

*'A New Planning and Consent Architecture  
for Development in the Marine Area'*

**MRIA Submission**

February 28<sup>th</sup> 2013



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## 1. Marine Renewables Industry Association

The Marine Renewables Industry Association (MRIA) represents all of the main interests on the island of Ireland engaged in wave and tidal energy<sup>1</sup>.

The Association includes firms engaged in device development and manufacture (e.g. Ocean Energy, Open Hydro and Aquamarine Power), utilities and site developers (e.g. ESB, Bord Gáis), professional firms and consultants (e.g. Arup, Arthur Cox Solicitors), R & D businesses (e.g. IMERC), supply chain activities (e.g. Port of Cork, Harland and Wolff Heavy Industries) and academic researchers. The Association is an all-island body. The relevant government agencies on the island sit on the Association's Council as observers.

It should be noted that the Association focuses on wave and tidal technology. Reference is also made, however, in this Submission to offshore wind (the other component of 'marine renewables') as it is inextricably linked to wave and tidal for consenting purposes.

## 2. Policy Landscape

### 2.1 Preparing for the Future

Ocean energy is an emerging technology. Wave and tidal devices are still at the experimental stage – particularly wave technology - and the consensus among experts is that the industry is still some time away from technical stability and maturity. The other component of marine renewables, offshore wind, is mature and turbines are being deployed in large numbers by other European countries, notably the UK. Nonetheless, the capital intensive nature of ocean energy (wave and tidal), the enormous investments that will be required by individual commercial developments at sea and the long lead times associated with the energy industry determines that both industry and Government must make preparations now. The compelling factor, the reason that this industry should be singled out for special attention, is the scale of the opportunity it presents for jobs and income creation in Ireland. This economic case for ocean energy and, indeed, offshore wind is dealt with at 10.

### 2.2 Developments in 2012

There was a steady drumbeat of helpful developments during 2012. Ocean energy has been singled out as a national priority for research and development aid<sup>2</sup>. Supporting the emergence of the industry was deemed one of a handful of strategic goals set for national energy policy to 2020<sup>3</sup>. The latest policy statement on the Green Economy, published in November 2012, also highlighted the potential importance of the sector and pledged

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<sup>1</sup> Wave + tidal energy = ocean energy (+ offshore wind) = marine renewables or marine energy

<sup>2</sup> *Report of the Research Prioritisation Steering Group*, Forfas March 2012

<sup>3</sup> *Strategy for Renewable Energy:2012-2020* Department of Communications, Energy and Natural Resources, 2012

support.<sup>4</sup> The capstone maritime policy document, *Harnessing Our Ocean Wealth*, recognises the potential of the marine renewables sector but also the need to “develop an integrated approach to marine and coastal planning and licensing in order to maximise the potential for Ireland’s ocean economy; assist with managing our resources effectively and sustainably; manage potential conflicts; and ensure harmonisation with coastal/terrestrial planning”<sup>5</sup>. Financial support was approved for the new Beaufort Laboratory at IMERC, which will house world standard tank testing and other facilities, and for new facilities at the test site for quarter-scale devices in Galway Bay.

### 2.3 Developments Required in Immediate Future

Looking to the immediate future, the Ocean Renewable Energy Development Plan<sup>6</sup> will be published this year. Funding is likely to be made available for the next stage of the planned full-scale wave test site – *Atlantic Marine Energy Test Site (AMETS)* - at Belmullet, Co Mayo. The critical new approach to consenting, the subject of this Consultation Paper, will be manifest in the form of a *Foreshore and Marine Area Development Bill*. As this document was being finalised, the Irish Government announced that it would support the huge *MAREI* R and D project which involves a multimillion euro investment over 6 years in ocean energy research<sup>7</sup>.

Two other developments are needed to complete the marine renewables policy tapestry. First, Government needs to establish a special REFIT (operating financial support) system to prompt and to render viable early demonstration arrays in wave and tidal. The Association has already suggested a modest and appropriate scheme to Government<sup>8</sup>. Second, there is a need, once the *Foreshore and Marine Area Development Bill* becomes law (which, in itself, is a major priority), to launch an arrangement to prompt wave and tidal projects e.g. a leasing round. It is noteworthy that Northern Ireland has completed its first such round and one outcome is two tidal energy projects which may amount in total to 200MW off the Antrim coast, involving a total investment of the order of €1bn.

If the Government creates the right environment for marine renewable energy and actively supports its development, Ireland can transform its economic position in two key areas.

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<sup>4</sup> *Delivering our Green Potential - Government Policy Statement on Growth and Employment in the Green Economy* Department of Jobs, Innovation and Enterprise November 2012

<sup>5</sup> *Harnessing Our Ocean Wealth An Integrated Marine Plan for Ireland*, July 2012 p33

<sup>6</sup>A commitment to deal with the OREDP and other ocean energy matters is contained in *Action Plan for Jobs 2013 +Table of Actions*, Department of Jobs, Innovation and Enterprise, 2013

<sup>7</sup> *300 Million Investment in 7 World-Class Research Centres- Minister Bruton, Minister Sherlock* Science Foundation Ireland, February 2013

<sup>8</sup> *Ireland: A Winner in Marine Renewables?* 2011. MRIA submission to Department of Communications, Energy and Natural Resources.

First, Ireland could become an *energy secure* and *exporting* country, replacing almost €6bn<sup>9</sup> in imports with up to €10bn<sup>10</sup> in exports with significant potential to revive our stalled economy. The initial export market is likely to be the UK, which faces a massive investment deficit in energy to 2020. Second, we could develop a supply chain or *enterprise* dimension - R and D, finance, legal services, education and training, operations and maintenance, high value added component design and manufacture, device assembly....the list goes on - to support world markets. The natural consequence of this development will be **substantial job creation**.

### **3. 'A New Planning and Consent Architecture for Development in the Marine Area'**

#### 3.1 The Current Regime

The foreshore, under Irish law, extends from the Mean High Water Mark to a point twelve nautical miles (c22.24 km) from this baseline- most of this area is owned by the State. The Foreshore Act, 1933 determines that a licence or a lease must be obtained from the Minister (today, the Minister for Environment, Community and Local Government) for *'carrying out of works, or placing of structures or material on, or the occupation of or removal of material from State- owned foreshore'* and, indeed, similar consent<sup>11</sup> is required in respect of privately owned foreshore. Thus, marine renewables developments on the foreshore require consent. The consenting authority is the Minister who authorises consents (the broad equivalent of 'planning permission' on land) and, in addition, acts as landlord for the foreshore e.g. the Minister issues licences and leases.

The current consenting regime is outdated and, indeed, the Department of the Environment, Community and Local Government (DECLG) website states that *'Pending roll-out of a comprehensively reformed consenting regime, the adoption of the OREDP and an agreed approach to the future release of areas of foreshore for ocean energy developments, the Department will limit the consideration of lease or license applications .....to investigative surveys and related works'*. Moreover, offshore wind technology today, and wave energy developments in the future, may be located further out to sea than the foreshore where no consenting regime designed for marine renewables is currently available.

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<sup>9</sup> €5.57bn imports of energy products in 2010, CSO External Trade statistics, 31 March 2011 ([http://www.cso.ie/releasespublications/documents/external\\_trade/2010/extrade\\_dec2010.pdf](http://www.cso.ie/releasespublications/documents/external_trade/2010/extrade_dec2010.pdf))

<sup>10</sup> Minister Eamon Ryan, Joint Oireachtas Committee on Climate Change & Energy Security, 24th March 2010 (<http://debates.oireachtas.ie/CLJ/2010/03/24/printall.asp>)

<sup>11</sup> The Consultation Paper (see footnote 12) gives a definition of development consent at p4 and this is adopted here: *'... references to 'development consent' mean the consent that is granted under the Foreshore Act or the Planning and Development Act as a result of the performance by the competent authority of screening for Environmental Impact Assessment/ Appropriate Assessment and/or a full EIA or AA'*.

### 3.2 Consultation Paper Welcomed

MRIA welcomes the publication of the Consultation Paper ‘*A New Planning and Consent Architecture for Development in the Marine Area*’ by the Department of the Environment, Community and Local Government. The Paper indicates that the foreshore consenting system will be integrated within the Planning Acts. This will be undertaken through a *Foreshore and Marine Area Development Bill*<sup>12</sup>. A well structured approach will help to overcome the reputation Ireland has gained in recent years for ‘regulatory risk’ in relation to marine renewables, *a reputation which undoubtedly hinders investment in this emerging industry*.

The MRIA wishes to place on record its appreciation of the constructive manner in which DECLG has dealt with consenting matters since it took responsibility for the area in January 2010 and to commend the Consultation Paper which captures the key issues in a succinct and clear fashion.

This Submission sets out the Association’s response to the Consultation Paper. It focuses on issues of major interest to our industry. We welcome the suggestions expressed regarding other matters such as the proposed *Atlas of the Irish Marine Environment*<sup>13</sup> and the aims for an *Integrated Coastal Zone Management* approach but we do not dwell on them here.

## **4. Principles to Underpin New Approach to Consenting and Landlord Arrangements**

### 4.1 Overarching Need

The perception among those engaged world-wide with marine renewables - ranging from developers and financiers to device manufacturers and researchers - is that Ireland has an unacceptable level of ‘regulatory risk’. Consenting in the Republic of Ireland has effectively been suspended in regard to leases pending the forthcoming Bill. The old ‘system’ is outdated and unpredictable and was a blockage to developing marine renewables off our coasts

*The overarching need of project developers and, indeed, the industry as a whole is for a clear pathway, all the way from application for a modest permit to the granting of a lease for a major development, with predictable costs and timescales. An effective system of consenting and, separately, property management is vital. ‘Marine Scotland’, for example,*

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<sup>12</sup> *A New Planning and Consent Architecture for Development in the Marine Area* Consultation Paper p2, Department of Environment, Community and Local Government 2013, referred to as the Consultation Paper.

<sup>13</sup> There should be a requirement for any publicly funded project to make data gathered available via the atlas. Examples would be bathymetry data, wave data gathered via ADCPs, species monitoring etc. It could also act as a portal for all data, even private data – e.g. to make it clear data has been gathered and can be made available at a cost / by negotiation.

has set time-targets to deliver decisions and the future Irish consenting regime should be benchmarked against these.

#### 4.2 'One- Stop Shop' for Consenting Marine Renewables

A critical component is the requirement for a 'one stop' shop for *consenting* which has two dimensions. One agency should be the principal 'port of call' concerning consenting for all developers as is the case with 'Marine Scotland' in Scotland. Second, the process should be as all-encompassing as possible e.g. one consent should cover both the offshore and the onshore aspects to a project.

It should be noted that the 'one stop shop' relates only to consenting and does not include other aspects such as grid connection, landlord functions etc. Indeed, the Consultation Paper is strong on consenting but has relatively little to say on the important 'landlord' issue- see 9. An example of a true 'one stop shop' is the Danish Energy Agency, set up in 1975, which works within strong co-ordination agreements with other relevant agencies and bodies. Such an approach would be desirable in Ireland but, to be practical, it must be listed as an aspiration to be dealt with in the future.

#### 4.3 Robust Assessment

All applications for licences and leases should be judged on a robust basis, regardless of whether the Government opts for a system based on an 'open call' (i.e. proponents seek licenses anywhere at any time) or opts for the more conventional practice – supported by MRIA - of a so- called 'leasing round' (i.e. proponents must make applications within a fixed time-scale, perhaps in competition with one another and perhaps in relation to a specific zone off the coast)...or some mix of the two approaches. This robust process should include performance milestones for successful proponents and be underpinned by the principle of 'use it or lose it'

#### 4.4 Capacity to Deliver

Assessment of applications should be made on the basis of the proponent's ability to deliver a fully consented site; their access to viable technology; a strong development strategy; and the firm intent and resources to develop, construct and operate a marine renewables site.

#### 4.5 Support for Demonstrations of New Technology

There should be leeway given for applications for small, demonstration developments to encourage the establishment and growth in Ireland of emerging marine renewables technology. **It is noteworthy that the Consultation Paper does not signal its support for the development of ocean energy – a potential huge source of new jobs in the medium term and an explicit priority under government policy (see 2.) – by way of special supportive arrangements for this infant industry.**

Part of the licence/lease fees arising from the marine renewables industry could be used to **support research** (e.g. into the environmental aspects to marine renewables). The precedent already exists – in the Department of Communications, Energy and Natural Resources - with the hydrocarbons industry where, under the *Petroleum Exploration and Production Promotion and Support* (PEPPS), at least two programmes are supported – *Irish Shelf Petroleum Study Group* (ISPSG) and the *Expanded Offshore Support Programme* (EOSG).

#### 4.6 State Response to New Procedure

The State response and approach to the new consenting arrangements must be characterised by fairness, transparency, competence and backed up by a performance culture which aims to give proponents decisions within challenging time-scales

The consenting architecture of the future must satisfy three needs overall: the need for a robust and predictable legal process; the requirement that various stakeholder interests are addressed in fair manner; and the requirement that it should act as a source of competitive advantage for economic development purposes in terms of transparency, speed, predictability and cost.

### **5. Core Issues in Consultative Document**

There are four core issues in ‘*A New Planning and Consenting Architecture for Development in the Marine Area*’ for marine renewables. First, how should the Bill, which will follow the Consultation Paper, link the Foreshore area with the Continental Shelf and the Exclusive Economic Zone (200nm), either through integration of all three zones for consenting etc purposes or through some form of alignment between them (for marine renewables applications)? Second, what criteria should apply in consenting marine renewables and which process should be followed? Third, which is the appropriate authority to deliver consenting, ranging from a central government model to one which involves significant devolution to local authorities? Finally, what should the future property management (e.g. licences and leases) of the State’s offshore territories look like?

Each of these matters is treated in turn below.

### **6. Proposed Marine Area**

#### 6.1 Zones Offshore

There are three important zones off the coast and each of them confers different rights on the State to regulate activities in those zones - there are two further areas that are not of direct interest to marine renewables - *Contiguous Zones* where a coastal State has enforcement jurisdiction out to 24 miles (c44.48km) and *Internal Waters* where the State has full jurisdiction and is already subsumed within the existing definition of foreshore.

The first zone of relevance is the *Territorial Sea* (TS): this is the traditional 'foreshore' and includes the shore and seabed from the Mean High Water Mark (MHW) to the limit of 12 nautical miles (c22.24km). The State has territorial sovereignty (under the UN Convention on Law of the Sea), subject to the 'right of innocent passage'.

However, there is a difficulty with the position of the MHW on maps. Specifically, the MHW is taken to be that described by the historic Ordnance Survey maps, produced over a century ago. The ambiguity associated with interpreting the maps can lead to conflicts around planning decisions in the coastal zone. This has potential consequences for device developers, particularly those that require consents in areas that have experienced significant geomorphologic change since the original mapping was conducted. **The new Bill must address this issue<sup>14</sup>.**

Next is the *Exclusive Economic Zone* (EEZ) which runs from 12 nautical miles (c22.24km) to 200 nautical miles (370.6km): a coastal State has sovereign rights for economic development activities subject to international law including fisheries (although there is a strong EU dimension to this), renewable energy, marine environment protection, underwater cultural heritage and marine scientific research.

Finally, there is the *Continental Shelf* (CS) and it extends from 200 nautical miles (370.6km) to 350 nautical miles (c648.5 km) or to the end of the topographical continental shelf, whichever is shorter. A coastal State has sovereign rights for exploring and exploiting natural resources on the Continental Shelf. Currently, the Irish State only regulates hydrocarbon development on it although this could be extended to include mineral resources, non-living resources and sedentary species. It should be noted that Ireland has submitted three claims to the *Commission on the Limits of the Continental Shelf* (CLCS). Two of these have been agreed while the third encompasses an area towards Rockall Hatton and extends almost 600 nautical miles (c1,112 km) into the Atlantic. It has not been adjudicated yet as it is subject to competing claims by Iceland and by the Faeroes.

The key governing legislation for these areas is the Foreshore Act, 1933, the Continental Shelf Act, 1968, and the Sea Fisheries and Maritime Jurisdiction Act, 2006.

One anomaly that needs to be borne in mind is that Ireland has no delimitation agreement with either the UK or with France on fishery limits, EEZ limits or TS limits off the eastern part of the country. It is understood that the 1988 Ireland-UK Continental Shelf Delimitation Agreement forms the boundary in day to day practice.

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<sup>14</sup> McKenna, J., O'Hagan, A. M., MacLeod, M.J., Power, J. and Cooper, J.A.G. 2003. *Obsolete maps and coastal management: case studies from northwest Ireland*. Coastal Management 31(3) pp.229–246.

The Consultation Paper seeks views on whether the forthcoming Bill should focus on integrating the consent regime for all three areas (collectively, the 'Marine Area') or whether it should at least 'align' the proposed reform of foreshore consenting with the regimes prevailing in the EEZ and the Continental Shelf.

### 6.2 Need for Legislation

The current state of *wave* technology dictates that a consenting and planning regime that is confined to the Territorial Sea would probably meet that industry's needs into the next decade<sup>15</sup>. However, it would exclude offshore wind which already is being located well offshore (e.g. in the North Sea and in the Irish Sea) and would almost certainly require further legislative changes within five- ten years to accommodate the likelihood that wave energy technology will be deployable well off the coast. To be practical, *legislation is needed now to protect the State's interest in renewable energy resources in the sea areas under Ireland's potential jurisdiction outside of the Territorial Sea...as well as to give the marine renewables industry a long term regulatory framework for development.*

### 6.3 Marine Area Options

There are several potential benefits from the wider ambition i.e. to create a Marine Area. First, the inclusion of the EEZ within the Marine Area is in line with international moves towards integrated marine governance (e.g. Natura 2000, Marine Strategy Framework Directive etc). Second, the 'clustering' of developments from different technologies (e.g. ocean energy, hydrocarbons) beneath one legislative framework would undoubtedly be helpful to maturing technologies as there is scope to share information, costs etc. Overall, MRIA prefers a single integrated system i.e. a full Marine Area despite likely difficulties, of which three are outlined below.

1. The issue of delimitation (e.g. on the eastern side of the country) already referred to, is a complication. It would be impractical to confine the Marine Area, and its underlying legislation, to the western seaboard. However, lack of delimitation may not be an insurmountable issue as pragmatic decisions, practical 'work arounds', have already been taken in respect of other circumstances. The Mean High Water Mark issue outlined at 6.1 must, however, be tackled.
2. There is also the complication of the Continental Shelf as renewable energy is not generally considered as a natural resource of the seabed and subsoil - hydrocarbons which arise from the Continental Shelf are regulated under a separate regime by the Department of Communications, Energy and Natural Resources, a regime that is regarded as *ineffective and flawed* by the hydrocarbons industry<sup>16</sup>.

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<sup>15</sup> Tidal developments will normally be located within the Territorial Sea

<sup>16</sup> See, for example, *Ireland's Offshore Potential* ICONET/CMRC Conference, NMCI, 25<sup>TH</sup> November 2011 by Fergus Cahill, Chairman of the Irish Offshore Operators Association. A copy is with the Chairman of MRIA.

3. The Association is also concerned that the lack of time and (scarce) senior civil service resources required in developing a solution to these and other issues may delay progress in consenting which is overdue and badly needed.

#### 6.4 MRiA Supports Integrated Marine Area

**Nonetheless, the MRiA welcomes and firmly supports the ambition to create an integrated Marine Area driven by national and regional marine spatial plans and urges that the resources – including senior officials’ time, Ministerial engagement and parliamentary time – is made available to build a robust solution within the near future.**

As a second best alternative, the Association suggests that a two stage process be adopted. First, an initial Act would deal with all aspects of the foreshore and confine itself beyond the foreshore to consenting marine renewables- wind, wave and tidal. A second Bill, at a later stage, could fill in the framework and provide for an integrated Marine Area, perhaps as part of a broader marine planning legislative effort implied in the Consultation Paper at 1.4. However, it is 80 years since the last occasion on which consenting was seriously tackled by legislators and, given this bad precedent, there is every possibility that the second Bill referred to would not arise until the next century!

### **7. Criteria and Process for Consenting**

#### 7.1 Criteria for Consenting

The Consultation Document states that:

*‘The overall criteria against which such a (strategic) development process would operate would be proper planning and sustainable development. In addition to such requirements as compliance with environmental and Natura regulations, conditions that might apply to development consent on the foreshore could include, therefore, the following: navigation and human safety; protection of fishery resources and protection of architectural heritage. The public participation and stakeholder consultation would operate on the same basis as applies under the existing provisions of the Planning and Development (Strategic Infrastructure) Act, 2006’ (4.1.1.a, p6)*

MRiA believes that this approach should **take cognisance of Government policy** (e.g. OREDP) which underlies the development of marine renewables. We recognise that this may be difficult to provide for in law but the Association is concerned that, without this recognition, the consenting body will not have the freedom to allow developments which have a modest impact on ecology, navigation and safety, fishing or archaeology....or to provide for a balance between all requirements.

The Association also believes that it is important to acknowledge, in the conditions, the role of a **marine spatial plan**, which encourages proposals in certain areas and discourages them in others. This provides a connection to the significant work already undertaken in the

*Strategic Environmental Assessment for Marine Renewables (2009)*<sup>17</sup>, informing strategic planning. The MRIA has set out a comprehensive case for *Initial Development Zones*<sup>18</sup> which would concentrate initial developments and make best use of limited resources during the formative years of the wave industry in particular.

Furthermore, the new consenting approach should dictate that the strategic consenting process leads to 'calls' or 'gates' (which may be on a regular, rolling basis) under which licenses and leases are granted. The possible process set out at 4.1.1.a of the Consultation Paper could be interpreted as supporting the adoption of a 'first come first served' system which could mobilise spurious applications. These could not easily be excluded in preference to non-spurious applications from bone fide developers at the same locations. This matter is referred to further at 7.2 and at 9.

### 7.2 Procedure for Consenting

The Consultation Paper sets out at 4.1.1 a view on how the *procedural* aspect to the new system might work and it seems to be based on the assumption that the Strategic delivery option (Option 1 at 8. below) would be chosen. The suggested procedure mixes together both consenting and property development/landlord matters. Our comments on the various points are set out in SMALL CAPS below:

- 'The proponent of the project applies for a lease/licence option from the State in respect of the foreshore portion of the project';
  - *PRESUMABLY THE DEPARTMENT OF ENVIRONMENT, COMMUNITY AND LOCAL GOVERNMENT IS THE FIRST 'PORT OF CALL' FOR ALL PROPOSALS?*
- 'the Minister conducts a screening review to determine if the area proposed for development has already been leased/licensed and if there are other factors that may impact on the grant of such an option';
  - *WE WOULD ENCOURAGE THE DEPARTMENT TO MAKE OUT A 'CRITERIA BASED' METHOD FOR SCREENING APPLICATIONS, INCLUDING THE FINANCIAL STRENGTH OF PROPONENTS AND THE NATURE OF THE PROPOSED PROJECT SO AS TO EXCLUDE SPURIOUS APPLICATIONS THAT WOULD OTHERWISE 'LAND BANK' AREAS.*
- 'if approved, the Minister grants the proponent a conditional interest (HOW DOES THIS DIFFER FROM A LICENCE?), in the form of a lease/licence option, in the area specified and project identified, which expires after a fixed period unless the proponent submits a planning application for all elements of the project (terrestrial/offshore) to An Bord Pleanála';

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<sup>17</sup> *Strategic Environmental Assessment (SEA) of the Offshore Renewable Energy Development Plan (OREDP) in the Republic of Ireland* Environmental Report Volume 2: Main Report. SEAI, AECOM, Metoc and CMRC. Sustainable Energy Authority of Ireland, 2010, Available at: [http://www.dcenr.gov.ie/NR/rdonlyres/060EEAC8-B8D4-4D94-951E-91B2CF970AFA/0/OREDP\\_SEA\\_ER\\_FINALForWeb.pdf](http://www.dcenr.gov.ie/NR/rdonlyres/060EEAC8-B8D4-4D94-951E-91B2CF970AFA/0/OREDP_SEA_ER_FINALForWeb.pdf)

<sup>18</sup> *White Paper on Initial Development Zones* MRIA, August 2010. Also, see *White Paper on Foreshore Licensing and Leasing for Marine Renewables Projects*, MRIA August 2009. Both Papers are available at [www.mria.ie](http://www.mria.ie).

- PLEASE MAKE CLEAR WHETHER THIS IS AN EXCLUSIVE LICENCE. ARE OTHER DEVELOPERS ALSO ABLE TO INVEST IN THE SAME SITE? THIS WOULD LIKELY ENCOURAGE ‘CORNER CUTTING’ AS COMPETING DEVELOPERS ATTEMPT TO RACE TO MAKE AN APPLICATION FIRST AND REDEEM THE COST OF THEIR CONSENTING WORK;
- PLEASE MAKE CLEAR ALSO WHAT TIME PERIOD IS LIKELY TO BE OFFERED FOR A DEVELOPER TO ACHIEVE CONSENT, AND WHAT EXEMPTIONS WOULD BE ALLOWED (E.G. MATTERS OUTSIDE OF THE DEVELOPER’S CONTROL – SUCH AS GRID ACCESS);
- WE WOULD STRONGLY ENCOURAGE THE DEPARTMENT TO CONSIDER RESERVING THE POWERS TO WITHDRAW A LICENCE, SO THAT DEVELOPERS ARE REQUIRED TO HIT GENUINE DEVELOPMENT MILESTONES DURING THIS PERIOD. THIS WOULD DISCOURAGE “DEVELOPERS” FROM LAND BANKING;
- WE WOULD ALSO ENCOURAGE THE DEPARTMENT TO MAKE CLEAR THAT AN APPLICATION FOR CONSENT IS NOT SUFFICIENT TO SECURE A SITE, THAT ACTUAL CONSENT IS REQUIRED TO ESTABLISH ANY RIGHTS.
- ‘the proponent of the project would also engage in pre-application consultations with the Strategic Infrastructure Division of An Bord Pleanála on the full project, including both terrestrial and foreshore elements’;
- ‘a scoping request (which will remain optional BUT WHICH MAY BECOME MANDATORY IF THE PROPOSED EIA DIRECTIVE [COM (2012) 628 FINAL] BECOMES LAW) will be for all elements of the project, as above’;
- ‘the proponent of the project will submit an application and Environmental Impact Statement / Natura Impact Statement for the whole project (terrestrial and offshore)’;
  - PLEASE MAKE CLEAR WHO THIS APPLICATION IS MADE TO. WILL ABP BE THE CONSENTING AUTHORITY CAPABLE OF MAKING DETERMINATIONS BASED ON EIS AND AA?
  - WHAT MECHANISMS WILL BE INTRODUCED TO ENSURE EFFECTIVE AND EFFICIENT ENGAGEMENT WITH CONSERVATION AND DESIGNATED SITE TYPE ISSUES? THIS IS A KEY POINT AND THESE ISSUES ARE ALREADY A SOURCE OF DIFFICULTY FOR THE MARINE RENEWABLES INDUSTRY IN SCOTLAND- SEE 7.3
- ‘the public and prescribed body consultations and oral hearing, as applicable, will be for the whole project’;
  - CLARIFICATION IS NEEDED ON THE TERM ‘WHOLE PROJECT’ – DOES THIS INCLUDE THE ELECTRICAL/GRID ELEMENTS OR MERELY THE FORESHORE AND LAND-BASED ELEMENTS?

The role of ocean energy in ‘*Harvesting Our Ocean Wealth*’ is unlike offshore wind or other established development options. Ocean energy projects will remain loss-making for years to come. Sustained industry and public funding will be used to secure the significant economic benefit arising in the 2020’s and beyond.

Therefore, the MRIA is concerned about the likely cost and lead-time of An Bord Pleanála (ABP) making consent determinations. If ABP anticipate fees in the order of €0.25m to process consent applications, then early stage ocean energy projects from this infant industry will be encouraged to invest in jurisdictions with ‘friendlier’ consenting processes

and the Irish Government's policy aims will not be achieved. The cost of seeking consent must be commensurate with the probability of securing the site and executing the project.

The questions posed at 4.1.1 in the Paper concerning sequencing of consent and property rights and, second, the sufficiencies of the license/lease option are dealt with at 9.

### 7.3 Precautionary Principle-The Scottish Experience

The MRIA is generally supportive of the Scottish approach to marine renewables including the consenting system there.

The experience to date in Scotland points to a number of lessons for Ireland - many of these are positive and raised elsewhere in this Submission e.g. the benefits of a 'one-stop shop'. There are a number of negative lessons, however, to take into account here: for example, there is not a widespread policy or consensus in Scotland on how to deal with the issue of 'Community Gain' (in effect, compensation for alleged disruption arising from developments).

The most important issue of all at the moment is the frustration being encountered by marine renewables developers in Scotland arising from the perceived disproportionate response – partly attributable to the so-called Precautionary Principle – required in regard to the Habitats Directive. In essence, developers believe that the data-gathering, cost and time involved in regard to specific species is out of all proportion to the prevalence (or lack of it!) of that species at specific locations. The Scottish experience points to the need to ensure first-rate communications and co-operation between the industry, the consenting authority and National Parks and Wildlife Service (NPWS) in Ireland.

## **8. Mechanism for Delivering Consent**

### 8.1 Options for Delivery

The Consultation Paper sets out three 'delivery' mechanisms from the perspective of marine renewables for consenting. These are tied together by a common thread: a desire to integrate the consent process in the foreshore (and beyond) into the existing planning system under the Planning and Development Acts 2000- 2012. The options from a marine renewables viewpoint are:

- Treat all marine renewables applications as Strategic and funnel them through the An Bord Pleanála (ABP) strategic infrastructure system. The Minister for Environment, Community and Local Government's role would be to act as a super-landlord e.g. to deal with initial enquiries, policy and with licenses and leases once consenting is achieved.
- Treat large scale projects as Strategic but have a modified approach for mid level cases- Modified Strategic

- Delegate the consenting function in part or wholly to Local Authorities

Marine renewables developments are strategic. Developments – wave, tidal and, indeed, offshore wind – involve massive technical risk and financial resources. Projects are complex and have both an offshore and an onshore dimension. The industry has major potential for employment and wealth creation. It is vital to get consenting right from ‘end to end’ - from legislation through the complex process of consenting to landlord arrangements. It must also be borne in mind that Ireland has a reputation internationally for regulatory risk which must be addressed.

## 8.2 Preferred, ‘Strategic’, Option

**MRIA believes that the only practical and appropriate way forward is to treat all marine renewables projects as Strategic i.e. to be dealt with under option 1. The Association believes that An Bord Pleanála is the only body which has the authority and ability to develop and to attract appropriate resources to act as consenting authority:**

- ABP is an experienced statutory body already dealing with (land-based) Strategic developments ;
- Arguably, it already has local knowledge through An Bord’s inspectorate;
- ABP can hire in expertise in relation to marine renewables’ matters although it would be best if the organisation could develop its own in- house expertise in this matter. This is a key issue as *ABP will be required to make scientific judgements about technology (wave and tidal) that is not mature and individual applications over the next five years or more will involve technology being demonstrated and tested for the first time;*
- In any event, the current *Marine Licensing Vetting Committee* system is part of the solution and should be developed into a major and low-cost source of significant expertise and placed on a statutory basis;
- Local authorities are already involved, as a statutory consultee, in the ABP process for strategic infrastructure;
- Most important of all, concentrating the consenting process in one agency with the strategic infrastructure powers and experience of ABP would reduce fragmentation, unpredictability and cost in the consenting system and generate scale in expertise;
- The focus of consenting in a ‘one stop shop’ for consenting (e.g. *Marine Scotland* and the arrangements emerging in Northern Ireland set the minimum bar) is the emerging norm and is expected by international industry.

### 8.3 Modified Strategic Option

It is not clear what is intended by the **Modified Strategic** option, option 2, entitled 'A New Consent System for Mid-Level Projects'. Would it speed applications up and reduce costs for demonstration wave or tidal arrays, for instance? In MRIA's view, it introduces unnecessary fragmentation and complexity into the system so far as marine renewables are concerned although other foreshore applications (e.g. concerning piers, coastal erosion works) should be transferred to local authorities.

An important point to be borne in mind in formulating the Bill is the early, highly expensive and complex nature of wave and tidal energy. Most projects (certainly in wave) for the next 5-10 years will be small in terms of generating capacity. It would represent a gross national error if they were to be treated outside of the strategic infrastructure system and the reasoning for this is set out both at 8.2 and 8.4. One particular point is that the consenting authority will need access to scientific expertise and this is unlikely to be developed if it is scattered around local authorities. The 'learning' which ABP will do in wave and tidal in the next few years will serve the State well when ocean energy reaches technical and commercial maturity.

If the Modified Strategic option is adopted, then the EIA is an appropriate threshold by which to guide whether a project is within or beyond the scope of a local authority but it should not be the only determinant. The Bill should make it clear whether the Department will determine during 'scoping' whether a project requires an EIA. The MRIA regard it as appropriate that, if an EIA is required, the consent should come under the scrutiny of a competent central authority- ABP - with the expert resources to make the determination.

*The decision to refer a project to ABP from a local authority should be free from local influence, and should take into account the long-term strategic value of the sea at a national and regional level. It will be important that a 'local project' with significant local backing does not disrupt other larger, strategically valuable, projects. This is particularly important when the lease option process offers exclusivity.*

### 8.4 Local Authority Option

This option- which broadly might see significant foreshore etc functions delegated to local authorities - is perhaps unclear so far as marine renewables are concerned. Does it refer only to marine renewables projects that might lie outside the scope of EIA or to all marine renewables projects?

One way or another, MRIA is opposed to option 3 whereby consenting arrangements would be delegated to local authorities..... even in a hybrid arrangement which would involve ABP dealing with the 'below the high water mark' element of applications and the local authority dealing with the matters requiring consent on the land.

The Association has reached its views even in light of the excellent relations that exist between the industry and local authorities, notably on the west coast. The issue is not the local authorities per se- their excellent staff and political representatives – but rather their individual small-scale, potential for fragmentation in decision- taking and, particularly, of course, the planning process issues which saw land- based strategic infrastructure consenting being moved to An Bord Pleanála in the first place.

- Local authorities do not have the resources or expertise to deal with complex marine renewables applications;
- There could be inconsistency in decisions between one local authority and another;
- There is a strong possibility of projects crossing (extrapolated) county boundaries and this would cause unnecessary cost and complexity, particularly in the years ahead as technology enables projects to locate far offshore;
- The strategic infrastructure approach was set up under ABP to deal with perceived weaknesses in the planning process, executed via the local authorities, to consent large on- land projects in specified categories. Exactly the same issues would apply at sea.

It has been suggested to the Association (and arguably is reflected in the Paper at 4.1.3) that local authorities could deal with marine renewables if the authorities pooled their resources and set up a central office (focused specifically on marine renewables?). It is likely that such an approach would take considerable time to establish and would be complex. Moreover, it does not address the issues of delays (e.g. arising from appeals etc) that have caused difficulty with past strategic projects dealt with under the planning system which local authorities are **required** to operate.

MRIA recommends that the Department should ensure that this (local authority) option, if adopted, does not allow ‘local interest’ energy projects to be processed outside of the central consenting process. We note, for instance, significant breakwater energy projects (which are physically connected to land) would not automatically be referred to the central consenting authority.

It is our view that all marine energy projects should be processed in a consistent manner by a central authority (ABP) and not by the local authority. There is a need to address the issues posed in contiguous zones and how to ensure that there is a joined-up approach between land and sea based planning and consenting activities. Should option 3 to go-ahead, care should be taken to ensure that projects proposed on a phased basis (in an attempt to ‘stay’ with the local authority) are referred to ABP from the outset.

*A local authority- based approach will not work for marine renewables and will in practice cause wave and tidal developers to continue to focus their efforts (and investment and jobs) elsewhere, notably in the supportive environment offered by the Scottish Government.*

## **9. Property Management**

The Consultation Paper focuses on the ‘planning permission’ dimension to consenting. In this section, the Association sets out its views on the ‘property management’ or ‘landlord’ aspects.

### 9.1 Procedure

The Foreshore Act, 1933 (as amended) requires a lease or licence to be obtained from the Minister for the Environment, Community and Local Government for the carrying out of works or placement of structures on, or for the occupation of or removal of materials from, State-owned foreshore.

The procedure is a two-stage process, involving applications, from a practical marine renewables perspective, for a foreshore:

- *Licence* – to allow investigation of the site and
- *Lease* – to allow construction and operation on the site.

A foreshore licence is required to assess the suitability of the site for the intended renewable energy project. Foreshore licences are granted on a ‘first come, first served’ basis. A foreshore licence is generally granted for four years and is not normally subject to extension. Multiple applications for a foreshore licence may be accepted for the same area, with the first applicant having first rights to development i.e. ‘first come, first served’. The Association believes that this approach may have stimulated a large number of speculative applications and led to the ‘sterilisation’ of sea space by speculators with no skill-set in development.

When a licence holder is satisfied that the site is appropriate, then an application may be made for a foreshore lease for the development. The granting of the lease allows construction and operation of the development and is subject to fees and agreed terms and conditions and lasts for as long as 99 years. It should be noted that, for practical purposes, the foreshore lease process has been suspended- see 3.

The Association has suggested previously to DCELG that all outstanding, historic, ‘frozen’ consent applications should be set aside and all proponents should start again under the new system<sup>19</sup> and sketched out in the Consultation Paper.

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<sup>19</sup> This excludes applications for demonstration projects lodged by Carnegie Wave and, second, ESB (re ‘WestWave’)

## 9.2 Property Management

The Consultation Paper raises a key issue about the link between a licence and a lease:

*How can the sequencing between development consent and securing a right in the foreshore (i.e. a licence or lease) be managed in a way that supports timely and integrated decision making? Would the availability of a lease/licence option described be sufficient? (4.1.1 a, p7)*

MRIA support the proposal of a lease/license option but suggest the addition of a *Preliminary Investigation Permit* (see 9.3) arrangement. However, the effectiveness of the proposed mechanisms will be determined by the implementation, not least the criteria used, when deciding to grant a site opportunity to one developer over another. We oppose the use of 'first-come first-served' as a basis for decision-taking.

The Association offer the following observations:

- The use of Marine Spatial Planning would significantly improve the quality of decision-making to allow development for one or other use in a particular area of sea.
- It is not clear from the Consultation Paper how the new Marine Area and associated consenting process will operate within the broader Marine Spatial Planning process, an area of work that is currently being progressed by the Department of Environment, Community and Local Government.
- Maritime Spatial Planning, as an inclusive process at both national and regional level, would significantly reduce the challenge of competing demands for sea space (e.g. fishing v ocean energy).
- Ocean energy leasing rounds should be used to organise potential developers in a way that allows comparison – to find the best developer and proposed project for a particular site. Note that ocean energy is often localised – there are only so many good sites.
- The demand for Preliminary Investigation Permits -see 9.3 - should help the landlord -see 9.4 - to determine which areas should be open to leasing rounds. See also the Association's paper on *Initial Development Zones*<sup>20</sup>.
- However, while the focus should be on leasing rounds, the door should not be closed to individual applications for other areas. For example, only one developer may wish to develop a particular site as it suits their technology alone. The Crown Estate in the UK runs open calls every six months or so and they generate projects totalling c30MW on each occasion- a sizeable 'haul' at this stage of ocean energy technology.
- When deciding to invite proposals for an area, in a leasing round, the Department should consider the strategic development of the sea asset, to maximise value for the public, taking into the value of early pilot projects (<2025), the likely future value

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<sup>20</sup> White Paper on *Initial Development Zones* MRIA, August 2010. Available at [www.mria.ie](http://www.mria.ie)

of sites when technology has developed, and the interaction between projects present and future.

- A lease option should allow exclusivity for the reasonable time it takes to achieve consent and grid access. A site should not be allocated until there is a good prospect of a viable project proposal.
- A booking deposit should be used to impose a financial burden on developers, commensurate with the risk / effort to develop the site versus the value of the site once developed. The early stage of the lease options should be relatively cheap (in proportion to cost of early stage resource assessment) then escalating as certainty increases and the developer can justify costly environmental baseline data. The goal is to discourage frivolous proposals from taking good sites that would have been usefully developed for the benefit of the public by another developer.
- In 2009, MRIA published a paper on consenting and this included criteria etc which might apply to licenses and leases. A summary of the recommendations is attached as an Appendix

### 9.3 Preliminary Investigation Permits

Provision should be made for a further instrument, the *Preliminary Investigation Permit (PIP)* which fits in prior to the full licence phase of projects. This is suggested to address the need for developers to undertake non-intrusive, very early investigation on sites e.g. data gathering. It should be easy to get, inexpensive and confer no exclusivity or property rights and, also, be strictly time limited. For consistency, it should probably be a matter for ABP.

### 9.4 Landlord

Minister for Environment, Community and Local Government is, under the current procedures, both the source of consent and, also, the landlord. The landlord role receives little coverage in the Consultation Paper and, yet, it is a role of great importance. The landlord should take a strong and pro-active role (in consultation with other stakeholders) in managing the vast estate which 'belongs' to Ireland at sea- about 90% of the States territory lies in the ocean. The landlord should promote the estate to developers and act as an information portal as well as deal with licenses, leases, policy etc.

MRIA believes that the **Department of Environment, Community and Local Government should continue to be the 'landlord' and policy-maker for the foreshore and beyond**. It should be the principal point of reference on offshore property matters, and the main 'port of call', for developers. The property management issues at sea are complicated and organizational disruption should be minimised for the time being. At a later stage, once the new consenting and property management regime has settled down, it might be useful to revisit the matter and examine the scope to develop a Danish Energy Agency-type arrangement.

It is important to interpret the landlord role in a proactive way and MRIA recommends that the landlord develop a handbook on consenting etc (again, 'Marine Scotland' offers an excellent example) and also a dedicated website to support proponents.

## 9.5 Other Property Matters: Valuation and Public Participation

The practice to date (to the best of MRIA's knowledge) has been to use the Valuation Office to value foreshore sites for lease purposes. In line with the need to have a transparent, efficient and predictable system, it is recommended that DCELG enters into a **Service Level Agreement (SLA)** to agree commercial level charges, performance targets etc – SLA's are common in other Departments e.g. Defence. Similar agreements should be reached with other bodies and agencies (including ABP) that will touch on the complex consenting process.

A question is raised in the Consultation Paper about public participation in the property management function. The public has, correctly, been involved in policy in this area at the strategic level. There was a public consultation on the overarching marine policy document, *Harnessing Our Ocean Wealth*, and the Consultation Paper provides an opportunity for all interested parties to express views on the regime that will oversee inter alia property management in our offshore estate in the future. There is no need for and, indeed, it would be disruptive to have a public consultation –outside of the consenting process overseen by An Bord Pleanála - on each site development project in regard to property management.

## **10. Ocean Energy and Ireland**

### 10.1 Scale of Opportunity

The Republic of Ireland is in the midst of an economic depression while Northern Ireland is also going through a period of economic difficulty with consequent loss of employment and income. Ireland has one-third of all of North West Europe's renewable energy resources (source: *Siemens*), including the world's most energy intensive waves and Europe's highest wind speeds. Ocean energy has the potential to make a significant employment and wealth creation impact over time. A study commissioned by the relevant State agencies on the island, SEAI and Invest Northern Ireland, on the potential economic impact of ocean energy<sup>21</sup> states that:

*There is currently sound quantitative evidence that by 2030 a fully developed island of Ireland OE sector providing a home market and feeding a global market for Renewable Energy could produce a total Net Present Value (NPV) of around €9billion and many thousands of jobs ....It is possible that an island of Ireland wave energy industry meeting the 500MW 2020 target could produce at least 1,431 additional FTE jobs and an NPV of €0.25bn, increasing to 17,000-52,000 jobs and an NPV of around €4-10bn by 2030.....Similarly a tidal industry providing 200MW of capacity by 2020 may deliver around 600 FTE jobs and an NPV of €111m, increasing to 8,500-17,000 jobs and an NPV of between 41.5-2.75bn by 2030 (SQW Executive Summary).*

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<sup>21</sup> *Economic Study for Ocean Energy Development in Ireland SQW, 2010*

The opportunity in Irish ocean energy has three possible dimensions- ENTERPRISE, ELECTRICITY EXPORT AND ENERGY SECURITY-for the purposes of this Submission. These points are dealt with briefly below (see also various other MRIA papers which are available at [www.mria.ie](http://www.mria.ie) ).

### 10.2 Enterprise

The ENTERPRISE element ranges from research and development and device manufacture to operations and maintenance, finance and legal services. This 'supply chain' faces an immediate opportunity in offshore wind in the UK which is developing rapidly into a major industry and there will be opportunities in onshore wind, at least in the home market, when the Anglo Irish 'export deal' now under active discussion comes to fruition, probably in late 2013. These prospects will give both early job and early income benefits to Ireland and will also build companies and grow their experience and their skills to capitalise on the forthcoming wave and tidal opportunity.

### 10.3 Electricity Export

All of the stakeholders in marine renewables accept that the enormous scale of the Irish resource in wave and wind (with a notable, but lesser, resource in tidal) represents a potentially huge opportunity for ELECTRICITY EXPORT via grid interconnectors. This is based on the likely emergence of an EU energy market and a Euro grid; potential export demand in the UK; the development of ocean energy technology and other factors. Moreover, large scale deployment of marine renewables devices will drive the cost of energy from the seas down as 'economies of scale' and the 'learning curve' effect kick in.

The Irish and British Governments are engaged in negotiations on a framework to enable trading in electricity between the two countries which, from the Irish perspective, will facilitate exports. In the background are several major (mostly onshore) wind-based projects at the early planning stage. All of the informal indicators point to overall Inter-Government approval of the deal by late 2013 or early 2014.

The implications for ocean energy are significant. Agreement between the two countries would allow a number of very large renewables projects to go ahead- various numbers have been speculated upon but a cumulative 12 GW (or even more) of new capacity is conceivable over the next ten years. The employment implications are very significant. More important, from an ocean energy point of view, is that exports, and export facilities, will be opened up which undoubtedly will benefit both wave and tidal when the latter reach commercial maturity and scale.

### 10.4 Energy Security

Our ocean energy resource alone could meet all of our electricity needs many times over and when combined with wind energy (which operates to a different pattern of intermittency to wave energy) will go a long way to provide Ireland with a balanced and

secure portfolio of energy inputs. ENERGY SECURITY, as the Economic and Social Research Institute (ESRI) points out in 'Aspects of Irish Energy Policy' (2005), is a high priority:

*'Ensuring a secure energy supply for the foreseeable future is of crucial importance for the health and economic welfare of the country.....by 2010 the bulk of electricity generation will depend on gas. This means that any physical disruption of energy supply could have very serious consequences.....major price shocks (to energy supplies \*) could have serious economic consequences'*

## APPENDIX

### Project Descriptions and Assessment Criteria

#### Project Description for License Applications

- Location
  - Outline of site provided in WGS84 and Irish National Grid (where possible)
- Size
  - Preliminary device layout
  - Estimate of number of devices & configuration
  - Annual energy production estimates
  - Installed capacity
- Landing points
  - Location of potential landing points
  - Description of onshore structures required
- Infrastructure
  - Estimate of vessels required during installation and operation.
  - Estimate of onshore infrastructure (road, water, telecommunications, electrical grid) which will be required during installation and operation of the site.
- Duration
  - Likely duration of project.

#### Project Description for Lease Applications

- General site description
  - A general description of the area should be provided and for the purposes of such a description applicants should cover an area up to 20 km. from the boundary of the site and the cable(s)/pipe(s) to shore.
- Location
  - The applicant should provide an outline of site area in WGS84 and Irish National Grid (where possible).
- Technology
  - The applicant should provide a detailed description of the technology which they intend to install on the site. This should include details of previous tests and installations.
  - The applicant should provide a detailed description with dimensions describing the method of securing/anchoring the technology to the seabed.
  - Expected lifetime of project

- Size
  - Device layout
  - Cable(s)/pipe(s) description and route to shore
  - Cable(s)/pipe(s) description and layout between devices
  - Estimate number of devices
  - Annual energy production estimates
  - Installed capacity
- Installation
  - The applicant should provide method of construction and installation of technology to be installed at the site.
  - Duration of construction and commissioning phase
- Operation
  - The applicant should provide a detailed description of the operation of the proposed electricity generation station.
- On-shore structures
  - The applicant should provide a detailed description of land based resources required during construction and operation phases.
- Emissions and Environmental Matters
  - The applicant should provide estimates of the quantity and type of expected residues and emissions resulting from the generating station (noise, light, vibration, chemicals, waste) during the construction, operation and decommissioning phases.
  - The applicant should provide details of plans to prevent spillage of oil or chemicals into the sea during construction and operation.
  - The applicant should provide details of plans for dealing with and containing spillages of oils or chemicals into the sea.
  - The application should contain all relevant environmental information.
- Safety
  - The applicants should provide details of plans in the event of accidents or emergencies.
  - The applicant must demonstrate its commitment to ensuring a safe working environment.
- Decommissioning
  - The applicant should provide details of plans for decommissioning and removal of structures.

## **Assessment Criteria for both License and Lease Applications**

The applicant should be assessed on their ability to develop a site to a fully consented stage according to the following criteria:

- Description of site investigation/development work to be carried out
  - The applicant must demonstrate an understanding of what work needs to be undertaken.
- Business plan & budget to deliver the site to a fully consented stage
  - The applicant must demonstrate a clear and realistic plan and budget to develop the site.
- Company finances and budget
  - The applicant must demonstrate firm access to sufficient funds to develop the site and generally demonstrate financial capacity to undertake the project in full.
- Access to technology
  - Applicants must demonstrate that they have firm access to a credible technology which they intend to deploy on the site. This must be accompanied with a detailed description of the technology.
  - The applicant's proposed site size must be within the forecast production capability of the technology supplier.
  - These requirements will apply to the Prototype Demonstration and the Early Commercial Array Demonstration categories almost by definition i.e. applicants under either heading will wish to demonstrate a particular technology.
  - However, the Commercial Deployment stage is some time away and it is likely that there will be a degree of technology fusion when it is reached i.e. developers may have access to several proven technology suppliers and may not wish to specify one of them at the Foreshore Licensing stage.
- Site development expertise
  - The applicant must demonstrate an expertise, or access to such expertise, in developing a site to the fully operational stage.
- Safety
  - The applicant must demonstrate its commitment to ensuring a safe working environment.
  - Measures designed to minimise, reduce or reverse any adverse impacts identified

**Monitoring programmes**

Detailed proposals for proposed monitoring programmes during construction, operation and decommissioning phases as identified from the EIA process.