

## TOWNSVILLE OCEAN TERMINAL

# ENVIRONMENTAL IMPACT STATEMENT SUBMISSION RESPONSE

## RESPONSE TO QUEENSLAND HEALTH

**August 2008**

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## QUEENSLAND HEALTH

Note: This submission response document has been prepared by means of duplicating the individual submission received and inserting response clauses where relevant.

### 1.1 SECTION 2.2 COMPATIBILITY WITH THE PORT OF TOWNSVILLE

The ToR requires the proponent to, "provide examples of similar residential developments located near industrial port facilities and discussion of their compatibility" in the EIS (page 9). However, this requirement does not appear to be addressed.

Examples of similar residential developments near industrial port facilities include Esperance (Western Australia), Whyalla (South Australia) and Newcastle (New South Wales). These locations have issues and considerations similar to the project.

*Recommendation:*

The proponent addresses this ToR requirement in the Supplementary EIS.

## RESPONSE

**Queensland Health comments in relation to the study of similar residential developments near industrial ports were noted and a comprehensive study undertaken.**

**In the Expert Reports in Volume 2 there is a report by Transpac Consulting entitled "Case Studies on Sea Ports and Residential Interface" (refer Appendix A32 in Volume 2) in which a number of Port Cities are examined to provide a comparison.**

### 1.2 SECTION 2.2.1 COMPATIBILITY WITH THE PORT OF TOWNSVILLE – EMISSIONS ASSOCIATED WITH PORT OPERATIONS

Queensland Health believes the EIS has not satisfactorily addressed this requirement of the ToR. In particular; the assessment provided in the *"report on air quality (dust, fumes, particulates, odours - organic and inorganic) impacting on the Project site based on current and future port activities"* (page 9) has not sufficiently assessed the potential health impacts of air and odour emissions from the Port on future residents.

Current port operations include loading and unloading mineral ores (e.g. nickel), mineral concentrates (e.g. lead and zinc) and live cattle. The EIS identifies these as existing emission sources, however data on emissions from these operations, as well as assessment of their impacts on the project, have not been satisfactorily provided. Particular issues include:

- Very limited data on airborne metals (particularly lead) at the project site (e.g. types, concentrations, particle sizes, water solubility, routes of human exposure, characterisation of risk),
- No data on concentrations of metals in surface swabs taken (refer to *page 31 of the Townsville Ocean Terminal - Air Quality Assessment* (the AQA)),
- Given that livestock transport is a function of the Port, an assessment of *the* possible health risks to future residents has not been provided (e.g. *Coxiella burnetii* (the infectious agent that causes Q Fever), indirect health effects of excessive odour),
- No clarification for using the Port's PM<sub>10</sub> sampling location in lieu of locations at the project site,

- Limited information on air sampling methodology (e.g. locations, air volumes, port activities at time of sampling), and
- Reliance on future air quality sampling, analysis and assessment for the EIS by bodies unrelated to the project (e.g. the proposed Environmental Protection Agency air quality project referred to on page 39 of the AQA).

*Recommendation:*

The proponent reassesses the impact of current and future air emissions from the Port on future residents.

## RESPONSE

**In the Expert Reports in Volume 2 there are a number of reports providing further information in regard to Air Quality issues including heavy metals and Q Fever. (Refer Appendices A1-A5 in Volume 2.)**

**In particular, the metals content analysis of the deposited dust has been considered following on the analysis of a single round of investigation of the August 2007 deposition sample. The results for the casino carpark station and Jezzine Barrack show the lead content levels were 0.104 and 0.038 mg/m<sup>2</sup>/day respectively. Both were well within the acceptable criteria. Further modelling of metals emission from the BHP lead oxide loading facility show that lead concentrations at the TOT Project and other residential areas close to the Port fall well below the Environmental Protection Air Policy criteria.**

### 1.3 SECTION 2.2.2 COMPATIBILITY WITH THE PORT OF TOWNSVILLE – HEALTH AND SOCIAL IMPACTS

The ToR requires the proponent to undertake an integrated health impact assessment of the proposed Breakwater Cove precinct (page 9), which appears to be provided as the *separate "Health & Safety"* report. However, this report does not provide satisfactory information on the potential direct and indirect *health* impacts of existing and future Port emissions on the future residents of the Breakwater Cove Precinct (particularly the cumulative impacts of existing and future air and noise emissions from the Port).

*Recommendation:*

The proponent undertakes further assessment of the potential health impacts of current and future Port emissions on future residents.

## RESPONSE

**In the Expert Reports in Volume 2 there are additional reports dealing with the health impacts of existing and future Port emissions on the future residents of the Breakwater Cove Precinct – particularly in regard to Air Quality and Noise. (Refer Appendices A1-A5 and A6 in Volume 2.)**

### 1.4 SECTION 4.10.2 NOISE AND VIBRATION: POTENTIAL IMPACTS AND MITIGATION MEASURES - SLEEP DISTURBANCE

The EIS states that *"sleep disturbance is related to the degree to which: maximum single noise events exceed the ambient noise environment for an area."* This statement is not entirely true.

As noted in the Queensland EPA *Planning for Noise Control* Guideline (page 7) and the World Health Organisation's *Guidelines for Community Noise* (page 40), sleep disturbance is also related to ambient/continuous noise levels. These noise levels are of particular relevance to the *project* due to the significant permanent residential population that is likely to live in the Breakwater Cove Precinct.

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*Recommendation:*

The proponent corrects the statement in the EIS and communicates the revised statement in the Supplementary EIS.

The EIS establishes internal  $LA_{eq}$  noise level guides for sleeping areas (see page 35 of Supplementary Acoustic Report). However, these noise level guides are not considered appropriate for this project. This is based on the following:

- The  $LA_{eq}$  noise level guides stated in the EIS (35 dB for sleeping areas and 40dB for other areas) are not the recommended design sound levels referred to in the relevant Australian Standard (*AS/NZS2107:2000*). As identified on page 10 of the Supplementary Acoustic Report (and stated *in AS/NZS2107:2000*), the recommended design sound levels for particular locations in a dwelling are:
  - 30dB (max. 35dB)  $LA_{eq}$  for sleeping areas,
  - 30dB (max. 40dB)  $LA_{eq}$  for living areas, and
  - 35dB (max. 40dB)  $LA_{eq}$  for work areas.
- From a health perspective, 30dB  $LA_{eq}$  is the appropriate design sound level for inside bedrooms (to avoid sleep disturbance) and 35dB  $LA_{eq}$  for inside dwellings (to avoid speech intelligibility and moderate annoyance) (see the Table 1, page 47, of the World Health Organisation's *Guidelines for Community Noise* (available at <http://whglibdoc.who.int/hq/1999/a68672.pdf>).

*Recommendation:*

The proponent changes the internal LAN noise level guides.

**RESPONSE**

**The Proponent notes the correct  $LA_{eq}$  criteria. The criteria will be most relevant in the preparation of the Port Protection Code.**

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*Recommendation:*

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