Association of Salmon Fishery Boards

Response to the marine licence application for the Sea Generation (Kyle Rhea) tidal stream array project
March 2013

Introduction

The Association of Salmon Fishery Boards is the representative body for Scotland's 41 District Salmon Fishery Boards (DSFBs) including the River Tweed Commission (RTC), which have a statutory responsibility to protect and improve salmon and sea trout fisheries. The Association and Boards work to create the environment in which sustainable fisheries for salmon and sea trout can be enjoyed. Conservation of fish stocks, and the habitats on which they depend, is essential and many DSFB's operate riparian habitat enhancement schemes and have voluntarily adopted 'catch and release' practices, which in some cases are made mandatory by the introduction of Salmon Conservation Regulations. ASFB creates policies that seek where possible to protect wider biodiversity and our environment as well as enhancing the economic benefits for our rural economy that result from angling. An analysis completed in 2004 demonstrated that freshwater angling in Scotland results in the Scottish economy producing over £100 million worth of annual output, which supports around 2,800 jobs and generates nearly £50million in wages and self-employment into Scottish households, most of which are in rural areas.

Similar to other offshore wind projects in Scotland, we have significant concerns relating to the proposed development, particularly with regard to the uncertainty surrounding the potential negative effects on Atlantic salmon and sea trout and the integrity of a number of Special Areas of Conservation for Atlantic salmon.

As stated above, DSFBs have a statutory duty to protect and improve salmon and sea trout *fisheries.* All salmon fishing rights in Scotland (freshwater and marine) are private heritable titles. As the environmental effects of offshore technologies are uncertain, we would expect that developers should be required to remedy any negative consequences of such developments on the heritable assets and the value of those assets (including employment within the fishery) of all fishery proprietors. We therefore believe that, as a condition of consent (should such consent be granted), there should be a requirement for a formal mitigation agreement between the developer and relevant DSFBs.

Overarching Comments

1. District Salmon Fishery Boards

District Salmon Fishery Boards have a statutory obligation to protect Atlantic salmon and sea trout fisheries. The marine phases of both Atlantic salmon and sea trout have been included on the draft list of Priority Marine Features drawn together by SNH - the habitats and species of *greatest conservation importance* in inshore waters.

2. Climate Change Mitigation and Adaptation

As for many other species, climate change has been identified as a threat to Atlantic salmon. The species' developmental rate is directly related to water temperature, and increasing temperature in freshwater may result in smolts developing more rapidly and entering the ocean at a suboptimal time in relation to their planktonic food sources.

In addition, as air temperatures warm, much of the snow that feeds the river systems is expected to melt earlier. This will lead to a reduction in the flow of many rivers in the spring and summer, which will increase water temperatures further and may reduce the overall optimal habitat available to the Atlantic salmon. It is also clear that survival of salmon and sea trout during their marine migration phase has fallen over the last 40 years. Some of this reduced survival can be explained by changes in sea surface temperature and subsequent contraction of feeding grounds.

The first priority in mitigating these effects is to control atmospheric concentrations of greenhouse gases and we note that the Scottish Government has committed to meeting a stated target of 50% of Scotland's electricity demand from renewable sources by 2015. However, with further climate change inevitable in the short to medium term, attention is now focusing on the development of accommodation and adaptation strategies, through which adverse effects on species or ecosystems can be minimized. Some of the key needs with respect to developing adaptation strategies for rivers and their biodiversity were summarised by Ormerod (2009 – *Aquatic Conserv: Mar. Freshw. Ecosyst.* 19: 609–613).We would highlight the following key point in particular: *to minimize the adverse effects on river biodiversity of actions taken to mitigate climate change*.

3. Potential Negative Effects of Offshore Renewable Devices

Offshore renewable developments have the potential to directly and indirectly impact anadromous fish such as Atlantic salmon and sea trout. We would therefore expect developers to assess the potential impacts of deployed devices on such fish during the deployment, operation and decommissioning phases. Such potential impacts have been highlighted by Marine Scotland Science and could include:

- Avoidance (including exclusion from particular rivers and subsequent impacts on local populations);
- Disorientation effects that could potentially affect behaviour, susceptibility to predation or by-catch; and
- Impaired ability to locate normal feeding grounds or river of origin; and delayed migration

ASFB therefore recommend to our members that careful consideration should be given to the following activities:

i. *Subsea noise during construction*
   A recent review commissioned by SNH[1] states that 'Marine renewable energy devices that require pile driving during construction appear to be the most relevant to consider, in addition to the time scale over which pile driving is carried out, for the species under investigation'.

ii. *Subsea noise during operation*

iii. *Electromagnetic fields (EMFs) arising from cabling*
   The SNH-commissioned review (cited above) has shown that EMFs from subsea cables have the potential to interact with European eels and possibly salmonids if their migration or movement routes take them over the cables, particularly in shallow waters (<20m). Marine Scotland Science are currently undertaking a research programme which aims to investigate electro-magnetic force impacts on salmonids. We would hope to have some results from this work later in 2012. It is vital that all cables are appropriately shielded to ensure that EMF effects are below any threshold of effect for salmonids.

iv. *EMFs arising from operation of devices*
   It is important to ensure that such effects are quantified and assessed in the Environmental Statement.

v. *Disturbance or degradation of the benthic environment (including secondary effects on prey species)*
   It is important to ensure that such effects are quantified and assessed in the Environmental Statement.

vi. *Aggregation effects*
   Whilst the aggregation of prey items around physical structures might be seen as a positive effect, possible negative effects might include the associated aggregation of predators.

4. General Comments on the Application

Guidance issued by Marine Scotland Science relating to information requirements on diadromous fish of freshwater fisheries interest states that an Environmental Statement should provide information on the use of the development area by such fish and that if such information was lacking then a suitable monitoring strategy

[1] Literature review on the potential effects of electromagnetic fields and subsea noise from marine renewable energy developments on Atlantic salmon, sea trout and European eel. Available at: http://www.asfb.org.uk/wp-content/uploads/2011/06/SNH-EMF-Report1.pdf

should be devised. Indeed, Marine Scotland Science regard the monitoring undertaken at existing offshore developments such as Robin Rigg as being inadequate. We believe that the lack of meaningful monitoring in the present proposal is extremely disappointing and completely inadequate. We would emphasise that any monitoring strategies must include pre-construction monitoring in order that baseline information on salmon and sea trout movement, abundance, swimming depth, feeding behaviour etc. can be collected.

As with other applications for offshore renewable energy, the Rochdale Envelope approach is set out in the application. It must be emphasised that this approach makes it extremely difficult for stakeholders to assess the potential environmental risk as there is little detailed information on: the likely size of the scheme; the type of devices to be deployed; and the degree of confidence attached to the assessment of impacts. Our comments must therefore be viewed on that basis.

Suspended Sediments

Given the risks associated with the increased sediment concentrations it is suggested that sensitive operations should be avoided during the annual smolt migration period. This would have the additional benefit of avoiding the migration period of returning early-running adult salmon which themselves have high value.

Electromagentic fields

We are aware that Marine Scotland Science are currently undertaking a research programme which aims to investigate electro-magnetic force impacts on salmonids. Until this work is completed, we are unable to assess the relative magnitude of this impact, or relate any potential EMFs arising from the proposed development to those magnetic fields likely to initiate a behavioural response in salmonids. Having for responded to a number of proposed offshore developments it is clear that there is not a consensus between developers as to the appropriate depth to which cables should be buried. We believe that burial depth of cables should be based on research, but in the absence of definitive data we believe that **all** cables should be buried to a **minimum** depth of 1.5m, for **all** offshore renewable developments. Where cable burial is not possible due to hard substrates etc. we believe that all cables should be shielded to an equivalent depth by placing a suitable substrate on top of the cable or by some other means.

There is a clear need to assess the swimming depths of salmon and sea trout transiting the area of the wind farm in relation to the effects of EMFs from cabling. We note that the SALSEA project has shown that Atlantic salmon are capable of diving to considerable depths. In addition, Malcolm et al (2010) concluded based on research undertaken to date (Jakupsstovu, 1986; Holm et al, 2005; Starlaugsson, 1995) that in general terms salmon spend most of the time close to the surface although dives to greater depths of up to 280m have often been observed. Dives do not appear restricted to offshore areas, persisting late into the migration on the return to home waters. Early studies (Jakupsstovu, 1986) suggest an association between diving and feeding.

It is important to consider the foraging behaviour of sea trout, which we assume use the area in question. No information is presented as to the depths at which such fish forage. Sea trout are also more likely to be benthic feeders. Pemberton (1976) suggested a diel feeding pattern, with bottom feeding being greatest during the day and mid-water and surface feeding increasing between sunset and sunrise.

Noise

The assessment of noise impacts carries high uncertainty. It must be recognised that the significance of behavioural avoidance is dependent on the behaviour disrupted. For example, avoidance may be significant if it causes a migratory species to be held up or prevented from reaching areas of biological importance, e.g., spawning and feeding areas. We believe that the predicted area which salmon would avoid is significant and has the potential to at least delay smolt migration. As no information is available on smolt migration routes, we must assume that such a delay could, for example, make smolts more susceptible to predation. It must also be noted that salmonid smolts are physiologically stressed in adapting to the environmental challenge of movement between freshwater and seawater. Simultaneous challenge from noise, EMFs etc. during this transition will constitute a significant additional stressor. Stress leads to increased plasma levels of the stress hormone cortisol. Corticosteroids cause a range of secondary effects, including hydromineral imbalance and changes in

intermediary metabolism (Wendelaar Bonga, 1997)[2]. In addition, tertiary responses extend to a reduction in the immune response and reduced capacity to tolerate subsequent or additional stressors (Wendelaar Bonga, 1997).

We stress the need for information on migratory routes and habitat usage for salmonids. In the absence of such data, ASFB and DSFBs, in assessing the risks of the development to migratory fish, have no alternative but to assume that the entire run of each river will use the area under development. We note that Marine Scotland Science have previously commented that '*it needs to be categorically established which species are present on the site, and where, before the application is considered for consent*'.

Introduction of New Substrates

We are concerned that the potential for the structures to act as fish aggregation devices (FADs) could potentially be negative in the case of wild salmonids. However, if the structures do act as FADs we would be concerned that such areas may in fact represent new 'pinch points' for predation of migrating smolts and returning adults. This possibility does not appear to be considered in the application.

Monitoring and mitigation measures

As with other offshore developments, we are disappointed at the lack of salmonid-specific monitoring. We are keen to work with the developers and Marine Scotland to identify appropriate monitoring programmes. We would emphasise that any monitoring strategies must include pre-construction monitoring in order that baseline information on salmon and sea trout movement, abundance, swimming depth, feeding behaviour etc. can be collected. We are very disappointed to see that no mitigation measures are proposed. As stated above, we believe that ***all*** inter-array cabling should be buried to a minimum depth of 1.5m or have a suitable shielding material placed over them. We do not believe that there should be any exceptions to this, irrespective of the technical difficulties involved.

Conclusion

As stated above, ASFB recognises the importance of offshore renewable energy. However, the environmental statement has failed to demonstrate that the development will not adversely affect salmon and sea trout fisheries. On that basis, we have no alternative but to formally object to the proposed development, until adequate monitoring and mitigation strategies have been put in place.

It should be emphasised that we have no wish to prevent or delay the proposed development unnecessarily and we remain keen to work constructively with the developers and Marine Scotland to identify appropriate monitoring programmes which will allow us to be able to assess the acknowledged risks of this development, and other proposed developments more appropriately. We stated in our introduction that we believe that a formal mitigation agreement should be a condition of consent. In addition, there is a clear and urgent need to fund, plan and start strategic research on the movement, abundance, swimming depth, feeding behaviour etc. of salmon and sea trout in the area. Such research would clearly feed into the potential mitigation measures that might be deemed appropriate, and the conditions under which such mitigation should be enacted. Developers should be encouraged to work together to fund strategic monitoring in order to allow more certainty for all involved.

The scale of proposed offshore developments in Scottish waters represents a step-change in the exposure of marine animals of high cultural and economic significance to attendant risks. In many cases, understanding of the risks is insufficient to support proposals for mitigation even at this late stage when substantial developments are being submitted for licensing. The cumulative impact of this proposal alongside those developments already submitted or likely to follow in the near future is potentially even greater. We would therefore recommend that an expert group is set up to rapidly consider the best way forward to plug the considerable knowledge gaps that remain. It is important that the best scientific and biological talent is made available to find practicable ways to address the unresolved issues. ASFB would be very keen to constructively engage with such a group.

For further information please contact:

[redacted] | [redacted]
Tel: [redacted] | Email: [redacted]@asfb.org.uk

[2] Wendelaar Bonga, S. E. (1997). The stress response in fish. *Physiol.l Rev.* 77, 591-625.

Queiros J (Joao)

From: [redacted]@bt.com
Sent: 20 February 2013 11:30
To: Ford A (Alexander)
Subject: RE: 023/TIDE/MCT - 4: MS LOT to BT: Kyle Rhea Tital Stream Array ES Consultation

BT Radio Network Protection do not have any comments to make…….. Nil return

Thanks

Regards

[redacted]
BT TS&O -Operations Control TM, Radio Frequency Allocation & Network Protection
Tel [redacted]
[redacted]
Web: http://operate.intra.bt.com/operate

Let us know how we're doing here in SD Operations Control… Please take our 30sec Mini-Survey below

BT Internal Customers… http://formwize.intra.bt.com/99243

From: Alexander.Ford@scotland.gsi.gov.uk [mailto:Alexander.Ford@scotland.gsi.gov.uk]
Sent: 20 February 2013 11:20
To: [redacted]
Cc: radionetworkprotection G
Subject: 023/TIDE/MCT - 4: MS LOT to BT: Kyle Rhea Tital Stream Array ES Consultation

Please see attached letter

Regards

Alexander Ford
Marine Licensing Casework Officer
Marine Scotland – Marine Planning & Policy Division
Scottish Government | Marine Laboratory, PO Box 101| 375, Victoria Road | Aberdeen AB11 9DB
Tel: +44 (0)1224 295414
S/B: +44 (0)1224 876544
Fax: +44 (0)1224 295524
e. alexander.ford@scotland.gsi.gov.uk
w: http://www.scotland.gov.uk/marinescotland

****

Queiros J (Joao)

From: [redacted]@bt.com
Sent: 01 March 2013 08:11
To: MS Marine Licensing
Subject: Kyle Rhea Tidal Array Isle of Skye

Dear Sir/Madam

BT Radio Network Protection have received a letter dated 20/02/2013 from Sea Generation (Kyle Rhea) Ltd regarding theKyle Rhea Tidal Array Isle of Skye .

We have studied this Array proposal with respect to EMC and related problems to BT point-to-point microwave radio links.

The conclusion is that, the Project indicated should not cause interference to BT's current and presently planned radio networks.

Regards

[redacted]
BT TS&O -Operations Control TM, Radio Frequency Allocation & Network Protection
pp 5M CTE, Newcastle Central Tel Exch (TEL-NE), Carliol Square, Newcastle upon Tyne. NE1 1BB. Tel: [redacted]

Queiros J (Joao)

From: [redacted]@ukchamberofshipping.com>
Sent: 19 April 2013 14:54
To: Ford A (Alexander)
Subject: RE: 023/TIDE/MCT - 4: MS LOT to CoS: 1 week after reminder - Kyle Rhea Tidal Stream Array ES Consultation

Ali

Thank you for the extended deadline. Having reviewed the Environmental Statement for the above application, it appears that the proposed project is situated in an area of relatively low density commercial shipping traffic. However, we do have overall concerns regarding the potential reduction in navigable sea room and the associated increases in collision/grounding risk.

We are aware that the recreational sector in particular has significant concerns over the project and its impacts on navigational safety and we have our own concerns regarding the overall ranking of additional navigational safety risk by the developers as "tolerable (moderate)". We therefore support any calls from the recreational sector for the project to be reappraised and suggest that further consultation takes place between the developers and navigational stakeholders to seek potentially suitable adjustments to the proposals.

If Marine Scotland would like to discuss our concerns in greater detail, please do not hesitate to contact me.

Best regards

[redacted]

[redacted]
Policy Advisor
Safety & Environment

UK Chamber of Shipping
30 Park Street, London, SE1 9EQ

DD +44 (0)[redacted]
M +44 (0)[redacted]
[redacted]@ukchamberofshipping.com
www.ukchamberofshipping.com

From: Alexander.Ford@scotland.gsi.gov.uk [mailto:Alexander.Ford@scotland.gsi.gov.uk]
Sent: 15 April 2013 13:40
To: [redacted]
Subject: 023/TIDE/MCT - 4: MS LOT to CoS: 1 week after reminder - Kyle Rhea Tidal Stream Array ES Consultation

[redacted]

Thank you for responding to my email. Your request for an extension to 19th April for comments on the above application is granted.

Regards

Ali

Alexander Ford
Marine Licensing Casework Officer
Marine Scotland – Marine Planning & Policy Division
Scottish Government | Marine Laboratory, PO Box 101| 375, Victoria Road | Aberdeen AB11 9DB

Queiros J (Joao)

From: Windfarms <Windfarms@caa.co.uk>
Sent: 11 March 2013 16:51
To: Ford A (Alexander)
Subject: RE: 023/TIDE/MCT - 4: MS LOT to CAA: Kyle Rhea Tidal Stream Array ES Consultation

Ally,

Despite trying on a couple of occasions to contact SeaGen for the full details of this proposal, I have had no response. As we discussed late last week the tidal array does not project to a height above sea level and therefore the development as a whole will have no impact to aviation. However, you explained that during maintenance/construction there may be a requirement for temporary tall structures that would impact upon aviation stakeholders. Temporary structures can be notified through the means of a **Not**ice to **A**ir**m**en (NOTAM). To arrange an associated NOTAM, the developer or those responsible for the site at the time should contact the CAA's Airspace Utilisation Section [redacted] they will need an accurate location, an accurate maximum height and a completion date.

Kind regards,

[redacted]

[redacted]

Surveillance and Spectrum Management
Directorate of Airspace Policy
Civil Aviation Authority
45-59 Kingsway London WC2B 6TE
Tel: 020[redacted] Fax: 020[redacted]
[redacted]@caa.co.uk

From: Alexander.Ford@scotland.gsi.gov.uk [mailto:Alexander.Ford@scotland.gsi.gov.uk]
Sent: 20 February 2013 11:39
To: Windfarms
Subject: 023/TIDE/MCT - 4: MS LOT to CAA: Kyle Rhea Tidal Stream Array ES Consultation

Please see attached letter. I know we would normally consult CAA on windfarms only, but this tidal array does project to a height above sea level.

Regards

Alexander Ford
Marine Licensing Casework Officer
Marine Scotland – Marine Planning & Policy Division
Scottish Government | Marine Laboratory, PO Box 101| 375, Victoria Road | Aberdeen AB11 9DB
Tel: +44 (0)1224 295414
S/B: +44 (0)1224 876544
Fax: +44 (0)1224 295524

HISTORIC SCOTLAND
ALBA AOSMHOR

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

Direct Line: 0131 668 8729
Direct Fax: 0131 668 8722
Switchboard: 0131 668 8600
Urszula.Szupszynska@scotland.gsi.gov.uk

Our ref: AMN/16/H
Our Case ID: 201207438
Your ref: 023/TIDE/MCT - 4

21 March 2013

Mr Alexander Ford
Marine Scotland
Scottish Government
Marine Laboratory
Po Box 101
375 Victoria Road
ABERDEEN
AB11 9DB

By email:
ms.marinelicensing@scotland.gsi.gov.uk

Dear Mr Ford

Electricity Act 1989
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (As Amended)

Marine (Scotland) Act 2010
The Marine Works (Environmental Impact Assessment) Regulations 2007 (As Amended)
Application for Consent Under Section 36 of the Electricity Act 1989, and a Marine Licence Under Part 4 of the Marine (Scotland) Act 2010 to Construct and Operate an 8MW Tidal Stream Array at Kyle Rhea

Thank you for your letter of 20 February and the accompanying Environmental Statement (ES). For information, this letter covers our comments on the ES for our role as consultees through the Scottish Ministers under the terms of the above Regulations.

We have undertaken an appraisal of the ES and our comments concentrate on our statutory historic environment interests. That is, scheduled monuments and their setting, category A listed buildings and their setting, gardens and designed landscapes included in the Inventory, Inventory historic battlefields and designated wreck sites (Protection of Wrecks Act 1973).

We understand that the proposal is for construction and operation of four SeaGen 2MW tidal devices at Kyle Rhea, project substation located close to the shore on Skye, an export cable and inter-array cabling. We understand from section 19 *Archaeology and Cultural Heritage* of the ES that there are two nationally important heritage assets in the vicinity of the development: Bernera Barracks (Index No. 950) and Glenelg War Memorial (HB No. 7236) which will have theoretical visibility with the development. However, we are content to accept that given the distance involved (over 3km) and the scale of the project, impacts on their setting are unlikely to be significant.

HISTORIC SCOTLAND
ALBA AOSMHOR

In summary, while we have some minor concerns with the methodology used in the ES, we are content to accept its conclusions that there will be no significant adverse impacts on historic environment features within our statutory remit. Consequently, we offer no objection to the proposal.

The Highland Council's archaeological services will be able to advise on the adequacy of the assessment of the likely impacts and mitigation proposed for unrecorded and unscheduled archaeology on land, and may wish to offer comments on offshore issues. However, our Heritage Management Team Leader for Marine Archaeology would also be happy to advise on offshore matters, if required. Please contact Iona Murray on 0131 668 8932 or at: iona.murray@scotland.gsi.gov.uk.

We hope you have found these comments useful. Please do not hesitate to contact me at the above details should you wish to discuss them.

Yours sincerely

[redacted]

Urszula Szupszynska
Senior Heritage Management Officer

HSE

Health and Safety Executive

Hazardous Installations Directorate

Kirsten Laidlaw

Chemical Industries
Belford House
59 Belford Road
Edinburgh
EH4 3UE

Tel: 0131 247 2000
Fax: 0131 247 2041
kirsten.laidlaw@hse.gsi.gov.uk

http://www.hse.gov.uk/

HM Principal Inspector of Health & Safety
Dr G. A. Cook

Sea Generation (Klye Rhea) Ltd
Bristol & Bath Science Park
Dirac Crescent
Emersons Green
Bristol
BS16 7FR

Our ref: EIA/Kyle Rhea/4.2.1.1701

Date: 07 March 2013

Dear Sirs

ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED DEVELOPMENT OF A TIDAL STREAM ARRAY AT KLYE RHEA, HIGHLANDS.

Thank you for your letter of 21 February 2013, enclosing a copy of the environmental statement for the proposed development by Sea Generation Ltd at Kyle Rhea. As requested a copy of this response has been sent to the Scottish Government.

Environmental Impact Assessments are concerned with projects which are likely to have significant effects on the environment. HSE's principal concerns are the health and safety of people affected by work activities. HSE has no comments on this environmental statement.

Yours faithfully

[redacted]

Kirsten Laidlaw
Admin Support

Cc; The Scottish Government, Marine Scotland, Marine Laboratory, PO Box 101, 375 Victoria Road, Aberdeen, AB11 9DB.

marinescotland

The Scottish Government

T:+44 (0)1224 295579 F: +44 (0)1224 295524
E: MS.MarineLicensing@scotland.gsi.gov.uk

File Note

File Reference 023/TIDE?MCT - 4
Date 15 April 2013
Subject Kyle Rhea ES Consultation Response

Marine Licence	x
S.36	x

Telephone call with A Ford (MS LOT) and [redacted] (IFG)

[redacted] informed MS LOT that the Inshore Fisheries Group will respond to the ES consultation for the SeaGeneration (Kyle Rhea) Ltd. , Kyle Rhea Tidal Stream Array Application with a 'nil return'.

Ali

Maritime &
Coastguard
Agency

Navigation Safety Branch
Bay 2/04
Spring Place
105 Commercial Road
Southampton SO15 1EG
United Kingdom

Tel: + 44 (0)23 8032 9191
Fax: + 44 (0)23 8032 9204
E-mail: Graeme.Proctor@mcga.gov.uk

By Email
Alexander Ford
Marine Renewables Licensing Officer
Marine Scotland
Aberdeen
AB11 9BD

Your ref: **023/TIDE/MCT-4**

Our ref: **Kyle Rhea -MCT**

5th April 2013

APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989, AND A MARINE LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE AN 8MW TIDAL STREAM ARRAY AT KYLE RHEA.

Thank you for your letter of 20th February 2013, with respect to the application from Sea Generation (Kyle Rhea) to construct and operate 4 Marine Current Turbines at Kyle Rhea.

The MCA's remit for offshore renewable energy development is to ensure that as progress is made towards government targets for renewable energy, the safety of navigation is preserved. This response is focused on the shipping and navigation elements of the ES, primarily the Navigation Risk Assessment (NRA).

The NRA has been reviewed, and in this case MCA recommends that the application is rejected, as it is considered that the mitigation proposals and residual risk to safety of navigation cannot be reduced to a level which is considered ALARP based on the following assessment:

The development effectively reduces the navigable channel by over 50%, the nature of tidal streams in this area are such that its difficult to maintain vessel control as evidenced in feedback from the stakeholder consultation, with vessels regularly observing excessive shear in the area. This was specifically noted by [redacted]. This concern was further evidenced by vessels towing cages, in one case a company reporting verbally that they would not be able to use the passage when towing.

Automatic Identification Systems (AIS) data tracks show an unacceptable number of transits that would be impacted by the location of the turbines, this is further compounded by the swept path analysis data at NRA paragraph 7.5 which indicates that vessels tend 'always' to be swept to the West (towards the turbines), confirming concerns over shear. This shear collision risk cannot effectively be mitigated.

The NRA offers a number of mitigating circumstances that in some cases suggest the consequence of an incident would reduce from major to serious.
Under the NRA paragraph12.5 a low powered vessel or sailing vessel lists consequence as major, despite reducing frequency to remote the consequence will remain the same, risk remains high and therefore unacceptable.

Of the proposed mitigation measures identified, it is accepted that they *may* help to reduce the frequency of an incident, they will not reduce consequence, the majority are simply within the observance of good seamanship.

It is of significant concern that placing VHF as a primary mitigation measure, for both reporting and some form of traffic management system when it is clearly reported that VHF coverage is extremely poor, highlighted as 'virtually non existent' under NRA paragraph 5.8.1, although improved VHF reception is suggested it remains unclear how this could be achieved.

Provision of a Guard Vessel as a risk mitigation is also questionable in what it can achieve in this location, quoted in the NRA at paragraph at A 3.2.1 under summary of potential risk controls ".....was generally felt to be ineffective for this hazard due to the short amount of time it would take for an incident to develop".

Although re routeing traffic to the West of the island, would not be considered significant in terms of additional steaming, the increased risk of weather exposure does not readily allow this to be considered as an alternative route.

Conclusion

In light of the key facts identified, the MCA does not feel that this project can be consented as the Navigation Safety Risk remains unacceptable. Throughout the early stages of consultation and development we have made the developer aware of these concerns. The MCA objects to this proposal and therefore cannot support this application.

Graeme Proctor

marineharvest
excellence in seafood

Marine Harvest Scotland
Farms Office
Blar Mhor Industrial Estate
Fort William, PH33 7PT
Tel: +44(0)1397 70 1550
Fax: +44(0)1397 70 1174

www.marineharvest.com

FAO: Alexander Ford

Marine Scotland – Licensing Operations Team
The Scottish Government
375 Victoria Road
Aberdeen
AB11 9DB

1st April 2013

Dear Sir/Madam

Marine Harvest Scotland Limited – Objection to 023/TIDE/MCT – 4

APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989, AND A MARINE LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE AN 8MW TIDAL STREAM ARRAY AT KYLE RHEA.

Marine Harvest (Scotland) Limited is the largest seafood company in Scotland and currently operates 30 seawater farms throughout the West Coast mainland, the Isle of Skye, and the Outer Hebrides. In 2009, the company announced investment plans to grow the business to meet market demand and create more sustainable jobs in rural communities, this has already involved the operation of two new farming sites and the upgrade of equipment at many of our existing farms.

New and modified pens purchased by MHS are currently constructed at Kishorn and are towed by boat to the appropriate farming site. The vast majority of these pens are transported through Kyle Rhea and this equates to approximately 10 trips per year. These pens are typically towed in banks which can measure over 40m wide and over 300m long. For example in 2011, the company transported 54 pens through the channel in 9 separate tows.

Marine Harvest has considered the content of the Environmental Statement and wishes to object to the development because the proposed turbines will create significant navigational risk to MHS staff and equipment when towing pens. From the information provided, the company believes it will not be able to transport pens through Kyle Rhea if the tidal project goes ahead. If the route is no longer available, the company will be forced to tow equipment around the Isle of Skye and in doing so incur additional expense,

time, and exposure. These concerns are likely to be applicable to other aquaculture companies who are known to also travel through Kyle Rhea.

Kyle Rhea is also used by vessels to transport MHS fish to the harvest station at Mallaig, and to transport feed to MHS farms. From the information provided, the proposal maintains an adequate channel to the east of the turbines which will enable harvest boats to continue using Kyle Rhea. Nonetheless, the marking and lighting of this channel is still of importance and the non-technical summary suggests this still needs to be confirmed with the appropriate authorities.

If the proposed development were to go ahead, we feel it is important that the applicant confirms lighting and marking with the Northern Lighthouse Board prior to the application being decided. We are particularly interested to know how the eastern extent of the turbines will be marked/lit to prevent the undersides of larger vessels from hitting the propellers.

Whilst harvest boats should be able to maintain a route through the channel, we are still concerned the proposed development will reduce the width of the channel for other marine users. If a harvest boat is entering the channel we must be confident that there is space for other vessels to pass safely. We trust that the NLB will submit comments regarding navigational risk to other marine users.

Please do not hesitate in contacting Marine Harvest (Scotland) Limited if you have any questions or require further information.

Yours faithfully

[redacted]

Environmental Analyst

Marine Harvest (Scotland) Limited

Queiros J (Joao)

From: DIO-Safeguarding-Offshore (MULTIUSER) <DIO-Safeguarding-Offshore@defence.gsi.gov.uk>
Sent: 26 March 2013 15:17
To: Ford A (Alexander)
Cc: joseph.kidd@marineturbines.com; gemma.keenan@rhdhv.com
Subject: 20130326- 023/TIDE/MCT - 4: MS LOT to MOD: Kyle Rhea Tidal Stream Array ES Consultation-U

Alexander,

D/DIO/OS/OD (2013/026)

I can confirm that the Ministry of Defence has no objections to the applications submitted for the installation and operation of the 8MW tidal stream array at Kyle Rhea.

Regards,

[redacted]
Safeguarding Officer (Statutory & Offshore)
DIO Safeguarding

Defence Infrastructure Organisation
Kingston Road, Sutton Coldfield, West Midlands, B75 7RL

MOD telephone: [redacted] | **Telephone:** 0121 [redacted] | **Fax:** 0121 [redacted]
| **Email:** [redacted]@mod.uk | **Website:** www.mod.uk/DefenceInternet/MicroSite/DIO/WhatWeDo/Operations/ModSafeguarding.htm

---

From: Alexander.Ford@scotland.gsi.gov.uk [mailto:Alexander.Ford@scotland.gsi.gov.uk]
Sent: 20 February 2013 11:50
To: DIO-Safeguarding-Offshore (MULTIUSER)
Subject: 023/TIDE/MCT - 4: MS LOT to MOD: Kyle Rhea Tidal Stream Array ES Consultation

Please see attached letter.

Regards

Alexander Ford
Marine Licensing Casework Officer
Marine Scotland – Marine Planning & Policy Division
Scottish Government | Marine Laboratory, PO Box 101| 375, Victoria Road | Aberdeen AB11 9DB
Tel: +44 (0)1224 295414
S/B: +44 (0)1224 876544
Fax: +44 (0)1224 295524
e. alexander.ford@scotland.gsi.gov.uk
w: http://www.scotland.gov.uk/marinescotland

Queiros J (Joao)

From: Griffin S (Stuart)
Sent: 08 April 2013 09:26
To: MS Marine Licensing; Ford A (Alexander)
Subject: Kyle Rhea Tidal Turbine.

Morning Alexander

I received several comments on the Kyle Rhea Tidal Turbine application, one from Mallaig and North West Fishermen's Association and one from the Officer in Charge of one of our Marine Protection Vessels (attached) (I must apologise for not forwarding these comments before the deadline, I had to take Friday off.)

1. **MNWFA;**

Sirs,

Consultation - Kyle Rhea Tidal Stream Array

MNWFA Ltd has concerns over this proposal from a navigational point of view.

Our members have pointed out that these four turbines cover a substantial area mid-channel – constricting manoeuvrability for larger vessels given the strong tidal flows in the area.

MNWFA Ltd are not objecting to the proposal but **we do wish to stress that adequate marking and lighting are of utmost importance** should this proposal go ahead.

Yours faithfully,

[redacted], *Chairman*

Home: [redacted]

Mobile: [redacted]

MNWFA Ltd
Harbour Offices
Mallaig
Inverness-shire PH41 4QB
Tel: (Office) [redacted]
e-mail: [redacted]@btconnect.com

2. [redacted] **(Officer in Charge Marine Protection Vessel)**

Other informal conversations back up the concerns expressed above relating to navigation, and conditions should be considered to mitigate these concerns. I gave respondents the option to comment direct which is hopefully why I only received the 2 formal comments.

Regards

Stuart Griffin
Senior Fishery Officer
Marine Scotland – Compliance

Scottish Government, Fishery Office, Harbour Buildings, Mallaig, Inverness-shire PH41 4QB

Tel: +44 (0)1687 462155
Mob:+44 (0)[redacted]
Fax: +44 (0)1687 462182
e: stuart.griffin@scotland.gsi.gov.uk
w: http://www.scotland.gov.uk/marinescotland

Queiros J (Joao)

From: Ebdy J (Jim)
Sent: 11 March 2013 11:12
To: MS Marine Licensing
Cc: Griffin S (Stuart); Horsburgh S (Scott)
Subject: Kyle Rhea proposed tidal turbines.

Good morning Mr Ford

Further to your letter of 20 February (Ref 023/TIDE/MCT-4) to Mallaig Fishery Office, please see attached my representation against the proposal to construct tidal turbines in Kyle Rhea.

Regards

James Ebdy
Commanding Officer
Marine Scotland – Compliance

Scottish Government | MPV Jura

Tel: +44 (0)1224 279 004
Mob:+44 (0)7769 072 723
Fax: +44 (0)1224 279 005
e: jim.ebdy@scotland.gsi.gov.uk
w: http://www.scotland.gov.uk/marinescotland

Alexander Ford
Marine Scotland Licensing Operations Team
Marine Laboratory
375 Victoria Road
Aberdeen, AB11 9DB

Your Ref: 023/TIDE/MCT-4

Dear Mr Ford

APPLICATION FOR CONSE NT UNDER S ECTION 36 OF THE ELECTRICITY ACT 1989, AND A MARINE LICENC E UNDER PART 4 O F THE MARINE (SCOTLAND) ACT 2010 TO CONS TRUCT AND OPERAT E AN 8MW TIDAL STREAM ARRAY AT KYLE RHEA

I refer to your letter to Mallaig Fishery Offic e of 20 February 2013 and wish to make representations relating to the proposals c ontained within this application.

I have held a Certificate of Competency as Master Mariner (unlim ited) sinc e 1983 being a serving Master aboard vesse ls of v arious siz es navigating around Scotland since 1998. My current Command is an 84 metre LOA, 2181 GRT patrol vessel.

I have personally transited Kyle Rhea aboard various vessels during my career; not only as Master, but as a deck officer whilst assisting the Master to safely navigate these very confi ned wa ters. Passage planning is essential, and involves calculating not only tidal streams (between 6-8 knots) and height predictions, but als o liaison with Stornoway Coast Guard to provide a voluntary transit report. For contingen cy planning, I will defer a passage until slack water, or certai nly negligible ti dal st reams, but never during hours of darkness or poor visibi lity. Anchors are alwa ys c leared and ready for immediate use, with t he engine room on 's tandby'. As Master, I will be in charge of conning the ship, ass isted by other deck officers. It could be sai d that navigating through Ky le Rhea ca n present risks more prevalent than those encountered when berthing a ship in port.

The existence of other vessels transiti ng simultaneously naturally restricts the availability of sea-room. The seasona l K yle Rh ea ferry will r espect other vessels conducting a passage, and briefl y delay her short crossing; this

highlights the physical constraints of the narrows, and the practice of good seamanship being observed.

At the proposed site, frequent tidal overfalls and eddies occur which can affect a vessels steerage considerably. Vessels passing the proposed structures in mid channel could easily sheer with an increased risk of collision, or grounding on the eastern shore.

My vessel has an operational draft of 5.7 metres; as such, this would be critical given the rotor tip to surface clearance at MLWS is 3.8 metres. I would not by choice be navigating so close to the structures, however, in the event of a power failure aboard ship, this would be an additional risk, with the rotors breaching the hull resulting in water ingress to a catastrophic scale.

The proposal to have a single vessel transit, including Vessel Traffic Service (VTS) being established is essential. This should be maintained not only during the construction phase, but after commissioning of the structures.

The proposal to have a line of navigational buoys close to the eastern shore would be 'draft dependent'. On my ship, the only safe passage would be to remain mid-channel.

The proposal to reposition the leading lights (more correctly a 'sector light') is not advised, as this would necessarily direct shipping away from the centre of channel, towards the hazards of eastern shoreline.

The proposal to floodlight the structures would create a blinding effect for Mariners, and not advisable when navigating in such close proximity.

Tidal streams are strong and may at times constitute a hazard to vessels on passage through Kyle Rhea. Topography of the area creates violent downdrafts, which present further hazards for the Mariner whilst transiting these waters.

Should this construction be developed, I would NOT navigate my vessel through Kyle Rhea for clear safety reasons. The risk of a close quarters situation developing is very real, more so, a major incident should accidental contact be made with the rotors or collision with the structures occur.

Alternatively, should the proposed structures be sited 1.5 cables clear of the main channel, for instance 2 cables south of Cuil á Mheannain where a strong tidal stream flows also, I would have no objections.

Yours sincerely

[redacted]

Master Mariner (Certificate of Competency [redacted]
8 March 2013

Queiros J (Joao)

From: FO Portree
Sent: 28 March 2013 09:54
To: Queiros J (Joao)
Subject: FW: Kyle Rhea

Importance: High

Good Morning Joao,

Please see below the only response I have had to date on the proposed tide turbines at Kylerhea.

Kind Regards

Karen Whelton
Senior Fishery Officer
Marine Scotland – Compliance

Scottish Government | Fishery Office | Estate Office| Scorrybreac | Portree| Isle of Skye IV51 9DH

Tel: +44 (0)1478 612 038
Fax: +44 (0)1478 612 056
Mob: +44 (0)[redacted]
e: karen.whelton@scotland.gsi.gov.uk
w: http://www.scotland.gov.uk/marinescotland

><{{{(°>`·.¸¸.·´¯`·.¸><{{{(°>`·.¸¸.·´¯`·.¸><{{{(°>`·.¸¸.·´¯`·.¸><{{{(°>

From: [redacted] [mailto:[redacted]@btinternet.com]
Sent: 27 March 2013 12:04
To: FO Portree
Subject: Kyle Rhea
Importance: High

Dear Karen

I'd like to express my concern over the proposed 8MW tidal stream array at Kylerhea.

I skipper a 32ft fishing trawler and feel the positioning of these turbines will put boats at risk when navigating an already challenging area. The force of the current means that small vessels struggle to manoeuvre out of the way of others coming with the tide which isn't a problem at the moment as there's plenty of room but, given the narrowing of the channel, would be an accident waiting to happen. In general the larger vessels travel down the centre leaving ample room on the south side, which is the more manageable route for smaller vessels, but the proposed site will change this, in fact it is positioned where the larger vessels would normally navigate therefore causing the route to narrow considerably. I feel this could be extremely dangerous.

Regards

marinescotland

T:+44 (0)1224 295579 F: +44 (0)1224 295524
E: MS.MarineLicensing@scotland.gsi.gov.uk

The Scottish Government
Riaghaltas na h-Alba

LEGACY 2014
XX COMMONWEALTH GAMES
SCOTLAND

Alexander Ford
Marine Scotland
Licensing Operations Team
375 Victoria Road
Aberdeen
AB11 9DB

19 April 2013

Dear Alexander

SEGENERATION: 8MW TIDAL STREAM ARRAY AT KYLE RHEA – MARINE SCOTLAND SCIENCE COMMENTS ON ENVIRONMENTAL STATEMENT

Thank-you for your e-mail dated 20 February 2013 requesting comments from Marine Scotland Science on the above proposal.

Marine Scotland Science Advice

Marine Scotland Science (MSS) have provided comments on Ornithology, Basking Sharks, Diadromous Fish & Diadromous Fish Fisheries, Benthic Ecology, Aquaculture, Coastal Processes, Physical Processes and Commercial Fish. Our comments are as follows.

Ornithology

MSS has reviewed the ES and is concerned that the comments on ornithology provided by ourselves on 15 November 2012 have been ignored. The information is therefore presented in a manner that makes the conclusions reached by the ES difficult to corroborate.

The very perfunctory analysis of survey data carried out to date do not allow conclusions on potential impacts to be determined and additional work is therefore required. When more robust density, distribution and abundance estimates are available, where necessary increased attention should given to modelling potential encounter and collision rates with significantly more information on the modelling methods used also provided.

ES: Ornithology Chapter

11.4.27: The statement that “the array area is relatively little used by diving seabirds and underutilised compared to other parts of Kyle Rhea survey area” has not been clearly demonstrated by the results presented.

Appendix 11.1 Ornithology

Pg 4: Is the detection P assumed to be 1 across site (i.e. no change with distance from VP) and if so is this valid?

Pg 4: What were the ‘Habitat Zones’ based on- they appear to me equal division of the channel. Depth, distance from shore, tidal flow would seem to be more appropriate ‘habitats’.

Pg 7: Alongside mean values any associated errors/ confidence intervals should be presented.

Pg 10 (and subsequent Figures): error bars should be presented to allow better assessment of seasonal variation in numbers to be assessed. Does this figure include individuals on land or just those on the water? The sum of the means from the two VPs will therefore be an overestimate due to the overlap in VPs?

Pg 11: For cormorant "64% of records of diving cormorant were in the WSZ part of the sound" is this an artefact of greater detection P in WSZ due to it being closer to the VPs than the other three zones? Does the map of sightings suggest that whilst larger groups of foraging birds were observed in easterly zones, fewer individuals/ small groups were observed in this more distant area?

Pg 11: Please indicate what the statement "Assuming that about one third of birds in the region are non-breeding immature birds" is based on.

Pg 12: Error bars on the shag plot would provide greater clarity over what evidence for a reduction in birds during June/ July exists.

Pg 12 & Map 6: Has detection probability with distance from VP been accounted for? It is not possible to determine from Figure 6 whether the conclusions regarding shag distribution or Habitat Zone associations are valid.

Figures 2 & 7 are both labelled as relating to shag. Headings need amending and confirmation of which are the correct plots for the two species concerned provided.

Additional analysis of the shag and cormorant data are required to determine distribution/ abundance patterns and if appropriate a collision/ encounter risk model for these two species undertaken. This analysis would also be required to provide any baseline for impact monitoring.

No robust attempt to explore the density/ distribution of birds across the site has been undertaken making it very difficult to come to any conclusion regarding the potential impacts of the proposed development.

A considerable weakness of the approach is that absolute abundance/ densities cannot be estimated due to the declining probability of detection with distance from shore. This is unfortunate as the geography at Kyle Rhea is perhaps the most ideally suited for undertaking a small number of simultaneous VP watches with overlapping observation fields that would have allowed absolute densities to be estimated. There appears to have been no attempt to address this issue in the ES or supporting appendices.

It is unclear why the marine mammal VP data were subject to more rigorous assessment (e.g. Appendix 12.3) than any of the seabird species, particularly as both include species that have the potential to be impacted by the development (e.g. by underwater collision).

Appendix 11.3: Kyle Rhea Tidal Stream Array Collision Risk to Diving Birds

Additional information on the methods used to calculate encounter rates with turbine/s including input values (measures of abundance, dive frequency and turbine characteristics) are required. A copy of the spreadsheet and/or of code used for calculations should be provided.

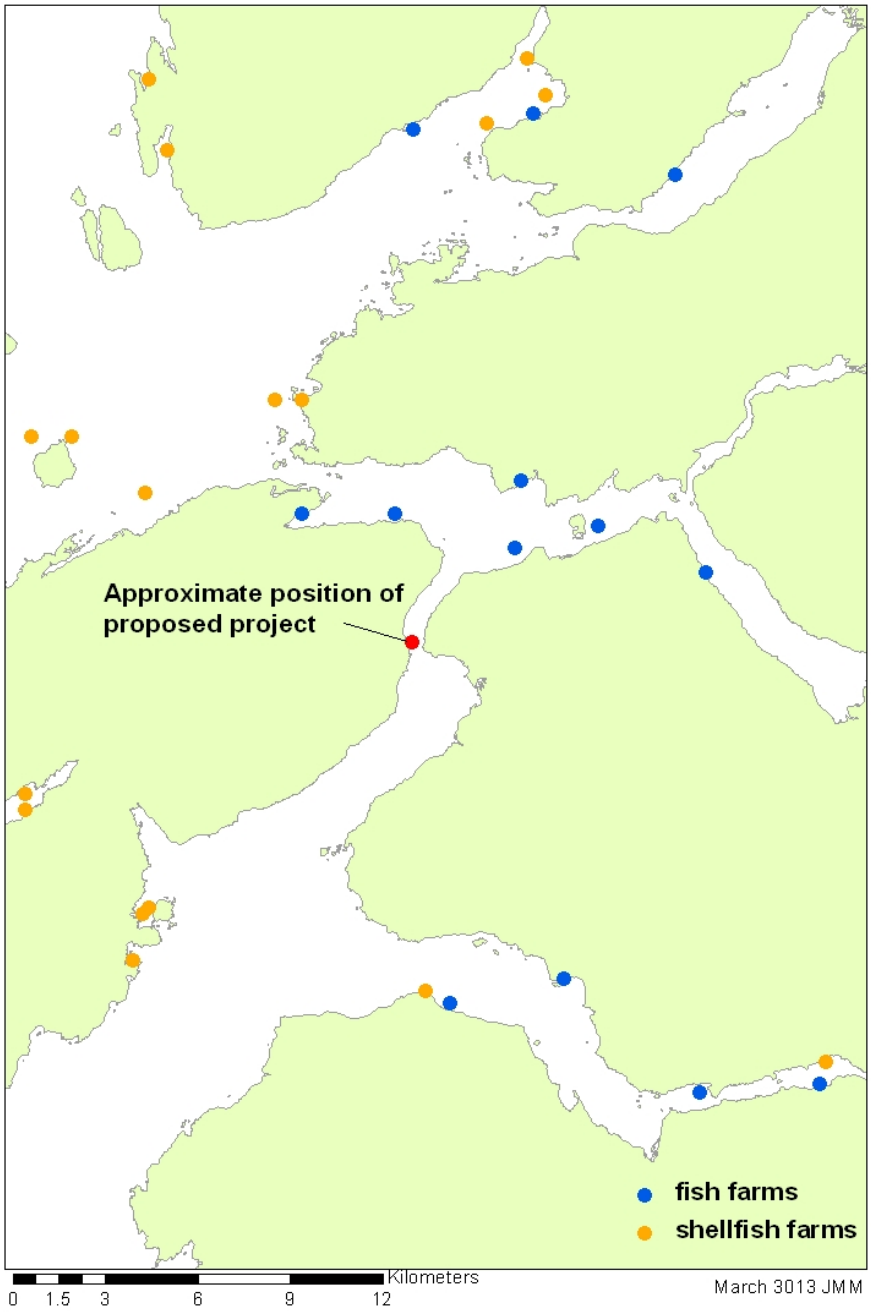
Additional information on how shag diving behaviour was 'modelled' against tidal state also required as it is difficult to establish how the stated relationships were established.

Aquaculture

There are no aquaculture sites situated directly in the vicinity of The Kyle Rhea Tidal Stream Array project proposed by SeaGeneration (Kyle Rhea) Ltd..

The closest aquaculture site is situated ~5 km north east of the proposed development and is an active Atlantic salmon site operated by Marine Harvest (Scotland) Ltd. Three further active Atlantic salmon sites operated by Marine Harvest (Scotland) Ltd. are situated ~6 km north west, ~13 km north east and ~15 km south east of the proposed development. Two inactive Atlantic salmon sites also operated by Marine Harvest (Scotland) Ltd. are situated ~8 km north east and ~9 km north west of the proposed development. The closest active shellfish site is situated ~17.5 km north west of the proposed development and is a Common mussel site operated by Moidart Shellfish Ltd.

Location of active and inactive fish and shellfish farms within the vicinity of the proposed project



Basking Sharks

Basking sharks have a strong tendency to aggregate in coastal areas of continental shelves dominated by transitional waters between stratified and mixed water columns. In Scottish waters, peak numbers of basking sharks tend to be sighted at the surface between June and August. Two basking shark 'hotspots' have been identified at Hyskeir and Canna situated in the Sea of the Hebrides and Coll in the Inner Hebrides. However, due to the difficulties in counting basking sharks, no abundance estimates or distribution maps of basking sharks currently exist for north-east Atlantic waters.

MSS has a few comments on the survey methodology for basking sharks. It is not clear from the text whether basking sharks were surveyed as part of the Marine Mammal Watches (MMW) or were they surveyed separately? This needs to be made clearer. The confusion may have arisen due to the fact that only 3 individuals were seen during the year of data collection and these were all incidental sightings. None of these incidental sightings are shown on any of the Figures presented in the Environmental Statement (ES) or Appendix.

The ES states that the Hebridean Whale and Dolphin Trust (HWDT) have recorded sightings of basking sharks between 2003-2011 in the wider study area but no sightings of basking sharks in the grid cell encompassing Kyle Rhea and Glenelg Bay. There is no mention of how this data was collected (boat based regular surveys, incidental sightings etc) or how many basking sharks were actually seen in the wider study area? HWDT may have seen no basking sharks in the Kyle Rhea area as they did not survey there? Marine Scotland feels that the HWDT data should be presented/discussed in more detail in the ES.

The fact that, unlike marine mammals, basking sharks do not need to come to the surface to breathe should be a consideration when interpreting basking shark survey results. Just because basking sharks were not sighted it does not mean they are not there, they may be below the surface. With this in mind, there are other methods of detecting basking sharks below the surface such as acoustic surveys, which could be carried out during the summer months when basking sharks are more likely to be present.

With these comments in mind and the fact that only one years data is presented in the ES, MSS feels that at a minimum, one more years survey work should be undertaken in order to get a better picture of how many basking sharks use the Kyle Rhea area.

Diadromous Fish and Diadromous Fish Fisheries

Collision risk.

14.4.91 on. The reassuring results from Verdant (14.4.97) and the EPRI report (14.4.106 on) do not necessarily transfer to the Kyle Rhea situation. The fish in these studies were much smaller than adult salmon or sea trout; the rotors smaller; and the tip speeds and water current speeds were lower. All these factors would make the risk to fish higher in the Kyle Rhea situation and no allowance is made for this. In addition the EPRI report indicates that the details of the rotor blade design will be important, which has not been factored in either.

14.4.115. This overstates the confidence that can be placed on swimming depths and proximity to shore. The supposition in the statement that salmon will avoid the central channel where the devices are located may well also be incorrect at least at times. Particularly if the tidal stream is running in the direction the salmon wish to migrate in, the energy efficient option will be to use the fastest current they can seek out.

14.4.116 again overstates the confidence that smolts will swim higher in the water column than the rotor tips.

14.5.3 The conclusion is that the operational impacts of the project are “generally considered to be less significant than construction impacts”. This may or may not be the case once there is a more robust assessment of collision risk for diadromous fish species.
Appendix 24.1 Post consent environmental monitoring. What is tentatively suggested includes nothing on diadromous fish. This should be revisited. The ability to lift the rotors may give opportunities for observational work.

Environmental Statement

Table 14.8 Potential for eel to be within the LSA is given as low. This is would seem unlikely to be correct.

Table 14.8 Salmon. Should also note that salmon from further afield may also be present.
14.3.50 and Table 14.9. The nearest salmon SACs are listed, all some way distant, although this is not necessarily relevant to whether there is a likely significant effect. What matters is whether salmon emigrating to or returning from distant sea feeding grounds do so through Kyle Rhea. This is not necessarily a function of proximity. we would have expected the developer to consider at least the significance test of an HRA but this does not appear to have been done, nor is there any consideration of salmon SACs in the separate HRA report. We are not sure it is useful to split salmon SACs into ones where salmon was primary reason for site selection and those where it is not, as both have to be treated the same. Nor did SNH appear to give consideration to salmon (and pearl mussel) SACs in its scoping advice, although we would have expected it to do this. All things equal as the sea feeding areas are to the north of Scotland it would be expected that salmon populations associated with rivers to the south of developments are more likely to be affected than those to the north although Malcolm et al 2010 document two way movement of adult salmon on the Scottish west coast.

14.3.53. That there are no salmon records available through the NBH gateway for the LSA is equated with lack of presence. This should not be done. It only indicates that no records have been reported. Many salmon could be passing through the area with no records of their presence.

14.3.56 Malcolm et al 2010 is cited as indicating emigrating salmon smolts from further south will go round the west side of Skye with only ones from local rivers using Kyle Rhea. We do not see any such statement in Malcolm et al. Rather they emphasise the uncertainties and unknowns in the routes taken by emigrating salmon smolts.

14.3.58 may overstate the confidence that can be placed on swimming depths. Diving to depth and staying at depth is also known to occur and until the drivers for this behaviour is established, which might include seeking food, avoidance of water currents flowing in a direction the fish does not wish to go, and taking advantage of water currents flowing in the direction the fish does wish to go.

14.3.59-12.3.69. Some aspects of the salmon net catch analysis are informative, particularly the conclusion that significant numbers of adult salmon travel through Kyle Rhea – indeed more through Kyle Rhea than around the west coast of Skye.

14.3.72 overstates any similarities in behaviour of salmon and sea trout

14.3.79 The most comprehensive general compilation of lamprey records is Watt, J. & Ravenscroft, N.O.M. 2005. The distribution of lampreys in Scotland: national
lamprey survey 2003-2004. Scottish Natural Heritage Commissioned Report, March 2005. It is unclear whether this was accessed.

Table 14.14 The frequency of sea trout in UK waters is given as Occasional. This looks to be an understatement.

In conclusion

There may need to be further scrutiny of whether an HRA is needed.

The conclusion that collision risk for salmon is of minor significance will need rechecked in the light of MSS comments. It is possible that some modelling may be helpful in this. If in revisiting the collision risk question it seems likely that there may be losses of salmon (or indeed other diadromous fish species) the ability of the populations to sustain these losses will need consideration.

A key consideration is the extent to which this development is in or out of main migratory routes for salmon.

More consideration of risk to sea trout and eels would be desirable

If approval is to be given, there will be a need for further consideration of what monitoring in required in connection with diadromous fish.

Physical Environment

7.1.25 Water depth within Kyle Rhea is indicated varies between 12m and 36 m with the 15 m bathymetry contour approximately 300 mm from the shoreline which is steep sided and rocky.

This section makes no direct reference to Appendix 13.1 which shows the location of the devices in areas of highest seabed roughness (Figure 2). This is supported by Figure 10 showing seabed habitats of rugged bedrock and rugged bedrock and boulders that coincide with the proposed location of the devices.

The ES would benefit from including more information from the Appendix 13.1 to detail the nature of the seabed that is likely occur where the devices are being considered for deployment. Additional information on the site preparation necessary for the deployment of the devices to address the irregular seabed morphology would also provide a more realistic seabed and associated benthos impact assessment.

Table 7.3 Receptor has some tolerance to accommodate the proposed change.
What does this mean? Any receptor will have some tolerance to accommodate the proposed change. Please provide a better definition of tolerance and capacity in Table 7.3.

7.1.28 Seabed sediments, there are no mention of the TV tows and SNH report for the Kyle Rhea area on Marine Scotland Interactive.

7.1.45 Sensitivity of the marine physical environment and coastal processes is considered negligible as the receptor is able to accommodate these hydrodynamic changes that are within the bounds of natural variation. Impacts are considered negligible magnitude localised and temporary and will not result in the significant alteration of the existing hydrodynamic regime. It is anticipated that the proposed installation works will be of negligible significance to the hydrodynamic regime within the Project area, its immediate surrounds, and further afield.

How has this been demonstrated? Should this section be cross referenced to additional information found elsewhere in the ES or Appendices.

7.1.68 The magnitude of impact on the bedrock platform and seabed formations caused by the installation activities is expected to be negligible. The sensitivity of the receptor is also negligible, therefore the impact is considered to be of negligible significance.

Is any cable protection being considered – mattresses?

7.1.107 The geological and coastal geomorphology of the study area is controlled by the geological structure of the Lewisian Gneiss. The operational changes to the wave climate and tidal currents are unlikely to affect this hard rock. Where the Lewisian Gneiss is overlain with Quaternary deposits, there can be no expected change in the rate of coastal processes as a direct consequence of alterations to wave and tidal energy caused by the Project.

Can the “no expected change” be demonstrated, should this be cross-referenced to another section of the ES or Appendices?

What is the anticipated particle size of the drill cuttings?

Benthic Ecology

HRA

MSS are concerned about any impacts on the reef biotopes (are there really no biogenic reef here? (SNH seems to think there is) especially as they are mentioned in Article 3 of the habitats Directive.

In the final Paragraph on Page 51 the introduced species all have to tackle and survive the local conditions when they are released into their new environment. The extreme tidal conditions experienced here will probably exclude most colonising organisms however.

In Habitat Disturbance section on Page 52 MSS agree that the use of DP vessels in this area is unlikely. The use of anchored barges is highly likely to cause damage to the reef habitats however. This damage is probably unacceptable in this area. These impacts may be temporary but we would need proof to accept that.

In Paragraph 2 on page 56 The artificial substrate provided by the foundations will not replace the habitat lost to the devices. It will lack the complex 3D structure provided by the natural substrate for example also on Page 56 (Point 4) Have they defined what the natural variability in the benthic community might be?

Finally on Page 59 (10.2 Point 5) the anchoring will have a large impact on the reef habitats initially.

NTS

In Section 2.7 MSS note that the reefs in Kyle Rhea are indeed important. The device foundations however are less complex than the existing reef habitats and won't have a larger surface area than the reefs have.

ES Vol II, Chapter 13

In section 13.4.8 the impact level should be increased to low from negligible given the potential impact of installation of foundations/cable installation

Sections 13.4.10 and 13.4.11 should be increased to moderate significance

For comments on section 13.4.12 and 13.4.17, please see MSS previous comments on HRA, page 52. "Habitat Disturbance".

Overall the impacts in section 13.4.19 are reasonably large therefore the impact should be re-assessed as being low giving an overall rating of a moderate adverse significance, not low.

In section 13.4.24 the finer materials will be quickly swept from the array area but where will they settle? this may be important for the maerl beds to the south of Kyle Rhea. Has the dispersion and settlement of fines been modelled and if so, where are they predicted to go? This comment also applies to the contaminated sediments. Where are they predicted to settle?

For comments on 13.4.8 please see MSS previous comments on HRA, page 51

The introduced substrate mentioned in 13.4.64 will not be broadly similar to the existing substrate, it will lack complexity.

Finally in section 13.4.73 the removal of the devices/foundations may release further sediment into the water column. See MSS previous comments on 13.4.24.

Marine Mammals

MSS have reviewed the ES and consider that the potential number of collisions with seals and porpoises is rather high for a development with only four devices, even when applying a relatively high avoidance rate. We also have some concerns about the calculation of seal surface densities that have been used in the collision risk models. These values are not clearly presented in the chapter or in the technical appendices. In particular we believe that there may have been a mathematical error in the calculation of area; cells that are 100m by 100m have an area of 10,000m^2, not 100m^2. Therefore where densities are predicted to be 0.09 harbour seals per cell, this is equivalent to 9 harbour seals per 1km^2. For grey seals, with 0.04 animals per 100m by 100m cell, this is equivalent to 4 grey seals per 1km^2.

Please confirm whether these are the densities used in the collision risk model?

We would also point out that accounting for the amount of time animals may spend under the water (availability bias) does not account for animals missed by the observer (observer bias). Producing a detection function would allow this, and although we note previous comments on this not being possible, we are still unsure about why this might be (refer to our comments on the first year survey results).

Although we accept that animals using this are likely to be accustomed to the noise levels, and that consequently operational turbines are unlikely to add much to the baseline noise level, we feel that this could also be a cause of concern. Where the background noise level is high, this may mask the noise produced by the turbines making them more difficult for animals to detect, which may in turn increase the risk of collision. This has not been considered in the ES. Key questions would be the distance at which mammals are able to detect the noise of the devices above background levels.

Mortality effects (such as those through interactions with ducted propellers) should be assessed at the site level, as well as the effect on SACs, as increased mortality should be accounted for in the PBR for the region.

Commercial Fisheries and Marine Fish

MSS have reviewed the sections in relation to commercial fisheries and marine fish species. The developer has identified the key issues and potential impacts and provided a robust assessment of these.

Also If the project needs to be moved for navigational safety reasons the commercial fisheries impacts may need to be reassessed, as this may move the devices in closer proximity to where the main fishery activities are taking place.

MSS have no further comments to make in relation to marine fish species or commercial fisheries.

Hopefully these comments are helpful to you. If you wish to discuss any matters further contact the MSS Renewables in-box MS_Renewables@scotland.gsi.gov.uk.

Yours sincerely

Paul Stainer
Marine Scotland Science

Marine Laboratory, PO Box 101, 375 Victoria Road,
Aberdeen AB11 9DB
www.scotland.gov.uk/marinescotland

Queiros J (Joao)

From: [redacted]@nats.co.uk> on behalf of NATS Safeguarding <NATSSafeguarding@nats.co.uk>
Sent: 12 April 2013 10:16
To: MS Marine Licensing
Subject: Your Reference: 023/TIDE/MCT - 4 Kyle Rhea (Our Ref: SG0663)

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Limited has no safeguarding objections to this proposal.

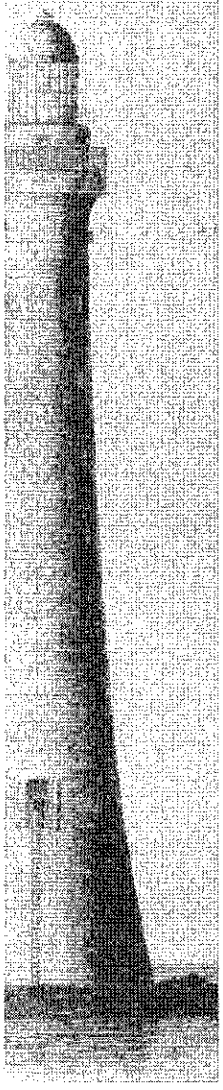
Please be aware that this response applies specifically to the above consultation based on the information supplied at the time of this application. If any changes are proposed to the information supplied to NERL in regard to this application (including the installation of wind turbines) which become the basis of a full, revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours faithfully,

NATS

[redacted]
Technical Administrator
for & on Behalf of NATS (En Route) Ltd

[redacted]
4000 Parkway, Whiteley, Fareham, Hants PO15 7FL
www.nats.co.uk



Northern Lighthouse Board

CAPTAIN PHILLIP DAY
DIRECTOR OF MARINE OPERATIONS

84 George Street
Edinburgh EH2 3DA
Switchboard: 0131 473 3100
Fax: 0131 220 2093
Website: www.nlb.org.uk
Email: enquiries@nlb.org.uk

Your Ref: 023 TIDE/MCT - 4
Our Ref: SD/OPS/ML/O8-10-096

Alexander Ford
Marine Renewables Licensing Officer
Marine Scotland – Marine Planning and Policy Division
Marine Laboratory
PO Box 101, 375 Victoria Road
ABERDEEN
AB11 9DB

03 April 2013

Dear Alexander

APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989, AND A MARINE LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE AN 8MW TIDAL STREAM ARRAY AT KYLE RHEA

Thank you for your correspondence dated 20 February 2013 regarding the application from Sea Generation (Kyle Rhea) Ltd to construct and operate four SeaGen 2MW tidal devices (supplied by Marine Current Turbines Ltd) at Kyle Rhea.

The Commissioners of Northern lighthouses operating as Northern Lighthouse Board has a dual role in relation to this development. We are responsible for advice on the marking of the development and also as the General Lighthouse Authority for Scotland providing marking of a safe navigable route through Kyle Rhea for all mariners.

Assessment of the application indicates that there is and will remain a substantial risk to Navigation safety from this project. The Northern Lighthouse Board does not believe a safe route can be maintained through Kyle Rhea and strongly advise that Marine Scotland should not give consent.

This advice is based on:

- Kyle Rhea has a tidal flow that can cause high vessel speed over the ground, along with eddies and back currents that can cause sudden vessel shear. The Navigational risk assessment provides ample evidence of this from third party consultee input and AIS swept path track analysis. This corroborates information contained within the Admiralty Sailing Directions, tidal stream atlas and AIS track evidence presented by Marico Marine during scoping meetings.

- The planned locations of the devices lie directly within the safe route NLB mark by day and night with the Kyle Rhea lighthouse and are at a critical turning point for vessels following the direction of the narrows as they turn.

- The planned devices reduce the width of the navigable channel from circa 450 meters (which the NRA shows is fully utilised by vessels), to 200 metres forcing vessels to proceed closer to the shore, putting them at greater risk from the back currents. This tidal affect will also have a detrimental impact on any towed cages or barges with a significant risk of the tow swinging out and colliding with turbines or shore. This is identified in the NRA through consultee feedback notably, Marine Harvest (Scotland) Ltd, Hebridean Princess and RYA.

- The high over the ground speeds coupled with sudden shear gives little time for the mariner to react if navigating close to danger. This is applicable for all craft but low powered craft transiting Kyle Rhea in particular are at risk. The Navigational risk assessment acknowledges the consequence of a vessel taking a shear and colliding with shore or device is major for smaller craft and severe for larger craft before any mitigation.

- Contrary to the Navigational risk assessment the NLB believes that a vessel colliding with turbines or shore will have the same consequence before and after mitigation. Using the Risk assessment table in the NRA this shows a sailing vessel collision with a turbine to have a major consequence (more than 1 fatality) which even when judged as a remote likelihood (after mitigation) is unacceptably high.

- Northern Lighthouse Board does not believe adequate mitigation can be provided for this development in its current location. Since its inception we have advised the developer that an area to the west and north in the red sector of Kyle Rhea light might be suitable for this kind of development, though that would need to be rigorously tested through the consenting process. The developer has advised that only the location being applied for provides economic viability for the project and that other locations in Kyle Rhea are not suitable.

Should you require any further details as to the reasons for our objection please do not hesitate to ask.

Yours faithfully

Queiros J (Joao)

From: Ferguson V (Val)
Sent: 12 March 2013 08:50
To: Ford A (Alexander)
Cc: MS Marine Licensing
Subject: RE: 023/TIDE/MCT - 4: MS LOT to P&H: Kyle Rhea Tidal Stream Array ES Consultation

Alex,
Thanks for sight of this application I have no comments on it.

Val Ferguson
Ports and Harbours Branch
Area 2G North
Victoria Quay
Edinburgh
EH6 6QQ
0131 244 7878
val.ferguson@transportscotland.gsi.gov.uk

From: Ford A (Alexander)
Sent: 20 February 2013 12:56
To: Ferguson V (Val)
Subject: 023/TIDE/MCT - 4: MS LOT to P&H: Kyle Rhea Tidal Stream Array ES Consultation

<< File: P&H.pdf >>
Please see attached letter.

Regards

Alexander Ford
Marine Licensing Casework Officer
Marine Scotland – Marine Planning & Policy Division
Scottish Government | Marine Laboratory, PO Box 101| 375, Victoria Road | Aberdeen AB11 9DB
Tel: +44 (0)1224 295414
S/B: +44 (0)1224 876544
Fax: +44 (0)1224 295524
e. alexander.ford@scotland.gsi.gov.uk
w: http://www.scotland.gov.uk/marinescotland

nature's voice

RSPB SCOTLAND

Alexander Ford (Marine Scotland Licensing Operations Team)
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

5th April 2013

Dear Mr Ford,

Sea Generation (Kyle Rhea) Ltd - Application for Marine Licenses and Section 36 Consents

RSPB Scotland welcomes the opportunity to comment on Sea Generation (Kyle Rhea) Ltd application to construct and operate four SeaGen 2MW tidal devices at Kyle Rhea.

RSPB Scotland **objects** to the proposal pending the provision of further information as requested in Annex 1.

We provide initial detailed comments on the proposal with a focus on the environmental impacts to ornithological interests. We are hopeful that our concerns can be addressed and that on the receipt of further information we will be able to re-appraise our position. However, in our view, the present application provides insufficient empirical evidence to justify the conclusions of the environmental assessment. Specifically our concerns relate to:

- Inadequate survey effort. We seek a further year's survey effort to address the shortcomings of the current data set.
- Lack of description and detailed justifications. This concern relates primarily to the collision risk modelling exercise and the lack of clarity surrounding the defining of parameters and approach taken in modelling the impacts.

Annex 1 provides a detailed summary of our initial concerns and recommendations for resolution of these issues. RSPB Scotland would welcome the opportunity to discuss any aspect of this letter and to provide advice on any future survey and assessment activities.

Yours sincerely

[redacted]

Dr [redacted]

[redacted]

Cc'd Joseph Kidd (Project Development Manager – Sea Generation Ltd)
Chris Leakey (Scottish Natural Heritage)

RSPB Scotland
Old Corry Industrial Estate
Broadford
Isle of Skye
IV49 9AB

Tel [redacted]
Fax [redacted]
[redacted]
www.rspb.org/scotland

Annex 1 – Sea Generation (Kyle Rhea) Ltd – RSPB Scotland's detailed comments (April 2013)

RSPB Scotland supports renewable energy development and the contribution it will make to reducing the causes of climate change. However, the deployment of tidal energy devices is an emerging industry using novel technologies and understanding of the potential impacts these devices will have on the marine and coastal environment is relatively poorly understood. We must therefore take an appropriately precautionary approach to ensure projects are located in the least sensitive sites and that potential environmental impacts are avoided. In this context RSPB Scotland has reviewed the application for four SeaGen tidal devices at Kyle Rhea and we make the following comments:

1. **Survey Effort:** We acknowledge Marine Scotland's draft survey, deploy, monitor policy which seeks to fast track lower risk projects by enabling consents with only one year's survey data. However, in this instance we consider the presented data are insufficient for site characterisation and do not adequately inform the environmental assessment, for the following reasons:

    a) Several species seem to be under recorded by comparison to experiences based on casual observations, notably foraging fluxes of gannet, and cormorant and shag (although relatively high numbers of cormorant are still recorded). We believe this may be a function of the survey method, in that during the VP watches a proportion of time is spent looking for marine mammals. The approach of partitioning VP time for different survey techniques is justified, and included in the draft SNH guidance, if, during the different survey periods notable species are still recorded. However, Kyle Rhea surveys only recorded Annex and Schedule 1 bird species outwith target surveys, and this excludes cormorant, shag, gannet, herring and both black-backed gulls. Had all the VP time been spent recording birds then it is likely this would have been sufficient.

    b) The surveys are not evenly distributed across all tidal states (see App 11.1, page 9, paragraph 4). The report itself states they were biased toward low tides, to assist surveying of hauled-out seals. This bias may result in an under representation of the main feeding periods for all species. When the tide turns and is running/ rising there is likely to be an upwelling of prey which is when all of the species including birds, seals and otters tend to feed. Counts outwith these periods are likely to under-estimate the level of activity in the area. It is known that there are occasional high densities of gannets feeding at the site. These are in largest numbers in September, though this is not recorded in the surveys. The birds are likely to be moving away from breeding colonies.

    c) In Furness et al, 2012, a sensitivity index of birds to tidal turbines is presented, and both cormorant and shag are described as having high vulnerability. Given that they appear in relatively high numbers at this site, potentially representing one of the largest wintering locations for shag along this region of the west coast, and that they are likely to have been under recorded for the above reasons, greater importance should be attributed to them.

d) We recommend a further year's survey effort is required to ensure the site characterisation is comprehensive and representative of the bird activity in this area. Focusing survey effort may also be appropriate, including the survey of gannet during the month of September. RSPB Scotland would welcome the opportunity to provide specialist advice into the development of any future survey methodologies, particularly in terms of targeted watches and their temporal spread..

2. **Collision Risk Model:** The presentation of the collision risk model does not adequately define the parameters of the model nor does it provide clear justification of its approach and application. Additionally, the CRM should have been undertaken for more than one bird species to robustly assess the potential impacts on all receptor species, especially if our concerns over under recording of species is justified which would increase any assumed dive rates/ occurrences. We recommend that guidance on best practice methods for collision risk assessment be sought through further discussion with Scottish Natural Heritage and Marine Scotland. Following this guidance we would seek a re-presentation of the CRM assessment.

3. **HRA:** The HRA screens species or sites out of the process using information from site survey data. We have concerns over the potential under recording of species and recommend a second year of survey effort be undertaken. We withhold detailed comment on this topic until a revised HRA covering both years' data is available.

4. **Other Issues:**

   a) The description of the "inter-array cabling" does not clearly describe nor assess the potential impacts to wildlife and we seek further detail in this respect.
   b) Whilst not covered in any detail in this response, we are also aware of the potential impacts to marine mammals including seals and potentially otter. In this regard we have concerns and seek assurance that these issues are considered in a comprehensive manner.

5. **Environmental Management Plan & Monitoring Strategy:** Any future consent for this application will require stringent consent conditions requiring a comprehensive monitoring programme. This approach is exceptionally important given the environmental knowledge gaps associated with a new technology such as tidal turbines. Improved knowledge of interactions of these developments with mobile marine species and the wider environment is imperative, not only to inform decisions on the potential impacts of other tidal developments, but also to inform any subsequent application for additional phases. RSPB Scotland offers its support in developing a suitably robust monitoring programme through engagement in discussions and provision of expert advice at this stage in the future.

RYA SCOTLAND

Royal Yachting Association Scotland

RYA Scotland

Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh
EH12 9DQ

Tel: +44 (0)131 317 7388
Fax: +44 (0)844 556 9549
Email: admin@ryascotland.org.uk
Web: www.ryascotland.org.uk

28 March 2013

Alexander Ford
Marine Scotland Licensing Operations Team
Marine Laboratory,
375 Victoria Road,
Aberdeen AB11 9DB
ms.marinelicensing@scotland.gsi.gov.uk

Dear Alexander,

APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989, AND A MARINE LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE AN 8MW TIDAL STREAM ARRAY AT KYLE RHEA.

Summary
Kyle Rhea is a significant tidal gate on the west coast of Scotland where the tide is strong enough to prevent progress of even the most powerful sailing yacht if the navigator gets his/her planning wrong. It may sometimes be necessary to push against the tide for the last hour of the counter tide in order to achieve a comfortable passage through the gate as, once the tide turns, standing waves, overfalls, eddies and whirlpools can quickly develop. It is against this background that the RYA has assessed the SeaGen project Environmental Statement including the Navigational Risk Assessment. This response has been composed by RYA Scotland in consultation with and on behalf of the RYA. The attention of the Developer and Marine Scotland is drawn to the risks associated with the proposal which we feel have been underestimated by an overoptimistic assessment of the effectiveness of the mitigation measures proposed. Having considered the evidence, the RYA does not believe that the mitigation measures set out in Section 12.5 of the NRA and listed and described in Table 24.23, and the good practice set out in MGN 371 are robust enough to reduce the risk of collision for sailing and low powered recreational craft to an acceptable level at any state of the tide and particularly when commercial craft are travelling against the tide. Indeed there is doubt whether some of the proposed mitigation measures will be able to be implemented. Nor do we believe that there are credible alternative mitigation measures that might make the project feasible. The RYA does not normally oppose Offshore Renewable Energy schemes, but in this case, the level of risk is so high that we regretfully have to do so.

We consider that:

- the NRA is correct in its assessment that the risk to sailing and slow moving craft would be intolerable without mitigation;
- the proposed mitigation measures would be difficult to implement and are likely to be ineffective;
- if consented, it would be important to ensure that all mitigation measures including the Emergency Response Co-operation Plan are in place before construction is started, particularly where actions are required by other parties.

Neither the RYA nor its affiliated clubs will accept any responsibility for warning recreational sailors about the hazards if the project is given consent. It is the skipper's responsibility to plan a passage taking account of all risks based on the information that is available. It is the developer's responsibility to ensure that relevant information about the devices and their location is readily available to all mariners, including those from outside the UK, to ensure that ERCOP procedures are acceptable to the MCA, and to ensure that they do not knowingly hazard the lives of users of this passage.

Kyle Rhea Tidal Streams

The northerly stream sets six hours after high water at Ullapool, and the southerly stream at Ullapool high water. Streams run at eight knots at springs, and occasionally more in places, with strong eddies and overfalls at the southern entrance on the south-going stream, if opposed by any wind. Some boaters transit at slack water. Others take advantage of the tide to make a rapid passage north or south, as can be inferred from Fig. 7.2 in appendix 17.1. As with other tidal gates, slack water does not always occur exactly at the predicted time.

Sea Gen Devices

The rotors revolve at around 11 rotations per minute (RPM), giving a tip speed of around 12 metres per second, This represent a considerable amount of kinetic energy, which would be catastrophic in the event of a blade strike. The rotors have a diameter of 20m and a clearance of approximately 3m above the seabed. The depth below the water surface to the tip of the rotor ranges from 9m at Highest Astronomical Tide to 3m at Lowest Astronomical Tide. It is stated that this clearance allows small vessels to pass directly over the rotors safely.

The RYA disagrees; a design clearance of only 3m below Chart Datum (LAT) does not reduce the risks to recreational craft to a tolerable level.

LAT is a calculated height, not the lowest tide that can be experienced and a vessel travelling north at slack water will pass through Kyle Rhea near low water. Tidal heights can be depressed by high atmospheric pressure and by other factors. From research carried out in the preparation of its position paper on offshore tidal energy developments, the RYA believes that the collision threat to 96% of recreational yachts can be minimised by specifying a minimum underwater clearance of 4m below chart datum (LAT) for submerged tidal energy converters. This assumes flat water conditions, which is not normally the case here. The Environmental Statement makes it clear that wave heights of up to 1m may be experienced for 75% of the time and waves in excess of 2m may be experienced for 10% of the time. Where there are overfalls and significant waves like this, the minimum underwater clearance must be increased. The RYA position paper provides the methodology for specifying minimum underwater clearance.

Section 5.6.16 states that *'Scheduled maintenance is likely to be carried out four times year. Only one device will have the crossbeam raised at any one time. The likely maintenance period per device is two days'*. As there are four devices this makes 32 days per year, assuming no unexpected delays. If this is indeed the case then it poses a significant collision risk that has not been properly assessed in the NRA. Experience of RYA members familiar with the Strangford Lough device is that the cross beam is raised frequently, presumably for unplanned maintenance, and is a significant hazard. When the cross beams are raised, the navigational obstruction increases dramatically, i.e. the width of the structure will be about 45m, and the blades are a dangerous hazard as they can become tangled in masts and rigging

which with strong tides could easily lead to serious damage to, and possible sinking of, a sailing vessel.

Location of Devices and Temporal Analysis
Three of the proposed device locations are in the safe sector of the Kyle Rhea sectored light which covers the safe approach and exit at the southern entrance. The area just south of the proposed device locations (between the southern-most device and the ferry route crossing) experiences the highest velocities for the longest duration. It is noted that 79% of recreational vessels transit either with the tidal stream or at slack water. The majority of recreational vessels logged were travelling over the ground at between 5 and 10 knots which would suggest that most are either sailing craft under sail or auxiliary power or are slow moving small motor craft.

The Swept Path Analysis confirms that vessels are usually set to the west whether making passage to the north or to the south or whether the tidal stream is with them or against; that is directly into the path of the devices. This is expected given the contours of the seabed. For the local inhabitants who may be familiar with the waters at all states of the tides this might be acceptable. However, the strength of the tide is a major vector in any transit by a slow speed vessel such as a sailing yacht and once in the tidal stream there may not be the sea room to manoeuvre to the eastern shore before a small craft is set by the current into the devices, particularly as a vessel travelling over the ground between 5 and 10 knots will cover the distance between Kyle Rhea light and the ferry in 3 to 5 minutes. The simple fact is that, as advised in the sailing directions and reinforced by the orientation of the sectored light, mid-channel passage making with the tidal stream is the safest method of transiting Kyle Rhea.

Channel width
The RYA agrees that transiting vessels would seek to achieve a safe clearance from the devices by taking a central course between the devices and the eastern shore 5m depth contour. This is entirely predictable as skippers will be aware that their craft will be affected by the tidal streams, with smaller vessels noticeably more affected than larger and higher powered vessels. The RYA notes that the devices will reduce the sea room available in this part of the channel from approximately 440m (between 5m depth contours) to 250m (east of device 2). There is therefore legitimate concern that the devices pose a navigation hazard due to the reduced sea room and the fact the tidal streams make it difficult for vessels (especially sailing or low-powered vessels) to control their heading within the channel, and will tend to sweep vessels towards the devices. The reduced sea room will also make avoiding action substantially more difficult and possibly more dangerous in the case of a vessel-to-vessel encounter. Commercial craft can make passage against the tide. Although vessels such as fish farm well-boats and fishing boats are very manoeuvrable, flatter bottomed vessels such as some coasters may be swept sideways, particularly if hit by a wind squall and would normally be given a wide berth. Note that the reference to Barne *et al.* 1997 in Section 7.1.30 is inappropriate as those are general data applicable to a very wide area and not to Kyle Rhea in particular. The wind regime in the kyle is actually rather complex for topographic reasons with unexpected calms and possible downdraughts.

Visibility
In this area, poor visibility caused by rain or mist is a not uncommon hazard. The impact of this on passage making in daylight hours has not been considered in the NRA. Moreover a vessel travelling north having awaited slack water by anchoring off Glenelg village, as can often be the case, will not be able to see any shipping traffic transiting the kyle against the north-going tide until close to the entrance to Kyle

Rhea. Poor visibility is particularly likely to be a problem for a vessel making for shelter beyond the kyle due to strong winds from the south-west that are often accompanied by rain.

Navigational Risk Assessment
We dispute the residual risk from increased vessel to vessel encounters and transiting low power and sailing vessels colliding with the devices being tolerable (moderate) given in Table 24.22. For the reasons alluded to above and given below we assess the risk as still unacceptable (high) unless recreational craft are dissuaded from using this important passage, which would have an adverse navigational safety and socio-economic impact (see also the Socio-economic impact paragraph below).

Detailed comments on the proposed mitigation measures
Most of the 34 recommended key best practices and mitigations listed and described in Table 24.23 refer to industry best practice rather than to mitigation measures. We comment on some of these below.

Timing of installation activity to be off-season, with work in early Spring, prior to the Skye ferry resuming operations in Easter.
This conflicts with Section 5.4.38 which states that installation of the devices will take place in the three summer months.

Distribution of information about devices, e.g. depiction on charts and note on underwater clearance, to allow vessels to pre-plan voyage; Suitable guidance in Sailing Directions in the area.
A new edition of the Clyde Cruising Club Sailing Directions for this area is in draft form and will be published later this year. The next major revision is not scheduled till 2018. Moreover, as this area is characterised by a rocky, and thus stable seabed and rather few aids to navigation, there is not an incentive to buy a new edition. It is unclear how exactly the developers promulgate information about the scheme to visitors from outside the UK. A difficult balance will need to be struck between informing potential users of this channel on the one hand and discouraging visitors on the other. Whatever is done, there will need to be a continuing programme throughout the life of the scheme of publicising safe passage guidance at marinas and harbours from which vessels may come.

Improved VHF reception in the area; Regular broadcasts on VHF Channel 16 from Stornoway Coastguard and intermediate broadcasts from working site.
Although most recreational vessels carry VHF, reception is patchy here hence the need for a repeater station in this area. VHF reception would need to be greatly improved before work starts on the scheme. Note that as VHF works on a 'line of sight' basis ship to ship transmissions may be more difficult than ship to a well-sited shore station, particularly as small craft that use this passage may only have portable VHF with a low aerial height.

Traffic management / reporting system.
See comments on VHF; a traffic management system would only be effective if it was compulsory, was accompanied by proper enforcement and if low powered vessels were given priority. Moreover, it is unclear what the legal mechanism would be for establishing a traffic management scheme like this. Note that contrary to what is stated in the Environmental statement in section 17.3.2, quite large vessels use this passage. For example, the MV Lysfoss of 4771 gross tonnes passed through Kyle Rhea before grounding in the Sound of Mull and causing a minor pollution incident (the MIAB report is relevant in the present case). The frigate HMS Richmond (4900

tonnes) recently passed under the Skye Bridge, the caissons of which were designed to withstand the impact of a 10,000 tonne vessel.

Advice given to transiting vessels to time of passage near slack water during daylight hours.
It is unclear whether this means that vessels will be advised to transit at slack water or whether it means that the timing of slack water will be broadcast. Any navigator of moderate competence will already know the approximate time of slack water. However, timing arrival from some distance away, particularly when under sail is not always easy and in any case skippers often wish to use the tide to effect a rapid passage.

AIS on devices as aid to navigation.
It is contact with the devices that is the problem rather than spotting them. AIS on the devices might be helpful, e.g. in darkness, for the minority of cruising vessels equipped to receive AIS transmissions but this cannot be considered effective mitigation.

Emergency Response Cooperation Plan (ERCoP) to be developed and agreed with the MCA prior to installation.
This is not mitigation; rather it is merely a response to emergency if one arises. The time taken from call out to when crew are rescued from the water needs to be simulated as part of this, bearing in mind that visibility may be poor and the people in the water may become separated due to turbulence and overfalls. The estimates in section 17.3.28 cover only part of this process. Moreover, the use of a SAR helicopter may be complicated by the presence of the high voltage cables crossing the kyle to the north of the proposed site and wind downdrafts caused by the local topography.

Liaison with local RNLI stations.
The RYA is unsure how this would help.

Broaden functionality of maintenance RIB to act as an emergency response vessel.
Agreed but it needs to be able to tow a 15 tonne vessel out of danger in an 8 knot current. It has also been assumed (wrongly we believe) that there is time to call the RIB and for a vessel to be taken in tow before a collision takes place.

Marker buoys off eastern shore to indicate safe inshore passage.
Fig. 9.2 suggests this would not be helpful. There is a particular difficulty with regard to the mandatory International Regulations for the Prevention of Collisions at Sea (ColRegs). This would presumably become a narrow channel (Rule 9) where small craft should not impede large vessels. However, it is the larger vessels that are the ones capable of changing course successfully in this location. Moreover, vessels are expected to keep to the starboard side of a narrow channel. However, a vessel such as a fishing boat or well boat heading south against the flood tide will keep to port to avoid the worst of the tide. Any confusion about rights of way poses a grave danger. Fig. 7.7 can be re-interpreted to show that the probability of a vessel passing through the kyle with one or more other vessels is 20%. This is an important consideration in a 250m wide channel. Finally, this channel is also used by sea kayaks which are generally very manoeuvrable but which would in effect further reduce the area available to the skipper of a larger vessel seeking to avoid them.

Changing the sectored light.
This measure is mentioned in the NRA and in section 17.3.1 but does not appear in the Table 24.23. It is difficult to see how the sectored light can be moved without

significantly reducing its usefulness. Having sectored lights on the turbines themselves, as suggested in the NRA, would pose a real risk to vessels without sufficient power to manoeuvre away from the devices if they get too close. Although it is correctly noted that the Admiralty Sailing Directions state that it is not advisable to proceed through Kyle Rhea at night without local knowledge, many skippers do have such knowledge but rely on this light to ensure a safe passage. Not having a safe passage marked by a sectored light system would represent a significant increase of risk for night passages.

Legal liability

The legal liabilities of the developer in the event of a collision occurring due to the presence of the turbines or associated work boats, or failure of a mitigation measure, as suggested in this letter, are unclear.

Socio-economic impact

Given the specific navigational safety concerns outlined above, navigating through Kyle Rhea may become such a daunting prospect for many recreational boaters and a significant number will choose not to do so. The only alternative to a passage north or south through Kyle Rhea is to circumnavigate Skye by way of the Little Minch. This is totally unacceptable upon navigational grounds of safety and passage time considerations. Small craft that currently use the passage as a safe route to and from the Sound of Sleat to the important cruising grounds in the Inner Sound and beyond may choose to go elsewhere. As evidence for this a letter has been sent to Marine Scotland by [redacted] from the Netherlands confirming that if the scheme goes ahead members of the Nederlandse Kring van Drascombe Eigenaren (Dutch Circle of Drascombe Owners) will not return to these waters (for convenience a copy has been appended to this letter). Moreover, although Kyleakin is the nearest marina, mention ought to have been made of Mallaig less than 15 nautical miles away where facilities for recreational craft have recently been expanded using funding from the EU Sail West INTERREG IV Project with the intention of welcoming an increased number of recreational craft to these waters. The impact on the local businesses that support the recreational boating sector may well be that jobs are lost in the economy of Skye, Lochalsh and Wester Ross.

Conclusion

The RYA opposes the granting of an Electricity Act consent and a Marine Licence for this proposal for the reasons described above.

Yours sincerely,

[redacted]

Letter from [redacted] and forwarded to MS-LOT by [redacted]

Dear [redacted]
We are writing you as members of the Nederlandse Kring van Drascombe Eigenaren (Dutch Circle of Drascome Owners) and we personally sail a Drascombe Coaster for some twenty years now. Please review - and if possible pass on to the bodies involved - our concern about the plans to construct sea generators in the Kyle Rhea main channel.

Each summer we transport our boats across Europe to new coastal sea areas to enjoy holiday voyages. We have visited the west highland coast of Scotland some five times now and spent altogether a couple of memorable months cruising her various beautiful unspoiled parts.

Each time we have passed through the Kyle Rhea narrows we had to wait until slack tide so a slight and favourable tide would help us along. In stronger winds we found it was quite impossible to make any headway at all against the flow in the centre of the main channel.

Our Drascombes have a maximum speed through the water of approximately 5.5 knots. We found the Kyle Rhea tidal stream much faster than that! Even with our outboard revving at full power we were unable to prevent ourselves being swept down tide, along with the main current. We also found it was not always possible to predict with any accuracy where the boat would be carried to next by the tidal rips and spectacular overfalls.

Sitting down close so to the water in our Drascombe we feel that any high pillars in mid channel on the bend, as proposed by this plan, would create large areas of restricted visibility particularly in foul weather and rain. Aboard a small sailing boat it might be impossible to spot approaching vessels beyond the pillars in time to take action to avoid them.

Had we not been sailing as a group when we visited Scotland, guided by a local Drascombe owner, we might never have dared use the Kyle Rhea channel at all. Even then the courses we could take were ours to control once local advice had been shared. The force of water and wind funnelled by this channel was always an interesting surprise to us.

If marine turbines, marker buoys and other complexities were to further restrict the centre of this channel, then for us a coastal voyage in our Drascombe through Kyle Rhea would be something we would no longer consider safe. Obstructions here would unfortunately have to affect our choice when choosing and promoting to come to this region of Scotland on a sailing holiday.

In a Drascombe we prefer to sail as long as there is wind. The outboard motor we have is an auxiliary one for which we carry limited reserves of fuel mainly for emergencies. To be required to use the motor to pass through Kyle Rhea would reduce any restricted reserves of fuel we carry. This might compromise a later emergency or rescue situation.

When we sailed through Kyle Rhea we noticed - apart from the playful seals - how much seaweed and debris is also swept along through the narrows. Some boats in our group snagged on floating weed and kelp which wrapped around rudders and centreboards. This affected our ability to control our course properly. While clearing this we were left no other choice than only drift with the current. Had our outboard motor been in use, weed might have become entangled around the propeller. We would then be at the mercy of the current as well.

We would worry that placing turbines in this complicated channel would create a situation that would be unsafe for small leisure craft in moderate weather. In strong winds any extra obstructions in this channel would be an unacceptable danger for all crews of small and low powered sailing boats.
Kind Regards,

NKDE
[redacted]
[redacted]

Scottish Canoe Association

March 26th 2013

KYLE RHEA TIDAL STREAM ARRAY

CONCERNS RE. SEA KAYAKING FROM THE SCOTTISH CANOE ASSOCIATION

Attached is a summary of detailed comments made recently by our members.

I would make the following general comments;

1) Sea kayaking is a popular recreational activity, attracting increased numbers of tourists to Scotland each year, as well as the large permanent population of kayakers living here. It is an extremely important economic activity, leading to marked expenditure in rural areas.
2) Kayakers using the sea and coast do so at all times of year, all states of the tide, and there are currently no 'no go' areas, with the few M.O.D. restricted areas now bowing to popular opinion, and opening up.
3) Any restriction of area or time is opposed by us, except for very small working areas for industrial construction - 'closing off' parts of the Kyle is unacceptable to us.
4) Navigational risks – the situation of modern sea kayaking has not been assessed
5) The 'consultation' process for this scheme is, as with many others, highly frustrating, and appears to be designed to stifle any opposition. We received the information from the developers (having heard rumours for the past two years) on February 27th, and although in a memory stick format, distributing this to our members and clubs within a month is impossible. (We could only via e-mail invite members to view the material via Dropbox). I understand that a public meeting on Skye only took place a week ago (attended by some of our members there), and this sort of timescale is highly unsatisfactory

Regards

[redacted]
SCA Board Director
Tel. [redacted]
E-mail; [redacted]

Responses to the Kyle Rhea Tidal Stream Array Environmental Statement

With specific regard to the potential impacts on sea kayaking.

According to the ES, Kyle Rhea is listed in the Visit Scotland 'Best Sea Kayaking in Europe' website although there are no data provided on this. Kyle Rhea provides a popular route for intermediate and advanced kayakers, both interested in the channel because of the tide race and using it as a transit to other places of interest but seeking to avoid the tidal stream at its highest levels.

Contrary to the statement in paragraph 22.4.24, Kyle Rhea is not only suitable for advanced kayakers. Intermediate kayakers are perfectly capable of safe passage at appropriate states of the tide, or along the coastline, and this must be taken into account. It is not appropriate to restrict access through an arbitrary decision on someone's perceived ability.

Sea kayakers would be classed as visitors to the coast, as the majority tend to stay within easy striking distance of the coast under most conditions. Loss of two seasons' paddling through disturbance owing to offshore construction would be considered significant to most sea kayakers, if the Kyle was closed to through traffic during this time. Opportunities for sea kayakers to continue to use the Kyle must be kept in place during the construction period, otherwise the adverse impact would be unacceptable. Routes must be available along both coastlines as well as through the tidal stream, for safety reasons.

The 'suggested mitigation' (box after paragraph 22.4.17) should also include consultation with all other water users to ensure minimal interference with recreational passage through the Kyle at all times. Have they given thought to how the 'support vessels' will escort unpowered traffic such as sea kayaks? It does not appear so. The implication is that unpowered traffic will be prevented from passing.

The concurrency analysis (17.3.20) clearly did not coincide with any sea kayak passages as groups of 6 or more kayaks would not be unusual. This has not apparently been given any consideration. It should not be a problem, but it should have been considered.

Impact 2: Rerouting around Skye is clearly impractical for unpowered craft including sea kayaks. This is not a sensible suggestion. Maintaining a safe channel down the east side of the Kyle is fine, but there must also be a navigable channel for sea kayakers and similar low-draft craft along the west coast. It would not be acceptable to prevent access down the western coastline as the majority of kayakers paddle within easy distance of the shoreline. Forcing a crossing of the tidal current, especially for less experienced paddlers, could have very serious consequences depending on the state of the tide, and there may be no alternative given the current proposals (e.g. landing). Forcing passage at slack water would also remove one of the reasons for sea kayakers to paddle Kyle Rhea, which is to make use of the tidal stream.

Navigational Risk Assessment (Appendix 17.1):

Sea kayaks have not been considered in the hazard review. The nearest option would be a sailing vessel without auxiliary power, but the risks are different. Many of the proposed mitigation measures are irrelevant to sea kayakers and it is difficult to see how they would reduce the potential impact significantly.

There is much talk of marking a safe passage off the eastern shore but nothing to indicate whether there will be any passage for very shallow-draft boats like sea kayaks of the western shore. Both passages must be left available to avoid the forced crossing of tidal currents by potentially inexperienced paddlers.

How would the pilot/escort vessel accommodate sea kayakers, should this be necessary? This needs to be properly taken into account.

Improved VHF coverage would be a benefit, but not all sea kayakers carry VHF radios and this is unlikely to change significantly in the future.

Scottish Canoe Association

March 2013

Our ref: PCS/125085
Your ref: 023/TIDE/MCT - 4

If telephoning ask for:
Susan Haslam

20 March 2013

Alexander Ford
Marine Scotland
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

By email only to: MS.Marinelicensing@scotland.gsi.gov.uk

Dear Mr Ford

The Electricity Act 1989
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations
Marine (Scotland) Act 2010
Construct and operate an 8MW Tidal Stream Array
Kyle Rhea, Isle of Skye

Thank you for your consultation email which SEPA received on 20 February 2013.

We ask that the **conditions** in Section 1 and 2 be attached to the consent. If any of these will not be applied, then please consider this representation as an objection. Please also note the advice provided below.

We have not provided comments on the on-shore elements of the application which are included in the ES.

Advice for the determining authority

1. Pollution prevention and environmental management

1.1 We note and welcome the pollution prevention mitigation measures and environmental management proposals outlined in the ES.

1.2 Some of proposed measures relate to works which may be regulated directly by us or other regulatory bodies. However, many of the works will not be regulated in this way and need to be covered by condition. Therefore, we request that a **condition** is attached to the consent requiring the submission of a site specific environmental management plan (EMP). To assist, the following wording is suggested:

At least two (2) months prior to the commencement of any works, a site specific and detailed environmental management plan (EMP) must be submitted for the written approval of the planning authority in consultation with SEPA [and other agencies such as SNH as appropriate] and all work shall be carried out in accordance with the approved plan.

Reason: to control pollution of air, land and water.

1.3 The plan should incorporate the proposed waste management plan and should specifically include information on proposals for drill cuttings.

2. Potential impact of marine non-native species

2.1 We welcome the information provided on potential impacts of marine non-native species, however, no details are provided on proposals for post-construction monitoring.

2.2 It is also noted that the SEPA classification results referenced in the ES are for 2010. For your information while this water body is still classified as 'High' with reference to non-native species, in the newer classification results the water bodies connected to this site now have confirmed records of marine non-native species present. As a consequence this water body is now identified as being at risk for this parameter.

2.3 As a result of the above we ask that a **condition** is applied requiring marine non native species surveillance to be undertaken for this development post construction.

Regulatory advice for the applicant

3. Regulatory requirements

3.1 Details of regulatory requirements and good practice advice for the applicant can be found on our website at www.sepa.org.uk/planning.aspx.

3.2 Decommissioning of boreholes should adhere to SEPA guidance 'Decommissioning of redundant boreholes and wells' which is available from our website.

3.3 If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the operations team in your local SEPA office at:

Carr's Corner Industrial Estate, Lochybridge, Fort William PH33 6TL Tel: 01397 704426

Should you wish to discuss th is consultation, please do not hesitate to contact me on 01349 860359 or planning.dingwall@sepa.org.uk.

Yours sincerely

Susan Haslam
Senior Planning Officer
Planning Service

Copy to: cara.donovan@marineturbines.com

generally can be found in How and when to consult SEPA, and on flood risk specifically in the SEPA-Planning Authority Protocol.

SCOTTISH FISHERMEN'S FEDERATION

Our Ref: MM/fl/CR13-026

Your Ref:

1st April, 2013

Scottish Fishermen's Federation
24 Rubislaw Terrace
Aberdeen, AB10 1XE
Scotland UK

T: +44 (0) 1224 646944
F: +44 (0) 1224 647058
E: sff@sff.co.uk

www.sff.co.uk

Marine Scotland (Licencing Operations Team)
Marine Laboratory
PO Box101
375 Victoria Road
Aberdeen
AB11 9DB

email: ms.marinelicensing@scotland.gsi.gov.uk

Dear Sirs,

Applications for Consents for a Tidal Farm in Kyle Rhea

The Scottish Fishermen's Federation (SFF) represents the interests of the membership of the Anglo-Scottish Fishermen's Association, the Clyde Fishermen's Association, the Fishsalesmen's Association (Scotland) Ltd, Mallaig and North-West Fishermen's Association Ltd, Orkney Fisheries Association, Scallop Association, Scottish Pelagic Fishermen's Association Ltd, Scottish Whitefish Producers Association Ltd and Shetland Fishermen's Association. The SFF clearly understands the importance of fishing industry engagement in the consultation process surrounding the development of marine renewables as these developments will in some cases have a disproportionate effect on our members. The opportunity to comment on this application is therefore welcomed and we look forward to the outcome of the process.

The environmental statement provided, has a comprehensive depiction of commercial fisheries relevant to the area, and it is apparent that the attractiveness of the site's conditions for a tidal power development preclude any fishing activity within the site. Therefore, the main consideration for the SFF within the site will be for navigational impact and note the statement, denoted as impact 10 on pages 27/28 of Chapter 15, "Ensure a clear, safe navigable fairway at all times."

If this matter is addressed correctly as stated, including in the process liaison between the FLO and local industry, and advice from MCA and the NLB as regards the requirements for navigation markings, the SFF is content that this should not be a barrier to the consenting of the development.

The SFF would be keen to see the developers continuing to inform the fishing industry in the vicinity on the ongoing stages of the development as is the normal expectation of any development in the marine environment. Ideally the developer should employ an FIR as a conduit for information but at the very least the FLO should run a regular programme for disseminating relevant information.

The SFF would expect that the maximum possible length of cable involved in the development would be buried to a safe depth. Consideration should also be given to the effects of the potential Electro Magnetic Force (EMF) on starfish and their interaction with crustaceans, to ensure that the development cabling does not become a potential barrier to the free movement of crustaceans.

The SFF would also seek to ensure that there is a proper plan in place for decommissioning before the consents for construction are granted.

Yours faithfully,

[redacted]

Scottish Fishermen's Federation

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
All of nature for all of Scotland
Nàdar air fad airson Alba air fad

Marine Scotland
Marine Laboratory
PO Box 101
375 Victoria Road
Aberdeen
AB11 9DB

Our Ref:
CNS REN TIDAL Marine Current Turbines - Kylerhea

Sent by email to:
MS.MarineLicensing@scotland.gsi.gov.uk

Date: 5th April 2013

For the attention of: Alexander Ford

Dear Alexander

KYLE RHEA - MARINE CURRENT TURBINES LTD

SECTION 36 OF THE ELECTRICITY ACT 1989
MARINE (SCOTLAND) ACT 2010, PART 4: MARINE LICENSING

Thank you for your consultation of the 19th February 2013 requesting our advice on this proposed tidal energy converter array in Kyle Rhea.

Summary
SNH is supportive of the development of offshore renewables; however, the proposed development site is located within and has the potential to adversely affect a number of internationally important protected areas and natural heritage interests. We are unable to provide final advice on all issues at this stage as the Environmental Statement is incomplete. Subject to further information we consider the most significant issues to relate to 'Natura' sites, European Protected Species (EPS) and collision risk modelling. We have outlined a number of areas where further information is required before we can complete our appraisal. Where we have been able to reach a conclusion we offer our final advice on the likely impacts.

Key issues
The key issues in our consideration of this proposal are summarised below. Appendices A to F provide further detail.

Navigational safety
We are aware of the major concerns of the Maritime and Coastguard Agency (MCA), the National Lighthouse Board (NLB) and other non-statutory consultees regarding navigational safety. We consider it important that the implication of these concerns is reached before any of the additional information detailed below is requested from the applicant.

Environmental Statement
Despite early engagement with the developer in pre-application discussions the quality of the Environmental Statement (ES) is poor. In some sections it does not address all relevant concerns. Our review of the ES highlights (a) the absence of key pieces of information (b) an over-reliance on experiences from the Strangford Lough SeaGen device which we consider to

be of limited relevance, and (c) issues relating to the approach to consideration of impacts to Natura sites to inform the HRA.

In addition, the ES utilises only one year of data from vantage point surveys (July 2011-July 2012). This is despite our previous recommendation that a second year of data is needed to provide sufficient confidence on the relative importance of the site for birds and seals. We do agree that the Hebridean Whale & Dolphin Trust (HWDT) report provided, together with the first year of survey data, provides sufficient site characterisation for cetaceans.

Habitat Regulations Appraisal (HRA)

- Lochs Duich, Long and Alsh Reefs Special Area of Conservation (SAC)

The proposal, especially the works required to establish and operate tidal devices and associated cabling, is likely to have a significant effect on the qualifying interest of the Lochs Duich, Long and Alsh Reefs SAC. As a consequence, Marine Scotland will be required to undertake an appropriate assessment (AA) in view of the site's conservation objectives for its qualifying interest. However, further information is required. Appendix A provides further details.

- Kinloch and Kyleakin Hills SAC

The proposal is likely to have a significant effect on the qualifying interests of the Kinloch and Kyleakin Hills SAC. Impacts from onshore aspects of the development upon terrestrial habitats will need to be addressed through an application under the Town and Country Planning (Scotland) Act 1997. This will require the competent authority (Highland Council) to undertake an AA in view of the site's conservation objectives for its qualifying interests.

The HRA for impacts upon otters designated as a qualifying interest of the SAC will require a collaborative approach between Marine Scotland and Highland Council, addressing activities on land, activities in the marine environment and those occurring across the marine-terrestrial interface that may impact upon otters in the SAC. In order to complete our advice on the HRA for these matters, some further information is required. Appendix A provides further details.

Bird Interests

We consider that one year of survey data is insufficient to understand, with any degree of confidence, the importance of the site for different bird species, including whether it is possible to conclude that there is no likely significant effect on the qualifying interests of potentially linked SPAs. There are also a number of problems with the approach to the EIA and HRA for birds that will need to be addressed. Appendix B provides further detail.

Collision Risk Modelling

Insufficient information is provided on the collision risk modelling (CRM) methods and results for birds and marine mammals. Appendix C details information required before we can provide sound advice on the validity of the modelling approach and an interpretation of the outcomes.

There is much uncertainty at present as to the degree of avoidance behaviour that can be assumed for different species. However, on the basis of current expert judgement, outputs of the CRM exercise cause concern, particularly for harbour seals.

European Protected Species and Basking Sharks

The Eurasian otter (*Lutra lutra*) and all cetacean species are listed as European Protected Species (EPS) on Annex IV of the Habitats Directive. Basking sharks receive protection through the Wildlife and Countryside Act 1981 (as amended), with licensing requirements similar to those for EPS. It is likely that the applicant would be required to apply for licences to disturb otters, cetaceans and basking sharks. Our final advice will be dependent upon clarification of some details. Appendix D provides further details.

Seals

Kyle Rhea is an area with a high degree of grey and harbour seal activity. We do not consider these seals are connected to Natura sites due to the distance from SAC's where seals are a qualifying interest. There is therefore no need for further consideration under an HRA. However, potential impacts of collision (with turbines and vessel propellers) and disturbance remain important considerations in areas of such high seal activity. Appendix E details further information and assessment required before our appraisal can be completed.

Seascape and Landscape Impacts

We consider that the proposal will result in a major impact to the seascape, landscape and coastal character of Kyle Rhea, albeit at a local scale. The site is 6.5 km and 7 km from the nearest national landscape designations, but the proposal would introduce novel, vertical, focal features into a scenic landscape noted for its remote qualities. The importance of the locality for wildlife tourism, recreational activities and cultural significance are important aspects of these considerations. Appendix F provides further detail.

Recreation

SNH have a role in regarding the access and transit of Scottish waters by recreational vessels and so are concerned about the potential restriction of access caused by navigational risks. However, we defer to the expertise of the MCA and NLB on these matters. As regards potential impacts to recreational access and experiences onshore, we will provide this advice in response to the onshore planning application.

Further advice

This advice highlights key concerns regarding the construction and operation of a tidal array in this location. We also provide advice on further information requirements to enable completion of our appraisal of impacts. However, we also note the strong concerns to public safety that are likely to be expressed by the Northern Lighthouse Board and the Maritime and Coastguard Agency, which we consider should be taken into consideration prior to any additional information being requested from the applicant.

We are happy to discuss any of the points raised. Please contact Chris Leakey in the first instance at Chris.Leakey@snh.gov.uk, or by phone on 01738 458661.

Yours sincerely,

SUSAN DAVIES
Director of Policy and Advice

Cc:
NLB – Philip Day
MCA – Graeme Procter
THC – David Baldwin

APPENDIX A

Habitat Regulations Appraisal (HRA)

i. Where a plan or project could affect a Natura site, the Habitats Regulations require the competent authority (Marine Scotland and / or the Highland Council) – the authority with the power to undertake or grant consent, permission or other authorisation for the plan or project in question – to consider the provisions of regulation 48. This means that the competent authority has a duty to:

   - determine whether the proposal is directly connected with or necessary to site management for conservation; and, if not,

   - determine whether the proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; and, if so, then,

   - make an appropriate assessment of the implications (of the proposal) for the site in view of that site's conservation objectives.

ii. This process is now commonly referred to as Habitats Regulations Appraisal (HRA). HRA applies to any plan or project which has the potential to affect the qualifying interests of a Natura site, even when those interests may be at some distance from that site.

iii. The competent authority, with advice from SNH, decides whether an appropriate assessment is necessary and carries it out if so. It is the applicant who is usually required to provide the information to inform the assessment. Appropriate assessment focuses exclusively on the qualifying interests of the Natura site affected and their conservation objectives. A plan or project can only be consented if it can be ascertained that it will not adversely affect the integrity of a Natura site (subject to regulation 49 considerations).

Appraisal of impacts of the proposal in relation to Lochs Duich, Long and Alsh Reefs Special Area of Conservation (SAC)

1. Lochs Duich, Long and Alsh Reefs SAC is designated for its benthic reef habitat. The marine components of the proposed development are within the SAC.

Step 1:	Is the proposal directly connected with or necessary for the conservation management of the SAC?

2. The proposal is not directly connected with or necessary for the conservation management of the SAC.

Step 2:	Is the proposal likely to have a significant effect on the qualifying interests of the SAC either alone or in combination with other plans or projects?

The conservation objectives of the site are:

(i) to avoid deterioration of the qualifying habitat thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying interests;

and to ensure for the qualifying habitat that the following are maintained in the long term:

(ii) Extent of the habitat on site
(iii) Distribution of the habitat within site
(iv) Structure and function of the habitat
(v) Processes supporting the habitat
(vi) Distribution of typical species of the habitat
(vii) Viability of typical species as components of the habitat
(viii) No significant disturbance of typical species of the habitat

SNH advice

2. The proposal is likely to have a significant effect on the qualifying interest of the Lochs Duich, Long and Alsh Reefs SAC, including permanent / long-term loss of habitat under the footprint of the device foundations and Horizontal Directional Drilling (HDD) break out, habitat damage during anchoring or positioning of barges during construction and maintenance activities, and abrasion and scouring around cabling. This site's current status, assessed through SNH's site condition monitoring programme, is unfavourable declining.

3. There are a number of details that require clarification or further information in order for Marine Scotland to complete an appropriate assessment (AA). These are detailed below, divided into the various project phases and components:

Construction phase

Turbine foundations:

- Section 5.4.10 of the ES (Volume II) mentions that seabed preparation at the foundation sites may be required, including movement of boulders. However, this is not addressed in the HRA report; the details of this, including seabed preparation methods and the extent of impact, will be an important matter to clarify for an AA.

- Section 5.3.14 of the ES (Volume II) mentions the possible need for scour protection, but states that if required will be the subject of a separate Marine Licence and consultation. Marine Scotland should confirm that they are content with this approach or whether scour protection should be addressed within the current application and therefore whether they require further details for the AA.

- The ES assumes that the benthic footprint of an anchored barge or a jack-up barge will be the same during installation of the foundations as during lowering of the devices? It is not clear whether this is a reasonable assumption. For example, would the mooring arrangement described be capable of providing access to all turbine locations for device deployment once the foundation structures are already in place? The footprint of these two installation phases in different years also needs to be considered separately and additively due to the low likelihood of anchors or barge legs being successfully lowered in exactly the same locations in different years.

- The mathematical workings of the footprint of mooring systems should be provided, as the figures as currently presented are confusing. For example, a simple extrapolation of a 25m^2 gravity anchor with a 5m buffer does not equal a maximum footprint of 177m^2 per anchor.

- Potential impacts from movement of anchor chains is not justified or clearly explained. It is understood that movement of anchor chains in Strangford Lough resulted in damage to relatively large areas of reef habitat. While conditions in Strangford Lough and Kyle Rhea are only comparable to a point, it is clear from this experience that the applicant needs to demonstrate their reasoning for the conclusions reached.

- A GIS model is described, referring to Appendix 13.2, which has been used to investigate the impact through 16 different device locations. Appendix 13.2 was not provided with the ES and should be acquired.

Cabling:

- Section 5.4.7 of the ES (Volume II) states that vessel options for cable-laying include use of a moored barge and/or a jack-up vessel. Cable-laying operations are presumably spatially and temporally distinct from works on the foundation and devices, but the details of the associated footprint have not been included.

- The ES does not consider that movement of the cable will result in habitat loss and considers that movement will be limited to 5cm either side of the cable. Given the conditions of the site we recommend that a clearer justification for these assumptions is sought. It is surprising that the applicants propose no cable stabilisation methods (e.g. concrete mattresses) for the intra-array cable, particularly for those sections for which it will not be possible to align it with the direction of tidal flow. Confirmation of this is sought, as otherwise it will be an important consideration for the AA.

- The extent of loss and damage of benthic habitat associated with the breakout point for the HDD, and the remaining length of export cabling on the seabed surface, are required.

Operation and maintenance phase

Maintenance visits

- Maintenance visits may require anchoring of vessels, as indicated in the ES and HRA document, and therefore would have an associated impact on the qualifying interest of the SAC. Information on the maximum frequency of maintenance visits (planned plus contingency) and the extent of the associated benthic footprint of the anchoring/mooring system is required to inform the AA. For anchored barges, we expect that the mooring design and spread will differ from the installation phases due to (a) possible different vessel types and (b) the presence of devices and towers.

Hydrodynamic and sediment processes

- The benthic habitat and sediment maps provided in the ES clearly show areas of sandy substrate adjacent to and down-drift from the proposed turbines. Consequently, there is the possibility of changes to entrainment, transport and deposition due to alteration of the local hydrodynamics due to the presence of

devices and infrastructure and the extraction of tidal energy. It is possible that this could cause smothering of SAC interests. At present there is no hydrodynamic model that predicts changes to sediment processes during the operational phase of the project, with the relevant section of the ES relying too heavily on the experience from the SeaGen device in Strangford Lough. However, prior to making a request for this work from the applicant, SNH would like to review data collected recently by the British Geological Survey (BGS) in Kyle Rhea. It is expected that this will provide substrate maps that will allow consideration of the relative stability of the sandy areas previous identified and therefore whether a modelling exercise is warranted.

Navigational marker buoys

- The use of navigational markers to the east of the array, demarcating a navigation channel, is mentioned in the ES as a proposed mitigation for navigational safety issues. As the moorings for these would have a benthic footprint in the SAC, we suggest this should be addressed alongside other benthic impacts in the AA or through a separate marine licence, which may be subject to a separate AA.

Cumulative impacts for HRA

The HRA will also need to address cumulative impacts on the benthic reef interests of the SAC. These may be relatively few, but should include geotechnical survey works for which a separate marine licence application has been submitted for this development proposal.

Other comments on the HRA report

It is stated in several parts of the benthic assessment that best-practice guidance will be followed to ensure habitat loss or damage is minimised. However, no further information is provided; detail is sought regarding what this mitigation would comprise.

Appendix 13.2 has not been provided and may be important as it appears it will include information on 16 possible device locations. It will be important to know the context in which these 16 locations are being considered.

On matters of navigation, we would like to draw the attention of Marine Scotland, MCA and NLB to a statement on in the benthic section (page 52) of the HRA report provided by the applicant: *"…on more detailed investigation, it may not be possible to use DP vessels or jack-up barges in the Kyle Rhea site"*. In this event, the applicants may only be left with the option of using anchored barges. Given the concerns previously raised by MCGA when this was an option for the geotechnical investigations, this matter should be urgently addressed.

The sensitivity of the benthic receptor to physical impacts is correctly recognised as high. However, in section 13.4.19 an example from MarLIN is used to consider the sensitivity of biotopes to abrasion and physical disturbance. The example available is CR.MCR.EcCr.FaAlCr.Pom and is assessed as low sensitivity with high recoverability. First, it should also be recognised that it is ranked as having high intolerance to physical abrasion Furthermore, this faunal crust biotope is less vulnerable to physical impacts than other key reef biotopes relevant to Kyle Rhea, such as CR.HCR.FaT.CTub.Adig, which have more protrusions (such as soft corals and anemones).

Appraisal of impacts of the proposal in relation to otters as a qualifying interest of Kinloch and Kyleakin Hills SAC

1. Kinloch and Kyleakin Hills SAC is designated for the following qualifying interests: Eurasian otter (*Lutra lutra*), alpine and subalpine heaths, blanket bog, dry heaths, mixed woodland on base-rich soils associated with rocky slopes, western acidic oak woodland, wet heathland and cross-leaved heather. Various components of the proposal are in proximity to or overlap with the SAC.

2. Impacts upon terrestrial habitat interests will be addressed through an application for onshore works under the Town and Country Planning (Scotland) Act 1997. While most of the proposed onshore works do not overlap with the features, cable route option 1 appears to be within or on the boundary of the SAC. As the competent authority, Highland Council may be required to undertake an appropriate assessment (AA) in view of the site's conservation objectives for its qualifying interests.

3. The HRA for impacts upon otters designated as a qualifying interest of the SAC will require a collaborative approach between Marine Scotland and Highland Council, addressing activities on land, activities in the marine environment and those occurring across the marine-terrestrial interface that may impact upon otters in the SAC. The following advice addresses only the otter qualifying interest.

Step 1:	Is the proposal directly connected with or necessary for the conservation management of the SAC?

4. The proposal is not directly connected with or necessary for the conservation management of the SAC.

Step 2:	Is the proposal likely to have a significant effect on the qualifying interests of the SAC either alone or in combination with other plans or projects?

The conservation objectives for otter as a qualifying interest of the site are:

> **(i)** to avoid deterioration of the habitats of the qualifying species or **(ii)** significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features;
>
> and to ensure for the qualifying species that the following are maintained in the long term:
>
> **(iii)** Population of the species as a viable component of the site
> **(iv)** Distribution of the species within site
> **(v)** Distribution and extent of habitats supporting the species
> **(vi)** Structure, function and supporting processes of habitats supporting the species
> **(vii)** No significant disturbance of the species

SNH advice in relation to the HRA

5. Due to the proximity to the SAC and/or the nature of some of the activities associated with the proposal, we consider that the proposal would have a likely significant effect (LSE) on otters in the Kinloch and Kyleakin Hills SAC. As a consequence, Marine Scotland and

Highland Council, as the competent authorities, are required to carry out appropriate assessments in view of the site's conservation objectives for this qualifying interest.

Step 3: Can it be ascertained that the proposal will not adversely affect the integrity of the SAC either alone or in combination with other plans or projects?

6. **Onshore drilling rigs, substations and directional drilling – impacts on otter holts**:

- Option 1:

  The option 1 onshore drilling pad would be located at least 250m from the nearest otter breeding or resting site identified in either the 2000 or 2012 otter surveys. The nearest holt site within the SAC is at least 270m away. Therefore no direct or indirect effect on the SAC breeding and resting sites would be expected from activity at the drilling pad.

  The option 1 substation would be located within 200m of two otter holts both of which were identified as 'high use' in the 2000 survey, although sufficiently distant to reduce disturbance potential. One of these is correctly labelled as 'nursery holt' in the confidential report annexed to the ES. The other is incorrectly labelled 'spraint' which may be because spraint was found in the area in 2012. Given the existing potential disturbance associated with the Forestry Commission toilets it is unlikely that these holts would be used as breeding holts in the future. However, it would be good practice to confirm this with an otter survey 4-6 weeks before works commence. Once constructed, the substation is unlikely to cause otters to avoid the holts, so any disturbance impacts would be short-term and therefore is considered to have no adverse effect on site integrity.

  The option 1 route for digging a trench and laying a cable along the edge of the existing forestry track is more than 160m from the nearest otter holt. Any disturbance is limited by the distances involved and the short-term nature of the works and therefore unlikely to have an adverse effect on site integrity. However, a pre-construction otter survey should confirm that there are no closer otter holts in use.

  The option 1 horizontal directional drilling (HDD) route shown does not pass under the SAC or close to an otter holt so disturbance due to vibration or noise is unlikely. A pre-construction otter survey should confirm that there are no otter holts close to this route in use prior to the start of works. Also, although the ES states that the HDD is unlikely to cause vibration that could disturb otters, this claim is unsubstantiated. Furthermore, the ES leaves open the possibility that that the turbines could be located elsewhere in the 'array area' and that the drilling route could therefore follow a different route to shore. Clarity on this matter, and / or agreement on the absence of a potential disturbance effect from HDD, must be acquired for Marine Scotland and Highland Council to undertake the AA.

- Option 2:

  The option 2 onshore drilling pad would be within a large SAC exclusion area around Kylerhea township, so there would be no direct or indirect effects on the otter breeding and resting sites within the SAC.

  The option 2 substation would be located approximately 100m south of the SAC but >200m from the nearest holt site so again there will be no direct effect or indirect effects on the otter breeding and resting sites within the SAC. A pre-construction otter survey should confirm that there are no closer otter holts in use prior to the start of works.

The option 2 cable laying route is not within or sufficiently close to the SAC for direct or indirect effects that would have an adverse effect on site integrity.

The directional drilling route shown does not pass under the SAC, but carries the same uncertainties and information requirements as for option 1 above.

7. **Risk of collision with operational tidal turbines -** Otters have been recorded diving to 20m depth (R. Cottis, pers. comm.) although the widely quoted maximum depth is 14m (from Twelves, 1984). Both are likely to be towards the extremes of otter behaviour (R Raynor - SNH pers. comm.). The majority of feeding dives take place in shallow water in seaweed beds and on the sea bed. In Shetland, Hans Kruuk estimated that 54% of dives were in water depths less than 2m and 98% water less than 8m. In Skye 0-10m is considered realistic (R. Cottis, pers. comm.). The indicative locations for proposed turbines are 23m+ depth so otters are not considered to forage in these areas. However, the 'array area' does extend to the 10m depth contour, so greater clarity on the potential locations of turbines must be acquired to conclude no adverse effect on site integrity from potential collision risk.

8. Otters have been recorded swimming across Kyle Rhea as part of the vantage point surveys. The ES states that this occurs north of the turbines, but the application seeks to maintain an option for locating the turbines anywhere within the 'array area', including further north. Nevertheless, expert advice is that transiting otters are likely to stay close to the surface when crossing the channel as they are unlikely to be foraging in such deep water and diving is energetically expensive (R. Raynor & R Cottis, pers. comm.). Consequently we consider it unlikely that they will be at significant risk of collision for otters crossing the Kyle.

9. **Underwater noise and otters -** The ES states that otters have ears designed for airborne sound. Gordon & Northridge (2002) report that no quantitative information on the hearing of European otter was found in the literature. Measurements have been recorded for the North American river otter but only with respect to in-air hearing. Gordon & Northridge (2002) state that without underwater audiograms it is impossible to speculate on potential for damage. However, it is worth noting that otters can close their ears while diving and it is very unlikely that they will be any more sensitive than cetaceans or seals.

10. The main source of vibration and noise would be likely to arise from the HDD and from drilling for installation of turbine foundations. Nevertheless, the high mobility of otters, the availability of nearby foraging habitat, the noisy background environment of a tidal channel and the temporary nature of drilling activities allow a conclusion that there will be no adverse effect on site integrity from underwater noise.

11. **Construction noise and otter foraging -** Construction activity could take place within ~70m of otter foraging areas. This is likely to cause otters to avoid these areas when works commence. However this displacement effect is likely to be localised and short-term. Once the disturbance becomes predictable (activity restricted to particular locations and times) it is likely that otters will become accustomed to it and are likely to revert to their normal foraging behaviour. Examples of such responses have included construction of the Skye bridge and otter activity in harbours. It is unlikely that displacement would be of sufficient scale to affect survivorship and therefore the worst case scenario is that there may be temporary disturbance which would not result in an adverse effect on site integrity.

12. In conclusion, in order to complete our appraisal and for the competent authorities to be able to undertake an appropriate assessment (AA) we advise that clarity or further information is sought on the following matters:

- Whether turbines require to be sited in water of depths greater than 20m;
- Confirmation of the proposed HDD cable route. This will be dependent on confirmation of proposed drilling rig and substation locations through the onshore planning application and refinement of proposed turbine locations following geotechnical site investigations.
- Information on the depth of HDD route and/or justification for considering that this activity does not create vibrations to the ground surface capable of disturbing otters.

13. If the development is consented, we recommend that it is conditional on the delivery of an otter survey 4-6 weeks prior to the start of construction. Further advice can be provided on the basis of this survey but we would advise that further consideration may be required if any new active holts are found in close proximity to these works.

14. Conditions that would be attached to EPS licences for otters (see Appendix D) would further ensure any impacts on otters are kept to a minimum.

APPENDIX B

Bird interests

Our primary consideration at present is the need for use of a second year of observation data to inform the EIA and HRA for birds, particularly diving species (shag and cormorant). If the species observed and their abundance are not significantly different in a second year then we do not expect the overall outcome of the assessment for birds to vary substantially. However, at present we are not confident that there is sufficient evidence to understand the use of the site by these bird species.

A number of procedural and analytical problems also need to be addressed in the EIA and HRA. We summarise some of the key issues below but can provide more detailed advice on these in due course if required.

Vulnerability

The HRA approach considers vulnerability prior to site-specific issues, potentially scoping out less vulnerable species before considering whether they are present on the site in numbers that represents a degree of risk that belies their relatively lower vulnerability. This approach is not suitable for considering Likely Significant Effect on an SPA qualifying interest.

The Furness *et al* (2012) report is applied without considering conservation of status of species (e.g. goosanders) or specific details of the development site or proposal (e.g. depth of turbine blades).

Defining thresholds

The ES, including the HRA, makes use of a number of thresholds to filter out species from further consideration, such as the criteria for assessing (a) the magnitude of impacts or (b) the priority species for EIA. These thresholds are applied without any supporting evidence for their application and do not make allowances for species-specific ecology or population status.

Collision risk modelling

See Appendix C for concerns about the collision risk modelling and information required for further appraisal of the results.

APPENDIX C

Collision Risk Modelling

Insufficient information is provided on the collision risk modelling (CRM) methods and results for birds and marine mammals. The following information is required for SNH to provide advice to Marine Scotland on this issue:

- A detailed description of the model, detailing the formula, each of the parameters and how the model has been constructed, including the spatial scale of species density data.
- Clarity on how the model accounts for a 'worst-case' positioning of the devices in the 'array area' rather than just the 'indicative locations'.
- Correction factors applied to address methodological artefacts (e.g. distance bias; surface area of water scanned with/against tide) and parameters used. The statistical report on seal data states a decline in detectability with distance from vantage points.
- Assumptions about animal and device metrics, including diving behaviour should be detailed and justified with references (e.g. length of time spent diving at different depths; risk of collision with turbine speed; seasonal variation in diving behaviour).
- Provision of the mathematical workings of the modelling exercise.
- We suggest minke whale should also be subject to encounter modelling, mostly likely using SCANS II data for density estimates. For bottlenose dolphin, we consider similar modelling for this species is currently too problematic. However, given the small bottlenose dolphin population on the west coast and the likely importance of Kyle Rhea as a 'corridor' between key habitats we recommend that further expert consideration is required on the likelihood of risk (i.e. how often bottlenose dolphins pass through Kyle Rhea) and the implications for the population.

Marine Mammals

For marine mammals species modelled so far, current collision risk outputs may be of concern (based on the 98% avoidance rate; see below), but a better understanding of the model used is required. We suggest consideration of collision rates against the Potential Biological Removal (PBR) figure for the entire west coast management unit area (currently 446 for harbour seals and 386 for grey seals), but also against the sub-area described by SMRU: 'West Scotland central' (Ardnamurchan to Rubha Reidh), with PBRs currently at 168 for harbour seal and 86 for grey seals.

As noted above, the bottlenose dolphin population of the west coast is small. As such, even a low rate of mortality could be deemed to be detrimental to the maintenance of the favourable conservation status of the species.

Table 1 – extract of marine mammal collision risks from the ES

	Harbour seal	Grey Seal	Harbour porpoise	
Dives per hour	12	6	60	120
Avoidance rate %	No. of potential collisions per year			
90	-	-	-	-
95	128	36	40	79
98	51	14	16	32
99	26	4	8	16
99.5	13	7	4	8
99	5	1	2	3

Birds

Collision modelling has only been completed for shags, concluding the following number of collisions for avoidance rates of 0, 90, 95, 98 and 99%, respectively: 96, 9.6, 4.8, 1.9 and

0.96. However, the absence of the second year of data results in uncertainty as to the representatively of the data collected so far for shags and doubt as to whether any other species should have been considered for collision risk modelling.

Appendix D

European Protected Species and Basking Sharks

The Eurasian otter (*Lutra lutra*) and all cetaceans are listed as European Protected Species (EPS) on Annex IV of the Habitats Directive. Basking sharks receive protection through the Wildlife & Countryside Act 1981 (as amended), with licensing requirements similar to EPS.

It is likely that the applicant would be required to apply for licences to disturb otters, cetaceans and basking sharks. Some further information and points of clarification are required for SNH to complete appraisal of the relevant sections of the ES. The licensing authority for these species is as follows:

Otters – Scottish Natural Heritage
Cetaceans – Marine Scotland
Basking Sharks – Marine Scotland

Otters

Kyle Rhea has a high degree of otter activity and otters are a major tourism attraction for the area.

The information required for the purpose of the HRA for otters as qualifying interests of the Kinloch and Kyleakin Hills SAC (see Appendix A) is also required to inform (a) which activities are relevant to consider as potential offences under EPS legislation and (b) whether it can be determined that those activities will not be detrimental to the maintenance of favourable conservation status (FCS) of the species within their natural range, and therefore whether a licence can be issued. The information needs are:

- Whether turbines require to be sited in water of depths greater than 20m;
- Confirmation of proposed HDD cable route. This will be dependent on confirmation of proposed drilling platform and substation locations through the onshore planning application and refinement of proposed turbine locations following geotechnical site investigations.
- Information on the depth of HDD route and/or justification for considering that this activity does not create vibrations to the ground surface capable of disturbing otters.

The issue of an EPS licence will be conditional on the delivery of an otter survey 4-6 weeks prior to the start of construction and that no new active holts are in close proximity to these works.

Cetaceans & basking sharks

The HWDT report and other sources clearly indicate Kyle Rhea as an important ‘corridor’ between core habitats, particularly for odontocetes.

Licences for the disturbance of cetaceans and basking sharks will be required for the construction phase of the project. For the operational phase it is expected that licences will only be required to cover the possibility of collision of animals with the tidal turbines. Below we list a number of matters that require clarification in order to complete our appraisal of this part of the ES:

- The additional information relating to the collision risk modelling as detailed in Appendix C.

- Detail on how the conclusions have been reached regarding behavioural impacts upon harbour porpoise from operational turbine noise. Mild-avoidance to 1.1km (in excess of channel width) is noted before consideration of background noise, but section 6.4 in Appendix 12.6 states that background noise would result in the turbine being inaudible beyond 11m from the device. It is not clear how this figure was reached.

APPENDIX E

Seals

We agree that Kyle Rhea is sufficiently distant from SAC's with seals as a qualifying interest to conclude no likely significant effect under HRA. However, Kyle Rhea is an area with a high degree of grey and harbour seal activity and so potential impacts of collision (with turbines and vessel propellers) and disturbance remain important considerations. The timetabling of construction works from April to September in two consecutive years would coincide with the greatest numbers of seals, so increases the risk.

There are a number of matters in the ES that require clarification or further work by the applicant in order for our appraisal of impacts upon seal species to be completed:

- The additional information relating to the collision risk modelling as detailed in Appendix C.
- We consider that completion of the recommended two years of site-specific surveys would give more confidence in the conclusions about seal usage of the site. Most importantly this should aim to provide further information on the presence of juveniles and therefore the importance of the area for breeding; this information is not available from the SMRU surveys, but distinguishing age-classes of seals can be challenging so requires an experienced observer. Juveniles may be at greatest risk of collision from turbines or vessel propellers.

The current assessment should be improved by addressing the following issues:

- A more thorough assessment of the potential for disturbance of seals at haul-out sites. This should not be limited to the indicative device locations but, as the application is for devices to be located anywhere in the 'array area', should also consider the worst-case scenario on that basis.
- While we agree that there is no greater risk to marine mammals from construction vessel noise than they are already subjected to, it should be recognised that disturbance from vessels does not just relate to noise – the presence of vessels, particularly if they are undertaking manoeuvres or activities not commonly seen in the area can also disturb animals.
- Further discussion of monitoring and mitigation options for disturbance and potential corkscrew injury impacts on seals would be beneficial.
- A more detailed breakdown of seal observation results, including numbers of juveniles at haul-outs.

It is hoped that a preliminary analysis of the most recent SMRU seal-tagging exercise in Kyle Rhea will be available soon. Consequently, if the applicant is required to provide further information then we expect to be able to use this extra source of information in our final advice.

APPENDIX F

Seascape and Landscape Impacts

Comments on SLVIA process

- The SLVIA assesses the seascape, coastal and landscape *character* impacts, separately from the *visual,* which is common practice. However, the '*complex interrelationships with other topics, for example nature conservation, cultural heritage and land use*' (GLVIA notes, Section 2.33, p 17), have not been adequately addressed within the ES.

SNH Assessment of Impacts

- There will be a major change to the scenic landscape qualities of Kyle Rhea, which forms a continuum between two National Scenic Areas (Knoydart and the Kintail NSAs); the existing coastal and landscape qualities are arguably of an equivalent quality and resource.
- There will be a major seascape, landscape and visual impact on the seascape and coastal character of Kyle Rhea strait, introducing novel, vertical, focal features into a scenic landscape noted for its remote qualities.
- The tower elements of the turbine devices will form a dominant feature within/over the kyle, causing major impacts to recreational sailing and kayaking and passengers on the Skye ferry crossing.
- Major impacts to the historically significant crossing-place between mainland and Isle of Skye; a culturally significant crossroads between maritime and onshore traffic.
- Lastly there will be a change to and diminution of, the Dark Sky Site by the introduction of navigational lighting. Lighting is as yet undetermined in size, intensity and character but likely to be permanent, during day and night. This will be a major/moderate change.

Seascape, Landscape and Coastal Character

The baseline of Local Coastal Character areas (mapped Fig 16.1.3) is presented with good explanation of their key characteristics (Table 16.6). The ES assessment methodology is clearly outlined, for SLVIA the term 'substantial' is where 'major' would be preferable.

In assessing the character of the site and its context the following should be considered: recreational amenity, lighting and the Skye Ferry. It is the amalgam of these key elements and experiences which compose the kyle's strong scenic sense of place. Our comments on the impacts on the key characteristics of the seascape and landscape, cross-referenced to the Skye and Lochalsh LCA (1996) are as follows:

Kyle Rhea strait (LCCA), where the proposal is located, is distinctive and remote, a narrow, steep-sided, fjord (LCT). Key characteristics include its dark and deep waters enclosed by a narrow steep-sided fjord valley. The adjacent hillsides reach a height of c 700m to the west and 245m to the east, with only a narrow and craggy rock-margin at the water's edge; this all makes for a strongly vertical emphasis, and forms a sheltered, quiet space with clear, transparent waters at the coastal edge. Within the kyle, the coast is largely uninhabited, settlement occurs to the south, at the 'mouth' to the kyle. There is an intense perception of remoteness with limited indication of human influence.

Kyle Rhea's distinctive landscape is of high sensitivity. While the towers will not vie with the hillside and peaks in terms of their vertical scale, they will change the character of the narrow strait. The four 18m towers will appear intrusive, man-made forms projecting out of the water

in the 'mid-kyle'. They will introduce static man-made features into a 'natural' sea corridor, where ships and sailing boats are transient and seen to 'pass through'.

The development will dominate the kyle and the solitary Kylerhea Lighthouse (minor light), on the west shore. The latter is comparatively 'modest' in nature standing on the edge of the shore, with most of its 7m high tower submerged at high tide.

The value of both the strait and the slipways at Kyle Rhea should also be considered for their cultural value and associations which contribute to the character context. The Glenelg and Kylerhea slipways are a rare droving slip, believed to be only one of a kind within Scotland, designed by Telford.

Visual Impacts

Common to many of the viewpoint assessments (VP3, VP4, VP5,VP7, VP8,VP9) is the repeated statement that human influence is displayed in the plantation woodland, ferry slipways, Kylerhea Minor Light, and electricity transmission lines that cross the channel. Also, in summer the ferry adds activity to the view. While this correct baseline description itemises existing man-made features it does not then follow that '*The project will not fundamentally change the baseline conditions, adding a series of new elements within the channel*'. It is the impact of the proposal on/within the landscape which needs reviewing, in comparison to the existing baseline.

The proposal will fundamentally change the baseline conditions by adding new, vertical elements that exceed the existing scale of man-made structures and introducing a bright colour attractant into the natural seasonal range of landscape colours. We consider that these will cause:

- a major impact in near views at <1km (VP1; VP2; VP3; VP4);
- a major/moderate impact in views 1km – 4.50km (VP5; VP6;VP7)
- a minor impact from viewpoints where the proposal is incidental in a broad expansive panorama at distances of 4.50km+ (VP8; VP9)

In VP5, VP6 and VP7 the colour of the turbines will be a major factor in their visibility.

The 18m+ towers, in close proximity to the Skye Ferry (VP1 Ferry crossing W 293m; VP2 Ferry crossing E 380m), will have a major visual effect on visitors/ferry passengers.

Amenity and recreation

The Skye Ferry, from Glenelg on the mainland to Kylerhea in Skye, is a long-established and traditional ferry route, carrying up to some 30,000 annual passengers a year (2007). The development may be considered to be relatively small - but in landscape terms the 18+m towers (bright yellow) in the very constrained, narrow strait is equivalent in height to a $5^1/_2$ – 6-storey building, with the kyle itself approximately 550m wide at the ferry crossing. Navigable sea room would be reduced from 440m to 250m to the east of device 2. During the operational phase of the project, the towers will form a dominant feature on crossings within/over the kyle, the nearest tower situated 160m north of the ferry route if the indicative turbine locations are assumed (further assessment may be required if these locations cannot be confirmed prior to a consent decision).

The kyle is an Inshore Traffic route, 8 miles shorter than the Little Minch with better mobile phone coverage. Consequently it is very popular for recreational sailing and kayaking (Visit Scotland (undated) Best Sea Kayaking in Europe website). Impacts on sailing and kayaking will be major as for the Skye Ferry, as the chief attractions of the kyle are not restricted to the navigable channel alone but do extend to the scenic landscape.

Effects of lighting

Kylerhea is recognised as a Dark Sky Discovery Site, and identified as being a 'Milky Way' site – where the Milky Way is visible to the naked eye. It is an intrinsically dark landscape, with only a few, dispersed lights from residential properties, street lights restricted to Reraig and the warning lights from Kylerhea minor light (every 3 secs) on the west shore of the strait.

During the installation phase there will be site flood lighting, during 3 months over two years, classed as temporary. Thereafter, the Operational phase will require navigational lights on the towers – however, these requirements have yet to be determined in consultation with the NLB and MCA. This area is valued and therefore of high sensitivity.

Queiros J (Joao)

From: Gethin, Toby <Toby.Gethin@thecrownestate.co.uk>
Sent: 28 February 2013 18:12
To: MS Marine Licensing
Subject: RE: 023/TIDE/MCT - 4: MS LOT to TCE: Kyle Rhea Tidal Stream Array ES Consultation

Dear Alexander,

Thank you for consulting the Crown Estate on the above application and consultation. We have no comments to make.

Regards,

Toby

Toby Gethin
Consents Adviser (Wave & Tidal)

THE CROWN ESTATE
The Crown Estate
16 Burlington Place
London W1S 2HX
Tel: +44 (0) 20 7851 5216
Mob: +44 (0) [redacted]
Fax: +44 (0) 20 7851 5125
Email: Toby.Gethin@thecrownestate.co.uk
www.thecrownestate.co.uk

From: Alexander.Ford@scotland.gsi.gov.uk [mailto:Alexander.Ford@scotland.gsi.gov.uk]
Sent: Wednesday, February 20, 2013 11:44 AM
To: Gethin, Toby
Subject: 023/TIDE/MCT - 4: MS LOT to TCE: Kyle Rhea Tidal Stream Array ES Consultation

Please see attached letter.

Regards

Alexander Ford
Marine Licensing Casework Officer
Marine Scotland – Marine Planning & Policy Division
Scottish Government | Marine Laboratory, PO Box 101| 375, Victoria Road | Aberdeen AB11 9DB
Tel: +44 (0)1224 295414
S/B: +44 (0)1224 876544
Fax: +44 (0)1224 295524
e. alexander.ford@scotland.gsi.gov.uk
w: http://www.scotland.gov.uk/marinescotland

Our Ref SCT6821B
Your Ref 023/TIDE/MCT - 4

18 April 2013

JMP Consultants Limited
Mercantile Chambers
53 Bothwell Street
Glasgow
G2 6TS

T 0141 221 4030
F 0800 066 4367
E glasgow@jmp.co.uk

www.jmp.co.uk

Andrew Sutherland
Marine Scotland
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Dear Andrew

THE ELECTRICITY ACT 1989
THE ELECTRICITY WORKS (EIA) (SCOTLAND) REGULATION 2000
MARINE (SCOTLAND) ACT 2010
THE MARINE WORKS (EIA) REGULATION 2007
SECTION 36 APPLICATION FOR PROPOSED 8MW TIDAL STREAM ARRAY AT KYLERHEA (ENVIRONMENTAL STATEMENT)

With reference to your correspondence dated 20 February 2013 relating to the above planning application, we write to inform you of our involvement as Term Consultants to Transport Scotland – Trunk Road and Bus Operations (TS-TRBO) in relation to the provision of advice on issues affecting the trunk road network.

We have been passed a copy of the Environmental Statement (ES) prepared by Royal Haskoning Limited on behalf of Sea Generation (Kyle Rhea) Limited in support of the above development. Having reviewed the information provided, we would make the following comments on behalf of Transport Scotland in relation to the trunk road network.

We understand from the information provided that the proposed development involves the construction of four 2MW SeaGen tidal turbines to be located to the south of Kyle Rhea, approximately 150m north of the MV Glenachulish ferry route. We note that all turbines will be located in water depths of up to 35m but will be joined together by inter-array cabling and there will be one electricity export cable from the turbines to the landing point at Kylerhea village in the Isle of Skye. We understand from the information provided that all the offshore works including the delivery of turbine components will be transported by sea from abroad. In such circumstance, Transport Scotland will offer no comments on the offshore operations of the project and do not require any further information in this regard.

Notwithstanding this, we note that additional onshore infrastructure is required to transfer the electricity generated from the tidal turbines to the National Grid. We understand that the substations required for the connection to the National Grid would be on land in the vicinity of the Forestry Commission car park in Kylerhea or an area of land close to Kylerhea village in the Isle of Skye. We understand that consent for those aspects of the project will be applied for under a separate application for planning permission under the Town and Country Planning (Scotland) Act 1997 and Transport Scotland will be in a position to provide comments on this aspect when consulted on the application.

I trust that the above is satisfactory and should you wish to discuss any issues raised in greater detail, please do not hesitate to contact me at our Glasgow office.

Yours faithfully

[redacted]

Alan DeVenny

Associate Director

Tel 0141 226 6923
Email alan.devenny@jmp.co.uk

cc Malcolm Forsyth, Transport Scotland – Trunk Road and Bus Operations (TS-TRBO)

WDC, Brookfield House, 38 St Paul Street, Chippenham, Wiltshire SN15 1LJ
T +44 (0)1249 449 500 **F** +44 (0)1249 449 501 **E** info@whales.org **W** whales.org

Alexander Ford
Marine Scotland Licensing Operations Team
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

5th April 2013

Dear Alexander

WDC comment on Kyle Rhea Tidal Array Environmental Statement

General comments

WDCS are endeavouring to assist with the environmentally sustainable development of marine renewable energy in Scotland. Whilst welcoming the Scottish Governments' commitment to renewable energy generation, particularly noting the potential consequences of climate change for whales and dolphins, we have serious concerns about current levels of uncertainty and the possible negative impacts these developments may have on whales and dolphins in Scottish waters.

We look forward to strong guidance being provided by Marine Scotland to assist developers in meeting their environmental responsibilities, including through requiring detailed monitoring to assess the full range of potential impacts, and appropriately managing and mitigating disturbance and injury.

Marine mammals and licensing decisions

Consideration should be given to the adequacy of the current frequency of one or two years baseline survey data collection, as not enough data are collected in one or two days visual surveys per month to provide densities of most species encountered (including the small population of 45 west coast bottlenose dolphins) in order to determine impacts during construction and operation.

Generally, it would be helpful if developers were required to apply a consistent and transparent approach to encounter/collision modelling.

Should a decision be made that this development can safely proceed without impact on the marine environment, monitoring should then continue during development to understand and to minimise the effects on marine mammal populations. In-field monitoring should continue at a considered level during development and post-development to answer key conservation questions so that potential impacts can be assessed and adaptive management applied, to ensure that legislative and welfare responsibilities are being upheld. It is important to test and standardise impact monitoring and long-term survey methodology as well as reporting.

A strategic approach to detailed monitoring of potential collision impacts with a view to understanding the extent (if any) occur is imperative. This includes consistency in licensing conditions that enables appropriate analysis of impacts and subsequent adaptive management.

WDC, Brookfield House, 38 St Paul Street, Chippenham, Wiltshire SN15 1LJ
T +44 (0)1249 449 500 **F** +44 (0)1249 449 501 **E** info@whales.org **W** whales.org

We have little information about how cetaceans will interact with arrays of renewable structures being placed in the water column and whilst the potential for collisions with tidal devices is acknowledged, other significant impacts may still come to light as the industry develops. A precautionary approach to monitoring should be required which attributes any recorded changes (post development) to the renewable installation until there is evidence to the contrary.

Whilst some limited data exists that documents the potential negative impacts of renewable devices on harbour porpoises in Europe, including the UK (MASTS, 2010), little data exists for a number of other cetacean species that we may expect to be impacted in these waters.

SMRU make some important research recommendations (SMRU, 2009). Whilst focused on licensing for wind farm sites, some of the conclusions can be applied to licensing conditions for tidal sites. In particular, that license conditions should be specific so that they are not open to interpretation. Standard conditions and protocols would enable comparison between sites over the longer term and could provide valuable evidence.

Compliance with consent conditions in existing marine renewables sites should be undertaken, as should compliance with consent conditions in future sites.

Application specific comments

The tidal array development is proposed to be located to the south of Kyle Rhea, in a narrow sea strait between the Isle of Skye and the mainland of the west coast of Scotland. An array of four 2MW SeaGen devices with the capacity to provide 8MW of energy is proposed. The rotors each have a diameter of 20m and will rotate at a maximum speed of 11RPM, resulting in a tip speed of 12m/s. Installation is planned for 2014 and it is expected to take 3 months to install the four devices.

The Appendix provided by HWDT provides a useful summary of the use of the area by animals. Sightings of cetaceans and basking sharks were low within the Kylerhea study region. However, it is probable that the Sound of Sleat, Kylerhea passage and the Sound of Raasay serve as important corridors between core habitats, including for the Inner Hebridean bottlenose dolphin community (Appendix 12.3). Whilst sightings are low, it is important to remember that the population sizes of some species found in this region, including bottlenose dolphins and Risso's dolphins, are small. As a result, you wouldn't necessarily anticipate a high sightings rate from these types and frequency of baseline surveys.

We understand the need for the Rochdale envelope approach (section 2.7). However without understanding the detailed design of a number of aspects of the development it is very difficult for us to comment to a great level of detail and can make it difficult to plan and develop suitable, effective mitigation measures.

We note that pile driving will not be undertaken, but drilling (section 5.4.8). This is likely to significantly reduce noise concerns during construction.

Should consent be given, sufficient monitoring should be undertaken so that should any collisions occur, these will be adequately monitored to support modelling predictions, which are currently entirely unsubstantiated. Modelling approaches should be consistent between development sites so that comparisons can be made.

WDC, Brookfield House, 38 St Paul Street, Chippenham, Wiltshire SN15 1LJ
T +44 (0)1249 449 500 **F** +44 (0)1249 449 501 **E** info@whales.org **W** whales.org

We disagree with section 12.4.11 that the risk of spiral injuries is low due to the distance from harbour seal Special Areas of Conservation (SACs). That seals have been observed in the proposed development area means that the seals may come into contact with ducted propellers if they are used. Both harbour seals and grey seals travel further that 30 and 4 nm from SACs to forage. We do not agree that the impact will be minor. A key mitigation measure through the licensing conditions should be to understand and minimise this potential impact (see Annex).

Section 12.4.5 and 6 suggest that collision risk modelling is precautionary. We have to disagree with this, given the number of unknowns in the calculations. We have no confidence in the determination of moderate significance for harbour seals, or minor significance for harbour porpoise and grey seals. Suggestions for the licensing conditions are made to account for this (see Annex)

Should other regional developments be consented and should any physical or displacement impacts occur, we would anticipate that appropriate decisions would subsequently have to be taken for other regional developments to ensure adequate protection of Natura and European Protected Species. A broader long term marine mammal monitoring plan is required to understand any population impacts of cumulative impacts.

We feel like the application would benefit from further consultation and guidance from Scottish Natural Heritage (SNH).

Should this development be consented then an Environmental Monitoring Programme should be robust to monitoring and reporting collision incidents. WDC requests involvement in those aspects of the monitoring programme that is relevant to marine mammals.

Yours sincerely

[redacted]

[redacted]

WDC, Brookfield House, 38 St Paul Street, Chippenham, Wiltshire SN15 1LJ
T +44 (0)1249 449 500 **F** +44 (0)1249 449 501 **E** info@whales.org **W** whales.org

ANNEX

Recommendations for license conditions

1. Ducted propellers should not be allowed, unless they are guarded or potential impacts can be effectively mitigated in some other way, especially for harbour seals.
2. Given the risk of collisions and the uncertainty surrounding the modelling work undertaken, in-field monitoring should be required in order to ground-truth the theoretical data provided in the collision modelling calculations. This should include: assessment of effectiveness of various monitoring options to be investigated, and used; as well as modelling of the tidal currents to determine the trajectory of dead bodies to understand the likelihood of them resulting on local beaches and frequent beach patrols for stranded animals conducting beach surveillance should be a requirement.
3. An EPS licence should be required with clear guidance on limits of various levels of impacts (disturbance, injury, death etc) and adequate monitoring efforts to understand the extent of disturbance throughout the development.
4. The Environmental Management Plan should include a well-designed long term monitoring plan.
5. WDCS requests involvement in the development of the marine mammal components of the Environmental Management Plan.
6. Regular reporting on monitoring and mitigation conditions should be required. There should be transparency in any adaptive decision making approach should physical interactions with marine mammals be recorded.

Reference

SMRU. 2009. Strategic review of Offshore Wind Farm Monitoring Data Associated with FEPA Licence Conditions Marine Mammals.

Queiros J (Joao)

From: David Baldwin <david.baldwin@highland.gcsx.gov.uk>
Sent: 04 December 2014 11:06
To: Ford A (Alexander)
Cc: Queiros J (Joao)
Subject: Kyle Rhea Tidal Array
Attachments: Decision Letter to Marine Scotland.doc; Delegated Report - Final.docx

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Alexander,

Kyle Rhea Tidal Array | Our ref. 13/00762/S36 | Your Ref. 023/TIDE/MCT - 4

Please find attached correspondence and information relating to the above. You will note that The Highland Council has decided to object to the application.

As expressed in the letter, please accept our sincere apologies for the delay in responding. Amongst other things, I was off work for a prolonged period in 2013/early 2014 and this had a significant impact on our ability to respond timeously to this case. We had been waiting for further information regarding the LSVIA work, but this has never materialised and we now feel we have to draw a line under the proposal.

Any questions or queries, please do not hesitate to contact me. Signed hardcopy to follow in the post.

Kind regards,

David

David Baldwin BSc (Hons) MSc MRTPI
Principal Planner :: Development Management
The Highland Council, Glenurquhart Road, Inverness, IV3 5NX
tel: 01463 702249; fax: 01463 702298

Dàibhidh Ó Maolagáin BSc (le Urram) MSc MRTPI
Prìomh Dhealbhadair :: Rianachd Leasachaidh
Comhairle na Gàidhealtachd, Rathad Ghleann Urchardain, Inbhir Nis, IV3 5NX
Fòn: 01463 702249; facs: 01463 702298

The Highland Council
Comhairle na Gàidhealtachd

Alexander Ford
Licencing Operations Team
Marine Scotland
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Please ask for / Foighnich airson: David Baldwin
Direct Dial / Àireamh fòn: 01463 702249
Email / Post-d: david.baldwin@highland.gov.uk

Our Ref / Ar n-àireamh-iùil: 13/00762/S36
Your Ref / Ur n-àireamh-iùil: 023/TIDE/MCT - 4

Date / Ceann-là: 4 December 2014

Dear Sir,

APPLICATION UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 TO CONSTRUCT AN 8MW TIDAL STREAM ARRAY (COMPRISING 8NO. TURBINES INSTALLED ON 4NO. PILED COLUMNS) AT KYLE RHEA, BETWEEN KYLERHEA, ISLE OF SKYE AND GLENELG

I refer to the above application and to your consultation, dated 20 February 2013, regarding the same. Please accept my sincere apologies for the delay in responding.

Having now had an opportunity to consider the merits of the proposal, I write to inform you that **The Highland Council objects to the application** as submitted for the following reasons:

1. The proposal fails to accord with the principles and requirements of policies 28, 29, 49, 57, 61 and 67 of the Highland-wide Local Development Plan in that it is likely to have a significant and unacceptable adverse visual impact and impact upon on the landscape, seascape, coastline and amenity resource at Kylerhea and the surrounding area and, for those reasons, will not promote and enhance the social, economic and environmental wellbeing of the people of Highland, nor does it give due consideration to the range of existing coastal interests, ensure best use of resources taking account of existing and planned marine activities and development or demonstrate that it will be located, sited and designed such that it will not be significantly detrimental overall in terms of the criteria outlined in policy 67.

2. The proposal fails to accord with the principles and requirements of policy 57 of the Highland-wide Local Development Plan in that it is likely to have an unacceptable adverse impact on the character, setting and interpretation of the listed jetties on either side of Kyle Rhea, as well as the listed Ferry House on the eastern side of the kyle, and in doing will have an unacceptable impact on amenity and heritage resource.

3. The proposal fails to accord with the principles and requirements of policies 57 and 58 of the Highland-wide Local Development Plan in that it is likely to have a significant effect on the qualifying interest of the Lochs Duich, Long and Alsh Reefs SAC, including permanent/long-term loss of habitat under the footprint of the device

foundations and Horizontal Directional Drilling (HDD) break out, habitat damage during anchoring or positioning of barges during construction and maintenance activities, and abrasion and scouring around cabling; in doing so, it will have an unacceptable impact on the natural environment and it has not been demonstrated that there is suitable mitigation or that there is no other satisfactory solution.

4. The proposal fails to accord with the principles and requirements of policy 58 of the Highland-wide Local Development Plan in that it is likely, due to the proximity to the SAC and/or the nature of some of the activities associated with the proposal, to have a significant effect on otters in the Kinloch and Kyleakin Hills SAC; in doing so, it will have an unacceptable impact on the natural environment and it has not been demonstrated that there is suitable mitigation or that there is no other satisfactory solution.

5. The proposal fails to accord with the principles and requirements of policies 28, 29, 49, 57, 61 and 67 of the Highland-wide Local Development Plan in that it is likely, through its landscape, seascape and visual impacts, to have an adverse impact on both terrestrial and water-based tourism and recreation; in doing so, the proposal does not reflect the landscape characteristics and special qualities of the area, does not enhance the landscape characteristics of the area, will result in a dilution of the area's distinctive sense of place and does not demonstrate that it will be located, sited and designed such that it will not be significantly detrimental overall in terms of the criteria outlined in policy 67.

6. The proposal is likely to have a significant and unacceptable adverse impact on marine navigation and safety, which is a core material consideration. Given its heavy reliance of tourism, any reduction in recreational marine activity is also likely to adversely affect tourism and, through association, economic activity in the area.

I have attached a copy of our report of handling for your information, while further information (including our internal consultee responses) can be found on our ePlanning system (using the ref. 13/00762/S36): http://wam.highland.gov.uk

Should you require any further information or clarification on any of the above, please do not hesitate to contact me on 01463 702249.

Yours faithfully,

David Baldwin
Principal Planner
Prìomh-dhealbhadair

Enc.

By post and electronically to ms.marinelicensing@scotland.gsi.gov.uk

The Highland Council
Comhairle na Gàidhealtachd

Development and Infrastructure Service
Seirbheis Leasachaidh is Bun-structair

REPORT OF HANDLING

AITHISG LÀIMHSEACHAIDH

Reference:	13/00762/S36	**Case Officer:**			David Baldwin
Email:	david.baldwin@highland.gov.uk		**Tel.**		01463 702249
Address:	Kyle Rhea Tidal Stream Array, Kylerhea, Breakish.				
Proposal:	Application under Section 36 of the Electricity Act 1989 to construct an 8MW tidal stream array (comprising 8no. turbines installed on 4no. piled columns) at Kyle Rhea, between Kylerhea, Isle of Skye and Glenelg, Lochalsh.				
Ward:	Eilean a' Cheò *and* Wester Ross, Strathpeffer & Lochalsh				
Advertised:	09.05.2013	**Closing Date for Reps:**			14.06.2013
Timeous Reps:	**For: 0**	**Against: 66**			**Neutral: 3**
Target Date:	20 June 2013	**Met:** N	**Reason not met**: On-going discussions with applicant & Marine Scotland		

PLANNING HISTORY [ ] YES [x] NO

Details:

DEVELOPMENT PLAN ACCORD CONFLICT

Highland Wide Local Development Plan (2012): [ ] [x]

Policies: 28 - Sustainable Design
29 - Design Quality & Place-making
36 - Development in the Wider Countryside
43 - Tourism
49 - Coastal Development
56 - Travel
57 - Natural, Built & Cultural Heritage
58 - Protected Species
61 - Landscape
67 - Renewable Energy Developments

West Highland & Islands Local Plan (as continued in force, April 2012): [ ] [x]

Policies: Local Regional Importance
International Importance

Supplementary Guidance: [ ] [x]

Construction Environmental Management Process for Large Scale Projects (August 2010)
Developer Contributions (March 2013)
Highland Historic Environment Strategy (Jan 2013)

Highland's Statutorily Protected Species (March 2013)
Highland Renewable Energy Strategy & Planning Guidelines (May 2006)
Physical Constraints (March 2013)
Special Landscape Area Citations (June 2011)
Standards for Archaeological Work (March 2012)
Sustainable Design Guide (Jan 2013)

Scottish Planning Policy & Other Guidance:		x

Scottish Planning Policy (The Scottish Government, June 2014)
In particular, paragraph 169-172.

CONSULTATIONS

	CONSULTED	NO OBJECTIONS	OBJECTIONS	RESOLVED
Internal Consultees:				
Access Officer	x			
Transport Planning	x	x		
Contaminated Land				
Development Plans				
Environmental Health	x	x		
Forestry				
Aquaculture				
Historic Environment Team	x		x	
Harbour Master	x		x	
Harbours	x		x	
Landscape Officer	x		x	
External Consultees:				
Northern Lighthouse Board	x		x	
Historic Scotland	x	x		
Scottish Water				
SEPA	x	x		
SNH	x		x	
Maritime & Coastguard Agency	x		x	
Community Council				
Kyleakin And Kylerhea	x		x	
Glenelg & Arnisdale	x			

ASSESSMENT

Date of Site Visit:	27 March 2013
Site Description:	Kyle Rhea comprises a narrow stretch of sea north-west of Glenelg, separating the Isle of Skye from the mainland. Due to the geomorphology of the kyle and the volume of water passing though as the tide changes, significant tidal races and steams form daily. On either

	side of the kyle, hills rise steeply, with open views available to the north and south, to Loch Alsh and Sleat/Mallaig respectively. A small community-owned car ferry plies between the two slipways on either side of Kyle Rhea. The slipways are Category B listed, so too the Ferry House on the Glenelg side, which was visited by Johnson and Boswell during their tour of Scotland. The kyle and the waters of Loch Alsh to which it feeds comprise part of the Lochs Duich, Long and Alsh Reefs Special Areas of Conservation. The area immediately surrounding the application site does not fall within a formal landscape designation, however a number of National Scenic Areas lie in the general area.
Material Considerations:	The planning assessment takes account of the following and other matters identified in the main issues section:

Planning history	Infrastructure/drainage	Representations
Layout	Privacy/Day-lighting	Consultee comments
Design and materials	Noise	Conservation area
Trees and landscaping	Public Safety	Listed building
Car parking, access and servicing	Residential amenity/impact on neighbours	

Main Issues

The proposal comprises the installation of 8no. 1MW sub-sea turbines fixed to four separate piled structures within the tidal stream at Kyle Rhea. The turbines will be located towards the western side of the kyle, while land-based infrastructure (unground cables and sub-station), which do not form part of this application, will be located on the Isle of Skye close to the settlement of Kylerhea.

The turbines constitute two large propeller-type turbines mounted on 'wing' which are fixed onto piles. The piles will be driven into the sea bed and will have a personal/maintenance platform atop. The wings will move up and down to enable the turbines to be retracted from the water for periods of maintenance. When submerged, only the upper sections of the piles and the top platform with me visible, while retracted, the entire turbine structure, including blades etc., will be visible. A system of navigation lighting is also proposed. The lights will be fixed to the piles and will be on continuously during periods of darkness.

Development Plan policy is, in principle, supportive of marine renewables proposals, however support is subject to applicants demonstrating that the development would not be significantly detrimental to a range of issue, including: landscape, seascape and visual impact; the historic environment; transport and navigation; public health; natural heritage and wildlife; and other material considerations. As will be explained in this report, it is considered that the proposal gives rise to a number of concerns and cannot be supported.

Landscape, Seascape and Visual Impact

Baseline Assessments

The baseline assessments in the Landscape, Seascape and Visual Impact Assessment (LSVIA) include descriptions and levels of sensitivity for Landscape, Coastal and Seascape characters. These are a combination of published information in relation to National Seascape and Landscape Character areas and original work concerning Coastal and Local Coastal Character

Assessments.

Individual components and Landscape/Seascape types are assessed, but not the combination of elements which forms the location, nor its strong sense of place.

The Highland Coastal Development Strategy states: *"5.9.3 Landscape is the sum of its parts and sometimes more; what the observer also brings to the view in terms of expectation, understanding and experience. In terms of distant views, Highland's coastal landscapes are relatively robust. … At the local level, landscape character and scenic quality can often be sensitive to change, so if these qualities are to be sustained, careful attention must be paid to the location, scale and design of individual developments, cumulative effects and the impact on local views. The amenity of semi-enclosed areas of coast, wilderness recreation areas, small islands and the seaward outlook from coastal settlements can be particularly sensitive in this respect."* This highlights the encompassing approach to assessment which is necessary, and emphasises the role of expectation, experience and understanding of the location. These are the aspects which are lacking from the LVIA presented.

Methodology and Techniques

Aspects of the sensitivity levels identified for receptors of both Landscape and Visual impacts are weak. Statements such as *"It should also be noted that the assessment of potential impacts at any viewpoint cannot be extended to conclude the same impacts on the whole of the landscape character area within which the viewpoint occurs."* within a paragraph addressing visual amenity rather than landscape, give rise to concern that the author may not have a clear appreciation of the distinction between these two areas of study.

Following the GLVIA example, the assessors have ascribed a medium sensitivity to users of transport routes. This is not wholly appropriate for this area. With the exception of views across Loch Alsh from the A87, 'views from roads' are achieved from minor roads which are only 'through roads' when the ferry is operational. Therefore views are likely to either be part of the attraction for tourists, or part of users' home neighbourhood. A higher sensitivity is therefore likely for many users.

Likewise much use of the ferry is tourist traffic, as recognised at para 16.3.17. It is worth noting, in relation to sensitivity, this text from the Sky Ferry website: *'We want your experience in crossing on the ferry to be truly memorable and the hope the spectacular scenery , the wildlife ...and the unique ferry experience will make your day special.'*

The link between the nature of Character areas and their sensitivity to the proposed development is not explained. For example: many of the descriptions cite a sensitivity level that 'reflects ', 'is dependent on' or is 'due to' the scale of the character area, but with no discussion of what the effect of scale is or how the effect comes about.

Therefore the sensitivity levels, which contribute to assessment of significance of impact, are not fully explained or supported. This is particularly important in the enclosed landscape of the Kyle Rhea coastal area where the steep sides of the surrounding hills combine with the narrowness of the kyle to create an intimate environment where much of the skyline is outside the general scope of view.

Magnitude of Change: The factors for consideration in describing Magnitude of Change are largely paraphrased from GLVIA, but with the crucial omission of the following: *'The scale of change in the view with respect to the loss or addition of features in the view and changes in its composition including the proportion of the view occupied by the proposed development.'*

While the GLVIA are not prescribed, the absence in the methodology of any reference to addition or loss of features or to composition of view and proportion or view occupied by the proposal must cast doubt on the robustness of the LVIA's conclusions.

Identification and Assessment of Potential Effects

Generally, criteria are based on the assessor's professional judgement, but the line of reasoning and justification should be presented such that it can be clearly followed and understood. This is not fully the case.

Kyle Rhea Coastal Character Area: The assessment states that the scale of the surrounding landscape will reduce the apparent scale of the proposed development. While this is true from more distant views outwith the Character area, from locations close to or within the Character Area the enclosing nature of the steep slopes focuses observer attention to the water level rather than the skyline.

In close views this has the effect of emphasising the scale of the proposed development. The report makes an assessment of moderate (not significant) impact, with locally major/moderate impacts. This seems to understate the area for which the experience of the Coastal Character is in close view and for this Character I would recommend that a minimum of half the area should be assessed as experiencing significant impacts.

Visual Assessment: there is a tendency to under assess the level of impacts in viewpoints 1-3. Despite this they are accorded the highest level of significance, so there would be little gain in disputing precise content. The impacts at viewpoints 7 and 8 are considered to be underestimated, revision would not be likely to change the assessment from Not Significant to Significant, but taken together there is a general downplaying of impacts on the visual resource in and around the kyle.

Offshore viewpoints are not included. The LVIA states that this is because 'a good range of onshore viewpoints represent close and distant views'. However, there are no sea level viewpoints from the north of the sound facing towards the development, with the exception of the much more distant view across Loch Alsh from Reraig. This means that the main navigation channel of the kyle is not assessed.

Night time Character: there is a comment about lighting in the Kylerhea Coastal Character analysis. Otherwise there is only a statement in the list of characteristics about whether there are existing light sources. If analysis has been done it should have been spelled out, what was considered, what were the conclusions and how they were arrived at.

Mitigation

No mitigation is specifically identified. Neither is any basis given for assessment of effectiveness of any mitigation which may have been applied.

Overall, the LVIA has a number of shortcomings such that, while individual elements of the landscape and visual resource have been identified, the methods of impact assessment are not clear. The LVIA fails to fully capture the sense of remoteness of the location and to identify where this affects perception of the proposed development. These factors lead to the conclusion that the LVIA is not robust and cannot be relied upon for decision making.

In addition, SNH state in its consultation response that *"We consider that the proposal will result in a major impact to the seascape, landscape and coastal character of Kyle Rhea, albeit at a local scale. The site is 6.5 km and 7 km from the nearest national landscape designations, but the proposal would introduce novel, vertical, focal features into a scenic landscape noted for its remote qualities. The importance of the locality for wildlife tourism, recreational activities and cultural significance are important aspects of these considerations."*

SNH goes on to explain its position is greater detail on Appendix F, raising the following key points:

- There will be a major change to the scenic landscape qualities of Kyle Rhea, which forms a continuum between two National Scenic Areas (Knoydart and the Kintail NSAs); the existing coastal and landscape qualities are arguably of an equivalent quality and resource.

- There will be a major seascape, landscape and visual impact on the seascape and coastal character of Kyle Rhea strait, introducing novel, vertical, focal features into a scenic landscape noted for its remote qualities.

- The tower elements of the turbine devices will form a dominant feature within/over the kyle, causing major impacts to recreational sailing and kayaking and passengers on the Skye ferry crossing.

- Major impacts to the historically significant crossing-place between mainland and Isle of Skye; a culturally significant crossroads between maritime and onshore traffic.

- Lastly there will be a change to and diminution of, the Dark Sky Site by the introduction of navigational lighting. Lighting is as yet undetermined in size, intensity and character but likely to be permanent, during day and night. This will be a major/moderate change.

SNH's points are not reproduced in this report. However, the concerns raised are shared in full by the Development & Infrastructure Service. It is considered that SNH's response is appropriate and should be supported. The issues raised conflict with the aims and objectives of Policies 28 - Sustainable Design, 29 - Design Quality & Place-making, 36 - Development in the Wider Countryside, 43 – Tourism, 49 - Coastal Development, 57 - Natural, Built & Cultural Heritage, 61 – Landscape and 67 - Renewable Energy Developments on the Highland-wide Development Plan.

Habitats and Species

SNH has provided expert advice on the potential habitat and species impacts of the proposed development. SNH summarises its advice as follows:

<u>Lochs Duich, Long and Alsh Reefs Special Area of Conservation (SAC)</u>

The proposal, especially the works required to establish and operate tidal devices and associated cabling, is likely to have a significant effect on the qualifying interest of the Lochs Duich, Long and Alsh Reefs SAC. As a consequence, Marine Scotland will be required to undertake an appropriate assessment (AA) in view of the site's conservation objectives for its qualifying interest. However, further information is required in order for this to be carried out. Appendix A of SNH's consultation response provides further details.

Kinloch and Kyleakin Hills SAC

The proposal is likely to have a significant effect on the qualifying interests of the Kinloch and Kyleakin Hills SAC. Impacts from onshore aspects of the development upon terrestrial habitats will need to be addressed through an application under the Town and Country Planning (Scotland) Act 1997. This will require the competent authority (Highland Council) to undertake an AA upon submission of a terrestrial planning application in view of the site's conservation objectives for its qualifying interests.

The HRA for impacts upon otters designated as a qualifying interest of the SAC will require a collaborative approach between Marine Scotland and The Highland Council, addressing activities on land, activities in the marine environment and those occurring across the marine-terrestrial interface that may impact upon otters in the SAC. In order for SNH to complete their advice on the HRA for these matters, some further information is required. Appendix A of SNH's consultation response provides further details.

Bird Interests

SNH consider that one year of survey data is insufficient to understand, with any degree of confidence, the importance of the site for different bird species, including whether it is possible to conclude that there is no likely significant effect on the qualifying interests of potentially linked SPAs. There are also a number of problems with the approach to the EIA and HRA for birds that will need to be addressed. Appendix B of SNH's consultation response provides further detail.

Collision Risk Modelling

Insufficient information is provided on the collision risk modelling (CRM) methods and results for birds and marine mammals. Appendix C details information required before we can provide sound advice on the validity of the modelling approach and an interpretation of the outcomes.

There is much uncertainty at present as to the degree of avoidance behaviour that can be assumed for different species. However, on the basis of current expert judgement, outputs of the CRM exercise cause concern, particularly for harbour seals.

European Protected Species and Basking Sharks

The Eurasian otter (Lutra lutra) and all cetacean species are listed as European Protected Species (EPS) on Annex IV of the Habitats Directive. Basking sharks receive protection through the Wildlife and Countryside Act 1981 (as amended), with licensing requirements similar to those for EPS. It is likely that the applicant would be required to apply for licences to disturb otters, cetaceans and basking sharks. SNH's final advice will be dependent upon clarification of some details. Appendix D of SNH's consultation response provides further details.

Seals

Kyle Rhea is an area with a high degree of grey and harbour seal activity. SNH do not consider these seals are connected to Natura sites due to the distance from SAC's where seals are a qualifying interest. There is therefore no need for further consideration under an HRA.

However, potential impacts of collision (with turbines and vessel propellers) and disturbance remain important considerations in areas of such high seal activity. Appendix E of SNH's

consultation response details further information and assessment required before their appraisal can be completed.

The Development & Infrastructure Service agrees with SNH's advice contained within their consultation response. It is considered that SNH's response is appropriate and should be supported; accordingly, the applicant has failed to demonstrate that the proposed development will not have an adverse impact on certain species and habitats. For this reason, it fails to accord with the Development Plan.

SEPA has provided additional advice on potential impacts of marine non-native species; however it advises that no details have been provided on proposals for post-construction monitoring. SEPA also notes that the SEPA classification results referenced in the ES are for 2010.

While this water body is still classified as 'High' with reference to non-native species, in the newer classification results the water bodies connected to this site now have confirmed records of marine non-native species present. As a consequence this water body is now identified as being at risk for this parameter.

As a result of the above, SEPA has requested that a condition is applied to any consent granted requiring marine non-native species surveillance to be undertaken for this development post construction.

The Historic Environment

While Historic Scotland has not objected to this development proposal and has stated that it does not believe that the development poses an issue in relation to the setting of the Scheduled Ancient Monument (Bernera Barracks) or the Glenelg war memorial, it does not make reference to the Category B listed structures close to the development site itself.

It is accepted that given the landscape setting and distances involved this is the case for the assets for which Historic Scotland have a statutory role (Bernera Barracks and the Glenelg war memorial) in terms of impact on setting. However, as mentioned, there are a number of listed buildings in the vicinity of this development (primarily category B) which will inevitably be affected by the proposal.

The details submitted in the Environmental Statement maintain that there is little impact on the setting of these assets and offers no mitigation. This is not considered acceptable in principle or in policy terms.

The listed buildings to either side of the Kyle Rhea straits are historically associated with one another and are intrinsically linked. Their association with each other and their wider landscape setting are crucial elements in their historic significance both as built structure and in terms of the social and cultural history associated with them.

This relationship is clearly apparent from the statutory list entry which establishes that their historical association is directly linked to their special historic and architectural interest:

"Part of a 'B Group' comprising 'Kylerhea Slipway (Kylerhea Ferry)', the 'Kylerhea Ferry, Old Ferry Inn' situated to the N of the Glenelg slipway and the 'Kylerhea Old Inn' situated to the S of the Kylerhea slipway (see separate listings).

Built by world-renowned engineer Thomas Telford and his associates, the Glenelg slipway,

along with its counterpart slipway at Kylerhea (see separate listing) marks the shortest and most historically significant crossing-place between mainland Scotland and the Isle of Skye. This was the primary cattle droving route out of the islands. The Glenelg slipway includes a rare cattle droving slip understood to be the only one of its kind in Scotland. It is innovatively incorporated into the design by Telford and clearly evidences its earlier historic use. A passenger ferry service is also recorded as operating at this location in the 17th century. It was part of General Wade's military road system in the mid-18th century.

Cattle droving was critical to the economy of the western Highlands between the 16th and late 19th centuries. The cattle slip at Glenelg was engineered to help facilitate the movement of this livestock with as many as 8000 cattle swimming across the Kyle Rhea at this spot each year…

..The slipways also serve as termini of the mountainous approach roads which wind their way to and from the Kyle Rhea ferry. Originally built around 1750 under Major Caulfield's direction for General Wade, the road was subsequently developed in 1805 by the Highland Roads Commission, making use of substantial buttressed retaining walls, to act as the principle route into and across Skye.

The slipway forms part of a wider 'B' grouping including the counterpart 'Kylerhea Slipway', the former 'Kylerhea Old Inn' 200m to the south of the Kylerhea slipway, and the former 'Old Ferry Inn' located 200m to the N of Glenelg slipway (see separate listings). The two former Inns (circa 1800) are comparable in scale and massing, with the 'Kylerhea Old Inn' understood to have been built by eminent Scottish architect, James Gillespie Graham."

The connection and historical importance of these listed buildings, their association with social and cultural history of the Isle of Skye and the wider Highlands, has recently been explored and recorded in detail by Historic Scotland to inform a review of the statutory list entries for these assets (as detailed above).

On this basis, the principle of this proposal is comparable to the installation of land based turbines between associated listed buildings (i.e. a country house and its walled garden or a castle and its keep). In principle terms such a development proposal would not be supported as the detrimental impact on the setting of the listed buildings would be such that there is a presumption against such development in the SPP.

Historic Scotland's Managing Change in the Historic Environment, Setting document states that: *"Setting can be important to the way in which historic structures or places are understood, appreciated and experienced. Planning authorities must take into account the setting of historic assets or places when considering various types of environmental and design assessments/statements and in determining planning applications.*

Setting often extends beyond the property boundary, or curtilage, of an individual historic asset into a broader landscape context. Less tangible elements can also be important in understanding the setting. These may include function, sensory perceptions or the historical, artistic, literary and scenic associations of places or landscapes."

If consented, this development will change significantly the setting and sense of place for the listed buildings and will inevitably change the way they are experienced and interpreted in the future. The proposed development is not in line with national policy and guidance in relation to the historic environment and, for this reason, cannot be supported in its current form.

Furthermore the submission falls short of the requirements of national guidance in terms of its assessment of the historic environment assets and their setting. Managing Change in the

Historic Environment also states that:

"Where development is proposed it is important to:

- *Identify the historic assets that might be affected*
- *Define the setting of each historic asset*
- *Assess how any new development would impact on this*

If proposed development is likely to impact on a setting, an objective written assessment should be prepared by the applicant to inform the decision making process. The conclusions should take into account the significance of the historic asset and its setting and attempt to quantify the extent of detrimental impact."

The detail presented falls short of a thorough assessment of the historic environment assets and their setting and fails to give any detailed assessment of the likely impact of the development proposed.

Transport

The road impact from the above development will relate largely to the associated onshore works, although the Environmental Statement is somewhat vague on the detail of the anticipated impact. Impact is, however, unlikely to have a significant impact on the Council's road network, albeit conditions relating to road impact mitigation and construction phase management would be required.

Marine Navigation

The Navigation Risk Assessment (NRA) has been reviewed by the Maritime & Coastguard Agency (MCA). In this case MCA recommends that the application is rejected, as it is considered that the mitigation proposals and residual risk to safety of navigation cannot be reduced to a level which is considered acceptable.

The development effectively reduces the navigable channel by over 50%, the nature of tidal streams in this area are such that it's difficult to maintain vessel control as evidenced in feedback from the stakeholder consultation, with vessels regularly observing excessive shear in the area. This was specifically noted by the Master of the passenger ferry Hebridean Princess. This concern was further evidenced by vessels towing cages, in one case a company reporting verbally that they would not be able to use the passage when towing.

Automatic Identification Systems (AIS) data tracks show an unacceptable number of transits that would be impacted by the location of the turbines, this is further compounded by the swept path analysis data at NRA paragraph 7.5 which indicates that vessels tend 'always' to be swept to the West (towards the turbines), confirming concerns over shear. MCA advises that this shear collision risk cannot effectively be mitigated.

The NRA offers a number of mitigating circumstances that in some cases suggest the consequence of an incident would reduce from major to serious. Under the NRA paragraph12.5 a low powered vessel or sailing vessel lists consequence as major, despite reducing frequency to remote the consequence will remain the same, risk remains high and therefore unacceptable. Of the proposed mitigation measures identified, the MCA accepts that they may help to reduce the frequency of an incident, they will not reduce consequence and state that the majority are simply within the observance of good seamanship.

It is of significant concern to the MCA that placing VHF as a primary mitigation measure, for both reporting and some form of traffic management system when it is clearly reported that VHF coverage is extremely poor, highlighted as 'virtually non-existent' under NRA paragraph 5.8.1, although improved VHF reception is suggested it remains unclear how this could be achieved.

The MCA advises that provision of a Guard Vessel as a risk mitigation is also questionable in what it can achieve in this location, quoted in the NRA at paragraph at A 3.2.1 under summary of potential risk controls " was generally felt to be ineffective for this hazard due to the short amount of time it would take for an incident to develop".

Although re-routeing traffic to the West of the island would not be considered significant in terms of additional steaming, the increased risk of weather exposure does not readily allow this to be considered as an alternative route.

The MCA concludes that, in light of the key facts identified in its response, it does not feel that this project can be consented as the Navigation Safety Risk remains unacceptable. The MCA objects to this proposal and therefore cannot support this application.

Similarly, the Northern Lighthouse Board (NLB) in its consultation response does not believe a safe route can be maintained through Kyle Rhea and strongly advise that Marine Scotland should not give consent. Their advice is based on Kyle Rhea being a tidal flow that can cause high vessel speed over the ground, along with eddies and back currents that can cause sudden vessel shear.

The Navigational risk assessment provides ample evidence of this from third party consultee input and AIS swept path track analysis. This corroborates information contained within the Admiralty Sailing Directions, tidal stream atlas and AIS track evidence presented by Marico Marine during scoping meetings.

The NLB also states that the planned locations of the devices lie directly within the safe route NLB mark by day and night with the Kyle Rhea lighthouse and are at a critical turning point for vessels following the direction of the narrows as they turn. The planned devices reduce the width of the navigable channel from circa 450 meters (which the NRA shows is fully utilised by vessels), to 200 metres forcing vessels to proceed closer to the shore, putting them at greater risk from the back currents.

This tidal affect will also have a detrimental impact on any towed cages or barges with a significant risk of the tow swinging out and colliding with turbines or shore. This is identified in the NRA through consultee feedback notably, Marine Harvest (Scotland) Ltd, Hebridean Princess and RYA.

Northern Lighthouse Board does not believe adequate mitigation can be provided for this development in its current location.

The Highland Council’s Harbour Manager has also raised concern over the impact of the installation on marine safety and in particular safe marine navigation, stating that the Kylerhea narrows have been historically and are still currently used by large vessels of differing types which include amongst others fish farm, trawlers, cruise liners, petroleum product tankers and dry cargo vessels.

The Harbour Manager advises that it is not correct that the use is limited to small leisure vessels

and, more generally, the proposal severely reduces the width of the navigable channel and will prevent many vessels from taking this route, forcing them to take the much more exposed route to the west of Skye.

Any vessel inadvertently entering the narrows from the North in following currents may find themselves unable to turn and be forced into a collision with the array. The Harbour Manager advises that these important navigational safety matters do not appear to have been fully considered or satisfactorily addressed by the applicant.

Public Health

In its response, SEPA notes the pollution prevention mitigation measures and environmental management proposals outlined in the ES. While some of proposed measures relate to works which may be regulated directly by them or other regulatory bodies, many of the works will not be regulated in this way and will need to be covered by condition.

SEPA therefore requests that a condition is attached to any consent requiring the submission of a site specific Environmental Management Plan (EMP) to be submitted and approved by the planning authority at least two months prior to commencement of any works.

The ES has identified a number of potential noise and vibration impacts that may arise as a result of the project. While the Council's Environmental Health Officer has raised no objections to the proposed development, they do nonetheless recommend that the EMP includes an assessment of noise and vibration in accordance with BS 5228 and associated standards. In particular this should include:

- Details of the methods to be used and planned hours of work;
- Methods to control noise and vibration at source;
- Predicted noise levels at noise sensitive premises; and
- Scheme for monitoring noise and vibration levels during the lifetime of the project.

Representations

As outlined below, a significant body of objection has mounted in relation to this application. Sixty-nine members of the public have objected, while three representations raise concerns, but do not explicitly object. A summary of the main issues raised is outlined below, however the majority can be considered as reflecting concerns also raised by consultees. In particular, concerns are raised about maritime safety, navigation and visual impact.

Quality of Supporting Information

An Environmental Statement was lodged in support of the application. A range of criticisms have been made by consultees, including the Maritime & Coastguard Agency, Northern Lighthouse Board, SNH and the Council's Conservation and Landscape Officers. The Development & Infrastructure Service has also raised separate concerns about the quality of a number of the submitted visualisations; the applicant did submit some revisions in March 2013, but these have not be lodged formally nor advertised. On balance, and considering the consultees' input in the round, it is considered that the Environmental Statement does not demonstrate that the development would not have a significantly detrimental effect on the receiving environment, amenity or maritime safety.

Environmental Impact Assessment (EIA)	EIA is required for this development under both The Electricity Works (environmental Impact Assessment) (Scotland) Regulations 2000 (as Amended) and the Marine Works (Environmental Impact Assessment) Regulations 2007 (As Amended)
Supporting information:	The application is accompanied by an Environmental Statement, including a Landscape, Seascape, Visual Impact Assessment (LSVA).
Variations since original submission:	No variations have been made to the application since submission.
Third party comments:	Sixty-nine representations have been received by the Council. Of these, sixty-six raise objections, while three where submitted as being neutral (albeit all of these raised issues of concern). The key issues raised can be summarised as including: • **Concerns over the quality and accuracy of the Environmental Statement;** • **Adverse impact on shipping, navigation and marine safety;** • **Adverse impact on landscape, seascape and visual amenity;** • **Adverse impact on protected and other species;** • **Adverse impact on a Special Area of Conservation (SAC);** • **Adverse impact on the Historic Environment;** • **Adverse impact on tourism; and** • **Adverse impact on Dark Sky Discovery Site.**
Section 75 Obligation:	n/a

Conclusion

All relevant matters have been taken into account when appraising this application. It is considered that the proposal fails to accord with the principles and policies contained within the Development Plan, particularly in relation to landscape, seascape visual impact and impact on the historic environment, and through association impact on tourism, and is unacceptable in terms of key applicable material considerations, principally maritime safety and navigation. Accordingly, it is recommended that an objection is raised under Section 36 of the Electricity Act 1989 and also to the granting of deemed planning permission under the 1997 Act.

DELEGATED DECISION

Decision:	**Raise Objection**		
Action required before decision issued?		Y	
Referral to Ward Members		Y	**Reason :** Proposed Delegated Refusal

SIGNATURE

David Baldwin: _____ Date: 13 November 2014

David Mudie:_____ Date: 13 November 2014

REASONS FOR OBJECTION RELATIVE TO APPLICATION 13/00762/S36

1. The proposal fails to accord with the principles and requirements of policies 28, 29, 49, 57, 61 and 67 of the Highland-wide Local Development Plan in that it is likely to have a significant and unacceptable adverse visual impact and impact upon on the landscape, seascape, coastline and amenity resource at Kylerhea and the surrounding area and, for those reasons, will not promote and enhance the social, economic and environmental wellbeing of the people of Highland, nor does it give due consideration to the range of existing coastal interests, ensure best use of resources taking account of existing and planned marine activities and development or demonstrate that it will be located, sited and designed such that it will not be significantly detrimental overall in terms of the criteria outlined in policy 67.

2. The proposal fails to accord with the principles and requirements of policy 57 of the Highland-wide Local Development Plan in that it is likely to have an unacceptable adverse impact on the character, setting and interpretation of the listed jetties on either side of Kyle Rhea, as well as the listed Ferry House on the eastern side of the kyle, and in doing will have an unacceptable impact on amenity and heritage resource.

3. The proposal fails to accord with the principles and requirements of policies 57 and 58 of the Highland-wide Local Development Plan in that it is likely to have a significant effect on the qualifying interest of the Lochs Duich, Long and Alsh Reefs SAC, including permanent/long-term loss of habitat under the footprint of the device foundations and Horizontal Directional Drilling (HDD) break out, habitat damage during anchoring or positioning of barges during construction and maintenance activities, and abrasion and scouring around cabling; in doing so, it will have an unacceptable impact on the natural environment and it has not been demonstrated that there is suitable mitigation or that there is no other satisfactory solution.

4. The proposal fails to accord with the principles and requirements of policy 58 of the Highland-wide Local Development Plan in that it is likely, due to the proximity to the SAC and/or the nature of some of the activities associated with the proposal, to have a significant effect on otters in the Kinloch and Kyleakin Hills SAC; in doing so, it will have an unacceptable impact on the natural environment and it has not been demonstrated that there is suitable mitigation or that there is no other satisfactory solution.

5. The proposal fails to accord with the principles and requirements of policies 28, 29, 49, 57, 61 and 67 of the Highland-wide Local Development Plan in that it is likely, through its landscape, seascape and visual impacts, to have an adverse impact on both terrestrial and water-based tourism and recreation; in doing so, the proposal does not reflect the landscape

characteristics and special qualities of the area, does not enhance the landscape characteristics of the area, will result in a dilution of the area's distinctive sense of place and does not demonstrate that it will be located, sited and designed such that it will not be significantly detrimental overall in terms of the criteria outlined in policy 67.

6. The proposal is likely to have a significant and unacceptable adverse impact on marine navigation and safety, which is a core material consideration. Given its heavy reliance of tourism, any reduction in recreational marine activity is also likely to adversely affect tourism and, through association, economic activity in the area.

CHECK SHEET FOR PREPARING AND ISSUING DECISION

Application Number	13/00762/S36
Decision Date	
Decision	Raise Objections
Decision Type	Delegated

Date signed by AM/TL or Committee date

Do Not Issue Decision	x	*Tick if relevant*	**Action Required (✓)**	**Date Actioned**
Notification to Scottish Ministers				
Notification to Historic Scotland				
Refer to Ward Members			x	
Section 75 Obligation/Modification or Discharge of Section 75				
Revocation/Modification of Previous Permission				

Issue Decision		Tick if relevant	**Standard Notes, Directions and Other Information to Include**					
Tick	***Dev/Decision Type***		Time Scale*	Initiation Notice	Completion Notice	Display Notice	Review Notes	Appeal Notes
				Only use if FUL/AMSC & Granted				
	National		✓	✓	✓	✓		✓
	Major		✓	✓	✓	✓		✓
	Local – Sch.3 - Committee		✓	✓	✓	✓		✓
	Local – Sch.3 – Delegated		✓	✓	✓	✓	✓	
	Local – Committee		✓	✓	✓			✓
	Local – Delegated		✓	✓	✓		✓	
	Listed Building Consent		✓					✓
	Advertisement Consent		✓					✓
	Hazardous Substances Consent							✓
x	Section 36 Consultation							

*NB. Standard time limit note/direction not required if application retrospective.

Include with Decision Notice	**(✓)**
Notification of Initiation Form	
Notification of Completion Form	
Community Services (Roads) Schedule	
Contaminated Land Form	
Private Water Supply Form	
Archaeology Notes (Photographic Record)	
Archaeology Notes (Extensive Ph. Record)	
Site Notice (Schedule 3)	
Site Notice (Major)	
Other:	

Notify of Decision	**(✓)**
Objectors/Contributors	x
Community Council	x
Transport Scotland	
Scottish Water	
SEPA	
Scottish Natural Heritage	
Health & Safety Executive (HSE)	
Community Services (Roads)	
HQ Dev Management Team	
HQ Enforcement Team	
Monitoring Officer	
Ward Members	x

Total Residential Units (FP3)			
Houses		Sheltered	
Flats		Affordable	

Affordable Housing Data Recording	**(✓)**		
Required		Not Required	x
UNIform screen: Functions / Case User Defined Screens / Houses and Affordable Housing			