

# Shell Taranaki Ltd. Applications for Marine Consent and Marine Discharge Consent

## Hearings Statement by Climate Justice Taranaki and Oil Free Wellington

3 October 2017

Climate Justice Taranaki (CJT) and Oil Free Wellington (OFW) are community groups working on climate change and social justice. Central to our groups is the concept of climate justice. The climate crisis we face is caused by unjust economic, social and political power structures. In order to bring about a sustainable and just world, radical change is needed.

Both groups are opposed to Shell Taranaki Ltd. (formerly STOS)' applications, in full.

### Unknown and Uncertain – Incomplete Application

1. We believe that there are simply too many unknowns and too much uncertainty in Shell Taranaki Ltd's (referred to as Shell hereon) applications for them to be considered at this stage. Without knowing the type of jack-up rig and the harmful chemicals that would be used, the Impact Assessment (IA) failed to provide sufficient detailed information for comprehensive assessment of effects, as required under the EEZ-CS Act 2012 ((s39(2)(b) version 7 March 2017).
2. The Seapen report (2017)<sup>1</sup> stated that *"STOS has indicated that the actual jack-up rig to be used has not yet been contracted and the composition of products to be used during the drilling activities are presently unknown."*
3. Shell witness Catherine Clarke (2017)<sup>2</sup> referred to other witnesses' that *"the detailed characteristics of the substances that may be discharged as offshore processing drainage through the deck drains of drill rigs have not yet been determined... due to the final engineering requirements for the wells not yet being determined and the fact that the specific drill rig will not be commissioned until closer to when they are needed and after the outcome of the Applications are known."*
4. Shell witness Alison Lane (11 September 2017)<sup>3</sup>, based on her review of the Offshore Chemical Notification Scheme from the UK, claimed that *"over 90% of the chemicals commonly used by the industry present extremely low or low risk of environmental effects when discharged in normal operational quantities."* What about the remaining 10%? What happens when an abnormally large quantity is discharged into the environment?
5. According to The Endocrine Disruption Exchange (2017)<sup>4</sup>, hundreds out of a thousand chemical products used in oil/gas drilling and well stimulation are toxic. Many chemicals used in drilling (e.g. Glyoxal), cementing (e.g. defoamer), cleanout (e.g. biocide NALCO EC6388A), completion and well stimulation or fracking (e.g. Hexamethylenetetramine) are ecotoxic, carcinogenic, mutagenic and/or have other harmful health effects. And many chemicals contain toxic components that are protected from disclosure by trade secret arrangements.
6. Notably, EPA's key issues report (August 2017)<sup>5</sup> has 18 mentions of the word 'unknown' or 'uncertain', including *"... uncertainty...as to the extent of the effects that will result from the installation, operation and removal of the jack-up legs", "the discharge of unknown, potentially harmful substances", "the unknown effects of discharges", "the number of times the jack-up rig will be removed and reinstalled is unknown", "the effects of a spill on existing interests are unknown", "the unknown variables within the application"* etc. We find this level of uncertainty to be incompatible with a complete application under the Act.
7. There is not even basic, in situ water quality data, as stated in the IA (p.99), water quality data are borrowed from elsewhere in the South Taranaki Bight (STB).

8. Clearly the IA and evidence submitted by Shell do not provide sufficient detail to enable the EPA and persons whose existing interests are, or may be, affected to understand the nature of the activities and their effects, as required under s39(2)(b).
9. Given these gross uncertainties, we reiterate our view, as expressed in CJT's complaint and request to EPA on 13 June 2017, that the applications should have been deemed 'incomplete' and returned to the applicant, as provided for by section 41 of the EEZ Act.
10. We do not consider the evidence provided by Shell since the filing of the applications has ruled out the issue of uncertainty or information inadequacy. As such, and following the information principles of the Act (s 61), EPA must favour caution and environmental protection.

## Structural Integrity

11. In CJT's original submission, we raised important concerns over the safety and integrity of the aging infrastructure at Maui A and B, the wells, the platform and associated structures, their ability to withstand extreme weather events resulting from climate disruption, and risks from earthquakes and the intensification of activities in and around the area.
12. We gave examples of integrity issues and/or 'dangerous occurrences' reported at various oil and gas sites on and offshore of Taranaki, including the Maui platforms and production station. We pointed to the lack of transparency in the investigation and reporting processes in some cases, and the problems of self-regulation and regulatory capture.
13. According to the IA (s 2.3), a safety case specific for a jack-up rig is yet to be developed and submitted to WorkSafe. The OSG operation assessment report (2017)<sup>6</sup> warned: "*By far the biggest risks are associated with the installation and removal of the jack-up rig... If an emergency occurs on the jack-up rig or platform, the jack-up rig cannot pull away to a safer location or distance itself from the platform... A jack-up rig is also vulnerable to seismic activity, which is common in Taranaki and the Taranaki Basin...*" OSG questioned whether there would be modelling carried out to assess the risk to the jack-up rig from seismic events.
14. OSG identified other key risks: "*Insufficient data on seabed soils property and potential instability problems*", "*scouring*" of the seabed, "*punch-through*" which is restricted to jack-up rigs with spud-can type foundations, and reliance on relatively calm weather conditions to ensure safe operation and structural integrity.
15. Shell witness Mr Owen Hey (11 September 2017)<sup>7</sup> explained that "*The Safety Case and Certificate of Fitness are detailed, facility specific requirements and therefore cannot be developed or approved until a specific rig is identified for a particular drilling campaign.*" We question again the timing of Shell's marine consent application which appears premature.
16. Mr Hey further stated that "*the current regulatory obligations on Shell Taranaki and the Maui Joint Venture, including compliance with conditions on marine consents and marine discharge consents, would continue to apply regardless of any future changes in operatorship or ownership of the Maui joint venture*".
17. This statement appears to reflect a rather different view to Mr Rob Jager's statement at the first STOS hearings two years ago, that he doesn't "*...think Shell will walk away from its obligations, either in 5 or 35 years...*"
18. While it is beyond the Decision-Making Committee (DMC)'s mandate, we wish to voice our concern and objection on the way that consents may be transferred from one operator to another, without

re-assessment which considers the new operator's capability to manage and maintain hazardous facilities, or their level of commitment for the consented activities.

## Cumulative impacts – the Totality

19. It is our view that there have now been repeated failures in the correct interpretation of the meaning of 'cumulative effects' by several DMCs for different applications under the EEZ-CS Act, although we have not been in the financial position to challenge these decisions in court. These failures include previous applications for fossil fuel extraction and most recently the TTRL iron-sand mining operation. In our view, cumulative effects must include the sum of all effects created by all the permitted and consented activities that occur in the area, and in conjunction with those arising from anthropogenic climate change, not just those of the application under consideration.
20. Notably section 6 clearly states that effect includes "*(c) any past, present, or future effect; and (d) any cumulative effect that arises over time or in combination with other effects.*" We consider that no assessment to date under the Act has addressed the total of cumulative effects, particularly the risks of synergisms among effects on threatened species and the ecosystem more generally (eg. chemical and noise pollution, shipping traffic and sediment plumes in light of the changing oceanography).
21. Our views above are supported by the legal advice presented in the Memorandum of Counsel (28 September 2017)<sup>8</sup>.
22. Focusing on the present application, several Shell witnesses remarked that environmental effects would be largely short-term and temporary, Shell's response to further information on 18/9/2017<sup>9</sup> stated that "*pre-installation activities... will be required each time a jack-up rig is installed... a jack-up rig may be installed and then removed at Māui A and/or Māui B up to four times per platform...*" and is "*typically expected to remain installed at a particular location for six months up to approximately two years... A worst-case estimate of the number of times pre-installation works may be required is 20 times over the proposed term for which consent is sought...*"
23. So every six months or two years, or anything in between, pre-installation, installation and removal of the rig could damage the seabed and impact on both the benthic and pelagic ecosystems, and this could occur up to six times per platform, and at locations other than the two platforms.
24. We do not consider such impacts to be short-term or temporary. The cumulative effects from such repeated disturbance over time, plus the effects from the existing consent EEZ00010 which allows drilling of 22 side-track wells, each taking 30-150 days or longer, totalling to six years, should be assessed to evaluate the cumulative impacts, especially on sensitive species or populations.
25. Questions to be asked may include how many weeks in a year is this species or population free from impacts of Shell and other operators' activities? Or how much of its critical reproductive or nursing period in its entire lifespan is impacted? For the Māui dolphin<sup>10</sup> which takes 7-9 years before females have their first calf, produces just one calf every 2-4 years and lives only up to 20 years, the multiple disturbance from the rig plus six years of drilling on top of all other stresses, could severely hamper the survival of the species. Remember only 55-63 individuals over one year of age remain on the planet.
26. Furthermore, Shell has indicated that after the current applications, they would apply for an additional marine discharge consent, albeit non-notified. We argue that such a disjoint application and assessment process prevents proper cumulative assessment, and contravenes the EEZ-Act.

## Cumulative impacts on Marine Mammals

27. Shell witness Sharon De Luca (11 Sept 2017, para 79)<sup>11</sup> referred to the assessment of cumulative effects, within the 100-200m depth contour, on marine ecological values from disturbance, occupation, noise, water quality / suspended sediment or turbidity, and discharges, as minor to negligible. In a footnote, she explained that *“TTR have been granted permission to extract iron sand at approximately 30-50m contours and is therefore not considered in the assessment of cumulative effects”*.
28. We do not agree with Ms De Luca’s statement, especially in relation to marine mammals. The Māui dolphin, for one, feeds throughout the water column, on both bottom-dwelling fish and free-swimming prey, and has been reported from the area of interest (AOI).
29. In 2016, the International Whaling Commission Scientific Committee (2017)<sup>12</sup> reiterated its continued grave concern over the status of the severely depleted Maui dolphin. It *“notes that the confirmed current range extends from Maunganui Bluff in the north to Whanganui in the south, offshore to 20 n. miles, and it includes harbours...”* Less than 30% of Maui habitat is protected from set nets and only 8% is protected from both set net and trawl threats. Very little of its habitat is fully protected from petroleum or seabed mining. The Scientific Committee *“re-emphasises that the critically endangered status of this subspecies and the inherent and irresolvable uncertainty surrounding information on most small populations point to the need for precautionary management.”*
30. New Zealand, as signatory to the UNCBD, has the international obligation to conserve biodiversity and protect and promote the recovery of threatened species. The Memorandum of Counsel (28 September 2017) agreed with previous interpretations that while the DMC *“is not, generally speaking, required to look beyond the Act to consider the nature and effect of New Zealand’s international obligations...”* it *“is not precluded... from taking guidance from an international instrument as relevant to a matter required to be taken into account in its decision”*.
31. Dr Leigh Torres and 17 co-authors, in their latest report to the IWC (2017)<sup>13</sup>, stated that they are *“confident that the STB [South Taranaki Bight] region is a blue whale foraging ground...”*, *“the numerous sighting of mother and calf pairs and ... nursing behavior provide strong evidence that the STB region is important for nursing and calf-rearing”*, and evidence now suggests that these whales form a New Zealand resident or semi-resident population. During the hearings on the Trans-Tasman Resources Ltd (TTRL) seabed mining application, Dr Torres (23 Jan 2016)<sup>14</sup> also reiterated that because blue whales have extreme energy demands, and each disturbance to their feeding opportunities and success rate can impact their viability and reproductive capacity, the cumulative impacts of all anthropogenic activities in the STB region must be considered.
32. Shell witness Simon Childerhouse (11 Sept 2017)<sup>15</sup> acknowledged that over 40 different marine mammals have been reported from the greater Taranaki region, over 20 from the Maui Field, with at least seven threatened marine mammal species in the region. However, he argued that given the short-term nature of the proposed activities and the relatively low level of noise involved, compared to the noise from large container vessels and seismic survey already common in the area, any impact is likely to be short term and relatively localised and there is limited potential for cumulative noise effects that would result in additional disturbance to marine fauna. We do not agree with this piecemeal ‘divide and conquer’ assessment approach.
33. Rather than assessing the cumulative impacts on the viability of threatened species, proponents use the percentage of added impacts from a proposed activity compared to the existing impacts as

justification that the proposals could go ahead. They are looking at the 'incremental effects' only, not the cumulative effects.

34. To illustrate the difference, the Maui dolphin is already Critically Endangered, any additional impacts could send it to extinction. The globally endangered blue whale has an extreme energetic demand, any impacts on its ability to effectively forage could lead to its demise. So the proponent and the DMC need to look at the cumulative effects, ie. sum of all existing effects plus the 'incremental effects' that the proposed activities will have, on the species or population, all in the context of rapid climate disruption and oceanic changes.
35. Moreover, it is our view that the assessment of cumulative effects provided is largely qualitative and inadequate. It is predicated on the opinions of various Shell witnesses who support each other's views. E.g. Shell witness Catherine Clarke, in her evidence (11 Sept 2017), referred to Dr Sharon De Luca's conclusions that *"any discharge of offshore processing drainage from deck drains is likely to be rapidly diluted, unlikely to have adverse effect on marine organisms and will not add significantly to existing discharges [in] terms of cumulative effects... Drawing on the impact assessments in the IA, and in the evidence of Dr Sharon De Luca, Dr Simon Childerhouse has concluded that there are unlikely to be any significant cumulative impacts on marine mammals from the proposed activities..."* and *"Similarly based on the evidence of Shell Taranaki's expert witnesses, particularly Dr Alison Lane, the adverse cumulative effects that may occur from unplanned activities are not likely to be significant, particularly given the low probability of occurrence."*
36. Prof. Liz Slooten and Dr. Leigh Torres have repeatedly expressed their deep concern for marine mammals in STB, and been critical of the approach to previous decisions under the EEZ-Act, notably the TTRL sand-mining application.

## Conditions are not silver bullets

37. EPA key issues report stated that: *"As most of the unknown matters within the application documents are able to be addressed by a set of draft conditions, the DMC may consider asking STL whether it intends to propose conditions to mitigate the effects on existing interests."* This statement appears to imply that most, if not all, issues associated with unknowns and uncertainties can be dealt with by consent conditions.
38. Shell witness Catherine Clarke has proposed conditions to the consents which would require Shell to submit an 'offshore processing drainage management plan' and drill rig pre-installation, installation and removal management plans. Such plans should be pre-requisite of an application, not as conditions.
39. We think that the proposition of such conditions is contrary to the principle of information, caution and requirements to avoid and remedy effects with mitigation being the last resort.

## Mitigation with caveat

40. The various Shell evidence and EPA commissioned reports put great emphasis on mitigation, albeit with significant caveated 'loop-holes', such as *"where practicable"* in terms of selection of low toxicity substances mentioned in the Seapen report. Childerhouse (2017) also proposed several mitigation measures relevant to marine mammals such as, to limit duration and extent of activities *"as far as practicable"*, again with caveat.

## From Shifting baseline to Sacrificial zones

41. Shell witness Sharon De Luca (2017) referred to surveys carried out in 2016 which found that *"sediment quality around MPA and MPB contain higher levels of some contaminants compared to*

reference sites... While polycyclic aromatic hydrocarbons (PAHs) as a group were below effects thresholds, acenaphthylene was above ISQG-low at a site 250m to the north of MPA. Barium, which is used as a weighting agent in drilling muds, is elevated in sediment around MPA and MPB... and was detected in higher concentrations in 2016 compared to 2015..." We concurred with the many questions raised by submitter Clark Thomborson concerning discharge of chemicals of concern notably acenaphthylene (DMC Minute 6, 28 Sept 2017)<sup>16</sup>.

42. The IA (s 6.4.2) stated that "PW [Produced water] has been discharged from the MPB platform since operation of this platform first began, and as such can be considered a component of the extant environment." This is a typical 'shifting baseline' (Olson, 2002)<sup>17</sup> approach whereby instead of documenting the baseline before human impacts, as was strongly recommended at the time of installation, a degraded environment becomes the new norm.
43. The above are indications that the area around the Maui platforms, likely the entire AOI and much of the STB, is being considered as a 'sacrificial zone' (Klein, 2014)<sup>18</sup> for the benefit of the mining industry and government economic agenda. Almost the entire STB is already under mining, exploration and prospecting permits for petroleum and minerals<sup>19</sup>. Nearly half a million km<sup>2</sup> of our oceans are earmarked as petroleum 'Block Offer 2017'. We do not accept that the proliferation of 'sacrificial zones' across Aotearoa and its EEZ-CS is a wise and sustainable use of our natural resources, or a responsible approach to conserving threatened species.
44. The continued determination to find, mine, sell and ultimately burn fossil fuels is in direct contravention to the clear, incontrovertible evidence provided by decades of peer-reviewed science that this must not occur if we are to avoid catastrophic climate change and oceanic ecosystem collapse. Such reckless corporate behaviour has been described as 'psychotic', even 'psychopathic' (Niiose, 2011<sup>20</sup> and The Corporation, 2003<sup>21</sup>).
45. The parent company Shell has a long and disgraceful history of environmental and social harm<sup>22</sup> stretching across multiple continents, and is also considered to operate a massive global greenwashing<sup>23, 24</sup> campaign, including the spin that gas is a necessary bridging fuel<sup>25</sup>.
46. Gas is not a 'bridging fuel'. Instead, it is a "gangplank to more warming and away from clean energy investments" (Ingraffea, 2013)<sup>26</sup>. It contributes large amounts of measured and unmeasured<sup>27,28</sup> greenhouse gases to the atmosphere during extraction, production, storage and combustion. Shell, if they needed to, would likely argue that Maui is only a small contributor of fossil fuels globally, again ignoring their overwhelming global contribution (top 10)<sup>29</sup> and that famous 'last straw on the camel's back'.

## Economics

47. The OECD report Investing in Climate, Investing in Growth (2017)<sup>30</sup> stated that "...countries can achieve strong and inclusive economic growth while reorienting their economies towards development pathways with low greenhouse gas emissions and high resilience to the effects of climate change... However, it is also increasingly clear that meeting the Paris Agreement's goals will require countries to step up ambition, enhance co-operation across borders and strengthen domestic policies and implementation on the ground as a matter of urgency. Moreover, there is a need for governments to take immediate action. The decisions that we take now on key issues such as infrastructure and the structure of our economies will be crucial in ensuring a longer term future that enhances rather than diminishes well-being. Proactive, forward-looking policies to facilitate a just transition for affected businesses and households will also be vital to ensure that reform is inclusive, progressive and good for business, particularly in vulnerable regions and communities."

48. The underlying problem is that governments, both national and regional, whilst professing concern and the need for action on climate change, have proven recalcitrant in making real progress on this, the most significant issue facing our civilization, wasting much precious time.

## The silence on climate change

49. It is absurd that the EEZ Act prevents EPA and the DMC to consider the effects of proposed activities on climate change. Even speaking about it now at the hearings may have us shut up for being irrelevant. But why?
50. Perhaps George Monbiot, writer and investigative journalist<sup>31</sup> has the real reason for the silence on climate change: *"...there's this terrible irony about climate change that the main perpetrators of it... are those who are hit least and last, whereas people who have made very little contribution to climate breakdown are hit first and worst, like the people of Bangladesh, who have tiny carbon footprint. Were we to really bring this to the front of our consciousness, as we should, it would necessitate a major change in the way we run our societies, a major change in the way we run our economies and a major change in the way we live. So that is why we do not talk about it..."*

## Decision sought

51. We ask that the DMC decline Shell Taranaki Ltd's applications in full.

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<sup>1</sup> Seapen Marine Environmental Services, 9 August 2017. EEZ100014: Shell Todd Oil Services Limited marine consent and marine discharge consent applications – Maui Field. Review of marine environmental impact assessment. [http://www.epa.govt.nz/EEZ/EEZ100014/Seapen\\_Marine\\_environment\\_Assessment\\_Report\\_Rev1\\_\(Final%20Issue\).pdf](http://www.epa.govt.nz/EEZ/EEZ100014/Seapen_Marine_environment_Assessment_Report_Rev1_(Final%20Issue).pdf)

<sup>2</sup> Clark, Catherine, 11 September 2017. Statement of expert evidence of Catherine Mary Clarke for Shell Taranaki Limited. <http://www.epa.govt.nz/EEZ/EEZ100014/10.%20Catherine%20Clarke%20-%20Planning%20and%20conditions.pdf>

<sup>3</sup> Lane, Alison, 11 August 2017. Statement of Expert Evidence of Alison Lane for Shell Taranaki Limited. <http://www.epa.govt.nz/EEZ/EEZ100014/9.%20Alison%20Lane%20-%20Harmful%20substances%20and%20unplanned%20spill%20impacts.pdf>

<sup>4</sup> The Endocrine Disruption Exchange, accessed on 12/06/2017. Drilling and fracking chemicals spreadsheet. <https://endocrinedisruption.org/audio-and-video/chemical-health-effects-spreadsheets>

<sup>5</sup> Environmental Protection Authority, August 2017. EPA Key Issues Report. Shell Taranaki Limited 2017 Applications for Marine Consent and Marine Discharge Consent. [http://www.epa.govt.nz/EEZ/EEZ100014/EEZ100014-Key\\_Issues\\_Report.pdf](http://www.epa.govt.nz/EEZ/EEZ100014/EEZ100014-Key_Issues_Report.pdf)

<sup>6</sup> OGS Operations Support Services, 2017. Assessment Report for the Environmental Protection Authority. Application Ref No.: EEZ100014 Technical Review and Analysis of Operational Activities Proposed in STOS 2017 Application. [http://www.epa.govt.nz/EEZ/EEZ100014/OGS\\_Operation\\_expert\\_report.pdf](http://www.epa.govt.nz/EEZ/EEZ100014/OGS_Operation_expert_report.pdf)

<sup>7</sup> Hey, Owen, 11 September 2017. Statement of non-expert evidence of Owen Michael Hey for Shell Taranaki Limited. <http://www.epa.govt.nz/EEZ/EEZ100014/1.%20Owen%20Hey%20-%20Jack-up%20rig%20operations.pdf>

<sup>8</sup> Memorandum of Counsel Assisting the Decision-Making Committee – Response to Minute 4, 28 September 2017. <http://www.epa.govt.nz/EEZ/EEZ100014/Memorandum%20of%20Counsel%2028%20September%202017.pdf>

<sup>9</sup> Shell Taranaki Limited, 18 September 2017. Response to further information request dated 6 September 2017 regarding Shell Taranaki Limited's marine consent and marine discharge consent applications. [http://www.epa.govt.nz/EEZ/EEZ100014/PART\\_1\\_S42\\_Response\\_18-9-17.pdf](http://www.epa.govt.nz/EEZ/EEZ100014/PART_1_S42_Response_18-9-17.pdf)

<sup>10</sup> Department of Conservation, website accessed on 22/9/2017. Facts about Maui dolphin. <http://www.doc.govt.nz/nature/native-animals/marine-mammals/dolphins/maui-dolphin/facts/>

<sup>11</sup> De Luca, Sharon, 11 September 2017. Statement of expert evidence of Sharon Betty De Luca for Shell Taranaki Limited. <http://www.epa.govt.nz/EEZ/EEZ100014/7.%20Sharon%20De%20Luca%20-%20Marine%20ecology%20and%20biosecurity.pdf>

<sup>12</sup> International Whaling Commission, May 2017. Report of the Scientific Committee, Bled, Slovenia, 9-21 May 2017. IWC/67/Rep01(2017). [http://awsassets.wwfnz.panda.org/downloads/Report\\_of\\_the\\_Scientific\\_Report,\\_International\\_Whaling\\_Commission\\_May\\_2017.pdf](http://awsassets.wwfnz.panda.org/downloads/Report_of_the_Scientific_Report,_International_Whaling_Commission_May_2017.pdf)

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- <sup>15</sup> Childerhouse, Simon, 11 September 2017. Statement of expert evidence of Simon John Childerhouse for Shell Taranaki Limited. <http://www.epa.govt.nz/EEZ/EEZ100014/5.%20Simon%20Childerhouse%20-%20Impact%20on%20marine%20mammals.pdf>
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