



Environmental Statement Chapter 5. Planning and Policy Context

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5.0 Planning and Policy Context

5.1 Introduction

- 5.1.0.1 The purpose of this Chapter is to set out the relevant policy context for the Project. The Development Consent Order (DCO) sought for the Project will authorise its construction and operation as an offshore generating station having a rated capacity in excess of 100 MW. Since the Project will be consented under the Planning Act 2008, a specific procedure and set of policies govern the applications that relate to it.
- 5.1.0.2 The legal structure within which an application for development consent will be made is set down in the Planning Act 2008 (PA 2008). In particular, Section 104 of the PA 2008 applies to decisions of the relevant Secretary of State (being the Secretary of State for Energy and Climate Change in respect of the Project). Section 104(2)(a) requires that the Secretary of State must have regard to any relevant National Policy Statement (NPS) and Section 104(3) requires that an application for development consent be determined in accordance with such a statement.
- 5.1.0.3 Other consents, permission and licences relevant to the Project will need to be determined in accordance with their relevant policies. This Chapter sets out the policies that relate to the Project and, in terms of energy policies and targets, the contribution of the Project can make to meeting these policies and targets is identified. Judgement of the interaction between other relevant policies and the Project is included within the Planning Statement which has been submitted as part of the DCO application.

5.2 Energy policy and targets

- 5.2.0.1 This section highlights key energy policy documents and targets at the international and national (both the UK and Wales) level, focusing on energy targets that relate directly to the Project. Further description of the applicable planning and policy framework is provided in this Chapter. The Planning Statement, which will be submitted as part of the DCO application, details further how the Project fulfils relevant policies.

International

- 5.2.0.2 The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) (2013) states that *"It is extremely likely that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forcings together."* The greenhouse gas most commonly produced by anthropogenic activities is carbon dioxide. There is much evidence that these greenhouse gas emissions will continue to grow over the next few decades with fossil fuels remaining a dominant energy source.
- 5.2.0.3 The Kyoto Protocol is an international agreement, reached under the United Nations Framework Convention on Climate Change, which commits its signatories to binding targets to reduce greenhouse gas emissions. The Doha Amendment to the Protocol was adopted in 2012, furthering these commitments in the future.
- 5.2.0.4 Under the Renewable Energy Directive (2009/28/EC) (2009), EU members made a legally-binding commitment to collectively cut their carbon dioxide emissions by at least 20 per cent of 1990 levels; improve energy efficiency to achieve a 20 per cent reduction in

primary energy use compared to projected levels; and increase the proportion of EU energy consumption from renewable sources to 20 per cent, all by 2020.

- 5.2.0.5 In 2005, the EU emission trading scheme (EU-ETS) was introduced to assist in achieving reductions in greenhouse emissions. EU Member States were given annual (declining) CO₂ emission limits, and major corporations within each state must operate within allocated emissions allowances to avoid collectively exceeding this limit. Financial penalties are imposed where limits are exceeded.
- 5.2.0.6 European legislation includes the Large Combustion Plant Directive (LCPD) (2001/80/EC (now included within the Industrial Emissions Directive (2010/75/EU)), which is specifically targeted at reducing harmful emissions (in particular sulphur dioxide, nitrous oxides and dust) from large power stations. As part of this Directive, power stations must be upgraded to meet the required standards, or must limit their operation and eventually be closed by 2015.
- 5.2.0.7 In the UK, various electricity utilities have elected not to upgrade 13 of the current fleet of power stations as required under this legislation (presently generating a total of 13GW), with an anticipated consequent reduction in generating capacity, of some 15 per cent of UK energy. Addressing this shortfall is a major driver for UK energy policy.

National

- 5.2.0.8 The Climate Change Bill became law in the UK in 2008, introducing long-term, legally-binding targets for reducing greenhouse gas emissions. The Climate Change Act 2008 sets targets to reduce national emissions by at least 26 per cent by 2020, and at least 80 per cent by 2050 against the 1990 baseline. Under the Act, governments must set carbon budgets that cap the greenhouse emissions allowed in each five year period.
- 5.2.0.9 Under the 2009 EU Renewable Directive (2009/28/EC), the UK committed to producing 15 per cent of its electricity from renewable resources. The progress made, in terms of the UK's 15 per cent target of energy consumption from renewable sources by 2020, is 4.1 per cent of energy consumption in 2012, up from 3.8 per cent in 2011 (DECC, 2013).
- 5.2.0.10 To meet the future targets, the UK Government has been working to develop policies and strategies to support the growth of renewable energy.
- 5.2.0.11 As part of the UK Renewable Energy Strategy (2009), the Department of Energy and Climate Change (DECC) published the results of analysis and modelling to demonstrate how it might be possible to meet this target by 2020. The analysis indicated that delivering 15 per cent renewable energy by 2020 was feasible through domestic energy generation.
- 5.2.0.12 Further details of how the 15 per cent renewable energy target could be achieved are outlined in the UK Government's National Renewable Energy Action Plan (2010), which was required under Article 4 of the Renewable Energy Directive (2009). In relation to tidal energy generation the Action Plan identifies a provision of 0 gigawatt hours (GWh) by 2015, increasing to a contribution of 3,950 GWh (estimated) by 2020.
- 5.2.0.13 The UK Renewable Energy Roadmap (DECC) also defines how targets could be achieved by 2020. Wave and tidal stream energy have the potential to meet up to 20 per cent of the UK's current electricity demand, although this contribution does not include tidal

range. As such, tidal range generation is capable of contributing to the ability to meet or exceed these targets.

- 5.2.0.14 The UK Government believes that tidal power could play a significant role in the future generation of electricity for the UK. The UK Marine Policy Statement (March 2011) states: *“Studies by organisations such as the Sustainable Development Commission and Liverpool University and the Proudman Laboratory have suggested that tidal range schemes could provide up to 15% of the UK’s current electricity demand. Tidal range technology is relatively mature. La Rance barrage in Brittany has been operating since the 1960s, and new innovative technologies are being investigated which could have less environmental impact and still produce significant amounts of energy.”*
- 5.2.0.15 The main direction of UK policy on energy and climate change was set out in two White papers, published in 2007 and 2009. The 2007 White paper “Meeting the Energy Challenge: a White Paper on Energy” was published with the aim of defining a long-term strategic vision for energy policy. In the 2009 paper, UK Low Carbon Transition Plan, renewable energy is identified as a key part of the plan and the strategy recognises that accelerating the uptake of renewable energy will help in decarbonising energy production in the UK, while ensuring secure and safe energy supplies.
- 5.2.0.16 To assist with the development of the renewable sector, including tidal energy generating schemes, the UK government has implemented other key legislative processes.
- 5.2.0.17 A ‘Renewables Obligation’ (Renewables Obligation Order 2009) is in place under UK legislation, requiring all UK licensed electricity suppliers to source a proportion of the electricity they sell from renewable sources. It is set each year, increasing annually, and suppliers who fail to meet these targets will be forced to pay a ‘buy-out price’. The sums of the buy-out price are recycled to those suppliers who fulfil their obligations to further increase the incentive. The obligation is in place to help assist the UK in achieving its national and international renewable energy targets, and to help promote a secure, diverse, competitive, energy supply market.
- 5.2.0.18 The Energy Act received Royal Assent on 18 December 2013 and is expected to come fully into force in February 2014. The Act makes provision for reforming the electricity market to encourage low carbon electricity generation. In particular, the Act contains provisions from DECC for Electricity Market Reform (EMR). The EMR sets out the framework for Contracts for Difference to provide stable financial incentives to encourage investment in low carbon electricity generation. It is the intention of the current coalition government that Contracts for Difference will replace Renewable Obligations Certificates ahead of their eventual expiry in 2027.
- 5.2.0.19 This chapter sets out the relevant planning policy framework against which the Project will be considered. This includes the National Policy Statements (NPS) that are the primary documents used by the relevant Secretary of State in decision making.

Wales

- 5.2.0.20 The Welsh Government views climate change as one of the greatest challenges facing the world and believes that it is imperative to act urgently to reduce emissions. The Welsh Government Energy Wales: Route Map to a Clean, Low Carbon and More Competitive Energy Future for Wales (2005) identifies that Wales is seeking to achieve a

renewable electricity production target of 7TWh (7,000MWh) per annum by 2020. A further target figure of 22,500MW (22.5TW) of installed capacity of renewables by 2025 has also been set in the Welsh Government's Energy Policy Statement, Low Carbon Revolution (2010).

- 5.2.0.21 The Low Carbon Revolution details how Wales has the potential to produce twice the amount of electricity it currently uses from renewable sources by 2025, with 40 per cent coming from marine energy. To assist with this, the Marine Renewable Energy Strategic Framework (Welsh Government) identifies the exploitable resource by device type and mapping. Though non-barrage tidal range schemes are not specifically included, some of the general principles contained in this document are applicable to this type of technology.

5.3 Benefits of tidal power

- 5.3.0.1 As identified above, the UK and Wales are committed to increasing the proportion of energy generation from renewable sources. The aim of both the UK Government and Welsh Government is to reduce reliance upon fossil fuels and to secure energy from a mix of energy types.
- 5.3.0.2 Renewable energy sources are those which can be continuously replenished, such as sunlight, wind, waves and tides. Of these it is recognised that tidal sources offer a predictable and consistent source of renewable energy. The UK is currently seen as a world leader and focal point for developing wave and tidal technologies. Wales has significant wave and tidal energy potential and is considered to be exceptionally well placed to participate strongly in the creation of a new marine energy sector.
- 5.3.0.3 As stated in paragraph 5.2.0.13, wave and tidal energy has the potential to meet up to 20 per cent of the UK's current electricity demand. By 2020, up to 300 megawatts (MW) may be able to be deployed, and, with continued development of the sector, this could increase to as much as 27 gigawatts (GW) by 2050 (Renewable Energy Roadmap, Department of Energy and Climate Change, updated 2012). By developing this potential, it is estimated that around 61 [million]¹ metric tonnes of carbon dioxide (CO₂) will be saved by 2025 (valued at an estimated £1.1 billion to the UK economy)².
- 5.3.0.4 Tidal lagoon technology utilises tidal range (head) rather than tidal stream (currents) and is not considered within the equations given above. However, it could significantly extend these contributions to energy and reduction in carbon emissions. Generating electricity from tidal head using hydro turbines will assure energy is reliably produced for around 14 hours of the day, and provide periods of energy production that can be used as baseload electricity for the National Grid.
- 5.3.0.5 In terms of the amount of energy produced per number of generating units (e.g. wind or hydro turbine) within a project, and the amount of land or seabed used for such an operation, the Project uses a lower amount of land or seabed than that of the most comparable existing renewable energy technologies (offshore wind, onshore wind and solar PV as passive technologies). Table 5.1 below sets out the approximate number of

¹ It is assumed that the 61 metric tonnes quoted on the DECC website is a typing error

² UK Government website, <https://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies>, accessed 4 October 2013; "It is assumed that the DECC website intends to state 61 million metric tonnes, as at the current price of carbon 61 metric tonnes of carbon would be valued at £732.7

individual generating units and the amount of land these schemes would require to achieve 240MW generating capacity (equivalent to that generated by the Project).

Table 5.1 Comparison of generating units to land take for 240MW

Scheme	Number of generating units	Land take (km ²)
Swansea Bay Tidal Lagoon	13-16	11.5km ²
Offshore wind	80 ⁽³⁾	39.6 km ² ⁽⁴⁾
Onshore wind	120 ⁽⁵⁾	28km ² ⁽⁶⁾
Solar PV	1,021 ⁽⁷⁾	4.8km ² ⁽⁸⁾

5.3.0.6 As illustrated above, in terms of reaching the energy targets of the UK and Wales, generating power from tidal lagoons can contribute a significant amount of renewable energy with a much reduced land or seabed take compared to other renewable energy equivalents.

5.4 Contribution of the Project to energy policies and targets

5.4.0.1 As part of the Project's development, energy optimisation work has been undertaken. This work is designed to secure the optimum energy yield from the Project during operation. The optimised outputs of energy generation and carbon dioxide emission savings are presented below.

5.4.0.2 Accurate tidal data for Swansea Bay, obtained from the UK Hydrographic Office, has been used in energy output studies to assess the potential for energy extraction through the tidal lagoon. The results have been extremely encouraging and the predictable power output can be used directly by the National Grid as a baseload source of electricity capacity (meaning that the tidal power station does not require back-up, fossil-fuel-driven, load balancing elsewhere). The Project's energy generation is estimated at approximately 400,000MWh per year. As the average household use is 3300kWh per year (Ofgem typical domestic energy consumption figures 2011⁹) the Project should supply the equivalent of 121,200 homes.

5.4.0.3 The Project is expected to take approximately 3 years to build (up to the point of generating first power) (see Chapter 4 Project Description) and, with appropriate maintenance, to be operational for 120 years – far longer than most generating technologies. A carbon lifecycle balance for the Project has been undertaken for its construction and operational phases and this is presented in Appendix 5.1, Volume 3. The calculations within Appendix 5.1 illustrate that the Project will be carbon neutral in around 4 years. Thus the Project would make an important contribution towards national carbon emission reduction targets.

³ Based on industry average of 3MW installed capacity

⁴ Based on Gwynt y Mor Offshore windfarm

⁵ Based on industry average of 2MW installed capacity

⁶ Based on 539MW capacity of Whitelee wind farm which has a land take of 57km². Halving both figures gives an approximate value of 28km².

⁷ Based on 235 watts per unit industry average.

⁸ Based on 1MW per 5 acres industry average.

⁹ <https://www.ofgem.gov.uk/ofgem-publications/64026/domestic-energy-consump-fig-fs.pdf>

5.5 Decision-making – DCOs

5.5.1 Introduction

5.5.1.1 In deciding an application for development consent, section 104(2) of the PA 2008 requires that the Secretary of State must have regard to:

- i. any national policy statement which has effect in relation to proposed development (the relevant National Policy Statement);
- ii. any local impact report (prepared and submitted by the relevant local planning authority once the application is registered by the Planning Inspectorate);
- iii. any matters prescribed in relation to development of the description to which the application relates; and
- iv. any other matter which the Secretary of State thinks is both important and relevant to the decision.

5.5.1.2 Important and relevant matters in respect of determining the DCO application for the Project may include:

- I. the regulatory framework under which consent is sought;
- II. the National Policy Statements (NPSs) relevant to renewable energy;
- III. relevant national planning policy produced by the Welsh Government (WG); and
- IV. the Local Development Plans (LDPs) of City & County of Swansea and Neath Port Talbot County Borough Councils.
- V. other material considerations relevant to the determination of the application.

5.5.1.3 Section 104(3) further states that applications must be decided in accordance with any relevant NPS (i.e. there is a presumption in favour of development), except where:

- i. deciding the application in accordance with any relevant NPS would lead to the UK being in breach of any of its international obligations - such as under a European Directive;
- ii. deciding the application in accordance with any relevant NPS would lead to the Secretary of State being in breach of any duty imposed by or under any enactments;
- iii. deciding the application in accordance with any relevant NPS would be unlawful by virtue of any enactment; or
- iv. that the Secretary of State is satisfied that the adverse impact of the proposed development would outweigh its benefits.

5.5.1.4 The NPS relevant to the Project functions as the primary planning policy document for decision-making by the Secretary of State, and the application for the Project would have to demonstrate accordance with it or them for development consent to be granted. The NPSs relevant to current circumstances are the overarching National Policy Statement for Energy (EN-1) (2011), and National Policy Statement for Renewable Energy Infrastructure (EN-3) (2011). However, specific circumstances apply to the Project by virtue of it being a tidal energy project, which are discussed below.

5.5.1.5 Importantly, the provisions of section 104(4)(d) also allow other matters that the Secretary of State deems 'important' and 'relevant' to be considered as part of the

decision-making process. Existing policies produced and adopted under other legislation, such as the Town and Country Planning Act 1990 (TCPA 1990), may also be considered by the Secretary of State if they are 'important' and 'relevant'.

5.6 Decision-making – marine licences

5.6.0.1 The determination of applications for Marine Licences (MLs), required because the Project lies within Welsh waters, is governed by Section 69 of the Marine and Coastal Access Act 2009 (MCAA 2009). This specifies that the appropriate licensing authority – Natural Resources Wales (NRW) acting on behalf of the Welsh Government (WG) in this case – must have regard to:

- i. the need to protect the environment;
- ii. the need to protect human health;
- iii. the need to prevent interference with legitimate users of the sea; and
- iv. any other matters the authority considers relevant.

5.6.0.2 The Marine Licensing Team (of NRW) must also have regard to any representation which it receives from any person having an interest in the outcome of the application. For the Project, NRW must also have regard to the effects of its operation.

5.7 UK national guidance

5.7.1 National Policy Statement for Energy (EN-1, 2011)

5.7.1.1 The Government has designated several National Policy Statements (NPS) relevant to energy projects, of which the overarching NPS for energy is that designated as EN-1.

5.7.1.2 NPS EN-1 provides overarching, general policy to apply to all energy generating technologies classified as NSIPs under the PA 2008. Whilst the Infrastructure Planning Commission (IPC) is referenced in this document as the decision-maker, under the Localism Act 2011 this role is now taken by the Secretary of State for Energy and Climate Change, with the initial examination of applications being undertaken by the Planning Inspectorate. As such, references to the IPC in the NPS are now taken as references to the Secretary of State.

5.7.1.3 Part 2 of NPS EN-1 reflects the Government's commitment to meet the legally-binding target to cut greenhouse gas emissions by at least 80 per cent by 2050 compared to 1990 levels, and the Government's objectives (which are crucial to meeting the targets on carbon emission reductions) of energy security and affordability.

5.7.1.4 Part 3 of EN-1 sets out the need for new nationally significant energy infrastructure projects. It also states that the UK needs a mix of energy types in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. It goes on to state:

5.7.1.5 *"The [Secretary of State] should therefore assess all applications for development consent for the types of infrastructure covered by the energy NPSs on the basis that the Government has demonstrated that there is a need for those types of infrastructure and that [this need is urgent]." (paragraph 3.1.3).*

- 5.7.1.6 Furthermore, *“the [Secretary of State] should give substantial weight to the contribution which projects would make towards satisfying this need when considering applications for development consent under the Planning Act 2008.”* (para. 3.1.4).
- 5.7.1.7 Section 3.4 states that the UK has committed to sourcing 15 per cent of its total energy from renewable sources by 2020 and new projects need to continue to come forward urgently to ensure that this target is met.
- 5.7.1.8 Part 4 of EN-1 sets out the “Assessment Principles” to be applied by the decision-maker to NSIPs, including environmental impact, good design, grid connection, pollution control, safety and security. Paragraph 4.2 states that, given the level and urgency of need for energy infrastructure of the types covered by the energy NPS set out in Part 3 of EN-1, the [Secretary of State] should start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPS clearly indicate that consent should be refused.
- 5.7.1.9 In considering any proposed development, and in particular when weighing its adverse impact against its benefits, the Secretary of State should take into account (para. 4.1.3):
- i. its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and
 - ii. its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.
- 5.7.1.10 Other matters that the Secretary of State may consider both important and relevant to its decision-making may include Development Plan Documents or other documents in the Local Development Framework adopted by the local planning authority. In the event of a conflict between these or other documents and an NPS, the NPS prevails for the purpose of decision-making given the national significance of the infrastructure. The energy NPSs have also taken account of relevant Technical Advice Notes (TANs) in Wales where appropriate (para. 4.1.5).
- 5.7.1.11 Further relevant policy is provided in EN-1 in relation to:
- I. environmental statements;
 - II. habitats and species regulations assessment;
 - III. alternatives;
 - IV. criteria for “good design” for energy infrastructure; and
 - V. grid connection.
- 5.7.1.12 Part 5 of EN-1 sets out policy relating to the “Generic Impacts” typically associated with infrastructure development, all of which are potentially relevant to the Project:
- i. air quality and emissions;
 - ii. biodiversity and geological conservation;
 - iii. civil and military aviation and defence interests;
 - iv. coastal change;
 - v. dust, odour, artificial light, smoke, steam and insect infestation;

- vi. flood risk;
- vii. historic environment;
- viii. landscape and visual;
- ix. land use including open space, green infrastructure and Green Belt;
- x. noise and vibration;
- xi. socio-economic;
- xii. traffic and transport;
- xiii. waste management; and
- xiv. water quality and resources.

5.7.1.13 Finally, it should be noted that the NPS expressly acknowledges that proven technology exists for tidal range generation. However, it does not consider the generation of electricity from tidal range developments within its scope, as projects of this kind were still “some time from commencement” (para. 3.4.3) when the NPS was published in July 2011.

5.7.1.14 Paragraph 1.4.5 of the NPS states that energy sources other than wind, biomass or waste (i.e. including tidal range generation) are “not within the scope of this NPS”. However, TLSB considers that the NPS still applies insofar as it supports the “urgent” delivery of renewable energy projects, of which tidal range power is a particular type and one which is viewed as a “likely” source of electrical power. TLSB therefore believes that the need for additional generating capacity that is identified in EN-1 supports tidal range generation. TLSB accepts that the specific assessment criteria in EN-1 are not directly appropriate to the Project, as they relate to other generating technologies, but suggests the criteria can be used as a framework for assessment of the Project. Whether the Application for a DCO in respect of the Project is determined under s104 or s105 of the PA 2008, TLSB asserts that NPS EN-1, its policies, supporting evidence and assessment criteria will all be important and relevant matters.

5.7.2 Renewable energy infrastructure National Policy Statement (EN-3, 2011)

5.7.2.1 EN-3 contains policy specifically relating to renewable energy infrastructure and is designed to be read in conjunction with EN-1. Paragraph 2.1.2 re-iterates EN-1 in that decisions should be made on the basis that the need for infrastructure covered by this NPS has already been established.

5.7.2.2 Part 2 of EN-3 contains information on assessment requirements for renewable energy infrastructure and sections specific to particular renewable energy technologies. These sections cover biomass and waste combustion, and onshore and offshore wind energy only. There is no such specific guidance for tidal range (or any other marine energy) projects. As such, the NPS is again not specifically applicable to a tidal range generating station such as the Project.

5.7.2.3 At the time of publishing EN-3 (July 2011), offshore renewable energy generation over 100MW was considered “not at present technically viable” (para 1.8.2). The NPS stated that “tidal range schemes may be the subject of applications... within the near future”, and considers that when these types of renewable technologies will be economically and technically viable over 50MW, the Government will further consider either revisions to this NPS or separate NPSs to cover these technologies. Although these technologies are now economically and technically viable (as shown elsewhere in this document), the

Government has not yet indicated when it intends to address the situation on NPSs which are directly applicable to the Project.

- 5.7.2.4 Para 2.2.1 states: “Policy set out in existing planning guidance in England, and where a proposal is located in Wales in planning policy and advice issued by the [Welsh Government] relevant to renewables, will provide important information to applicants of nationally significant energy infrastructure projects (energy NSIPs). The [Secretary of State] should have regard to these policies and expect applicants to have taken them into account when working up their proposals. Applicants should explain in their applications how their proposals fit with the guidance and support its targets or, alternatively, why they depart from them. Whether an application conforms to the guidance or the targets will not, in itself, be a reason for approving or rejecting the application.”
- 5.7.2.5 The technology-specific sections of EN-3 set out “factors influencing site selection by applicants” which includes factors of relevance to the Project, and which have been considered and covered in this ES, including:
- i. Grid connection – applicants are expected to have assured themselves that a viable connection and spare grid capacity exists to export power produced, and are further expected to have considered the environmental impact of that connection. Offshore projects must work within the regulatory regime for offshore transmission networks established by Ofgem.
 - ii. Transport infrastructure – applicants are expected to have considered the impact of the proposals on existing transport infrastructure, during construction and operational phases, and to make use of multiple transport modes and rail or water transport where possible.
 - iii. The Crown Estate (TCE) – TCE owns virtually the entire seabed out to the 12nm territorial limit, including the rights to explore and utilise the natural resources of the UK Continental Shelf (excluding oil, gas and coal). Therefore it is necessary to obtain a licence from TCE prior to placing any offshore structures on, or passing cables over, the seabed and its foreshore. As well as owning the rights to explore and utilise waters up to 12nm, the Energy Act 2004 gives TCE rights to issue licences for development beyond the territorial limit and within the Renewable Energy Zone (REZ, identified in the Offshore Energy Strategic Environmental Assessment 2009). The Crown Estate Act 1961 states that, with regard to property and land, TCE must “maintain and enhance its value and the return obtained from it, but with due regard to the requirements of good management”¹⁰.
 - iv. Water depth and foundation conditions – water depth, bathymetry and geological conditions are all important considerations for the selection of offshore energy sites and will affect many aspects of a proposal. The onus is on the applicant to ensure that the foundation design is technically suitable for the seabed conditions and that the application caters for any uncertainty regarding the geological conditions. While the technical suitability of the foundation design is not in itself a matter for the decision-maker, it will need to be satisfied that the foundations will not have an unacceptable adverse effect on marine biodiversity, physical environment and marine heritage assets. The applicant should have provided the necessary details to allow the decision-maker to assess such impacts.

¹⁰ The Crown Estate Act 1961: Part (1) Continuance of Crown Estate Commissioners, and general provisions as to their constitution and functions, (3) (<http://www.legislation.gov.uk/ukpga/Eliz2/9-10/55/section/1>).

- v. Other offshore infrastructure – applicants are advised that there may be constraints imposed on the siting or design of proposals because of restrictions resulting from the presence of other offshore infrastructure or activities.
- vi. Offshore impacts are recommended for assessment in the development of offshore wind turbines including: biodiversity; fish; intertidal; marine mammals; birds; subtidal; commercial fisheries and fishing; historic environment; navigation and shipping; oil, gas and other offshore infrastructure activities; physical environment; and seascape and visual effects. TLSB assumes that the same will apply to tidal lagoon technology.

5.7.2.6 Paragraph 2.5.33 states that for renewable energy projects in sites with nationally recognised designations (Sites of Special Scientific Interest, National Nature Reserves, National Parks, the Broads, Areas of Outstanding Natural Beauty and Registered Parks and Gardens), consent should only be granted where it can be demonstrated that the objectives of designation of the area will not be compromised by the development, and any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by the environmental, social and economic benefits.

5.7.2.7 Paragraph 2.5.36 states that most renewable energy resources can only be developed where the resource exists and where economically feasible. Therefore, the Secretary of State should not use a sequential approach in the consideration of renewable energy projects (for example, by giving priority to the re-use of previously developed land for renewable technology developments).

5.7.2.8 TLSB consider that EN-3 paragraph 1.8.2 (quoted above) should be viewed as a positive indication of the potential for tidal range technology to make a significant and valued contribution to the generation of renewable technology. As such, EN-3 is an important and relevant matter in the determination of the Application and its assessment criteria can be used as a framework for assessment of the Project.

5.7.3 Department for Transport, National Policy Statement for Ports (2012)

5.7.3.1 This NPS provides the basis for decisions on proposals for new port development. It is a relevant consideration to the Project as the lagoon lies between the dredged channels of Swansea Docks and Neath Harbour. Furthermore, Port Talbot is also located close to the development within the wider Swansea Bay.

5.7.4 UK Renewable Energy Strategy (2009)

5.7.4.1 The UK Renewable Energy Strategy (RES) was published in July 2009 in conjunction with the UK Low Carbon Transition Plan (2009).

5.7.4.2 The RES significantly raises the target figure of electricity generated from renewable sources, requiring 15 per cent of all energy consumed in the UK to be from such sources by 2020. Notably, the RES makes it clear that this target includes fuel and heating, and therefore applies to all energy sources not just electricity. With regard to the challenge in providing fuel and heating from renewables by 2020, the proportion of electricity that will have to be generated by renewable energy to cover this ambition will need to be raised substantially (i.e. in excess of 30 per cent).

5.7.4.3 The RES expects onshore and offshore wind to provide around 64 per cent of all the electricity produced from renewable sources by 2020. The 'split' is to be around 29 per cent onshore and 35 per cent offshore. While this breakdown into technologies is

indicative, it is important to recognise that it has been produced with the same modelling as that used to produce the lead scenario in the RES. The RES also proposed significant changes to grid infrastructure, which is required to facilitate the export of onshore and offshore wind energy to the areas of greatest consumption.

- 5.7.4.4 Rather than looking towards the 2020 target as the next future target date, the RES incorporates the EU Directive (EU Renewable Energy Directive, 2009) that requires each Member country to submit details of its performance against the targets every two years, to ensure that trajectories are on course to meet the 2020 target.

5.7.5 UK Marine Policy Statement (2011)

- 5.7.5.1 The UK Marine Policy Statement (MPS) was published in March 2011. It is the framework for preparing Marine Plans and taking decisions affecting the marine environment, and aims to contribute to the achievement of sustainable development in the UK marine area.
- 5.7.5.2 The MPS seeks to fulfil the vision shared by the UK Administrations of having ‘clean, healthy, safe, productive and biologically diverse oceans and seas’. Accordingly, the MPS will facilitate and support the formulation of Marine Plans, ensuring that marine resources are used in a sustainable way and thereby:
- i. promote sustainable economic development;
 - ii. enable the UK’s move towards a low-carbon economy in order to mitigate the causes of climate change and ocean acidification and adapt to their effects;
 - iii. ensure a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and our heritage assets; and
 - iv. contribute to the societal benefits of the marine area, including the sustainable use of marine resources to address local social and economic issues.
- 5.7.5.3 Paragraph 1.3.2 emphasises that, in England and Wales, consents for NSIPs, including larger offshore renewable energy developments, should be determined in accordance with the PA 2008. Where a relevant NPS has been designated, NSIP applications must be decided in accordance with the NPS, subject to certain exceptions, and having regard to the MPS. In other circumstances, the decision is for the Secretary of State.
- 5.7.5.4 Paragraph 2.5.3 states that marine-based activities can provide opportunities for employment in new and developing industries, such as the renewable energy sector and associated offshore electricity transmission. This employment is described as providing wide and long-term benefits for both national and local economies.
- 5.7.5.5 Section 3.3 addresses energy production and infrastructure development, stating that a secure, sustainable and affordable supply of energy is of central importance to the economic and social well-being of the UK. The marine environment is seen as making an increasingly major contribution to the provision of the UK’s energy supply and distribution (para. 3.3.1). Paragraph 3.3.3 states that *“a significant part of the renewable energy required to meet [the UK’s] targets and objectives will come from marine sources”*.

5.8 Welsh national guidance

5.8.1 Introduction

5.8.1.1 The function of determining applications for NSIPs has not been devolved to the WG, but it is nevertheless relevant to consider how the WG intends to contribute to the achievement of targets set out in the RES, how the WG's policy applies to the Project and how its own decision in respect of the marine licence (ML) application will be influenced by relevant matters in domestic Welsh policy.

5.8.1.2 This section outlines Welsh National Guidance provided in Planning Policy Wales (2012) and Planning Guidance Wales: Technical Advice Notes (Wales) and other statements produced by the Welsh Government relevant to the Project.

5.8.1.3 The determination of a ML is for the Natural Resources Wales (NRW) Marine Licensing Team (MLT) on behalf of the appropriate licencing authority (as defined in the Marine and Coastal Access Act 2009 (MCAA 2009)). Whilst the Welsh Government provides Marine Policy guidance to NRW, the determination process is outlined in section 69 of the MCAA 2009.

5.8.2 Climate Change Strategy for Wales (Welsh Government, October 2010)

5.8.2.1 This Strategy, and the associated Delivery Plans, confirm the Welsh Government's commitments to addressing climate change. It outlines the areas where the Government will act, and where it will work with its partners including the Climate Change Commission for Wales and the UK Committee on Climate Change, to reduce greenhouse gas (GHG) emissions and enable effective adaptation in Wales. The Strategy identifies a target of reducing greenhouse gas emissions by 3% per year from 2011 in areas of devolved competence, against a baseline of average emissions between 2006-10. In terms of energy generation, the strategy identifies that the Welsh Government will *"drive reduced energy consumption and improve energy efficiency, and maximise renewable and low carbon energy generation in Wales"*.

5.8.3 Low Carbon Revolution – Welsh Government Energy Policy Statement (2010)

5.8.3.1 The Low Carbon Revolution is a Welsh Government Energy Policy Statement, published to help achieve the WG's targets towards renewable energy resources. The document states that climate change is the greatest environmental, economic and social challenge facing the planet, and that achieving sufficient supplies of affordable low carbon energy is necessary for future well-being. It goes on to explain how the WG aims to make the ambition for low carbon energy a reality by:

- i. maximising energy savings and energy efficiency in order to make producing the majority of the energy needed from low carbon sources more feasible and less costly.;
- ii. moving to resilient, low carbon energy production via indigenous (and thus secure) renewables, on both a centralised and localised basis and
- iii. ensuring that the transition to low carbon maximises the economic renewal opportunities for practical jobs and skills, strengthens and engages research and development sectors, promotes personal and community engagement and helps to tackle deprivation and improve quality of life.

5.8.3.2 The Policy goes on to state its main actions. With particular regard to actions on a large scale tidal range development it plans to “*test the appropriateness and cost effectiveness of steps to exploit the tidal range of the Severn Estuary*”. This will be achieved:

- i. by continuing to support the major study of the Severn Estuary being led by DECC;
- ii. ensuring both the costs and benefits of any project are fully understood and explained;
- iii. supporting further research or development as appropriate in the light of the study and, in particular, where new technology ideas look to have potential and could be developed within Wales; and
- iv. considering the applicability of tidal range technologies elsewhere in Wales as appropriate.

5.8.3.3 The publication of the Energy Policy Statement by the WG in March 2010 significantly altered energy generation targets. The position in 2005 [what in?] had been a target of 7TWh (7000MWh) of output from renewable sources by 2020. However, the 2010 document sets out an enhanced target figure of 22,500MW (22.5TW) of installed capacity of renewables by 2025.

5.8.4 Energy Wales: A Low Carbon Transition (2012)

5.8.4.1 The document sets out that it is the Welsh Government’s ambition to create a “sustainable, low carbon economy for Wales”. As part of this, it is the aim of the Welsh Government to: maximise long term economic benefits of decarbonisation; maximise community benefits from infrastructure developments; and manage the relationship between energy development and the natural environment.

5.8.4.2 The document states that Wales has significant assets in virtually every energy source, including “*significant wave and tidal energy potential*” plus “*the key infrastructure to make the most of the energy opportunity in terms of our roads, railways, deep ports and electrical and gas grids*”. The WG supports “*moving towards commercial deployment of marine renewable energy devices*”, stating that “*we are strongly committed to unlocking the energy in our seas*”.

5.8.5 Planning Policy Wales (Ed. 5, 2012)

5.8.5.1 Planning Policy Wales (PPW) edition 5, issued in November 2012, provides the policy framework for the effective preparation and delivery of development plans. PPW reflects the WG’s commitment to sustainable development which over time aims to lead to an economically, socially and environmentally sustainable Wales. PPW will be monitored and reviewed in accordance with the WG’s objectives for Wales.

5.8.5.2 Chapter 4, ‘Planning for Sustainable Development’, explains the WG’s duty to promote sustainable development and its commitment to bringing forward legislation to strengthen the duty and commitment at local and national level. The full text of this Chapter can be found on the Welsh Government website¹¹. The following is a summary of the key areas of this section.

¹¹ <http://wales.gov.uk/docs/desh/publications/121107ppw5chapter4en.pdf>

5.8.5.3 Paragraph 4.4.3 states that planning policies, decisions and proposals should:

- i. *“Support the need to tackle the causes of climate change by moving towards a low carbon economy. This includes facilitating development that reduces emissions of greenhouse gases in a sustainable manner, provides for renewable and low carbon energy sources at all scales and facilitates low and zero carbon developments”* (Sections 4.7, 4.11 and Chapter 12).
- ii. *“Maximise the use of renewable resources, including sustainable materials (recycled and renewable materials and those with a lower embodied energy). Where it is judged necessary to use non-renewable resources they should be used as efficiently as possible. The use of renewable resources and of sustainably produced materials from local sources should be encouraged and recycling and re-use levels arising from demolition and construction maximised and waste minimised”* (Sections 4.11.5 and 4.11.10).
- iii. *“Promote a low carbon economy and social enterprises”* (Section 7.4).

5.8.5.4 It is stated within this document that climate change is one of the most important challenges facing the world and it is imperative to act urgently to reduce greenhouse gas emissions and deal with the consequences of climate change. In relation to this, the WG is required to make a contribution to the International, EU and UK targets for greenhouse gas emission reduction, and has set out to achieve *“annual carbon reduction-equivalent emissions reductions of 3 per cent per year from 2011 in areas of devolved competence, which include land use planning”* and are *“committed to achieving at least a 40 per cent reduction in all greenhouse gas emissions in Wales by 2020 against a 1990 baseline”* (Section 4.5.2).

5.8.5.5 In order to minimise the cause of climate change the WG is planning to take decisive actions to move towards a low carbon economy, facilitating the delivery of new and sustainable forms of energy generation at all scales.

5.8.5.6 Section 4.7.2 discusses the need for development plans to provide a framework to stimulate, guide and manage change towards sustainability. Local planning authorities' policies and proposals should: *“ensure that tackling the causes and consequences of climate change is taken into account in locating new development”* (Sections 5.6 to 5.8 and 13.2 to 13.4).

5.8.5.7 Section 4.11 outlines the WG's approach to 'Promoting Sustainability Through Good Design', highlighting that to create sustainable development, design must go beyond aesthetics and include the social, environmental and economic aspects of the development at all stages.

5.8.6 **Technical Advice Note (TAN) (Wales) 5: Nature Conservation and Planning (2009)**

5.8.6.1 TAN 5 describes nature conservation issues and advises how planning policy should contribute to protecting and enhancing biodiversity and geological conservation. In particular, when considering plans and development, local planning authorities should ensure that any unavoidable harm to habitat is ameliorated, mitigated or offset.

5.8.7 Technical Advice Note (Wales) 8: Renewable Energy (2005)

- 5.8.7.1 TAN 8 2005 replaces that published in 1996, and relates to the land use planning considerations of renewable energy.
- 5.8.7.2 The WG has a target of 4TWh of electricity per annum to be produced by renewable energy by 2010 and 7TWh by 2020. In order to meet these targets the WG has concluded that 800MW of additional installed capacity is required from onshore wind sources and a further 200MW of installed capacity is required from offshore wind and other renewable technologies (Section 1.4).
- 5.8.7.3 Section 4 highlights that design and energy should be considered during the submission of planning applications.
- 5.8.7.4 Section 5.2 states that Local Development Plans should promote high standards of energy efficiency, energy conservation and the use of renewable energy as a part of the national and international response to climate change, and this should be reflected in the strategy of development plans. Local planning authorities should consider the local availability of renewable energy resources and develop suitable policies that promote their implementation.
- 5.8.7.5 It is mentioned that developers, in consultation with local planning authorities, should take an active role in engaging with the local community on renewable energy proposals.

5.8.8 Technical Advice Note (Wales) 12: Design (adopted 2009)

- 5.8.8.1 TAN 12 provides advice and guidance to those involved in the design of the development noting how the planning system can facilitate the promotion of sustainability through good design. Guidance in relation to the preparation of Design and Access Statements is also provided within TAN(W) 12.

5.8.9 Technical Advice Note (Wales) 14: Coastal Planning (1998)

- 5.8.9.1 TAN 14 describes the coastal zone as an area of land and adjacent sea that are considered to be mutually interdependent. The aim of this TAN is to provide guidance on issues relating to development in this coastal zone.
- 5.8.9.2 Section 4 states that it is for each local planning authority to consider and define the most appropriate coastal zone in its area. For land use planning purposes, the seaward limit of the coastal zone is generally the mean low water mark, but between high and low water mark the planning system usually needs to operate in tandem with a range of sectoral controls over coastal and marine development.
- 5.8.9.3 Due to the dynamic nature of the coast, local planning authorities need to be aware of coastal issues at two scales – firstly, the site and its immediate environs, and secondly in terms of the wider setting. Section 7 explains that physical processes and ground conditions at the coast may be essential for creating and maintaining conservation and recreation site features. Interference with these processes can have consequences for the overall balance of the physical system. It is therefore incumbent on a developer to demonstrate that a site can be developed satisfactorily, without adverse impacts on the area. Local planning authorities need to consider the potential effects when making

planning decisions in the coastal zone, and the potential influence of offshore developments must be similarly appraised.

5.8.10 Technical Advice Note 11: Noise (1997)

- 5.8.10.1 TAN 11 provides advice on *"how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business"*.

5.8.11 Technical Advice Note 15: Development and Flood Risk (July 2004)

- 5.8.11.1 TAN 15 supplements policies set out in PPW and provides guidance in relation to development and flood risk, which is intended for use by Local Planning Authorities. It provides a precautionary framework from which risks associated with river, coastal and surface water flooding can be assessed.

5.8.12 Technical Advice Note 21: Waste (2001)

- 5.8.12.1 TAN 21 provides advice to facilitate the introduction of a comprehensive, integrated and sustainable land use planning framework for waste management in Wales. Consultation was carried out during 2013 regarding revising the Technical Advice Note 21 to reflect the new waste management drivers at an EU and Welsh level.

5.8.13 Marine Renewable Strategic Framework, Approach to Sustainable Development (March 2011)

- 5.8.13.1 The Marine Renewable Energy Strategic Framework (MRESF) was prepared by RPS for the WG. The project investigated the potential marine renewable energy resource of Welsh Territorial Waters and sought to aid policy development and provide an indicator of resource potential for developers. The document focuses on the potential marine energy source from wave and tidal stream – it does not address tidal lagoons.
- 5.8.13.2 The MRESF concludes that there is considerable wave and tidal stream energy potential in Welsh terrestrial waters, and there is potential to meet, and perhaps even exceed, the 4GW installed capacity target by 2025 (highlighted by the WG in its Energy Policy Statement). However, there would need to be development in areas subject to significant levels of constraints. Therefore acceptability of development in these areas would require careful consideration and detailed discussion with relevant parties in order to achieve a balance - realising higher installed capacity levels while sensibly minimising associated impacts on environmental receptors or existing sectoral use.

5.8.14 Ministerial Policy Statement on Marine Energy in Wales (July 2009)

- 5.8.14.1 The Ministerial Policy Statement was produced by the WG and proposes how marine energy can be maximised from the Welsh coasts with minimum local environmental impact. The statement includes suggestions of actions for key stakeholders to put Wales on track for when low carbon electricity might be practically produced from the Welsh seas, something thought to be achievable by 2025.
- 5.8.14.2 It is suggested in this statement that Wales is exceptionally well placed to participate strongly in the creation of a new marine energy sector with over 1,200 kilometres of coastline; extensive port facilities; a strong manufacturing and energy sector tradition;

and a Government determined to enable the maximum amount of renewable energy production within a sustainable development context.

5.8.14.3 The statement explains how tidal range projects, and marine energy projects in general, will be supported by actions such as:

- i. encouraging research and development capabilities;
- ii. laying foundations in Wales for a strong marine-energy industrial sector including relevant port developments;
- iii. close liaison with potential developers, The Crown Estate, CCW and EA;
- iv. ensuring that the new marine planning process takes full account of the climate change mitigation potential of large and small scale marine energy developments off the coasts of Wales; and
- v. working with the UK Governments and Crown dependencies to accelerate the delivery of this whole agenda.

5.8.15 Interim Marine Aggregates Dredging Policy, Welsh Government (2004)

5.8.15.1 The Interim Marine Aggregates Dredging Policy (IMADP) is a policy that is used to form the basis for decisions regarding aggregate dredging. It seeks to ensure sustainable, objective and transparent decision-making to meet society's needs for aggregates dredged from the Bristol Channel, Severn Estuary and River Severn.

5.8.15.2 Section 1.3 of the IMADP addresses how the policy plans for dredged aggregate supplies to meet society's needs by making provision to:

- i. identify areas where dredging for marine aggregates is likely to be acceptable;
- ii. protect the marine and coastal environment – landscape, habitats, ecology and heritage;
- iii. control the impacts of marine dredging to acceptable levels;
- iv. encourage efficient and appropriate use of dredged aggregates;
- v. safeguard resources from sterilisation; and
- vi. protect the interests of other users of the area.

5.9 Local policy

5.9.1 Introduction

- 5.9.1.1 The Project will be located in Swansea Bay. Due to its size, location and nature, this development will affect both the City and County of Swansea (CCS) and Neath Port Talbot County Borough (NPTCB) and their Councils, whose administrative boundary is shown in Figure 5.1. Consequently, the Unitary Development Plans (UDPs) for each administrative area are reviewed in this section.

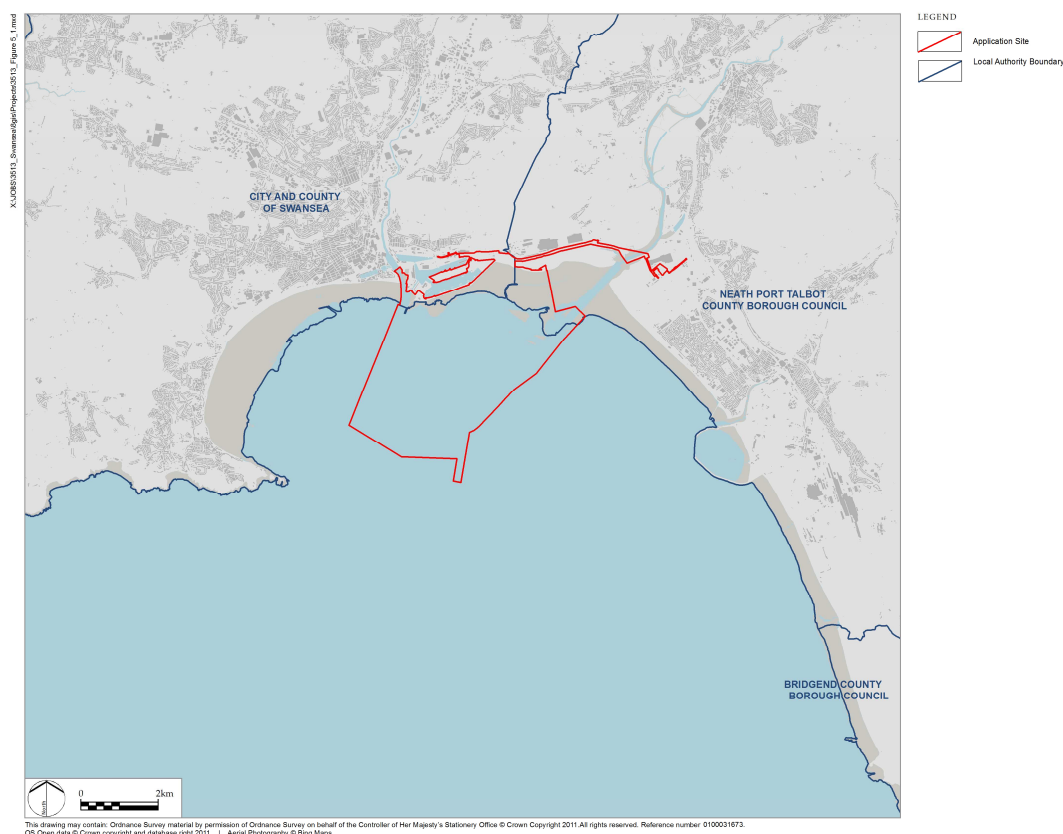


Figure 5.1 Local authority boundary

- 5.9.1.2 The UDPs provide general structured guidance on development, conservation and the use of land development in their areas, taking into account both national and regional policies. Both UDPs were adopted in 2008 and will be used for the period to 2016.
- 5.9.2 City & County of Swansea Council UDP (adopted 2008)**
- 5.9.2.1 The City & County of Swansea Council (CCSC) is committed to the promotion of sustainable development. Within its main goals, it includes the aim to sustain a healthy, attractive ecologically rich environment, to help promote the sustainable growth of the local and regional economy, and to make more efficient and sustainable use of the area's resources.
- 5.9.2.2 Under policy SP1, sustainable development will be pursued as an integral principle of the planning and development process; development proposals designed to a high quality

and standard, which enhance townscape, landscape, sense of place, and strengthen Swansea Waterfront identity, will be favoured.

- 5.9.2.3 Policy SP3 states that the natural, built, and cultural heritage of the County will be protected and enhanced to safeguard from materially harmful development, and policy EV1 supports sustainable development and states that new developments should be in accordance with the objectives of good design.
- 5.9.2.4 Ecology and conservation: It is understood that the County is rich in ecological resources, and is covered by a large number of internationally designated conservation sites as well as nationally and locally significant sites. The UDP states that the need to protect the high quality countryside is at the core of the policy framework, together with the need for positive management to safeguard areas with conservation designations. The UDP contains a number of policies relating to ecology and conservation and these are discussed further in the relevant chapters of this ES.
- 5.9.2.5 Recreation and tourism: CCSC places high priority on economic prosperity and is described in the UDP as being well placed to benefit from growth in tourism. The Wales Spatial Plan also envisages a lead role for Swansea in driving the region's tourism economy. Further investment in both the infrastructure and quality of tourism businesses will continue to promote the City and County as an important visitor destination. Policies relevant to recreation and tourism (including SP4 and SP5) are discussed in more detail in Chapter 22 of this ES.
- 5.9.2.6 Renewable Energy: the UDP states that CCSC supports the WG's policy for strengthening renewable energy production, and recognises the long-term benefits to be derived from the development of renewable energy sources. The UDP recognises that renewable energy technologies can have a positive impact on local communities and the local economy.
- 5.9.2.7 Although CCSC supports the principles of renewable energy, there are concerns about the impact of such developments on the landscape, local communities, natural heritage and historic environment, and local economy. CCSC will favour developments that produce renewable energy where the proposals conform with UDP policies and are in scale and character with their surroundings.
- 5.9.2.8 Policy SP11 states that the upgrading of infrastructure provision and the generation of energy from renewable resources to meet the needs of existing and new development will be favoured, provided that environmental impact is kept to a minimum. Policy R11 supports this policy and provides conditions on which the proposals will be permitted including:
- i. the social, economic or environmental benefits of the scheme in meeting local, and national energy targets outweigh any adverse impacts.
 - ii. the scale form, design, appearance and cumulative impacts of proposals can be satisfactorily incorporated into the landscape, seascape or built environment and would not significantly adversely affect the visual amenity, local environment or recreational/tourist use of these areas.
 - iii. there would be no significant adverse effect on local amenity, highways, aircraft operations or telecommunications.

- iv. there would be no significant adverse effect on natural heritage and the historic environment.
- v. the development would reserve or enhance any conservation areas and not adversely affect listed buildings or their settings.
- vi. the development is accompanied by adequate information to indicate the extent of possible environmental effects and how they can be satisfactorily contained and/or mitigated.
- vii. the development includes measures to secure the satisfactory removal of structures/related infrastructure and an acceptable after use which brings about a net gain where practically feasible for biodiversity following cessation of operation of the installation.

5.9.3 Neath Port Talbot County Borough Council UDP (adopted 2008)

- 5.9.3.1 Neath Port Talbot County Borough Council (NPTCBC) regards its UDP as having a key role in delivering sustainability. While addressing more local issues, the UDP also aims to help the County Borough make its contribution to tackling global environmental problems.
- 5.9.3.2 Ecology and conservation: under policy 1, the countryside, seascapes and landscapes of Neath Port Talbot will be enhanced where appropriate and/or protected from proposals that would have unacceptable impacts on their character and appearance.
- 5.9.3.3 Policy 2 states that wildlife and habitats, including those within urban areas, will be enhanced where appropriate and protected from proposals that would cause unacceptable impacts. Particular emphasis will be placed on species and habitat areas that are designated as being of international or national importance.
- 5.9.3.4 These environment policies are supported by policy ENV3 (Impacts on the landscape), policy ENV4 (Proposals affecting international and national sites for nature conservation and species protected by European or UK legislation), policy ENV5 (Nature conservation), policy ENV10 (Coastal protection), policy ENV11 (Proposals in areas of flood risk), policy ENV12 (proposals affecting water resources), and policy ENV17 (Design).
- 5.9.3.5 Recreation and tourism: under policy 17, the UDP states that provision for sport, recreation and open space will be protected and enhanced. These policies are supported by policy RO2 (New sport and recreational facilities), policy RO4 (Access to the countryside and coast), and policy RO5 (Water based recreation).
- 5.9.3.6 Renewable energy: with regard to renewable energy, policy 19 states that opportunities to create energy from renewable resources will be encouraged provided that unacceptable impacts are not created.
- 5.9.3.7 This is supported by policy IE6 (Renewable energy) which states that proposals for the creation of renewable energy will be supported provided their impacts are acceptable and, where appropriate, they include measures to reinstate the land.

5.9.4 Swansea and Carmarthen Bay Engineering Group, Shoreline Management Plan (SMP2), Lavernock Point to St Ann's Head (January 2012)

- 5.9.4.1 Shoreline Management Plans (SMPs) form an important part of the Welsh Government's strategy for managing risks due to flooding and coastal erosion. The SMP2 (2012)

encompasses the area from the shoreline between Lavernock Point (Vale of Glamorgan) in the east and St Ann's Head (Pembrokeshire) in the west.

- 5.9.4.2 Section 1.3.1 of the main document states that the SMP2 must remain flexible to adapt to changes in legislation, politics and social attitudes. It therefore considers objectives, policy setting and management requirements for three main time scales: the present day or short term (next 20 years); the medium-term (approximately 20-50 years); and the long term (beyond 50-100 years). Four alternative policies are set out for managing the shoreline: Hold the line; Advance the line; Managed realignment; and No active intervention.
- 5.9.4.3 Annex 1 comprises SMP2 Policy Statements, which define the preferred SMP2 policies for each Policy Unit (length of coast/estuary). Policy Statements of Swansea Bay, and Sker Point to Swansea Docks are reviewed here, as these are the most relevant to the Project.
- 5.9.4.4 **Swansea Bay:** comprising the western half of Swansea Bay, which includes Swansea Docks, Swansea Marina and SA1 development, Swansea city centre and the promenade which sweeps around the Bay to Mumbles. The long-term plan is to continue to manage the risk of coastal erosion and flooding by maintaining and upgrading existing defences, subject to the availability of public funding for coastal erosion and flood risk management. It may become necessary to construct defences, or consider alternative management techniques.
- 5.9.4.5 Swansea Bay SMP2 policies are to hold the line. The document specifically states that, with regard to Swansea Docks, the structures themselves are not covered by the SMP as they are not coastal defence structures, and their maintenance and upgrade is the responsibility of the Port Authority. However, the structures do provide a defence function by reducing the risk of coastal erosion and flooding to the hinterland and reducing the risk of coastal erosion of potentially contaminated material into Swansea Bay.
- 5.9.4.6 **Sker Point to Swansea Docks:** comprising the eastern part of Swansea Bay, and including the areas of (from west to east): Sker Point, Port Talbot Steelworks, Port of Port Talbot, Baglan Burrows, the Neath Estuary, Crymlyn Burrows and the former BP Tank Farm. The areas that relate to the Project are the Neath Estuary through to the former BP Tank Farm. The long-term aim of the policy is to manage the risk of coastal erosion and flooding to the residential and commercial assets along the coast while also enabling the natural evolution of the dunes.
- 5.9.4.7 In relation to the Neath Estuary and the former BP Tank Farm, the policy is to hold the line. As with Swansea Docks above, maintenance and upgrade of the structures relating to Port of Neath are the responsibility of the Port Authority and it is considered that these structures serve the function of sea defences. According to the SMP2, these are expected to be maintained to ensure the port and leisure functions of this area. The policy for the former BP Tank Farm, before consideration of the Swansea University Bay Campus (SUBC) development, is to hold the line. After consideration of the SUBC development, the policy remains to hold the line taking into account the private coastal defences that will be provided as part of this development. The policy sets out a risk of outflanking of the defences provided for the SUBC development should the structures covering Swansea Docks no longer provide defence.

- 5.9.4.8 The policy for Crymlyn Burrows is that of managed realignment. This is in order to ensure the long-term habitat management of the nature reserve and introduce measures, as necessary, to manage the impacts of recreational use and possible risks to the A483.

5.9.5 Fabian Way Corridor Transport Assessment (2010)

- 5.9.5.1 Arup was commissioned on behalf of the WG to undertake a strategic assessment of the transportation options for the A483 Fabian Way corridor. The corridor is scheduled to experience significant development in the next 25 years, generating increased travel demand. It was seen as important that a balanced transport strategy was established to support the sustainable development of the corridor and to facilitate wider economic regeneration in the surrounding catchment area. The study area covered the strategic route into eastern Swansea and lies within both the boundaries of NPTCBC and CCSC.

- 5.9.5.2 The report states: *"it seems certain that the Fabian Way corridor will be further developed in the future in order to help Swansea to consolidate its position as a prominent regional centre. Fabian Way will become a destination in its own right, with employment, residential and leisure uses planned. To support this development, it is essential that transport links are strengthened and real choices provided for travellers meeting their individual and family needs."*

5.9.6 Industry guidance

- 5.9.6.1 As the Project is the world's first tidal energy lagoon, there is currently no specific guidance to consider.

5.10 Conclusions

- 5.10.0.1 This chapter has outlined international, national and Welsh energy policies and targets and identified the contribution of the Project to achieving Welsh targets. The chapter then highlighted the planning policy and regulatory framework considered relevant to the Project. Judgement of the interaction between policies and the Project are included within the Planning Statement submitted in support of the development consent application. Further details of planning policy and regulatory frameworks are outlined as appropriate within the following specialist chapters within this ES.

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