

**Marine Works (Environmental Impact Assessment) Regulations 2007, Regulation 22 -
EIA Consent Decision**

Title: The Skerries Tidal Stream Array

Regulatory approval: Marine Licence under Part 4 of the Marine and Coastal Access Act 2009 and The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)

Operator: Sea Generation (Wales) Limited

Report no: CML1321 EIA Consent Decision

Location: Off the coast of Anglesey, north Wales

Introduction

This document constitutes an EIA consent decision under Regulation 22 of the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (MWR), in respect of an application submitted by Sea Generation (Wales) Ltd for a variation to Marine License 11/17/ML the Skerries Tidal Stream Array off the coast of Anglesey, north Wales.

This document should be read in conjunction with the EIA consent decision produced in respect of an application submitted by Marine Current Turbines Ltd (MCT) for a regulatory approval for the Skerries Tidal Stream Array off the coast of Anglesey, North Wales. (MCT and RWE npower renewable collaborated to develop the project under the Sea Generation (Wales) Ltd Special Purpose Company). The Marine Licensing Team accept and defer to conclusions of the EIA Consent Decision issued by the Welsh Governments Marine Consents Unit, dated 22/02/2013 for Marine Licence 11/17/ML. This EIA Consent Decision can be considered to be an addendum to the previous EIA Consent decision and has taken account of the project changes submitted for approval under marine licence application CML1321.

Project Description

The original consent covered the array area between the Skerries rocks and the North West Coast of Anglesey and included a cable corridor achieving cable landfall between Carmel Head and Hen Borth Bay. Further studies and assessments on the cable corridor for the export cable have identified an alternative cable corridor to a landfall at Cemaes Bay.

Environmental Statement

The variation application was supported by Supplementary Environmental Information (SEI) dated 27/06/2013 prepared by SeaGeneration (Wales) Ltd. Additional information was then provided following consultation with NRW Advisory dated 29/10/2013. Both documents should be read in conjunction with the Environmental Statement (ES) and Supplementary Environmental Information (SEI) for the project submitted previously as part of the application for Marine Licence 11/17/ML.

The Supplementary Environmental Information referenced above identified the areas where a potential change to the Environmental Statement submitted in support of the application of Marine Licence 11/17/ML has been identified. These sections are outlined below.

Marine Archaeology

Wessex archaeology has reviewed the proposed cable corridor and features identified utilising outputs from the geological survey conducted in March 2013. No potential impacts to Marine Archaeology have been identified as a result of the change in cable landfall methodology.

Benthic Ecology

With regards to the extended cable burial Centre for Marine and Coastal Processes have been identified that there is potential for some interactions with a small area of Sabellaria within Cemaes Bay, Sea Generation (Wales) Ltd will undertake pre-installation survey to fully understand the extent of this area of Sabellaria and will seek to microsite away from it.

Coastal Processes

Royal Haskoning DHV undertook a desk based Coastal Processes Assessment and modelling exercise and have concluded that given the highly exposed nature of the area and the character of the sea bed and shoreline, the thresholds of sensitivity to changes in hydrodynamic and sedimentary processes will be high. Only substantial changes to coastal processes are anticipated to cause any effect beyond natural variability. The Project is not anticipated to exceed these thresholds.

Navigation

Marico Marine completed an update to the Navigational Risk Assessment (NRA) related to the revised cable corridor. The NRA concludes that the location of the tidal array site and the proposed export cable corridor are well outside navigational channels and anchorages, and the prevailing wind and tide make a drifting vessel scenario unlikely.

No potential impacts to Navigation have been identified as a result of the change in cable landfall methodology.

Environmental Sensitivities and the Appropriate Assessment

Following the advice received at the consultation stage for Marine Licence application 11/17/ML, an AA was carried out for this project, considering the features highlighted below:

Cemlyn Bay Special Area of Conservation (SAC)
Ynys Feurig, Cemlyn and the Skerries Special Protection Area (SPA)
Sterna hirundo
Sterna paradisaea
Sterna dougallii
Sterna sandvicensis
Lleyn Peninsula and the Sarnau SAC
Halichoerus grypus
Tursiops truncatus
Cardigan Bay SAC
Halichoerus grypus
Tursiops truncatus
Pembrokeshire Marine SAC
Halichoerus grypus
Grassholm SPA
Morus bassanus)

The conclusion of the AA is that there will be no adverse affect to the integrity of the following sites, subject to the mitigations identified, and the conditions being imposed and adhered to on any marine licence granted for this project:

Cemlyn Bay Special Area of Conservation (SAC)
Feurig, Cemlyn and the Skerries Special Protection Area (SPA)
Lleyn Peninsula and the Sarnau SAC
Grassholm SPA

The mitigations identified require a detailed Environmental Monitoring and Adaptive Management Plan to be produced by the licence holder on the basis that the project will operate with a shut down requirement if grey seal or bottlenose dolphin are detected in the vicinity of the devices. A shut down zone and a robust and fit for purpose monitoring and response procedure needs to be agreed with the licensing authority, prior to commencement of the works. This includes details and dimensions of the shut down zone around devices, the monitoring procedures which will be employed to detect marine mammal presence within the zone and the detail of how devices will be shut down and restarted once mammals move out of the zone.

The mitigations also require exclusions zones around seal haul out areas and tern breeding sites, monitoring of gannet population, avoidance of adverse effects on Cemlyn Lagoon from cable route and risk assessments to be carried out in relation to the use of Ducted Propeller vessels. Full details can be found in the Appropriate Assessment, which is available on request from Natural Resources Wales acting on behalf of the licensing authority.

The Appropriate Assessment has been updated to include the alterations to the cable route and is available on request from Natural Resources Wales acting on behalf of the Licensing Authority.

Consultation

The first variation application was consulted on by the Marine Licensing Team alongside public notices in July 2013 and sent to the following. : The Centre for Environment, Fisheries and Aquaculture Science (Cefas), Natural Resources Wales (Advisory), , Natural Resources Wales Planning, The Crown Estate (TCE), Ministry of Defence (MoD), North West and North Wales Sea Fisheries Committee, Stena Line - Holyhead Port Authority, Royal Yachting Association (RYA), Holyhead Sailing Club, Trinity House, Maritime and Coastguard Agency (MCA), Chamber of Shipping, Trinity House (TH), Ofcom, NATS – NERL Safeguarding, Department for Transport (DFT), Isle of Anglesey County Council (inc Local Biodiversity Officer), Marine Conservation Society, Royal Society for the Protection of Birds (RSPB), The Wildlife Trusts, Royal Commission on Historic Monuments Wales, World Wildlife Fund (WWF)the Welsh Government to: Marine Enforcement Officers, Energy Branch, Cadw,

Those consulted replicated those consulted for Marine Licence Application 11/17/ML

The main comments following the first consultation are set out below:

Natural Resources Wales (Advisory)

NRW Advisory comment

Appendix A the Geophysical survey is missing, making it hard to comment on some of the conclusions in the report.

Sea Generation response

Provided within Appendix 4 of Report Osiris

NRW Advisory comment

Export Cable (sections 2.1, 2.3, 3.1). The report states that the export cable will be trenched into the intertidal from MLWS up to MHWS using land based plant. NRW would advise that this would leave a significant length of cable exposed at low spring tides between MLWS and LAT (lowest Astronomical Tide).

Sea Generation response

SGW have reviewed the distance that the cable will be buried offshore in order to avoid cable exposure as recommended. Direct drilling techniques were considered for this location however given the distances required and residential nature of the beach surrounds were thought to be too sensitive to the likely noise arising from 24 hour drilling (for up to 7 days) required to install the cable. The use of bentonite as a lubricant for directional drilling was also thought unwise given the sensitivity of the beach from a tourism perspective. Furthermore the considerable cost of HDD was not an economical option.

NRW Advisory comment

NRW would further advise that best practice for cable land fall would be to use Direct Drilling techniques to link the cable from the subtidal to a land based jointing station above MHWS.

Sea Generation response

The coastal processes assessment was based on trenching the cable in at SGW request and RH don't predict this method will cause an issue in terms of physical processes. RH NRW

Advisory comment

NRW would advise that the technique proposed in the report (trenching using land based plant) causes substantial disturbance to both the ecology and integrity of the beach receptors which would take some time to recover.

Sea Generation response

Trenching in this deeply indented and relatively self-contained bay will not cause any significant damage to the beach ecology or the beach receptors, either in the bay or further afield (RH)

A terrestrial ecology assessment has also been carried out and mitigation has been employed that avoids sensitive receptors by routing the cable through already damaged sand dunes to the northern end of the beach (as also agreed with IACC Ecological and Environmental Adviser: David Cowley). Disturbance has been specifically targeted for already damaged areas of low habitat value (damaged sand dune, car park, derelict building) (SGW)

NRW Advisory comment

In the light of local wave and weather conditions (Page 5 section 3.1 - the area is subject to severe wave conditions and high sediment transport potential) this method of cable landfall would appear to carry a significant risk of cable damage due to coastal erosion.

Sea Generation response

The high energy environment of the beach supports the assessment of only temporary and localised disturbance, since any disturbed sediments / mounds will quickly become flattened by tides and waves. Regarding erosion, the decision has been taken to increase the distance that the cable is buried for to at least 300m below LAT. RH

NRW Advisory comment

Page 8 Sediment thickness. The report states -Processed sub-bottom profiling data along the centreline of the cable route indicate that within the inshore section of Cemaes Bay, up to around 5.0m of sediment cover is present over the bedrock (away from the cable centreline this thickness decreases rapidly towards the areas of rocky outcrops at the mouth of the Bay). Without an understanding of the variation in thickness of this sediment layer over time due to coastal erosion, winter storms, long shore drift etc it is impossible to know whether there will be sufficient sand to bury the cable to an appropriate depth.

Sea Generation response

Please see Appendix to Coastal Processes report for survey findings and associated images illustrating sediment thickness SGW/ Osiris

NRW Advisory comment

Section 4 Page 12. The Report suggests that the work done in 2011 for the ES provides 'a comprehensive assessment of the baseline physical conditions and likely cable laying and landfall effects, based upon publicly available datasets and information sources (including scientific publications). This information provides an accepted basis for assessment of effects for cable route 3 and landfall L3'. NRW would advise that this is not the case as the Study area in the ES (figure 4-2) only covers the area around the initial proposed landfalls and does not include the area around Cemaes Bay.

Sea Generation response

The intention of this statement is such that by combining the previous „baseline“ work in the ES (across its area of coverage) with the additional geophysical survey across cable route L3 and landfall 3 (which covers the new lengths not previously surveyed or assessed in the ES),

and by following the accepted assessment methods from the ES, there is a suitable and complete basis for assessment. We are not saying that the original ES covered all of cable route 3 and landfall 3 as this was not the case. However, it should be noted that there was some overlap (e.g. the numerical model used in the ES for assessing changes in tidal flows due to the array presented results covering part (but not all) of the cable route 3). RH

NRW Advisory comment

The assessment of potential effects section (4.2 Operation Intertidal and 4.3 Decommissioning pages 13/14) only appears to cover coastal process impacts. It should also look at impacts on benthic ecology.

Sea Generation response

This is assessed in a separate Benthic Ecology Report undertaken by CMACS and provided as part of the full application SGW

NRW Advisory comment

Section 4.4 Cumulative. As highlighted higher up in the report there is an existing cable landfall at Cemaes Bay very close to the proposed MCT cable landfall. The existing cable route can be seen on aerial photos. Cumulative effects on receptors need to be considered in this section.

Sea Generation response

Unable to find evidence in Aerial photography - are NRW able to send copies?

This cable is a disused BT cable which has been decommissioned for some time - SGW has an agreement in place to cross the cable or to remove a section of it if deemed necessary. SGW

NRW Advisory comment

The assessment doesn't seem to have covered any of the land based aspect of the cabling i.e access through the sea defence? This is a high flood risk coastal defence area therefore breach of the seawall would not be a possibility and therefore the most likely solution would be some sort of DDR under the defences. Would it therefore not seem practicable to DDR under the whole of the intertidal (into subtidal)?

Sea Generation response

There is no breach of the sea wall - the onshore cabling route has been specifically designed to avoid the harbour wall, instead crossing through the frequently disturbed sand dune adjacent to the northern car park (as agreed with IACC Ecological and Environmental Adviser: David Cowley) in the area where no sea defence exists. This has formed part of the Town and Country Planning application to the Isle of Anglesey County Council SGW

NRW Advisory comment

KR indicated that discussions with Natural England regarding *Sabellaria spinulosa* reef had identified that the survey to inform the cable route should be no more than 12-18 months before the actual cable installation. KR to discuss with Natural England and confirm timings. We can confirm the timings of no more than 12-18 months. This is because of the ephemeral nature of *Sabellaria spinulosa*.

Sea Generation response

SGW undertake to survey the *Sabellaria spinulosa* reef no more than 18 months before cable installation commences in order to determine the areas of high density reef that will be avoided during cable installation.

SGW

NRW Advisory comment

Existing variations in beach levels are unknown and little assurance is given on the cable not becoming exposed. This is an eroding area of coastline and the toe of the coastal slope is only going to try and roll back over time, eventually undermining the existing defences (as documented in the SMP2). I would therefore think the cable needs to be buried from at least LAT, in the inter-tidal area, to a depth greater than 1m with due consideration of the existing defences. No mitigation measures such as rock matressing etc.. should be considered. The angle of the beach will steepen with SLR also, this hasn't been mentioned.

Sea Generation response

The cable landfall has been revised in line with recommendations received from NRW, the cable will be buried to 1.5 - 2 m depth out to at least 0.3km below LAT, potentially as far as 1km offshore - depending on ecological factors and technical feasibility.

SGW

NRW Advisory comment

NRW are worried about the sediment supply to the bay being altered due to the cable existence in the short term, as the bedload transport is interrupted as the cable 'self-buries' or 'ramps' are initiated. NRW would recommend keeping a record of beach levels periodically to monitor this.

Sea Generation response

This can be arranged as part of the Environmental Monitoring and Mitigation Plan required as part of the Marine Licence for the array.

NRW Advisory comment

little evidence using past studies and therefore assurance on the cable remaining in situ throughout the project lifetime. Is there likely to be any swing in position, causing damage to the Sabellaria beds etc... What is the expected lateral disturbance of the cable once in place? Plus scour resulting from the cable being in position?

Sea Generation response

Initial cable stability has been assessed using DNV guidelines developed for pipelines. Guidelines which have been found to also be applicable for cables. As such the cable has been specifically routed to be stable throughout the lifetime of the project based on these guidelines. This is mainly achieved by laying as close to the direction of the tidal flow as possible an approach that has worked at other tidal sites such as EMEC in the Orkneys. The installation of the cable will be accurate to +/- 5m. The routeing seeks to avoid any global movement of the cable from a stability point of view but also local strumming of cables due to suspensions. From an operational point of view cable longevity is a key factor and any movement or strumming of the cable will be very detrimental to the longevity of the cable life. Where potential movement or strumming issues are identified via post installation survey, measures will be taken to locally stabilise the cable using ROV to reposition the cable and optimise alignment with the seabed features. Where the export cable crosses areas of mobile sand/gravel or megaripples, scour may occur with the potential for the cable to selfbury or for spans (lengths of cable suspended across local sea bed depressions) to form with consequent cable vibration. The extent of

downstream bed disturbance induced by the cable will be limited to about $10h$ (where h is the cable diameter) (Whitehouse et al., 2000). Given an envisaged maximum cable diameter of around 280mm, these effects are expected to occur within a very short distance of the cable (<3m). ETA/ RH/ SGW

NRW Advisory comment

The SMP for the area suggests managed realignment (MR) in epoch 3, although this is greater than the lifetime of the project, with the cable being left in place after decommissioning, this will impact the aim for this unit.

Sea Generation response

SGW can commit to remove a section of the cable during decommissioning if this would be preferable. Initially it was thought that leaving in situ would be less disruptive and less damaging to the environment. SGW

NRW Marine Licensing response

The Applicant has provided NRW (Advisory) with additional information on all concerns raised through the submission of an amended application dated 29th October 2013 and NRW (Advisory) are content with that information providing the measures outlined in the table of Responses are implemented as described and additional conditions suggested are incorporated into the licence.

Royal Yachting Association 08/08/2013

The RYA notes that the entrance to Cemaes Bay is a charted anchorage. Section 6 of the variation application states that it is intended that the cable will be buried from the mouth of the Cemaes Bay approximately 100m after MLW through the intertidal zone to the jointing pit. Once the cable has made landfall in the intertidal zone, the cable will be trenched in to the beach for approximately 220m between MLW and the car park. This tends to suggest that the cable will be surface laid through the anchorage which might cause obstruction and a potential danger to navigation. This specific scenario does not appear to have been covered in the NRA.

The RYA believes that, consistent with its position on offshore renewable energy, the sea bed should remain unobstructed to a minimum of 4 metres below Chart Datum and that the export cable will require burial to that point to sea beyond Mean Low Water Springs, not only to Mean Low Water.

The RYA requests that this be made a condition of the licence

Sea Generation Response

Cable burial depth has been proposed line with industry standards and recommendations from our cable experts. Cable burial distance has been increased to reflect concerns previously raised, and cable will not resurface until clear of anchorage areas.

NRW Marine Licensing response

The Suggested condition has not been included within the licence. The Marine Licensing Team are content with the response from Sea Generation Wales. Further detail regarding cable location and burial will be provided in the Installation and Commissioning Plan. In addition:

The Skerries Section 36 Consent issued on 22 February 2013 require:

(d) The Company shall not commence construction of the Development until the MMO, in consultation with the Maritime and Coastguard Agency (MCA), is satisfied that the Company has taken into account and adequately addressed all the MCA recommendations in the current Offshore Renewable Energy Installations Marine Guidance Note, „*Offshore Renewable Energy Installations (OREI) – Guidance on Navigational Practice, Safety and Emergency Response Issues*“ and any Annexes* that may be appropriate to this Development. *Currently MGN371

Reason: To ensure that an Active Safety Management System is agreed by the MMO taking into account MCA recommendations before any construction work commences and to ensure compliance with MCA navigation safety guidance.

Marine and Coastguard Agency 05/08/2013

Further to your letter of 10th July, seeking comment on the proposed cable corridor addendum for the Skerries Tidal array, the following comment is provided:

MCA have reviewed the addendum to the cable corridor, with our primary focus on Navigation Safety in which our review has been based on the Navigation Risk Assessment (NRA), contained within appendix 5 of the Cable Corridor and Landfall, variation application, supplementary information.

MCA have no significant concerns with the amendment as presented, the following minor points are raised for consideration and referred to in the cover letter accompanying the licence:

1. 4.1 (p17) This section makes reference to the fact that there is no anchoring within Cemeas Bay as vessels will use the moorings that are provided. The subsequent figure 14 provided by the RYA clearly identifies the bay as an anchorage, it is therefore not unreasonable to assume that yachts will want to anchor in the bay, the developer should be requested to provide hard evidence to support the accuracy of their statement.

2. Admiralty Chart 1977 shows an existing cable (disused??) running into the bay, NRW, should seek clarification from the developer as to how they intend to undertake operations within the bay, ensuring existing cables and moorings are not compromised and that the freedom to navigate and anchor remains.

MCA will provide detailed consent conditions to NRW in support of any licence application following approval of the project development.

Sea Generation response

- 1) Increase in burial distance acknowledged and included in supplementary information provided.
- 2) As per section 7.32 of the application Information the existing cable is discussed and BT have agreed that it can be removed where the cables intersect. Operations within the bay (and throughout the project) will be detailed and agreed as part of the Installation and Commissioning Plan submitted to the regulator prior to work commencing.

NRW Marine Licensing response No further response required.

Navigation Directorate, Trinity House 21/08/2013

With reference to your letter dated 10 July 2013 concerning the above, I can confirm that Trinity House has no objections to the proposed variation as detailed and no specific marking requirements in this regard.

NRW Marine Licensing response
No further response required.

MCA additional Information 16/08/2013

Further to your letter of 18th November, I can confirm that MCA are happy with the variation request as presented, with no further action required. The comment in our response as attached remains valid.

NRW Marine Licensing response

No further response required

Holyhead Sailing Club 29/07/2013

Acknowledgement of receipt of application for comment. Briefly commented on those aspects which could potentially affect navigation along the North Coast. Support the Navigation Risk Assessment Contractors should be made aware of the limitations of tide rode, small craft. Which may be less able to take avoiding action if confronted by a cable laying vessel. Small Craft movements are likely to be between April to September. Anchoring in Cemaes Bay. The proposal to route the cable close to the North East shoreline of the bay shoreward would seem sensible to avoid snagging by anchors.

Burial of the cable to at least one metre depth to avoid small craft anchor penetration would be useful in case sea bed material movements reduce the effective cable depth over time.

NRW Response

Acknowledgement email sent on 21/08/2013. The comments were forwarded to Sea Generation Wales and further comments were submitted following the subsequent consultation.

Cefas 22/08/2013

A number of licence conditions were suggested pre-works, during works and post works. The majority of these were covered in the current licence excluding those listed below in relation to decommissioning:

The Licence Holder must ensure monitoring is undertaken as soon as practically possible after the removal of the device and cable to assess the degree of damage, if any, and the rate of re-colonisation. The results of the surveys must be submitted to the Licensing Authority within 90 days of the final date of decommissioning.

The Licence Holder must undertake a swathe bathymetric survey following removal of the device to ensure no debris is left on the seabed and to assist with assessment of damage to the seabed.

NRW Marine Licensing response

Licence conditions have been inserted into the licence (8.21, 8.22). However the time frame for submissions has been amended in line with Sea Generations reasonable request. The results of the surveys must be submitted to the Licensing Authority within 6 months of the final date of decommissioning.

A further consultation was undertaken in November 2011 following the submission of supplementary information dated 29/10/2013 submitted after NRW (Advisory) comments were received, considered and resolved. All those who commented on the initial variation application were consulted again.

The main comments following the second consultation are set out below:

Additional response from Cefas 28/11/2013

I would recommend that where possible the cable is buried but I note the need to microsite the cable burial around Sabellaria within Cemaes Bay, and given the potential for smothering resulting from subsurface burial as a minimum the micro-sited length adjacent to the Sabellaria will be surface laid.

All previous advice with regards to suggested licence conditions remains the same.

NRW Marine Licensing response

No further response required. Conditions inserted into the licence with regard to the micro-siting of the cable to avoid Sabellaria spinulosa in line with NRW advisory's request (conditions 8.2 and 8.3)

Anglesey Planning Authority 28/11/2013

I refer to your correspondence dated 18.11.13 in respect of the above and have no objection to the modification based upon the fact that following advice from Natural Resources Wales the cable from the Skerries development to landfall at Cemaes will be buried further offshore than was granted previously.

I have however, received a response from the Authority's Maritime Officer who wishes to see a marine traffic management plan put in place. I trust you will have regard to this in making your decision.

Sea Generation Response

These will be detailed in the Installation and Commissioning Plan which will include provision for suitable marine traffic management.

NRW Marine Licensing response

The Skerries Section 36 Consent issued on 22 February 2013 require:

(d) The Company shall not commence construction of the Development until the MMO, in consultation with the Maritime and Coastguard Agency (MCA), is satisfied that the Company has taken into account and adequately addressed all the MCA recommendations in the current Offshore Renewable Energy Installations Marine Guidance Note, „Offshore Renewable Energy Installations (OREI) – Guidance on Navigational Practice, Safety and Emergency Response Issues“ and any Annexes* that may be appropriate to this Development. *Currently MGN371

Reason: To ensure that an Active Safety Management System is agreed by the MMO taking into account MCA recommendations before any construction work commences and to ensure compliance with MCA navigation safety guidance.

In addition Section 9 of Marine Licence CML1321 contains Navigational safety and vessel specific conditions

On behalf of Holyhead Sailing Club 10/12/2013

We note the results of the survey of recreational vessels, in the document and the resulting conclusions. It is our experience that the amount of anchoring by recreational vessels has been understated.

Sailing vessels transiting the north coast of Anglesey are constrained by the “Tidal gate” around Carmel Head. This results in the need to time this part of the passage accurately depending on whether the rounding is eastward or westward. Consequently there is significant

use made of the various anchorages in Cemaes Bay, whilst waiting for suitable tide and weather conditions. Cemaes is the only safe anchorage in south or SW winds, between Holyhead and east of Point Lynas. In addition to vessels seeking shelter, a number of Sailing Clubs around the Island arrange "cruises in company" in which up to 12 to 15 yachts may anchor overnight in Cemaes.

It is to be noted that it is very unlikely that vessels in either of these above scenarios would use local mooring facilities, all would be on their own anchors.

Due to the amount of poorly marked fishing gear around this part of the coast, visiting yachts are often forced to anchor further out in the bay, than would otherwise be expected. From the above local knowledge of the area, HSC would urge that the cable burial arrangements extend at least to a line from Wylfa Head to Llanbadrig Head, to allow safe anchoring of recreational vessels.

HSC also has concerns that during the construction phase of the cable and arrays, small vessels may not be able to fully comply with the exclusion zones proposed. Constructors will need to be aware of the manoeuvring constraints of sailing vessels, due to wind and tide conditions in these restricted areas.

Sea Generation Wales response

Anchorage were assessed using local charts (as shown below) and using available information regarding local conditions and we are grateful for further evidence in this regard.

Given the depths within the Bay (up to 10m) it was expected that anchorage further out into the bay was possible, therefore the decision was taken to assess potential impact out to 1.2km from the beach at Cemaes Bay and to include cable burial to this distance within the application (which is approximately in line with Wylfa Head and Llanbadrig head as suggested).

As above, it is expected that burial out to 1.2km would accommodate for this (noting that a restriction to burial is expected in the area where Sabellaria has been found, although this will be subject to survey prior to installation).

The duration of installation within Cemaes Bay will be as short a period as possible. In line with our existing Marine Licence conditions (11/17/ML) a full Installation and Construction Plan will be submitted to NRW, within which details of safety boat presence will be outlined, acknowledging the likely manoeuvring constraints of sailing vessels.

NRW Marine Licensing response

The Conditions within Marine Licence 11/76/ML relating to the duration of installation within Cemaes Bay have been replicated in Licence CML1321.

The response was sent to those representing Holyhead Sailing Club on 29 January 2014 and no further concerns have been raised. No further action required.

Cadw 16/01/2014

I have now reviewed the revised information sent in support of the new cable routing. I am generally in agreement that the revised export cable route, below MLW, will not suffer any significant marine archaeological impacts. The route above MLW has already been granted planning permission; and screening for archaeological/historic environment impacts will have taken place through that process. Cadw therefore have no concerns to raise.

NRW Marine Licensing response No further response required.

NRW Advisory 15/01/2014

We acknowledge receipt of the updated Supplementary Information (dated 29/10/2013) and the table detailing Sea Generation Wales" responses to each of NRW"s previous comments (document titled: Questions in relation to Marine Licence Application: CRV Responses).

Intertidal Habitat

We are generally satisfied that the supplementary information is sufficient to address previous comments relating to the intertidal aspects of the cable route. We would however like to draw the Marine Licensing Team"s attention to the following paragraph taken from the end of the CMACS Intertidal Survey Report (Cemaes Bay Export Cable Landfall Option, Intertidal Survey Report, A report to: Sea Generation Wales Ltd, CMACS Ref: J3218v2):

excessive trampling of the algae and sessile fauna of the rocky shore areas. prior to construction works to limit incidents of accidental leaks and spillages. Provided the above is adhered to, the cable installation in Cemaes Bay is unlikely to have adverse impacts on the intertidal habitat in Cemaes Bay.

Subtidal Habitat – *Sabellaria spinulosa* reef

We note the commitment in the Supplementary Information to microsite the cable in order to avoid the *S. spinulosa* reef. The *S. spinulosa* reef is ephemeral in terms of its distribution and we therefore advise that pre-works survey is undertaken no more than 18 months before start of works, and that the survey methodology is agreed with NRW beforehand. The micrositing methodology should also be agreed at an early stage to ensure that the survey methodology/coverage is appropriate to the micrositing measures proposed. We would welcome early discussions regarding the survey methodology and principles for micrositing to allow plenty of time to reach agreement. In summary, we advise that the following measures are conditioned: *S. spinulosa* survey to be undertaken no more than 18 months prior to start of works micrositing) to be agreed with NRW before start of surveying work

Coastal processes

The measures outlined in the table of Responses should be implemented as Described See above). We look forward to receipt of the detailed micrositing measures proposed, as requested above.

NRW Marine Licensing response

The Applicant has provided NRW (Advisory) with additional information on all concerns raised and NRW (Advisory) are content with that information. Additional conditions will be added to the licence to address the *S. Spinulosa* (8.1 and 8.2) concerns identified above (see Annex 1)

Public Notices

The Marine Licence Application and supplementary environmental information were advertised as followed to give interested parties an opportunity to make representation on the application as necessary:

Bangor and Anglesey Mail - Last Notice 24 /072013 & 31/07/2013

Independent - Last Notice 24/07/2013 and 31/07/2013

Lloyds 22/07/2013 and 29/07/2013

London Gazette - 30/07/2013 and 05/08/2013

The application information was also placed in Holyhead Library, Newry Fields, Holyhead, Anglesey, LL65 1LA.

Public consultation 01/08/2013

Dear sirs, I would find it objectionable if there is a substation built where the marine cable makes landfall in the holiday village of Cemaes Bay.

Sea Generation response

The substation has been designed to be sensitive to the local surroundings via extensive consultation with the National Trust, IACC and a local architect – planning permission has now been granted by IACC. Further details can be found via the IACC planning portal application number PP02726901.

NRW Marine Licensing Response

An acknowledgment letter was forwarded to the author of the representation on 11/03/2014 advising that planning permission for the substation had been granted following consultation with the National Trust, IACC and local architect. Further details can be found via the IACC planning portal application number PP02726901.

Conditions

Following consideration of all relevant information, including the original Environmental Statement in support of licence 11/17/ML, the Supplementary Environmental Information 27/06/2013 prepared by SeaGeneration (Wales) Ltd. Additional information was then provided following consultation with NRW Advisory dated 29/10/2013, the outcome of both the consultations and the outcome of the updated Appropriate Assessment, NRW considers that the conditions set out in Annex B must be included in any marine licence granted.

Regulatory evaluation and EIA Consent Decision

In considering the application for The Skerries Tidal Stream Array, the following has been considered: the ES and mitigation measures proposed, the SEI provided by the applicant and further clarifications, the relevant provisions of the Marine and Coastal Access Act 2009, and other relevant legislation, and the consultation responses received. Through consideration of these, a full and detailed assessment has been made of the potential direct and indirect effects of the proposals on human beings, fauna and flora, soils, water, the landscape, material assets and the cultural heritage including any risk to the integrity of the European sites of conservation importance and European species and habitats. NRW endorses the findings of the ES, as supplemented by the SEI, subject to the inclusion, in any marine licence issued, of the conditions referred to above and compliance with them. Following our full assessment of the application we conclude that this project will not have an adverse effect on the environment. Accordingly, NRW on behalf of the Licensing Authority concludes that a favourable EIA consent decision can be issued to SeaGeneration (Wales) Ltd.

Sign off

Produced by: Zoe McMellin

Signed:



Date: 31/03/2014

Approved by: Lisa Hopkinson

Signed:

A handwritten signature in black ink, appearing to read "M. Hopkison". The signature is written in a cursive style with a prominent initial letter.

Date: 31/03/2014

8. Project Specific Conditions

- 8.1 The Licence Holder shall submit to NRW acting on behalf of the Licensing Authority the following plans for approval at least **90 days** prior to commencement of the installation of the foundations, subsea cables and associated protection, and installation and operation of the SeaGen devices ("Devices") (the "Project"):
- i) Environmental Monitoring and Adaptive Management Plan (EMAMP);
 - ii) Installation and Commissioning Plan (ICP); and
 - iii) Decommissioning Plan

Any revision or revisions will require approval by NRW acting on behalf of the Licensing Authority prior to such revision/s being implemented. The Project will be carried out in accordance with the latest approved version of these plans.

- 8.2 The Licence Holder must submit a *Sabellaria spinulosa* survey methodology, (and principles for micrositing of the cable), to NRW acting on behalf of the Licensing Authority for approval in writing prior to beginning the survey.
- 8.3 The Licence Holder must undertake the *Sabellaria spinulosa* survey no more than 18 months prior to start of the works. The analysis of the results of the survey and the final cable route must be agreed in writing with NRW acting on behalf of the Licensing Authority before the start of the works.

Environmental Monitoring and Adaptive Management (EMAMP):

- 8.4 The Licence Holder shall submit a framework EMAMP to NRW acting on behalf of the Licensing Authority, as soon as possible after the issuing of this licence.
- 8.5 As part of the EMAMP, if alternative adaptive management measures cannot be agreed between the Licence Holder and NRW acting on behalf of the Licensing Authority, then the project will operate with a shut down requirement if marine mammals (grey seal and cetaceans) are detected in the vicinity of the devices. A shut down zone and a robust and fit for purpose monitoring and response procedure needs to be agreed with NRW acting on behalf of the Licensing Authority, prior to commencement of the works. This includes details and dimensions of the shut down zone around devices, the monitoring procedures which will be employed to detect marine mammal presence within the zone and the detail of how devices will be shut down and restarted once mammals move out of the zone
- 8.6 The EMAMP must include (but may not be limited to) the following, and be implemented as approved:
- (i) Pre-, during and/or post installation marine mammal monitoring;
 - (ii) adaptive management for marine mammals;
 - (iii) adaptive management for birds, including pre-, during and/or post installation bird surveys, which must include monitoring for gannet presence and behaviour in the array area and buffer zone. Any significant

increase in gannet presence in the array area may result in the need for adaptive management;

- (iv) post installation operational noise measurements;
 - (v) tidal flow measurements to monitor wake effects;
 - (vi) swathe bathymetric survey;
 - (vii) details of all monitoring equipment to be used;
 - (viii) operational benthic ecology surveys; and
 - (ix) any other monitoring and mitigation outlined in Section 8 of the Environmental Statement.
- 8.7 The Licence Holder must submit the monitoring reports to NRW acting on behalf of the Licensing Authority at the dates specified within the EMAMP and shall make available to NRW acting on behalf of the Licensing Authority upon their reasonable request, any available data relating to the protection of the marine environment.
- 8.8 Any physical monitoring carried out as part of the EMAMP or carried out in relation to any alteration in cable route or installation methodology shall be scrutinised by archaeologists with regards to archaeological potential and to scouring or alteration in sediment.
- 8.9 Appropriate timescales for the environmental monitoring (including any appropriate timescales for assessing any significance of environmental impacts) and adaptive management must be approved in writing by NRW acting on behalf of the Licensing Authority as part of the EMAMP.
- 8.10 If NRW acting on behalf of the Licensing Authority considers that a significant environmental impact has occurred or is likely to occur, and is attributable to the Project, then NRW acting on behalf of the Licensing Authority may require the Licence Holder to cease operation of the Project pending an assessment of the situation. In taking any such decision, NRW acting on behalf of the Licensing Authority will take into consideration all available environmental information including that from the Science Group and the EMAMP.
- 8.11 In the case of permanent cessation of operation, the Licence Holder shall ensure that the Devices, foundations and cables are decommissioned in accordance with the Energy Act 2004 and removed from the Skerries site in accordance with the terms of the Decommissioning Plan.

Installation and Commissioning

- 8.12 The Licence Holder shall submit to NRW acting on behalf of the Licensing Authority for approval the Installation and Commissioning Plan (ICP) at least 90 days prior to commencement of the Project. No installation works shall commence until written approval has been given by NRW acting on behalf of the Licensing Authority.
- 8.13 The ICP must include (but may not be limited to) the following details, and be implemented as approved:
- (i) the final design of the Devices (including diameter of rotors) and the configuration of the Devices within the array area;
 - (ii) the locations (micrositing) of the Devices within the array area;

- (iii) details of the installation vessels to be utilised for the Project together with the method of disposal of drill cuttings;
- (iv) the final cable route, including the landfall, and method of installation and securing the cable (rock placement and concrete mattresses should be avoided);
- (v) progress reporting procedures for the purposes of providing regular updates including confirmation of the key operational stages to NRW acting on behalf of the Licensing Authority;
- (vi) a Pollution Contingency Plan including an oil spill plan;
- (vii) Description of proposed hours of work and anticipated noise and vibration levels during the construction phase;
- (viii) Methodology to be used to minimise re-suspension of sediment during the installation of the project.

8.14 As part of the ICP, the Licence Holder must ensure the following:

- i) installation of bunding and/or storage facilities to contain and prevent the release of fuel, oils, and chemicals associated with plant, refuelling and construction equipment, into the marine environment. i.e. secondary containment should be used with a capacity of not less than 110% of the containers storage capacity.
- ii) the Pollution Contingency Plan is communicated to all contractors' personnel involved with the Project and made available for inspection by Marine Enforcement Officers upon request.
- iii) during the Project, store all waste in designated areas that are isolated from surface water drains, open water and banded to contain any spillage;
- iv) any waste from the Project is disposed of in accordance with section 34 of the Environment Protection Act 1990 (as amended); and
- v) any equipment, temporary works and/or debris associated with the installation of the foundations, Devices and cable is removed upon completion of these works;
- vi) notice to mariners and fishermen's organisations is issued at least **14 days** prior to commencement (and during construction as necessary) of the Project;
- vii) Marine Enforcement Officers are notified at least **14 days** prior to commencement of the Project;
- viii) all chemicals used (including oils and lubricants) are selected from the list of notified chemicals assessed for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002 (list can be found on www.cefas.co.uk), or provide evidence to NRW acting on behalf of the Licensing Authority that they have undergone equivalent testing;
- ix) all protective coatings, paints and antifoulants used are suitable for use in the marine environment and where necessary, are approved by the Health and Safety Executive. Such coatings should be utilised in accordance with best environmental practices; and

- x) any oil, fuel or chemical spill is reported to NRW acting on behalf of the Licensing Authority as soon as reasonably practicable (on 0800 807060);
- 8.15 . If of any construction or maintenance activity using a Dynamic Positioning vessels being planned for execution in December, a risk assessment must be carried out by the Licence Holder, and the activity and appropriate mitigation must be approved in writing by NRW acting on behalf of the Licensing Authority prior to commencement of such works.
- 8.16 The Licence Holder must ensure appropriate steps are taken to minimise damage to the beach/foreshore by the installation of the subsea cable.
- 8.17 The Licence Holder must undertake a bio-security risk assessment containing an investigation of the pathways that may carry non-native organisms to the works area, as invasive non-native plant and animal species are a threat to UK marine biodiversity and can negatively impact on the native species and cause damage to the environment. Effective measures must be put in place to ensure that all plant and equipment used during the works are clean prior to arrival on site. The bio-security risk assessment must be undertaken prior to works commencing, and be available for inspection by our Marine Enforcement Officers upon request. The GB Non Native Species Secretariat website provides up to date information on non native species and biosecurity:<https://secure.fera.defra.gov.uk/nonnativespecies/home/index.cfm>
- 8.18 The Licence Holder must ensure that the works are maintained at all times in good repair.
- 8.19 The Licence Holder shall comply at all times with the BMAPA/English Heritage Protocol for reporting finds of Archaeological Interest. A copy of the Protocol must be available to all contractors' personnel to ensure they are fully aware of the Protocol. Should any object of archaeological interest be found during the installation of the foundations and/or the subsea cables, the Licence Holder must report the find as soon as reasonably practicable NRW acting on behalf of the Licensing Authority. In addition, within 90 days of completion of survey works, a report on any archaeological data or discoveries must be sent to the marine database of the Royal Commission of Ancient and Historical Monuments in Wales, Aberystwyth for archiving.

Decommissioning

- 8.20 The Licence Holder shall ensure that the Devices, foundations and cables are decommissioned in accordance with the Energy Act 2004.
- 8.21 The Licence Holder must undertake a swathe bathymetric survey following removal of the device to assist with assessment of damage to the seabed. The survey results and assessment shall be submitted to NRW acting on behalf of the Licensing Authority for our written approval.
- 8.22 The Licence Holder must ensure monitoring as required in condition 8.6 is undertaken as soon as practically possible after the removal of the device and cable to assess the degree of damage, if any, and the level of re-colonisation. The results of the surveys must be submitted to NRW acting on behalf of the Licensing Authority within 6 months of the final date of decommissioning.

Exclusion Zones

- 8.23 The cable route must avoid Cemlyn Lagoon and the Licence Holder must avoid any routes that could adversely effect Cemlyn Lagoon,
- 8.24 To minimise disturbance during pupping, operations and maintenance vessels must not be routed within 500m of grey seal haul outs on Skerries and the mainland between 1 September and 31 December, throughout the lifetime of the project.
- 8.25 To minimise disturbance during breeding, operations and maintenance vessels must not be routed within 500m of tern breeding sites on Ynys Feurig between 30 April and 31 August, throughout the lifetime of the project.
- 8.26 The Licence Holder must implement an exclusion zone of 50m around all known areas of archaeological sensitivity, the wrecks and other anomalies detected during survey.

9. Navigational safety and vessel specific conditions

- 9.1. All motor powered vessels engaged in operations to which this Licence relates must be fitted with the following equipment:
 - 9.1.1 Electronic positioning aid to provide navigational data e.g. GPS, etc.
 - 9.1.2 Radar
 - 9.1.3 Echo sounder
 - 9.1.4 Multi-channel VHF
- 9.2. All vessel names or identification shall be clearly marked on the hull or superstructure.
- 9.3. All communication on VHF working frequencies shall be in the English Language.
- 9.4. The Licence Holder must notify the UK Hydrographic Office of the timetable and location of the Devices and subsea cables prior to the commencement of the Project, to permit the promulgation of Maritime Safety Information and the updating of nautical charts and publications.
- 9.5. The Licence Holder must remove the works from below the level of mean high water springs, or such alterations made, within one month of notice being given by NRW acting on behalf of the Licensing Authority, or a different timescale agreed with NRW acting on behalf of the Licensing Authority, at any time we consider this necessary or advisable for the safety of navigation, and not replaced until NRW acting on behalf of the Licensing Authority has given its written approval. The Licence Holder shall be liable for any expense incurred.
- 9.6. No radio beacon or radar beacon operating in the marine frequency bands shall be installed or used on the Project without prior written approval by the Licensing Authority.

- 9.7. The Devices, and any associated temporary works, should be marked and lighted in accordance with the requirements of the General Lighthouse Authority in this case Trinity House Lighthouse Service. Once specific details are known regarding the layout and the specific type of turbines that are to be used, the applicant must contact Trinity House in order to ascertain the specific navigational marking requirements (including the colour of each turbine) relating to this project.
- 9.8. If in the opinion of NRW acting on behalf of the Licensing Authority the assistance of a Government Department, including the broadcast of navigational warnings, is required in connection with the Project or to deal with any emergency arising from the failure to mark and light the Devices as required by this Licence or to maintain the Devices and/or any associated temporary works in good order or from the drifting or wreck of the works (if any), the Licence Holder shall be liable for any expense incurred in securing such assistance.
- 9.9. All vessels utilised during the works must comply with the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs) – as amended, particularly with respect to the display of lights, shapes and signals.
- 9.10. Any jack up barges / vessels utilised during the works, when jacked up, should exhibit signals in accordance with the UK Standard Marking Schedule for Offshore Installations.
- 9.11. The Licence Holder shall issue a notice to mariners at least 14 days prior to any planned (or if unplanned or emergency works, as soon as possible before those works commence) maintenance works. Such notice must advise of the recommended safety zone. The Licence Holder must also advise the Licensing Authority and Marine Enforcement Officers prior to such works within the same timescales.
- 9.12. The Licence Holder shall allow officers of the Maritime and Coastguard Agency, Marine Enforcement Officers or any other person authorised by the Licensing Authority, to inspect the works at any reasonable time.
- 9.13. Under no circumstances shall a vessel engage in the works until all equipment specified in this paragraph (section 9) is fully operational.

EXPLANATORY NOTES

*This page does not form part of this Licence **CML1321** or its associated schedule but the licence holder is recommended to read the following guidance notes.*

1. The granting of this licence does not absolve the Licence Holder from obtaining such other authorisations, consents and approvals which may be required under any other legislation, controls or regulations.
2. Under Section 72 of the Marine and Coastal Access Act 2009, NRW acting on behalf of the Licensing Authority may vary or revoke this Licence if it appears to NRW acting on behalf of the Authority that the Licence Holder is in breach of any conditions in it or for any other reason that appears to the Authority to be relevant.
3. A person who contravenes Section 65 (1) of the Marine and Coastal Access Act 2009, or fails to comply with any condition of a Marine Licence, commits an

offence under Part 4, Chapter 3, Section 85 of the Marine and Coastal Access Act 2009.

4. It is a defence, Under Part 4, Chapter 3, Section 86 of the Marine and Coastal Access Act 2009, for a person charged with an offence under Section 85 (1) to prove that:

a) the activity was carried out for the purpose of securing the safety of a vessel, aircraft or marine structure or for the purpose of securing life, and, b) that he/she took steps within reasonable time following the incident to inform NRW acting on behalf of the Licensing Authority of:

(i) the fact that the activity was carried out,

(ii) the locality and circumstances in which it was carried out, and (iii) any substance or objects concerned.

5. If the works authorised by this Licence are unlikely to be completed by the expiry date of this licence, the Licence Holder should apply for a replacement licence at least **12 weeks** prior to the expiry date of this Licence.