

# **GUARDIANS OF PAUATAHANUI INLET**

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Mana

Porirua

In association with

## **Pāuatahanui Inlet Community Trust**

**6 March 2012**

### **To the Transmission Gully Project Board of Inquiry.**

Joint representation by Pauatahanui Inlet Community Trust and Guardians of Pauatahanui Inlet - 6 March 2012

(This is Submission 2 on TGP presented by GOPI)

#### **Brief background of GOPI and PICT**

1. The Guardians of Pauatahanui Inlet (GOPI) is a community based Incorporated Society with about 190 financial members. It was established in 1991 to encourage, promote, protect, maintain and foster the natural, historic and cultural values of the Pauatahanui Inlet.
2. The Pauatahanui Inlet Community Trust (PICT) was established in 2002. Its trustees include representatives from GWRC, PCC and Ngāti Toa, plus 8 members from the community. PICT is charged with facilitating the implementation of the Pauatahanui Inlet Action Plan which was prepared by community groups and local authorities following concerns about degradation of the Inlet and the way it was being managed.
3. A key objective for both organisations is to advocate for developments in the Inlet and catchment to have a negligible (if not positive) effect on the ecological functioning and other values associated with the Inlet

#### **Reasons for Submission - Concerns for Welfare of Pauatahanui Inlet**

4. The 2 major sources of pollutants from human activities which threaten the ecological integrity and values of the Inlet are sediments from rural erosion and urban development, and input of toxic chemicals largely derived from vehicles using roads in the catchment.
5. From an early stage we identified roading and traffic as having major impacts on the Harbour. One of PICT's first tasks, therefore, was to carry out a detailed assessment of the likely implications - for both arms of the Porirua Harbour - of proceeding or not proceeding with TGP.
6. In brief, the analysis concluded that the current impacts on the Harbour from roads and traffic were unsustainable. The Harbour's ecological, recreational, amenity, cultural and economic values

were already at real risk, and if the current situation were allowed to continue the future of the Harbour looked very grim.

7. The assessment identified that construction of TGP had the potential for creating adverse effects on the Harbour and would attract more traffic through the Harbour catchment. However, it also noted that TGM would significantly reduce traffic levels in the immediate vicinity of the Harbour.
8. It concluded that TGM, if accompanied by strict controls both during and after construction, should provide significant benefits in terms of contamination, recreational use, amenity and cultural values, and economic activity.
9. Both organisations continue to support the concept of TGM.
10. However, the current applications and supporting technical information reveal that our assumption that controls on sediment and contamination could be managed to produce a near zero impact was naive.
11. It was expected that the "advanced ecological mitigation" required under the original designation, together with the ever-increasing sophistication of sediment control measures and the likelihood of very strict resource consent conditions would - by the time of eventual construction - result in minimal sediment problems (except perhaps in the event of extreme storm conditions).
12. Similarly, it was believed that, despite TGM leading to an overall increase (estimated at 15%) in vehicle kilometres traversing the Harbour catchments, the reduction (estimated at 45%) in travel on roads directly beside the Harbour would actually result in a reduction in Harbour contamination.
13. We are concerned that the Applicants regard the likely impacts as assessed in the AEE and supporting evidence to this hearing, as unavoidable and reasonable. This is reinforced by the view that impacts in the Harbour of sediment runoff will affect the Harbour primarily in areas of "low ecological value".
14. We view the predicted impacts as neither unavoidable nor reasonable, and we do not accept that the affected areas are of "low ecological value" and therefore able in some way to be sacrificed. I explain the basis for this view later.
15. We submit that the Applicants be required to consider additional mitigation and offsetting measures to more nearly approach a zero impact of both the construction and operating stages of the TGP.

### **The Context of Change**

16. We would point out that the issues which may arise as a result of the TGP need to be viewed in the context of ongoing changes to the Inlet through human activities since human settlement.
17. We are well aware that changes we see in the Inlet are taking place as part of a dynamic set of processes and events which include an element of "natural" change. This makes the consideration of threats from new sources (such as TGP) on an "incremental" basis very difficult - given that there is a tendency to "dilute" the significance of possible effects within the historical quantum of change.

There are for example a number of statements in the Applicants' evidence that seek to compare % increases in sediment load from TGP to the estimated "natural" (without the project) load. The "natural" load is, we submit, to a large degree unnatural, resulting from the historical modifications to the catchment.

18. We would also like to point out that many of the impacts from TGP such as contaminant loading and increases in sediment loads in the Harbour are, for all practical purposes, irreversible.

19. This leads to a need to focus on **prevention** of adverse impacts rather than **remedy**.

20. There have been many past attempts (which are ongoing) to mitigate and remedy the impacts of sedimentation and contamination. Significant lessons have been learned as a result, which will be of great value in considering TGP impacts.

21. We have an opportunity to manage TGM to achieve **improvements** on the current situation.

Evaluating likely effects of TGP on the Harbour

22. The Assessment of Environmental Effects Report, and subsequent expert evidence, predict ongoing sedimentation throughout the construction phase and, despite installing current 'state of the art' treatment for stormwater run-off during the operational phase, an increase for the foreseeable future in contaminant loads in the Pauatahanui Inlet. In other words, the nature and extent of the proposed mitigation methods will not be sufficient to prevent short term or long term cumulative adverse effects on the Inlet ecology.

23. There is a good deal of uncertainty in these assessments about the "background" loads as well as what might be generated as a result of construction. This is understandable given the unpredictable nature of major storm events.

24. Our concerns are heightened by the peer reviews suggesting that the NZTA methods of analysis and prediction could be serious underestimates.

25. Moreover, a considerable degree of extra uncertainty arises because of a lack of data on existing loads, the nature of the geology of the area and the efficacy of sediment management techniques during construction.

### **Management of risk**

26. GOPI and PICT accept that it is probably not possible to avoid all adverse effects of the project. In particular, it is inevitable that storm events during or after construction and the limited effectiveness of the proposed contaminant treatments will mean increased sedimentation and contamination of the Harbour attributable to the works.

27. We submit that there is a need to consider a different approach to risk management and avoidance and minimisation of sediments entering the marine environment from the approach indicated in the project application and documents and evidence.

28. This arises because of:

- a. the significant unknowns and uncertainties in the assessment of effects;
- b. the irreversibility of many impacts;
- c. the limited effectiveness of methods for mitigating sediment runoff into streams and the Harbour during storm events during the construction phase;

d. concerns about effectiveness of management and monitoring - based on past experience.

29. This approach should be inherently conservative and involve management of sediment generation:

- a. that is designed for events which are less likely than currently assumed;
- b. that is triggered, in the event of predicted adverse events at lower thresholds than currently assumed;
- c. that is genuinely state of the art and continually reviewed.

30. Whatever the probability of adverse events occurring a set of activities should be considered which are designed to reduce the overall sedimentation and contamination which may not directly result from the TGP activities.

31. Such mitigating or offsetting measures should be sufficient to ensure that there is no net adverse impact on the Harbour in the long-term arising from the construction and operation of TGP.

### **Methods for mitigating and managing sediment generation**

32. We acknowledge that a focus in the project development and assessment stages has been on measures to avoid and minimise sediment and contaminant problems. This is proposed through the erosion and sediment control measures, the revegetation of riparian margins, retirement of land, controls on maximum areas of open earthworks and procedures for stabilising earthworks sites, particularly when a large rainfall is predicted. It is clear, however, that these measures will be only partially effective during construction and do not address the longer-term situation.

33. The only reference we could find in the AEE to any form of mitigation is "*funding for a community project in the event of a notable event occurring*" on page 481 as addressed in Condition M7. This relates solely to an extreme weather event where sediment is transported from construction areas to the Harbour resulting in significant negative impacts on the marine ecology.

34. Such an approach would be totally ineffective in dealing with the impacts on the Harbour of an adverse event, however such an event might be measured and defined. There is no sense in waiting until an adverse event has occurred and been identified, because options for remedy or offsetting are very limited.

35. The concept of offset mitigation is discussed further in the rebuttal evidence of Dr De Luca (para 57). She notes that "*given that adverse effects are only potential at this stage, it is not reasonable to specify the offset mitigation required*".

36. We disagree. The nature of many potential adverse effects is very predictable, the only variables being scale and timing. It makes good sense to consider and implement offset mitigation in advance of likely events based on an appropriate consideration of risks mentioned above.

37. In this context the concept of offsetting for habitat loss by creating new habitat, as considered in the Freshwater Plan, is neither appropriate nor possible. We are not dealing with a simple loss of habitat concept but a significant change to the ecological functioning of a system.

38. We are aware, however, that practical opportunities for effective compensatory activities are likely to be very limited and we suggest that greatest weight needs to go on avoidance, minimisation and mitigation in advance of adverse events.

39. In respect of **sediment**, a condition of approval should be to require NZTA to contribute to plans contained in the Harbour Strategy aimed at:

- a. reducing the sediment input into the Harbour from all sources other than the TGP, including riparian planting programmes and other land management measures;
- b. restoring the tidal prism or increasing the flushing ability of the Harbour, for example by:
  - creation or deepening of strategic channels;
  - removal of existing reclamations;
  - removal of tidal restrictions;
  - the dredging and disposal of sediment from the sub-tidal basins.

40. We cannot be specific about particular measures at this stage because we think the first step is to extend the current modelling to enable the effectiveness of the various possibilities to be tested. The AEE (Chapter 20, page 345) mentions the benefits already gained from the detailed modelling done by NZTA to support this application. However, we understand that more modelling will be required if the most effective additional mitigation measures are to be assessed. It seems appropriate that this be funded by NZTA and carried out in collaboration with the Harbour Strategy team as a matter of relative urgency.

41. In respect of **contaminants**, although there seems to be little scope in the short term to further reduce contaminant inputs from the TGM and other roading in the catchment, it should be a condition of consent that NZTA be required in mitigation to:

- a. update stormwater treatment methods throughout the life of the road; and
- b. install treatment measures on stormwater run-off from other roads in the catchment to offset the adverse effects.

### **Estimation of Ecological Value**

42. The evidence presented by the Applicants comes to the conclusion that, under the assumptions and modelling parameters chosen, most sediment which is likely to enter the Pauatahanui Inlet will settle in the central basin area.

43. The ecological "value" of this area is assessed as "low" and the conclusion which seems to be drawn from this assessment is that impacting this area in this way is not particularly adverse and is acceptable.

44. Our view is that such conclusions are based on a naive definition of ecological "value".

45. The assessments of ecological value are based, as far as we can tell, on a view that value is lower in areas of greater muddiness and a relatively low invertebrate diversity and abundance.

46. Given that ecological functioning of systems is driven by relationships and connectedness between elements of the system it is misleading to view a subset of the system in isolation.

47. There is not a lot of specific information available about the biological connections between the central basin of the Inlet and other parts of the system. There are, however, likely to be significant

connections between the basins and other parts of the Inlet, through fish and other more mobile organisms which use the extensive central basins for feeding, spawning or other purposes.

48. Such connectedness will ensure that changes to the biological community in this supposedly low value area will have an impact on the other areas and fauna in the Inlet. Dr Baber discussed this in his evidence - particularly as it might impact birds, for example.