teifi Valley: The NCLA explains how the estuary in which the town is located was formed and the towns historical</li> </ul> </li> </ul> |

| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|                             | <p>character and development. The historic settlement pattern still exists in the town, represented by the old stone bridge across the River Teifi and main roads following the bottom of the valley sides.</p> <ul style="list-style-type: none"> <li>- National Marine Character Area (NMCA) 16: Bae Ceredigion (de)/Cardigan Bay (South): The NMCA focuses on coastal waters. It describes how Cardigan is the meeting point for the Afon Teifi and the sea and how this is part of a wider SSSI and SAC designated river system. It also describes the maritime cultural and social influences on the landscape.</li> <li>• A townscape photographic and landscape character assessment summary (Cardigan Flood Risk Management Scheme – Photographic Review and Landscape Character Assessment Update) was previously prepared in May 2015 as part of the Outline Business Case (OBC) and an updated Landscape Character Assessment was produced in April 2022. The updated study examines in detail the specific areas likely to be affected by the Scheme. It considers amongst others visual qualities, sense of place, material and form of buildings, sense of openness or enclosure, and key features, such as Cardigan Castle and Prince Charles Quay. The document also includes a preliminary exploration of views that may be impacted by the scheme.</li> <li>• A zone of theoretical visibility (ZTV) study (using a 2km buffer) was carried out for the OBC and provides indicative information on the visibility of the scheme. Possible receptors in order of descending proximity to the site include: <ul style="list-style-type: none"> <li>- Occupiers and residents of buildings on the north bank of the river adjacent to the Scheme</li> <li>- Pedestrians and road users on The Strand and Castle Bridge</li> <li>- Visitors to Cardigan Castle</li> <li>- Residents and occupiers of houses and industrial units on the south bank of the river and further south along Castle Street</li> <li>- Users of the cycle path on south bank to nature reserve</li> <li>- Pedestrians and road users on Priory Bridge (A487) east of the scheme</li> <li>- Residents of houses between Castle Street and the Ridgeway</li> </ul> </li> </ul> |

| Topic – receptor / resource | Summary of baseline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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|                             | <ul style="list-style-type: none"> <li>- User of the Ceredigion Coast Path</li> <li>- Users of bridle ways to southwest of Scheme that are on hills.</li> <li>• Some preliminary ‘ground-truthing’ of receptors has been undertaken. It is expected that the Scheme will be barely visible from distant receptors.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Cumulative Effects</b>   | <ul style="list-style-type: none"> <li>• An initial review of potential other development has been undertaken considering both terrestrial and marine projects which exceed certain size criteria. The criteria used and a table of other projects identified is provided in Appendix E.</li> <li>• In addition to the planning application listed above, the scheme should consider the impact on the proposed Aberteifi Otter Walk referenced under the Biodiversity topic. The Aberteifi Otter Walk is proposed to improve Aberteifi’s connection with the Afon Teifi, increase biodiversity and the quality of green space along the riverfront, while encouraging walking and accessibility to green spaces. The proposal includes utilisation of riverside space along The Strand, including garden projects, planting tree lines, access to the riverbank, and educational boards<sup>14</sup>.</li> </ul> |

<sup>14</sup> Ceredigion County Council, 2023. Aberteifi Otter Walk. <https://lucmaps.co.uk/CeredigionGBIDigitalReport/the-cardigan-otter-walk/> Accessed 24/05/2023.

## 2.2 Strategic Environmental Review – Aspirations and Challenges

Based on the review of the local environmental plans, policies and programmes contained in Appendix E the key challenges identified relevant to the Scheme are:

- The area is identified as experiencing income deprivation and associated challenges, the area is not well connected by active travel routes and there is poor access to green space. Communities are concerned about the state of the environment and climate change.
- The area is important for biodiversity, however, there is a decline in salmonid stocks and challenges experienced by other important species such as otters, bottlenose dolphin and bats.

The key aspirations identified in the area include:

- Provision of more amenity and green space, encourage the use of active travel between these and existing open spaces (identified through Ceredigion Well-being Plan, A Strategy for Greening 6 Towns, Aberteifi Otter Walk, Ceredigion Active Travel Plans)
- Increase the population of fish and eel within the River Teifi, with subsequent benefits for other species such as otters. The key aspiration identified which could be appropriate to the Scheme Area is to improve habitats for these species, specifically riparian habitat.

In addition to these more specific goals there is generally an aspiration to enhance biodiversity and its connectivity in Cardigan and more widely in Ceredigion (identified through the Cardigan Town Council Biodiversity Action Plan and the Ceredigion Local Development Plan 2007-2022).



## 3 Summary of options

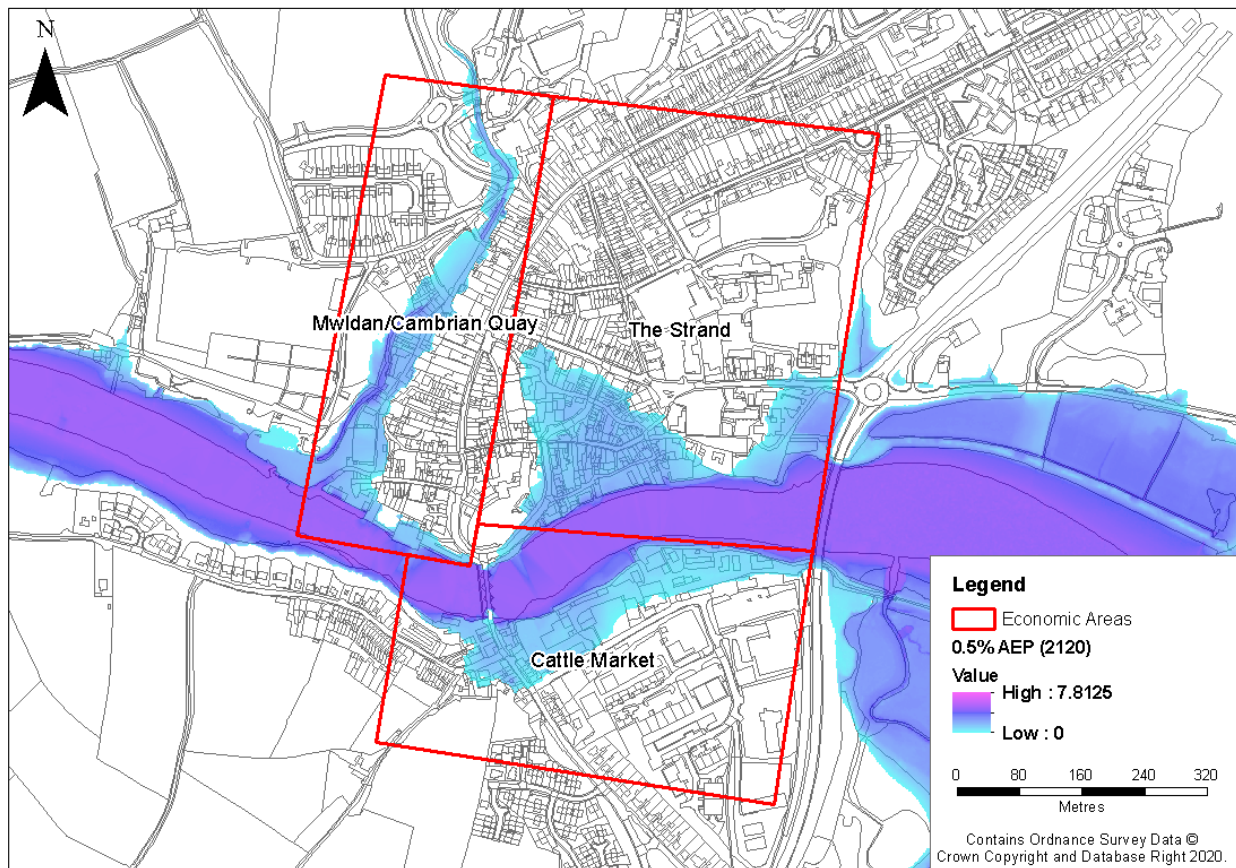
### 3.1 Introduction

The Scheme has been subject to initial stages of optioneering, comprising:

- Initial options appraisal in 2007
- Development of a long list of potential flood risk management options by NRW in 2014, based on brief discussions with stakeholders

A feasibility design was agreed for assessment in the JBA 2021 Outline Business Case. The previous issue of the ECOR was based on this concept design. The concept design included flood defences for three areas of Cardigan as shown on Figure 2, Mwldan, Cattle Market and The Strand. The JBA 2021 OBC only demonstrated a positive business case for the provision of flood defences at The Strand.

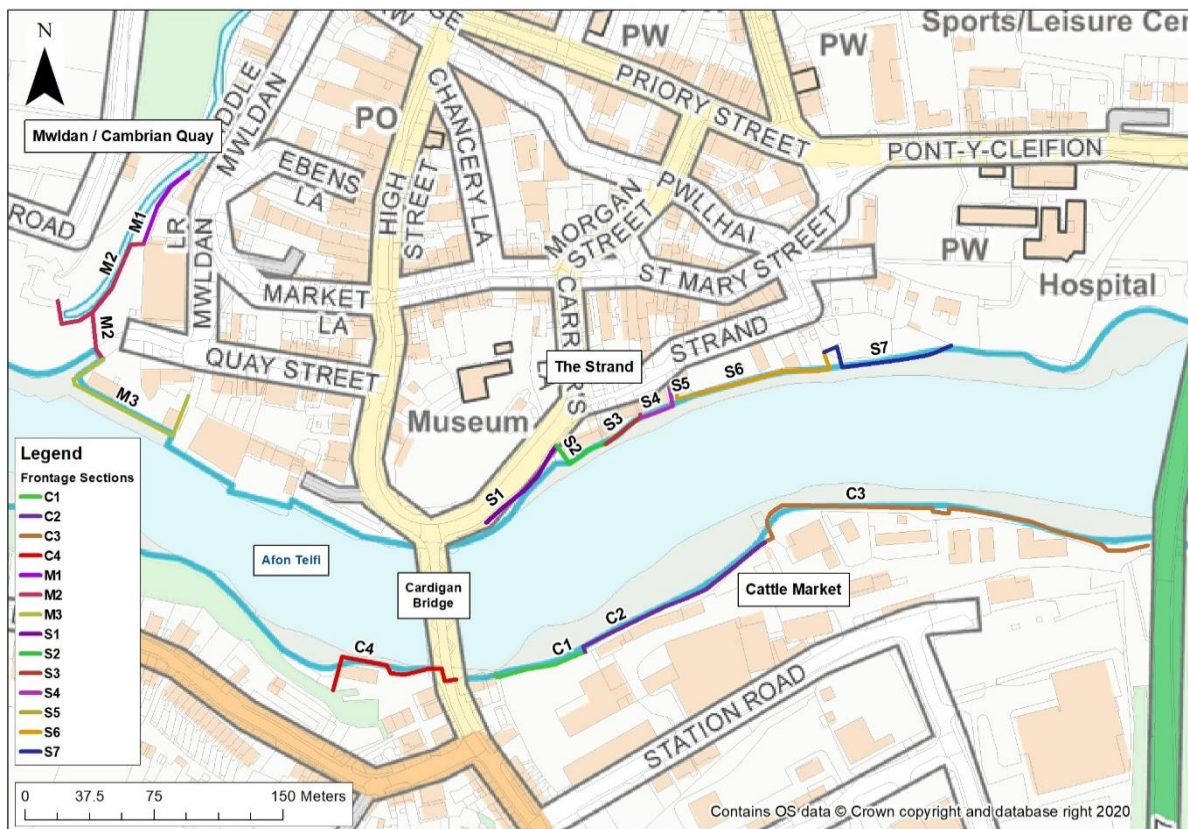
Therefore, following the JBA 2021 Outline Business Case, Binnies was commissioned by NRW to produce an outline design for the Scheme (covering The Strand area only). The concept design stage was revisited and two stages of optioneering followed to confirm that the preferred option taken forward to outline design best met the objectives and critical success factors (see Section 1.4). The long list stage of optioneering comprised a review and update of a long list of options, and discard of those options which were not considered to be feasible. Those options then considered to be feasible were further developed to a concept design stage and an optioneering process undertaken to compare the feasible options and select the preferred option.



**Figure 2 The three flood areas included in the Concept Design (JBA, 2020).**

### 3.2 Concept Design

Based on the outcomes of the previous studies in 2007 and 2014, NRW provided an existing concept design combining walls and flood gates to be taken forward for further investigation and optimisation in the JBA 2021 OBC (see Figure 3).



**Figure 3 Cardigan Concept Design frontages**

### 3.3 Long List Optioneering

Following the JBA 2021 OBC the long list of options for The Strand area were revisited in 2022. The options considered comprised:

- Do Nothing: no changes in current scenario with tidal flooding of properties along the Strand.
- Reduce flood defence height required by providing attenuation upstream of the Strand.
- Adapt Cardigan Bridge to prevent tidal flows moving upstream.
- Build a tidal barrage downstream of Cardigan Bridge.
- Create a hard engineered flood defence.

Options were further considered for each section of the Scheme Area:

- S1 – The western part of The Strand from Cardigan Bridge to the Bathroom Showroom
- S2 – The Bathroom Showroom
- S3 and S4 – The area of the Old Presbytery (S3) and J&M Garage (S4)
- S5 – Existing slipway and Sea Cadet Boathouse
- S6 – The Old Foundry, Garages and Private Garden (Teifi House)
- S7 – Gloster Row Slipway and Car Park

In general, for each section the Options 1 to 3 from the JBA 2021 OBC were included in the assessment as follows:

- Option 1 – maximum land take: Flood defence wall along the existing highway wall at the Strand and approximately 5m landward compared to the existing river wall alignment. Several buildings to be demolished.
- Option 2 – preferred OBC option: Flood defence wall along the existing highway wall at the Strand, along the existing river wall alignment and at the back of the existing Foundry site wall. Two buildings to be demolished.
- Option 3 – minimum land take: Flood defence wall along the existing highway wall at the Strand and approximately 5m riverward compared to the existing river wall alignment.

Additional options were also considered including:

- Wall along existing river wall between Cardigan Bridge and the Bathroom Centre
- Wall approximately 5m riverward to the existing river wall between Cardigan Bridge and the Bathroom Centre
- Floodproofing of the Bathroom Centre and adjacent buildings
- Wall offset from existing river wall alignment at the Bathroom Centre as suitable from the existing wall
- Replacing of the Bathroom Centre buildings with floating buildings
- Relocation of the Sea Scout Boathouse (either on Foundry site, south bank or at the east of Gloster Row car park) or up and over access for a new raised structure
- Demolition of the Sea Scout Boathouse and replacement with floating building
- Raising of existing river wall at the Foundry site
- Cantilever wall at the existing river wall at the Foundry site
- Wall along the Strand and cutting through Teifi house garden with access to garden by steps
- Wall (and required flood gates) at the back of Gloster Row car park
- Embankment across the Foundry site
- Embankment at the Gloster Row car park area with use of Fluds system

This long list of options was assessed against technical viability, buildability, access and construction, cost (only high level assessment) and environmental considerations for further details refer to the long list assessment, document reference 123666-BUK-ZZ-00-RP-C-00005).

The only viable option brought forward from the long list to the short list was to provide new flood defences at the right bank of the Afon Teifi between the Cardigan Bridge and the Gloster Row Car park.

### 3.4 Short List – Concept Design

In order to develop the short list of options, the sections set out above were amended to four sections, shown on the Concept Designs Overview and Key Plan, drawing 123666-BUK-ZZ-00-DR-C-00001. Sections were used to be able to evaluate the options due to the complex constraints present.

The short list of options developed to a concept design stage comprised:

- Section 1 (between Cardigan Bridge and the Bathroom Centre)
  - o Wall offset approximately 5m into the Afon Teifi from the existing river wall alignment.



- New flood defence wall broadly following alignment of the existing river wall from Cardigan Bridge before extending into the margin of the river as it approaches the Bathroom Centre.
- New wall along the existing highway wall alignment.
- Section 2 (Bathroom Centre to Sea Scouts Slipway)
  - Wall offset approximately 5m into the Afon Teifi from the existing river wall alignment.
  - New flood wall at a minimum offset in front of the existing river wall.
  - Demolition of existing buildings and build flood defence on preferred alignment.
- Section 3 (Sea Scouts Slipway to Gloster Rwy Slipway)
  - Wall offset approximately 5m into the Afon Teifi from the existing river wall alignment.
  - Wall at the existing river wall alignment with walls (and flood gates) at the back of the existing slipway and relocation of Sea Scout Boathouse.
  - Demolish existing buildings between Old Forge Craft shop site and office/garage and build the flood defence on the preferred alignment.
- Section 4 (Gloster Row Slipway to Eastern Extent)
  - Wall offset approximately 5m into the Afon Teifi from the existing river wall alignment.
  - Wall along the existing river wall alignment.

Within this short-list concept design stage consultation with the public and stakeholders was held on a simplified version of the options running from Cardigan Bridge to Gloster Row Car Park:

- Option 1: Wall offset of approximately 5m into the Afon Teifi from the existing river wall alignment.
- Option 2: Wall along the existing river wall alignment. At the Bathroom Centre wall offset into the Afon Teifi maintaining the alignment as close as feasible to the existing wall (asset in poor condition). Sea Scout Boathouse or slipway relocated or modified.
- Option 3: Wall along the existing highway wall for section 1 and along the existing river wall alignment for section S4. Wall across the Bathroom Centre and Old Foundry site with demolition of several buildings.

Following minor modifications to the options after consultation each of the options were appraised and ranked on a comparative basis against the other options in the section. The criteria used for the rankings were:

- Buildability
- Environmental
- Social, including human health
- Economic
- Statutory stakeholder views
- Other stakeholders (including general public and important landowners) views (based on the public consultation held)
- Investment objectives

A collaborative workshop was held between Binnies, NRW and NRW's cost consultants to agree the assigned rankings and process. The results of the optioneering process are presented in the Consultation Options Appraisal Matrix (123666-BUK-ZZ-00-RP-C-00004).

The preferred option selected is primarily Option 2, with Option 1 for section 2 and part of section 1. Where Option 1 has been selected opportunities to reduce land take in the estuary will be sought.

This combination of Option 2 and Option 1 was selected to:

- Reduce land take into the Afon Teifi estuary;
- Avoid demolition or potential destabilisation of commercial buildings;
- Provide an area of public open space off the Strand (while minimising land take from the estuary).

### 3.5 Outline Design

A description of the outline design is available in Section 1.3 of this ECOR. Design development has been ongoing alongside the production of this ECOR, therefore, certain assumptions have been made to ensure that a worst-case scenario for the screening and scoping exercise (documented in Section 4) has been completed. The assumptions which have been made are set out in Section 1.3.

## 4 Environmental Assessment Screening and Scoping

### 4.1 The need for Planning Permission

#### *Planning Permission*

The proposed Scheme falls within the jurisdiction of Ceredigion County Council as the Local Planning Authority. The Scheme includes works that constitute 'development' in accordance with the Town and Country Planning Act (1990), and therefore the proposed scheme is considered to require planning permission. There is not an existing flood defence in the area meaning that none of NRW's permitted development rights under the Town and Country Planning (General Permitted Development) Order 1995 (as amended) are considered to apply. An application for planning permission will need to be made to the Local Planning Authority.

#### *Marine Licence*

A marine licence is required for any marine licensable activity as defined in Section 66 of the Marine and Coastal Access Act 2009 in the marine licensable area. The marine licensable area extends seaward from the Mean High Water Springs (MHWS). The Scheme extends to areas below the MHWS and includes works which fall under the remit of Section 66 and as such it is considered that a marine licence is required. An application for a marine licence will need to be made to the NRW Marine Licensing Team.

Exemptions are available for an activity carried out by, or on behalf of NRW for the purpose of maintaining coast protection, drainage and flood defence works under Article 18 of the Marine Licensing (Exempted Activities) (Wales) Order 2022. However, this exemption is subject to the condition that the activity is carried out within the existing boundaries of the works being maintained. As the Scheme does not pertain to the maintenance of an existing flood defence, but is constructing a new defence, the exemption does not apply and a marine licence must be obtained prior to works commencing.

### 4.2 Environmental Impact Assessment (EIA) Screening

The Scheme may require an Environmental Impact Assessment under both the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 and the Marine Works (Environmental Impact Assessment) Regulations 2017.

The Scheme constitutes a Schedule 2 development under the Town and Country Planning EIA Regulations under:

*Paragraph 10(h): Inland-waterway construction not included in Schedule 1, canalisation and flood-relief works. The applicable threshold is if the area of the works exceeds 1 hectare. [Noted that the applicable EIA Regulations state that development in Schedule 2 which is either to be carried out in a sensitive area, e.g. a Special Area of Conservation, or satisfies a threshold or criterion requires an EIA if it is likely to have significant effects on the environment]*

The Scheme constitutes a Schedule A2 development under the Marine Works EIA Regulations under:

*Paragraph 64. Inland-waterway construction not included in Schedule A1, canalisation and flood relief works.*

As the Scheme constitutes Schedule 2 / Schedule A2 development an EIA would be required if the Scheme is likely; because of its size, nature or location; to have significant effects on the environment.

The Scheme's preferred option has been screened by the project team against the relevant EIA Regulations. From which it is considered a statutory Environmental Impact Assessment, and supporting Environmental Statement, will be required. The screening has been documented within Table 3. A formal screening opinion will be sought from the Ceredigion County Council and the Natural Resources Wales Marine Licencing Team with a view to determine whether they are in agreement with the EIA screening exercise having been undertaken.



**Table 3 – Environmental screening and scoping assessment**

| Topic                                | Description of likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Population &amp; Human Health</b> | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>Potential for negative temporary construction effects relating to noise, vibration, pollution, dust, footpath closure and diversions, traffic disruption, reduced amenity access, reduced recreational capacity, and changes to water navigation. The temporary effects may impact residents, business owners and users, users of transport infrastructure and users of recreational facilities.</li> <li>Potential for permanent negative effects due to the demolition of buildings (set out in Section 1.3, requirement is to be confirmed).</li> <li>Potential for positive effects on the local economy during construction through employment of a local contractor or contractors and</li> </ul> | <p><u>Mitigation implemented:</u></p> <p>The option selected avoids land take from private property, and to protect the structural integrity of adjacent buildings, in so far as possible.</p> <p>The objective of the scheme is to provide increased flood protection to the human population in Cardigan including residents, tourists, and commercial premises/occupants (Refer to section 1.4).</p> <p><u>Mitigation to be implemented:</u></p> <p>Further mitigation to be developed as part of the EIA process.</p> | <p>Construction Phase: <b>Likely to have a Significant Effect</b> (further assessment of impacts to population and human health receptors required to confirm mitigation required, precautionary approach taken to scope in due to uncertainty on whether sufficient mitigation can be applied to avoid likely significant effects)</p> <p>Operation: <b>Not Likely to have a Significant Effect</b> (no potential negative effects identified from operation of the Scheme)</p> |

| Topic                                         | Description of likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                             | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               | <p>an increase in trade for local shops and businesses.</p> <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>Unlikely to create permanent negative effects.</li> <li>Potential for permanent positive effects due to the reduction in flood risk and the provision of an area of public open space.</li> </ul>                                                                                                                                                                                 |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Biodiversity &amp; Nature Conservation</b> | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>The site is a sensitive location, with potential impacts on the following protected sites and associated features: <ul style="list-style-type: none"> <li>Afon Teifi SAC / SSSI</li> <li>Cardigan Bay and West Wales Marine SAC</li> </ul> </li> <li>Potential impacts to protected habitats and species, both terrestrial and estuarine. For example including direct impacts to intertidal habitats, and potential impacts on</li> </ul> | <p><b><u>Mitigation implemented:</u></b></p> <p>The option selected minimises land take within the estuary in so far as possible.</p> <p><b><u>Mitigation to be implemented:</u></b></p> <p>Further mitigation to be developed as part of the EIA process.</p> | <p>Construction: <b>Likely to have a Significant Effect</b> (further assessment of impacts to biodiversity and nature conservation receptors required to confirm mitigation requirements, precautionary approach taken to scope in due to uncertainty on whether sufficient mitigation can be applied to avoid likely significant effects)</p> <p>Operation: <b>Not Likely to have a Significant Effect</b> (no negative impacts considered likely during operation of the Scheme)</p> |

| Topic        | Description of likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                                                                                      | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                      |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>migratory and non-migratory fish species.</p> <ul style="list-style-type: none"> <li>• Potential spread of INNS.</li> <li>• Potential negative effect on trees in the Scheme Area due to potential removal/felling and construction works.</li> </ul> <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>• It is not anticipated that regular maintenance of the new structure(s) will be required therefore impacts to biodiversity and nature conservation during operation are considered to be unlikely.</li> <li>• Reduced flood risk could result in reduced potential for environmental pollution during and following a flood event.</li> </ul> |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                 |
| <b>Water</b> | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>• Impacts to hydromorphology from construction of the flood defence within the channel.</li> <li>• Impacts to water quality from construction related impacts (e.g., pollution, siltation).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                               | <p><b><u>Mitigation implemented:</u></b></p> <p>The option selected minimises land take in the estuary as far as possible. The option selected intends to utilise construction from land in so far as possible to minimise potential construction related impacts (however this is to be confirmed by contractors).</p> | <p>Construction: <b>Not Likely to have a Significant Effect</b> (with the adoption of mitigation set out, and the impacts to aquatic species covered under biodiversity, no significant effects are likely)</p> |

| Topic | Description of likely effects                                                                                                                                                       | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                   |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>Impacts to hydromorphology due to the permanent narrowing of the channel.</li> <li>Changes in flood risk.</li> </ul> | <p>The aim of the Scheme is to reduce flood risk in the area.</p> <p><b><u>Mitigation to be implemented:</u></b><br/>Design will seek to minimise in river working and extent of hydromorphological changes in so far as possible.</p> <p>Detailed design to minimise the depth of piles as much as is practical, whilst maintaining the scheme's flood risk reduction objectives.</p> <p>Implementation of any measures identified in the WFD Detailed Assessment.</p> <p>Implementation of the measures set out in a Piling Risk Assessment (if required).</p> <p>Completion of a Flood Consequences Assessment to understand the changes to flooding from the Scheme, and implementation of any measures identified in the flood modelling.</p> <p>All works will be undertaken by an NRW framework contractor who will implement best practice techniques to control</p> | <p>Operation: <b>Not Likely to have a Significant Effect</b> (with the adoption of mitigation set out, and the impacts to aquatic species covered under biodiversity, no significant effects are likely)</p> |

| Topic                      | Description of likely effects                                                                                                                                                                                                                                                 | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                                                   |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            |                                                                                                                                                                                                                                                                               | <p>pollution and siltation. As with all works carried out by NRW framework contractors, the contractor will be required to prepare and comply with a Pollution Prevention Plan, including spill response plans, and a Biosecurity Risk Assessment.</p> <p>Best-practice guidelines (e.g. GPP5: Works and maintenance in or near water, Version 1.2, 2018 and Pollution Prevention Guidelines, CIRIA 2015) will be followed as a minimum to prevent potential adverse effects from pollution and the spread of Invasive Non-Native Species (INNS).</p> |                                                                                                                                                                                                                                              |
| <b>Land Use &amp; Soil</b> | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>Potential impact due to mobilisation of existing contamination, including asbestos.</li> </ul> <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>No operational impacts identified.</li> </ul> | <p><b><u>Mitigation to be implemented:</u></b></p> <p>Designs to avoid disturbance of areas identified as containing asbestos if possible.</p> <p>A Contaminated Land Preliminary Risk Assessment will be undertaken to further assess the potential for land contamination and any environmental and health risks. Implementation of any remediation requirements identified through the Preliminary Risk Assessment.</p> <p>Any further mitigation required during construction would be controlled through a</p>                                   | <p>Construction: <b>Not Likely to have a Significant Effect</b> (with the adoption of mitigation no significant effects are likely)</p> <p>Operation: <b>Not Likely to have a Significant Effect</b> (no operational impacts identified)</p> |

| Topic      | Description of likely effects                                                                                                                                                                                                                                                     | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                                                                                                                 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            |                                                                                                                                                                                                                                                                                   | Construction Environmental Management Plan (CEMP) and EAP. The CEMP and EAP will include control measures to manage human health and environmental risks should contaminated land be encountered during construction. This will include implementation of an appropriate Site Waste Management Plan. If contaminated material is to be transported off site, NRW will apply the Definition of Waste: Code of Practice to ensure as much material as possible is reused. The Site Waste Management plan will include soil management considerations, for example around stockpiling of waste. |                                                                                                                                                                                                                                                                                                            |
| <b>Air</b> | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>Impact of dust generation.</li> <li>Impact of vehicular emissions to local air quality.</li> </ul> <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>No operational impacts identified.</li> </ul> | <p><b><u>Mitigation to be implemented:</u></b></p> <p>Construction plant and vehicles to be used will be considered to select those with the lowest possible emissions.</p> <p>The CEMP and EAP will include appropriate control measures to limit the potential for significant dust emissions. The CTMP will seek to reduce the amount of vehicular travel required in so far as possible.</p>                                                                                                                                                                                             | <p>Construction: <b>Not Likely to have Significant Effect</b> (it is considered that construction effects can be managed through standard controls and therefore no significant effects are likely)</p> <p>Operation: <b>Not Likely to have Significant Effect</b> (no operational impacts identified)</p> |

| Topic           | Description of likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                                                                                                | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                                                                                                                                                                                                                               |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Climate         | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>Construction of the flood defences will require use of natural resources i.e. construction material production and energy, which will result in the release of carbon emissions.</li> <li>Construction plant will result in carbon emissions.</li> </ul> <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>The proposed Scheme will reduce the risk of flooding and associated environmental, social and economic impacts. The Scheme therefore contributes to climate change adaptation and provides increased environmental and community resilience. GHG emissions from the operational scheme will be minimal – associated with maintenance only.</li> </ul> | <p><b><u>Mitigation implemented:</u></b></p> <p>The option selected has a lower requirement for materials and associated carbon emissions due to the reduced area of building required in the river.</p> <p><b><u>Mitigation to be implemented:</u></b></p> <p>Further mitigation to be developed as part of the EIA process.</p> | <p>Construction: <b>Likely to have a Significant Effect</b> (further assessment of climate related effects required to confirm mitigation requirements, precautionary approach taken to scope in due to uncertainty on whether sufficient mitigation can be applied to avoid likely significant effects.)</p> <p>Operation: <b>Not Likely to have Significant Effect</b> (no adverse operational effects identified)</p> |
| Material Assets | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>Potential impact on local traffic due to road closures and traffic associated with</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p><b><u>Mitigation implemented:</u></b></p> <p>Maintenance of the slipways to access the water.</p>                                                                                                                                                                                                                              | <p>Construction: <b>Not Likely to have Significant Effect</b> (with the adoption of mitigation, and consideration of effects on local traffic, water navigation and</p>                                                                                                                                                                                                                                                  |



| Topic | Description of likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                       |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <p>construction of the flood defences (deliveries and plant movements) could contribute to road congestion in Cardigan and affect the use of certain roads and the bridge for periods during the construction phase.</p> <ul style="list-style-type: none"> <li>Potential impact on water navigation.</li> <li>Installation of the proposed flood defences could have a temporary effect on utilities infrastructure.</li> <li>Potential demolition of buildings (see Section 1.3).</li> </ul> <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>It is not anticipated that there will be any operational impacts to material assets.</li> </ul> | <p>Design has considered the Welsh Water outfall and other services.</p> <p><b><u>Mitigation to be implemented:</u></b></p> <p>Design will seek to avoid or reduce the impact of road closures and water access restrictions during construction.</p> <p>Community engagement and consultation to inform and manage expectations related to construction impacts.</p> <p>Agreement regarding compensation/ reinstatement would be sought with landowners/users where demolition of buildings is required.</p> <p>Implementation of measures identified in a Construction Transport Assessment to mitigate effects on the local road network.</p> <p>Implementation of a Construction Traffic Management Plan, temporary footpath diversions and/or closures and appropriate signage as well as wider communication with residents and the public.</p> <p>In addition, appropriate control measures will be set out in the CEMP and EAP to further minimise disturbance to the road</p> | <p>potential demolition of buildings under Population and Human Health no significant effects are likely)</p> <p>Operation: <b>Not Likely to have Significant Effect</b> (no operational effects identified)</p> |

| Topic                         | Description of likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Mitigation measure applied to avoid likely effects                                                                                                                                                                                                                                                                                                                           | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | network. This will include appropriate time restrictions on deliveries of materials to avoid peak commuting times and phasing of deliveries to prevent a backlog of vehicles waiting to be unloaded.                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Historic Environment</b>   | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>• Potential for direct impacts to scheduled monument(s).</li> <li>• Potential for impacts on the historical setting of the Scheme Area.</li> <li>• Potential for direct impacts to conservation area.</li> <li>• Potential for direct impacts on currently unknown archaeological remains.</li> </ul> <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>• Potential for impacts on the historical setting of the Scheme Area.</li> </ul> | <p><b><u>Mitigation implemented:</u></b></p> <p>Design development and option selection has avoided and reduced impacts to heritage assets where possible, for example by selecting an option which limits impacts within the old foundry site.</p> <p><b><u>Mitigation to be implemented:</u></b></p> <p>Further mitigation to be developed as part of the EIA process.</p> | <p>Construction: <b>Likely to have a Significant Effect</b> (further assessment of effects to historic environment required to confirm mitigation requirements, precautionary approach taken to scope in due to uncertainty on whether sufficient mitigation can be applied to avoid likely significant effects)</p> <p>Operation: <b>Likely to have a Significant Effect</b> (further assessment of effects to historic environment required to confirm mitigation requirements, precautionary approach taken to scope in due to uncertainty on whether sufficient mitigation can be applied to avoid likely significant effects)</p> |
| <b>Landscape &amp; Visual</b> | <p><u>Construction</u></p> <ul style="list-style-type: none"> <li>• Potential for temporary negative impacts to the</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                          | <p><b><u>Mitigation to be implemented:</u></b></p> <p>Further mitigation to be developed as part of the EIA process.</p>                                                                                                                                                                                                                                                     | <p>Construction: <b>Likely to have a Significant Effect</b> (further assessment of effects to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Topic | Description of likely effects                                                                                                                                                                                                                                                                                                                                                                                                                                         | Mitigation measure applied to avoid likely effects | Likely to have Significant Effect or Not Likely to have Significant Effect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <p>landscape and visual receptors due to construction activity.</p> <ul style="list-style-type: none"> <li>Potential for changes in landscape character.</li> </ul> <p><u>Operation</u></p> <ul style="list-style-type: none"> <li>Potential for permanent negative impacts to landscape and visual receptors due to the presence of the new flood defence, which will be taller than the existing.</li> <li>Potential for changes in landscape character.</li> </ul> |                                                    | <p>landscape and visual receptors required to confirm mitigation requirements, precautionary approach taken to scope in due to uncertainty on whether sufficient mitigation can be applied to avoid likely significant effects)</p> <p>Operation: <b>Likely to have a Significant Effect</b> (further assessment of effects to landscape and visual receptors required to confirm mitigation requirements, precautionary approach taken to scope in due to uncertainty on whether sufficient mitigation can be applied to avoid likely significant effects)</p> |

### 4.3 Scope of statutory Environmental Impact Assessment

EIA topics as defined by the EIA regulations include: Population and Human Health; Biodiversity; Land; Soil; Water; Air; Climate; Material Assets; Cultural Heritage; Landscape. Consideration also needs to be given to identifying other projects where there's potential for cumulative effects.

The aim of scoping is to 'scope in' only those issues considered to have potential to give rise to likely significant effects, either during construction or operation. Where no impact pathways exist, topics have been 'scoped out' of further assessment. Where we have identified suitable mitigation to avoid, reduce or remediate negative impacts these measures will be included in the Environmental Action Plan (to be prepared at a later date) and/or the scheme design and will be scoped out of further assessment. These mitigation measures may require further review as the Scheme progresses; this is particularly so where further environmental survey is recommended. As such, this scoping exercise is based on available information at the time of writing and a precautionary approach has been adopted; where it cannot be considered certain that effects cannot be scoped out, these potential effects have been scoped in until more certainty can be provided.

This scoping exercise has considered likely construction and operation phase effects and opportunities. However, we have not considered decommission phase effects given that flood risk management measures proposed is required in perpetuity.

The EIA topics and likely significant effects scoped in for further assessment and those scoped out are presented below. A scoping opinion will be requested from Ceredigion County Council and Natural Resources Wales Marine Licencing Team in order to obtain formal confirmation on the EIA scope.

### 4.4 EIA topics scoped in

The environmental topics and associated likely significant effects listed here will be further considered as part of the EIA, the assessment will be integrated into the project's detailed design. The EIA will assess the extent of effects likely and seek to identify measures to mitigate those effects. The topics are:

- Population and Human Health (construction)
- Biodiversity and Nature Conservation (construction)
- Climate (construction)
- Historic Environment (construction and operation)
- Landscape and Visual (construction and operation)

Table 4 sets out the proposed next steps for topics scoped in.

**Table 4 Next steps for topics scoped in**

| Topics Scoped In                                           | Next Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Population and human health (construction)</b>          | Further assessment of population and human health impacts as the Scheme design evolves, including assessment of impacts on PRoW and active travel routes from the Scheme (including construction).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Biodiversity and nature conservation (construction)</b> | <p>Updated Phase 1 Habitat Survey and PEA due to expiration of validity period (2 years), to identify any changes in potential presence for protected species and habitats.</p> <p>Further protected species surveys currently identified as required comprise;</p> <ul style="list-style-type: none"> <li>• Preliminary Roost Assessments (PRA) for buildings/trees with bat roost potential within 100m of any noise/vibration works (0-50m – construction activities; 50-100m - Piling works);</li> <li>• Breeding bird surveys; and</li> <li>• Pre-construction checks for nesting birds, otter, reptiles, marine mammals and INNS.</li> </ul> <p>It is noted that although invertebrate surveys were recommended in the PEA advice from the Lead Specialist Advisor- Invertebrates at NRW has indicated that the Scheme is unlikely to impact upon any invertebrate species of importance, and therefore and invertebrate survey has been descoped (email communication 17/04/2023).</p> <p>An Ecological Impact Assessment will be required to identify, quantify, and evaluate potential effects of development-related works on habitats, species, and ecosystems.</p> |
| <b>Climate (construction)</b>                              | <p>Carbon calculator to calculate emissions associated with the scheme design and construction. Review of carbon budgets relevant to the Scheme, and comparison with outputs of the carbon calculator.</p> <p>Outline climate adaptation plan will be undertaken to identify climate vulnerabilities and actions required to integrate climate resilience in the Scheme Area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Topics Scoped In                                           | Next Steps                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Historic Environment (construction and operation)</b>   | Confirmation required with Ceredigion County Council and Dyfed Archaeological Trust on the scope of any archaeological survey and assessment required.<br><br>Heritage Statement (covering impacts to the designated heritage assets) to identify the potential impact of the scheme on heritage assets and their associated settings. |
| <b>Landscape &amp; Visual (construction and operation)</b> | Landscape and Visual Impact Assessment (LVIA) to assess the impact on the landscape and visual amenity of the scheme area.<br><br>Tree survey and arboricultural impact assessment (if required) to identify the site-specific effect of the scheme on existing tree stock.                                                            |

#### 4.5 EIA topics scoped out

The environmental topics listed here will not be considered within the project's EIA. They have been scoped out given the project is not likely to have a significant effect upon these topics. Where suitable mitigation to avoid, reduce or remediate significant effects is being relied upon to conclude no likely significant effect, those mitigation measures have been listed in this section and will be taken forward into the project's Environmental Action Plan to be implemented at project construction. The topics scoped out are:

- Population and Human Health (operation)
- Biodiversity and Nature Conservation (operation)
- Water (construction and operation)
- Land Use and Soils (construction and operation)
- Air (construction and operation)
- Climate (operation)
- Material Assets (construction and operation)

The justification for scoping out these topics is set out in Table 3. Table 5 sets out the mitigation relied on to scope out the topics.

**Table 5 – Mitigation relied on for topics scoped out**

| Topics Scoped Out | Mitigation relied on                                                                                                                                                                                                                                                                                                                                   |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>All topics</b> | An EAP will be developed to describe the mitigation and control measures to protect the environment and local community during detailed design and transferred to a CEMP for implementation during construction. This will also include the measures identified in Table 3 as well as additional measures identified during the detailed design stage. |

| Topics Scoped Out                                        | Mitigation relied on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                          | A Construction Traffic Management Plan will be implemented to minimise construction traffic impacts on the local highway network and users.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Population and human health (operation)</b>           | No mitigation required during operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Biodiversity and nature conservation (operation)</b>  | No mitigation required during operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Water (construction and operation)</b>                | <p>Implementation of any mitigation identified through the WFD Detailed Assessment, undertaken to assess the potential impact and identify any potential for deterioration in water quality/status.</p> <p>Implementation of any mitigation identified in the Flood Consequence Assessment, undertaken to understand the changes to flooding from the Scheme.</p> <p>Implementation of any mitigation identified in the Piling Risk Assessment (if required), undertaken to assess the piling methodology in conjunction with site geology and potential for contamination.</p> |
| <b>Land Use &amp; Soils (construction and operation)</b> | <p>Implementation of any measures identified in the Contaminated Land Preliminary Risk Assessment, undertaken to identify land contamination issues.</p> <p>Implementation of a Site Waste Management Plan to manage the amount and type of waste produced during construction and identify appropriate disposal methods including reuse and recycling where appropriate.</p>                                                                                                                                                                                                   |
| <b>Air (construction and operation)</b>                  | No specific mitigation required, beyond those identified for all topics.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Climate (operation)</b>                               | No mitigation required during operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Material Assets (construction and operation)</b>      | <p>Construction Transport Assessment to assess the potential impacts associated with construction related transport.</p> <p>Agreement with landowners and users of properties requiring demolition.</p>                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Cumulative Effects</b>                                | As the Scheme progresses the list of other projects will be updated. If the potential for cumulative effects with other developments are identified potential mitigation will be considered.                                                                                                                                                                                                                                                                                                                                                                                    |



## 4.6 Other Consents/Approvals

This section highlights other consents, permits, and licences likely to be required for the Scheme. This section is subject to change as the design and understanding of the Scheme progresses and is based on the current understanding of the Scheme at the time of writing.

### *Habitats Regulations Assessment*

The Scheme is partially located within Afon Teifi Special Area of Conservation (SAC) and so will be subject to an assessment under the Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations). A shadow Test of Likely Significant Effects Habitats Regulations Assessment has been carried out and indicates that the scheme is likely to have an effect on the SAC. A shadow Appropriate Assessment is being undertaken to establish whether the Scheme is likely to affect the qualifying features of the SAC.

### *SSSI Assent*

The Scheme is partially located within Afon Teifi SSSI. SSSI Assent (under the Countryside and Rights of Way (CROW) Act) is only required if the Scheme is not subject to planning permission. Therefore, as it is considered that the Scheme is likely to require planning permission no SSSI assent would be necessary.

### *Scheduled Monument Consent*

The Scheme has potential to directly impact a Scheduled Monument (refer to Heritage in Section 2.1). If there is a direct impact to a Scheduled Monument formal consent must be obtained prior to the commencement of any works which may impact a Scheduled Monument. An application for consent must be made to the Cadw. A Scheduled Monument consent would be required in addition to the need for planning consent.

If a direct impact is avoided, but works are in close proximity to a Scheduled Monument consultation will be undertaken with Cadw to confirm the requirement for a Scheduled Monument consent.

### *Conservation Area Consent*

Conservation Area consent from the local planning authority is required for the demolition of an unlisted building in a Conservation Area. However, this requirement is subject to a number of exceptions including if the building is required to be demolished by virtue of a condition of planning permission granted under section 70 of 177(l) of the Town and Country Planning Act 1990. Therefore, if planning permission is required no additional Conservation Area consent would be required.

### *Flood Risk Activity Permit (FRAP)*

A Flood Risk Activity Permit (FRAP) is required from NRW for works on or near a main river or a flood defence structure in accordance with the Environmental Permitting (England and Wales) Regulations 2016. This is to ensure the temporary and permanent works associated with the Scheme do not interfere with NRW's flood risk management assets or adversely impact the local environment, fisheries or wildlife.

To ensure the proposed Scheme does not increase the risk of flooding for existing properties, a Flood Consequences Assessment (FCA) will be required to support the FRAP application and the application for planning permission.

### *Protected Species Licences*

A European Protected Species Mitigation (EPSM) Licence issued by Natural Resources Wales will be required for any works liable to affect protected species. The PEA identifies the potential for protected species within the Scheme Area (see Biodiversity under Section 2.1) and further surveys are required to determine the presence/likely absence of these species. If presence is determined an EPSM licence must be obtained prior to commencement of any construction activity.

## **5 Potential Environmental Enhancements**

In line with the project objectives and wider strategic environmental aspirations and challenges as outlined within Section 2.2 above the following environmental enhancements have been identified and are shown on the ECOP (Appendix A).

We will seek to embed enhancements into the design of the project as far as possible and work collaboratively in their delivery. This list will be refined as the project progresses.

- 1) Improvements to the Teifi Marshes Nature Reserve, this could include:
  - provision of artificial otter holts,
  - desilting of an area of open water,
  - annual cutting of the reedbed, and
  - installation of wildflower turf.
- 2) Netpool Orchard and Riverside Enhancements (as identified in A Strategy for Greening 6 Towns<sup>15</sup>), this could include: .
  - provision of a public orchard,
  - park infrastructure and access improvement, and
  - tree planting.
- 3) Enhanced planting/amenity intervention to the space east of Cardigan bridge (as identified in A Strategy for Greening 6 Towns), this could include:
  - empowered community garden project,
  - planting trees along northern perimeter to screen from traffic,
  - access to the river,
  - educational boards, for example on local marine and wildlife,
  - installation of public art/wildlife/heritage information boards, and

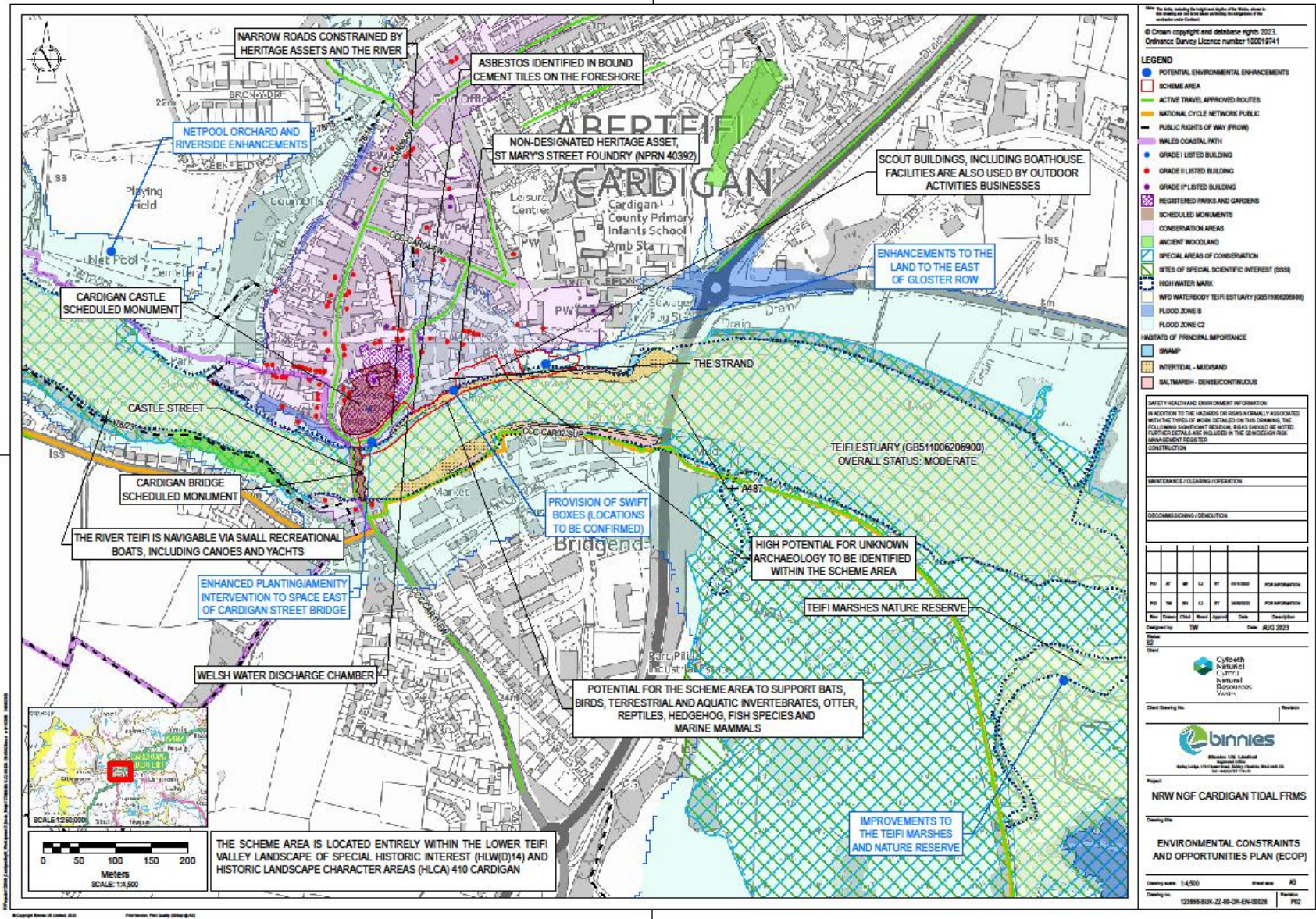
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<sup>15</sup> Ceredigion County Council. A Strategy for Greening 6 Towns. Available online at: <https://lucmaps.co.uk/CeredigionGBIDigitalReport/> [Accessed 05/07/2023]

- enhanced signage of the Welsh coastal path which runs along Cardigan Bridge.
- 4) Enhancement to the land to the east of Gloster row (subject to the aspirations of the town council) this could include:
  - a pocket park,
  - seating area,
  - wildlife area, and
  - exploring whether a cut through can be created to the Old Hospital site
- 5) Provision of swift boxes (although noting that this may become mitigation subject to the results of further surveys).

## Appendix A – Environmental Constraints and Opportunities Plan (ECOP)





## Appendix B – ECOR Consultation 2020

| NRW - Internal NRW Consultees | Date of Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                    | Action taken                                                                                                                                                                                 |
|-------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Development Planning          | 2020                 | PRELIMINARY PRE-APPLICATION ADVICE                                                                                                                                                                                                                                                                                                                     | <p>Comments noted and where necessary addressed in the relevant section of the ECOR.</p> <p>Afon Teifi Marine Protected Areas SSSI mentioned on page 2 of 12 - not included (not found).</p> |
| Ceredigion Environment Team   |                      | BWRIAD / PROPOSAL: Cardigan Tidal Flood Alleviation Scheme – Environmental Constraints and Opportunities Record Consultation<br>LLEOLIAD / LOCATION: Aberteifi/Cardigan, Ceredigion.                                                                                                                                                                   |                                                                                                                                                                                              |
| Fisheries Officer             |                      | Thank you for your enquiry dated 03/08/2020.                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                              |
| Landscape                     |                      | We understand from discussions with you that this scheme is in early stages of development, and we will subsequently be consulted when further detailed plans and more information is available.                                                                                                                                                       |                                                                                                                                                                                              |
| Protected Species             |                      | Please note that our comments are without prejudice to any comments we may wish to make when consulted on any subsequent planning application or permit (either at pre-application or application stage) for the proposed development. At that time there may be new information available which we will need to consider in making a formal response. |                                                                                                                                                                                              |
| Geoscience                    |                      | We have considered your enquiry in relation to our Development Planning Consultations Topics document (September 2018). We advise that the following matters are relevant to your site / proposed development and suggest you consider these further prior to the submission of any planning application:                                              |                                                                                                                                                                                              |
| Health                        |                      | We have reviewed and based our advice on the following documents:                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                              |
| Geomorphology                 |                      | <ul style="list-style-type: none"> <li>• 'Cardigan Outline Business Case – Concept Design Assessment' JBA Consulting, June 2020</li> <li>• 'Cardigan Tidal FAS Environmental Constraints and Opportunities Record – Part A (Draft Report)' JBA consulting, July 2020</li> </ul>                                                                        |                                                                                                                                                                                              |
| Coastal Team                  |                      | Protected Sites<br>The proposal is within or hydrologically connected to the following protected sites, where the nature conservation interest is a matter of international and national policy or legislation requiring protection from damage and deterioration, with its important features conserved by appropriate management.                    |                                                                                                                                                                                              |
|                               |                      | <ul style="list-style-type: none"> <li>• Afon Teifi/Afon Teifi Special Area of Conservation (SAC)</li> </ul>                                                                                                                                                                                                                                           |                                                                                                                                                                                              |



| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action taken |
|----------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|                                  |                         | <ul style="list-style-type: none"> <li>• Bae Ceredigion/Cardigan Bay SAC</li> <li>• Afon Teifi Site of Special Scientific Interest (SSSI)</li> <li>• Aberarth – Carreg Wylan SSSI</li> <li>• Afon Teifi Marine Protected Areas SSSI</li> </ul> <p><i>Site specific advice from the documents provided</i></p> <p>1) Business Case (Concept Design Assessment):</p> <p>We have reviewed Version RP-C-0001-S3-P02 of this document. We have previously commented on a previous version. Included in this updated document is an additional cell referenced: C4 – Cardigan Bridge to activity centre.<br/>Our comments are as follows:</p> <p>a) For section C3 (south shore, Slipway to A487 bridge), the current proposal involves felling of the existing tree line backing the river front cycle route and footpath. This tree line has a significant landscaping role in a local context in shielding the view of the industrial buildings from the town on the other bank, and provides a wildlife corridor in conjunction with the adjacent saltmarsh strip along the estuarine edge. This should be added to the list of Constraints for this option, and alternative approaches need to be explored here.</p> <p>b) For section S5 (north shore, slipway &amp; scout boathouse), the current proposal envisages demolition of the old scout boathouse, which was disused at the time of the initial design phase. As noted in the Business Case, this building has been refurbished and is now occupied by a successful water-based outdoor activities business, which uses the slipway and contributes to the tourist economy of the town. The current demolition proposals may therefore need to be revisited.</p> <p>2) Environmental Constraints and Opportunities Record:</p> <p>a) Preliminary Ecological Appraisal (PEA) and Habitats Regulations Assessment reports: Table 2.1, pages 12 and 13 of Section 2 - Environmental Baseline state that "The Preliminary Ecological Appraisal (PEA) and Habitats Regulations Assessment (HRA) has assessed the value of the "...."natural resources and ecosystems".</p> <p>Table 4.2 on page 35 (Scope of future work) also states that "A Preliminary Ecological Appraisal (PEA) and Habitats Regulations Assessment (HRA) Test of Likely Significant Effect have been completed for the scheme."</p> |              |



| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action taken |
|----------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|                                  |                         | <p>We were consulted on the first draft of the screening stage (TLSE) of an HRA on 6 July, but some aspects still needed further work, and it has not been signed off by the Environment Team.</p> <p>The preliminary conclusion was that an Appropriate Assessment of the potential impacts on SAC species and habitats will be required. As of the date of this letter, we have not yet been consulted on a Preliminary Ecological Appraisal, so we are unable to comment further on its content or conclusions.</p> <p>b) Following the comments for a) on the Business Case above, the significance and potential loss of the existing tree line along Frontage Cell C3 has not been considered as part of the Environmental Baseline (Landscape and Biodiversity aspects) and is therefore missing from the subsequent options appraisal and environmental assessment sections of the report. This needs further consideration.</p> <p>c) Loss of intertidal SSSI and SAC habitats:</p> <p>Table 4.2 on page 34 acknowledges that the concept design involves a permanent encroachment into the Afon Teifi SAC and SSSI, resulting in a permanent - although minor - loss of habitat area from these designated sites. The intertidal edges within the scheme footprint are currently largely mud and cobbles, with some narrow strips of saltmarsh, used by foraging otters and small numbers of waders and wildfowl. The amount of habitat loss will need to be quantified in terms of area and what habitats/substrates are involved, but also in terms of any consequential effects - e.g. possible changes to the foreshore as a result of the adjacent new wall foundations; habitat damage/ground compaction resulting from the access tracks for the works; consequential impacts on river flow and sedimentation patterns within the channel. Once the information requested is available any effects on the SAC needs to be assessed following the principles of avoid and mitigation. Any residual effects must be highlighted for further discussions. Any HRA issues need to be addressed prior to submission for determination. Any impact on SSSI features need to be covered through the assent/consent process.</p> <p>This aspect is discussed in Table 6-2 (page 46), in which the possibility is raised of biodiversity enhancement and soft engineering approaches being built into the scheme, to further allow intertidal habitats to develop, in addition to compensation for habitat loss and the potential to achieve a habitat net gain beyond the scheme extent. However, Figure 5.1 (page 43) and the Appendix A plan (page 53) propose that this compensation and a net gain of intertidal habitat could potentially be realised at the Teifi Marshes upstream of proposed scheme. This may not be appropriate, since the area indicated comprises existing high value SSSI habitats that are</p> |              |

| NRW - Internal NRW Consultees | Date of Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Action taken |
|-------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|                               |                      | <p>already managed to maximise their conservation potential. The possibility of habitat enhancement and creation elsewhere within the Teifi estuary should be explored further. However, the primary emphasis should be on maintaining and enhancing the intertidal habitats within the footprint of the scheme, utilising the approaches described above, since this stretch of tidal river through the town is vital in providing ecological connectivity between the upper and lower estuary.</p> <p>It is also worth noting that any physical changes to the sedimentation patterns within the channel may also impact upon navigation by boats and other river users; this aspect is already an issue of concern in the Teifi estuary, including immediately downstream of the scheme stretch in the vicinity of Cardigan Old Bridge. Navigation rights are managed by Afon Teifi Fairways Ltd ( <a href="https://www.afonteififairways.org/">https://www.afonteififairways.org/</a> ).</p> <p>HRA Requirement<br/>For the planning application stage, the Habitats Regulations require that the competent authority (the Planning Authority) must, for the purposes of the assessment, consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the Authority specify.</p> <p>Enough information must be provided so to allow the Local Authority to undertake an assessment.</p> <p>We advise the information listed in this letter will be required for an assessment to be undertaken on the following protected sites:</p> <ul style="list-style-type: none"> <li>• Afon Teifi/Afon Teifi Special Area of Conservation (SAC)</li> <li>• Bae Ceredigion/Cardigan Bay SAC</li> </ul> <p>A detailed Construction Environmental Management Plan (CEMP) is required which clearly lists the pollution prevention measures which will be implemented during the proposal. The CEMP is also required to detail the construction method statement of the proposal. The CEMP must include (as appropriate):</p> <ul style="list-style-type: none"> <li>• Construction methods: details of materials, how waste generated will be managed;</li> <li>• General Site Management: details of the construction programme including timetable, details of site clearance; details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain.</li> <li>• Biodiversity Management: details of tree protection or removal; invasive species management; species and habitats protection, avoidance and mitigation measures.</li> <li>• Soil Management: details of topsoil strip, storage and amelioration for re-use.</li> </ul> |              |

| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action taken |
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|                                  |                         | <ul style="list-style-type: none"> <li>• CEMP Masterplan: details of the extent and phasing of development; location of landscape and environmental resources; design proposals and objectives for integration and mitigation measures.</li> <li>• Control of Nuisances: details of restrictions to be applied during construction including timing, duration and frequency of works; details of measures to minimise noise and vibration from piling activities, for example acoustic barriers; details of dust control measures; measures to control light spill and the conservation of dark skies.</li> <li>• Resource Management: details of fuel and chemical storage and containment; details of waste generation and its management; details of water consumption, wastewater and energy use</li> <li>• Traffic Management: details of site deliveries, plant on site, wheel wash facilities</li> <li>• Pollution Prevention: demonstrate how relevant Guidelines for Pollution Prevention and best practice will be implemented, including details of emergency spill procedures and incident response plan.</li> <li>• Details of the persons and bodies responsible for activities associated with the CEMP and emergency contact details</li> <li>• Landscape/ecological clerk of works to ensure construction compliance with approved plans and environmental regulations.</li> </ul> <p>Protected Species</p> <p>Protected Species: Legislation and Policy</p> <p>Otters and All species of British bats are European Protected Species, legally protected under The Conservation of Habitats and Species Regulations 2017. Legal protection relates to the animals themselves and the places they use to rest and breed.</p> <p>Where a European Protected Species is present and development proposal is likely to contravene the legal protection they are afforded, the development may only proceed under licence issued by Natural Resources Wales, having satisfied the three requirements set out in the legislation. One of these requires that the development authorised will 'not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range'.</p> <p>These requirements are translated into planning policy through Planning Policy Wales (PPW) December 2018, section 6.4.22 and 6.4.23, and Technical Advice Note (TAN) 5 , Nature Conservation and Planning (September 2009). The planning authority should take them into account when considering development proposals where a European Protected Species is present.</p> |              |

| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action taken |
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|                                  |                         | <p>Water vole are listed under Schedule 5 of the legally protected under the Wildlife and Countryside (Amendment) Act 1991. Legal protection relates to the animals themselves and their places of shelter.</p> <p>Species Summary:<br/>We note that there are numerous records for otter around and on the proposed scheme including under Cardigan bridge and the A487 bridge, as well as a record further upstream on the Afon Mwldan. In addition, there are several bat roost records in the Cardigan area, including several roosts located near the proposals, most notably the greater horseshoe bat roosts at Cardigan Castle. The ECOR states that water vole have been recorded within 2km of the scheme.</p> <p>EA Scoping Opinion<br/>The EA for this development should include enough information to enable the local planning authority to determine the extent of any environmental impacts arising from the proposed scheme on legally protected species, including those which may also comprise notified features of designated sites affected by the proposals.</p> <p>Evaluation of the impacts of the scheme should include: direct and indirect; secondary; cumulative; short medium and long term; permanent and temporary; positive and negative, and construction (including impacts of construction site access) operation and decommissioning phase impacts on the nature conservation resource, landscape and public access.</p> <p>Description of the Project<br/>The entire scheme should be described in detail. This description should cover construction, operation and decommissioning phases and include detailed, scaled maps and drawings as appropriate.</p> <p>We would expect the description to include:</p> <ul style="list-style-type: none"> <li>• The purpose and physical characteristics of the proposals;</li> <li>• Location, development size and configuration of the development including flexibility of the site layout;</li> <li>• Land use requirements and other physical features of the project;</li> <li>• Procedures for good working practices;</li> <li>• Resource use, including waste, minerals and energy;</li> <li>• Identification of appropriate pollution contingency and emergency measures;</li> <li>• Timing of all works and contingency plans should slippage in the programme occur;</li> </ul> |              |

| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Action taken |
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|                                  |                         | <ul style="list-style-type: none"> <li>• Details of construction works including methodology, location and extent of construction sites, construction access/working corridors and stock piling sites;</li> <li>• Quantity and content of any discharges from the development site;</li> <li>• Details of source, type and quantity of any filling material required;</li> <li>• Details of the disposal of any surplus material e.g. material displaced from constructing bases or access roads.</li> <li>• Maintenance requirements of structures.</li> <li>• Maintenance of any habitats within the site;</li> <li>• Details of access routes/transport links, alterations to traffic flows, including the type and frequency of vehicles, noise and dust levels;</li> <li>• Identification of appropriate contingency plans for any emergency incidents on the site.</li> </ul> <p>Illustrations within the Environmental Statement</p> <p>Any maps, drawings and illustrations that are produced to describe the project should be designed such that they can be overlaid maps, drawings and illustrations produced for other sections of the EA such as biodiversity.</p> <p>Description of Biodiversity</p> <p>The EA must include a description of all the existing natural resources and wildlife interests within and in the vicinity of the proposed development, together with an assessment of the significance of any likely impacts.</p> <p>Key Habitats</p> <p>A Phase I survey of the site should be undertaken to describe and map the key habitats of the site and species of importance. This should be undertaken in accordance with the NCC Phase 1 survey guidelines (NCC (1990). Handbook for Phase 1 habitat survey. NCC, Peterborough) and should be undertaken and completed during the summer to ensure the best chance of identifying the habitats present. While we note that the ECOR refers to a Phase 1 survey having been carried out, no details of this have been included with the consultation.</p> <p>Protected Species</p> <p>The site should be comprehensively assessed for its potential to support protected species. We note that the ECOR considers dormice, bats and otters. We note that the ECOR refer to record of water vole within 2km of the scheme, however no further reference to them is made in the report, and no details have been provided on why they have been scoped out from further assessment.</p> <p>Surveys for protected species should be undertaken by suitably qualified, experienced and where necessary, licensed surveyors in accordance with published guidance, where this exists,</p> |              |

| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action taken |
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|                                  |                         | <p>and best practice.</p> <p>We welcome the recommendations on page 35 of the ECOR that recommends a range of phase 2 species surveys for Bats and Otters should be undertaken, to inform the detailed design and mitigation measures. We note that the ECOR refers to a phase 1 survey of the site being undertaken and that report makes recommendations as to the scope of further surveys required. The phase one report was not included in the consultation documents for this scheme, and no details of when this was undertaken have been provided, as such we are not able to comment on whether the scope of any future surveys will be sufficient to rule out presence/absence of protected species and rule out potential impacts on protected species from the proposals.</p> <p>Additionally, we note that the ECOR rules out any operational impacts on Otters. However, until Otter use of the site is identified and the nature of the flood defence structures has been confirmed we do not believe that operational impacts can be ruled out. Additional structures along the banks of the Afon Teifi and Mwldan and between the two rivers could make the wider landscape less permeable for otters and higher structures proposed in the river channel itself could increase otter mortality in flood events. As such without further information precautionary basis we do not feel that this can be ruled out.</p> <p>We advise that otters are considered in the context of a notified feature of the Afon Teifi SAC, and underpinning SSSI, as well as in the context of their status as European Protected Species. In that regard, we also recommend consultation on the proposals with the relevant Environment team.</p> <p>We note that while no lighting is proposed in relation to the scheme, that several footpaths and cycle ways exist currently along the scheme, some of which are already lit. We would advise that any scheme would ensure that no additional lighting is installed along the scheme that would illuminate waterways or adjacent vegetation. Where lighting is deemed essential or is proposed for replacement we advise that a sensitive lighting scheme is employed which prevents light spill and ensures that sensitive features are not lit. Where lighting cannot be located away from sensitive features we would advise that a lighting strategy is produce which include Isolux plans to evidence that lighting will not illuminate sensitive features.</p> <p>While we understand at this stage it is not clear is any trees will be affected by the proposals, we advise that any trees that will be removed or will be affected by the development must have a potential roost feature bat survey carried out, and any features identified as having moderate or higher potential for bats will need an additional inspection carried out, we would normal require that this is submitted with any future planning proposal.</p> |              |

| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action taken |
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|                                  |                         | <p><b>Protected Species Mitigation</b><br/> If protected species are likely to be affected by the proposed development, the EA should include a conservation strategy for each of the relevant species which details all of the mitigation that will be put in place to offset the anticipated impacts. Protected species conservation strategies should set include long-term habitat and species management and monitoring proposals (including monitoring objectives to be used to define when habitats are in favourable condition and which would trigger management), who will be responsible for delivery of these, and the mechanism through which they will be funded and delivered.</p> <p>The EA should also set out any EPS licences likely to be required.</p> <p>Finally, in line with the new duty under Section 6 of the Environment Wales Act 2016, measures should be incorporated to also enhance the environment for the benefit of protected species.</p> <p><b>Local Biodiversity Interests</b><br/> Please note that we have not considered possible effects on all species and habitats listed in section 42 of the Natural Environment and Rural Communities (NERC) Act 2006, or on local Biodiversity Action Plan or other local natural heritage interests. We recommend that you consult with the local authority Ecologist for Pembrokeshire and Ceredigion on the scope of the work to ensure that regional and local biodiversity issues are adequately considered, particularly those habitats and species listed in the relevant Local Biodiversity Action Plans, and are that are considered important for the conservation of biological diversity in Wales.</p> <p>NRW would expect you to contact other relevant people/organisations for biological information/records relevant to the site and its surrounds. These include the relevant Local Records Centre and any local ecological interest groups (Eg. bat groups, mammal groups). The Wales Biodiversity Partnership's website has guidance for assessing proposals that have implications for section 42 habitats and species (<a href="http://www.biodiversitywales.org.uk/HOME">http://www.biodiversitywales.org.uk/HOME</a>).</p> <p><b>Advice from the All Wales Marine Advice Team</b><br/> The team have reviewed the submitted documents. Their advice is as follows:</p> <p>Cardigan Outline Business Case: Concept Design Assessment.</p> <p>No comments</p> <p>Cardigan Tidal FAS Environmental Constraints and Opportunities Record – Part A.</p> |              |



| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action taken |
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|                                  |                         | <p>General comment: Interaction of the works with DCWW's Cardigan Lower Town Outfall construction and operation, on the north bank of the Afon Teifi to the south of the Strand, should be considered within the cumulative assessment.</p> <p>Section 4.1: Given the location of the Cardigan FAS, a Habitats Regulations Assessment (HRA) will be required and it is advised this considers effects upon all designated fish species of the Afon Teifi SAC, as well as any fish species that are typical species of the habitats of the Afon Teifi SAC.</p> <p>Table 4-1 Biodiversity and Nature Conservation: The effect of piling, or other in-channel construction activities, upon the designated fish features of the Afon Teifi SAC (or typical species of the habitats of the Afon Teifi SAC) should be assessed. It is advised that this considers the timing and duration of piling, as well as the size and installation method of the piles, and uses suitable sound source levels for the assessment.</p> <p>Table 4-2 Biodiversity &amp; Nature Conservation: The table identifies that a HRA Test of Likely Significant Effect has been completed, but this has not been made available for review. Therefore, we cannot confirm whether pathways of effect to designated fish species have been assessed appropriately. We request to be consulted on the HRA when it is available.</p> <p>Table 6-2 Biodiversity and Nature Conservation: We reserve comments on the impact level and scale until the assessment and mitigation measures in the HRA can be reviewed.</p> <p>Geoscience<br/>Section 2.2 'Geotechnical considerations' of the JBA report 'Cardigan Outline Business Case – Concept Design Assessment' (June 2020) states a 'Ground Investigation Report' by WYG dated May 2015 includes some information regarding the ground conditions for the land where the flood defences are proposed to be built.</p> <p>The Concept Design Assessment by JBA consulting June 2020 states "We strongly recommend additional ground investigation is undertaken including a comprehensive desk study to manage and identify the anticipated project risks. This would also include a formal assessment of the geotechnical category for the scheme."</p> <p>We agree with this statement. More information (as outlined in the report) is required so to understand the risks to controlled waters from the proposal. We would provide further advice when this information becomes available.</p> |              |

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|                                  |                         | <p><b>Flood Risk</b><br/>The proposed tidal flood alleviation works would all take place within Zone C2 of the Development Advice Map (DAM) contained in TAN15 and the 1% (1 in 100 year) and 0.1% (1 in 1000 year) annual probability of tidal and fluvial flood outline of the Afon Teifi.</p> <p>NRW's flood risk team advise detailed plans of each different flood cells will be required, and a clear plan showing all the proposed defences as the project in its entirety.</p> <p>The Environmental Permitting Regulations (2016) will require this proposal to obtain a several bespoke Flood Risk Activity Permits (FRAPs) for any works and structures located in, under, over or within 8 metres of the bank top of the Afon Teifi, a designated 'main river'. Further advice on these are available on our website here.</p> <p>The works involving the bed of the Afon Teifi may require a Marine Licence.</p> <p>We would also strongly advise discussions take place with the Local Planning Authority at Ceredigion County Council in terms of the requirements for the planning application process for this proposal.</p> <p><b>Bio-security Risk Assessment</b><br/>We consider biosecurity to be a material consideration owing to the nature and location of the proposal. In this case, biosecurity issues concern invasive non native species (INNS) and diseases. We therefore advise that any consent includes the imposition of a condition requiring the submission and implementation of a Biosecurity Risk Assessment to the satisfaction of the LPA.</p> <p>We consider that this assessment must include<br/>i. appropriate measures to control any INNS on site; and<br/>ii. measures or actions that aim to prevent INNS being introduced to the site for the duration of construction and operational phases of the scheme.</p> <p><b>Landscape</b><br/>We agree with the findings of the initial Environmental Constraints and Opportunities and agree that a Landscape and Visual Appraisal or LVIA, if EIA is a requirement, should be carried out to inform the detailed design and mitigation. Reference should be made to Landmap and any local assessments, such as townscape, Conservation Area guidance, design guides.</p> <p>The report does not refer to the Pembrokeshire Coast National Park, however the national park</p> |              |

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|                                  |                         | <p>boundary lies 2.9km away to the north west at its closest point, where the land rises to the west. There would be no impact on the National Park at this distance.</p> <p>Environmental Constraints &amp; Opportunities Record</p> <p>Table 2.1 Environmental Baseline</p> <p>The proposals lie within the historic market town of Cardigan and project objectives include the provision of enhancements that benefit the natural environment and well-being.</p> <p>The report refers to Ceredigion LDP Objective 11 to 'conserve and enhance landscape, encompassing the visual, historic, geological, ecological &amp; cultural environments.</p> <p>The Landscape &amp; Visual section references the National Landscape Character Area (Teifi Valley) and Marine Character Area (Cardigan Bay).</p> <p>The primary function of the scheme is stated to be to protect the urban townscape including the heritage assets of Cardigan.</p> <p>The report states that the scheme will require sympathetic design to minimise adverse impacts to landscape character, matching the aesthetic of the current walls through use of cladding and transparent sections.</p> <p>There are views of the Afon Teifi from the north bank to east and west and from the road bridges, with a mix of historic buildings and modern industrial buildings and houses. From the south bank there are views of the river and historic town, including the castle and town walls and views up and down river of tree lined sections.</p> <p>4.1 indicates that it is not envisaged that EIA will be required, but NRW will progress an non-statutory environmental assessment. Landscape &amp; Visual aspects are scoped in for both construction and operational phases.</p> <p>Potential localised changes in landscape character are anticipated on construction. The existing slate stone walls have aesthetic value and the height of the new flood walls would be 1.5 – 2m higher than the existing, impacting views of the river and across the river from both banks. The detailed design of the walls will take account of local characteristics and materials and transparent sections with glass panels would be included to allow views in places.</p> <p>The report states that an updated Landscape and Visual Appraisal will be carried out to further</p> |              |

| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Action taken                                                                                                                    |
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|                                  |                         | <p>assess the detailed design and mitigation requirements, including potential new tree planting and public realm enhancements. Table 4.2 refers to an LVIA including appropriate landscape plans and assessment of finishes and cladding to complement the existing slate walls and landscape characteristics. The installation of public art is also referenced as a potential enhancement.</p> <p>Geomorphology<br/>NRW's geomorphology team were consulted on this proposal, however given the current level of detail provided, no site specific comments can be provided.</p> <p>NRW's geomorphology team wish to be re-consulted when more detail is available, particularly on the planned pluvial/fluviol storage of water during tidal events.</p> <p>Environmental Impact Assessment (EIA)<br/>The decision on whether the proposal needs to be considered under the Environmental Impact Assessment (Wales) Regulations 2017 will need to be made by the Local Planning Authority at Ceredigion County Council.</p> <p>Should the Authority believe the proposal needs to be considered under the EIA regulations, we will address matters under our remit such as flood risk, drainage, pollution prevention, landscape and ecology when consulted on any subsequent scoping opinion or planning application. Alternatively, if the local authority deems that an EIA is not required, further information can be found on our website regarding NRW's planning service:-<br/><a href="https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/?lang=en">https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/?lang=en</a></p> <p>Other Matters<br/>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.</p> <p>We advise the applicant that, in addition to planning permission, it is their responsibility to ensure they secure all other permits/consents/licences relevant to their development. Please refer to our website for further details.</p> |                                                                                                                                 |
| NRW EAT<br>Landscape Lead        | <u>2020</u>             | <p><b>General</b></p> <ul style="list-style-type: none"> <li>• I think perhaps more could be mentioned to do with protecting existing soils during construction – both in Table 2.1 and 4.1.</li> <li>• Have any meetings with Ceredigion Council been held yet?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><b>General</b></p> <ul style="list-style-type: none"> <li>• References to minimising and mitigating risks to soil</li> </ul> |

| NRW - Internal<br>NRW Consultees | Date of<br>Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action taken                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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|                                  |                         | <p><b><u>Landscape</u></b></p> <ul style="list-style-type: none"> <li>• Conservation Area: The exact boundary is a little difficult to determine on the current plan in the ECOR – in particular where it aligns with the riverside/ie the most important bit for us. I searched on line but unsuccessfully for a better plan and a Conservation Area Statement. Do you know if there is one? Does Ceredigion have a Conservation Officer? • I couldn't see mention of TPOs or protection offered to trees in a Conservation Area – possibly there aren't many trees in the areas we are looking at?</li> <li>• Nor could I see mention of the fact that we are working within the curtilage of several SAMs and so we need to be aware of the settings of these. It possibly just needs spelling out a bit more?</li> <li>• Do you think we will need to do Heritage Impact Assessments for any of the areas?</li> <li>• Marine Conservation Area 16- Cardigan Bay(South) is referred to but perhaps a little more should be said about this. (I keep reflecting on how Cardigan gives its name to the whole bay and yet in terms of towns it is much more modest and tucked away than say Aber) Although clearly the coastal setting/influence is very important to the overall area. • Might be good for us to reference TAN 12 Design.</li> <li>• It may also be good scheme to put in practice some of the principles of Environmental Colour Assessment.</li> </ul> <p><b><u>Other Consultees</u></b></p> <p>The report mentions the use of public art and so it would be good to involve Joseph Roberts, the earlier the better. Also may be worth including coastal footpath team and Steven Richards Price on Interpretation/Visitor Experience.</p> <p>Contact details as follows:<br/> Steven Richards-Price (<a href="mailto:Steven.Richards-Price@cyfoethnaturiolcymru.gov.uk">Steven.Richards-Price@cyfoethnaturiolcymru.gov.uk</a>)<br/> Joseph Roberts (<a href="mailto:Joseph.Roberts@cyfoethnaturiolcymru.gov.uk">Joseph.Roberts@cyfoethnaturiolcymru.gov.uk</a>)<br/> Quentin Grimley (<a href="mailto:Quentin.Grimley@cyfoethnaturiolcymru.gov.uk">Quentin.Grimley@cyfoethnaturiolcymru.gov.uk</a>)</p> | <p>during construction are mentioned in Table 4-1 Environmental scoping assessment as well as Table 4-2 Scope of future work.</p> <p><b><u>Landscape</u></b></p> <ul style="list-style-type: none"> <li>• The scale of the ECOP Plan (Appendix A) was deemed to be sufficient at this stage. A separate PDF of the ECOP should be available to view which should be clearer.</li> <li>• TPOs noted - impacts to trees with Conservation Area mentioned in Table 4-2 Scope of future work. Trees unlikely to be affected as part of proposed Scheme.</li> <li>• Working adjacent/ near to Scheduled Monuments - as mentioned in Table 4-2 Scope of future work - impacts to setting will be considered in a heritage and archaeological assessment which will be completed for the new proposed Scheme.</li> <li>• Heritage Impact Assessment noted - addressed within Table 4-2 Scope of future</li> </ul> |

| NRW - Internal NRW Consultees | Date of Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action taken                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|                               |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>work - a heritage and archaeology assessment will be completed for the new proposed Scheme.</p> <ul style="list-style-type: none"> <li>• Additional information on the Marine Conservation Area is provided in Table 2-1 Environmental baseline.</li> <li>• Reference to TAN 12 Design included within Table 4-2 Scope of future work.</li> <li>• Reference to Environmental Colour Assessment included within Table 4-2 Scope of future work.</li> </ul> <p><b><u>Other Consultees</u></b></p> <ul style="list-style-type: none"> <li>• Noted.</li> </ul> |
| Marine Team                   | 2020                 | <p>In relation to review of the Business Case and ECOR; we wish to add the following comments in addition to those above:</p> <ul style="list-style-type: none"> <li>• Section 4.2 sets out that “The aim of scoping is to ‘scope in’ only those issues considered to have potential to give rise to likely significant impacts, either during construction or operation. Where no impact pathways exist, topics have been ‘scoped out’ of further assessment. Where we have identified suitable mitigation to fully avoid, reduce and remediate negative impacts, these aspects have also been scoped out”. We advise that this approach is incorrect and mitigation should not be considered until the detailed assessment stage so the unmitigated negative impacts should be scoped in to detailed assessment and then mitigation applied, as per the “People Over Wind” Ruling.</li> <li>• Operational phase effects of the scheme on water quality and all relevant interconnected parameters, including, but not limited to, migratory fish, opportunistic macroalgae and phytoplankton should be considered in the scope of the assessment.</li> <li>• We welcome the inclusion of the proposal to Deliver improvements that contribute to maintaining or enhancing the WFD status of the waterbodies within the scheme area through design and material use.</li> </ul> | <ul style="list-style-type: none"> <li>• Addressed, section 4.2 updated.</li> <li>• It is considered unlikely that the proposed works will affect water quality during the operation of the Scheme.</li> <li>• Comments noted.</li> </ul>                                                                                                                                                                                                                                                                                                                     |

| External Consultees | Date of Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action taken                                                                                              |
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| Cadw                | 2020                 | <p>Scheduled Monuments<br/>CD003 Cardigan Bridge<br/>CD123 Cardigan Castle<br/>CD141 Cardigan Town Walls</p> <p>Registered Parks and Gardens<br/>PGW (Dy) 72(CER) Cardigan Castle (grade II)</p> <p>Listed Buildings<br/>56 Listed buildings including Castle House (Grade 1)</p> <p>This consultation is in respect of an Environmental Constraints and Opportunities Record (ECOR) for the proposed Cardigan Tidal Flood Alleviation Scheme prepared by JBA Consulting.</p> <p>The ECOR has identified the above designated historic assets as being in close proximity to the proposed works but that in most cases there will not be a direct impact on them: However, the works outlined in the proposals for Wall Section C4 will have a direct impact on scheduled monument CD003 Cardigan Bridge and these works, including any ground and structural investigations carried out prior to the commencement of the proposed flood alleviation works, will require scheduled monument consent.</p> <p>The ECOR includes a section scoping the proposed environmental impact assessment for the scheme. The historic environment section of this work has identified that there is a potential for direct impacts on unknown archaeological works during the construction phase of the project. It has therefore proposed that an "Archaeological Clerk of Works (ACW)" will be present during the construction phase of the project. It is not clear what the term and role of the "ACW" consists of, but we assume that this will be an experienced qualified archaeologist undertaking a watching brief during the construction works: However, considerable costs and delays to the construction phase could be prevented or anticipated if an archaeologist was present during any ground investigation works (this should also include an archaeologist inspecting any core samples taken by boring) to identify archaeological features revealed during those works so that appropriate mitigation measures can be applied before the construction works commence.</p> | <p>Comments noted.<br/>Explanation of ACW provided in Table 4-1<br/>Environmental scoping assessment.</p> |



| External Consultees        | Date of Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Action taken                                                                                                                                    |
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|                            |                      | <p>The ECOR considers that there will be no operational impacts on the historic environment, but this is incorrect. The proposed works will increase the height of existing walls and structures alongside the river and in some case will add new structures. These new and raised structures may impede historic access to the river and will also be clearly visible in views from the designated historic assets, which in some cases such as the castle and the historic gardens add considerably to their significance. As such the proposed structures will alter the way that the designated historic assets are experienced, understood and appreciated. Any Environmental Impact Assessment that is produced will therefore need to consider the impact of the proposed development on the setting of the designated historic assets and should include an assessment carried out in accordance guidelines included in the Welsh Government document "The Setting of Historic Assets in Wales".</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                 |
| Dyfed Archaeological Trust | 2020                 | <p>Thank you for your email and documentation regarding the proposed scheme to reduce the risk of tidal flooding to the town and community of Cardigan.</p> <p>We were consulted on similar proposals five years ago, at which time we advised that an archaeological desk-based assessment (DBA) should be prepared in order to address potential impact, both visual and direct, of the scheme on the historic environment. This report was undertaken by DAT Archaeological Services (report no. 2015/08, March 2015), which concluded that further archaeological mitigation would be required, including possible pre-commencement works, structural recording and an archaeological watching brief during initial groundworks associated with construction.</p> <p>Your Constraints and Opportunities Record draft report (July 2020) states that An updated archaeology assessment will be completed for the new proposed scheme given the scheme is located within an archaeologically and historically significant area of Cardigan (table 4-2) We concur with this, to ensure that the assessment contains all up-to-date information on the historic environment and that any mitigation recommendations take the current construction and design proposals into account. As previously, this assessment should be carried out in accordance with the standard &amp; guidance published by the Chartered Institute for Archaeologists (CIfA) and we would expect to see, and recommend approval of, a specification for the work in advance.</p> <p>Other mitigation to protect the historic environment is suggested in the draft report (table 4-1). The requirement for a watching brief during construction work sounds reasonable, although we are uncertain of the term 'Archaeological Clerk of Works (ACW)', but it is possible/probable that other mitigation may be needed and we would prefer to await the findings of the updated DBA before making further recommendations.</p> | <p>Comments noted.Explanation of ACW provided in Table 4-1 Environmental scoping assessment. Comment regarding additional mitigation noted.</p> |

| External Consultees                                     | Date of Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action taken                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Wildlife Trust South and West Wales                     | 2020                 | Did not respond.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| RSPB                                                    | 2020                 | Did not respond.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Ceredigion County Council - Ecologist                   | 2020                 | <p>I have read the consultation documents.</p> <p>A minor question is why describe Cardigan as being 55km from Swansea? And is it really northeast?</p> <p>More importantly:</p> <ul style="list-style-type: none"> <li>I disagree with the scoping out of biodiversity and ecological effects of operation of the proposed scheme. If, as is proposed and should be considered, the scheme will improve footpath and perhaps cycle path access, will include public art and other such improvements, and therefore undoubtedly lighting, the potential disturbance impacts of the scheme during the operational phase on a minimum of otters and bats should be scoped in to the assessment.</li> <li>I am concerned that only one “do something” proposal has been considered. Even if any other defence option is highly impractical, these should at least be described briefly and the reasons for discounting them outlined.</li> </ul> <p>I advise that an EIA screening request is made to CCC Development Management Team.</p> <p>As the documents state, SSSI assent will be required</p> <p>Both the Planning Application proposal and the SSSI assent will require Habitats Regulations Assessment.</p> | <p>First comment addressed.</p> <p>Improvements to footpaths and cycles paths are potential enhancements as well as the installation of public art. No lighting is currently proposed as part of the Scheme therefore no operational impacts are considered likely.</p> <p>Small scale optioneering had taken place prior to ECOR commission and will be looked at during phase 2 Outline Business Case.</p> <p>Other comments raised noted.</p> |
| Ceredigion county Council - Safe and Active travel Team | 2020                 | <p>The attached Integrated Network Map for Cardigan highlights 2 routes:</p> <p>CER-INMCA-007 This is a proposed new Active Travel route to the west of the bridge, which would make an active travel connection between Cardigan and St Dogmael's.</p> <p>CER-INMCA-008 This is a proposed upgrade of an existing cycle and pedestrian path route known locally as the 'Cardi Bach Trail'. This is a tarmac surface path with fencing to the eastern side of the bridge on the bank of the river, which connects with Cilgerran Wildlife Centre and also with the settlement of Cilgerran. As Gwyn has stated it also forms part of NCN Route 82.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>Addressed - references to Ceredigion County Council Active Travel Map, Integrated Network Map and Rights of Way Improvement Plan have been added in Table 4-2</p> <p>Scope of future work and will be considered further at the detailed design stage.</p>                                                                                                                                                                                    |

| External Consultees                                     | Date of Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action taken                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|                                                         |                      | The Existing Route Maps and Integrated Network Maps for Cardigan can be viewed on our webpage: <a href="http://www.ceredigion.gov.uk/resident/travel-roads-parking/active-travel/">http://www.ceredigion.gov.uk/resident/travel-roads-parking/active-travel/</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Reference to Cardi Bach Trail has been included in the ECOP (Appendix A).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ceredigion County Council - Public Right of Way Officer | 2020                 | <p>Many thanks for the email and including us in the consultation; I am responding on behalf of Ceredigion County Councils Public Rights of Way team.</p> <p>My comments and observations are centred on the population/health benefits &amp; air quality elements in particular. Whilst a number of rights of way are mentioned within the environmental baseline (table 2.1) there is no reference to the Rights of Way Improvement Plan nor the Integrated Network Map for Active Travel (that I can see); both of which would be of particular relevance given the opportunity to link Cardigan with St Dogmaels and the wide range of benefits that would bring. I understand that Sustrans Network Development Manager has previously contacted you in respects walking/cycling and active travel.</p> <p>In specific terms I make the following observations:</p> <ul style="list-style-type: none"> <li>Public Right of Way (PROW) 78/23; impact and opportunities, see the map beneath.</li> </ul> <p>Impact - Despite its current condition this PROW is still effectively a highway and afforded the same legal protection; whilst only part the route is included within the affected zones, there's a concern that the accumulative effect of the proposed works will negatively impact the PROW in its entirety, which leads to St Dogmaels in Pembrokeshire. For example, the map in Appendix A (Environmental Constraints and Opportunities Plan), identifies the area in which the PROW runs as a location to "increase intertidal habitat". This would at least suggest that the PROW could be further degraded as a result of the scheme and as such some form of mitigation may be required to protect (&amp; enhance) it?</p> <p>There also appears to be some work at frontage section C4 that may be of some concern as it's in close proximity to the PROW; it is assumed the PROW will remain unhindered save for flood events where the gates need to be closed?</p> <p>Opportunities - It would be worth noting that the condition of this particular PROW is not due to its lack of strategic importance; in fact it has huge potential from an active travel and recreational perspective; by providing a safe, traffic free link from Cardigan into the National Park. Its condition in the main remains due to the environmental</p> | <p>Addressed - references to Ceredigion County Council Active Travel Map, Integrated Network Map and Rights of Way Improvement Plan have been added in Table 4-2 Scope of future work and will be considered further at the detailed design stage. Yes - flood gates would only be closed during flood events. Comments on PROW condition noted. It is not envisaged that the proposal will affect any PROW within the area of the Scheme except perhaps during construction where temporary closures and/or diversions may be required. Claimed PROW mentioned within Table 2-1 Environmental baseline.</p> |

| External Consultees             | Date of Consultation | Comment(s) Received                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action taken                                                                                                                                                                                                    |
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|                                 |                      | <p>constraints on the undertaking of works in this particular area (SAC). Previous discussions (of which there have been many) have stalled following NRW feedback, who are understandably concerned about the presence of otters and other qualifying features; discussions have gone as far as the instruction of external consultants to undertake feasibility studies (instructed by Pembs CC/NP and more recently by CCC). Part of this PROW lies in Pembrokeshire and as such they would be important stakeholders in the process; I have forwarded the information onto Pembrokeshire County Council and National Parks Access teams who are of the same mind in terms of impact and opportunities.</p> <ul style="list-style-type: none"> <li>• Claimed Public Right of Way (PROW) 78/63M</li> </ul> <p>This is a short length of path that's being "claimed" by the Town Council under the Wildlife and Countryside Act 1981; whilst it doesn't look like it affects your proposals it's worth noting its "potential" existence – as surveying authority for the definitive map we will need to investigate this claim in due course and decide on its public status.</p>                 |                                                                                                                                                                                                                 |
| Sustrans                        | 2020                 | <p>Thanks for getting in contact with Sustrans.</p> <p>Having review the documents with regards to this scheme I am disappointed that active travel has not been considered. The proposals directly affect National Cycle Route 82 and as part of the works this route should be upgrade to the standards set out in the Active Travel Act design Guidance.</p> <p>There is also no consideration or mention of Ceredigion Integrated Network Map and how this development is going to effect the councils active travel plans in the future. (<a href="https://www.ceredigion.gov.uk/media/3762/4-cardigan-at-all-routes.pdf">https://www.ceredigion.gov.uk/media/3762/4-cardigan-at-all-routes.pdf</a>);</p> <p>The report also needs to clearly set out how they have considered enhancing walking and cycling into the scheme. This would be in line with NRW a remit to increase public access: <a href="https://naturalresources.wales/days-out/recreation-and-access-policy-advice-and-guidance/recreation-and-access-enabling-plan/?lang=en">https://naturalresources.wales/days-out/recreation-and-access-policy-advice-and-guidance/recreation-and-access-enabling-plan/?lang=en</a></p> | Addressed - references to Ceredigion County Council Active Travel Map and Integrated Network Map have been added in Table 4-2 Scope of future work and will be considered further at the detailed design stage. |
| Ceredigion Public Service Board | 2020                 | Did not respond.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                                                                                                                                             |
| Cardigan and District Ramblers  | 2020                 | Did not respond.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                                                                                                                                             |

## Appendix C – Consultation on Short List Options

| Consultee                                                                              | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Action taken                                                                                                                                             |
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| NRW INTERNAL CONSULTATION                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                          |
| Steve Meaden<br>- Health Policy Team                                                   | 09/11/22             | Requested the 3 options (including cross-section, materials palette, methodology overview, pros and cons table and aspects of the internal stakeholder presentation) is shared via external and public consultation to understand the potential health impacts. This is to specifically target members who interact with the environment such as local businesses (owners, employees), castle, Active Cardigan Bay, Scouts Hall/Boat House; Wales Coastal Path; National Cycle Route and the Town more generally.<br><br>Consideration to be given to the placemaking charter principles. | Completed during public consultation in 2022.                                                                                                            |
| Rowland Sharp (& others from Marine Team)<br>- Marine Area Advice and Management Team. | 09/11/22             | Flagged the Scheme is partially located within the Afon Teifi SAC and Afon Teifi SSSI and as a result will require a Habitats Regulation Assessment and potentially a SSSI Assent.                                                                                                                                                                                                                                                                                                                                                                                                        | Preliminary HRA undertaken.                                                                                                                              |
|                                                                                        |                      | Flagged that direct impacts to Habitats of Principal Importance should be avoided and protected where possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Noted, to be assessed via an Ecological Impact Assessment.                                                                                               |
|                                                                                        |                      | Recommended that an Environmental Impact Assessment is conducted to assess the magnitude and significance of the potential impacts including direct and indirect impacts on designated sites.                                                                                                                                                                                                                                                                                                                                                                                             | Noted, refer to Section 4.2.                                                                                                                             |
|                                                                                        |                      | Advised a Water Framework Directive assessment is carried out to determine whether the proposed flood defence works meet the environmental objectives of the water body in which the scheme is located.                                                                                                                                                                                                                                                                                                                                                                                   | Noted, the initial stages of a WFD assessment have been completed, and further stages scoped in.                                                         |
|                                                                                        |                      | Flagged the intention in Option 1 and Option 2 to erect sheet pile flood defences 8m into the intertidal in front of the existing defences may require a change to the SMP2 policy which is currently Hold the Line, to Advance the Line. Option 1 and 2 will lead to substantial intertidal habitat loss (mudflats and saltmarsh) of up to 3200m <sup>2</sup> (8m x 400m) for Option 1 but less for Option 2.                                                                                                                                                                            | Confirmed that the Scheme remains within the hold the line policy. This is because there is no significant land reclamation required through the Scheme. |
|                                                                                        |                      | Flagged potential Environmental Impacts relating to Physical Processes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Noted, this has been and will be considered further as part of the geomorphology assessments.                                                            |

| Consultee     | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action taken                                                                                                                                                                                                      |
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|               |                      | Advised that a change to the alignment of the foreshore caused by the sheet pile wall and loss of intertidal habitat will potentially alter the hydrodynamics in the river and potentially increase flooding on the south bank of the river during high flood events.                                                                                                                                                                                                                                                                                            | Flood modelling is underway to confirm any detriment. Flood Consequences Assessment is required at detailed design stage.                                                                                         |
|               |                      | We advised that a baseline conceptual understanding of the estuary/river hydrodynamics (currents, waves and water levels) and morphodynamics (channel and foreshore profile, intertidal and subtidal sediment type, sediment transport) is established in order to accurately determine the potential impacts to the hydrodynamics and morphodynamics caused by the flood defence scheme. Investigation into the hydrological impacts on saltmarsh/intertidal mudflats/saline reedbed should be undertaken if works have the potential to impact these habitats. | Flood modelling is currently being undertaken. Flood Consequences Assessment is required at detailed design stage.<br><br>Geomorphology impacts have been reviewed and considered as part of the preliminary HRA. |
|               |                      | Raised potential for scour at base of seawall.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Noted                                                                                                                                                                                                             |
|               |                      | Raised potential for vehicle movement on foreshore and site access to disturb and permanently damage intertidal mud flats and saltmarsh.                                                                                                                                                                                                                                                                                                                                                                                                                         | The preliminary HRA considers vehicle movement on foreshore and access.                                                                                                                                           |
|               |                      | We advise that the ground investigations should reveal the type, size and quantity of seabed sediments to be excavated and the data used to inform the Suspended Sediment Concentration (SSC) Plumes plume assessment.                                                                                                                                                                                                                                                                                                                                           | Noted.                                                                                                                                                                                                            |
|               |                      | Advised investigations should be carried out to determine the potential for contaminants in the seabed sediments which could be released into the water column following augering and excavation works. The potential for the release of contaminants into the water course should be assessed as it could cause a deterioration in water quality status and impact on the aquaculture and habitats in the Afon Teifi SAC/SSSI and downstream or upstream of the site.                                                                                           | Contaminated land assessment scoped for next stage of assessment.                                                                                                                                                 |
|               |                      | Advised there may be a requirement for a Coastal squeeze assessment and/or a Policy change as the SMP policy is currently HTL for this unit and one of the proposals is to Advance the Line.                                                                                                                                                                                                                                                                                                                                                                     | Confirmed that the Scheme remains within the hold the line policy. This is because there is no significant land reclamation required through the Scheme.                                                          |
| Alex Scorey - | 09/11/22             | Previous comments made in September 2020 remain valid.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | The comment previously related to the requirement for HRA. A preliminary HRA has been undertaken.                                                                                                                 |

| Consultee                                     | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action taken                                                                                                                                                                 |
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|                                               |                      | Advised that the works timing restriction for fish in Section 5 needs to be reviewed. Whilst prohibiting work during this period may be appropriate for in the river, as the project is within the estuary, the relevant fish species will be moving through the estuary at different times of year.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | This comment related to the Preliminary Ecological Appraisal. The Preliminary Ecological Appraisal has been revised to take account of the estuarine location of the Scheme. |
|                                               |                      | Indicated likely estuarine migration periods for the relevant SAC feature species below:<br>Maitland (2003) (Ecology of the River Brook and Sea Lamprey - IN104 (naturalengland.org.uk)) identifies sea lamprey and river lamprey migration periods as: <ul style="list-style-type: none"> <li>• Sea lamprey adults upstream – April and May</li> <li>• Sea lamprey transformers downstream – July to September</li> <li>• River lamprey adults upstream – October to December</li> <li>• River lamprey juveniles downstream – July to September</li> </ul> There will be uncertainty within this for the River Teifi specifically as the evidence used in Maitland (2003) is from other rivers.<br>Upstream migration of Atlantic salmon adults through the Teifi Estuary will likely be between April and October, peaking June-October. Downstream migration of Atlantic salmon smolts through the Teifi Estuary will likely be between mid-March to mid-June, peaking in April and May. | Noted.                                                                                                                                                                       |
|                                               |                      | Mitigation for piling during these periods may be required if works cannot be timed to avoid them, depending on the piling methodology to be used and the location of the piles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Noted, mitigation is being developed through the preliminary HRA.                                                                                                            |
|                                               |                      | Noted interaction of the works with DCWW's Cardigan Lower Town Outfall construction and operation, on the north bank of the River Teifi to the south of the Strand, should be considered within the cumulative assessment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | The DCWW outfall has now been constructed so is considered as part of the baseline scenario.                                                                                 |
|                                               |                      | Advised a HRA is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Noted, a preliminary HRA has been undertaken.                                                                                                                                |
|                                               |                      | Advised that this considers the timing and duration of piling, as well as the size and installation method of the piles, and uses suitable sound source levels for the assessment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Noted.                                                                                                                                                                       |
|                                               |                      | Request to be consulted on the HRA when it is available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Noted.                                                                                                                                                                       |
|                                               |                      | Raised concerns regarding Option 1 due to impacts on SAC/SSSI and significant visual/landscape impact.<br>Option 2 includes a small loss of intertidal, but from a part of the foreshore supporting little if any saltmarsh habitat and part of which                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Noted, the options appraisal as summarised in in Section 3 took account of the environmental constraints.                                                                    |
| John Turner<br>(Senior Officer)<br>Ceredigion | 09/11/22             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                              |



| Consultee        | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action taken                                                    |
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| Environment Team |                      | has already been impacted by the recent DCWW new outfall construction. Option 3 involves no permanent loss of intertidal habitats, but the demolition of several waterfront buildings is likely to have significant impacts on the local community, and landscape impacts.                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                 |
|                  |                      | Advised artificial rockpools may not be suitable as the Teifi is a tidal river rather than marine and they would fill with salt and litter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Noted.                                                          |
|                  |                      | Advised habitat enhancements need to be considered in an intertidal context. If floating habitat rafts are to rise and fall with the tide, then they will not be subject to the tidal inundation required to support saltmarsh plants, and again will tend to collect debris and litter; sliding structures will also presumably create a maintenance requirement.<br>Suggests that a better option would be to consider intertidal habitat creation using sustainable materials of the type piloted by Salix - e.g. terracing using brushwood fascines to encourage the restoration of a saltmarsh fringe. Salt Marshes & Intertidal Rivers Archives - Salix (salixrw.com) | Noted.                                                          |
|                  |                      | Suggests interpretation boards should prioritise internationally recognised biodiversity of the river rather than historical information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Noted, further consultation will be undertaken on enhancements. |
|                  |                      | With respect to the piling options and in-river working, Jason Jones would be best placed to advise on the needs of migratory fish. Heidi may also have comments on the construction methodology. From a designated sites aspect, construction options that limit the damage to existing intertidal habitats as much as possible would be preferable.                                                                                                                                                                                                                                                                                                                       | Noted.                                                          |
|                  |                      | No additional comments on the other ecological survey recommendations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Noted.                                                          |
|                  |                      | Suggested the Wildlife Trust may have some proposals in the context of their Teifi Marshes reserve upstream for consideration in environmental enhancements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Noted.                                                          |
|                  |                      | Advised there may be potential to assist the Afon Teifi Fairways board who are very concerned about a recent build-up of stone debris in the centre of the Teifi river channel just downstream of Cardigan Town Bridge opposite Prince Charles Quay (i.e. the lower limit of the project stretch), which they believe may be partly the result of alterations to the bridge footings last time it was repaired. This shoal is causing a safety hazard to boat traffic and affecting                                                                                                                                                                                         | Noted.                                                          |

| Consultee                                                                                            | Date of consultation | Summary of Response                                                                                                                                                                                                                                              | Action taken                                                                                   |
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|                                                                                                      |                      | river flows but ATFL (who are responsible for maintaining the fairway) lack the resources to remove it.                                                                                                                                                          |                                                                                                |
| Heidi Markam<br>(Senior Officer)<br>Ceredigion Environment Team                                      | 09/11/22             | Requested further consultation when construction methodology is available.                                                                                                                                                                                       | Noted.                                                                                         |
|                                                                                                      |                      | Advised there is a significant difference between the mitigation measures that would be needed for in-river works to those on the banks of the river.                                                                                                            |                                                                                                |
|                                                                                                      |                      | The mitigation measures that will need to be in place will very much depend on the option that is chosen and the proposed construction methodology for that option.                                                                                              |                                                                                                |
| Rachel Jarvis<br>Senior Officer<br>- Water, Land, Biodiversity and Marine Regulatory Approaches Team | 09/11/22             | Further consultation requested.                                                                                                                                                                                                                                  | Noted.                                                                                         |
| Trevor West<br>(Senior Officer - NRW Ecosystems Planning & Partnerships)                             | 17/11/22             | Flagged Option 3 is the preferred option, given the minimised impact upon adjacent habitats.                                                                                                                                                                     | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |
| Mandy Richards<br>(Senior Engineer - NRW Assets Performance Team)                                    | 17/11/22             | Asset Performance are supportive on both Options 1 and 2 in line with influencing priority factors – construction cost, workable land agreements & negotiation with external stakeholders and all evidence based environmental assessment & mitigation measures. | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |
|                                                                                                      |                      | Advised the landward side of the defence should allow for a continuous 1.5m buffer zone for inspections & maintenance. Possible agreements or notice options here for future access, discussion & agreement with landowners at consultation stage encouraged.    | Noted, requirements have informed design development.                                          |
|                                                                                                      |                      | Previous landowner consultation proposed the glass panel options on Strand and at Teifi House which was welcomed.                                                                                                                                                | Noted, glass panels will be considered further during detailed design.                         |
|                                                                                                      |                      | The preference for a maximum of 2 Floodgate openings at both slipways on right bank, with a MOA required on closure                                                                                                                                              | Noted, requirements have informed design development.                                          |

| Consultee | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Action taken                                                                                                                                                                                                                                                                                                    |
|-----------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |                      | arrangements with the LA and limited access provisions for The Sea scouts and boating groups only. NRW maintainer of asset.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                 |
|           |                      | Reclaimed Land - Consideration should be given to future access to the foreshore area of reclaimed land in front of residential property and businesses adjacent to the Sea Scouts slipway.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | The preferred option will not result in reclaimed land in front of the residential property.                                                                                                                                                                                                                    |
|           |                      | Concerns raised regarding the privacy to existing property being compromised. Asset Performance have examples of this from other Capital schemes.<br><br>Asset Performance would like to avoid a similar situation at Cardigan, so agreement between the project team at an early stage would be beneficial.                                                                                                                                                                                                                                                                                                                                                                               | Noted, comments have informed design development. The option selected does not include for a public walkway along its length.                                                                                                                                                                                   |
|           |                      | Currently there is no walkway on the foreshore between the Bathroom Centre and Teifi House other than the slipways. A sensitive, low risk approach is needed here.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Noted, the design does not include for a walkway on the foreshore.                                                                                                                                                                                                                                              |
|           |                      | Regarding environmental enhancements and providing habitat opportunities, it is critical for future asset inspection and maintenance that options allow flood defence walls to be kept clear of vegetation and access is considered as priority.<br>Prefer option of 'floating beds' which will rise & fall with the tide and are fixable to the wall, and habitat shelves on some sections of the pile, in the lesser urbanised surroundings i.e. close to the bridge.<br>Growth of any shrubs and flora on or over the defence is not favourable.                                                                                                                                        | Environmental enhancements will be the subject of further consultation.                                                                                                                                                                                                                                         |
|           |                      | In favour of enhancements along The Strand to include Rekli or similar cladding effect, decorative glass panels, seating areas & information boards.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Noted.                                                                                                                                                                                                                                                                                                          |
|           |                      | Raised comments on the SMP2 Policy & Coastal Squeeze:<br>By definition, the SMP2 Policy Option 'Advance the Line' allows for the building of new defences on the seaward side of the original defences, where funding permits, involving a 'significant reclamation of land' in the process.<br>There are currently no defences on the foreshore at Cardigan, and there is an assumption that the defence line needs to be in keeping with existing quayside walls. As a direct percentage of the designation boundary, and the tidal flood outlines in present day and future SMP2 epochs, the defence line encroachment of Option 1 is a significant reclamation of land, arguably <10%. | Confirmed that the Scheme remains within the hold the line policy. This is because there is no significant land reclamation required through the Scheme.<br><br>Assessment of impacts to physical processes has been considered through geomorphology assessments, and will be considered further as necessary. |

| Consultee                                                                        | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action taken                                                                                                  |
|----------------------------------------------------------------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
|                                                                                  |                      | <p>The 2021 published paper by the Environment Agency, in partnership with NRW clearly outlines the case that under natural baseline (no defence) the habitat (mudflats, saltmarsh) may decrease over time with natural changes such as sea level rise. This guidance is being used to shape operational approaches to compensatory habitat provision and quantifying benefits for the FCERM investment programme. It is important to establish direct losses of habitat under the footprint of scheme.</p> <p>For a more accurate environmental assessment, NRW should consider commissioning an independent specialised coastal process consultant to quantify actual impacts to the foreshore from the scheme.</p>                  |                                                                                                               |
| Jason Jones<br>(Senior technical Fisheries Officer - NRW People and Places Team) | 17/11/22             | No concern raised by the encroachment of the wall into the Estuary from a freshwater fisheries perspective, as long as the migration route of the species present is not impacted or disturbed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Noted.                                                                                                        |
|                                                                                  |                      | <p>Raised piling activities have the potential to disturb or even kill fish and so the proposed construction methodology does cause some concern. In particular, concerns raised that piling activities, depending on the amount of noise and vibration created, may disturb migratory fish as they move through the estuary and so impact migration and spawning success. Migratory fish species of one species or life stage or another will be moving through the estuary through much of the year and it may be difficult to find construction timings that avoid all sensitive life stages of all species. Mitigation is likely to be required and this may involve working around tides to minimise the risk of disturbance.</p> | Noted, the preliminary HRA has assessed these impacts and an Ecological Impact Assessment will be undertaken. |
|                                                                                  |                      | <p>Re the PEA:</p> <p>a. Atlantic salmon appear to have been omitted from the Teifi SAC row of Table 3.1</p> <p>b. The PEA appears to understate the value of the fish populations of the Afon Teifi with no records being found. In addition to the information supplied by Paul Hyatt NRW have a great deal of survey information that illustrates that the catchment supports significant populations of migratory fish such as Atlantic salmon, brown/sea trout and eel. Clearly, these species must pass through the estuary to complete their lifecycle.</p>                                                                                                                                                                     | The PEA has been updated to account for these comments.                                                       |

| Consultee                                                                   | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action taken                                                                                   |
|-----------------------------------------------------------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|                                                                             |                      | <p>c. No requirement for additional fish surveys as long as the project team are happy to accept that the Teifi supports populations of Atlantic salmon, brown/sea trout, lamprey species and eels and that mitigation will be required to minimise impacts on these species.</p> <p>d. Flagged the in river working embargo of October 17th to May 15th (which is actually the embargo period for the Wye rather than the Teifi) is unlikely to be suitable at this location due to the different species and sensitive life stages present at various times of year.</p>                         |                                                                                                |
| Gari Jones,<br>Sustainable<br>Infrastructure<br>Engineer -<br>Ceredigion CC | 18/11/22             | Preference is Option 1 as this has the greatest potential to create new pedestrian provision along the Strand to connect with Gloster Row car park. This would be an enhancement to active travel provision and may also present an opportunity for the new flood defence wall to tie into the 'Castle' style stone wall on the boundary of the Old Hospital site and provide a more continuous flood defence feature.                                                                                                                                                                             | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |
|                                                                             |                      | Queried if design has considered the possibility of starting the defence wall slightly further to the east of this property and tying into the 'Old Hospital' site. Proposals currently show the defence wall starting to the east of Gloster Row car park, at the front of a property named 'Caerhuan'. Under Option 1 this could potentially create an improved active travel link between the current shared use path network at Pont y Cleifion roundabout and the Town Centre, through the Old Hospital site – subject to agreement with the new housing developer for the Old Hospital site. | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |
| Eifion Jones,<br>PROW Officer<br>- Ceredigion<br>CC                         | 18/11/22             | Advised any scheme should not impact the current public right of way on the southern bank without there being clear mitigation for how public passage will be retained. Whilst the route is currently largely impassable it is still a public right of way and afforded legal protection under the Highways Act; any scheme option should not lead to greater deterioration in its condition.                                                                                                                                                                                                      | Noted, this public right of way is identified in the baseline of the ECOR.                     |
| Alison Heal,<br>Senior<br>Ecologist -<br>Ceredigion CC                      | 18/11/22             | Raised concerns regarding the impact on the SAC. This flood scheme and the potential footpath scheme need to be considered together for eg impacts on otters, incursion into the river, lighting impacts on bat roosts in the castle and other nearby roosts and therefore the Pembrokeshire bat SACs.                                                                                                                                                                                                                                                                                             | Noted, a preliminary HRA has been undertaken to understand the impacts to the SAC.             |
|                                                                             |                      | Flagged Cardigan Fishermen are looking for funding for a feasibility study for improving the harbour in Cardigan. Queried if contact has been made Alison Kinsey of the Ceredigion FLAG group.                                                                                                                                                                                                                                                                                                                                                                                                     | Noted.                                                                                         |

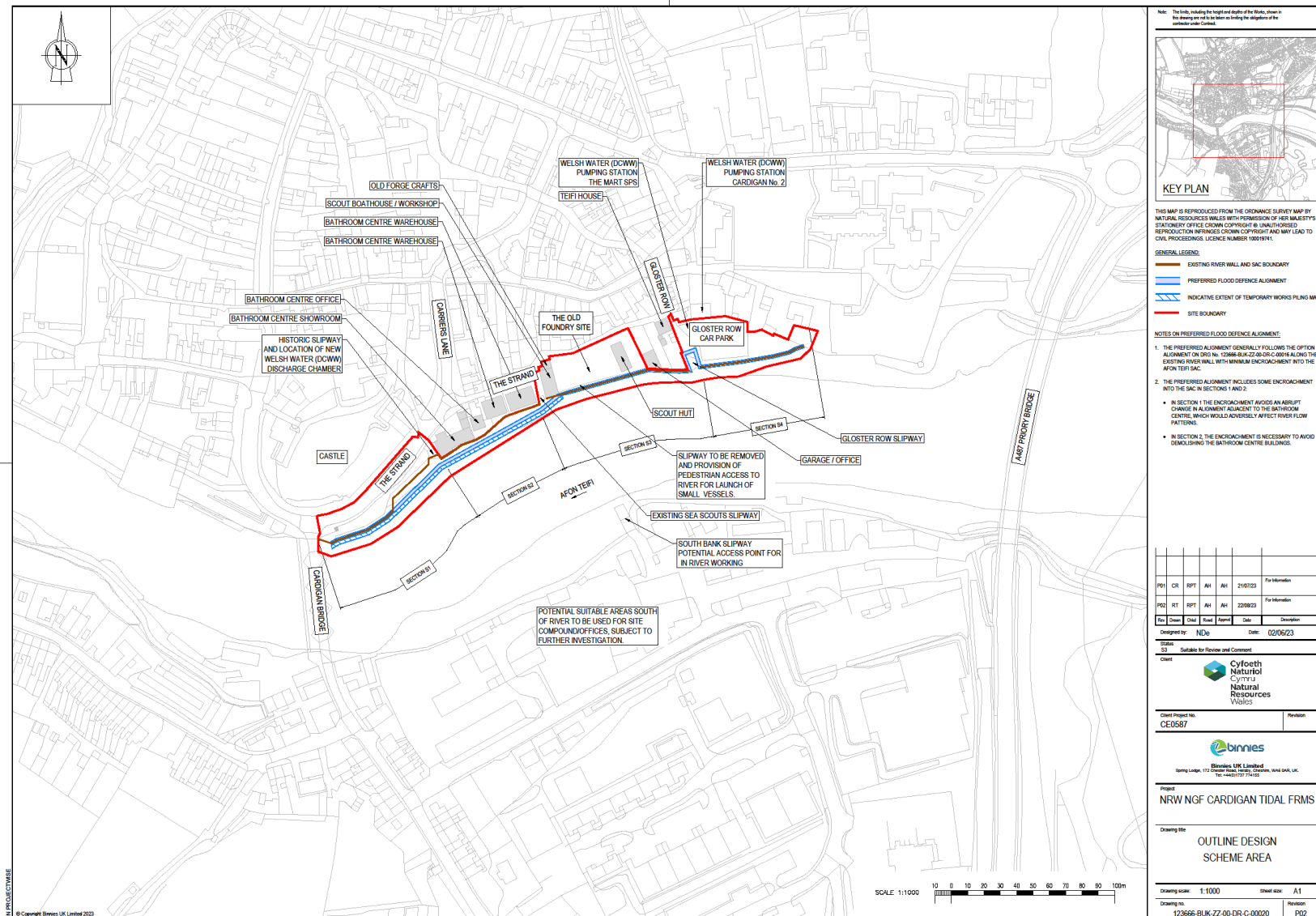
| Consultee | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Action taken                                                                                   |
|-----------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|           |                      | Request to include Jo Shaw in CCC meeting as she is CCC's Conservation Officer (buildings and town centres).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Noted.                                                                                         |
|           |                      | Option 1: Least preferred option of the three. The walkway would be popular. But the solid wall would reduce its popularity. And almost removes any aesthetic benefit of having a riverside walk. Queried if a raised walkway has been considered.<br>Flagged there is no or very little inclusion for this public access space to include trees, shrubs, greenness and possibly very little capacity. Queried if building out into the river further would increase the flood risk due to loss of river volume, and therefore require a higher wall than other schemes.                                                                                                                                                                                                                                                                                  | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |
|           |                      | Option 2: Has the obvious benefit of less incursion into the river. It should be possible to find a pedestrian route that is not immediately adjacent to the river by working with the business owners and landowners. The potential for some ecological mitigation and perhaps enhancement is greater than option 1 which meets the Environment (Wales) Act 2016 Section 6 duty on all public bodies including NRW.                                                                                                                                                                                                                                                                                                                                                                                                                                      | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |
|           |                      | Option 3: The best environmental option. Any difficulties with the business owners coming on board with this option should be considered less important than the relative environmental benefits of this option over the other two.<br><br>The fact that the road around the castle has already been built into the river is not a reason to build more infrastructure into the river. More the opposite.<br><br>Queried if there has been any feasibility study of increasing flood water capacity either downstream or upstream – creating wetlands, flood plain, salt marsh, temporary ponds.<br><br>Request to share the long list of enhancements.<br><br>Positive feedback on consideration of HRA impacts at early project stages. That really is good practice and will hopefully set a precedent for all future development schemes by everyone. | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |

| Consultee                           | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Action taken                                                                                                                                                                                  |
|-------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gwyn Smith - Sustrans               | 18/11/22             | <p>Queried if both walking and cycling could be incorporated and if the route could be extended though the old hospital site then it would link the existing route on the A478 as shown in red below. This would have a benefit to the network of routes in Cardigan. However, obtaining suitable access to the old hospital site would be a key requisite to making this happen.</p> <p>This additional route would require additional funding and may only be viable for Option 1.<br/>As Option 1 requires encroaching into more of the estuary it would have higher environmental impact and reduce the capacity (albeit by a small amount) of the river.</p> | Environmental enhancements including improvements to active travel routes are under consideration. The selected option does not include for the provision of a walkway along the river front. |
| Zoe Bevans-Rice - Dyfed Archaeology | 18/11/22             | Advised that a full desk-based assessment should be produced. This will ensure that the character, date, condition, value, etc. of the resource is fully understood and that in consequence suitable and reasonable mitigation, which will protect historic environment interests, may be considered.                                                                                                                                                                                                                                                                                                                                                             | Noted, an archaeological desk based assessment has been undertaken.                                                                                                                           |
| Cadw                                | 18/11/22             | Concern raised regarding the potential adverse impact on the historic setting. Advised the proposed walls should be clad in stone sympathetic to the designated historic assets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Noted, materials and finishings will be consulted on at detailed design.                                                                                                                      |
|                                     |                      | Concern the height of the walls will prevent views of the river from the riverside walk. Noted glass panels could be inserted in the wall to allow views of the river to be obtained however these panels will be incongruous features in the settings of the historic assets and may need considerable maintenance if the views are to remain visible due to the hostile conditions. Suggested that the height of the riverside walk should be raised to allow views over the wall rather than inserting glass panels into the wall.                                                                                                                             | Noted, the comments are being considered in design development.                                                                                                                               |
|                                     |                      | Raised there is therefore a considerable risk that option 1 will encounter significant archaeological features that will delay construction work and lead to increased financial costs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Noted.                                                                                                                                                                                        |
|                                     |                      | Concerns the benefits of the riverside walk will not outweigh the adverse impact on the settings of the designated historic assets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Noted.                                                                                                                                                                                        |



| Consultee | Date of consultation | Summary of Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Action taken                                                                                   |
|-----------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|           |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                |
|           |                      | The reduced area of the defences encroaching into the river, lessens their impact on the designated historic assets. Whilst this option removes the riverside walk it will still be possible to install boards providing historic interpretation material in suitable locations, which will compensate for the impact of the proposed works on the settings of the designated historic assets, especially the bridge. Option 2 will have a neutral impact on the settings of the designated historic assets. | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |
|           |                      | Option 3 will have least impact on the settings of the designated historic assets. With the visual impact being limited to the raised height of the walls. The possible removal of some of the modern building in the significant view from the castle to the original fording point of the river along with the provision of historic interpretation material in suitable locations gives this option a neutral or even a very slight beneficial impact on the settings of the designated historic assets.  | Noted, the stakeholder consultation informed the options appraisal as summarised in Section 3. |

## Appendix D – Location Plan



## Appendix E – Local Environmental Policies, Plans and Programmes

The following policies, plan and programmes set out key environmental aspirations and challenges applicable to the project and its study area. The policies plans and programmes comprise the:

- Mid-Wales Area Statement<sup>16</sup>
- Marine Area Statement<sup>17</sup>
- Ceredigion Local Development Plan 2007-2022<sup>18</sup>
- Ceredigion Well-Being Plan 2023-2028<sup>19</sup>
- Ceredigion Active Travel Network Map<sup>20</sup>
- A Strategy for Greening 6 Towns<sup>21</sup>
- Ceredigion Biodiversity Action Plan<sup>22</sup>
- Core Management Plan including Conservation Objectives for Afon Teifi/River Teifi SAC<sup>23</sup>
- Cardigan Bay Special Area of Conservation: Conservation Objectives<sup>24</sup>
- West Wales Marine Special Area of Conservation: Conservation Objectives and Advice on Operations<sup>25</sup>

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<sup>16</sup> Natural Resources Wales. Mid Wales Area Statement. <https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/area-statements/mid-wales-area-statement/> Accessed 20/06/2023

<sup>17</sup> Natural Resources Wales. Marine Area Statement. Available online at: <https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/area-statements/marine-area-statement/?lang=en> [Accessed 10/07/2023]

<sup>18</sup> Ceredigion County Council, 2013. Local Development Plan 2007 – 2022 (currently under review). <https://www.ceredigion.gov.uk/media/6223/ceredigion-local-development-plan-ldp-volume-1-strategy-and-policies-english.pdf> Accessed 24/05/2023.

<sup>19</sup> Ceredigion Well-Being Plan 2023-2028. Available online at: <http://www.ceredigion.gov.uk/your-council/partnerships/ceredigion-public-services-board/ceredigion-local-well-being-plan/> [Accessed 05/07/2023]

<sup>20</sup> Ceredigion Active Travel Network Map. Available online at: <https://www.ceredigion.gov.uk/resident/travel-roads-parking/active-travel/> [Accessed 05/07/2023]

<sup>21</sup> Ceredigion County Council. A Strategy for Greening 6 Towns. Available online at: <https://lucmaps.co.uk/CeredigionGBIDigitalReport/> [Accessed 05/07/2023]

<sup>22</sup> Ceredigion County Council. Biodiversity Action Plan. Available online at: <https://www.ceredigion.gov.uk/resident/coast-countryside/conservation-and-wildlife/ceredigion-biodiversity-action-plan> [Accessed 05/07/2023]

<sup>23</sup> Natural Resources Wales (September 2022) Core Management Plan Including Conservation Objectives for Afon Teifi/River Teifi SAC. <https://naturalresources.wales/media/682845/afon-teifi-river-teifi-management-plan.pdf> Accessed 20/06/2023

<sup>24</sup> Natural Resources Wales (March 2018) Cardigan Bay Special Area of Conservation. Available online at: [https://naturalresources.wales/media/688099/sac\\_uk0012712\\_enreg\\_37.pdf](https://naturalresources.wales/media/688099/sac_uk0012712_enreg_37.pdf) [Accessed 10/07/2023]

<sup>25</sup> Natural Resources Wales (March 2019) Harbour Porpoise Special Area of Conservation: West Wales Marine: Conservation Objectives and Advice on Operations. Available online at: <https://naturalresources.wales/media/691803/west-wales-marine-conservation-objectives-and-advice-on-operations.pdf> [Accessed 10/07/2023]

- Cardigan Town Council Biodiversity Action Report<sup>26</sup>
- Know Your River 2022: River Teifi Salmon and Sea Trout Catchment Summary<sup>27</sup>
- Salmon and Sea Trout Plan of Action 2020<sup>28</sup>
- Afon Teifi Restoration Project<sup>29</sup>
- Afonydd Cymru<sup>30</sup>
- 4Rivers4LIFE Project<sup>31</sup>
- Western Wales Flood Risk Management Plan<sup>32</sup>

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<sup>26</sup> Cardigan Town Council. Biodiversity Action Report. Available online at:

<http://www.ctaberteifi.co.uk/ UserFiles/Files/2023-Biodiversity%20Report.pdf> [Accessed 05/07/2023]

<sup>27</sup> Natural Resources Wales. Know Your River 2022: River Teifi Salmon and Sea Trout Catchment Summary

<sup>28</sup> Natural Resources Wales. Salmon and Sea Trout Plan of Action 2020. Available online at:

<https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/salmon-and-sea-trout-plan-of-action-2020/?lang=en> [Accessed 05/07/2023]

<sup>29</sup> West Wales River Trust. Afon Teifi Restoration Project. Available online at:

<https://westwalesrivertrust.org/river-teifi-restoration-project-prosiect-adfer-afon-teifi/> [Accessed 05/07/2023]

<sup>30</sup> Afonydd Cymru. Reconnecting the Salmon Rivers of Wales. Available online at:

<https://afonyddcymru.org/reconnecting-the-salmon-rivers-of-wales/> [Accessed 05/07/2023]

<sup>31</sup> Natural Resources Wales. 4 Rivers for Life Project. Available online at:

<https://naturalresources.wales/about-us/news-blog-and-statements/blog/4rivers-project-launch-blog/?lang=en> [Accessed 05/07/2023]

<sup>32</sup> Natural Resources Wales. Western Wales Flood Risk Management Plan. Available online at:

[https://cdn.cyfoethnaturiol.cymru/media/675146/final\\_frmf\\_-\\_western-wales\\_pk26b82.pdf?mode=pad&rnd=131466534560000000](https://cdn.cyfoethnaturiol.cymru/media/675146/final_frmf_-_western-wales_pk26b82.pdf?mode=pad&rnd=131466534560000000) [Accessed 05/07/2023]

## Appendix F – Cumulative Effect Planning Application Results

The initial search of other projects that could give rise to cumulative effects with the Scheme is set out in Table A1. The search for other developments was undertaken in accordance with the following criteria:

### For terrestrial projects:

- Projects meeting the definition of major development, as set out in the Town and Country Planning (Development Management Procedures) Order 2015 legislation have been compiled, where the definition comprises:
  - “major development” means development involving any one or more of the following
    - (a) the winning and working of minerals or the use of land for mineral-working deposits;
    - (b) waste development;
    - (c) the provision of dwellinghouses where—
      - (i) the number of dwellinghouses to be provided is 10 or more; or
      - (ii) the development is to be carried out on a site having an area of 0.5 hectares or more and it is not known whether the development falls within sub-paragraph (c)(i);
    - (d) the provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more; or
    - (e) development carried out on a site having an area of 1 hectare or more;

The area of search for terrestrial projects comprised:

- up to 2km from the site for projects that would be decided by the Local Planning Authority
- up to 30km from the site for projects that would be decided by Planning and Environment Decision Wales (e.g. major infrastructure projects)

### For marine projects:

- Projects within the Afon Teifi subject to a marine licence application.

The search for other projects has only considered those projects where applications have been validated/granted in the time period 1 May 2020 to the present, based on the assumption that applications validated prior to this date have already been built.

**Table F1 – Cumulative Projects**

| Consenting body              | LPA/ PEDW Ref. | Date validated | Site address                                                                   | Grid Ref X | Grid Ref Y | Distance from the site (m) | Direction from the site | Project Description                                                                                                                                                                                                               | Status                         | Anticipated construction timescales                                                                       | EIA Development                                                                                                                             |
|------------------------------|----------------|----------------|--------------------------------------------------------------------------------|------------|------------|----------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Ceredigion County Council    | A230028        | 19/01/2023     | Land at Bath House Road, Cardigan, SA43 1JY                                    | 217594     | 246480     | 545                        | NNW                     | Erection of 1 no. retail unit (Class A1) along with the creation of external display area, access and servicing arrangements, car parking, landscaping and associated works. Retail floorspace of 2359sq m (gross internal area). | Approved subject to conditions | Unknown                                                                                                   | Not EIA Development (although no Screening Opinion has been provided, no mention to EIA is made in the decision notice for the application) |
| Pembrokeshire County Council | 22/1051/PA     | 14/03/2023     | Land adjoining Green Meadow, Pilot Street, St Dogmaels, SA43 3EN               | 216305     | 246298     | 1488                       | WNW                     | Residential development with associated access, landscaping and ancillary works (15 no. residential dwellings)                                                                                                                    | Validated                      | Unknown                                                                                                   | Not EIA Development                                                                                                                         |
| Ceredigion County Council    | A210510        | 17/06/2021     | Cardigan And District Hospital Pont-y-cleifion, Cardigan, Ceredigion, SA43 1DP | 218133     | 246039     | 30                         | E                       | Proposed demolition of buildings and the construction of mixed-use development which includes office workspace, residential development and associated works (34 one bed apartments, 800 sq m office space)                       | Approved subject to conditions | The development is under construction (June 2023), understood to be programmed to complete by early 2024. | Not EIA development                                                                                                                         |
| Ceredigion County Council    | E0202          | N/A            | Pentood Industrial                                                             | 217972     | 245853     | 0                          | S                       | B1, B2 and B8 uses (note this is existing employment land)                                                                                                                                                                        | Local Plan Allocation          | Unknown                                                                                                   | Unknown                                                                                                                                     |



| Consenting body                 | LPA/<br>PEDW<br>Ref. | Date<br>validated | Site<br>address                                    | Grid<br>Ref X | Grid<br>Ref Y | Distan<br>ce<br>from<br>the site<br>(m) | Directi<br>on<br>from<br>the site | Project Description                                                                                                                                                                              | Status                   | Anticipated<br>constructio<br>n<br>timescales | EIA<br>Development |
|---------------------------------|----------------------|-------------------|----------------------------------------------------|---------------|---------------|-----------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------|--------------------|
|                                 |                      |                   | Estate<br>Cardigan                                 |               |               |                                         |                                   | however the<br>allocation indicates<br>that additional space<br>within the allocation<br>may be available for<br>development)                                                                    |                          |                                               |                    |
| Ceredigion<br>County<br>Council | H0203                | N/A               | Pentop<br>Fields                                   | 217816        | 245429        | 500                                     | S                                 | 19 residential units                                                                                                                                                                             | Local Plan<br>Allocation | Unknown                                       | Unknown            |
| Ceredigion<br>County<br>Council | H0204                | N/A               | Adj. to Roby<br>Villa, St<br>Dogmls                | 217502        | 245796        | 270                                     | W                                 | 16 residential units                                                                                                                                                                             | Local Plan<br>Allocation | Unknown                                       | Unknown            |
| Ceredigion<br>County<br>Council | M0201                | N/A               | Pwllhai,<br>Cardigan                               | 217869        | 246016        | 80                                      | N                                 | Employment (0.25ha<br>of B1),<br>Transport and Retail                                                                                                                                            | Local Plan<br>Allocation | Unknown                                       | Unknown            |
| Ceredigion<br>County<br>Council | E0201                | N/A               | Parc Teifi,<br>Cardigan                            | 218507        | 246160        | 470                                     | E                                 | B1, B2 and B8 uses<br>(note this is existing<br>employment land<br>however the<br>allocation indicates<br>that additional space<br>within the allocation<br>may be available for<br>development) | Local Plan<br>Allocation | Unknown                                       | Unknown            |
| Ceredigion<br>County<br>Council | H0201                | N/A               | Land at<br>Stepside<br>Farm,<br>Gwbert<br>Road (1) | 217749        | 246861        | 915                                     | N                                 | 78 residential units                                                                                                                                                                             | Local Plan<br>Allocation | Unknown                                       | Unknown            |
| Ceredigion<br>County<br>Council | H0202                | N/A               | Land at<br>Stepside<br>Farm,<br>Gwbert<br>Road (2) | 217692        | 247102        | 1015                                    | N                                 | 33 residential units                                                                                                                                                                             | Local Plan<br>Allocation | Unknown                                       | Unknown            |



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