



Causeway Coast & Glens Borough Council

Tidal Ventures Ltd (TVL) – Torr Head Tidal Array Project	23 rd March 2016
PLANNING COMMITTEE	

Linkage to Council Strategy (2015-19)	
Strategic Theme	Protect the environment in which we live
Outcome	<ul style="list-style-type: none">• All environments in the area will benefit from pro-active decision making which protects the natural features, characteristics and integrity of the Borough;• Our citizens will be given the maximum opportunity to enjoy our natural environments; and• Our natural assets will be carefully managed to generate economic and social returns without compromising their sustainability for future generations.
Lead Officer	Sharon Mulhern
Cost:	N/A

For Decision

1.0 Background

- 1.1 The Department of Enterprise, Trade & Investment (DETI) wrote to Council advising that they had received an application under Article 39 of the Electricity (NI) Order and that DOE Marine Division had received an application for a Marine Licence from Tidal Ventures Limited to construct and operate a 100MW (max) tidal electric generator off the coast of Torr Head, Co. Antrim.

2.0 Detail

- 2.1 Both DETI and DOE Marine Division have agreed that the separate applications will be processed in parallel and that only one Environmental Statement should be submitted, to avoid duplication. A combined consultation process is also being undertaken for both.

- 2.2 Information provided to Members in this paper is based on the literature that has been uploaded onto Tidal Ventures website, which states that the proposal includes:
- A tidal array which consists of between 50 and 100 fully submerged tidal turbines. The actual number will depend on the rated capacity of the selected turbine technology. This is expected to range between 1 MW and 2 MW per turbine, although this could increase to more than 2 MW as turbine technologies continue to evolve;
 - A proposed site of approximately 6.8km.sq;
 - Water depths ranging from 30m to 100m;
 - A project area that will occupy, at most, 0.37% of the total available sea area within the North Channel;
 - Centre of the Agreement for Lease (AfL) area lies approximately 1 km offshore at Torr Head, 12km east of Ballycastle and 11km south east of Rathlin Island;
 - Phased development over a three year period; 30MW to start in 2017 and up to a maximum capacity of 100MW to be completed by 2020 (subject to planning permission and licences); and
 - A capacity to generate electricity for up to 75,000 homes.
- 2.3 The proposal detailed in this paper relates only to the **offshore components** of the tidal project (Part 1) (see Discussion Paper at Appendix 1). The onshore components of the Project (Part 2) will be the subject of a separate planning application.
- 2.4 Planning officials have also contacted the relevant officer within DOE Marine Division to obtain some further details to provide Members with further and up to date information in relation to this project.
- 2.5 DOE Marine Division has advised that they have not yet finalised all their comments on the Habitats Regulations Assessment (HRA) submitted by TLV. They are currently doing this whilst putting together conditions for a Draft Marine Licence which will be issued in the near future. Once the developer is known further discussions will take place in relation to construction, operation and decommissioning details, before a final licence will be issued.
- 2.6 DOE has acknowledged that some “unknowns” remain. However, this will be subject ongoing monitoring throughout the various stages of the Project. Marine Division has set up a Science Group who will meet regularly with TLV and discuss the results of the monitors set up as part of any licence agreement issued. An Adaptive Management Process will be employed (as was the case in Strangford Lough). DOE Marine Division has the power to amend or revoke the licence at any time should TVL not comply with the Environmental Management Plan (EMP) and any licence or conditions imposed.
- 2.7 The DOE officer also advised that the Environmental Impact Assessment (EIA) and the Habitats Regulation Assessment (HRA) submitted have been informed by previous discussions held between the applicant and DOE Marine Division.

- 2.8 He also advised that TVL are in discussion with DARD on the impacts on fisheries and how to take this issue forward.
- 2.9 Planning officials highlighted the need for recently proposed Marine Conservation Zones (MCZs) within this Borough to also be considered. DOE advised that as they are not European designated sites they will only need to be considered as part of the EIA going forward, not the HRA. They will however ensure their inclusion.

3.0 Recommendation

- 3.1 **IT IS RECOMMENDED** that Members note the content of the discussion paper attached at Appendix 1 and agree to the Head of Planning providing a response to DETI/DOE Marine Division on behalf of Council.

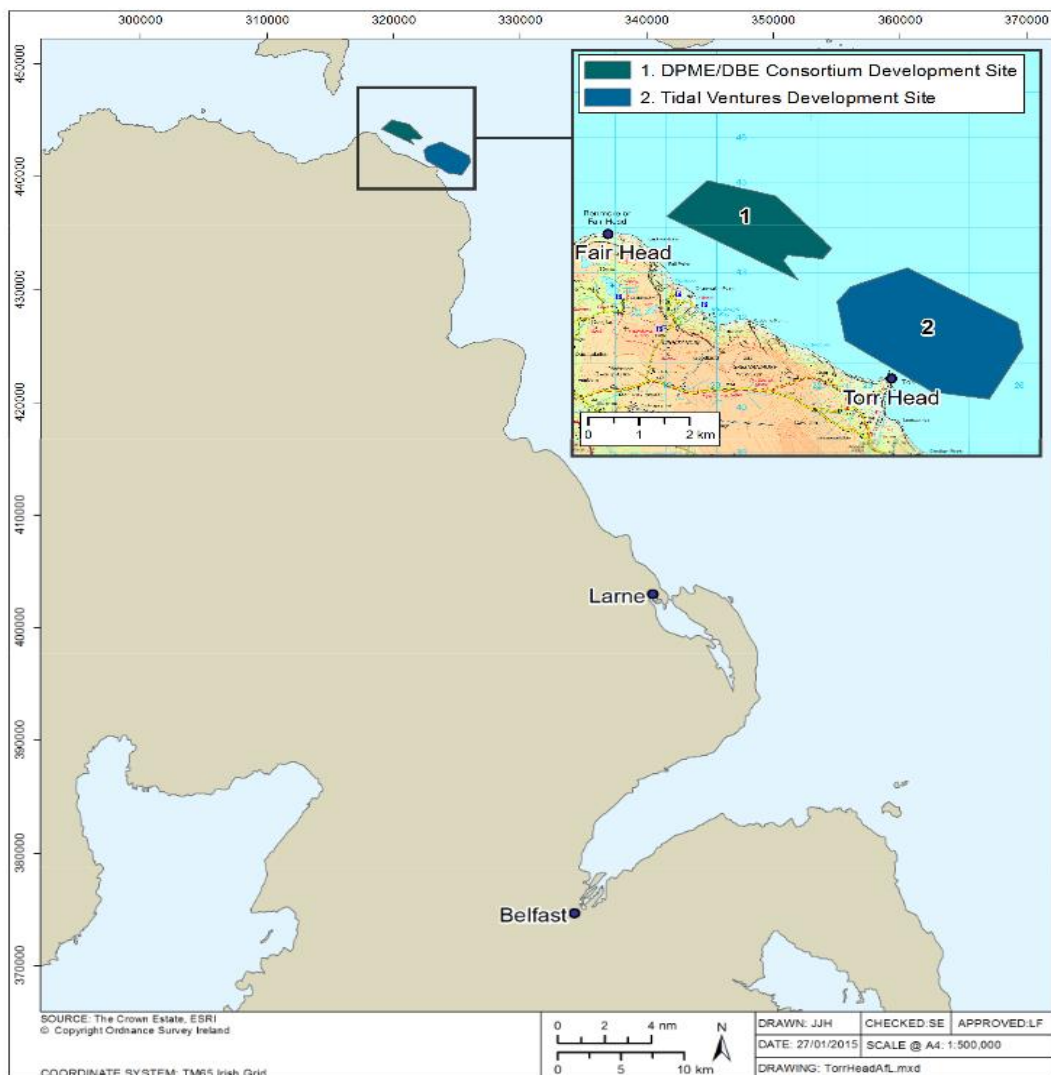
Appendix 1: Discussion Paper

Tidal Ventures Limited (TVL) proposal for a 100MW Tidal Energy Array at Torr Head, Co. Antrim.

1.0 Applicant:

- Tidal Ventures Ltd (TVL), a joint venture partnership between Brookfield Renewable Energy and Open Hydro.
- Crown Estates awarded TVL an Agreement for Lease (AfL) giving exclusive rights to investigate the development of a commercial scale 100 MW tidal electricity generator for a period of 5 years.
- The award forms part of NI's Offshore Renewable Energy Strategic Action Plan (ORESAP). A similar joint venture was awarded at Fair Head in autumn 2012 (see Map 1 below).

Map 1: Fair Head & Torr Head Projects



2.0 Proposal:

2.1 This paper deals **only** with the **offshore** component, which includes;

- Max.100MW Underwater Tidal Energy Array;
- Between 50 and 100 fully submerged tidal turbines (actual number will depend on the rated capacity of the selected turbine technology);
- Turbine output will range between 1 MW and 2 MW per turbine, although this could increase to more than 2 MW as turbine technologies continue to evolve;
- Proposed site is approximately 6.8km.sq;
- Water depths ranging from 30m to 100m;
- Project area will occupy, at most, 0.37% of the total available sea area within the North Channel;
- Centre of the Agreement for Lease (AfL) area lies approximately 1 km offshore at Torr Head, 12km east of Ballycastle and 11km south east of Rathlin Island;
- Phased development over a three year period; 30MW to start in 2017 and up to a maximum capacity of 100MW to be completed by 2020 (subject to planning permission and licences);
- Proposal will have capacity to generate electricity for up to 75,000 homes;

2.2 The **onshore component** is subject to separate planning permission. It will involve the cable landfall, onshore cable route, onshore substation and connection of this infrastructure to the National Grid. Two onshore landfall options are currently under consideration and have been identified through investigation of environmental sensitivities, engineering considerations, stakeholder and health & safety issues. Further details of this will be presented to Members when received by Council.

Analysis of suitable locations:

2.3 The area offshore of Torr Head is one of five zones highlighted by the Strategic Environmental Assessment (SEA) of Offshore Wind and Marine Renewable Energy in Northern Ireland which provides a high level assessment of the suitability of offshore areas for marine renewable development.

2.4 The TVL Project Team advises that they have extensively analysed each zone. The analysis included an assessment of:

- **Tidal velocities:** the speed and volume of water passing through the site.
- **Bathymetry:** the water depth and geology of the seabed to determine the best position and number of turbines to be deployed.
- **Navigational risk:** ensuring the location is appropriate so that turbines will not interfere with navigational traffic.
- **Environmental constraints:** Understanding the relative position of the Project area with respect to key designations and ecological receptors.

Preferred location: Torr Head, Co. Antrim (see Map 2 below).

Map 2: Project Area (AfL)



3.0 Reason for location: Torr Head was selected as the preferred site for the following reasons:

- Its strong tidal resource – optimise tidal stream energy capacity;
- Its suitable seabed and oceanographic conditions; and
- The opening of a suitable leasing round by The Crown Estate.

4.0 Project Timeline: 2013 – 2020 (see Fig.1 below)

Fig.1 Timeline



5.0 Turbine testing

5.1 OpenHydro has been testing the Open-Centre Turbine at the European Marine Energy Centre (EMEC) since 2006. To date, no marine life incidents have been recorded. EMEC, based in Orkney, is the first and only centre of its kind in the world to provide developers of both wave and tidal technologies with purpose built, accredited open-sea testing facilities.

6.0 Public Consultation

6.1 TVL states that it is committed to engaging with all local community stakeholders, elected representatives and any other interested parties for the duration of the project, as well as ensuring an extensive consultation process throughout.

6.2 TVL also states that it is committed to ensuring local community and fisheries' involvement and collaboration in the project. There are several distinct project stages and they aim to both communicate with and employ locals where possible, at each relevant stage.

6.3 During the course of this project, they expect to create a number of direct and indirect jobs. In the longer term, this project has the potential to create a significantly higher number of jobs. In addition to having regular meetings with fishery groups and organisations, they have also appointed a Fisheries' Industry Representative. His role will be to ensure that there is always a two way flow of information between TVL and key marine users in the area. The Fisheries' Industry Representative will keep the local fishing community informed about any planned activities and ensure minimum disruption is caused throughout the duration of the project.

7.0 Linkage to National Grid

- Electricity generated will be carried from the turbines via a subsea cable.
- Once discussions with Northern Ireland Electricity (NIE) and System Operator for Northern Ireland (SONI) have concluded, the most appropriate location for cable landfall and connection to the national grid will be identified.
- TVL will work closely with local communities and any other persons or group who may be affected.

- Any proposals will be subject to an EIA and the appropriate consent and licence approvals.

8.0 Socio-Economic – Local Impacts

8.1 Cost & Impacts:

- Major infrastructure investment project - Capacity to power 75,000 homes.

8.2 Supply Chain Opportunities:

- Technology development
- Applied research, innovation and testing
- Consultancy
- Engineering
- Manufacturing & components
- Vessels
- Surveying
- Deployment
- Ports, port operations & land based support

8.3 Predicted impact on NI Economy:

- 300 Jobs
- £110 million

8.4 Community Benefit:

- TVL supports the provision of financial contributions from operating developments to local communities.
- It is TVL's intention to establish a community fund to benefit both the local and fishing communities.

9.0 Ecology – Designated Sites

INTERNATIONAL/EUROPEAN DESIGNATIONS (see Map 3 over)

9.1 RAMSAR sites (wetlands of international importance designated under the *Ramsar Convention*):

- Garron Plateau: - a particularly good representative example of a wetland complex including blanket bog base-rich flushes and upland lakes. The most extensive area of intact upland blanket bog in NI and represents one of the best examples of this habitat in the UK. It supports an appreciable assemblage of rare, vulnerable or endangered species. Rare vascular plants included in the Irish Red Data Book species: narrow-leaved marsh-orchid, bog orchid, marsh saxifrage, few-flowered sedge, tall bog-sedge and opposite-leaved pondweed. Irish Red Data Book bird species associated with the blanket bog include breeding red grouse, golden plover, dunlin, merlin and hen harrier. The site also supports a wide variety of scarce insect species including the rare ground beetle *Bembidion geniculatum*, which is recorded for only one other location in Ireland. Other insects of note include the Large Heath Butterfly and aquatic invertebrates such as water beetles and the water boatman.

9.2 Special Areas of Conservation (SACs)/Sites of Community Importance (SCIs):

There are, in total, six designated SACs/SCIs which intersect with the study area. These areas contain rare and vulnerable habitats and/or species of European importance:

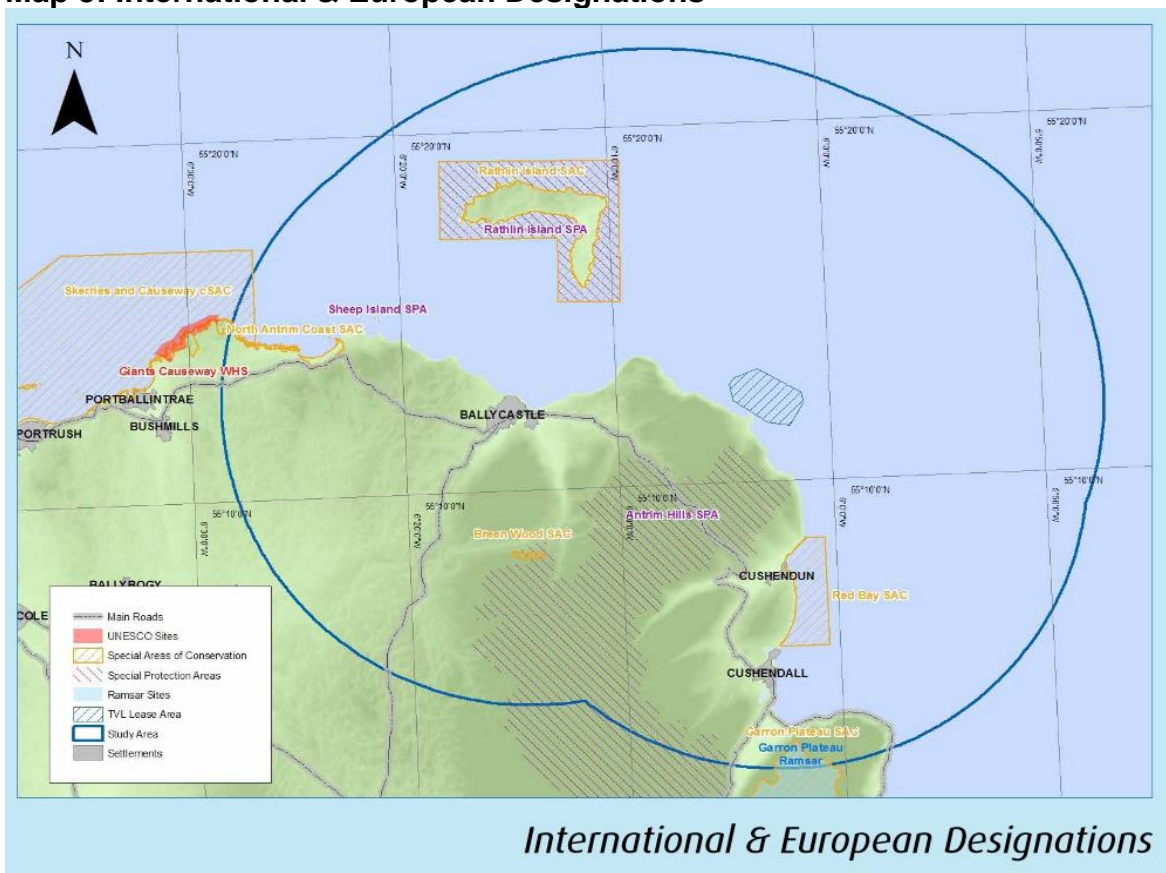
- Breen Wood – qualifies due to Bog Woodland, Old sessile oak woods with *Ilex* and *Blechnum*.
- Garron Plateau (partial) – qualifies due to Blanket Bogs, Marsh saxifrage, Alkaline fens, acid peat-stained lakes and ponds, Wet heathland with cross-leaved heath, Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels, transition mires and quaking bogs.
- North Antrim Coast – qualifies due to fixed dunes with herbaceous vegetation (grey dunes), Species-rich *Nardus* grassland, on siliceous substrates in mountain areas (and sub mountain areas in continental Europe), Annual vegetation of drift lines, Atlantic salt meadows, Shifting dunes with marram, Vegetated sea cliffs of the Atlantic and Baltic coasts.
- Rathlin Island - qualifies due to submerged or partially submerged sea caves, Annual vegetation of drift lines, Reefs, Subtidal sandbanks, Vegetated sea cliffs of the Atlantic and Baltic coasts.
- Red Bay cSCI – qualifies due to Sandbanks which are slightly covered by sea water all of the time.
- Skerries and Causeway cSCI (partial) - qualifies due to submerged or partially submerged sea caves, sandbanks which are slightly covered by sea water all of the time, Reefs, Harbour porpoise.

9.3 Special Protection Areas (SPAs);

There are three SPAs within the study area. These areas are important for rare and vulnerable bird species as they use them for breeding, feeding, wintering or migration;

- **Antrim Hills** - qualifies by supporting nationally important populations of hen harrier and merlin. The site encompasses all lands within these boundaries, excluding wholly-improved pasture, arable land, buildings and associated lands. It includes coniferous plantations, blanket bog, wet and dry heath, grass moor, scrub, inland cliff and limited semi-improved agricultural grassland. The principal interests are the breeding populations of hen harrier and merlin.
- **Rathlin Island** – qualifies by supporting important numbers of Peregrine Falcon. The site further qualifies by supporting internationally important breeding numbers of migratory species: Razorbill, Guillemot and Kittiwake. Additionally, Rathlin SPA regularly supports over 20,000 breeding seabirds. Species include, fulmar, shag, eider, common gull, herring gull, lesser black-backed gull, black guillemot, puffin and Manx shearwater.
- **Sheep Island** – qualifies by regularly supporting, in summer, a nationally important breeding population of the Northern European sub-species of Cormorant. In addition, the population is the largest in the north of Ireland and thus makes an important contribution to the range of the sub-species.

Map 3: International & European Designations



NATIONAL DESIGNATIONS (see Map 4 over)

9.4 Areas of Special Scientific Interest (ASSIs):

Twenty five ASSIs intersect the study area;

- Ballycastle Coalfield
- Breen Wood
- Capecastle
- Carey Valley
- Carrick-a-rede
- Castle Point
- Church Bay
- Cloghastucan
- Fairhead and Murlough Bay
- Galboly
- Garron Plateau
- Giants Causeway and Dunseverick
- Glenariff
- Glenballyemon River
- Rathlin Island – Ballygill North
- Rathlin Island - Kebble
- Rathlin Island – Kinramer South
- Rathlin Island - Coast
- Rathlin Island – Ballycarry
- Sheep Island
- Slievanorra and Croghan
- Tievebulliagh
- Torr Head
- Tow River Wood
- White Park Bay

9.5 Areas of outstanding Natural Beauty (AONBs);

Two AONBs intersect the study area;

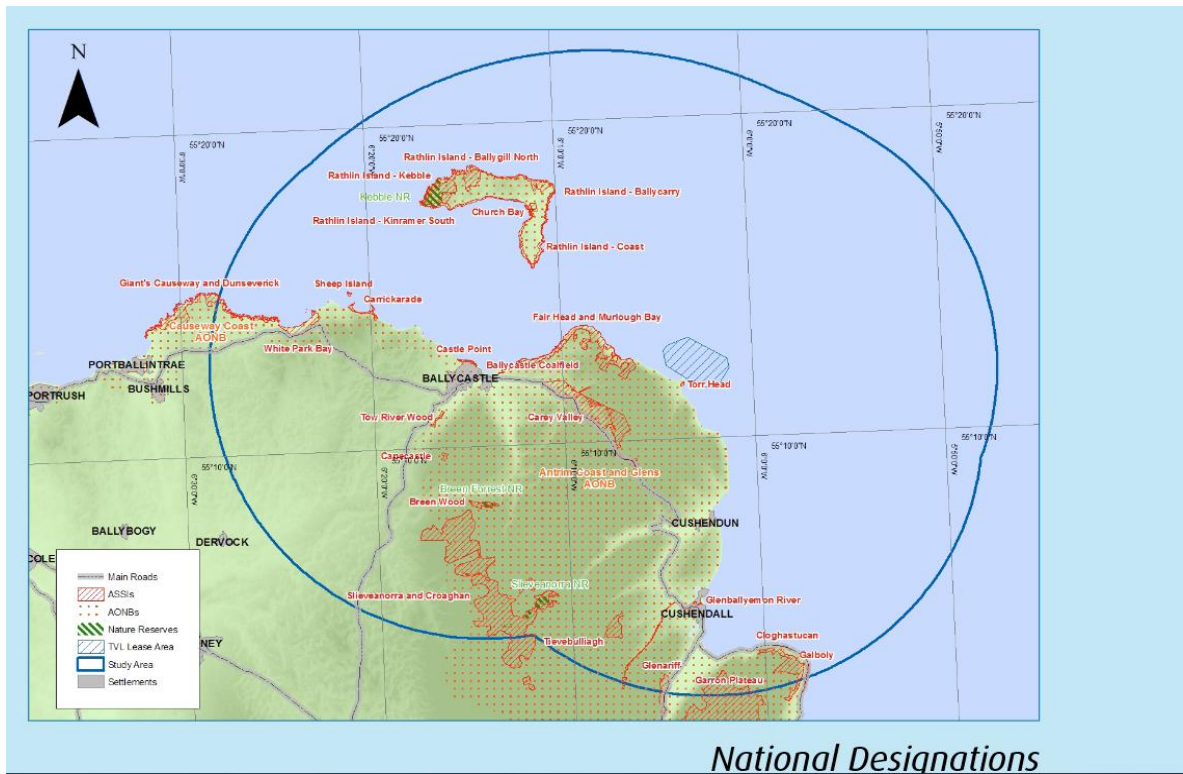
- Antrim Coast & Glens
- Causeway Coast & Glens (partial)

9.6 Nature Reserves (NRs):

Three Nature Reserves intersect the study area;

- Breen Oakwood
- Keeble
- Slievanorra Forest

Map 4: National Designations



10.0 Environmental Impact Assessment (EIA)

10.1 The EIA, which was submitted on a “worst case scenario” basis, covers only the **offshore** component of the project (Part 1) which addresses the following;

- Benthic & Intertidal Ecology;
- Coastal Processes & Seabed Conditions;
- Marine Archaeology & Cultural Heritage;
- Fish Ecology;
- Commercial Fisheries;
- Ornithology;
- Marine Mammals & Megafauna;
- Underwater Sound;
- Socio Economics;
- Shipping & Navigation;
- Water;
- Air Quality & Climate;
- Seascape, Landscape & Visual;
- Habitat Regulations Assessment; and
- Cumulative & In-combination Impacts

10.2 The potential effects of the **offshore** components of the Project on sites of European Conservation importance (Natura sites) have been assessed through a Habitats Regulations Assessment (HRA) carried out in line with the requirements of the Habitats Directive and the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995.

10.3 Although the information collated during the EIA has informed the HRA, each assessment is a separate process carried out under different legislation. Results from the HRA are presented in the very detailed HRA Report which has been submitted with the Environmental Statement (ES) for the **offshore** components of the Project to provide information for an Appropriate Assessment to be undertaken.

10.4 Screening will also be carried out as part of the HRA process to determine whether there is potential for the **onshore** Project to have any adverse effects on a Natura site.

10.5 Table 1 (over) details the main features of each of the above listed environments and the likely significant impacts on these as a result of the project (if any) as well as mitigation measures and further studies that may be required.

Table 1: Likely Significant Impacts as a result of the offshore Project

Environment	Main features of the environment	Likely Significant Impact of the “off shore” component of the Project on the features
Benthic and intertidal ecology	<p>Project area: exposed bedrock boulders and cobbles</p> <p>Export cable area: more variable seabed, inc bedrock, coarse gravels, sandy gravels and small areas of megaripples.</p> <p>Diverse range of benthic organisms on the faunal turf covering the rocks and boulders. Starfish, sea urchins and sea cucumbers also.</p>	<p>Overall there are predicted to be no significant impacts.</p>
Marine mammals	<p>Project area: 15 species of whale & dolphin (not regular visitors). Harbour Porpoise most common. Bottlenose Dolphin, Grey and Harbour Seals also recorded (low numbers) – all of which are features of the Special Area of Conservation (SAC). Minke Whale (low numbers).</p>	<p>Overall there are predicted to be no significant impacts. TLV does acknowledge lack of evidence /uncertainty around potential impacts from vessels/collision with operating turbines – need to implement an adaptive marine mammal monitoring programme to confirm predictions. To be developed in consultation with the regulator and other relevant stakeholders. If impacts from vessels cannot be ruled out then appropriate mitigation to be put in place to ensure significant impacts do not occur.</p>
Ornithology	<p>Project area: 24 species of seabird recorded, most in low numbers. Guillemot & Razorbill most frequently recorded (diving to below 8m depths). Rathlin Island SPA & Sheep Island SPA within vicinity.</p> <p>None of the birds which are a qualifying interest in the Antrim Hills SPA were recorded at the Project site.</p>	<p>All potential impacts on seabirds during installation and diving birds during operation are concluded to be not significant.</p> <p>Also concluded that the Antrim Hills SPA would not be affected by the project.</p>
Fish and shellfish ecology	<p>A range of fish & shellfish occur in the project area and its surrounding waters. Some are critically endangered (Cod) and</p>	<p>All impacts on fish and shellfish were assessed to be not significant.</p>

	<p>protected both international and UK level.</p> <p>Project area lies within a spawning ground for Sprat and nursery grounds for various species. Potential for crab and lobster also to be present. Glendun River (9km to south) is used by migratory Atlantic Salmon and Sea Trout. Nearest European Sites for Atlantic Salmon are River Foyle & River Roe, approx. 74km and 84km respectively from the Project area.</p>	<p>Fatal Salmon collision assessed as very low. Impact on migratory salmon assessed to be not significant.</p> <p>Electromagnetic Field (EMF) impacts on fish and shellfish considered not significant.</p>
<p>Commercial fisheries</p>	<p>Crab & Lobster Fisheries and Portaleen Salmon fishery</p>	<p>Safety zones will be required when installing the turbines (500m radius). Fishing vessels prohibited from the area during this time – as only temporary displacement of fishermen from fishing grounds impact assessed as not significant.</p> <p>Potential for significant impact on local fisheries due to long term displacement of crab and lobster fishing grounds and could cover entire project area. However, given the small area needed for the turbines it may reduce the potential for any significant impacts.</p> <p>Where genuine financial loss can be demonstrated compensation will be considered.</p> <p>Continued consultation will occur with Fishing Liaison Officer, inc installation and operation phases.</p> <p>Portaleen Salmon Fishery – any impact on salmon likely to be temporary therefore considered not significant.</p> <p>NB: The Fishery was not operational at the time of the study however it now appears to be. TVL will liaise with the owner and where genuine financial loss</p>

		can be demonstrated compensation will be considered.
Coastal processes and seabed conditions	<p>Project area: exposed bedrock boulders and cobbles. Average water depth 60m (ranges from 35m to 110m)</p> <p>Export cable area: more variable seabed, inc bedrock, coarse gravels, sandy gravels and small areas of megaripples. Water depths increase steadily from the coastline down to a depth of approx. 50m at the edge of the Project area.</p> <p>Coastline: rocky cliffs interspersed with occasional headland bays and small beaches.</p> <p>Project area is sheltered by the mainland from waves coming from north and east.</p> <p>Torr Head ASSI and Fair Head and Murlough Bay ASSI within 10km of the Project area.</p>	<p>Minor changes in current speeds as a result of the project are not likely to bring about any changes to the surrounding beaches or cliff coastline.</p> <p>All impacts to physical processes and sediment dynamics were assessed to be not significant.</p>
Marine archaeology & cultural heritage	<p>No known shipwrecks within Project area (although 2 recorded wrecking events in Project area and five in export cable area)</p>	<p>Given highly dynamic environment and hostile nature of exposed bedrock it is unlikely that any shipwreck would remain intact for any length of time.</p> <p>Series of anomalies identified from the data collected inc one outside the Project area.</p> <p>A geophysical survey will be carried out to inform detailed design and layout of the turbines and cables. If archaeological remains found there is potential for these to be impacted during installation. Proper mitigation measures focused on avoidance of the remains. Concluded that any impacts will not be significant.</p>

<p>Shipping and navigation</p>	<p>Navigation Risk Assessment (NRA) carried out.</p> <p>Maritime traffic surveyed over 2 two-week periods; one during winter 2013 the other during summer 2014.</p> <p>Hazard Review Workshop held Sept 2014.</p>	<p>All of the residual risks were assessed to be either broadly acceptable or tolerable (as low as reasonably practical with mitigation).</p> <p>With appropriate mitigation all ship and navigational impacts area assessed to be not significant.</p>
<p>Seascape, landscape and visual amenity</p>	<p>Project area lies within Torr Head Seascape Character Area (SCA); features are exposed headlands with crashing waves, sheltered bays, rocky outcrops and a strong sense of inaccessibility, remoteness and naturalness.</p> <p>Views from the coastal area immediately adjacent to the Project area are dramatic with views of Scotland in the distance.</p> <p>Antrim Coast & Glens AONB and Causeway Coast & Glens AONB (partial)</p>	<p>All offshore components will be fully submerged therefore potential impacts are assessed to be not significant.</p> <p>Given depth of turbines (at least 8m below the surface) it is unlikely that navigation aids will be required. However, this is subject to further consultation. If required the impacts are assessed to be not significant.</p>
<p>Socio-economics, tourism and recreation</p>	<p>Positive Impacts:</p> <ul style="list-style-type: none"> • NI and local workforce and supply chain. • Opportunity to establish NI offshore renewable energy industry base through synergies with similar projects. • Potential to create academic and scientific research opportunities. <p>Negative impacts: Disruption to marine tourism (sea angling, sight-seeing boat trips, diving).</p>	<p>TVL will work with local communities.</p> <p>Considered to be not significant. May be other options for marine tourism, e.g. visitors to the Project area.</p>
<p>Water and accidental events</p>	<p>No known or potential areas of contamination within the Project area.</p> <p>Significant decrease in contaminants and marine sediment levels in recent years –</p>	<p>While there is potential for a pollution event to occur, either as a result of a fuel/oil spill from a vessel during installation or release of lubricants from the turbines, the likelihood is very low.</p>

	<p>positive effect on the environment.</p> <p>No designated shellfish waters in the Project area.</p> <p>Nearest designated bathing water is at Ballycastle, approx. 11.5km from the site.</p>	<p>Industry best practice mitigation measures and management plans will further reduce/minimise potential risks.</p>
Other sea users	<ul style="list-style-type: none"> • No existing oil, gas, windfarm or aggregated dredging located in the vicinity. • Project area is located within the Offshore Frontier Licence Block awarded to Providence Resources in 2012 (Oil & Gas) (1%). • A second licence application has been submitted under Petroleum Exploration Licences – still under consideration. • Fair Head Tidal Energy Array, approx. 4km North West of the Project area. • Rathlin Island Interconnector cable runs from Ballycastle to Rathlin, approx. 11km from the Project site. • Hibernia Atlantic Telecoms Cable passes within 13km of the Project area. • Project area lies within a Military Practice Area (Torr) (0.3%) 	<p>Potential for restricted access to MOD practice and exercise areas and oil and gas exploration during all phases. Impacts not considered to be not significant given small scale of affected areas</p> <p>No significant impacts on other sea users.</p>
Potential onshore impacts	<p>Not yet designed – too early in the Project. Will be dealt with under Part 2.</p> <p>Located within the Antrim Coast & Glens AONB.</p>	<p>There may be impacts, e.g. visual amenity/character issues. Further investigations may be required.</p>
Cumulative and in-combination impacts	<p>Cumulative Impact Assessment (CIA) carried out. A list of 40 other projects (past, present and planned) to be considered for cumulative impact was agreed with DOE Marine.</p>	<p>CIA concluded (for all topics) that cumulative impacts resulting from Fair Head were considered to be not significant.</p>

	Fair Head Tidal Energy Array identified as having greatest potential for cumulative and in-combination impacts.	The overall cumulative impact of both projects was also considered to be not significant . Cumulative impact on shipping, navigation and marine mammals is considered not significant .
Wildlife licences	For marine species protected under either the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) e.g. whales, dolphins, porpoise and seals, and / or the Wildlife (Northern Ireland) Order 1985 (basking shark and seals) it is an offence to deliberately or recklessly kill, harm or disturb any of these species.	Deliberate harm to any of these species is not anticipated as part of the Project. However, inadvertent or accidental disturbance may occur if Project activities take place in the presence of these species. Requirements for a Wildlife Licence with regard to potential disturbance to any of these species during all stages of the Project will be discussed through consultation with the DoENI Marine Division

11.0 Environmental Management Plan (EMP)

11.1 EIA, including consultation with stakeholders, is an iterative process that will continue beyond ES submission. The primary mechanism for ensuring that the environmental assessment continues and that all environmental issues are addressed throughout the lifetime of the Project is through the Project Environmental Management Plan (EMP) which will be implemented as part of the overall Operational Management System for the Project.

11.2 The EMP will provide the overarching framework for on-site environmental management for the protection of environmental interests. It will be a working document which details consent conditions, the commitments outlined in the ES and compliance monitoring requirements. It will also highlight the parties that are responsible for the implementation of the contents of the EMP.

11.3 The EMP will be developed and implemented in agreement with the relevant stakeholders, including the DoENI Marine Division and their statutory advisors following a successful award of Project consents. This is necessary to ensure that all ES mitigation commitments, consent conditions and environmental monitoring requirements are implemented as required.

12.0 Marine Conservation Zones (MCZs)

12.1 The Department of the Environment (DOE) has proposed four new NI Marine Conservation Zones (MCZs), two of which lie within this Borough:

Rathlin Island

12.2 The proposed MCZ for Rathlin Island overlaps the existing Marine Special Protection Area (SPA) and Special Area of Conservation (SAC) with a large extension to the north of the island and a smaller extended area to the south west of Church Bay.

12.3 The Rathlin MCZ has been proposed for the following features:

- **Deep-sea bed**
- **The Black Guillemot**
- **Geological/geomorphological features indicating past change in relative sea level (Submerged lagoons and sea arches)**

Waterfoot

12.4 Waterfoot proposed MCZ is located in the Bay just offshore from the village of Waterfoot. The seabed in this proposed MCZ is mostly sand and gravelly sandy sediments. Waterfoot has been proposed as a MCZ for the following habitat feature:

- **Subtidal (sublittoral) sand with subtidal seagrass beds (*Zostera marina*).**

12.5 The MCZs lie within the overall study area for the Project, however none lie directly within the Project area itself (where the turbines will be located).

12.6 A DOE officer has advised that these proposed MCZs would not have been taken into account in the submitted Environmental Impact Assessment. Further analysis of the project will need to consider these proposed zones. However, as the sites are not European designations they do not need to be considered under the HRA.