



Submission to the Aquis Resort at the Great Barrier Reef project Environmental Impact Statement

5th August 2014

This submission is made to:

The Coordinator-General
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Executive summary

This submission is made in response to the Aquis Resort at the Great Barrier Reef Pty Ltd (Aquis Resort) Environmental Impact Statement (EIS), released for public comment until 5th August. The proposed project has been declared a coordinated project by the Queensland Coordinator-General under the *State Development and Public Works Organisation Act 1971*. The Aquis Resort is the largest single tourism development ever proposed for Cairns, Queensland or Australia (Executive Summary p.17).

Cairns and Far North Environment Centre (CAFNEC) is the peak regional non-government environment organisation for Far North Queensland. CAFNEC was established in 1981 by concerned local and regional community members with an interest in nature conservation and environmental protection. We engage with stakeholders across community and industry to enhance conservation and protection outcomes, and to promote issues of sustainability. Our work relates to advocacy and awareness-raising, whilst collaborating with other organisations focusing on issues of local, state, national, and international importance.

Recommendations

EIS and project proposal

1. That this proposal is not approved without further sound assessment of social, economic and environmental impacts and clear strategies and plans on how these impacts will be mitigated and risks managed.

Landscape and Visual

2. That a series of project design images be created from a number of key locations in Cairns, such as just off shore and various residential areas including Machans Beach and that these are made available in further consultation with the public.

Flora and Fauna

3. That an alternative proposal to filling in the aquaculture ponds be developed to improve and utilise this freshwater habitat as an additional natural feature for the development and to retain habitat for microbats and migratory and threatened bird species.
4. That a detailed review be conducted of the potential impacts of significant additional lighting on native fauna. With respect to findings, develop appropriate mitigation strategies for example, to primarily internalise light direction toward resort buildings and away from environmental areas.

Coastal Processes and Flooding

5. Provide alternate site for Aquis Resort development; or at the minimum,

6. Undertake further extensive predictive modelling to incorporate climate prediction impacts on local processes and to provide greater certainty on the likelihood and cost associated with potential river migration, than presented in the current EIS.

Water Quality

7. That no approvals be provided for an artificial lake until such time as the strategies to deal with issues (including separation of the lake from groundwater), have been developed and are available for consideration by the community.

8. More consideration be given to the issues of ingress and egress of waters between the natural waterways and the proposed artificial lake prior to approval, particularly in relation to flooding events and potential for underground leakage.

9. That, if an artificial lake is approved, any outfall from the artificial lake be piped offshore rather than simply allowed to drain into the estuarine environment.

10. That the rules for monitoring and managing water quality leaving the site:

- are better articulated;
- have clear, monitored and enforceable targets;
- are designed to ensure that there is at no time any reduction in water quality outside of the development area (i.e. not just matching the worst possible current case for the time of year regardless of actual conditions);
- include a realistic plan for preventing impacts in the case of lake water quality parameters exceeding clear monitored and enforceable targets; and
- include monitoring for invasive species in lake and at outfall point(s).

Waste Management

11. That a full waste management strategy be developed that:

- describes and details measures, processes and procedures that will be implemented to minimise waste generation and maximise waste resource recovery;
- clearly states what the target figures of waste generation and resource recovery are;
- outlines what type of monitoring processes/systems will be in place;
- includes a risk management strategy for failures at any stage of the processes/systems and mitigation of these including where the waste generation grossly exceeds predicted amounts; and
- provides commitment and assurances on the responsibility of Aquis Resort to deal in an environmentally appropriate manner, with construction and operation generated waste.

12. If there is a potential situation where existing infrastructure for waste management would need to be upgraded or projected future upgrades brought forward (and therefore the associated costs) to accommodate the Aquis Resort construction and/or operation, the Aquis Resort EIS should clearly state its intended contribution to this upgrade.

Matters of National Environmental Significance (MNES)

13. That an analysis be conducted of the likely increase in visitor numbers to specific areas within the World Heritage Areas and other MNES sites and that prior to any approvals, a strategy be developed to mitigate any negative impacts on the natural values of these. The analysis and strategy should state:

- estimated daily increase in visitor numbers to each site;
- mode of transportation to these sites and impact of this;
- site impacts; and
- management and mitigation methods.

Environmental Management Plan

14. That a comprehensive Environmental Management Plan be developed encompassing sound management strategies for each relevant area that demonstrate:

- processes, procedures and standards to which activities will be undertaken;
- measurable intended outcomes;
- risks to achieving intended outcomes and mitigation/remediation strategies;
- timelines (to include seasonal disruptions) for implementation; and
- commitment to achieving stated outcomes.

Discussion and related recommendations

EIS and project proposal (overall)

Issue

The scale of the Aquis Resort proposal demands considerable diligence in assessing the environmental, social and economic impacts for the Cairns region. This includes with regard to the rapid projected change of population; shift of the regional economy to a heavy reliance on one business if the proposal operates as presented; and an unknown pressure on the natural environment including World Heritage Areas, due to increased visitor pressure. The EIS as presented does not provide any sound cost benefit analysis or modelling or prediction of social impacts.

The scale and range of issues associated with this project also means that there is no current precedence for development of appropriate solutions through environmental management strategies and plans. The approach taken in the EIS, however, is basically that strategies and plans will be developed as the project progresses. We do not even know if these strategies or plans can in effect deliver the mitigation measures to meet the stated objectives.

Recommendation 1

That this proposal is not approved without further sound assessment of social, economic and environmental impacts and clear strategies and plans on how these impacts will be mitigated and risks managed.

Landscape and Visual (Chapter 6)

Issue

The EIS acknowledges that one unavoidable impact of the proposed Aquis resort is the “fundamental change in land use and its effect on landscape”. Apart from the resort’s massive horizontal footprint on the region, it is only approximately 10m less in height than the natural landform ‘knob’ of Yorkeys Knob. The visual impact of this proposal on the landscape of Cairns and its outstanding natural environment has not been adequately conveyed to the Cairns community through design drawing, consultation or the EIS document.

Recommendation 2

That a series of project design images be created from a number of key locations in Cairns, such as just off shore and various residential areas including Machans Beach and that these are made available in further consultation with the public.

Flora and Fauna (Chapter 7)

The stated intent to retain the majority of mapped natural vegetation and to plant an additional 53 hectares of native vegetation is welcome, as is the restoration of approximately 30 hectares of marine plants.

The EIS however, has a number of key shortcomings with regard to environmental management of flora and fauna on site and impacted by the project.

Issue

In the EIS it is stated that surveys showed that the man-made abandoned aquaculture ponds:

- provided a novel habitat resource during the annual dry season;
- have the second highest species diversity (mainly due to wetland birds July – October);
- were recorded as having the highest number of threatened species for the site;
- included migratory birds; and
- showed seven microbat species through identification by ‘Echolocation Call Recording Analysis’.

Despite initially being man-made, these ponds have clearly taken on a role to support native fauna in the face of surrounding urbanisation. In the establishment of the project, it is proposed that the ponds be filled in. With regard to the impact, it is stated in the EIS that nearby Cattana Wetlands provides a similar habitat and that loss of this habitat should reduce bird airstrike.

Recommendation 3

That an alternative proposal to filling in the aquaculture ponds be developed to improve and utilise this freshwater habitat as an additional natural feature for the development and to retain habitat for microbats and migratory and threatened bird species.

Issue

It is stated in the Executive Summary of the EIS that “lighting associated with this major complex will be noticeable over a wide distance, either directly or as night-time glow”. The potential impacts of this on native fauna are lightly raised several times in the EIS and include:

- disrupting bird nesting patterns, roost sites and dawn calls;
- that birds may become ‘trapped’ and unable to leave a lit area;
- impact of nocturnally migrating birds to the point of exhausting energy reserves;
- altered behaviour for marine animals; and
- impacts on other nocturnal native species.

These impacts could potentially interfere with the behaviour of spectacled flying foxes in the area and microbats recorded on site. It could also increase bird and bat airstrike due to the stated reasons. In the EIS some potential mitigation measures are mentioned such as ‘strategic light placement’, but these suggestions do not constitute a management strategy.

Recommendation 4

That a detailed review be conducted of the potential impacts of significant additional lighting on native fauna. With respect to findings, develop appropriate mitigation strategies for example, to primarily internalise light direction toward resort buildings and away from environmental areas.

Coastal Processes and Flooding (Chapters 8 and 9)

Issue

It is recognised in Chapter 9 (9.1.2) that the Thomatis/Richters Creek system is a major distributary of the Barron River and that 39% of the river flow uses this system for minor flood (referencing the *Barron River Delta Investigation Report 1979*). However, the issue of river migration (Barron River/Thomatis Creek bifurcation) is largely dismissed as a low likelihood. It is noted that some erosion mitigation works have been undertaken since this report and it is stated that the entrance to Thomatis / Richters Creek at the bifurcation has become more constrained due to stabilisation works.

Despite this, there is some consideration of stockpiling suitable rock and even a possibility stated of providing a bond or bank guarantee to fund additional armour works to stabilise the bifurcation of Thomatis Creek and the Barron River. It is further stated in the EIS that if river migration did occur, a response to this would need to be coordinated with “actions involving... major public and private infrastructure.” This presents a considerable potential cost to ratepayers and taxpayers to protect a resort on a location that is in fact unsuitable.

Recommendation 5

Provide alternate site for Aquis resort development; or at the minimum,

Recommendation 6

Undertake further extensive predictive modelling to incorporate climate prediction impacts on local processes and to provide greater certainty on the likelihood and cost associated with potential river migration, than presented in the current EIS.

Water Quality (Chapter 11)

Issues

Marine water quality - The EIS documentation provides us with insufficient evidence to understand and comment on all but the most rudimentary of potential impacts on marine water quality or the potential effectiveness of as yet undeveloped mitigation strategies. The as yet undeveloped management strategies should be part of the EIS documentation. To allow a development approval without a clear plan to manage, for example, acid sulphate soils, would be irresponsible.

The basis of the approach to monitoring and controlling lake discharge is fundamentally flawed. The approach is “that the quality of the discharge must fall within the range of normal variation in water quality in the receiving waters”. There is no apparent solution, however, for situations when discharge does not fall within ‘the range’ as there is no apparent alternative option to discharge other than to stop pumping new water into the artificial lake. Flood events will also mean unregulated and presumably unmonitored discharges. Choosing to use a range provides a convenient loophole which presumably gives the developer licence to discharge water at the worst quality that could possibly already occur regardless of actual background water quality, constantly. The EIS notes that “Current water quality in the Aquis Resort catchment does not meet the Queensland Water Quality Guidelines for various nutrients and turbidity”. Existing poor water quality cannot be used as a justification for future poor water quality from development discharges.

Water discharge quality must not just be “based on Australian and New Zealand Environment and Conservation Council guidelines” but must be stipulated to meet these guidelines.

The concept of piping in seawater from offshore, running it through an artificial system and then releasing the water inshore is concerning on a number of levels. The flora and fauna piped in are removed from natural conditions. They are then provided with artificial conditions in which to thrive or die. Some organisms are likely to boom in plague numbers while most will not survive. Such conditions may be conducive to the importation and facilitation of disease outbreaks. To then release these artificially elevated numbers of specific organisms and potential disease inshore invites ecological imbalance. Discharge of water offshore may help mitigate some of these problems.

Recommendation 7

That no approvals be provided for an artificial lake until such time as the strategies to deal with issues (including separation of the lake from groundwater), have been developed and are available for consideration by the community.

Recommendation 8

More consideration be given to the issues of ingress and egress of waters between the natural waterways and the proposed artificial lake prior to approval, particularly in relation to flooding events and potential for underground leakage.

Recommendation 9

That, if an artificial lake is approved, any outfall from the artificial lake be piped offshore rather than simply allowed to drain into the estuarine environment.

Recommendation 10

That the rules for monitoring and managing water quality leaving the site:

- are better articulated;
- have clear, monitored and enforceable targets;
- are designed to ensure that there is at no time any reduction in water quality outside of the development area (i.e. not just matching the worst possible current case for the time of year regardless of actual conditions);
- include a realistic plan for preventing impacts in the case of lake water quality parameters exceeding clear monitored and enforceable targets; and
- include monitoring for invasive species in lake and at outfall point(s).

Waste Management (Chapter 18)

Issue

In the Terms of Reference (TOR) for Aquis Resort Waste Management, it is clearly stated:

- “Define and describe the objective and practical measure for protecting or enhancing environmental values from impacts by wastes...” (8.14).
- “Assess the proposed management measures against the preferred waste management hierarchy...” (8.15).
- “Provide details on natural resource use efficiency...” (8.17)

While there are plenty of broad objectives on waste management stated in the EIS, the practical measures and a detailed strategy are lacking.

For example, 18.2.1 refers us to Appendix T that apparently ‘details’ the Aquis Resort Waste Management Strategy (section 3.0). The approach in Appendix T however, is as an “Aquis Resort solid waste management assessment”. As such, this document provides a range of assumptions, possibilities and high end environmental objectives with no guarantees or specific methodology of implementation of these, as is demonstrated by:

- Broad hierarchy objectives in order of preferred options (3.2)
- Broad and unmeasurable performance indicators (3.3.1)
- Various general management, training, awareness, response, monitoring and reporting statements (3.3)
- “The percentages of waste that may be generated from the total ordered volumes of material were assumed to be 3%”. This is based on the assertion that Aquis Resort will utilise best practice procurement systems (4.3).
- Estimated construction residual waste (4.3 including table 6) show expected waste based on the level of practice employed. It is then stated in section 4.4 that the strategy will “target the minimum Green Star Standard” and that Aquis Resort will “seek opportunities” to achieve best practice.
- A similar approach (of the previous point) is repeated for operational waste.

- Tables 7 and 10 refer to potential waste destinations “In order of preference” with the last order of preference ending in landfill on a number of occasions. There is no process/procedure that demonstrates a higher order of preference will be achieved.

The assessment and loose strategy then leads to conclusions of what landfill targets ‘should be’ (if good or best practices are adopted) and that these may be able to be accommodated through current infrastructure.

Chapter 18 of the EIS – Waste Management (with a heavy reliance on Appendix T), does not provide any confidence that best practise will be adopted or clearly define or describe measures or processes that will minimise waste generation and maximise waste resource recovery, during construction or operation. Final figures of expected residual waste are ultimately based on assumptions and the broad objectives stated.

Recommendation 11

That a full waste management strategy be developed that:

- describes and details measures, processes and procedures that will be implemented to minimise waste generation and maximise waste resource recovery;
- clearly states what the target figures of waste generation and resource recovery are;
- outlines what type of monitoring processes/systems will be in place;
- includes a risk management strategy for failures at any stage of the processes/systems and mitigation of these, including where the waste generation grossly exceeds predicted amounts; and
- provides commitment and assurances on the responsibility of Aquis Resort to deal in an environmentally appropriate manner, with construction and operation generated waste.

Issue

In section 18.2.2 (b), if the objectives of resource recovery of 75% or 95% are not met (Table 18-5), the scenarios would leave residual waste “outside the capacity of existing local inert landfills located within the Barron River flood plain area” and “Most residual waste would need to be transported to Springmount Landfill which would need to bring forward the final approval and installation of new waste storage capacity”.

There is no statement or commitment to contribute toward the bringing forward of the installation of a new waste storage capacity.

Recommendation 12

If there is a potential situation where existing infrastructure for waste management would need to be upgraded or projected future upgrades brought forward (and therefore the associated costs) to accommodate the Aquis Resort construction and/or operation, the Aquis Resort EIS should clearly state its intended contribution to this upgrade.

Matters of National Environmental Significance (Chapter 22)

Issue

The mandatory requirements in TORs for the Aquis Resort at the Great Barrier Reef project, include - 2.2 “The assessment should cover both the short and long terms and state whether any relevant impacts are likely to be irreversible....”.

This has not been addressed for MNES. There is a mention in this chapter of the likelihood of resort guests choosing to visit the Great Barrier Reef and Wet Tropics World Heritage Areas, however, no discussion on how the pressure of increased visitor numbers will be managed to protect the values that lend the key attraction to the region.

Recommendation 13

That an analysis be conducted of the likely increase in visitor numbers to specific areas within the World Heritage Areas and other MNES sites and that prior to any approvals, a strategy be developed to mitigate any negative impacts on the natural values of these. The analysis and strategy should state:

- estimated daily increase in visitor numbers to each site;
- mode of transportation to these sites and impact of this;
- site impacts; and
- management and mitigation methods.

Environmental Management Plan (Chapter 23)

Issue

The environmental management plan is largely a repeat and tabulation of goals and objectives stated in other chapters including chapters 7 and 22. It provides some information on what strategies should include and then tabulates a number of ‘strategies’. Each ‘strategy’ is then comprised of a list (often less than half a page) of what the strategy will do. For example, the Fauna Management Strategy includes a number of statements such as:

- Incorporate flying animal strike.
- Ensure water bodies have steep sides to discourage use by waders.
- Minimise new or novel foraging opportunities.....

These are not Environmental Management Strategies by any stretch of the imagination. However, throughout the document, these are relied upon to demonstrate that good environmental practice will be undertaken. For example, the reference in the Executive Summary “A suite of environmental management strategies has been prepared to manage impacts during the construction and operation phase...” and in Chapter 7 – Flora and Fauna “a set of environmental management strategies which, when implemented, will lead to the protection of specific values – examples relevant to this chapter are...”

This is a key flaw of the full EIS; it does not fulfil 2.4 of the TORs to “Provide detailed strategies in regard to all critical matters for the protection, or enhancement as desirable, of all environmental values in terms of outcomes and possible conditions that can be measured and audited.” Further, it does not meet 1.3 of the TORs that states “The detail at which the EIS deals with matters relevant to the project should be proportional to the scale

of the impacts on environmental values.” This is the largest development of this type in Australia and therefore the first. A reliance on broad objectives and strategies that list intents is totally inadequate and unacceptable. The EIS is extensive yes, but largely through demonstrating existing knowledge, methodology and repetition of broad intent statements.

Recommendation 14

That a comprehensive Environmental Management Plan be developed encompassing sound management strategies for each relevant area that demonstrate:

- processes, procedures and standards to which activities will be undertaken;
- measurable intended outcomes;
- risks to achieving intended outcomes and mitigation/remediation strategies;
- timelines (to include seasonal disruptions) for implementation; and
- commitment to achieving stated outcomes.

We urge the Coordinator-General not to approve the project with regard to information presented in this EIS and to require at the least, development of comprehensive management strategies that demonstrate mitigation/management of the risks and negative impacts for such a large scale project.