MPI Proposal
Economic effects or significance

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As at 3 May 2017

In Confidence

We understand a cost-benefit analysis and possibly a risk assessment of the MPI proposal are being prepared by MPI after the Panel report to the Minister.

The following points relate to the 2016 PricewaterhouseCoopers (PwC) report and the Ernst & Young (EY) review of this report, which we understand are the only publicly available reports on the economic impact of this proposal.

(i) The relevant points upon which I agree with opposing expert views in the materials placed before the Panel.

Relevant point	Evidence
1. The PwC report is not a cost-benefit analysis.	PwC have already agreed this in a submission, see p. 3, response to NERA submission, 11 April 2017.
2. PwC will not supply the data/Excel sheets that were provided to them by NZKS.	Meeting on 1 May 2017 at PwC. MPI have also acknowledged this by email.
3. PwC will not provide the input-output (IO) multipliers.	This was because the multipliers are protected intellectual property that PwC has purchased. Meeting of 1 May 2017 at PwC.
4. PwC took the data from NZKS at face value and did not verify the data.	'We have not carried out anything in the nature of an audit' (pp. 58–59). Meeting of 1 May 2017 at PwC. PwC advised that verification was not part of their terms of engagement; these did not include an assessment of the quality of their data. For example: a. The new farm equipment build is significant and appears expensive when compared with purchasing overseas pens (suggesting more transparency is necessary). b. The Full Time Equivalent figures (FTEs) used by PwC seem high when compared with the Global Salmon Initiative (GSI) figures and **c.** the value add per 100 tonnes is based on all new farm equipment being built in NZ without reuse of old equipment from relocated farms or buying cheaper overseas premade pens. Farms are frequently moved around the Sounds so

	we remain unsure why that is not the case with the proposed relocation.
5. EY, in reviewing the work of PwC, also took the data from NZKS at face value and did not verify the data.	EY state 'we have not verified the underlying figures' (p. 3).
6. No formal sensitivity analysis was undertaken regarding the parameters and assumptions employed.	EY agrees, see p. 3 of their review. We do not know what key information is shaping the model.
7. The approach taken is limited due to the lack of key information on timeframes, sites and production figures.	'Because some details about future levels of production and future sites are yet to be decided, our analysis estimated the impact per 100 tonnes of production and per additional site developed.' (See PwC report, p. 5).

I believe that both PwC and EY will agree with all seven points above. If that is not the case, I can provide more evidence for the discussion on the 10 May.

My view is that the EY review and the seven points above are sufficient to indicate the PwC report should be ignored. It is not fit for purpose, as it lacks the transparency necessary to shape a narrative around a nationally significant decision that may last up to 35 years. The authors and reviewers, in the limitations and disclaimers, have indicated that the above points are true.

(ii) The relevant points upon which I differ from the opposing expert views in the materials placed before the Panel.

Relevant point	Notes
8. There is no officially recognised regional IO model in New Zealand.	My view is that they are uncommon, not well understood, and easily misused and misinterpreted.
9. The terms of engagement for PwC were narrow. The report is now being used in a different way than what the authors intended; it is being used beyond its original purpose.	We note that the PwC report states 'this report can support an *Assessment of Environmental Effects* (AEE) process', yet its conclusions are interpreted as the sole economic evidence for the relocation of six farms in a Cabinet paper (December 2016). See the excerpts at the end of this document.
10. Table 41 is unclear and the wording is unnecessarily complex and difficult to understand for a layman.	'… incorporating commercial viability and operational considerations' is confusing. Further, our understanding is that Table 41 shows that the Ruakaka farm creates -$3.5 million of the -$3.6 million estimated decrease of value add for all six of the farms. This is an important conclusion. It also implies the five existing farms must be extremely profitable.
11. That a cost-benefit analysis and risk assessment should be undertaken to fit alongside an IO model.	The IO model has a regional focus, so if the panel wants to rely on the PwC report, it must

	sit alongside a cost-benefit analysis and risk assessment that is regionally focused.
12. An extremely high level of due diligence and transparency is required in decisions that create the right to pollute public assets over long periods of time (e.g. 35 years) without ongoing public consultation.	Because the data and assumptions are not comprehensive, verified and/or verifiable by a third party; the report is not up to the standard required for such a long-term national decision. The limitations and disclaimers made by PwC and EY indicate caution should be exercised in using the report's conclusions. It removes other strategic uses of the Tory Channel (e.g. hydroelectric power) and the Pelorus Sounds (such as a national park) for 35 years; neither of which have been assessed to date.
13. The Panel should request access to the Excel sheet that shows the EBIT for each operational salmon farm.	See p. 36 of the PwC report. This should align with the actuals or the forecasts (it provides an additional check). PwC said they will not provide me the Excel sheet. I have asked whether they performed this check but they were unsure. They said they will come back to me on whether this check was completed.
14. MPI, in the interests of providing the Panel and the public with a report that was independent (real and perceived), should have found an expert that had not been a consultant for NZKS (Bill Kaye-Blake was an economics expert for NZKS at the BOI 2012).	This was further evidenced by the PwC review of the McGuinness Institute Working Paper (published April 2017), see Appendix 1 of Andrew Clarke's Statement of Evidence 'I asked PwC to review the McGuinness Institute 2016/02 report'.
15. MPI, in the interests of providing the panel and the public with a report that was independent (real and perceived), should have had the report reviewed by a firm that did not have an ongoing working relationship with NZKS (EY are the auditors of NZKS's financial statements).	

(iii) Succinctly, the specific reasons why the Panel should prefer my views to those of the opposing experts.

The onus is on the preparer to provide quality information as evidence to support the proposal. It is not possible to question/challenge information if it is not available.

That evidence has not been provided. Instead you have a report where

1. Not all the data, indices and assumptions are transparent

2. The author and verifier note that the data has not been verified (there has been no attempt by PwC or EY to check that the data from NZKS is correct – e.g. building costs for the pens)
3. Data cannot be verified by a third party as it is simply not available
4. No sensitivity analysis had been completed
5. Its conclusions are being used beyond its purpose

Appendix 1: Excerpts from the December 2016 Cabinet paper

5. The proposed regulations I intend to consult on would amend the Marlborough Sounds Resource Management Plan to allow aquaculture in new areas, some of which currently prohibit new aquaculture. At the proposed relocation sites, New Zealand King Salmon Company Limited could farm consistently with environmental standards for benthic quality agreed in 2014 while remaining commercially viable, which is not possible at the existing sites. The regulations would provide rules to manage the effects of salmon farming. Resource consents would still be required, but the council's discretion to refuse consents and impose conditions would be limited to specific matters, to streamline consenting.

20. PwC estimates[3] that current production at the four active[4] existing lower flow sites results in a GDP value of $10 million and employment of 105 full-time equivalents (FTEs). Implementing the Benthic Guidelines at these sites would require destocking and fallowing for two to five years to allow the seabed to recover before recommencing production at lower stocking levels. Over the fallowing period $10 million GDP per annum and 105 FTEs would be lost.

21. There is scientific uncertainty about the exact stocking level that will meet the Benthic Guidelines following the fallowing period, hence GDP and FTE implications under both minimum and maximum levels have been estimated.

22. Under minimum stocking levels all four farms are commercially unviable, resulting in an ongoing loss of $10 million in GDP and 105 FTEs. Under the maximum stocking levels three of the four sites (Waihinau Bay, Forsyth Bay, and Otanerau) would remain commercially viable, albeit at production levels lower than current production. PwC estimates that the production at these three sites would result in $6.4 million added to GDP per year and 67 FTEs in employment. Compared to the present situation, this amounts to a loss of $3.6 million per year in GDP and a loss of 38 FTEs in employment.