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### **Abbot Point Coal Terminal 0 at Port of Abbot Point, Queensland (EPBC 2011/6194)**

This submission is made on behalf of North Queensland Conservation Council. We respectfully request that it be taken into consideration in the process of assessing the proposal for Abbot Point Terminal 0.

#### **Terrestrial Ecology**

##### **Use of out dated surveys to predict on the abundance of species**

This EIS is based on number of now out-dated studies done for other developments in the area. For example, the WBM study used as a source in the fauna survey section was done in 2006. In an area where large scale developments are undertaken, significant changes can occur in the flora and fauna communities over a period of 7 years. The use of the WBM 2006 study is unacceptable.

##### **Failure to consider relevant conservation advices and recovery plans**

SEWPaC has an online NRM region search module that provides Conservation Advice or Recovery Plans for EPBC-listed species and ecological communities. Information in Table 3-65 (Conservation Significant Flora Species and Potential to Occur in the Project Area) shows that the EIS has failed to consider this information.

Regional plan for the project area has stated that the distribution of *Eucalyptus raveretiana* (Black Iron-box plant overlaps with Semi Evergreen Wine Thickets (SEWT) of Brigalow belt. The species is distributed between Rockhampton and Ayr. There is one record of the species in the wildnet data base. This species cannot be named as “unlikely” to occur.

The EIS notes that *Pteropus conspicillatus* (Spectacled flying fox) “Roosts in or near the rain forest. Feeds on fruits and nectar and ranging into other habitats to feed such as eucalypt and paper bark”.

However, the Recovery Plan for this species notes “The spectacled flying fox feeds on fruits and blossom, primarily in the canopy vegetation of **a wide range of vegetation communities, including closed forest, gallery forest, eucalypt open forest and woodland, *Melaleuca* thickets, coastal swamps, mangroves, vegetation in urban settings, and commercial fruit crops**” [emphasis added]. Considering the wide range of habitats preferred by the species, the potential to occur cannot be categorised as “unlikely”.

#### **Vague use of terminology in Table 3-66**

- The table uses the term “unlikely” in relation to species (*Denisonia maculate*, *Egernia rugosa*, *Erythrorchis radiates*) despite the fact that no survey was conducted and despite the fact that they appear in an EPBC **online search**
- The term “unlikely” has also been given to species with one wild net database record within 25 km of the project area.
- Species with a single wild life data base record have been variously categorised as “likely”, “unlikely and “potential”.

The rationale for this variable use of terminology is not clear. The basis for describing the potential to occur as “potential”, “known”, “likely” and “unlikely” should be provided.

#### **Failure to include two “Near Threatened” species as conservation significant fauna species**

*Melithreptus gularis* (black – chinned honey eater) and *Stictonetta naevosa* (freckled duck) are listed in Appendix B4 (Queensland government wild life on line extract) as Near Threatened species listed under Nature Conservation Act. However, they have not been identified in Table 3-66.

Near threatened species should also be included in mitigation and management plans as impacts of the proposed development have the potential to reduce the population and thereby relocate them to higher threatened levels. This issue has not been addressed in this report.

#### **Lack of habitat information on Koala**

Surveys were not carried out in the phase 2 lay down area, which is a suitable habitat for koala.

- Even though the species was not sighted, suitable habitat occurs in the project terminal area
- Phase 2 lay down area has not been surveyed. More suitable habitat may occur in that area
- These “more suitable habitats” are “unlikely” to be critical habitats.

There is no basis for concluding that the existence of critical habitat is “unlikely’ as the area was not surveyed due to restriction of access. A target species survey for Koala and a general species survey should have been carried out in the phase 2 lay down area and the result taken into consideration before a request for approval of the proposal. If the area were found to be important for the species, a recommendation to

avoid clearing would not be enough. Buffering of the area would need to be declared around the habitat and other direct and indirect impacts would need to be identified. A management plan for the target area should be provided.

#### **Direct mortality and injury of fauna**

Detailed and specific mitigation methods should have been provided for this section, and include information on habitat locations which will be established beforehand (3.11.10.2) and speed limits for vehicles in construction and operation phases.

#### **Noise**

Generalized statement of noise impacts have been provided. However, the EIS fails to provide specific information (for both onshore and offshore species) in relation to: maximum potential noise levels in different stages of the project; activities generating those noise levels (e.g. transportation, excavation); and, anticipated durations of particular noise levels. These data would be necessary for any rigorous assessment, including any CIA.

#### **Artificial Lighting**

This section fails to state the activities and stages that require artificial light, anticipated levels of light and area covered in those activities. The EIS merely describes (Table 4.1) light levels as “high” or “low”. Rigorous assessment would require data on quantified ranges of light intensity to differentiate ‘high’ and ‘low’.

### **Marine Ecology**

#### **Impact of coal dust**

The impacts of coal dust have been underestimated. The report states that increases in coal dust from the project individually or cumulatively will not have any significant impact on the marine environment or benthic communities within the Port of Abbot Point.

However, researchers have monitored the flow of coal particles from the Mackay coastline 40 nautical miles to the reef on the continental shelf break. There is evidence that coal dust could be carried from Abbot Point on typical ocean currents between Bowen and Cape Upstart.

([http://www.townsvillebulletin.com.au/article/2012/03/19/315221\\_news.html](http://www.townsvillebulletin.com.au/article/2012/03/19/315221_news.html)).

The EIS has simply ignored this evidence and failed to address the long-term effects of coal dust.

#### **Long-term impacts**

The report has failed to address the long-term impacts of the development. Meanwhile, the report notes that the construction of the project will not have a direct impact areas on ecologically significant marine habitat.

What is the rationale for failing to address long-term impacts when the project constructions occur through two different types of sea grass communities, an area with high density echinoids, two types of algal communities, aggregation area for

humpback whales and distribution area for Snubfin dolphin and Indo Pacific Humpback Dolphin, when the southeast boundary of the project is adjacent to turtle nesting and hatching sites on Abbot beach and when seagrass communities provide forage sites for dugongs and a dugong protection area is located near the project.

#### **Direct impacts on marina fauna have been underestimated**

The report claims that the benthic communities will recover from any kind of damage that will happen due to the project and adapt to the new environment resulting from the project. However, the **resilience of benthic communities has been weakened** due to natural and human causes. Recovery to existing levels would still see the communities in a weakened state. Furthermore, the capacity of weakened communities to recover is less than that of healthy communities; this does appear to have been taken into account.

There is a time lag/ duration for an ecological community to bounce back to its normal stage after a disturbance has been occurred. The effect on dependent and interacting species during this time should be considered. Issues such as the impact on green turtles (<http://www.magnetictimes.com.au/article-4091.html>) and impacts on commercial fishery [http://www.townsvillebulletin.com.au/article/2013/01/30/374464\\_news.html](http://www.townsvillebulletin.com.au/article/2013/01/30/374464_news.html) have been ignored.

#### **Dredge material disposal site**

As is widely known by now a WWII Catalina A24-24 wreck lies about 8 km offshore from Bowen. The EIS fails to identify this historical wreck (deemed by many to be a war grave). An assessment must be done on the site where the dredge material is planned to be dumped in order to evaluate the impacts of dumping on the Catalina wreck site. The EIS fails to provide any non-monetary justification for selecting offshore dumping of dredge material over onshore dumping. Offshore disposal will result in a number of negative impacts on the benthic communities in and outside the project boundary.

### **Cumulative and Consequential Impacts**

To put it bluntly, the EIS has not provided a Cumulative Impact Assessment. The Chapter entitled 'Cumulative and Consequential Impacts' is a very largely narrative and descriptive comment on the various impacts that will be imposed by the proposed development. There is virtually no attempt to provide anything other than the most basic comment on 'additive' impacts. Synergistic impacts are not addressed at all. There is no scientific model underpinning the conclusions that are drawn to support the claim that there is no cumulative impact. Conclusions related to cumulative impacts appear to be little more than subjective comments.

The conclusion that "There are limited measures that Adani and the Project could take to protect MNES from the synergistic impacts of climate change" would, if it were not so tragic, be laughable. The Indian company, Adani, by mining and exporting coal to India for burning is contributing hugely to climate change impact [the "greatest threat to MNES"]; one of the measures it could take would be to refrain from doing this.

Considering the capacity of the project, the blasé conclusion of no or limited cumulative impact from the positively massive development planned for the area, cannot be accepted.

Cumulative impact is not only about the addition of impacts but also about the multiplication of impacts due to the interaction effect of the changes that will take place. Such interactive or synergistic impacts have not been accounted for in any scientific or transparent way in what is referred to as the 'cumulative impact assessment' provided in the EIS.

There is no attempt to determine baselines against which to assess cumulative impact. There is no recognition that additional impacts on an already weakened system could result in 'tipping points'.

The so-called Cumulative Impact Assessment provided in this EIS is an insult. Some of those specific concerns (for example, failure to explain methods adequately and inconsistency in the information provided – the dredging area and quantity varies between the PER and the EIS) are addressed below.

### **Disregard of CUI**

The proponent has not considered the common use of infrastructure (CUI) in the analysis of cumulative and consequential impacts due to "its relationship with a broader range of projects, including the MCF". This is not an adequate reason; while the MCF may be 'off the cards', the government has publicly called for replacement projects. Inclusion of all possible impacts is expected under cumulative impact assessment. This report has ignored the very basis of CIA.

The CIA also bases much of its conclusions on the claim that T1 has had no noticeable adverse impacts on coastal processes at Abbot Point. CIA is not about the 'noticeability' of impacts. It is about all the possible impacts despite their scale, spatial and temporal properties. All noticeable and unnoticeable [insignificant] impacts from all the considered projects can have synergistic and aggregated impacts on the environment and it is this accumulation of synergistic and aggregated impacts that is the raison d'être for CIAs.

The so-called CIA does not meet the basic criteria for cumulative impact assessment and is totally unacceptable.

### **Climate change**

According to the 2009 GBRMP Outlook Report, the greatest threat to the resilience of the reef is climate change. The burning of Australian fossil fuel is the country's major contribution to global climate change. Furthermore, Australia relies on coal to generate 77% of its electricity and coal is the most greenhouse intensive fuel. Development of the coal industry and related infrastructure is also a key contributor to local climate change.

It is essential that the CIA for T0 provide a **cumulative carbon foot print** and address the likely impacts on climate change at the local, regional, state, national and international scale.

### **Resilience**

The EIS claims that the benthic communities at Abbot Point are able to recover from burial within three years of impact. It has ignored the **impacts during those three years**, especially on the species that depend on the seagrasses, algae and other micro and macro fauna. Furthermore, given the impacts of climate change and the decreased resilience of the reef ecosystems, recovery within this time frame and to the same extent cannot necessarily be expected.

The effect on dugongs and marine turtles due to loss of seagrass arising from sedimentation has been simply ignored by stating they will move to extensive forage areas occur outside the predicted plume from Abbot Point. Turtles have been found to be 'locationally loyal', they do not move easily to new locations in order to exploit other food sources.

It is a lame excuse to say 3, 000,000 m<sup>3</sup> of dredge material dumped at the Great Barrier Reef has only temporary and non-significant impacts.

The impact of coal dust has again been neglected despite the growing evidence of its negative impacts.

### **World Heritage Values**

Resilience of the GBR is not expected to be affected due the scale of GBR and distance between the port and the GBR. This is another clumsy excuse for a place (Abbot Point) located within a World Heritage Area. Apart from the world heritage criteria, a natural world heritage site is selected based on its integrity.(World Heritage Convention).

**Integrity relates to the wholeness and intactness of the heritage property.** When a small part of the site is affected (degraded/polluted/degraded), it affects the integrity of the whole area named as world heritage. The point of declaring world heritage areas is to stop the activities that can disturb its integrity and to maintain it for the future generations of the earth.

The argument of Abbot Point not being an exceptionally beautiful area is not valid. Abbot Point is located within an area which has been declared by the UNESCO to be of "superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance". Furthermore, the 'integrity' of the GBR was a key reason for it being listed as World heritage in 1981. Therefore, any activity that disturbs or disintegrates the natural beauty of the Abbot Point is disturbing the natural beauty of GBRWHA.

### **Vague use of terminology**

Vague use of terminology is observed in tables 4-3, 4-4 and 4-5, all of which fail to provide a clear picture of cumulative impacts. Risk appears to have been derived by way of a mysterious formula, which should be explained. The report should clearly

state the scientific basis behind this assessment. It should also state whether peer review of the methodology was undertaken.

The report should provide a rationale for selecting only two or three hazards and for using them in an ad hoc manner throughout the tables. It should also provide valid reasons to ignore some of the potential hazards. These tables lead to the suspicion that little thought and little research lie behind the assumptions of impacts.

Specific examples for problems with Table 4.3 include;

- **“Reduction of Habitat Quality”** is a common hazard caused by climate change. Yet it is only mentioned in relation to *Croton magneticus*.
- **“Vehicle strike”** is mentioned as a hazard only for Koala. Does that mean other species do not face the hazard of “vehicle strike”?
- **Northern Quoll** is only affected by **“poisoning”** (by cane toads). Are they not threatened by “habitat loss” or “habitat quality” like the other species mentioned in this table?
- **“Increased temperature”** is mentioned as a “factor” (under climate change impact) related only to reptiles. Why does “increased temperature” not have an effect on other mammals or birds?
- **“Weed invasion”** is mentioned as a climate change factor only under *Croton magneticus*. Are the other plant species not affected by weed invasion as a climate change impact?
- **“Accidental death”** has been stated as a hazard only for Squatter pigeon and Koala. Does that mean the other birds and animals do not face the hazard of accidental death?
- Construction has been indicated as a factor for only five species in table 4-3 (3 plants and 2 reptiles). Why is this not considered as a factor for other species?
- What is the basis for stating in Table 4-3 the red goshawk can only be affected from “changed fire regime”, while the rest of the species are affected by “accidental fires”?

Similar examples can be found in tables 4-4 and 4-5. Of the 32 listed migratory species indicated in the table 4-4 only three are affected by coastal erosion, only one species is affected by mudflat erosion and another one species is affected by estuarine erosion. Ocean acidification, changes to ocean currents and extreme weather events must be included as factors of climate change impact in table 4-5. There have been NO risks indicated for any of the species under the climate change section of table 4-5.

Cumulative impacts caused by habitat loss and fauna mortality, changes to marine water quality, increased artificial lighting, increased underwater noise, habitat fragmentation, alteration of coastal hydrodynamic and the input of coal dust in the marine environment are not identified in Table 4-5, whereas they have been identified in the Abbot Point CIA by ELA and Open lines, 2012. Impacts of degradation, chemical spills, dust and light have not been identified in table 4-3 and 4-4.

### Risk level calculation

There is no full explanation of how risk levels have been calculated; they are defined merely as the output generated multiplied by a magnitude and a level of possibility. In other words there is some sort of black box involved – something goes in one end and comes out, transmogrified, at the other – with no explanation.

Furthermore, there are no explanations for the terms used and they are used without any logical background. For example, the report should be clear about the difference between “insignificant” and “minor” and the basis behind deciding whether the impact is moderate, insignificant, minor or major. When the risk levels of the cumulative impacts and climate change impacts on Oriental Cuckoo (*Cuculus optatus*) in Table 4-4 are compared, both “Minor x Unlikely” and “Insignificant x Unlikely” have come up with risk level “Low”. For Marsh Sandpiper (*Tringa stagnatilis*), no “risk” level has been stated despite the indication of “hazard” and “factors”. There is apparent inconsistency in allocating risk levels.

Further examples to support this argument can be found in table 4-4:

- **Latham’s Snipe (*Gallinago hardwickii*)** - Hazards of “Habitat loss” and “Disturbance” with Factors “Fire” and “Noise” is given a risk of “High” (Possible x Moderate)
- **Australian painted Snipe (*Rostratula australis*)** and **Glossy Ibis (*Plegadis falcinellus*)** - Hazards of “Habitat loss” and “Disturbance” with Factors “Fire” and “Noise” has given a risk of “Low” (Insignificant x Unlikely)
- **Fork-tailed Swift (*Apus pacificus*)** and **Eastern reef Egret (*Egretta sacra*)** – Hazard “Negligible” with no “Factors” has given a risk of “Low” (Insignificant x Unlikely)

### Shortcomings of proposed management plans

Numbers of confusing and problematic statements regarding management plans are mentioned in tables 4-3, 4-4 and 4-5. There is no consistency in the proposed management methods provided in table 4-4. Fire control plans and noise control plans have not been provided for all the species identified to be affected by fire and noise (Oriental Plover and White-Winged Black Tern).

In section 3.11.8 (Terrestrial conservation objectives) it is stated that action will be undertaken to minimize the clearing of confirmed SEVT. Yet the proposed management in table 4-3 states, “No SEVT will be cleared”. Does the minimising of SEVT means no clearing?

Tables 4-3 and 4-4 (Impacts on terrestrial species) have not considered the effect of altered rainfall patterns and extreme weather events (drought is not the only extreme



weather event resulting from climate change). Table 4-5 does not provide any management plan for 10 of the 14 species indicated.

## Economic matters

### Valuing the environment

Section 5.7 (c) of EIS guidelines requires “*short, medium and long term environmental, social and economic advantages and disadvantages of the options, including no action option*”.

It is widely held that a total economic value (TEV) approach should be adopted in valuation of natural environment. TEV describes the economic value of natural resources in two main categories; use values and non use values.

Use values are further divided into direct and indirect use values. This project of port development addresses both inland and offshore resources and the benefits from the “direct use values” of these resources. These are market based uses and are addressed in the economic matters section.

But the indirect uses (which include the ecosystem services provided by the inland and offshore) are not addressed in any way enabling comparison. When the project activities interfere or restrict these ecosystem services, there is a cost associated with them and that cost should be acknowledged and, at least partially, quantified. (What, for example, would be the cost of the damage done to coastal resources during a cyclone in the absence of a protecting reef?)

Non-use values are further divided to option value, existence value and bequest value. These concepts can be further explained in the context of GBR,

- Direct use of values of commercial, recreational fishing and tourism industries (profitability)
- Direct use value for tourists and fishers
- Indirect use values of coastal protection
- Non – use values of Australians who may not visit the reef but are willing to pay for its continued existence
- Non – use value of international residents
  - (See: *Valuing the effects of Great Barrier Reef Bleaching*, Great Barrier Reef Foundation, Australia 2009)

By expanding development of Abbot Point, values of the inland and offshore environments are affected and there is a cost associated with that.

The report has made no attempt to illustrate, let alone address, the economic aspects of impacts on the natural environment. Even though it is substantially difficult to place monetary values on conventional goods and environmental effects, it is not an excuse to disregard the issue completely.

### **Affect on stake holders**

Section 5.5 (c) of EIS guidelines require the report to describe the local and regional economic and social context within the project. The effect on related industries comes under this. What the report has repeatedly stated is how the stakeholders of mining and mining related industries will be benefited. It has not focused on the other industries connected to the Abbot Point. The report has paid no attention to some of the stakeholders of the Abbot Point expansion. Related industries such as commercial and recreational fisheries have already raised their fears associated with this project.

Economic impact assessment for a development in a marine protected area should take these matters into account. (According to the Socio-economic Impact Assessment Toolkit - A guide to assessing the socio-economic impacts of Marine Protected Areas in Australia, Prepared for the Australian Government Department of the Environment and Heritage)

Direct and indirect impact on commercial and recreational fishing should be assessed. This should include the impacts on fishers and fishing associated business. According to the Great Barrier Reef port strategy, commercial investment decision must fully account for all costs of doing business, including the cost of managing environment protection. The economics section of the report has not stated the costs associated with environment protection.

### **Input-output approach**

Economic impact analysis in the EIS uses a regional input-output approach. As pointed out in the Carmichael Coal mine and rail project EIS, benefit cost analysis is preferred over the input-output approach by the Queensland Department of Infrastructure and Planning and by the majority of economists – for very good reasons.

### **No action option**

Section 5.7 (c) of the EIS guidelines requires the report to address, *“short, medium and long-term environmental, social and economic advantages and disadvantages of the options (including the option of no action).”*

When economic impacts of the potential alternatives were compared (section 1.4), the “No Action” option has not been considered. If the environmental costs were factored in, “No Action” option would have provided the least environmental cost. It would also be a baseline to examine the magnitude of environmental costs of the proposed project.

### **Ecologically Sustainably Development**

The EIS guidelines require statements about the reasons for choosing the preferred location and option and its compliance with the principles of sustainable development and use. Thus, the project should be designed to achieve the core objectives of the National Strategy for Ecologically Sustainable Development (NSES).

Among the core objectives of the NSES is the enhancement of individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations.

But the economic section of the EIS remains silent on the issue of sustainable development.

We commend the above comments to you.

A handwritten signature in grey ink, appearing to read 'Wendy Tubman', with a stylized, cursive script.

Wendy Tubman  
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