

CRAMAC 9

CRA 9 INDUSTRY ASSOCIATION INCORPORATED

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Marine Consents and Marine Discharge Consents Application

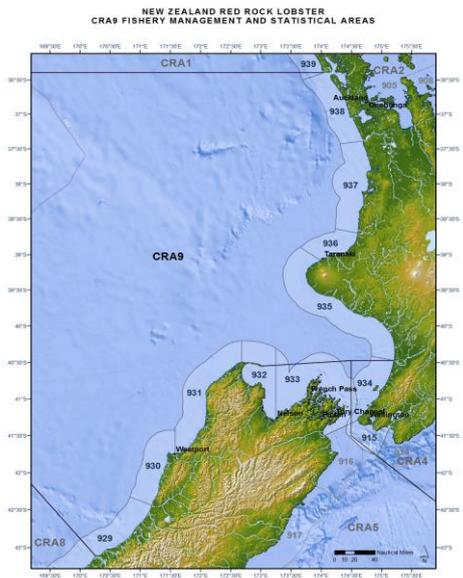
TRANS-TASMAN RESOURCES LIMITED IRON SAND EXTRACTION AND PROCESSING APPLICATION

EPA Reference: EEZ000011

Applicant: Trans-Tasman Resources Limited

A SUBMISSION ON BEHALF OF THE CRA 9 ROCK LOBSTER FISHING INDUSTRY

1. The CRA 9 Rock Lobster Industry Association (CRAMAC 9) is representative of quota share owners, permit holders, Licensed Fish Receivers and processors who themselves are invested in and/or dependent upon commercial access and utilisation of the rock lobster fishery within the CRA 9 fishery management area. The management area is geographically large but the long history of commercial harvest confirms that rock lobster fishing grounds are very small but numerous scattered areas of rocky coastline along the west coast of the South Island and patches of vibrant reef systems further offshore from the South Taranaki Bight northwards.
2. Otherwise very productive fishing grounds along the Taranaki coastline are closed to commercial fishing as a consequence of pipeline and cable exclusion zones; several no-take marine reserves close to New Plymouth and a more extensive no-take marine reserve in the Urenui Bight.



3. All remaining fishing grounds available to and accessible by the commercial lobster fleet are necessary in order to catch and land the available Total Allowable Commercial Catch (TACC); currently 60 tonnes all CRA 9.
4. The 935 sub-area of CRA 9 is historically the most productive with approximately 35% of the TACC taken from fishing grounds including those in the general vicinity of the proposed mining site
5. There are currently 49 quota share and/or ACE owners with an interest in the TTR application.

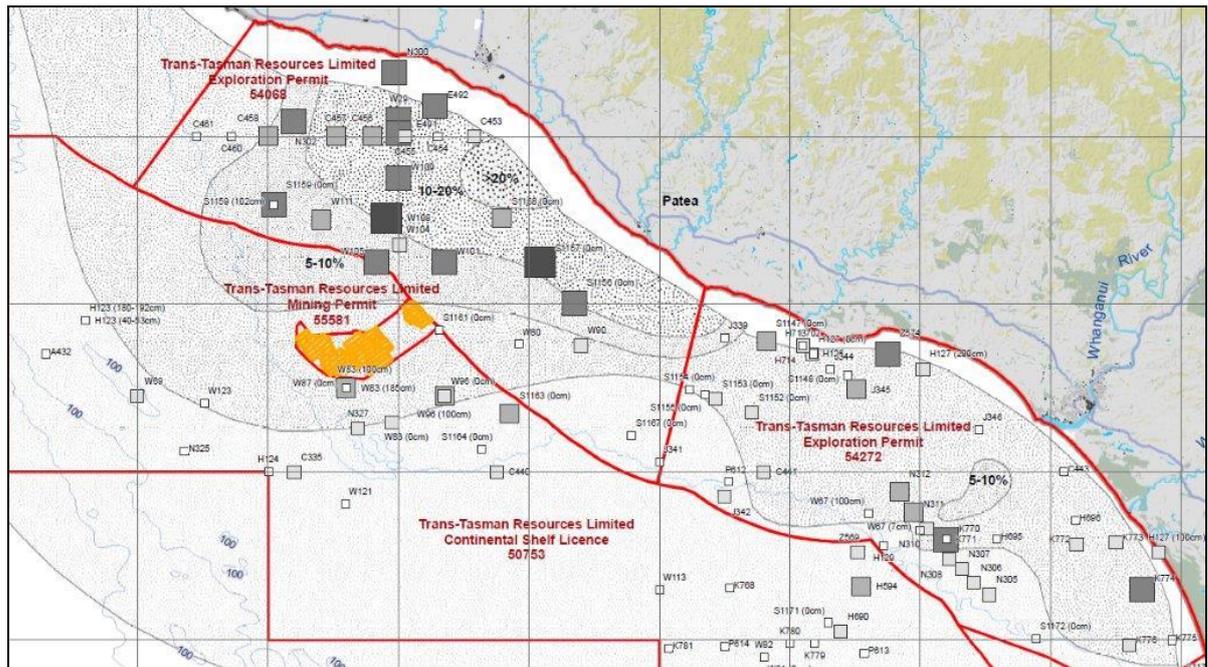
6. The iron sand extraction and processing activities are proposed for an area of seabed in close proximity to an extensive range of reef systems and substrates which support very abundant rock lobster populations.
7. Two of the seven commercial rock lobster vessels operating in CRA 9 take significant quantities of their annual catch entitlements from those fishing grounds. Any prolonged disruption to fishing or any negative environmental impact on local stock abundance will result in effort and catches being displaced – at significant cost to the incumbent operators.
8. Any negative impact on stock abundance will also be felt by non-commercial users fishing across those same grounds. Their perceived lack of fishing success will result in some pressure being exerted to have commercial fishing further excluded.
9. CRAMAC 9 has an interest in the rock lobster species across all stages of its lifecycle – from egg production, through an extended larval period, to the settlement of juvenile rock lobsters as puerulus on substrate and habitat which offers protection and opportunity for growth.
10. Any impacts on the settlement substrate which extend the natural mortality of juvenile rock lobsters will manifest as lower than expected stock abundance in future years.
11. **Those concerns set the scene for the principal CRAMAC 9 submission – that the TTR application as it stands be refused on the grounds that potential impacts on marine ecosystems are poorly tested and therefore greatly understated.**
12. CRAMAC 9 does not have personnel qualified to do extensive technical peer reviews of the screeds of data presented by TTR in support of the current application. However, as users of the coastal marine area our catching members have many years of personal observations and well informed opinions and explanations for the dynamics of their fishery. What we read in the TTR application just does not tally with our observations and experience.
13. For example, there is a biological inventory of sorts credited to NIWA in which the assemblages of reef systems within the vicinity of the sediment plume movements are grossly understated in our view. The sparsity of sites and the descriptions made of them just do not tally with what we know to be present. If sediment dispersal and settlement is any risk at all it is much greater as a consequence of the potential impact given the biodiversity and extent of the offshore reef systems.
14. Ecologically the habitats with the greatest diversity and greatest number of species occur in the rocky areas located along and off the shore. Despite this, the sampling effort did not concentrate on these areas – for example the NIWA ‘benthic near shore habitats’ report had 36 sampled areas with only 5 rocky areas in this total. Two of the five rocky areas sampled accounted for 61% of the total species recorded.

15. An ecologically significant rocky area – the Graham Bank – which falls within the path of some of the highest levels of the sediment plume – was not included in any NIWA research. Rocky areas are characterised by high proportions of organisms that filter feed and are immobile, such as bryozoans and sponges, which are susceptible to small increases in sediment.
16. For example, the presence and possible impacts of heavy metals in the marine environment seems also understated. CRAMAC 9 notes that the supporting information to the application makes no mention in relation to heavy metal characteristics of the likely effects of the ‘grinding process’ used when mining.
17. There could be double or triple grinding of sand, in order to reach the market specifications for the iron ore. Each grind concentrates the metals, such as copper and nickel. Once grinding specifications are determined, and before any application is approved, the EPA needs to work with TTR to obtain engineering solutions for the predicted high concentrations of metals, so that water quality standards for the protection of species are met.
18. CRAMAC 9 believes that the sediment plume composition, intensity and distribution can be more extensive than modelled if mud layers are disturbed. The SKM evaluation of potential effects notes that *‘limiting mining activities only to sediments located above the mud layer has the potential to significantly reduce the volume of the mineral sand resource available for TTR, particularly if the mud layer is thin and underlain by mineral sands of high iron content. SKM recommends, in the event that the application is approved, that conditions and criteria for avoidance of working the mud layer be developed, to provide certainty for the EPA and TTR on the operational arrangements that will be adopted to avoid the creation of suspended sediment plumes associated with mining-related disturbance of the mud layer’*.
19. CRAMAC 9 strongly recommends a no-risk approach in this regard – Sediment can directly affect aquatic organisms and habitats, blocking gills and filter feeders and smothering sedentary aquatic plants, animals and their eggs.
20. Sediments can have other significant impacts such as reduced light penetration inhibiting photosynthesis. Fine sediments can bury coarse bottom sediments leading to a loss of habitat and spawning sites for gravel bed dependent fish. This can produce flow on effects through food chain linkages. Where the supply of sediment exceeds the ‘normal habitat’ flushing capacity, this material will accumulate and smother bed habitats.



PRECEDENT

21. CRAMAC 9 has significant concerns in relation to the duration and extent of TTR exploration permits in the territorial waters. It is essential that the current application is scrutinised in fine detail to ensure that there are no adverse impacts on marine ecosystems as a consequence of any aspect of the extraction and processing activities. The current application represents precedent for any and all future applications.



22. And the current application is of extensive duration in its own right. Should the application be approved, and with appropriate safeguards as we consider necessary, CRAMAC 9 submits that there must be ongoing supervision and monitoring of the extraction and processing activities – and the subsequent impacts on the mining site and from the sediment plume.
23. The various modelling projections offered in support of the application must be tested in real time and if the results differ negatively from those predicted then extraction must be modified so as to mitigate those effects and terminated if that cannot be done.
24. We note that in relation to sediment dispersal the full area to be mined was not modelled – rather a subset of the area (11%) to be mined has been modelled - a 3x2 km area (6.05km²)– when the mining application is for an area of 65 km² with 53.63km² to be mined.
25. A further limitation was that a modelling run of 10 years was used – but if a greater mean depth than 5 metres is used (and it could be a twofold increase from 5 metres) the Project could extend out towards 20 years.

AN ELEMENT OF SPIN

26. CRAMAC 9 notes a selective range of contemporary media comments made by TTR in support of the current application:

TTR developed and have completed a comprehensive consultation programme that provided open and inclusive consultation with all parties with existing interests, and other stakeholders. In respect of South Taranaki Bight iwi, Ngati Ruanui hold mana whenua over the proposed permit area and Nga Rauru and Nga Ruahine have neighbouring interests. Te Tai-hau a uru Fishing forum is a collective of iwi from Muaupoko to Mokau who have commercial and customary rights and interests in the Exclusive Economic Zone (EEZ) outside the 12 nautical mile zone. Te Atihau a paparangi and Ngati Apa are within the Wanganui District Council territorial authority where TTR propose to operate a geotechnical support base.

27. When reading this it would be easy to assume that TTR intends to imply that consultation with Iwi has resulted in an endorsement for the mining operation. CRAMAC 9 is certain that is not the case. The named organisations have responsibility for the relevant Iwi fishing interests but are not mandated as implied by TTR.

TTR's extraction process occurs in a sequence of blocks, by extracting a lane 10m wide and 5m deep on average. Residual pits and mounds that occur at the first and last lanes of a sequence are naturally levelled and filled by the action of the sea on the surrounding seafloor

The sand is returned to the seafloor in a controlled manner through a pipe extending from the processing vessel to approximately 4m above the seafloor. This method minimises the pluming effect and our independent scientific research shows there will be minimal environmental impacts.

The environmental monitoring and measurement limits in the consent conditions proposed by TTR have been based on environmental effects not exceeding the naturally occurring levels.

28. CRAMAC 9 makes several responses in relation to the three paragraphs above.
- a. The mining rig is going to be mobile and active – not fixed in one position and for every location it works there will be a corresponding vessel exclusion zone.
 - b. The mining and sediment disposal will create pits and mounds which TTR claims will quickly be 'levelled out' by natural processes. One of the groups objecting to mining claims to have information which shows that natural processes will not level out the pits and mounds because of the depth they are at. That claim needs to be checked and verified.
 - c. And finally – we do not believe that there is sufficient data available to be confident that we know what 'naturally occurring levels' of disturbance are at the depths and locations being mined.

From a marine navigation point of view there will be little impact on commercial fishing because the proposed operations only occupy a relatively small, constantly moving area and have an exclusion zone around it similar to the existing oil and natural gas marine installations in the area. Studies show that aquatic life forms in the STB area are well adapted and used to the existing high sediment content of the turbid waters.

29. CRAMAC 9 notes that the 'existing high sediment content of the turbid waters' is a key part of the TTR application. In essence they claim that mining is not going to make things worse or better than they already are. From their perspective that may or may not be the case but we are unable to find much in their current application to support their contention. We dispute it.

These recreational activities are generally near to shore, where there already exists high sediment content in turbid waters. Studies show that aquatic life forms in the STB area are well adapted to this high-energy environment. Studies show that the environmental effects of the project are indistinguishable from the existing background. From a marine navigation perspective there will be little impact to coastal water users because the proposed operations will be over 20km offshore, and the operations themselves only occupy a relatively small, constantly moving, area and have an exclusion zone around the vessels similar to the existing oil and natural gas marine installations in the area.

30. The statement above is made in relation to concerns over impacts on recreational activities including fishing. Again TTR are relying on their assertion that the water is dirty anyway and they won't make it any worse. CRAMAC 9 does not share that opinion. We again draw attention to what we consider to be limitations to the modelling as noted in para 24 above.

IN CONCLUSION

CRAMAC 9 submits that the application must be declined because the potential risk that extraction and processing presents to the marine environment. The possible negative impacts on aquatic ecosystems will erode cultural, recreational and commercial fishing success and in particular create cost and dislocation to commercial lobster fishing businesses.

On behalf of the CRA 9 Rock Lobster Industry Association - CRAMAC 9



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