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### **Proposed Lauderdale Quay Development Draft Integrated Impact Assessment Statement: Elaboration on previous arguments in relation to the endangered spotted handfish**

The Tasmanian Conservation Trust (TCT) is strongly opposed to the Proposed Lauderdale Quay Development (the development) and urges the Resource Planning and Development Commission (RPDC) to recommend to the State Government that it not be given approval to proceed.

In our written submission on the Draft IIAS we raised concerns regarding impacts on the spotted handfish, coastal vegetation and mudflats, wader birds, climate change, visual impacts, recreational use, planning and the State Coastal policy. Today we will focus solely on the spotted handfish.

The spotted handfish (*Brachionichthys hirsutus*), is listed as an endangered species on both the state and national legislation. This species is also listed as critically endangered on the World Conservation Union (IUCN) Red List of Threatened Species – it is globally endangered.

The species is endemic to Tasmania and is currently known only from the lower Derwent Estuary – it is found nowhere else in the world. The species occupies a total area of less than 3 km<sup>2</sup>.

The TCT has stated in the past and still believes that given its limited distribution, low rate of breeding and the existence of on-going threats in the River Derwent, the spotted handfish may become the first recorded example, anywhere in the world, of a marine fish going extinct due to human actions.

Just last October there was an example of a development by the Hobart City Council at Sandy Bay Beach releasing sediment into the river that covered spotted handfish eggs. With this species, such avoidable impacts cannot be condoned and this example serves as a warning of how vulnerable this species is.

The proposed Lauderdale marina will involve movement of very large amounts of sediments and it is vital to find out if this has the potential to affect the spotted handfish.

The *Marine and Estuarine Ecology Report* prepared by the consultant Aquenal (Appendix T1) summarises the known threats to the handfish and notes that many of these could be exacerbated by the development. These threats include habitat modification or loss through siltation, pollution from storm water and sewage, elevated nutrients that result in loss of habitat through algal growth and re-suspension of heavy metals in sediments.

The report states:

“Dredging and re-suspension of heavy metal contaminated sediments in the Derwent Estuary have been specifically identified as threats that may hinder the recovery of the spotted handfish” (page 217).

The Aquenal report also recommends a range of additional assessments in relation to the spotted handfish including determining environmental tolerances for the spotted handfish and determining the effects of sediment movement on habitat of the handfish.

The Aquenal report provides sufficient evidence to support the conclusion that the proposed development could adversely impact on the population of the spotted handfish found closest to the development site and possibly the other populations found in the River Derwent.

Based on the limited assessments, the TCT believes the risk to the handfish population closest to the development, over the long term, from construction and operation of the development is so high that this population would be virtually assured of extinction and there would be no possibility of reintroduction. This risk is unacceptable and should not be permitted.

Given these concerns and that Aquenal were employed for their expertise in assessing marine species, the report makes the startling admission that

“Information on the extent of marine environmental disturbance during construction and operation of the development was not available at the time of performing the study” (page 207).”

Given the likely impacts from the development, we are astonished that Aquenal were not given, or in fact, were not required, to have access to information from other consultants performing the assessments on marine environmental disturbance – in particular movement of sediments and pollutants.

We strongly recommend an additional study (including hydro-dynamic studies) by Aquenal or another suitably qualified and independent consultant while having full access to information on the extent of marine environmental disturbance during construction and operation of the development. The additional assessments recommended by Aquenal must also be included in this study.

Following this, a report must be produced and provided to the RPDC and released for public comment.

Without this additional assessment we cannot see how the proposed mitigation measures and off-sets for the handfish can be justified. The people with the expertise employed to assess the impacts on the hand fish did not have access to information that would allow them to fully assess the potential impacts and the people who designed the mitigation and off-set measures (appear not to have expertise in marine species) and did not specifically assess the spotted handfish.

In short the impacts on the endangered spotted handfish were not assessed.

We do not know the level and nature of impacts that are likely in order to determine whether the mitigation measures and off-sets are appropriate.

The *Environmental Off-sets Strategy* (Appendix W) prepared by consultants Cardno Lawson Treloar recommends a range of mitigation measures and the principle two that relate to the handfish are:

“1. During construction the site would be isolated from Ralphs Bay by a bund wall, established using a cutter-suction dredge and double silt curtains, to minimize the potential for large scale release of sediments into Ralphs Bay.”

“7. A vessel transit lane (VTL) would be established in Ralphs Bay to keep boat movements as far away from the Spotted handfish colony located in the north of Ralphs Bay. (page 7)”

It is also proposed to provide financial payments as off-sets for the Spotted handfish. These are:

- \$25,000 for the potential establishment and management the boating transit lane in Ralphs Bay.
- \$100,000 toward the implementation of the spotted handfish recovery plan.

This is a small amount of funding that would not go very far. The Strategy does not stipulate any objectives or outcomes for the funding allocated toward the recovery plan so we do not know what we get for the money. Also, a vessel transit land or exclusion area would be counter productive as it would draw attention to the location of the handfish colony. But before we debate the adequacy of the

proposed off-sets and mitigation measures the likely level of impacts must be determined.

The *Environmental Off-sets Strategy* fails to refer to any reports that provide the required analysis or studies relating to the spotted handfish to justify these mitigation and off-set measures. Curiously, the strategy does refer to two reports that appear quite irrelevant. The strategy states that:

“Detailed coastal process and water quality investigations (Cardno, Lawson and Treloar 2008a,c) indicate that this Spotted handfish colony is not likely to be adversely affected by the dredging and earthworks that will be carried out to construct the Lauderdale Quay development nor any alternations to water qualities that may occur during operational phases of development.”  
(page 26)

**These reports do not make this statement or anything of the sort. They do not specifically address the handfish. This statement is untrue and misleading. It is greatly disturbing to us that a crucial document such as the off-sets strategy is being misleading.**

We have looked in some detail at these two reports (Appendices L1 and M2) and both fail to reference the Aquenal report and both fail to provide any specific analysis or recommendations regarding the handfish. It appears that both also fail to mention the spotted handfish.

L1 concludes:

“the development would have a minimum influence on the surrounding region of Ralphs Bay in relation to coastal processes and water quality”  
(page vii)

It doesn't say zero influence. What “minimum influence” means for the spotted handfish is anyone's guess.

Appendix T2 by consultant Ecolab assesses the likely impacts on the spotted handfish and proposes mitigation measures but these are based largely on Appendices L1 and their own opinions, but also M1 and I2. It provided no new data relevant to the spotted handfish.

The *Environmental Off-sets Strategy* also fails to provide any analysis of any other reports relating to sediment and water quality and how they may relate to the spotted handfish. Relevant reports include Appendices H, M1, M4 but these also avoid mention of the spotted handfish. Appendix H references Aquenal report.

In conclusion, we urge the RPDC to act on our recommendation and require that an additional, thorough and independent study be done in relation to the likely impacts of the Lauderdale marina proposal on the spotted handfish. We note that the Department of Primary Industries and Water submission also made the same recommendation.

We believe that failure to do so would make it impossible to argue that this matter of national environmental significance had been appropriately assessed or that the recommended mitigation and off-set measures were appropriate. As it stands we believe the Lauderdale marina proposal would most probably be in contravention of the Environment Protection and Biodiversity Conservation Act.

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