



NORTHERN
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AECOM

Darwin Ship Lift Supplementary

EIS

Executive Summary

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Introduction

Since the submission and public exhibition of the Draft Environmental Impact Statement (EIS) in November 2021, the Darwin Ship Lift Project (the Project) has received public and government advisory agency comments. Parallel to the Northern Territory Environment Protection Authority (NT EPA) approvals process, a two-party Early Contractor Involvement (ECI) process has further progressed the Project design.

This Supplementary EIS has been developed to address comments from stakeholders on the Draft EIS while also providing updates based on the design refinements made to date. As the Project design has been further refined, impact assessments of key changes to the Project design have been considered and relevant mitigation strategies updated.

Design refinements

Several updates have been made to the design, which have a net beneficial outcome by reducing the overall potential environmental impact through design mitigation. The proposed design updates as a result of the ECI process have been considered in this Supplementary EIS.

Importantly, the proposed design mitigations largely respond to key concerns raised through the Draft EIS exhibition process by reducing the risks associated with marine, land-based transport, and resultant air and noise impacts.

The key design refinements made as part of the ECI process updates include:

- refined method of reclamation works
- decrease in piles required
- decrease in fill import
- decrease in rock import
- decrease in pavement import
- decrease in material transport
- increase in hardstand area
- minor increase in dredge volume.

Draft EIS Submissions

A total of 9 submissions were received on the Draft EIS. These consisted of 8 submissions from NTG Agencies and 1 public submission. Additional information to be included in the Supplementary EIS was also provided by the NT EPA which requested further information on specific agency submissions. The submissions and subsequent studies or further responses are discussed below.

Air Quality and Greenhouse Gases

The DEPWS comments on Air Quality and Greenhouse Gases requested further modelling and assessment in accordance with the NSW Approved Methods, and additional assessment of fugitive emissions, VOC emissions and additional sensitive receptors.

The Air Quality Impact Assessment (AQIA) for the Draft EIS was undertaken in accordance with the approved Terms of Reference (ToR) for the Project, which does not specify the use of NSW Approved Methods. To address the DEPWS submission, a sensitivity analysis was conducted comparing the NSW Approved Methods and the method adopted for the Project's AQIA. Differences between the two methods were identified and were found to have no significant influence on the results of the original AQIA for the Project.

Further discussion of fugitive and VOC emissions has been provided. The discussion highlights that the modelling inputs in the Draft EIS are based on conservative assumptions, and that with these conservative assumptions the modelling did not predict exceedance of air quality goals at sensitive

receptors for any pollutant species. To aid in understanding potential impacts outside the boundary of the site, as required by the NSW Approved Methods, an additional contour plot was also developed for VOCs.

Additional sensitive receptor locations identified by DEPWS at the suburbs of Weddell, Mitchell and the Elizabeth River boat ramp have been discussed further. These additional receptors have not been included in modelling on the basis that the modelling undertaken for the Draft EIS has not predicted any exceedances of the adopted air quality goals at these locations.

Noise

In response to the DEPWS comments on noise impacts of the Project, additional background monitoring was conducted at locations considered to be at the highest risk of receiving Project related noise impacts. The findings from the additional data collected did not change the assessment conducted for the Draft EIS, but provides further confidence for the noise criteria levels set for the Project for both operation and construction phase. As with air quality, further assessments were also conducted on the Project's activities such as abrasive blasting, with no material changes to the impact assessment presented in the Draft EIS identified.

Marine Environmental Quality

The DEPWS comments on the Draft EIS related to the Project's reclamation methodology, water quality trigger values and cumulative impacts. A key concern raised by DEPWS was around the considerations of sediment suspension from reclamation activities. The Draft EIS also received one public submission from Environment Centre Northern Territory (ECNT) regarding the dredging campaign.

Design refinements from the ECI process have developed a methodology incorporating a banded reclamation area to separate potential water quality impacts occurring during the reclaim process from Darwin Harbour. This updated methodology, alongside mitigation measures developed as part of the Draft Dredging and Dredge Spoil Disposal Management Plan (DDSPMP) (included as an appendix to this report) will reduce the risk of sediment plume impacts generated as a result of Project activities.

The management of tailwater and water quality targets were also raised by DEPWS. In response, the tailwater management process using the East Arm dredge ponds and similar monitoring and mitigation methodologies applied for previous dredging campaigns in East Arm has been further detailed.

While trigger values have been further considered as part of developing the Draft DDSPMP, no further updates were found to be required.

Finally, cumulative impacts from multiple dredging campaigns were further considered through liaison with other Proponents planning future dredge campaigns in Darwin Harbour. The Project's zones of impact during its dredging program is not anticipated to spatially align with other campaigns throughout its duration.

Marine Flora and Fauna

The DEPWS commented on the Draft EIS related to the impacts of Project activities on marine flora and fauna and communities. Specifically, the impacts of night-time construction activities, light availability and habitat mapping of benthic communities and management measures for marine species. The Draft EIS also received one public submission from ECNT relating to underwater noise and impacts on marine species.

In response to these comments, detailed environmental management framework (EMF) strategies have been developed for vessel interactions, underwater noise from piling and dredging alongside lighting recommendations and the implementation of vessel speed limits. These EMFs provide targets, key performance indicators, management, mitigation measures and reporting requirements that will be applicable throughout the Project's construction.

The habitat mapping for benthic communities developed as part of the Draft EIS was also updated based on new information released after the submission of the Draft EIS. In response to the submissions, the Proponent has completed further habitat condition surveys of the benthic communities at South Shell Island and Catalina Island.

Social, Cultural and Economic Surrounds

The AAPA comments on the Draft EIS related to the AAPA certificate requirements. Specifically, that no damage is to occur to the sacred sites nearby the Project. The Proponent is committed to managing and monitoring potential impacts through the deployment of mitigation measures such as, the deployment of silt curtains and monitoring of the dredge plume outlined in the Draft Dredging and Dredge Spoil Management Plan as well as mitigation measures such as vessel speed limits and No-Go Zones to be outlined in the Construction Environmental Management Plan.

The Heritage Branch comments on the Draft EIS identified concerns relating to the Flying Boat Base (FBB), specifically the conservation of its heritage values. The Proponent has committed to providing data that has been recorded for the Project to date, alongside maritime surveys and the display of public signage. These future works will be conducted in liaison with the Heritage Branch and will also involve further development of a Heritage Interpretation Plan.

DIPL comments on the Traffic Impact Assessment requested further information on the mitigation measures for truck use during Project construction. Following improvements identified through changes in construction methodology, truck movements are expected to be significantly reduced (~75 %) and sources of material have been located closer to the Project. This has been identified as a key reduction in transport impact for the Project. Furthermore, the NTG is committed to trialling a Heavy Vehicle Priority System. This will allow uninterrupted truck movements outside of peak hours and will further reduce the potential impacts associated with trucks stopping and starting frequently.

DCMC also requested further information on the economic figures and studies that were used in the Draft EIS. The ACIL Allen (2019) report and subsequent discussions and analysis Government has undertaken includes information that was commercial-in-confidence at the time, and remains so, which was the basis of the full economic information not being included in the Draft EIS. The economic figures are also discussed further, including the Proponents approach to addressing uncertainty around the Project's economic potential.

Environmental Management

The DEPWS comments on the Draft EIS requested further information on the environmental management plans for the Project's construction and operation. Draft Construction Environmental Management Plans have been developed for the construction of the Project by the ECI contractors and submitted to the NTG as part of the tender submissions. However, due to the stringent probity requirements of the two-party ECI process, these plans are unavailable for disclosure. These environmental management plans were informed by the EMF presented in Chapter 13 of the Draft EIS.

A Draft DDSPMP (included in this SEIS) has been prepared in accordance with NT guidelines to provides more detailed mitigation strategies that minimise impacts to Darwin harbour ecosystems. This document will inform the Dredging Contractor's DDSPMP which will be submitted for approval prior to commencement of dredging.

The EMF in Chapter 13 of the Draft EIS has been updated to consider stakeholder comments and design refinements and has been upgraded to a standalone document (included in this SEIS) to inform stakeholders on the required management and mitigation measures for the construction and operation of the Project. The final construction environmental management plans for the Project will be reviewed by DIPL and in the case of the DDSPMP will also be reviewed by an independent expert.

Supplementary EIS Outcomes

This Supplementary EIS has addressed stakeholder submissions on the Draft EIS which has included undertaking supplementary baseline surveys and impact assessment modelling to review and update the Draft EIS. These assessments mostly reaffirmed the Draft EIS outcomes and were mostly found not to materially change the nature or scale of Project impacts. Design refinements undertaken as part of the ECI process have also been considered and were overall found to have a net environmental benefit compared to the Draft EIS. These design refinements, and updated Environmental Management Plans (Draft DDSPMP & updated EMF) have further reduced environmental risks associated with reclamation activities, and mostly reduced impacts to key environmental factors.