

Item: 14

Development and Infrastructure Committee: 10 September 2019.

Churchill Barriers - Wave Overtopping.

Report by Executive Director of Development and Infrastructure.

1. Purpose of Report

To reconsider the method of consultation to be undertaken with the community on proposed options for wave overtopping at Barrier Number 2.

2. Recommendations

The Committee is invited to note:

2.1.

That project work has been ongoing for a number of years to explore options for wave overtopping at Barrier Number 2, a summary of which is attached as Appendix 1 to this report.

2.2.

That, on 2 April 2019, when reviewing historic activity in respect of wave overtopping and tidal energy scheme concession for the Churchill Barriers and considering the next steps, the Development and Infrastructure Committee recommended that consideration of commissioning a study to further assess the viability and cost of beach recharge at Barrier Number 2, be deferred.

2.3.

That the recommendation to defer commissioning a study was to enable the Executive Director of Development and Infrastructure to undertake consultation with the community, through South Ronaldsay and Burray Community Council, to seek opinion of residents in the linked south isles on the proposed options for wave overtopping at Barrier Number 2.

2.4.

That, on 2 May 2019, when considering the recommendation referred to at paragraph 2.2 above, the Council resolved that the method of consultation to be undertaken with the community on proposed options for wave overtopping at Barrier Number 2 be referred back to the Development and Infrastructure Committee for further consideration.

2.5.

The proposed method of consultation to be undertaken with the community on proposed options for wave overtopping at Barrier Number 2, as detailed in section 4 of this report.

It is recommended:

2.6.

That the Executive Director of Development and Infrastructure should undertake consultation, by way of a survey based communication, with key national agency stakeholders, Orkney Opinions, all households in South Ronaldsay and Burray and all Community Councils, to seek views on the options detailed in Appendix 1 to this report.

2.7.

That the Executive Director of Development and Infrastructure should submit a report, to a meeting of the Committee in early 2020, detailing the outcome of the consultation exercise referred to at paragraph 2.6 above.

3. Background

3.1.

On 2 April 2019, when reviewing historic activity in respect of wave overtopping and tidal energy scheme concession for the Churchill Barriers and considering the next steps, the Development and Infrastructure Committee recommended that consideration of commissioning a study to further assess the viability and cost of beach recharge at Barrier Number 2 be deferred.

3.1.1.

This deferral was to enable the Executive Director of Development and Infrastructure to undertake consultation with the community, through South Ronaldsay and Burray Community Council, to seek opinion of residents in the linked south isles on the proposed options for wave overtopping at Barrier Number 2.

3.2.

On 2 May 2019, when considering the recommendation above, the Council resolved that the method of consultation to be undertaken with the community on proposed options for wave overtopping at Barrier Number 2 be referred back to the Development and Infrastructure Committee for further consideration.

4. Consultation

4.1.

The Churchill Barriers are a strategic part of Orkney's transportation and community infrastructure as well as having significant heritage value. Decisions regarding the future of the Barriers therefore have relevance to all of the Orkney community and national stakeholders. This said, the communities most directly and regularly impacted

by poor weather closures are those of South Ronaldsay and Burray. It is therefore considered appropriate to focus the main effort of consultation towards the South Ronaldsay and Burray communities, with the wider Orkney community representation being achieved through engagement with Orkney Opinions (the Orkney public consultation group) and Community Councils. Orkney Opinions has good representation of individuals across all of Orkney.

4.2.

It is proposed to undertake a survey based communication with Orkney Opinions, all households in South Ronaldsay and Burray and all Community Councils. The survey would seek views on the four options for future work at Barrier Number 2 outlined in Appendix 1.

4.3.

Key national agency stakeholders, namely Scottish Natural Heritage, Marine Scotland, Historic Environment Scotland, Transport Scotland, Crown Estate Scotland and the Scottish Environment Protection Agency, will be given the opportunity to provide a response to the survey.

4.4.

A meeting with South Ronaldsay and Burray Community Council will be held after conclusion of the survey and national stakeholder consultation to discuss the outcome of that engagement.

4.5.

It is thereafter anticipated to report the outcome of the consultation to the Committee in Spring 2020.

5. Corporate Governance

This report relates to governance and procedural issues and therefore does not directly support and contribute to improved outcomes for communities as outlined in the Council Plan and the Local Outcomes Improvement Plan.

6. Financial Implications

6.1.

The sum of £325,000 was initially set aside in financial year 2012 to 2013 to allow a Barriers feasibility study to be progressed. An additional funding commitment of up to £38,800 was further approved in 2016 to progress a concession contract for a tidal energy scheme at Churchill Barriers Numbers 1 and 2. The latter funds were duly set aside from within the Renewable Energy, Redevelopment and Regeneration Fund but subsequently were not required.

6.2.

As at 31 March 2019, the total cost of undertaking these studies amounts to £309,806.23, leaving an available balance of £15,193.77.

6.3.

The cost of undertaking the consultation is estimated to be up to £2,000. This can be met from within the remaining project budget referred to at section 6.2 above.

7. Legal Aspects

There are no legal implications arising directly from the recommendations of this report.

8. Contact Officers

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9. Appendix

Appendix 1 – Summary of Background to Barrier Number 2 Project.

Appendix 1

Summary of Background to Barrier Number 2 Project Since 2011

Background

In December 2011, the Council agreed to carry out a detailed hydraulic modelling study to find a solution to the wave overtopping at Barrier Number 2. Following initial approaches from developers and others interested in promoting energy capture from tidal turbines installed in the Barriers, the scope was widened to investigate both a solution to the Barrier Number 2 wave overtopping problem and the possibility of tidal energy capture from both Barriers Number 1 and 2.

In December 2014, after being advised by consultant JBA that an optimised design for refacing the east side of Barrier Number 2 had an estimated cost of £13m, the Council agreed to investigate developer interest in progressing a wave overtopping and tidal energy scheme at Barrier Number 2.

In April 2019, Council resolved that no further action be taken in respect of a tidal energy scheme at Barrier Number 2.

Closures

The average number of closures per year between 2006 and 2018 has been seven, with each closure having an average duration of 3 hours and 40 minutes. The longest recorded closure since 2006 is 10 hours on 7 December 2017 due to wind from the west.

It is significant to note that 33% of all closures in the period 2006 to 2018 were due to winds from the west. Any solution that focused only on the east including offshore breakwaters, refacing to the east only and beach recharge, would not prevent the closures due to westerly winds. The only solution proposed that would be effective for both sides is a bridge which has been costed at £23 million.

For comparison, in 2017, the North Isles (Westray, Sanday, Eday and Stronsay) lost 37 sailings due to weather, equivalent to approximately 144 hours (six days) with no boat. The figures for 2018 were 53 sailings, which is equivalent to approximately 216 hours (nine days).

Caisson

A caisson was initially purchased in December 2015 through the Council's capital programme at a cost of £45,000. The installation of the caisson at Barrier Number 2 cost £90,137.99 against an estimate of up to £132,000 and was funded from the Renewable Energy, Redevelopment and Regeneration Fund.

The temporary Marine Licence for the caisson issued by Marine Scotland has been extended until 18 December 2019. The terms of the licence require that the caisson be removed on expiry of the licence. The intention is for the caisson to be used for another purpose however to date no other use has been identified. It is doubtful if Marine Scotland would react positively to a further extension request for the licence.

A hydrographic survey has been commissioned to determine the extent of dredging required to allow the caisson to be floated out. The outcome of this study and proposed next steps, will be brought to a future meeting of the Committee for consideration.

The estimated cost for the hydrographic survey, dredging and removal of the caisson is £60,000 which can be met from amounts set aside in the Renewable Energy, Redevelopment and Regeneration Fund.

Options

The following next step options have been considered by the Committee, and are now to be the subject of consultation:

Option 1: Develop a project to resurface the east side of Barrier Number 2, at an estimated cost of £13 million, through the Capital Project Appraisal process. When complete this would reduce closures of the Barriers by around 60%.

Option 2: Develop a project to progress with a bridge to replace Barrier Number 2, at an estimated cost of £24.5 million, through the Capital Project Appraisal process. When complete this would eliminate closure in all but the most extreme conditions.

Option 3: Progress a study, at an estimated cost of £60,000, to further assess the viability of beach recharge.

Option 4: Remove the caisson and take no further action in relation to a project to prevent overtopping at Barrier Number 2.