

1 May 2017

Simon Male
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Dear Simon

Feedback on proposed methodology for marine dumping consent

On 7 April we received two documents by email from you. These documents related to your consultants approach to an environmental assessment for a marine dumping consent to dispose of dredge material at your Outer Gulf Disposal Area (OGDA). We also met on 12 April with you, Mary-ellen Stichbury, David Hay and Jennifer Hart in Wellington

At the Wellington meeting David Hay provided background on the establishment of the OGDA site and the reasons why you are considering an increase in the volume of dredged material from 50,000 m³ to 250,000 m³. Jennifer Hart discussed her approach to assessing the physical effects of the increase in material and how this would be modelled using existing monitoring data. You specifically asked for our feedback on the two documents; Bioreserches's ecological assessment approach and Beca's physical oceanography approach.

A requirement of the EEZ Act when applying for a marine consent is to provide an impact assessment as outlined in s 39 (1) and include information related to the decision making criteria outlined in s 87D. Critical to the impact assessment is:

- s 39(1)(a) to describe the activity for the which the consent is sought;
- s 39(1)(b) to describe the current state of the area where it is proposed that the activity will be undertaken and **environment surrounding the area**; and
- s 39(1)(c) to identify the effects of the activity on the environment and existing interests (including cumulative effects)

How you plan to undertake the activity will likely influence the level of effects. Therefore, including a description of the frequency and volume of material that will be disposed will be of interest and whether effects of the dumped material will localised or dispersed across the OGDA or beyond.

The approach by both consultants using data from the initial studies conducted by University of Waikato and subsequent collection of benthic, sediment chemistry and bathymetric data should provide a thorough description of the current state of the environment where the activity occurs. Consideration should be given to any information that has been or could be obtained about the

surrounding area. Any predictions regarding the presence/absence of unique or sensitive habitats/ecosystems within the disposal area or surrounding area should include details on the data used for the assessment. This should include the type of sampling carried out, e.g. whether the site has been visually observed, physically sampled, remotely assessed, as well as the sampling frequency and sampling site resolution. The extent to which extrapolation and modelling has been used for habitat assessment should also be outlined. It would also be useful if predicted timeframes for recolonization once disposal ends is included. This could include predicted habitat post-disposal.

The use of monitoring data will assist in understanding temporal effects of the activity on the environment at the disposal area from 2010 to 2016. The modelling proposed to identify future trends in the disposal mound is reliant on hydrodynamic data including current and wave conditions. Any studies that have been undertaken to ground truth the predicted effects at the site and surrounding area would be useful. These studies could include a discussion of the monitoring undertaken at OGDAs to date including a description of any plume monitoring, the depositional footprint, and any trends in sediment physicochemical data and benthic faunal composition. Providing a number of future dumping scenarios based on different volumes and frequency of disposal events would help understand potential future impacts at the site. Comparisons of the environment in the affected area against a non-affected adjacent area would also be useful to demonstrate the potential scale and significance of the effects. Are there any potential impacts of the plume on fish?? Any ecotoxicological concerns? Any potential for bioaccumulation? Will the dumped material have effects beyond the OGDAs?

The physical oceanography assessment focuses on the modelling/development of the mound. The origin of raw data used as input for hydrodynamic and sediment dispersal models should be outlined. This should include the temporal and spatial resolution of the data (in both the vertical and horizontal plane). If modelled data is used for any input parameter in a model, the extent to which these data have been ground truthed should be outlined. How the mound will affect local hydrodynamics as the mound develops should also be addressed. It would also be useful if suggested site management for minimal impact on local hydrodynamics is included.

We recommended that a monitoring plan is included with an application as well as any conditions that you feel are relevant to managing the environmental effects of the activity. We have found it productive to discuss conditions with applicants as part of the consent process.

Although not covered in the approach by Bioresourches and Beca, s 87D decision making matters, particularly the effects on human health, alternative methods of disposal and whether there are practical opportunities to reuse, recycle or treat the waste, should be addressed. Even if these options are not applicable, evidence to show you have considered these matters is required and must be taken into account by the decision maker.

In the guidance for applications to dump waste

[http://www.epa.govt.nz/Publications/EEZ%20Guidance%20Doc%20\(Dump%20Waste\)%20final.pdf](http://www.epa.govt.nz/Publications/EEZ%20Guidance%20Doc%20(Dump%20Waste)%20final.pdf)

we recommend that descriptions and evidence provided in an application be of sufficient detail to enable the EPA and people whose existing interests are or may be affected, to understand the nature of the activity and its effects on the environment and existing interests. In this case, providing a description of the volumes (50,000m³ and 250,000m³) of material to be dumped in 'real-world' terms (i.e. by way of comparison to the volume of everyday objects) would assist an understanding of the

nature and scale of the activity. Reference to similar activities in other parts of New Zealand or the globe may also be informative as a comparison of volumes and frequencies.

While we have highlighted some parts of the regulatory framework, we would expect you to address all aspects of s 39 and s 87D of the EEZ Act.

If there is anything else that you wish to discuss further please don't hesitate to contact us.

Yours sincerely

A handwritten signature in black ink, appearing to read 'J Cahill', with a large loop at the end of the name.

June Cahill
Principal Advisor
EEZ Applications