



MARINE ENERGY WALES

MARINE ENERGY TEST AREA (META)

Environmental Impact Assessment

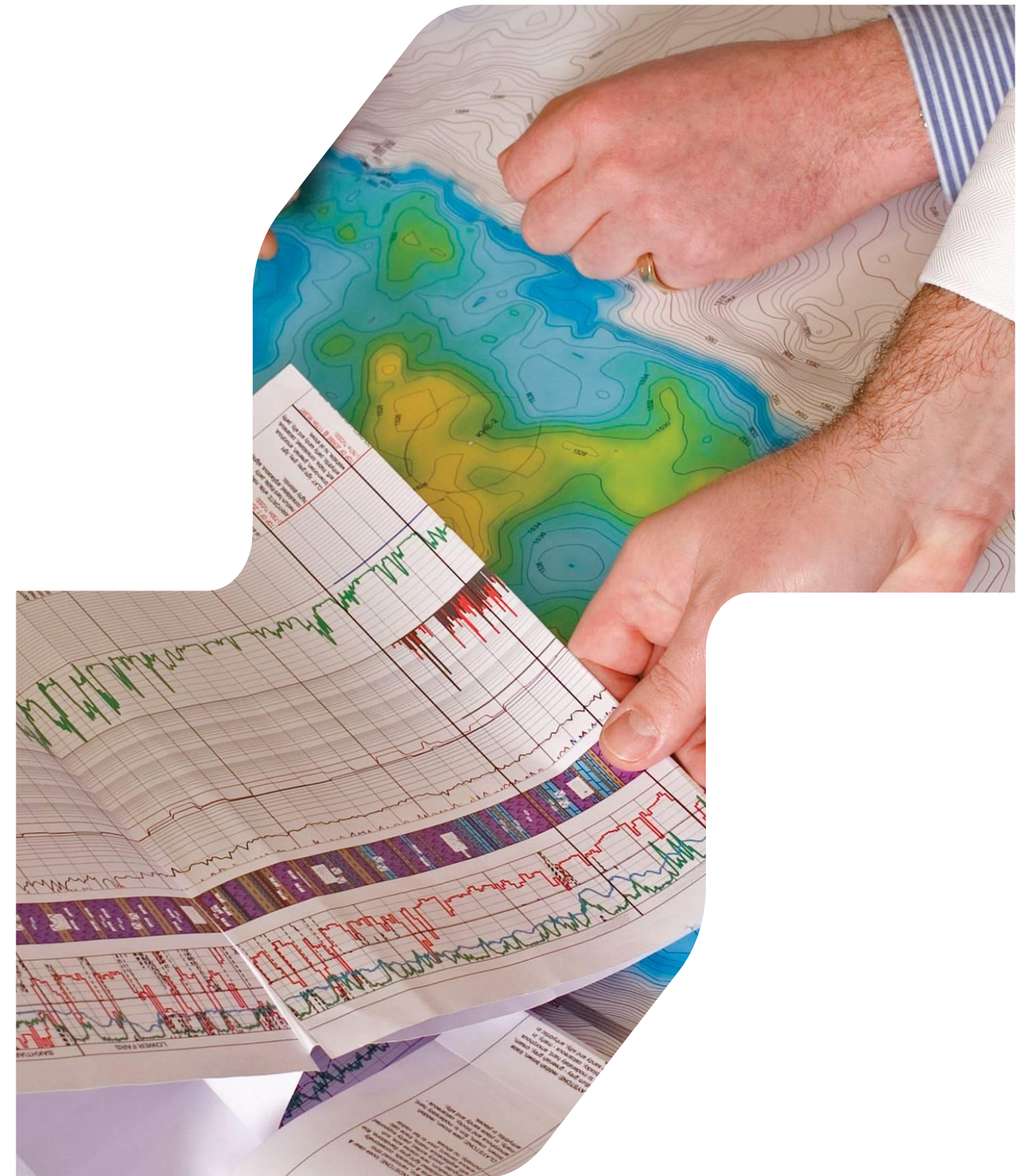
Chapter 3:

Need and Alternatives



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Glossary

| Term | Definition |
|-------------------------------|--|
| ABPmer | A marine consultancy. |
| Bombora Wave Power Europe Ltd | A wave energy converter developer intending to be the first customer to the META East Pickard Bay site (site 8). |
| CADW | Welsh government's historic environment service. |
| Carnegie Clean Energy | Wave, solar, battery and hybrid energy technology developer. |
| European Marine Energy Centre | Accredited wave and tidal stream testing facility in Orkney, with 13 grid-connected test berths and two non-grid connected scale test sites. |
| Marine Current Turbines | Tidal power device developer (SeaGen and Sea Flow turbines). |
| Marine Power Systems Ltd | Wave power technology development company (WaveSub wave energy converter). |
| MaRS | Marine Resource System. A GIS based system |
| Minesto | Slow tidal stream and ocean current technology developer |
| mWave | Bombora Wave Power Europe Ltd's wave energy generating device . |
| Natura 2000 | Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types. It stretches across all 28 EU countries, both on land and at sea. The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the Birds Directive and the Habitats Directive |
| Open Hydro | Tidal stream marine turbine technology developer. |
| SEACAMS | Partnership project between Bangor and Swansea Universities to assist in the development of opportunities in Low carbon, Energy and Environment in the convergence regions of Wales. |
| The Crown Estate | The Crown Estate is a collection of lands and holdings in the United Kingdom belonging to the British monarch as a corporation sole, making it the "Sovereign's public estate", which is neither government property nor part of the monarch's private estate. |
| The META project | Warrior Way (site 6), Dale Roads (site 7) and East Pickard Bay (site 8). |
| The Waterway | The Milford Haven Waterway. |
| Tidal Energy Ltd | Tidal turbine technology developer. |
| WaveHub | The Wave Hub is a wave power research project. The project is developed approximately 16 kilometres (km) off Hayle, on the north coast of Cornwall, United Kingdom. The hub was installed on the seabed in September 2010 and is a 'socket' sitting on the seabed for wave energy converters to be plugged into. |
| Wavepower | Wave energy technology developer. |
| Wave-tricity | Inventor, owner and developer of the Ocean Wave Rower. |

Acronyms

| Acronym | Description |
|---------|------------------------------------|
| AIS | Automatic Identification System |
| AONB | Area of Outstanding Natural Beauty |

| Acronym | Description |
|---------|--|
| CIA | Cumulative Impact Assessment |
| dWNMP | draft Welsh National Marine Plan |
| EMEC | European Marine Energy Centre |
| EIA | Environmental Impact Assessment |
| LDP | Local Development Plan |
| LNR | Local Nature Reserve |
| MCT | Marine Current Turbines |
| MEECE | Marine Energy Engineering Centre of Excellence |
| MEW | Marine Energy Wales |
| MHPA | Milford Haven Port Authority |
| MHWS | Mean High Water Springs |
| ML | Marine Licence |
| MLWS | Mean Low Water Spring |
| MPA | Marine Protected Area |
| MPS a | Marine Power Systems |
| MPS b | Marine Policy Statement |
| NDF | National Development Framework |
| NNR | National Nature Reserve |
| NPS | National Policy Statement |
| NRP | Natural Resources Policy |
| NRW | Natural Resources Wales |
| NSIP | Nationally Significant Infrastructure Project |
| PCC | Pembrokeshire County Council |
| PCF | Pembrokeshire Coastal Forum |
| PDE | Project Design Envelope |
| PDM | Pembroke Dock Marine |
| PDZ | Pembrokeshire Demonstration Zone |
| RIAA | Report to Inform Appropriate Assessment |
| RDP | Rural Development Plan |
| SAC | Special Area of Conservation |
| SMNR | Sustainable Management of Natural Resources |
| SPA | Special Protection Area |
| SSSI | Site of Special Scientific Interest |
| TEL | Tidal Energy Ltd |
| TRL | Technology Readiness Level |
| WBFGA | Well-being and Future Generations Act 2015 |



Units

| Unit | Description |
|-------|----------------|
| month | calendar month |
| mi | miles |
| km | kilometres |

3. NEED AND ALTERNATIVES

3.1 Introduction and purpose of this chapter

- 3.1.1.1 This chapter of the Environmental Statement provides a summary of the need for the project and the main alternatives considered by the Marine Energy Wales (MEW) on behalf of the Applicant during the Environmental Impact Assessment (EIA) process. It includes a summary of the reasons for the selection of the sites, together with a description of the alternative marine cable route options that have been considered.
- 3.1.1.2 The NRW Guidance notes: GN 003 – Marine Vertebrate conservation Legislation in Wales, GN006 – Marine Ecology datasets for marine developments and activities, GN13 – Scoping an Environmental Impact Assessment for Marine Developments, and GN 030 – Benthic Habitat Assessment guidance for marine developments, have been taken into consideration in the production of this Environmental Statement, and are referenced as appropriate in technical chapters.

3.2 Consultation

- 3.2.1.1 A summary of the key issues raised during consultation relevant to chapter 3: Need and Alternatives is outlined below in Table 3.1 together with how these issues have been considered in the production of this Environmental Statement chapter or how the Applicant has had regard to them.

Table 3.1: Summary of key consultation issues raised during consultation activities undertaken for the META project, relevant to chapter 3: Need and Alternatives

| Date | Consultee and type of response | Issue raised | Response to issue raised and/or where considered in this chapter |
|---------------|--------------------------------|--|--|
| 28 March 2019 | NRW/MMO – Scoping Opinion | 1.2. Section 1.1 refers to the pre-2017 amended Marine Works EIA regulations, such as referring to the development falling under schedule 2, 3a and 3c, rather than schedule A2 section 13 and 20. The EIA/Environmental Statement must refer to the relevant provisions in the current (2017) regulations. The scoping report quotes incorrect provisions of the Marine Works EIA regulations (MWR) in other sections too. This must be corrected in the Environmental Statement. | Chapter 1: Introduction outlines the relevant EIA Regulations followed. Appendix 3.1: Policy and Legislation to this chapter provides more detail on the relevant EIA Regulations. |
| 28 March 2019 | NRW/MMO – Scoping Opinion | 2.1. Section 2.2 – As set out in Schedule 3 paragraph 2 of the MWR, the ES must include a description of the reasonable alternatives (for example in terms of project design, technology, | This chapter (chapter 3: Need and Alternatives) provides a description of the alternatives considered in terms of project design, location, |

| Date | Consultee and type of response | Issue raised | Response to issue raised and/or where considered in this chapter |
|---------------|--------------------------------|---|--|
| | | location, size and scale) studied by the applicant, which are relevant to the proposed project, the regulated activity and their specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects. | size and scale along with the main reason(s) for selecting the proposed option. |
| 28 March 2019 | NRW/MMO – Scoping Opinion | 3.1. Section 3.2.1 - the policy considered in the EIA/ES must also include the Environment (Wales) Act 2016 and the requirements of this Act must be considered appropriately in the impact assessments. | Chapter 3: Need and Alternatives, section 3.3.1, paragraphs 3.3.1.10 and 3.3.1.11 consider the requirements of the Environment (Wales) Act 2016. |
| 28 March 2019 | NRW/MMO – Scoping Opinion | The scoping report recognises and highlights the developing Welsh National Marine Plan (WNMP) and marine planning framework as key policy context and correctly identifies that the plan is not yet adopted. Once the plan has been adopted we must make decisions in accordance with the marine plan, unless relevant considerations indicate otherwise. In preparation for the adoption of the plan, we recommend that any EIA undertaken reviews the contents of the draft WNMP, and the EIA/Environmental Statement considers how the project complies with the draft Policies, or the final policies once the plan is adopted. | Chapter 3: Need and Alternatives considers how the META project supports and complies with the dWNMP in section 3.3.1, paragraphs 3.3.1.5 to 3.3.1.7, and Table 3.3. |

3.3 Need for the development

3.3.1 National Policy context

- 3.3.1.1 The UK and Welsh Government has made clear the urgent need for new energy generating capacity in the Overarching National Policy Statement (NPS) for Energy (EN-1) and the UK Marine Policy Statement.

National Policy Statement for Energy (EN-1)

- 3.3.1.2 EN-1 (paragraph 3.3.10) states that ‘there is a need to diversify and decarbonise electricity generation’ and that ‘the Government is committed to increasing dramatically the amount of renewable generation capacity’. This is particularly relevant to the META project as this paragraph also states an expectation that this new capacity will move towards the generation of electricity from wave and tidal power.

UK Marine Policy Statement

- 3.3.1.3 The UK Marine Policy Statement (MPS) framework has been adopted by The Secretary of State, Scottish Ministers, Welsh Ministers and the Department of the Environment in Northern Ireland, which is a key step towards achieving the vision of a ‘clean, healthy, safe, productive and biologically diverse oceans and seas’; to ‘Enable the UK’s move towards a low-carbon economy, to mitigate the causes of climate change and ocean acidification’; and to ‘Promote sustainable economic development.’
- 3.3.1.4 The META project has been developed considering the UK Marine Policy Statement as per the following summary provided in Table 3.2 below:

Table 3.2: Consideration of the UK Marine Policy Statement in relation to the META project.

| UK Marine Policy Statement section and reference | Where addressed |
|--|--|
| Section 2.3.2 - The level of assessment undertaken for any project should be proportionate to the scale and impact of the project as well as the sensitivity of the environment concerned and in accordance with the Environmental Impact Assessment (EIA). | This document (Environmental Statement) presents an assessment of potential impacts proportionate to the scale of development proposed while taking into account that the META project lies within sites designated for environmental interests. The assessment is presented in technical chapters 5 – 16. |
| Section 2.3.2.2 An Appropriate Assessment in accordance with the Habitats Directive (Directive 92/43/EC) may also be required, in accordance with relevant national legislation and Government circulars or guidance. | A report to inform an Appropriate Assessment (RIAA) has been developed in accordance with this document and will be submitted alongside the Environmental Statement to inform consideration of the META project. |
| Section 2.3.2.2 Be conducted in a manner that meets requirements under UK and EU legislation and is consistent with our obligations under international law. | Reference to relevant legislation is provided in chapter 3 – Need and Alternatives, chapter 1: Introduction, and in each technical chapter (chapters 5 – 16) where relevant to specific receptor groups. |
| Section 2.3.2.2 Be conducted in a manner that takes account of other relevant projects, programmes, plans and national policies and guidance. | An assessment of potential cumulative impacts from the META project together with a consideration of other plans and projects is provided in each technical chapter (chapters 5-16). The projects that have been considered as part of the cumulative impact assessment (CIA) and the approach to these projects are presented in Chapter 4: Table 4.6 and chapter 4: Environmental Assessment Methodology (section 4.4.2), respectively. |
| Section 2.3.2.2 Be taken using a risk-based approach that allows for uncertainty, recognising the need to use sound science responsibly as set out in the high-level objectives. | The method to the risk-based approach adopted in this assessment is provided in each technical chapter (chapters 5-16). Each chapter sets out the scientific baseline used to inform the assessment and identifies data limitations where these exist. |
| Section 2.3.2.2 Be sensitive to any potential impacts on sites of particular significance including those: <ul style="list-style-type: none"> protected under environmental legislation or designated in relation to cultural heritage; and of particular social or economic significance. | A RIAA has been developed in accordance with this document and will be submitted alongside the Environmental Statement to inform consideration of the META project in relation to sites protected under environmental legislation. Environmentally designated sites are identified in each topic chapter where relevant and assessed within the RIAA. Potential impacts on cultural heritage designations are identified and assessed within chapter 13: Marine Archaeology. Socio-economic impacts are assessed in chapter 15: Socio-economic and Tourism |
| Section 2.3.2.2 Look to avoid and then mitigate negative impacts where possible at various stages of development, including appropriate conditions in line with legal obligations, in a manner that is proportionate to the potential impacts of the proposal under | Embedded mitigation is outlined in chapter 2: Project Description (section 2.8). Where there is a potential impact that requires additional mitigation measures to be implemented, proposed mitigation is provided in each technical chapter (chapters 5-16). |

| UK Marine Policy Statement section and reference | Where addressed |
|---|---|
| consideration. Where alternative site selection or design could mitigate negative effects whilst retaining benefits, this should be considered, where appropriate. | |
| Section 2.4.1 The marine plan authority will need to assess the impacts of their proposals for the marine plan area. These may be identified as anticipated benefits, including the contribution that the proposals would make to policy objectives, or anticipated adverse effects. These benefits and adverse effects may be economic, social and environmental in nature. | Impacts from the META project on marine environmental receptors are assessed in each technical chapter (chapters 5-16). |
| Section 2.4.3 The marine plan authority will need to consider the potential cumulative impact of activities and, using best available techniques. | An assessment of potential cumulative impacts from the META project together with a consideration of other plans and projects is provided in each technical chapter (chapters 5-16). The projects that have been considered as part of the cumulative impact assessment (CIA) and the approach to these projects are presented in Chapter 4: Table 4.6 and chapter 4: Environmental Assessment Methodology (section 4.4.2), respectively. |
| Section 2.6.1.1 A halting and, if possible, a reversal of biodiversity loss with species and habitats operating as a part of healthy, functioning ecosystems. | Impacts from the META project on marine ecology are assessed in chapter 7: Benthic Subtidal and Intertidal Ecology, chapter 8: Fish and Shellfish, chapter 9: Marine Mammals, Basking Shark and Otter, and chapter 10: Marine Ornithology. |
| Section 2.6.1.3 As a general principle, development should aim to avoid harm to marine ecology, biodiversity and geological conservation interests (including geological and morphological features), including through location, mitigation and consideration of reasonable alternatives. | Impacts from the META project on marine ecology are assessed in chapter 7: Benthic Subtidal and Intertidal Ecology, chapter 8: Fish and Shellfish, chapter 9: Marine Mammals, Basking Shark and Otter, and chapter 10: Marine Ornithology. Mitigation measures adopted as part of the project are discussed in chapter 4: Environmental Assessment Methodology (section 4.4.2) and alternatives are discussed in this chapter (chapter 3: Need and Alternatives). |
| Section 2.6.1.5 Marine plan authorities should apply precaution within an overall risk-based approach, in accordance with the sustainable development policies of the UK Administrations. The marine plan authority should ensure that appropriate weight is attached to designated sites; to protected species; habitats and other species of principal importance for the conservation of biodiversity; and to geological interests within the wider environment. | The method to the risk-based approach adopted in this assessment is provided in each technical chapter (chapters 5-16). Each chapter sets out the scientific baseline used to inform the assessment and identifies data limitations where these exist. |
| Section 2.6.1.6 The marine plan authority should ensure that development does not result in a significant adverse effect on the conservation of habitats or the populations of species of conservation concern and that wildlife species and habitats enjoying statutory protection are protected from the adverse effects of development in accordance with applicable legislation. | This document (Environmental Statement) presents an assessment of potential impacts proportionate to the scale of development proposed while taking into account that the META project lies within sites designated for environmental interests. The assessment is presented in each technical chapter (chapters 5 – 16). A RIAA has been developed in accordance with this document and will be submitted alongside the Environmental Statement to inform consideration of the META project. |
| Section 2.6.4.2 When developing Marine Plans, the marine plan authority should ensure it has regard to any relevant River Basin Management Plan (RBMP) or supplementary plan and the programme of measures devised for the river basin district which is summarised in each plan. | A Water Framework Directive (WFD) assessment has been undertaken for the META project and is presented as a supporting report to this application. |

| UK Marine Policy Statement section and reference | Where addressed |
|--|-----------------|
|--|-----------------|

| | |
|---|--|
| Section 2.6.4.3 The marine plan authority should satisfy itself where relevant that any development will not cause a deterioration in status of any water to which the WFD applies, subject to the provision of Article 4.7 of that Directive or prevent compliance with any WFD obligation and is consistent with the requirements of daughter directives of the WFD including those on priority substances and groundwater. Decision makers should also take into account impacts on the quality of designated bathing waters and shellfish waters from any proposed development. | A Water Framework Directive (WFD) assessment has been undertaken for the META project and is presented as a supporting report to this application. |
| Section 2.6.4.4 Marine plan authorities will also need to take into account, once developed, any relevant targets, indicators or measures aimed at achieving good environmental status under the Marine Strategy Framework Directive (MSFD). One element of good environmental status involves ensuring that concentrations and effects of contaminants are kept within acceptable limits, so as to ensure that there are no significant impacts on, or risks to, the wider marine environment. | Impacts from the proposals on marine ecology and biodiversity including effects from changes in marine water quality as a result of the proposals are assessed in chapter 5: Coastal Processes, chapter 7: Benthic Subtidal and Intertidal Ecology, chapter 8: Fish and Shellfish, chapter 9: Marine Mammals, Basking Shark and Otter, and chapter 10: Marine Ornithology. |

Draft Welsh National Marine Plan

- 3.3.1.5 Welsh Government have now completed reviewing responses to the consultation on the draft Welsh National Marine Plan (dWNMP) (Welsh Government, 2017) which ended 29 March 2018. The draft Welsh National Marine Plan introduces a framework to support sustainable decision-making for the marine environment and includes policies specific to the ports and renewables sectors. The relevant policies associated with the dWNMP have been considered in Table 3.3 below as appropriate, noting that this plan is still in draft. Relevant policies include the UK Marine Policy Statement, Natural Resources Policy and National Policy Statements.
- 3.3.1.6 The dWNMP represents the start of a planning process in order to shape Wales' seas to support economic, social and environmental objectives. The purpose of the plan is to *"guide the sustainable development of our marine area by setting out how proposals for use will be considered by decision makers"*.
- 3.3.1.7 The dWNMP sets out key objectives in achieving a sustainable marine economy, namely:
1. Contribute to a thriving Welsh economy by encouraging economically productive activities and profitable and sustainable businesses that create long-term employment at all skill levels;
 2. Maximise the opportunity to sustainably develop marine renewable energy resources, helping to achieve the UK's energy security and carbon reduction objectives, whilst fully considering other's interests and ecosystem resilience; and
 3. Provide space to support existing and future sustainable economic activity through managing multiple uses, encouraging the coexistence of compatible activities, the mitigation of conflicts between users and, where possible, by reducing the displacement of existing opportunities.

Table 3.3: Consideration of the draft Welsh National Marine Plan in relation to the META project.

| Draft Welsh National Marine Plan section and reference | Where addressed |
|---|--|
| Table 1 Point 9. Protect, conserve, restore and enhance marine biodiversity to halt and reverse its decline. | Mitigation measures adopted as part of the project are outlined in chapter 4: Environmental Assessment Methodology (section 4.4.2). Where there is a potential impact that requires additional mitigation measures to be implemented, proposed mitigation is provided in each technical chapter (chapters 5-16). |
| Table 2 Consider the relevant policy framework – this plan, the MPS b, relevant terrestrial planning plans, relevant National Policy Statements, neighbouring marine plans, Natural Resource Policy (NRP) and Sustainable Management of Natural Resources (SMNR) principles. | Reference to relevant legislation is provided in chapter 3: Needs and Alternatives, chapter 1: Introduction, and in each technical chapter (chapters 5-16) where relevant to specific receptor groups. |
| Table 2 Consider the relevant regulatory regime – marine licensing (NRW-MLT), Environmental Impact Assessment (EIA), terrestrial planning, mid-size terrestrial project National Development Framework (NDF) and NSIP (NPSs). | Regulatory regime associated with the META project is provided chapter 1: Introduction. |
| Table 2 Consider spatial opportunities and potential constraints – this plan's general policies, supporting and safeguarding sector policies and policy implementation guidance, marine planning portal (natural resources, sea users, current authorisations) and relevant sectoral planning. Other relevant considerations. | The plan has been considered through the sections of this document as per the references provided in this table. |
| Table 2 Where appropriate, engage with the relevant public authority, as well as adjacent public authorities, to discuss the scale and nature of the proposal and the proportional implementation of Welsh National Marine Plan policies – relevant public authorities and Welsh Government marine planning officials. | Consultation associated with the META project relating to the marine environment are outlined in each chapter (chapters 1-16). |
| Table 2 Assess existing evidence, identify key issues and further evidence needs, collect and apply evidence – marine planning portal (natural resources, sea users, current authorisations), other evidence sources, locational guidance where available. | The method to the risk-based approach adopted in this assessment is provided in each technical chapter (chapters 5-16). Each chapter sets out the scientific baseline used to inform the assessment and identifies data limitations where these exist. |
| Table 2 Consider relevant advice and guidance produced by public authorities and / or industry bodies. | Consultation associated with the META project relating to the marine environment are outlined in each chapter (chapters 1-16) |
| Table 2 Gather any outstanding evidence including, if necessary, desk or site study. | Each technical chapter (chapters 5-16) sets out the scientific baseline used to inform the assessment and identifies data limitations where these exist. |
| Policy 65 The level of detail required to demonstrate compliance should be proportionate to the project's scale, potential impacts and thus risk (in accordance with policy GEN_02 of this plan). | This document (Environmental Statement) presents an assessment of potential impacts proportionate to the scale of development proposed while taking into account that the META project lies within sites designated for environmental interests. The assessment is presented in each technical chapter (chapters 5 – 16). The level of detail provided has been written with the objective of ensuring |

| Draft Welsh National Marine Plan section and reference | Where addressed |
|---|--|
| | proportionality across the META project design, activities and environmental and social receptors that could be affected. |
| Policy 66 Similarly, the level of assessment and engagement undertaken for any project should be proportionate to the scale and impact of the project as well as the sensitivity of the environment concerned and undertaken in accordance with any relevant project assessment requirements. | This document (Environmental Statement) presents an assessment of potential impacts proportionate to the scale of development proposed while taking into account that the META project lies within sites designated for environmental interests. The assessment is presented in each technical chapter (chapters 5 – 16). |
| Table 3 ECON_02: Coexistence Proposals that consider opportunities for coexistence with other compatible sectors are encouraged in order to optimise the value and use of the marine area and marine natural resources | Third parties and other users that could be affected by the proposals have been considered as part of chapter 16: Other Users. |
| Table 3 SOC_03: Marine pollution incidents Proposals should minimise their risk of marine pollution incidents. | Mitigation to reduce the risk of marine pollution has been described in chapter 2: Project Design Envelope (section 2.8) and is set out in detail in a Marine Pollution Control Contingency Plan (MPCP) |
| Table 3 SOC_05: Historic assets Proposals should demonstrate how potential impacts on historic assets and their settings have been taken into consideration at an early stage and should, in order of preference: a) avoid adverse impacts on historic assets and their settings; and/or b) minimise impacts where they cannot be avoided; and/or c) mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be adequately addressed, proposals should present a clear and convincing justification for proceeding. Opportunities to enhance historic assets are encouraged. | Potential impacts on historic assets and their settings are identified and assessed within chapter 13: Marine Archaeology. |
| Table 3 SOC_06: Designated landscapes Proposals that demonstrate that they are compatible with the purposes and special qualities for which National Parks or Areas of Outstanding Natural Beauty have been designated are encouraged. | The Proposals demonstrate that they are compatible with the purposes and special qualities for which National Parks or Areas of Outstanding Natural Beauty have been designated is provided in chapter 14: Seascape and Landscape |
| Table 3 SOC_08: Resilience to coastal change and flooding Proposals should demonstrate how they are resilient to coastal change and flooding over their lifetime. | Chapter 4: Environmental Assessment Methodology (section 4.3.4) outlines the consideration of climate change resilience, including changes to future environmental conditions. |
| Table 3 SOC_11: Resilience to climate change Proposals should demonstrate that they have considered the impacts of climate change and have incorporated appropriate adaption measures, taking into account Climate Change Risk Assessments for Wales. | Chapter 4: Environmental Assessment Methodology (section 4.3.4) outlines the consideration of climate change resilience, including changes to future environmental conditions and effects of the project on climate. |
| Table 3 ENV_02: Marine Protected Areas Proposals should demonstrate how they: - avoid adverse impacts on individual Marine Protected Areas (MPAs) and the coherence of the network as a whole; - have regard to the measures to manage MPAs; and - avoid adverse impacts on non-marine designated sites. | A review of designated sites has been completed as part of each ecological technical chapter and is presented in each chapter (chapter 7: Benthic Subtidal and Intertidal Ecology, chapter 8: Fish and Shellfish, chapter 9: Marine Mammals, Basking Shark and Otter, and chapter 10: Marine Ornithology) and for Natura 2000 sites also in the RIAA (RPS, 2019a). |

| Draft Welsh National Marine Plan section and reference | Where addressed |
|---|---|
| Table 3 ENV_04: Marine litter Proposals should demonstrate that they: - avoid the deliberate introduction of litter into the marine plan area; and - minimise the risk of accidental release. | Chapter 2: Project Description outlines the approach to waste management. |
| Table 3 ENV_05: Underwater noise Proposals should demonstrate that they have considered man-made noise impacts on the marine environment and, in order of preference: a) avoid adverse impacts; and/or b) minimise impacts where they cannot be avoided; and/or c) mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be adequately addressed, proposals should present a clear and convincing justification for proceeding | Impacts from underwater noise emissions have been considered in chapter 6: Underwater Noise, and this assessment has been used to inform chapter 8: Fish and Shellfish and chapter 9: Marine Mammals, Basking Shark and Otter. |
| Table 3 ENV_06: Air and water quality Proposals should demonstrate that they have considered their potential air and water quality impacts and should, in order of preference: a) avoid adverse impacts; and/or b) minimise adverse impacts where they cannot be avoided; and/or c) mitigate adverse impacts where they cannot be minimised. If significant adverse impacts cannot be adequately addressed, proposals should present a clear and convincing justification for proceeding. | Air quality impacts have been assessed as part of chapter 16: Other Users, while impacts on water quality have been assessed in chapter 5: Coastal Processes and chapter 7: Benthic Intertidal and Subtidal Ecology. |
| Table 3 GOV_01: Cumulative effects Proposals should demonstrate that they have assessed potential cumulative effects and, in order of preference: a) avoid adverse effects; and/or b) minimise effects where they cannot be avoided; and/or c) mitigate effects where they cannot be minimised. If significant adverse effects cannot be adequately addressed, proposals should present a clear and convincing justification for proceeding. Proposals that contribute to positive cumulative effects are encouraged. | An assessment of potential cumulative impacts from the META project together with a consideration of other plans and projects is provided in each technical chapter (chapters 5-16). The projects that have been considered as part of the cumulative impact assessment (CIA) and the approach to these projects are presented in Chapter 4: Table 4.6 and chapter 4: Environmental Assessment Methodology (section 4.4.2), respectively. |
| Table 4 D_02: Dredging and disposal (safeguarding) Proposals potentially affecting areas where a consent or authorisation for: navigation dredging; or at-sea disposal of dredged material has been granted or formally applied for should not be authorised unless compatibility with the existing, authorised or proposed dredging or | Dredging activities take place in the Waterway associated with maintenance of the Port of Milford Haven shipping channels and berths. There are no dredging areas in the vicinity of the Warrior Way (site 6), Dale Roads (site 7) or East Pickard Bay (site 8) sites. There is one licenced open disposal site in the Waterway, Neyland, just to |

| Draft Welsh National Marine Plan section and reference | Where addressed |
|--|-----------------|
|--|-----------------|

| | |
|---|--|
| disposal activity can be satisfactorily demonstrated or there are exceptional circumstances. Compatibility should be achieved, in order of preference, through: a) avoiding adverse impacts on those activities; and/or b) minimising impacts where they cannot be avoided; and/or c) mitigating impacts where they cannot be minimised. | the west of the Cleddau Bridge and approximately 528 m from the Warrior Way (site 6) site. There are no other open disposal sites in the vicinity of the META project areas. |
|---|--|

3.3.1.8 It is noted that the Habitats Regulation Assessment (HRA) of the draft Wales National Marine Plan was unable to rule out no adverse effect on site integrity for a number of Natura sites. The report to inform Appropriate Assessment (RIAA) for the META project will take into account the findings of this HRA.

The Well-being of Future Generations (Wales) Act 2015

3.3.1.9 The Well-being and Future Generations (Wales) Act 2015 (WBFGA, 2015) places a duty on public bodies to place the principles of sustainability and sustainable development at the heart of its decision-making processes. The relevant objectives of the WBFGA 2015 include:

- **A Resilient Wales** - contributing to the protection and improvement of the environment, to improve the quality of life and protect local and global ecosystems;
- **A Healthier Wales** - Contribute to the protection and, where possible, the improvement of people's health and wellbeing as a core component of achieving the well-being goals and responding to climate change; and
- **A Globally Responsive Wales** - Support the need to tackle the causes of climate change by moving towards a low carbon economy.

The Environment (Wales) Act 2016

3.3.1.10 The Environment (Wales) Act 2016 puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. A key part of the Environment (Wales) Act 2016 focuses on climate change with the aim to reduce emissions by at least 80% by 2050 and sets a clear path for decarbonisation.

3.3.1.11 The Environment (Wales) Act 2016 is supported by the Natural Resources Policy (NRP) which focuses on the sustainable management of Wales' natural resources to maximise their contribution to achieving goals within the Well-being Future Generations Act. The NRP sets out three National Priorities including 'Increasing renewable energy and resource efficiency'.

¹ <http://www.marineenergywales.co.uk/marine-energy-in-wales/projects/pembroke-dock-marine/>

3.3.2 Local policy context

3.3.2.1 The Wales Spatial Plan identifies 'Pembrokeshire - The Haven', comprising the 'Haven Towns' of Haverfordwest (including Merlin's Bridge), Milford Haven, Neyland, Pembroke and Pembroke Dock, as a strategic hub that performs an important regional role and should be a focus for future investment.

3.3.2.2 The Pembrokeshire Local Development Plan (LDP), adopted February 2013, states that strategic priorities included in the Rural Development Plan (RDP) include energy (including renewables), and that the energy sector (renewable energy technology in particular) is important as a potential growth sector in the Waterway area. The adopted LDP underwent review in May 2017 to ensure that the LDP is up-to-date. The consultation of proposed Candidate Sites occurred between 17 December 2018 and 4 February 2019 and Pembrokeshire County Council (PCC) anticipates that a replacement LDP for Pembrokeshire will be adopted in 2021. The LDP Proposals Map identifies the Warrior Way META site (site 6) as outside of the settlement boundary of Pembroke Dock (Policy SP 13) and within a site protected by Designations (Policy GN.37) (Pembrokeshire Marine/ Sir Benfro Forol SAC). Specific policies relevant to the META project may be seen in Appendix 3.1: Policy and Legislation.

3.3.3 Strategic Pembroke Dock Marine project

3.3.3.1 Whilst there are a number of existing marine energy testing facilities within the UK, including those at European Marine Energy Centre (EMEC) and Wave Hub, many marine energy technology developers are still at the testing and demonstration phase (technology readiness level (TRL) 3-6). Therefore, a need for appropriately targeted, innovative, local facilities in Welsh waters has been identified.

3.3.3.2 MEW's proposed Marine Energy Testing Area (the META project) forms part of Pembroke Dock Marine (PDM)¹, a £76 million project to develop a world class centre for marine energy development, fabrication, testing and deployment, in Pembrokeshire. It is one of 11 projects included in the Swansea Bay City Deal signed in 2017.

3.3.3.3 The four pillars of the Pembrokeshire Dock Marine Project include:

- The META project (being developed by MEW);
- Marine Energy Engineering Centre of Excellence (MEECE) (an Offshore Renewable Energy Catapult project);
- Pembroke Port managed and operated by Milford Haven Port Authority (MHPA); and
- Pembrokeshire Demonstration Zone (PDZ) (being developed by WaveHub Ltd.).

3.3.3.4 The provision of testing sites at the META project, in relatively benign at-sea environments, will work towards de-risking technology and operations critical to the success of further larger scale or array

deployments, as well as improving understanding of potential environmental impacts of marine energy deployments.

3.3.4 Overall need

3.3.4.1 In determining a Marine Licence (ML) application, significant weight should be attached to considerations of the need for energy generating capacity in line with the policy context paragraphs above (3.3.1 - 3.3.3.4, and Table 3.2 and Table 3.3), and the potential of the META project to contribute to meeting that need.

3.4 Alternatives considered

3.4.1.1 The EIA Regulations require that an Environmental Statement should include:

'A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option(s), including a comparison of the environmental effects' (Schedule 3(2)).

3.4.1.2 The consideration of alternative sites has been carried out in accordance with Schedule 3 paragraph 2 of the Electricity Works (EIA (England and Wales) Regulations 2017, and Section 2 of Schedule 4 of the Town and Country Planning (EIA) (Wales) 2017, which requires the Applicant to provide an outline of the main alternatives studied, and an indication of the main reasons for the Applicant's choice.

3.4.1.3 Through the site selection process and consideration of alternative sites, the parameters of the META project have been considered and these have been aligned with the constraints of each of the META project sites.

3.4.1.4 This section therefore sets out the key reasons for the selection of the META project sites, taking into account environmental effects.

3.4.2 Site location

3.4.2.1 As described in chapter 1: Introduction, the META project forms part of the PDM project, a project devised to develop a world class centre for marine energy development, fabrication, testing and deployment in Pembrokeshire. The key aims of the META project include:

- To provide early stage device developers with a local, easy access facility for device testing, which will de-risk future deployments;

- To support marine energy device developers, supply chain companies, and universities, in developing new products and services, and to provide a showcase for the commercialisation of these products and services;
- To provide a focal point for marketing the marine energy cluster in Pembrokeshire, increasing the area's attractiveness as a base for device and project developers currently outside Wales;
- To support job retention and creation in Pembrokeshire in terms of supply chain clustering and diversification;
- To support Enterprise Zone initiatives; and
- To act as a link to the Wave and Tidal Demonstration Zones proposed in Welsh waters².

3.4.2.2 In order to comply with the aims of the over-arching PDM and the META project, site selection was limited to within Pembrokeshire waters, with a focus on an existing energy cluster that has grown around the Pembroke Dock area.

3.4.2.3 One of the key drivers of site selection was wave and tidal resource, requiring a suite of sites to be identified in both benign as well as higher-energy at-sea environments. In addition, sites were considered in relation to potential interface with shipping and navigation, other users and environmental designated sites and interests.

3.4.2.4 Selection of the suite of META sites has followed a rigorous site selection process that has incorporated resource assessment, a desktop review of available data, constraints analysis, and developer and stakeholder discussions. Site selection has been iterative, and has followed a staged, chronological assessment.

3.4.2.5 The site selection assessment undertaken by MEW is summarised below in section 3.4.3 *et seq.*

3.4.3 Testing requirements assessment

3.4.3.1 Initial requirements of the META project sites were established through engagement with developers already local to the area (e.g. Tidal Energy Ltd (TEL)), developers expressing an interest in the area (e.g. Marine Power Systems (MPS) (a) and Wavetricity), and developers with potential test interests who were reviewing UK test centre opportunities and suitability (e.g. OpenHydro, Marine Current Turbines (MCT), Wavepower, Seabased Carnegie Clean Energy, and Minesto). For the most part these initial requirements focussed on depth and resource.

3.4.3.2 Indications from developers highlighted that a range of marine conditions should be represented in the resultant test areas, facilitating a stepping stone approach to test procedures and device effectiveness in increasingly realistic marine conditions. This was indicated as of benefit across a range of marine renewable device types from both the wave and tidal sectors, including testing components, small sub-

² In 2014 The Crown Estate announced that they had agreed seabed rights for six new wave and tidal current demonstration zones, which for the first time would enable locally-based organisations to manage and sub-let parts of the seabed to a range of wave and tidal stream developers. The aim of these is to accelerate technology

development and commercialisation. Of these 6 zones, 2 are in Wales – the West Anglesey Demonstration Zone managed by Morlais, and the Pembrokeshire Demonstration Zone managed by Wave Hub.

assemblies and scaled or full-scale devices. This created a requirement for a range of water depths and resource availability, whilst maintaining accessibility and recoverability.

3.4.3.3 This testing requirement assessment was followed by engagement with the MHPA to further refine the proposed META project sites (see paragraph 3.4.4.9). This engagement helped to eliminate a few identified sites and realign others.

3.4.4 Constraints assessment

3.4.4.1 Following the initial requirements assessment outlined in section 3.4.2 above, a three-step constraints assessment focusing on operational, physical and environmental constraints, was undertaken.

Operational constraints

3.4.4.2 The initial site selection was supported by MHPA and was made on the basis of areas that would not interfere with port activity. Following this, an assessment was made looking at the existing uses, selecting initial test site areas that avoided areas of the Waterway with existing high usage. Examination of these sources was supported by knowledge from local users of the estuary, the supply chain, and developers' individual in-house assessments of areas suitable for testing of their own devices.

Physical constraints

3.4.4.3 The physical constraints analysis looked at depth and resource in order to identify areas with potential capacity to accommodate test protocols detailed by prospective customers to the META project. Data sources examined are highlighted in Table 3.4 below. Examination of these sources was supported by knowledge from local users of the Waterway, the supply chain, and developers' individual in-house assessments of areas suitable for testing of their own devices.

Table 3.4: Data sources included in the constraints assessment.

| Data reviewed | Source |
|-----------------------|--|
| Bathymetry | Admiralty Chart data |
| Wave Resource | Renewable Energy Atlas (ABPMer, 2008) |
| Tidal Resource | MHPA Tidal Atlas Vols 1-4 data collected 1997-1999 |
| Shipping & Navigation | MHPA & Automatic Identification System (AIS) |
| Industrial activities | MHPA |

Environmental constraints

3.4.4.4 Whilst the Waterway is heavily industrialised, it is also heavily designated from an environmental point of view.

3.4.4.5 The environmental constraints that were assessed as part of the initial desktop review include:

- Environmental designations, such as Natura 2000 sites, National and Local Protected Areas, habitats, and species;
- Marine ecology factors, such as marine mammals, birds and benthos;
- Landscape and seascape constraints such as World Heritage sites, Coastal National Parks, and Coastal Areas of Outstanding Natural Beauty (AONB);
- Navigation constraints, such as the risk to existing marine traffic, including commercial shipping and recreational boating;
- Marine archaeological constraints, driven by the Protection of Wrecks Act 1973 and Protection of Military Remains Act 1986, which include wrecks and military remains; and
- Constraints of other users, covering those activities which require an area of seabed to be leased.

3.4.4.6 In carrying out the above constraints assessment the data sources which were examined are shown in Table 3.5.

Table 3.5: Data sources for the environmental constraints assessment.

| Environmental issue | Data type | Data source |
|----------------------|---|---|
| Other Seabed Users | • Seabed Leases | • The Crown Estate |
| Designated Sites | • Natura 2000 sites • Protected Areas – national and local including: – Site of Scientific Interest (SSSI) – Local Nature Reserve (LNR) – National Nature Reserve (NNR) | • Statutory Nature Conservation Bodies • NRW data distribution enquiry supported by following references: – http://ec.europa.eu/environment/nature/natura2000/index_en.htm – http://jncc.defra.gov.uk/page-1377 – http://jncc.defra.gov.uk/default.aspx?page=2132 |
| Landscape / Seascape | • Heritage Coasts • World Heritage Sites • AONB • National Park | • NRW Data Distribution Enquiry |
| Fisheries | • Fisheries Catch Data • Fishing vessel activity | • MHPA |
| Archaeology | • Scheduled Ancient Monuments • Listed Buildings • Protected Wrecks | • CADW |
| Navigation | • Traffic Separation Schemes | • MHPA |

3.4.4.7 This operational, physical and environmental constraints analysis resulted in a suite of potential test sites (see section 3.4.4.9 below). Other sites within the Waterway were considered, however due to technical and consenting factors, these could not be progressed further.

3.4.4.8 The initial desktop assessment was followed by engagement with a key stakeholder in the Waterway; the MHPA. Given that the MHPA controls the majority of activities in the Waterway, it was deemed necessary that the most prominent constraint posed by health and safety issues due to existing active port activities, was addressed early in the site selection process. This engagement eliminated a few areas and realigned others. Those sites which were eliminated during this engagement are greyed out in the list below; whereas those that were deemed to warrant further consideration are purple/bold (see section 3.4.4.9).

3.4.4.9 The main sites considered for the META project, including alternatives that were considered are:

- Pickling Pond;
- **Quay 1;**
- **Quay 2 and 3;**
- **Ferryside;**
- **Carr Jetty;**
- **Hobbs Point;**
- **Warrior Way;**
- Cleddau Bridge;
- **Dale Roads;**
- Castles Bay;
- **East Pickard Bay;** and
- Marloes Sands.

3.4.4.10 The main reasons alternative sites were eliminated (greyed out above) were:

- Site outside jurisdiction of MHPA;
- Risk to other users;
- Risk to recreational areas;
- Requirement to schedule activities around other users; and
- Site challenging due to depth, ground conditions and presence of designated sites and associated notified interest features.

3.4.4.11 Once the sites had been refined through MHPA engagement, indicative site areas were illustrated in a preliminary site figure to facilitate further developer engagement for refinement of the sites' suitability to meet developers' needs (Figure 3.1). The indicative areas were also sent to The Crown Estate for comparison against their Marine Resource System (MaRS) to enable interrogation of their internal data regarding other users of the areas in question.

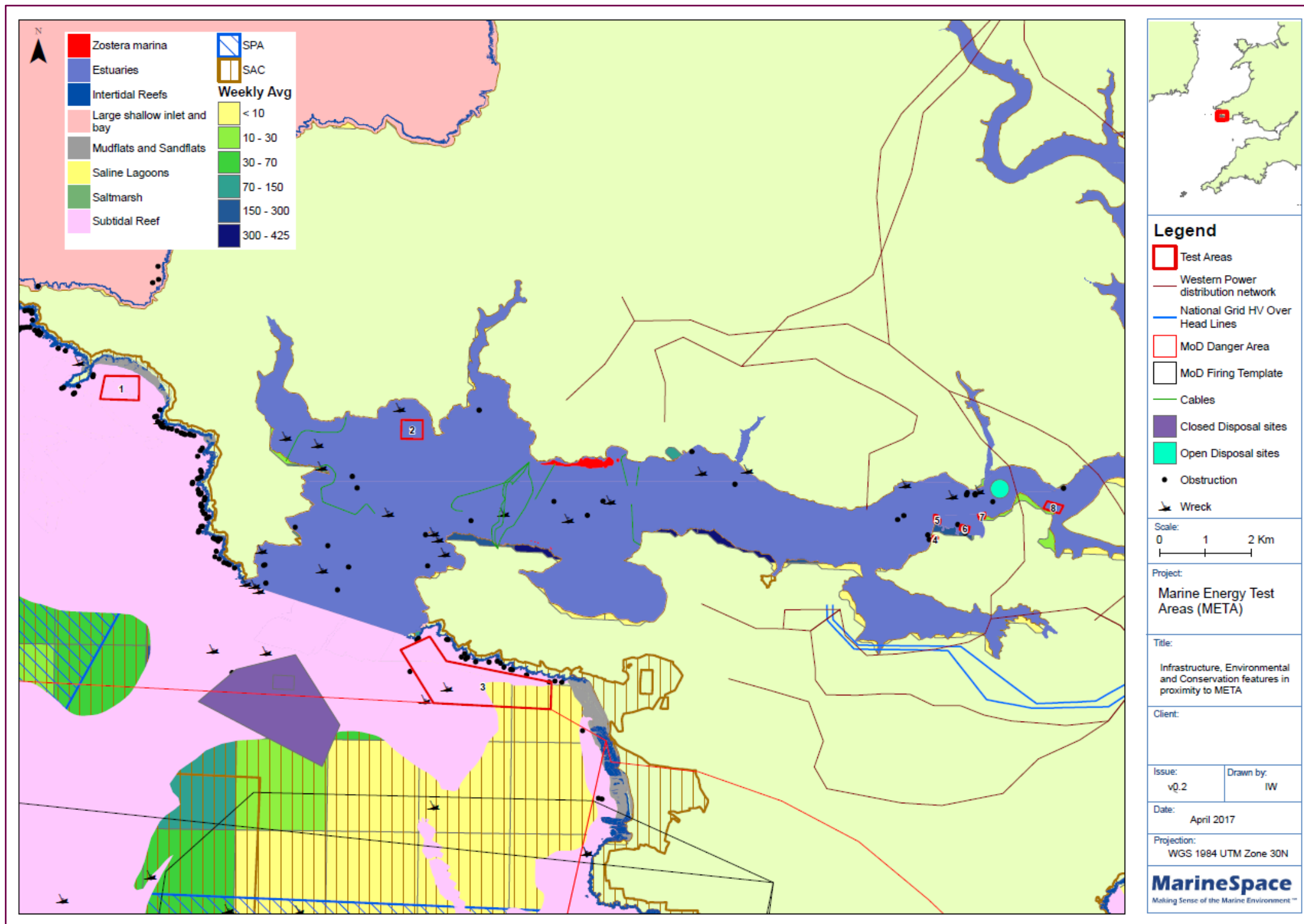


Figure 3.1: Preliminary test areas.

3.4.4.12 To interrogate the developer requirements further, a technology developers' questionnaire was authored in conjunction with SEACAMS and MEECE. Using MEW's extensive membership network and technology developer database, potential customers to, and parties interested in, META's development were issued with the technology developer questionnaire and an accompanying interactive map (Figure 3.1) showing the indicative areas with basic resource and depth information. This was intended to 'tease out' a more robust baseline of activities that META was likely to be used for, as well as defining the key infrastructure, equipment and consents that technology developers would require to support their testing parameters.

3.4.4.13 Further engagement with technology developers and key statutory stakeholders provided refinement of the testing activities to be supported at each proposed test area. The developer requirements were collated and cross-checked against the known characteristics of each proposed META site, and further verified through engagement with developers already active in the Waterway. Following completion of the process, eight sites were identified for progression as follows:

- Carr Jetty (site 1);
- Mainstay Quay (site 2);
- Ferryside (site 3);
- Quay 1 (site 4);
- Criterion Jetty (site 5);
- Warrior Way (site 6);
- Dale Roads (site 7); and
- East Pickard Bay (site 8).

3.4.4.14 Five of these identified test areas are considered to support activities that do not require EIA and are therefore being consented as a separate Band 2 ML application (see chapter 1: Introduction). The remaining three sites (for location map see Figure 1.1, chapter 1: Introduction) to be carried forward as the META project and are the subject of this Environmental Statement were identified as follows:

- Warrior Way (Site 6);
- Dale Roads (Site 7); and
- East Pickard Bay (Site 8).

3.4.4.15 In order to meet the objectives of the META project whilst considering the comments received from stakeholders, it was essential that the final META project sites met and aligned certain characteristics, which the above three sites did. The characteristics which the sites needed to meet were as follows:

- Meeting developers' technical requirements;
- Out-with areas of particular concern for environmental sensitivities - whilst it is recognised that the META sites lie within Natura 2000 sites, the sites chosen, and extents of sites are considered unlikely to result in a significant effect on qualifying interest features of the designated sites; and
- Out-with areas of significant concern for shipping and navigation.

3.4.4.16 Further refinement to Warrior Way (site 6) and East Pickard Bay (site 8) was undertaken following feedback from NRW-Advisory (15 February 2019). Changes were made to both sites to remove overlap with known areas of Annex 1 reef habitat.

3.4.5 Cable route selection

3.4.5.1 A marine cable corridor between the offshore testing area and Mean High Water Springs (MHWS) was initially included in the offshore consents (ML and S.36) for East Pickard Bay (site 8), as was onshore works above MHWS. This was to accommodate a temporary air and communications cable to shore that would be in situ for up to 18 months and would support the testing of a single marine energy device at East Pickard Bay (site 8) (mWave).

3.4.5.2 The cable route selection process considered both the route to shore and the location of temporary onshore infrastructure required by Bombora Wave Power Europe Ltd (Bombora) for testing of their mWave device at East Pickard Bay³. Factors taken into consideration for this process included:

- Risks to the cable;
- Risks to other users;
- Appropriate methods for cable burial;
- Designated sites;
- Distance from the offshore cable connection to shore;
- Ease of access to temporary Bombora onshore infrastructure; and
- Practicalities of constructing and installing the cable.

3.4.5.3 An indicative Cable Route Corridor Search Area was proposed, and four alternative options were identified (see Figure 3.2). The cable route and temporary control station options are no longer within the scope of this Environmental Statement and are therefore greyed out in Figure 3.2. These are provided as context and to illustrate the alternative options that have been considered.

³ A previous iteration of the META project intended to provide an EIA of associated onshore infrastructure at East Pickard Bay, included a 'temporary onshore control station'. As such, the cable route selection process was largely driven by selecting the most suitable location for this temporary onshore control station. The onshore infrastructure and likely onshore receptors will be assessed as part of a separate EIA.

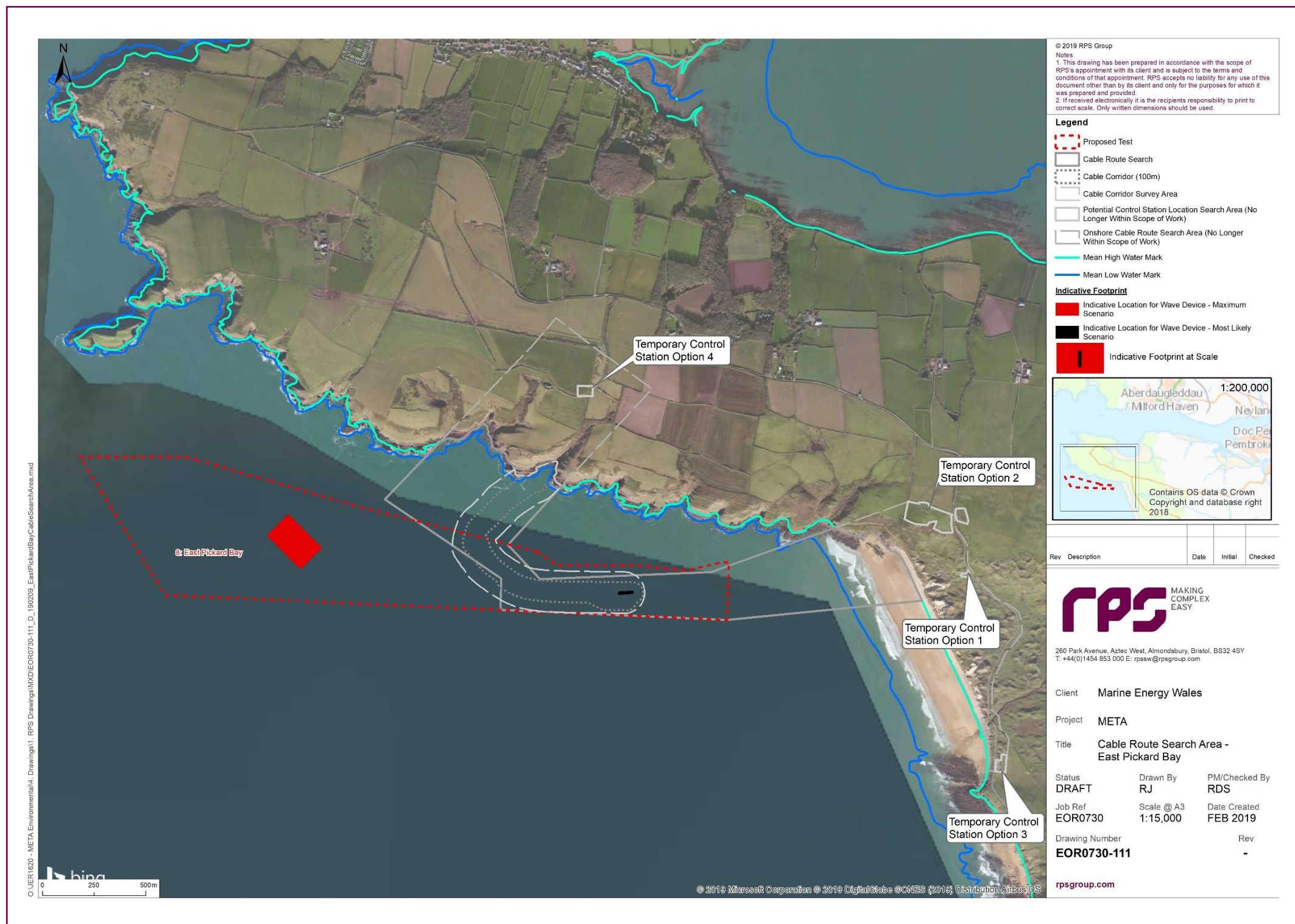


Figure 3.2: Proposed cable route corridor search area (up to MHWS) (cable route and temporary control station options are no longer with the scope of this Environmental Statement and are therefore greyed out).

3.4.5.4 Through developer and stakeholder engagement, cable route option 4 (making landfall to the north of East Pickard Bay (site 8) was identified as the most suitable (Figure 3.2).

3.4.5.5 The main reasons cable route options 1, 2, and 3 were not selected for implementation were:

- Potential impacts on the Castlemartin coast Special Protection Area (SPA);
- Potential impacts on the Castlemartin range SSSI;
- Potential impacts on the Pembrokeshire Marine Special Area of Conservation (SAC);
- Potential impacts on Limestone Coast of South West Wales SAC;
- Potential impacts on landscape and visual impact;
- Potential impacts on identified historic sites; and
- Engineering constraints regarding length of marine cable.

3.4.5.6 The main reasons cable route option 4 was originally selected were:

- Reduced potential for impact on environmentally designated sites;
- Reduced impact on visual receptors;
- Reduced impact on recreational receptors;
- Reduced potential for impact on historic sites; and
- Reduced marine cable length and associated engineering considerations.

3.4.5.7 Following advice from NRW-PS, the cable route and onshore works are no longer within the scope of the META project assessment and Marine Licence Application. A separate assessment and set of licence applications will be submitted to support the testing of the Bombora mWave device by Bombora. This will include the deployment of the mWave device, the marine and onshore communications cable, and the temporary onshore control station at East Pickard Bay (site 8). The details above have been provided to illustrate the alternative options that have been considered as part of the META project a required under Schedule 3 paragraph 2 of the Electricity Works (EIA (England and Wales) Regulations 2017, and Section 2 of Schedule 5 of the Town and Country Planning (EIA) (Wales) 2017.

3.5 References

Cyngor Sir Penfro - Pembrokeshire County Council (2013). Local Development Plan: Planning Pembrokeshire's Future (up to 2021). Adopted 28 February 2013. Accessed <https://www.pembrokeshire.gov.uk/adopted-local-development-plan> 21st December 2018.

Llywodraeth Cymru Welsh Government (2008). The Wales Spatial Plan: People, Places, Futures (2008 update). Accessed: <https://gov.wales/docs/desh/publications/130701wales-spatial-plan-2008-update-en.pdf> 21 December 2018.

Llywodraeth Cymru Welsh Government (2017). The Natural Resources Policy (NRP) Accessed: <https://gov.wales/docs/desh/publications/170821-natural-resources-policy-en.PDF> 6 December 2018.

Overarching National Policy Statement for Energy (EN-1) (2011). Department of Energy and Climate Change. Presented to Parliament pursuant to Section 5(9) of the Planning Act 2008. July 2011. Accessed: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf 21 December 2018.

Parc Cenedlaethol Arfordir Penfro – Pembrokeshire Coast National Park (2010). Local Development Plan (Local Development Plan 1). Adopted Plan (end date 2021). Accessed: <https://www.pembrokeshirecoast.wales/files/files/dev%20plans/finalldp.pdf> 21 December 2018.

The Environment (Wales) Act (2016 SI No, anaw 3).

The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (2007 SI No. 1518).

The Marine Works (Environmental Impact Assessment) (Amendment) Regulations 2017 (2017 SI No. 588).

The Well-being and Future Generations (Wales) Act 2015 (2015 SI No. anaw 2).

UK Marine Policy Statement (2011). HM Government; Northern Ireland Executive; Scottish Government; Welsh Assembly Government. March 2011. Accessed: <https://www.gov.uk/government/publications/uk-marine-policy-statement> 21 December 2018.

Welsh Government (2018). draft Welsh National Marine Plan. WG25663. ISBN: 978-1-4734-5357-9.