



# **Appendix C**

## **Social Impact Assessment**

# Darwin Ship Lift Project

## SOCIAL IMPACT ASSESSMENT

Prepared by True North Strategic Communication

2021

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### Consultation statement

True North Strategic Communication is guided by the principles of good community engagement, based on people's level of interest and concern as outlined by the International Association for Public Participation (IAP2).

Our role is to provide stakeholders and the general public with objective information so they can provide informed feedback on consultation projects. We give people the opportunity to provide input that is balanced and reflective of the range of community views to independently provide the best possible guidance to decision makers.

Our practice reflects professional standards and ethical standards for human research including anonymity, confidentiality, record storage and keeping people informed.

## Limitations

This Social Impact Assessment is based on desktop research, an initial scoping exercise, client input, background documents and targeted consultation with key stakeholders. While True North Strategic Communication has applied its best efforts to produce a reliable and accurate study based on ethical research methodology, some limitations of this Social Impact Assessment are:

- The subjective and variable nature of many social impacts, which makes it difficult to predict and assess the significance of risks and opportunities with accuracy.
- Not being able to start consultation with stakeholders until close to the EIS being submitted due to project changes. This meant initial scoping and much of the analysis relied on desktop research. However, we feel this analysis provided reasonable confidence of issues to be covered due to: the limited scale of the project, its consistency with existing land use and relatively few substantial change processes. We were able to reference several documents on the values of Darwin Harbour and how they might be disturbed by development. Consultation was targeted at stakeholders likely to have expert knowledge, a vested interest in the project or concerns.
- Economic studies were excluded from our scope, so we have relied on government reports and Treasury data for the economic impact assessment.
- It was difficult to obtain definitive data on workforce numbers and likely skills needed for construction, given that the design and construct contractor is yet to be appointed. However, a probable skills breakdown was provided by the Northern Territory Government (NTG).
- Although cumulative impacts are discussed in Section 10, as stipulated in the NT EPA's Terms of Reference, a rigorous consideration of disturbance to social, cultural, ecological and economic values is beyond the scope of this study and would be more appropriately addressed elsewhere.
- The ability to make rigorous predictions about the impact of the Darwin Ship Lift Project is diminished by uncertainties around COVID-19 and matters outside the project proponent's control, such as labour force issues. It proved difficult to provide definitive, time-bound data given anecdotal reports of a fast-changing labour environment, apparent Australian population drift to regional areas, skilled worker shortages and the extent to which both are influenced by housing shortages and prices.
- Difficulties accessing up-to-date and relevant data on some issues, lags in data sets (the last Census being 2016) and aggregated data often not conveying local realities. A further issue is that ABS Labour Force data does not include Defence, which is important to note given the large proportion of defence families living in the project's social area of influence.

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## Abbreviations and terminology

AAPA	Aboriginal Areas Protection Authority
AARC	AustralAsia Railway Corporation
ABS	Australian Bureau of Statistics
AFANT	Amateur Fishermen’s Association of the NT
ALRA	<i>Aboriginal Land Rights Act (Northern Territory) 1976 (Commonwealth)</i>
DCA	Development Consent Authority
DCMC	Department of the Chief Minister and Cabinet
DEPWS	Department of Environment, Parks and Water Security
DHAC	Darwin Harbour Advisory Committee
DIPL	Department of Infrastructure, Planning and Logistics
DITT	Department of Industry, Tourism and Trade
DRLUP	Darwin Region Land Use Plan 2015
ECNT	Environment Centre of the Northern Territory
EIS	Environmental Impact Statement
EA Act	<i>Environmental Assessment Act 1982 (NT)</i>
EP Act	<i>Environment Protection Act 2019 (NT)</i>
EPBC	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
ERP	Estimated Residential Population
FBB	Flying Boat Base
GDP	Gross Domestic Product
GSP	Gross State Product
HMP	Heritage Management Plan
IAIA	International Association for Impact Assessment
IAP2	International Association for Public Participation
ICN	Industry Capability Network
ISACNT	Industry Skills Advisory Council of the NT
KTECH	Keep Top End Coasts Healthy
LDC	Larrakia Development Corporation
LDC	Land Development Corporation
LGA	Local Government Area (ABS statistical area)
LMS	Lugger Maintenance Section
LNAC	Larrakia Nation Aboriginal Corporation
MUBRF	Multi-user Barge Ramp Facility

MNES	Matters of National Environmental Significance
NAIF	Northern Australia Infrastructure Facility
NLC	Northern Land Council
NT	Northern Territory
NTA	<i>Native Title Act 1993</i> (Commonwealth)
NTEPA	Northern Territory Environment Protection Authority
NTG	Northern Territory Government
NTIBN	Northern Territory Indigenous Business Network
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
SPMT	Self-propelled modular transporter
SSC	Sacred Sites Certificate (AAPA)
TERC	Territory Economic Reconstruction Commission
TIA	Traffic Impact Assessment
ToR	Terms of Reference (issued by the NTEPA)
VET	Vocational Education and Training

## Executive Summary

This Social Impact Assessment (SIA) has been prepared by True North Strategic Communication for environmental consultancy AECOM, which is coordinating the Environmental Impact Statement (EIS) for the Darwin Ship Lift Project (DSLIP) (the 'Project') on behalf of the Northern Territory Government as proponent. The project comprises a common use, government-owned ship lift facility and adjacent privately operated marine facility.

The SIA covers the construction and operational phases of the ship lift facility, including dredging, reclamation, haulage of materials, construction activities and longer-term operations. It was prepared after an initial scoping exercise and desk research of issues raised in environmental studies for other projects in the region. True North Strategic Communication drew on publicly available reports on community values and management of Darwin Harbour to prepare a stakeholder analysis and consultation strategy.

In general, we determined that a low-scale SIA was warranted because:

- the project has a relatively small footprint with construction activities similar to the nearby \$110 million marine supply base, which evoked little to no comment during construction in 2012
- minimal feedback received when the Draft Terms of Reference for the ship lift facility were advertised in 2019 after the Northern Territory Government become the proponent for the Darwin Ship Lift Project
- no public submissions were received when a development application for early works dredging was advertised and a fact sheet was emailed to stakeholders in November 2020 (see consultation report at Appendix B)
- there is no change in land use: the site is part of an area set aside since 1984 for strategic marine industries and progressively developed over the past 20 years. It is part of a maritime and logistics precinct that includes Darwin Port, a marine supply base, marine industry park (multi-user barge ramp, common user area and lots for development) and East Arm Business Park
- the scale of change is minimal and should be readily absorbed
- Berrimah Road and the Tiger Brennan Drive Extension were funded to improve access to East Arm Wharf, so the project is unlikely to contribute to noticeably higher industrial traffic
- the site is several kilometres from residential areas, although sensitivity to disturbance from noise, pile-driving vibrations and traffic will need to be monitored, as outlined in various management plans
- disturbance to mangroves may be of concern, but reclamation will affect only a small one-hectare stand of mangroves: technical studies suggest the biological impact is insignificant at a project level
- the site has been degraded by decades of industrial activity and the disposal of rubble and weeds
- most of the 100 construction workers are likely to be drawn from the Greater Darwin Region's existing labour force, so mobilisation should have negligible impact on social infrastructure and short-term accommodation
- most concerns documented for other projects and in media reports, such as impacts on fish health and reduced access to the harbour, relate to cumulative impacts from dredging and industrialisation of the harbour, not project-level impacts (as discussed in Section 10).

An initial scoping exercise led to many significance ratings of negligible (see scoping document at Appendix A of this report), hence most impacts typically associated with a marine infrastructure project were screened

out from further study. The key issues that remained for research and analysis aligned with the requirements of the regulatory Terms of Reference (NT EPA, December 2019) under the 'People and Communities' key environmental factor, these being:

- a description and assessment of economic benefits and potential negative impacts
- potential impacts on Larrakia and World War II cultural heritage values
- potential impact on the diverse values of Darwin Harbour
- discussion of other industrial activity in Darwin Harbour that may contribute to the cumulative impacts of the Darwin Ship Lift Project.

After screening out impacts rated as negligible or imperceptible, 14 priority impacts remained for assessment in the SIA, four potentially positive and 10 potentially negative. Some initial ratings were revised after considering stakeholder feedback or other technical reports. In the final risk and opportunities assessment, after mitigation or enhancement measures were taken into account, all positive impacts rate as BENEFICIAL, meaning benefits may be felt across the region but at a smaller or incremental scale, or NOTICEABLE (benefits are noticeable but may be quickly absorbed). Of the negative impacts, only cumulative impacts rated as HIGH, two were rated as MEDIUM while seven were rated as LOW (see 1.5.1 for an outline of methodology and descriptors). (See SIMP at Appendix C for the final risk and opportunity table).

**Potential opportunities (positive):**

- strong and more diverse economy from enabling economic infrastructure and capacity-building (positive, beneficial)
- local businesses benefit from winning work and enhanced capabilities (positive, noticeable)
- enhanced employment and training of local people (positive, noticeable)
- Aboriginal jobs and training as a result of the project (positive, noticeable).

**Potential risks (negative):**

- cumulative impacts on the values of Darwin Harbour (negative, high)
- damage to remnants of European heritage and history, namely World War II heritage sites (negative, medium)
- damage to cultural heritage (negative, medium)
- reduced feelings of safety due to potential road trauma (negative, low)
- project-level impacts on recreational values and activities (negative, low)
- crowding out of other economic activities on the harbour, such as tourism and recreational fishing (negative, low)
- frustration by businesses who fail to win tenders or have unrealistic expectations of opportunities (negative, low)
- detrimental impacts on competing maritime businesses (negative, low)
- reduced marine safety (negative, low)
- reduced amenity due to construction activities (considered collectively in the section on 'Living Environment'), such as traffic congestion, noise and vibrations from piling (negative, low).

The SIA draws on quantitative and qualitative data from consultation to provide a baseline description of the social, economic and cultural characteristics of the project footprint and its surrounding region. Each section then contains a prediction and assessment of the significance of likely impacts from change processes invoked by the project.

Finally, at Appendix C, we provide a Social Impact Management Plan (SIMP). The SIMP is intended as a stand-alone document that summarises social risks and opportunities and outlines ways to enhance positive and manage or mitigate negative impacts. This includes advice for ongoing consultation and communication during the construction phase.

In some cases, the SIMP cross-references to suggested mitigation and management strategies in other technical reports. In general, our findings concur with or are informed by these technical reports. It should be noted, however that:

1. social impact assessment considers impacts from the perspective of the people and communities that experience them, not risk to the project
2. whereas traditional risk assessment is focussed on a mitigation hierarchy (avoid, mitigate, manage, compensate or offset) social impact assessment also considers how beneficial impacts can be enhanced, therefore the SIMP includes a risk and opportunity table (see Section 1.5 for our methodology and descriptors)
3. social science considers both quantitative and qualitative indicators in order to analysis people's actual experience of impacts; many intangible factors such as quality of life, wellbeing, values and sensitivity to change that are not captured in more technical, quantitative data.

## Summary of Findings Against Terms of Reference

Table 1-1: Summary of findings

Requested in TOR	Key findings (key findings will be summarised here)	Where addressed in EIS and SIA
<p><b>Statement of reasons, November 2018</b> (aspects relevant to social impact assessment)</p> <p>Objective: Protect the rich social, economic, cultural and heritage values of the Northern Territory</p>		
<p><b>Cultural heritage:</b> The NT EPA considers that the proposal has the potential to have significant impact on heritage values and further information is required to enable the NT EPA to form a view whether its environmental objective can be met (p.10).</p>	<p>Aboriginal and World War II heritage is covered by the Archaeological Heritage report. No listed heritage items are in the project footprint.</p> <p>However, the SIA finds that the loss of World War II historical remnants is a probable impact of concern, despite their lack of formal heritage status.</p> <p>The archaeological heritage assessment by Earthsea finds there is a low risk of impacts on Catalina Island due to tidal flows and no risk of impacts on Old Man Rock.</p> <p>A hydrological study modelling the impacts of planned changes to the shoreline from tidal flows in East Arm and around Catalina Island (MetOcean 2020) was commissioned for the project EIS. The study indicates that, while some changes in flow may occur as a result of ship lift construction, they are relatively minor and unlikely to affect Catalina Island. It recommends monitoring sediment mobility around the island during and at completion of construction.</p>	<p>Archaeological and Heritage Assessment (Appendix N)</p> <p>SIA: <a href="#">Cultural identity (section 6)</a></p>

Requested in TOR	Key findings (key findings will be summarised here)	Where addressed in EIS and SIA
<p>The NT EPA considers that the Proposal has the potential to have significant environmental impacts, including social, economic and cultural surroundings (p.10).</p> <p><b>Social:</b> The NT EPA identified that comprehensive stakeholder consultation (is) required, especially recreational fishing organisations, tourism operators, tourism agencies and commercial operators to assess social impacts (p.9).</p> <p><b>Economic:</b> The NOI stated that the proposed ship lift facility was identified as a need by the NT Government to support the region's status as a growing logistics and marine services hub for northern Australia. Details of the economic benefits of the Proposal were not provided (p.9)</p>	<p>The SIA reports on Larrakia cultural values of the harbour. It finds that project-related impacts are likely to be limited and addressed by monitoring and mitigation, for example avoiding sedimentation affecting Catalina Island (covered in Archaeological Heritage Assessment at Appendix N).</p> <p>Most project-related social impacts are rated as low to negligible, however some stakeholders raised the issue of cumulative impacts of development on diverse values of Darwin Harbour.</p> <p>The Northern Territory Government has promoted the substantial economic benefits of the project, including jobs, economic diversification and the economic growth that will derive from the ship lift's role as enabling economic infrastructure. This was supported by stakeholder consultation, with the construction and maritime industries pointing to the ship lift's contribution to a growing maritime precinct at East Arm, diversification of the economy and incremental growth of Darwin's maritime repairs and maintenance capacity.</p>	<p>SIA – all sections, particularly Economy and Jobs</p> <p>Consultation report</p> <p>Transport Impact Study (AECOM 2021)</p>
<p><b>Cumulative:</b> In addition to the proposed dredging campaign for the ship lift facility, other proponents are planning dredging in Darwin Harbour. The NTEPA considers there is potential to contribute significantly to cumulative impacts (p.6).</p>	<p>Other dredging campaigns planned for Darwin Harbour during construction of the ship lift facility include possible maintenance dredging for the Marine Supply Base while dredging equipment is in Darwin. INPEX expects do maintenance dredging of up to 250,000 cubic metres over a two/three-week period in the next one or two years.</p> <p>Cumulative construction impacts on workforce availability and industrial traffic are likely to be limited, although it is noted that a proposed US fuel storage facility at East Arm may be built in the same timeframe as the ship lift facility.</p> <p>The key impact of concern to stakeholders, evidenced by interviews, reviewing other regulatory submissions and reports, relates to cumulative degradation of Darwin Harbour and its catchment from urban growth and industrialisation and the need for a harbour wide dredging strategy.</p> <p>Desk research shows recurrent themes in public responses to development over the past 10 years are: protection of mangroves, water quality, iconic species such as turtles and dugong, the rich ecological values of Darwin Harbour and a</p>	<p>Consultation report</p> <p>SIA: <a href="#">Healthy land and seas (section 7)</a> and <a href="#">cumulative impacts (section 10)</a></p>

Requested in TOR	Key findings (key findings will be summarised here)	Where addressed in EIS and SIA
	strategic approach to managing the impacts of dredging.	
<b>Requirements of Terms of Reference, issued December 2019</b>		
<b>Construction and operations:</b> Provide a detailed description of all construction and operational aspects of the proposal, as outlined below (p.3).	Project description	AECOM
<b>Site layout maps,</b> showing the location, area to be disturbed, proposal layout (p.3)	Project Description	AECOM
<b>Design proposal:</b> including options and selection processes (p.3)	Project description.	AECOM
<b>Construction:</b> Describe all elements of the construction phase, including environmental management and feasible alternatives.	Project description	AECOM
<b>Dredging:</b> To be in accord with the NT EPA's Guidelines for the Environmental Assessment of Marine Dredging (p.4)	Technical reports. Stakeholder consultation.	AECOM
<b>Operation:</b> Describe all landside and waterside elements of the proposed operation.	Project description.	AECOM
<b>Traffic and transport:</b> Describe land and water traffic and transport activities during construction and operations including vessels; details on frequency, access, haulage routes, vehicle types, volumes of traffic (p.5).	The Transport Impact Assessment (TIA) provides this data and suggests a temporary increase in industrial traffic, including haulage of fill from Channel Island and Howard Springs, can be readily absorbed on access routes to East Arm. From a social impact perspective, this is unlikely to create a noticeable scale of change, or community alarm of increased risks of road trauma. The route largely avoids residential areas so is unlikely to reduce residential amenity. Darwin Port, which has a port traffic management plan, felt the level of increased construction traffic along Berrimah Road would be readily absorbed.  The TIA suggests measures such as triple road trains avoiding peak hour traffic, requiring construction traffic management plans and good communication.	Transport Assessment Report (AECOM 2021) at Appendix M  SIA: <a href="#">Living environment (section 8)</a>  Consultation report
<b>Energy:</b> requirements and sources, greenhouse gas emissions, energy efficiency.	Project description	AECOM
<b>Workforce:</b> Provide a summary of the: <ul style="list-style-type: none"> <li>• estimated number of people to be employed</li> <li>• skills base required</li> </ul>	The NT Government advises that the project is expected to create 100 direct jobs during construction (see Table 5.2) During operations, Paspaley expects 15-40 staff and contractors to	SIA: <a href="#">People and Communities (section 3)</a> ;

Requested in TOR	Key findings (key findings will be summarised here)	Where addressed in EIS and SIA
<ul style="list-style-type: none"> <li>likely sources (local, regional, overseas) (p.5)</li> </ul>	<p>transfer from its Frances Bay marine facility to the common user ship lift and adjacent private marine facility. The growth of the maritime supply and services industry will support industry growth and jobs more widely. A Maritime Industry Development Plan, coordinated by the Department of Industry, Trade and Tourism (DITT) is examining issues such as workforce and capability development across the Territory's marine sector.</p> <p>It is likely that a number of specialised skills will be drawn from interstate. The NT Government does not envisage that labour will be sourced from overseas.</p> <p>Full workforce details are unavailable until a preferred design and construct contractor is appointed, however industry feedback is that the project's benefits will be incremental and beneficial across a broad range of trades. Because of Darwin's thin labour market, many construction workers are mobile. Industry growth will help stabilise the market, across the maritime, mining and oil and gas sectors.</p>	<a href="#">Economies and jobs (section 5)</a>
<p><b>Cumulative:</b> take into consideration other industries and proposals in Darwin Harbour that may contribute to cumulative impacts of this Proposal, e.g. from dredging, contamination and habitat loss (p.7)</p>	<p>Consultation and desk research identify a recurrent theme: concern about the impacts of cumulative industrialisation of the harbour (as outlined above). Sections 7 and 10 of the SIA draw on a number of reports to describe the values of the harbour and how they could be disturbed. It is suggested that this is a harbour-wide issue, best addressed in broader studies, such as the proposed Middle Arm Strategic Assessment and Dredging Management Strategy.</p>	<p>AECOM</p> <p>SIA: <a href="#">Cumulative impacts (section 10)</a> and <a href="#">Healthy land and seas (section 7)</a></p> <p>Consultation report</p>
<p><b>Social, economic and cultural surroundings (pages 12-13):</b> Provide sufficient information to enable assessment of whether the Proposal is likely to meet the NT EPA's objective to protect the rich social, economic, cultural and heritage values of the Northern Territory.</p> <p>Information requirements outlined in Table 6 below should be read in consideration of the NT EPA General Guidance for Proponents Preparing an EIS (NT EPA 2019). The minimum information required:</p>		
<ul style="list-style-type: none"> <li><b>Environmental values:</b> Describe, using maps where appropriate, the existing social and economic values of Darwin Harbour that may be impacted including commercial and recreational values.</li> </ul>	<p>Darwin Harbour is highly valued by a range of stakeholders, including as a working harbour. While activities such as recreational fishing and tourism have the potential to be disturbed, this is likely to be of a relatively low scale and short duration at a project level.</p>	<p>SIA: <a href="#">Healthy land and seas, section 7</a>; <a href="#">living environment section 8</a></p> <p>Consultation report.</p>
<ul style="list-style-type: none"> <li>Identify and map all places and items with historic and/or Indigenous cultural heritage values and/or</li> </ul>	<p>World War II and Aboriginal cultural heritage are covered in the Anthropological and Heritage Assessment (Appendix N).</p>	<p>Anthropological and Heritage Assessment</p>

Requested in TOR	Key findings (key findings will be summarised here)	Where addressed in EIS and SIA
<p>protected under legislation within the proposal footprint, zone of influence or areas that could be adversely impacted;</p> <ul style="list-style-type: none"> <li>• Baseline information on areas listed on registers of historic and/or cultural heritage;</li> <li>• Description and location of Aboriginal and non-Aboriginal sites;</li> <li>• AAPA Certificate and information on the current status of any approvals, permits or clearances.</li> </ul>	<p>Key sacred sites such as Catalina Island and Old Man Rock are outside the project footprint and unlikely to be affected, except if mobilisation of sediments and bathymetric changes erode the sandbar at Catalina Island or lead to sedimentation, which technical reports consider unlikely.</p> <p>The project will lead to the loss of the former Catalina boat ramp. A decision was made by the NTG not to declare heritage status for the boat ramp, Marine Luggie Section to the east of the project footprint, and Catalina 2 close to the approach channel. While these sites lack formal heritage status, the cumulative loss of the remnants of World War II historical sites around the harbour has previously evoked angst from historical and heritage groups, which is likely to continue.</p>	<p>(Earthsea Heritage Surveys, (Appendix N))</p>
<p><b>Describe and quantify:</b> the potential social and economic opportunities and impacts with an analysis of the social and economic values, benefits and potential impacts of the proposal on a local/regional, NT and national scale, including but not limited to (p.12)</p>		
<ul style="list-style-type: none"> <li>• Projected <b>economic costs and benefits</b> of the Proposal, including a cost/benefit analysis or similar studies, the estimated capital and annual operational expenditure and estimated total revenue</li> <li>• Details of <b>relevant costs and benefits of alternative options</b> to the proposed actions (as identified in section 2.2.4 in the NT EPA General Guidance for Proponents)</li> </ul>	<p>The Northern Territory Government has commissioned a number of economic reports as this project has evolved.</p> <p>Government advises that capital expenditure across the two-three years of construction and commissioning is \$400 million.</p> <p>Estimated additional industry spend on marine repairs and maintenance over the first 20 years of operations is estimated at between \$2283 and \$4505 million (see Table 5-2).</p>	<p>SIA: <a href="#">Economies and jobs (section 5)</a></p> <p>Consultation report, feedback from business</p>
<ul style="list-style-type: none"> <li>• <b>Training and employment</b> opportunities expected to be generated by the proposed</li> </ul>	<p>Government expects the project to create 100 direct jobs during the two-year construction period (based on a preliminary study by ACIL Allen in 2019). About 15 direct jobs on the ship lift will transition from Pearl Marine Engineering at Frances Bay, along with up to 25 workers with Paspaley sub-contractors (source: Paspaley Group). Updated forecasts of the economic effects suggest between 78 and 147 additional full-time equivalent (FTE) jobs during the start-up phase, with incremental growth over 20 years to between 187 (base case) and 359 (high case) (see Table 5-2). The Marine Industry Council and NT Government-led Maritime Industry Development Plan are focussed on addressing local skills shortages and a workforce development strategy to capitalise on the range of opportunities likely to flow from an expanded maritime precinct at East</p>	<p>SIA: <a href="#">Economies and jobs (section 5)</a>.</p>

Requested in TOR	Key findings (key findings will be summarised here)	Where addressed in EIS and SIA
	<p>Arm. The key benefits are expected to be unlocked by incremental growth of the marine services industry. The ship lift facility is likely to be a catalyst for this growth.</p> <p>Construction and marine industry stakeholders were positive about the broader benefits of the enhanced facilities as growing Darwin's competitive advantage as a marine service and supply hub for naval, offshore oil and gas and cruise industry vessels. This, in turn, would support a broad range of multi-sectoral trades.</p>	
<ul style="list-style-type: none"> <li>• <b>Opportunities for local and regional businesses</b></li> </ul>	<p>Industry stakeholders felt the local construction industry had the capacity to benefit from construction works packages. However, the main benefits were seen as the economic stimulus provided by the ship lift and enhanced maritime precinct, which would be incremental but durable. Multiple service providers will operate at the common user facility, which will fill a market gap, facilitate broader growth of the region's marine repairs and maintenance capabilities and attract more vessels to home-base or commission services in Darwin.</p> <p>Capability mapping by the Industry Capability Network (ICN) suggests most of the construction work packages can be met by the Darwin market, apart from some specialised equipment and materials.</p>	<p>SIA: <a href="#">Economies and jobs (Section 5)</a></p> <p>Consultation report</p>
<ul style="list-style-type: none"> <li>• <b>Impacts on the local community:</b> such as the amenity of the area, marine tourism, recreational fishing and amateur fishing</li> </ul>	<p>Amenity impacts from the project (noise, vibrations, dust, pollution, turbidity, traffic congestion) are likely to be localised and short-term. AFANT suggests recreational fishers would appreciate proactive communication about dredging and project activities likely to reduce access to fishing spots or create marine safety risks. Disruption is expected to be minimal and should be mitigated through community updates and Darwin Harbour Master's Notices to Mariners.</p> <p>The Noise and Vibration Assessment (AECOM 2021) predicted noise impacts on nearby residential areas would likely remain within NT EPA noise guidelines. The report contains recommendations about vibration monitoring systems, working hours and an environmental incident reporting system.</p>	<p>Consultation report</p> <p>Noise and Vibration Assessment (AECOM 2021, Appendix L)</p> <p>SIA: <a href="#">Healthy Land and Seas (section 7); Living Environment (Section 8)</a></p>
<ul style="list-style-type: none"> <li>• <b>Risks of the proposal not realising its proposed economic and social benefits</b> and social impacts associated</li> </ul>	<p>Stakeholders interviewed for this report pointed to the importance of government investment in enabling economic infrastructure, such as the ship</p>	<p>SIA: <a href="#">Economies and Jobs (section 5)</a></p>

Requested in TOR	Key findings (key findings will be summarised here)	Where addressed in EIS and SIA
with not achieving the proposed economic benefits.	<p>lift, which would be uncommercial in its own right. They saw the government's investment as supporting longer-term social and economic benefits by fostering a more diverse economy and a stronger marine industry serving Northern Australia.</p> <p>Some reservations were expressed (see consultation report) about the potential of the project to compete with smaller operators. The Marine Industry Council wants to ensure that the ship lift and associated marine precinct meets the needs of the entire industry.</p>	Consultation report
<ul style="list-style-type: none"> <li>• Potential impacts on infrastructure and activities such as land transport and traffic impacts, water vessel traffic, dredging and reclamation, on cultural and historic heritage values on land, within the intertidal zone and submerged in Darwin Harbour. This should include: <ul style="list-style-type: none"> <li>○ potential impacts and risks of destruction and/or damage to the <b>Catalina 2</b> wreck site and East Arm Flying Boat Base</li> <li>○ the <b>cumulative impacts and risks</b>, taking into consideration other users and activities</li> <li>○ details of <b>unexploded ordnance</b> clearance.</li> </ul> </li> </ul>	<p>Land transport should have no impact on cultural and historic values.</p> <p>Heritage and historical relics in the harbour, including Catalinas sunk during World War II, are outside the project footprint and unlikely to be affected by dredging or sea traffic, however, see recommendations in the Archaeological and Heritage Assessment for their protection.</p> <p>Reclamation will see the loss of historic remnants of World War II, including the former Catalina boat ramp. Despite their lack of formal heritage status, it is suggested these sites be acknowledged with interpretive signage that record the World War II history of the East Arm Peninsula (stakeholder interview, Earthsea report).</p> <p>Unexploded ordinances are discussed in Chapter 4: Environmental Setting and Chapter 11: Environmental Factors under Terrestrial Environmental Quality and Human Health. The Archaeological and Heritage Report refers to UXO finds in previous marine archaeological surveys.</p>	<p>Archaeological and Heritage Assessment (Appendix N)</p> <p>Transport Impact Assessment (AECOM 2021, Appendix M)</p> <p>SIA: <a href="#">People and Communities (section 3)</a>; <a href="#">Living Environment (section 8)</a></p> <p>Consultation report</p>
<p><b>Mitigation and management</b></p> <p>Address all potential impacts and risks identified through the economic and social impact assessment (potentially in an Economic and Social Management Plan), identify measures to avoid, reduce or mitigate these impacts including (p.13):</p>		
Measures to protect, and avoid impacts and entry to sacred sites, including vessels	Heritage Management Plan	Archaeological and Heritage Report (Earthsea, Appendix N)
Procedures to avoid significant heritage values and sites, and protect key sites during construction and operation	Heritage Management Plan	Earthsea

Requested in TOR	Key findings (key findings will be summarised here)	Where addressed in EIS and SIA
Any requirement to apply to disturb or destroy and prescribed archaeological place under the Heritage Act 2011	Heritage Management Plan	Earthsea
Procedures to be implemented if sites of heritage or cultural significance are disturbed	Heritage Management Plan	Earthsea
Traffic management	<p>The Transport Impact Assessment recommends traffic management plans for construction and operations and potential measures such as communication of triple road train movements during construction, and avoiding use of heavy vehicles during peak hour.</p> <p>Darwin Port maintains a traffic management plan for the port and suggests the construction contractor collaborate with Darwin Port on daily traffic notifications regarding Berrimah Road and port traffic movements.</p>	<p>Transport Impact Assessment (AECOM 2021, Appendix M)</p> <p>Ongoing communication and engagement (SIMP)</p>
Describe how emerging social impacts would be identified, assessed and mitigated in the future.	The Social Impact Management Plan suggests community updates during construction and a complaints register to capture and respond to any community complaints (such as piling noise and vibrations, traffic disruption).	SIMP
Describe monitoring and reporting of identified potential economic, social and cultural impacts and risks	The SIMP outlines a number of measures to be covered by the NT Government's Australian Industry Participation Plan and short-listed design and construct contractor's Territory Benefit Plan to maximise local industry and employment participation, including opportunities for Aboriginal workers and enterprises.	SIMP
Assess any residual impact or risk of the proposal to identified values	The SIA finds that the residual economic impacts are positive. Residual impacts on social and cultural values are considered negligible at project level and best addressed by harbour-wide strategies, such as the proposed Darwin Harbour Advisory Committee integrated reporting framework, dredging management strategy and the proposed Middle Arm Strategic Assessment.	SIA and SIMP

## 1. Background

### 1.1 Project description

The Northern Territory Government is building the largest ship lift in Northern Australia. The \$400 million facility will enable the maintenance and servicing of Defence and Australian Border Force vessels and commercial and private vessels, including from the oil, gas, pearling, fishing and cruise shipping industries. The project will provide a synchro lift, or ship lift, facility and related hardstand and berthing to cater for wet and dry dock ship maintenance.

The ship lift will be 26 metres wide, 103 metres long and capable of lifting vessels weighing up to 5,500 tonnes (t) including associated platform, blocking trestles and vessel transfer system. This is double the capacity of Darwin's two large ship lifts at Pearl Marine Engineering in Frances Bay and Coonawarra naval base in Larrakeyah, both of which are old and due to be decommissioned.

The Darwin Ship Lift Project (DSLPL) has been funded by a \$300 million concessional loan from the Northern Australian Infrastructure Facility (NAIF) and \$100 million from the Northern Territory Government.

The ship lift will be built at the end of East Arm Peninsula, between the Marine Supply Base at the Port of Darwin and the Multi-user Barge Ramp Facility (MUBRF), common user area and Marine Industry Park operated by the Land Development Corporation.

The area is zoned DV - Development under the NT Planning Scheme, which allows for major industries with strategic importance to the future economic development of the Territory.

The project footprint covers 27 hectares, including land and water components. The land component of 15.5 hectares will comprise 8.5 hectares of reclaimed land and 4.5 hectares of existing land. In all, the project comprises:

- 13 hectares of hardstand for ship repair and maintenance, about 8.5 hectares of which will be reclaimed land
- a self-propelled modular transportation vessel transfer system and garage
- vessel wash area with separate contained drainage and treatment system
- stormwater system to capture and treat runoff water before discharge
- enclosed blast and paint facility with separate contained drainage system
- site services and utilities
- security infrastructure
- ancillary facilities including an administration building and ship lift control room
- access channel and dredged manoeuvring areas
- six wet berths
- heavy lift platforms suitable for a 100-tonne crane at each berth
- 2.5 hectares of revetment wall (designed to protect against erosion).

About 9.2 hectares will be dredged for construction to cover:

- 6 hectares for the ship lift and wet berths (to accommodate boats with a draught of six metres at low tide)
- manoeuvring basin area of 3.2 hectares.

Dredging to deepen the access channel and manoeuvring basin, berth and ship lift pockets will remove 185,000 cubic metres of silt, clay and sands and about 315,000 of rock materials. Most of the dredge spoil will be used

in land reclamation for the project. Some of the finer dredged material may be pumped to the Port of Darwin dredge spoil ponds if it cannot be used for reclamation. These ponds have been used to receive similar types of dredge spoil in the past.

Table 1-1 shows the extent of dredging for the Darwin Ship Lift Project compared with other key dredging campaigns in Darwin Harbour:

*Table 1-1: Comparison with other dredging campaigns*

<b>Project</b>	<b>Amount of dredging in the harbour</b>
INPEX	16 million cubic metres
Marine Supply Base	685,000 cubic metres
Darwin Ship Lift Project	500,000 cubic metres
Charles Point Patches	105,000 cubic metres
Multi-user Barge Ramp	16,000 cubic metres

Approvals for the dredging campaign (Dredge and Dredge Spoil Placement Management Plan, Waste Discharge Licence and development consent) will be submitted at the same time as the Environmental Impact Statement (EIS).

The landside component of the project will include:

- about 315,000 cubic metres of consolidated material, comprising stiff clays and rock from dredging
- about 400,000 cubic metres of sand fill sourced from local borrow pits or clean fill sources within 20 kilometres of the site
- 90,000 cubic metres of pavement material and subgrade material
- 1.2 hectares of interlocking concrete block pavers
- about 46,000 cubic metres of rock from a commercial quarry or pre-cast concrete blocks
- about 16,500 m<sup>3</sup> of revetment filter rock sourced from a commercial quarry.

The likely haulage route for quarried material will be via Berrimah Road to East Arm Wharf.

### **Design, construction and operations**

The completed facility will comprise:

- a Northern Territory Government-owned facility (Darwin Ship Lift Facility) that will lease areas/berths on a common user basis under a principal operator, the Paspaley Group
- a privately owned berthing and maintenance facility.

Multiple marine service providers will operate at the common user facility and provide vessel operators with a range of maintenance services within a secure area. The ship lift and transfer system will accommodate servicing of naval offshore patrol vessels expected to be based at the nearby HMAS Coonawarra.

Construction is likely to begin in 2022 and take from 24 – 36 months, with operations due to start in late 2025.

### **Workforce**

Construction is expected to create about 100 direct jobs during construction across a range of trades, including civil works. Dredging and some works packages will require specialist equipment and skilled labour.

For the ship lift's operational phase, Paspaley expects to transfer about 15 workers from Pearl Marine Engineering at Frances Bay to operate the common user facility. Paspaley suggests its contractors will move another 25 staff from Frances Bay to provide associated services. The main contribution to the maritime



## 1.2 Purpose of a social impact assessment

The purpose of a social impact assessment (SIA) is to combine community insights with expert judgement to determine how the consequences of projects are likely to be felt or perceived by affected people, communities and service providers. Effective studies will:

- reduce uncertainty about the consequences of projects (or policy changes)
- inform and influence decision-making by regulators, project proponents and affected communities
- provide data and insights that improve project planning (such as project design, alternatives and workforce and accommodation issues)
- provide baseline quantitative and qualitative data against which to track project and cumulative change across the life span of the project, from conception to closure
- inform effective management plans and proponents' long-term social performance (including enhancement of social and economic benefits, trust and relationships).

The NT EPA's requirements for the SIA and social impact management plan (SIMP) are outlined in the Terms of Reference Table above.

### Social Impact Assessment

*"A Social Impact Assessment includes the process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment."*

Source: International Association for Impact Assessment, Principles of SIA, (Vanclay 2003)

### 1.3 Objectives of this social impact assessment

The purpose of this Social Impact Assessment (SIA) is to address the NT EPA's terms of reference and issues that emerge from research and stakeholder consultation.

The objectives of the SIA are to:

- describe social, economic and cultural baseline conditions in the project's immediate footprint and social area of influence:
  - the project's immediate footprint on East Arm Peninsula and adjacent areas of Darwin Harbour
  - secondary footprint – or zone of influence – that includes transport routes, such as haul roads, sources of services and supplies, areas that may host construction workers and cumulative impacts on Darwin Harbour
- incorporate best practice community consultation to capture qualitative insights
- provide impartial, timely and accurate communication about the project, so stakeholders can provide objective and relevant input and feedback
- describe contextual factors and complexities that may compound the experience or perception of key negative impacts or act as barriers to maximising opportunities
- predict and assess the likely significance of key potential positive and negative, direct and indirect, tangible and intangible, long and short-term social, cultural and economic impacts
- produce concise and relevant reports that give regulators and stakeholders confidence that the proponent has a comprehensive understanding of the social, cultural and economic environment in which its contractors will be operating
- produce a social impact management plan (SIMP) that:
  - outlines proponent commitments and measures to alleviate or manage potentially negative impacts and enhance beneficial impacts, such as opportunities for jobs and industry, and ongoing communication and engagement during construction
  - provides for ongoing monitoring and measurement to capture and adapt to emerging issues throughout the life cycle of the project.

## 1.4 Scope

### **Temporal**

The Social Impact Assessment for the Darwin Ship Lift Project considers potential impacts at all stages of the project including:

- **project planning**
- **the construction stage** between 2022 and 2025, when impacts are likely to be most intensely felt or experienced from dredging, land reclamation, increased industrial traffic, mobilisation of workers and procurement of services and supplies
- **operations**, when longer-term economic benefits are likely to be realised incrementally
- **closure**: given the industrial surrounds, closure and rehabilitation is not a strong focus of this SIA.

### **Spatial**

The spatial boundaries of the study are twofold:

- the marine and terrestrial environs of the East Arm Peninsula potentially affected by construction and operations, including dredging, reclamation, access routes and approach channels
- potentially affected people and communities, particularly in the Greater Darwin Region municipalities of Darwin, Palmerston and Litchfield
- the broader footprint of Darwin Harbour, where cumulative impacts may be experienced or feared.

### **Social**

The social area of influence takes in the Greater Darwin Region catchment area for workers and procurement. The social area of influence includes all Larrakia people, who maintain social and cultural connections with the land and seas potentially affected by the project.

### **Boundaries**

Multi-scale boundaries are described as:

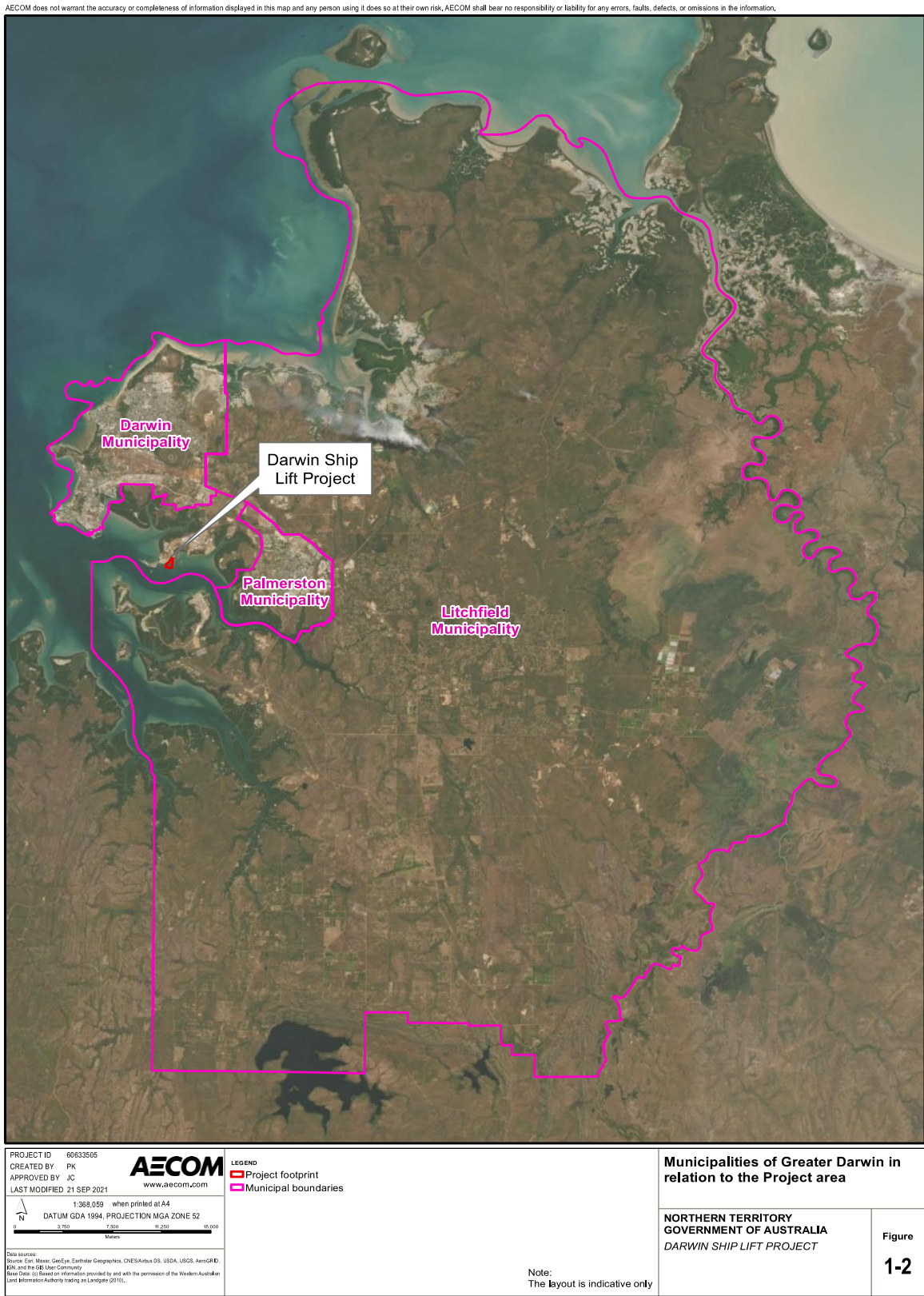
- **'local'**, which means directly affected people, families and communities
- **'regional', which** means the broader catchment for potential workers and sourcing services and supplies
- **Northern Territory**, which captures jurisdictional impacts, such as economic growth, economic development objectives, financial benefits such as taxes and the implications of social, cultural and economic impacts for government policies, programs and planning.

### **Statistical boundaries**

Data for the study is drawn from:

- ABS statistical boundaries at an SA4 level (Greater Darwin) and SA3 State Suburb level (Darwin City, Darwin Suburbs, Litchfield and Palmerston)
- Local Government Areas of Darwin, Palmerston and Litchfield.

Figure 1-2: Map of municipalities covered (Source: AECOM)



## 1.4 Methodology

The methodology for this study and categorisation of impacts is in accord with the New South Wales Guidelines for the Social Impact Assessment of Statement Significant Projects (2017 and updated in 2021), the NT EPA's Guidance for Economic and Social Impact Assessment (2013), a Guide to Social Impact Assessment (Munday 2020) and internal research by True North into best practice social and cultural impact assessment.

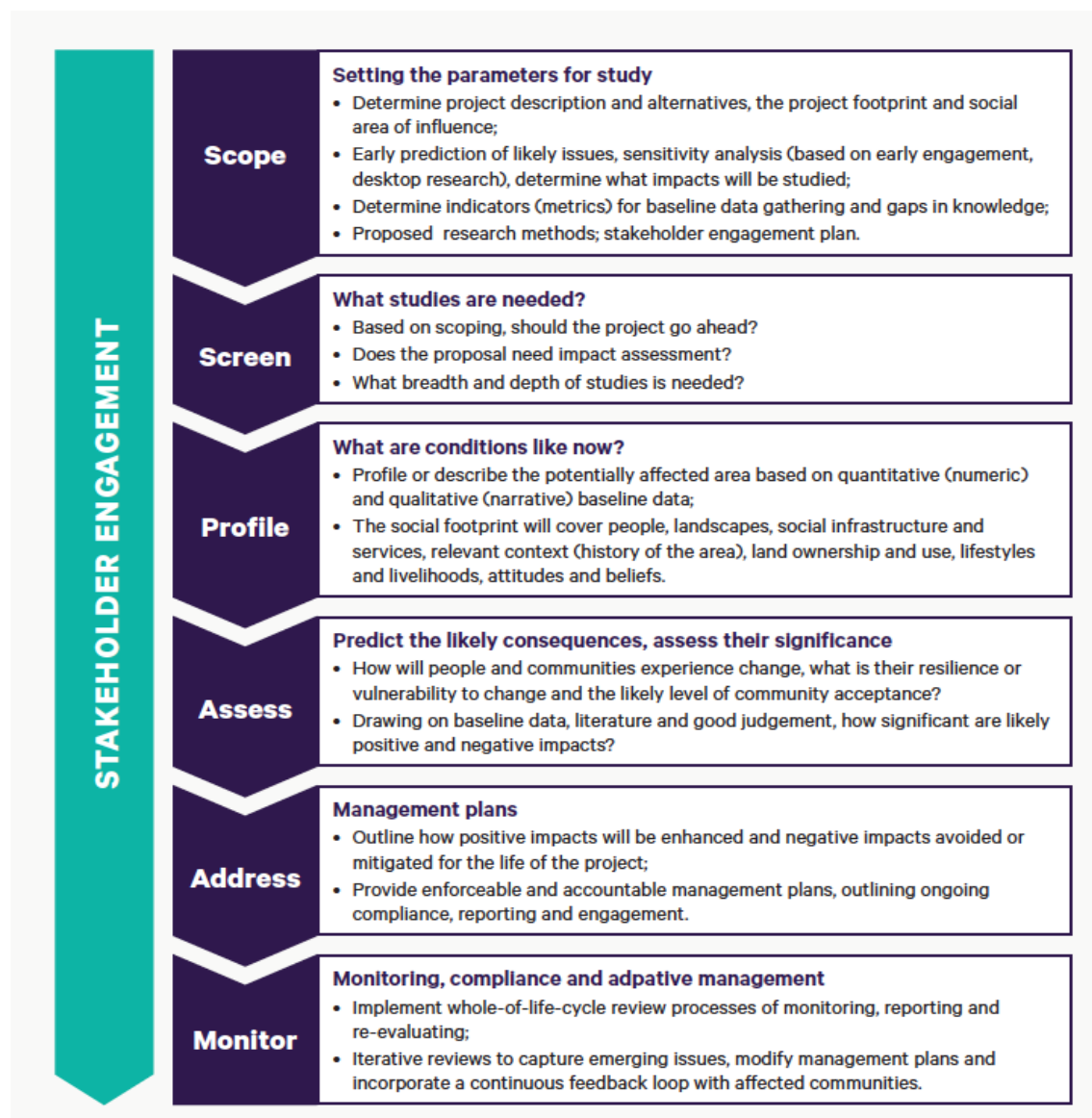


Figure 1-3: Overview of methodology

## 1.5 Scoping

A scoping exercise for this SIA in December 2020 (Appendix A) suggested a low-scale SIA was appropriate, given the proposed ship lift facility is in accord with its industrial zoning and existing maritime and logistics activities on East Arm Peninsula.

The SIA cross-references rather than duplicates other relevant technical studies, in particular the Transport Impact Assessment (Appendix M), Noise and Vibration Impact Assessment (Appendix L) and Archaeological and Heritage Assessment (Appendix N). The section on Economies and Jobs benefits from reports provided by the Department of the Chief Minister and Cabinet, the Marine Industries Development Plan coordinator and Marine Industry Council of the NT Chamber of Commerce.

Scoping drew on desk research to profile the existing social zone of influence, current land and sea use, change processes likely to be invoked by the project, people and communities affected by these changes and issues that may be of concern or interest.

A preliminary significance assessment was based on an analysis of likelihood and consequence of potential impacts. Likelihood is an assessment of how likely it is that the impact (perceived or not) will actually happen. Consequence is the extent to which impacts are felt. Social risk and opportunity ratings may differ from those of technical studies in that they are measuring how environmental factors are valued and used and perceptions of how change will be experienced (sensitivity to change). The following criteria (Munday, 2020) was used to determine consequence from the community's perspective:

1. **Extent:** how many people will experience the impacts
2. **Duration:** how long the impacts will last
3. **Severity:** the scale of change from the current conditions
4. **Sensitivity:** based on the level of controversy, disturbance to values, people's resilience and capacity to absorb change.

The tables below show the methodology and descriptors used to assess social risks and opportunities.

Table 1-2: Ratings for negative impacts

		Negative consequence (for harms, disturbance)				
		1	2	3	4	5
Likelihood	Descriptor	Insignificant	Minor	Moderate	Major	Extreme
A	Almost certain	A1	A2	A3	A4	A5
B	Likely	B1	B2	B3	B4	B5
C	Possible	C1	C2	C3	C4	C5
D	Unlikely	D1	D2	D3	D4	D5
E	Rare	E1	E2	E3	E4	E5

Table 1-3: Descriptors for negative impacts

<b>Catastrophic</b>	Intolerable social, cultural and economic cumulative impacts that are unlikely to be amenable to management.
<b>High</b>	Intolerable cumulative impacts that might be accepted if managed to as low as reasonably practicable, taking account of community perceptions, values and resilience.
<b>Medium</b>	Tolerable (depending on the level of community acceptance) cumulative impacts if managed effectively, but requires close monitoring.
<b>Low</b>	Tolerable, barely perceptible negative impacts, but implement adaptive management approaches to ensure the threat level doesn't increase and exacerbate emerging threats as development unfolds across the region.

Table 1-4: Ratings for positive impacts

		Importance consequences (for benefits, opportunities)				
		1	2	3	4	5
Likelihood	Descriptor	Insignificant	Minor	Important	Very Important	Extremely Important
<b>A</b>	<b>Almost certain</b>	A1	A2	A3	A4	A5
<b>B</b>	<b>Likely</b>	B1	B2	B3	B4	B5
<b>C</b>	<b>Possible</b>	C1	C2	C3	C4	C5
<b>D</b>	<b>Unlikely</b>	D1	D2	D3	D4	D5
<b>E</b>	<b>Rare</b>	E1	E2	E3	E4	E5

Table 1-5: Descriptors for positive impacts

<b>Transformational</b>	Transformational collective and socially, culturally and economically sustainable opportunities for the region, by building enduring capacity that benefits future generations
<b>Beneficial</b>	Beneficial cumulative benefits across the region that may be of a smaller scale or incremental, but which may suit culturally appropriate sustainable development.
<b>Noticeable</b>	Benefits are noticeable but may be quickly absorbed.
<b>Imperceptible</b>	Little change in the way of life, livelihoods and lifestyles of the region

Impacts assessed as likely to be inconsequential or imperceptible were screened out of further study unless raised by stakeholders. For example, a relatively small construction workforce is likely to be drawn mainly from the existing population therefore no material impacts are likely on social infrastructure, such as schools, health, transport and emergency services and utilities. Safety and wellbeing issues were not raised during consultation and were not deemed to warrant further analysis, apart from road and marine safety.

Economic impacts were rated as mainly positive. Social and cultural impacts were rated as mostly low to negligible. A prevalent theme identified in desk research, however, was concerns at the potential cumulative impacts of dredging and industrialisation of the harbour and advocacy for a harbour-wide strategic assessment

(see for example the Keep Top End Coasts Healthy report, Smyth 2020). The Terms of Reference require consideration of cumulative impacts, which is covered in Section 10. While the risk of cumulative social impacts rates as high, based on stakeholder concerns, the contribution of the project to cumulative impacts is considered low and appropriate assessment is beyond the scope of a project-level assessment. Ideally, cumulative risks should be addressed in harbour-wide dredging management strategies, master planning or strategic assessments.

After screening out impacts rated as negligible or imperceptible, 14 remained for assessment in the SIA, four positive and 10 potentially negative. The following ratings reflect some adjustment during research and are residual risk and opportunity ratings (after recommended management strategies are taken into account):

**Potentially positive:**

- strong and more diverse economy from enabling economic infrastructure and capacity-building (positive, beneficial)
- local businesses benefit from winning work and enhanced capabilities (positive, beneficial)
- enhanced employment and training of local people (positive, beneficial)
- Aboriginal jobs and training as a result of the project (positive, beneficial).

**Potentially negative:**

- cumulative impacts on the values of Darwin Harbour (negative, high)
- damage to remnants of European heritage and history, namely World War II heritage sites (negative, medium)
- damage to cultural heritage (negative, medium)
- reduced feelings of safety due to potential road trauma (negative, low)
- project-level impacts on recreational values and activities (negative, low)
- cumulative crowding out of other economic activities on the harbour, such as tourism, recreational fishing (negative, low)
- frustration by businesses who fail to win tenders or have unrealistic expectations of opportunities (negative, low)
- detrimental impacts on competing maritime businesses (negative, low)
- reduced marine safety (negative, low)
- reduced amenity impacts due to construction activities (considered collectively in the section on 'living environment'), such as traffic congestion, noise and vibrations from piling (negative, low).

### 1.5.1 Categorising impacts

The potential key risks and opportunities were categorised using the dimensions of social impacts adapted for a North Australia context (Munday 2020). These categories are adapted from the International Association for Impact Assessment (IAIA) Principles (Vanclay 2003) and Guidelines (Vanclay et al. 2015) and are illustrated in Figure 1.4 below.



Figure 1-4: Dimensions of social impacts adapted for a North Australia context (Munday 2020)

## 1.6 Standards and statutory framework

The primary standards guiding consultation and social research for this SIA are:

- *Environment Protection Act 2019* (NT) and Regulations: The purpose of impact assessment is to allow the NT EPA to analyse the significant potential environmental impacts of a development proposal and make recommendations to the Minister about the acceptability, or otherwise, of these potential impacts.
- *Stakeholder Engagement and Consultation: Environmental impact assessment guidance for proponents* (NTEPA 2021). The guideline adopts as best practice the IAP2 principles for stakeholder engagement. It outlines expected formal feedback processes for projects on public exhibition and encourages proactive approaches to early engagement during preparation of environmental impact statements, starting at the scoping phase. The guideline defines engagement as including ‘communication, dialogue, listening and responding’ (see Section 2 for more detail).
- *Environmental Protection and Biodiversity Conservation Act 1999* (Cwth), currently under review, provides for Australian Government assessment of projects likely to have an impact on Matters of National Significance such as threatened species and heritage matters. For the purposes of this assessment, this includes species such as shorebirds, turtles and dolphins.
- International Association for Impact Assessment (IAIA), *Social Impact Assessment Principles* (Vanclay, 2003), which is regarded as leading practice for social impact assessment.
- IAIA’s *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* (Vanclay et al., 2015).
- *New South Wales Guidelines for Social Impact Assessment of State Significant Projects* (2017, revised 2021): Regarded as leading practice in Australia and included in recent NT EPA Terms of Reference.
- *A Guide to Social Impact Assessment*, by Jane Munday, October 2020.
- International Association for Public Participation (IAP2) *Core Values, Spectrum of Participation and Quality Assurance Standard* (2015) which are regarded as industry best practice for public participation (or community and stakeholder engagement) (see [www.iap2.org.au](http://www.iap2.org.au)).
- *Guiding Principles on Business and Human Rights*, United Nations Human Rights, Office of the High Commissioner, 2011.
- *United Nations Declaration on the Rights of Indigenous Peoples* (2007).
- *Guidelines for the Preparation of an Economic and Social Impact Assessment*, Northern Territory Environment Protection Authority, November 2013.
- *AS/NZS ISO 31000:2009 Risk Management – Principles and Guidelines*.

The concept of free, prior and informed consent (FPIC) is considered particularly important for vulnerable and disadvantaged communities, recognising unequal power relationships and greater vulnerability to impacts:

- **free:** no coercion, harassment or retribution
- **prior:** before any activity starts
- **informed:** full disclosure
- **consent:** that communities have a real choice (Vanclay et al. 2015).

## 1.7 Relevant policy documents

A number of Northern Territory documents and previous reports relevant to this SIA are listed below for context:

Table 1-6: Key policy documents relevant to this SIA

Policy or strategy	Year	Released by	Relevant points
Territory Economic Reconstruction Commission	2020	Northern Territory Government	<p>The Territory Economic Reconstruction Commission (TERC) is co-chaired by former Chief Minister Paul Henderson and businessman Andrew Liveris. The TERC's final report in November 2020 outlines strategies to support the Government's ambitions of a \$40B economy by 2030. Priorities are creating jobs, attracting private investment, supporting current and emerging industries, building on the Territory's competitive advantages and unlocking the potential of the Territory's regions</p> <p>The TERC report identifies the Territory's strengths as including its strategic location for both trade and defence, a deep-water harbour and intermodal logistics, world-class mineral deposits and highly prospective onshore gas resources. Key sectors identified as contributing to economic growth were mining and energy, manufacturing and agribusiness. Other focus areas include tourism, renewable energy, national security and defence, the maritime industry and digital and space industries.</p> <p>This report is discussed in greater detail in the economies section.</p>
Territory Benefit Policy	2019	Northern Territory Government	<p>The Territory Benefit Policy aims to 'maximise the contribution to the NT economy by private sector investments in the NT'. The policy must address all phases of the project's life. It applies to:</p> <ul style="list-style-type: none"> <li>• private sector projects granted major project status</li> <li>• private projects where the NT Government provides support valued at or greater than \$500,000</li> <li>• projects where a Territory Benefit Plan is specified as a condition of an NT Government agreement.</li> </ul> <p>It covers:</p> <ul style="list-style-type: none"> <li>• local workforce development and employment</li> <li>• regional and Aboriginal economic and community development</li> <li>• local business participation and small to medium enterprise capability development</li> <li>• economic, industry and social infrastructure investment.</li> </ul> <p>The Territory Benefit Plan is consistent with the objectives of the Australian Industry Participation (AIP) National Framework.</p>
Darwin Region Land Use Plan	2015	NT Planning Commission	<p>The Darwin Region Land Use Plan (DRLUP) provides a strategic framework to manage future growth, including planning for land use, transport and infrastructure needed to support growth. The plan, based on broad community consultation, identifies the essential characteristics and needs of the region. It is supported by a number of sub-regional area plans.</p> <p>The vision of the plan is: "A Darwin Region that is alive and prosperous, led by a thriving global city with high-quality amenity and connectivity" and "A region with a diverse economy and strong society that promotes innovation and tropical concepts, and holds an enduring connection to the natural environment."</p>

			The plan identifies the East Arm Logistics Precinct as ideally located to grow and capitalise on the region's expanding oil and gas, marine and logistic industries. It identifies East Arm and Middle Arm Peninsulas as supporting future strategic industrial development in the region (p.25).
Palmerston Community Plan  Palmerston Local Economic Plan	2018  2021	Palmerston Council	<p>The plan was developed through a deliberative democracy process with community members. Its vision is for Palmerston to be "A place for people". The Mayor's foreword outlines an ambition to be the "family city of the Northern Territory".</p> <p>Outcomes of the strategy are:</p> <ul style="list-style-type: none"> <li>• <b>family and community</b> (including wellbeing, family values will determine everything we do, young people's voices are heard)</li> <li>• <b>vibrant economy</b></li> <li>• <b>cultural diversity</b></li> <li>• <b>future focussed</b> (can sustain itself through the challenges of the future)</li> <li>• <b>environmental sustainability</b></li> <li>• <b>governance</b> (values and encourages participation).</li> </ul> <p>The City of Palmerston's Local Economic Plan 2021-31 (Deloitte 2021) comments on the potential of expanded industrial areas, such as Pinelands and Yarrowonga. It sees opportunities in light industry, transport and logistics, commenting that city's:</p> <p>"proximity to Darwin, the port and rail line, and cheaper rents, could make Palmerston an attractive location for... businesses in light industry, oil and gas service supply, manufacturing or logistics... and businesses finding commercial and residential rents in Darwin increasingly expensive".</p> <p>The plan's key areas of focus are:</p> <ul style="list-style-type: none"> <li>• business and industry attraction and retention</li> <li>• population attraction and retention</li> <li>• fostering business development and innovation</li> <li>• strategic pursuits.</li> </ul>
City of Darwin Strategic Plan: 2030 City for People. City of Colour	2019	City of Darwin	<p>The City of Darwin strategic plan identifies the following strategic directions for the Darwin municipality:</p> <ul style="list-style-type: none"> <li>• a capital city with best practice and sustainable infrastructure</li> <li>• a safe, liveable and healthy city</li> <li>• a cool, clean and green city</li> <li>• a smart and prosperous city (including to implement an economic development plan to retain people and jobs)</li> <li>• a vibrant and creative city.</li> </ul> <p>The aim is that Darwin will be known as a vibrant, creative, innovative, connected, healthy and environmentally responsible city, with well-planned amenities and services. Values of the plan are:</p> <ul style="list-style-type: none"> <li>• <b>diversity and acceptance</b> (including multicultural heritage and a sense of belonging)</li> <li>• <b>choice of lifestyles</b> (unique, laid back, connected, active, safe)</li> <li>• <b>environment</b> (integrated, long-term planning, sustainable, ecologically sound decisions)</li> <li>• <b>sense of community</b> (active participation)</li> </ul>

			<ul style="list-style-type: none"> <li>• <b>equality</b> (collaborative and transparent decisions, listening and responding).</li> </ul>
Litchfield Strategic Plan 2018-22		Litchfield Council	<p>The vision of Litchfield’s strategic plan is “for a place where social and community wellbeing stems from four unique attributes”:</p> <ul style="list-style-type: none"> <li>• <b>wellbeing</b> (personal, social, community)</li> <li>• <b>natural and scenic</b> (large blocks with attractive scenic outlooks)</li> <li>• <b>spacious</b> (but close to everything)</li> <li>• <b>opportunity and prosperity</b> (fully employment, strong industries and business)</li> <li>• <b>family-friendly and connected</b> (“the best place to live in the Top End”).</li> </ul>
<p>Darwin Harbour Strategy 2020-2025</p> <p>Darwin Harbour Regional Plan of Management (2003)</p>	2021	Darwin Harbour Advisory Committee	<p>The Darwin Harbour Advisory Committee (DHAC) was established in 2003. Its role is to provide advice to government through the Minister for the Environment. DHAC produced the first Darwin Harbour Strategy in 2010. A revised strategy was published in 2020 to guide sustainable management and planning in the region.</p> <p>Chair of DHAC, Professor Karen Gibb suggests: “Darwin Harbour is a thriving tropical harbour, which is highly valued by the community for its significant natural, cultural and social values. As a working harbour it supports an important industry hub and is the gateway of Northern Australia, which presents a diversity of economic opportunities.”</p> <p>The values and goals espoused by the strategy are:</p> <ul style="list-style-type: none"> <li>• <b>Foster partnerships:</b> To protect and enhance Darwin Harbour through integrated management and in a partnership between government, industry and the community.</li> <li>• <b>Protect and preserve:</b> To protect and enhance the natural environment of Darwin Harbour.</li> <li>• <b>Celebrate connection:</b> To protect and enhance the cultural values and heritage of Darwin Harbour.</li> <li>• <b>Sustainable industry:</b> To protect and enhance the economic value of Darwin Harbour in accordance with ecologically sustainable development principles.</li> <li>• <b>Maintain our unique lifestyle:</b> To protect and enhance social, recreational, lifestyle use and enjoyment of Darwin Harbour in an ecologically sustainable manner.</li> </ul> <p>DHAC is working on the framework for an integrated harbour report card. The multidisciplinary report card would compare ecological, social and economic information about Darwin Harbour against predefined goals or objectives chosen by local stakeholders.</p> <p>A 2003 Darwin Harbour Regional Plan of Management by DHAC has valuable context and background to the committee’s work, including a section on Larrakia perspectives</p>
Darwin Harbour Health Check	2020	Keep Top End Coasts Healthy (Smyth 2020)	<p>The Darwin Harbour Health Check report, published in 2020 by a coalition of environmental groups, suggests the health of Darwin Harbour is vital to the Territory’s future and identity but is under increasing pressure from industrial and urban development.</p> <p>The report recommends a strategic environmental assessment of Darwin Harbour, including Middle Arm; developing an integrated and harbour-wide Dredge Management Plan; and implementing the NT Government’s Coastal and Marine Management Strategy to safeguard Top End coasts.</p>

Ecologically Sustainable Development of Darwin Harbour	2010	NTEPA	<p>The former NT EPA examined governance frameworks for promoting ESD in the Darwin Harbour Region and described the region as “a jewel in the Territory’s crown, developmentally, economically, recreationally, environmentally”.</p> <p>“Darwin is recognised as one of the last remaining places in the world where a large natural harbour environment still exists next to a major urban settlement. It contains one of the largest intact areas of mangroves in Australia, is recognised as a site of international conservation significance and has strong cultural meaning for the Larrakia people and the residents of the wider Darwin region.” (p.1)</p> <p>Among other things, the EPA report pointed to a lack of integration between strategic planning activities by various government agencies and suggested better consideration of cumulative impacts.</p>
Darwin Port Development Plan	2020	Darwin Port/ Landbridge	<p>Port operator Landbridge’s Port Development Plan outlines plans to further expand the port and increase trade flow through Darwin. The plan outlines Darwin Port’s role as the only major multimodal port in Northern Australia. Outcomes since Darwin Port’s 2016 plan include:</p> <ul style="list-style-type: none"> <li>• expansion of its refrigerated container park storage capacity at East Arm Wharf from 50 to 190 reefer outlets</li> <li>• an additional 17,000 square metres of additional hardstand on reclaimed land next to the main quay line to improve efficiencies in vessel unloading.</li> </ul> <p>Development opportunities include a harbour support vessel facility for tugs, work boats and pilot boats.</p>
Maritime Industry Development Plan	2021	Department of Industry, Tourism and Trade	<p>Development of a Maritime Industry Development Plan was a recommendation of the Territory Economic Reconstruction Commission. The plan is intended to provide a whole-of-government and industry framework to develop the maritime sector. A discussion paper was circulated in July 2021. Actions under the plan include:</p> <ul style="list-style-type: none"> <li>• a master plan for the Marine Industry Park</li> <li>• maritime infrastructure gap analysis</li> <li>• business capability gap analysis and development strategy</li> <li>• comprehensive workforce strategy</li> <li>• economic baseline analysis.</li> </ul>

## 1.8 Ethical standards

True North’s research work is guided by our values and membership of several relevant professional associations that establish ethical standards for independent, impartial and rigorous research. These include the Environmental Institute of Australia and New Zealand (EIANZ); International Association for Impact Assessment (IAIA); International Association of Public Participation (IAP2); and the Research Society (formerly Australian Market and Social Research Society).

We observe the standards set out by the National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council 2018) and Australia’s *Privacy Act 1988*. This includes the protection of intellectual property, the ability for people to provide input confidentially if requested and protection of data gathered during our research. We report on the limitations of our research ([see page 2](#)).

This report has been prepared by suitably qualified and experienced social impact practitioners (see Section 12).

## 1.9 Structure of this report

The structure of this report is:

<a href="#"><u>Section 1</u></a>	Background: Project description, purpose, objectives, methodology, scoping, standards, relevant policy documents
<a href="#"><u>Section 2</u></a>	Consultation and communication objectives and approach
<a href="#"><u>Section 3</u></a>	People and communities
<a href="#"><u>Section 4</u></a>	Social infrastructure
<a href="#"><u>Section 5</u></a>	Economies and jobs
<a href="#"><u>Section 6</u></a>	Cultural identity
<a href="#"><u>Section 7</u></a>	Healthy land and seas
<a href="#"><u>Section 8</u></a>	Living environment
<a href="#"><u>Section 9</u></a>	Having a voice, governance
<a href="#"><u>Section 10</u></a>	Cumulative impacts
<a href="#"><u>Section 11</u></a>	Summary
<a href="#"><u>Section 12</u></a>	Qualifications of the consultants

Sections 3 to 10 cover:

- a baseline assessment that profiles the existing social, cultural and economic environment
- change processes that may lead to positive or negative social, cultural, economic impacts
- the key potential impacts identified in the scoping process
- an assessment of the significance of each of these potential impacts
- suggested management and mitigation measures for ongoing monitoring, measurement and reporting.

Appendices to the SIA are:

Appendix A	scoping report, that guided the key areas of study for the SIA.
Appendix B	consultation Report and fact sheets prepared for consultation
Appendix C	Social Impact Management Plan (SIMP), which includes a risk and opportunity assessment and suggestions for mitigation and enhancement of negative and positive impacts

## 2. Community and stakeholder engagement

A requirement to consult is a key aspect of the Statement of Reasons and Terms of Reference for the Darwin Ship Lift Project, issued by the NTEPA in 2018.

The objects of the Northern Territory *Environment Protection Act* (sections 3(d) and 3(e)) expressively:

- provide for “broad community involvement during the process of environmental impact assessment and environmental approval
- recognise “the role that Aboriginal people have as stewards of their country as conferred under their traditions and recognised in law, and the importance of participation by Aboriginal people and communities in environmental decision-making process”.

The Northern Territory EPA’s *Stakeholder Engagement and Consultation Guidance for Proponents* (updated January 2021) recognises that stakeholder consultation is an important component of social, cultural and health impact assessments, over and above formal opportunities for feedback on documents placed on public exhibition.

The guidance note stipulates that a purpose of impact assessment in the Northern Territory is to involve the community in planning for projects. This requires a proactive approach to early stakeholder engagement, in order to identify and address issues “before key decisions are made and when alternatives are still an option” (p.8)

“The NTEPA considers that both proponents and the community benefit from respectful decisions, deeper dialogue, and collaborative decisions that result from ongoing stakeholder engagement rather than being limited to specific consultation activities.”

The guidance note recommends that proponents adopt the International Association for Public Participation (IAP2) core values as principles for best practice stakeholder engagement. These core values are shown in Fig 2.1 below.

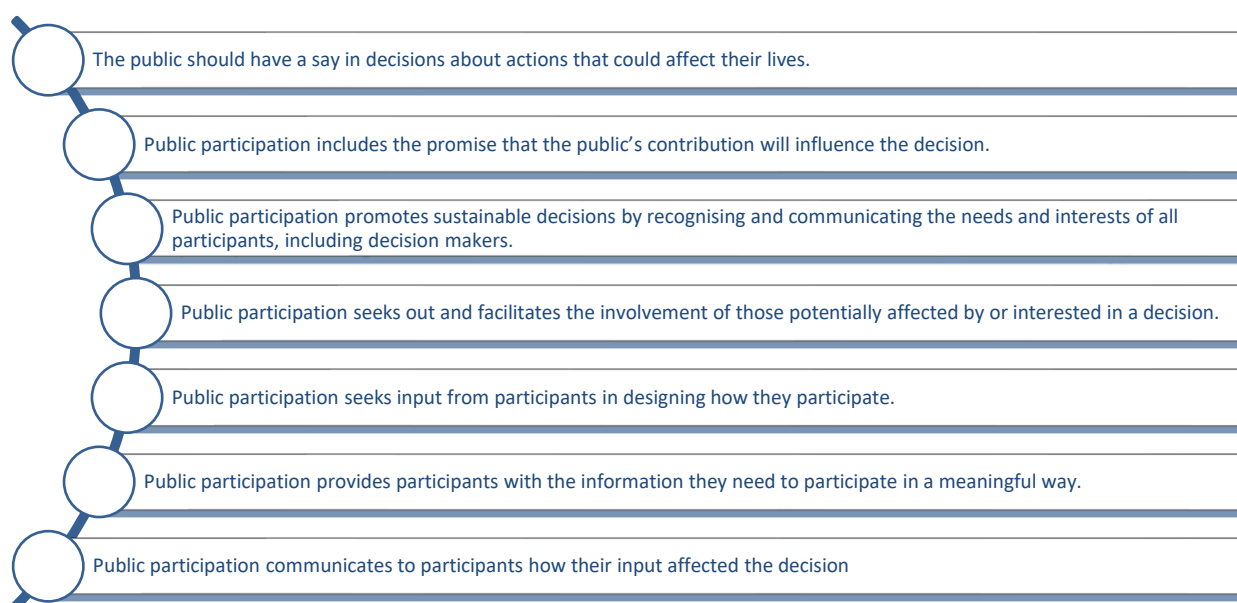


Figure 2-1: Core values

## 2.1 Objectives of stakeholder engagement

Early and meaningful engagement is an authentic process of involving people in solutions and decisions, listening to understand their perspectives, providing an honest account of their input and taking seriously the lived experience of communities (Munday 2020). The objectives of consultation for the Environmental Impact Statement (EIS) and Social Impact Assessment (SIA) of the Darwin Ship Lift Project were to:

- listen to and understand the perspectives of all stakeholder groups
- ensure concerned groups have a chance to provide early input
- manage stakeholder expectations
- provide early identification of potential issues or concerns that may contribute to better project outcomes, avoid mistakes or mitigate negative impacts
- support delivery of a project that is environmentally, economically, culturally and socially acceptable to the community and key stakeholders
- provide regulators with confidence that all positive and negative impacts are well understood and can be managed through all phases of the project
- provide guidance for the project proponent's long-term social performance.

Communication objectives were to:

- build awareness of the project
- provide objective and accurate information so stakeholder could provide informed feedback
- provide a tailored approach to communicating with different stakeholder groups
- build understanding, trust and relationships with individuals or groups likely to be positively or negatively impacted by the project.

## 2.2 Consultation approach

A communication and engagement strategy prepared in 2020 outlined True North's proposed approach to consultation. An issues and stakeholder analysis informed scoping for the SIA. The strategy outlined key messages for consultation materials and a suggested approach. The strategy was approved by the client and a draft fact sheet prepared.

On 3 November, key stakeholders were advised of plans to submit an early works dredging application with the Development Consent Authority. They were sent a fact sheet by the Northern Territory Government. The development application was submitted on 25 November and placed on public exhibition from 27 November to 11 December 2020. The Darwin Harbour Advisory Committee was briefed on 3 December. There were no public submissions and three from Northern Territory Government (Transport, Power and Water and Medical Entomology). The DA was subsequently withdrawn when it was agreed with the NTEPA not to proceed with the early works dredging. All impacts of the Darwin Ship Lift Project will now be considered by an Environmental Impact Statement, under the *Environment Protection Act (NT) 2019* and Development Application under the *Planning Act (NT) 2020*.

A second NT Government fact sheet was distributed on 26 July 2021 outlining the project, environmental studies and opportunities to provide feedback (see Appendix B). Targeted stakeholders were then contacted by True North Strategic Communication to arrange interviews.

The Northern Territory Government has maintained Darwin Ship Lift Project website since the project was first announced in late 2015 (<https://cmc.nt.gov.au/advancing-industry/ship-lift>).

### 2.3 Consultation results

Most consultation for the EIS and SIA took place in August 2021. The main issues raised were the long-term economic benefits of the ship lift as enabling infrastructure, the economic and labour force benefits and the strategic nature of the project. Reservations expressed by the marine industry included poor engagement in the design process, concerns about whether the ship lift facility would meet the needs of the entire industry, a need for greater certainty on pricing and industry needing visible acceptance by foundation customers before smaller operators would feel confident to relocate and invest in business growth.

From a social and cultural perspective, the ship lift facility was seen as invoking limited change processes. No stakeholders raised topics such as social infrastructure or impacts on community cohesion and wellbeing. Environmental, social and cultural issues were confined to questions regarding the management of waste water, potential sedimentation impacts on Catalina Island (a sacred site) and the progressive loss of Darwin's World War II heritage and history. Several stakeholders commented that their concerns related more broadly to the cumulative impacts of dredging and industrialisation of the harbour.

See the attached Consultation Report at Appendix B for a more detailed description of stakeholders consulted, issues raised, responses provided and where these are addressed in the Environmental Impact Study.

### 3. People and communities

#### 3.1 Overview

What is covered by People and Communities	What the Terms of Reference asked for
Health, wellbeing, safety, community cohesion, our sense of connectedness, ability to feel safe, shared values and capacity to absorb newcomers into the community.	<p>Provide sufficient information to enable assessment of whether the Proposal is likely to meet the NT EPA's objective to protect the rich social, economic, cultural and heritage values of the Northern Territory.</p> <p>Describe, using maps where appropriate, the existing social and economic values of Darwin Harbour that may be impacted including commercial and recreational values.</p>

#### 3.1 Overview

This section provides a profile of the social area of influence for the Darwin Ship Lift Project and a baseline characterisation of the Greater Darwin Region. It outlines likely change processes and their consequences, then concludes with a brief assessment of the significance of these changes.

Potential impacts under People and Communities would be invoked by noticeable effects on people's health, wellbeing and safety, which are essential for a good quality of life. Wellbeing includes our sense of connectedness, ability to live in harmony with each other, feel safe and be healthy (Munday 2020).

The Greater Darwin Region includes the three Local Government Areas of Darwin, Palmerston and Litchfield. The primary footprint covers East Arm and its closest residential suburbs, as well as transport routes likely to be used by workers and to quarries.

#### 3.2 The project social area of influence

It is proposed to build the ship lift facility at the end of the East Arm Peninsula between the Marine Supply Base at Darwin Port and Multi-user Barge Ramp Facility (MUBRF) at the Marine Industry Park. East Arm is about 6.5 kilometres across the harbour from the Central Business District (CBD), or 14 kilometres by road. The nearest residential areas include the Northcrest housing development in Berrimah and Palmerston's outer suburbs of Marlow Lagoon and Durack, six kilometres to the east or a nine-kilometre commute.

The area is accessed by Berrimah Road, which links to two arterial roads: Tiger Brennan Drive and the Stuart Highway. The \$6.5 million Tiger Brennan Drive Extension, completed in 2009, saw the duplication of Berrimah Road between Tiger Brennan Drive and East Arm Port to provide better access and ease traffic congestion. In August 2021, local firm Sitzler was announced as winning an Early Contractor Involvement tender for an overpass at the busy intersection of Berrimah Road and Tiger Brennan Drive, which has been the scene of several high-profile multiple fatalities in recent years. The \$61.5 million project will be jointly delivered by the Australian and Northern Territory Governments under a national road safety program. The overpass is intended to improve road safety, traffic flow and connectivity for freight transport to East Arm Wharf.

Darwin Harbour, which surrounds East Arm Peninsula, is an important ecological, social, cultural and economic asset. The harbour spans 3230 square kilometres from Charles Point in the West to Gunn Point in the East and Darwin River Dam to the south. The harbour embraces Shoal Bay, Middle Arm, West Arm and their respective tributaries. Sometimes referred to as a 'working harbour', the natural deep-water port supports northern Australia's largest concentration of marine and logistics activities. Darwin Port, backed by the AustralAsia Railway, is promoted as Australia's gateway to Asia and northern gateway for trade. This makes it a nationally

significant economic hub which provides services to international and domestic trading vessels, cruise ships, gas exports, livestock exports, defence and dry and liquid bulk trades (see Section 5 on economies).



Figure 3-1: Surrounding land uses (source AECOM)

### 3.3 Key communities

The Greater Darwin Region is likely to be the key catchment for workers and procurement of services and supplies for the ship lift facility. Greater Darwin comprises the three municipalities of Darwin, Palmerston and Litchfield. The map (figure 3.2 below) shows the location of East Arm (in the red border), with Palmerston to the south-east and Darwin to the north-west.

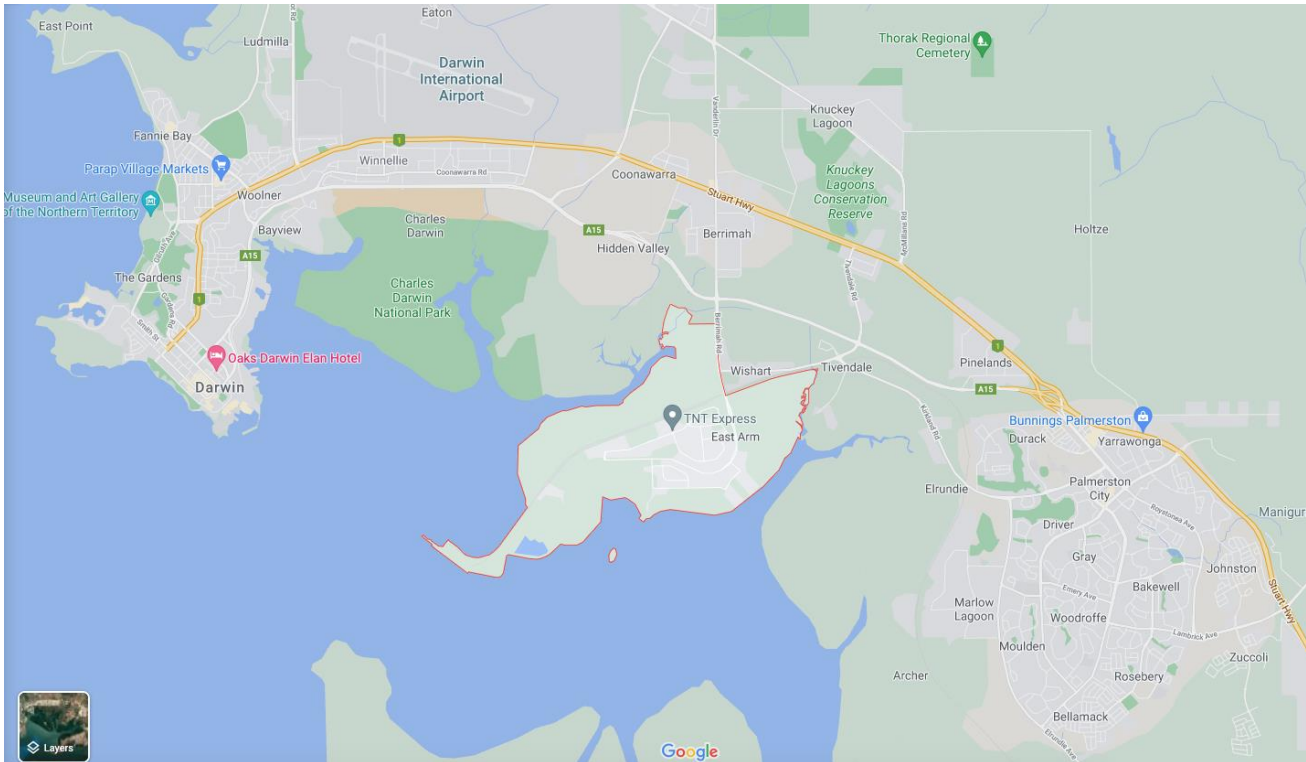


Figure 3-2: The Greater Darwin Area (Google Earth)

#### 3.3.1 Greater Darwin

The Greater Darwin Area is home to 60 per cent of the Northern Territory's population, with 147,255 residents, about 11 per cent of whom identify as Aboriginal and Torres Strait Islander (ABS 2016 and 2019).

Between 2007 and 2017, the Greater Darwin population increased year on year, peaking at 4.27 per cent in 2013 as a result of the INPEX Ichthys LNG plant construction. However, the Greater Darwin area was the only capital city to record a population decrease in the 2019-20 financial year, dropping by 180 people or 0.1 per cent (ABS 2021).

Greater Darwin has a young population, with a median age of 33 compared with 38 nationally. Close to half of Greater Darwin's population (43 per cent) is aged between 25 and 49 compared with about a third nationally (34.7 per cent). Similarly, Greater Darwin has a lower proportion of older people compared with the rest of Australia. Residents aged over 50 account for 24.5 per cent of the population, compared with 34.1 per cent nationally.

Many of Greater Darwin's workers tend to be transient, relocating to the region for work, then leaving when major projects end. A Charles Darwin University study (Taylor et al. 2020) found only 57 per cent of early career individuals planned to continue living in the Territory for the next two years. This retention rate rose across age groups to 82 per cent for people at retirement age. When the highest level of education for respondents

was considered, people holding trade certificates had the lowest intended two-year retention rates across all life stages, particularly in early career respondents (43 per cent) and pre-retiree stages (55 per cent). The study suggests “people working in trades are potentially more affected by broader economic conditions and may migrate more quickly to where work is available” (Taylor et al. 2020).

ABS data suggests that the Greater Darwin Region experienced a net migration loss of 1864 internally in 2020 (not counting overseas migration), which is equivalent to 1.26 per cent of the population. Other Greater Capital City areas such as Sydney and Melbourne experienced an internal migration loss equivalent to 0.56 per cent and 0.18 per cent of the population respectively in the same period.

Generally, people residing in Greater Darwin have a lower level of educational attainment than the rest of Australia, with slightly fewer people having completed a Bachelor degree or above and fewer completing year 12. However, 19.3 per cent of people in Greater Darwin have obtained a Certificate III or IV compared with 15.7 per cent nationally.

Almost three-quarters (71.2 per cent) of Greater Darwin’s working population is aged between 15 and 64 compared with 65.4 per cent nationally, aligning with the Territory’s young population profile (ABS 2016). The highest industry of employment is public administration and safety (12.5 per cent) followed by construction (10.3 per cent) and accommodation and food services (9.3 per cent) (ABS 2017).

People living and working in Greater Darwin have a higher median income than the rest of Australia, sitting at \$61,375 a year compared with \$48,360. Greater Darwin has a higher proportion of mid to high income earners (people earning more than \$1000 per week) than other capital cities and a lower proportion earning between \$1 and \$999 per week (.id Community/ABS 2016).

### 3.3.2 Darwin

The City of Darwin has the largest population of the three municipalities, with an estimated 82,030 residents in 2020 (ABS 2020). Reflecting its larger population, Darwin has substantially more registered businesses than the other two local government areas in Greater Darwin (7284 compared with fewer than 2000 for both Litchfield and Palmerston) (ABS 2020). Many registered businesses in Darwin are small, with almost two-thirds (63 per cent) non-employing, 33 per cent employing between 1 and 19 people and the remaining 4 per cent employing 20 or more people. While the median household income is slightly lower than in Palmerston and Litchfield, aggregated data can be misleading and mask substantial inequalities. In 2019 there were fewer people receiving Selected Government Pensions and Allowances in Darwin (25.7 per cent of the population) than in Palmerston (29 per cent). Litchfield had the lowest proportion of people receiving the listed allowances, at 14.5 per cent.

As Table 3.1 (below) shows, Darwin has the highest rate of recorded Aboriginal unemployment, sitting at 13.7 per cent compared with 12.2 per cent for the whole of the Greater Darwin Region and much lower participation rates in the labour force (ABS 2016).

### 3.3.3 Palmerston

Palmerston is the second largest city in the Northern Territory and the fastest-growing municipality. Palmerston is a relatively new city, with residential development dating back to 1982. During the 1980s and 1990s the municipality experienced significant growth, with the population more than doubling between 1991 and 2001. Much of this growth was due to Defence personnel moving into the area (.id community, 2020). While growth rates have steadied, Palmerston recorded the strongest growth in the Territory in 2019-20 (up 1.9 per cent) while Greater Darwin as a whole recorded a loss (Department of Treasury and Finance, 2020). Residential development in Palmerston continues, with the newest suburbs being Zuccoli, The Heights Durack

and Mitchell Green. Population projections expect Palmerston to grow at an annual rate of 2.4 per cent between 2016-36 (Department of Treasury and Finance, 2019).

Many Palmerston residents enjoy a high income (\$2197 median weekly household income). However, the area has a higher rate of socioeconomic disadvantage than Darwin and Litchfield as ranked by the Australian Bureau of Statistics' Socio-Economic Indexes for Areas (ABS 2016). More families live in Palmerston than in Darwin and Litchfield but the area also has the highest proportion of single parent families (ABS 2016).

The main employment sector is State Government and Administration (6.5 per cent) which is consistent with Darwin and Greater Darwin. A lower level of tertiary educational attainment is recorded in Palmerston which perhaps correlates with a higher proportion of technicians and trade workers than in Darwin (18.5 per cent compared with 14.9 per cent).

Aboriginal people comprise 11 per cent of Palmerston's population, with an unemployment rate of 12.4 per cent. However, participation rates (the proportion of a working-age people working or actively looking for work) for Aboriginal people in Palmerston and Litchfield are relatively low. This is likely to reflect disengaged youth and people on welfare benefits (the non-participation category includes retired persons, students, those taking care of children or other family members, and others who are neither working nor seeking work).

Palmerston has a relatively high rate of home ownership, compared with Darwin, with lower property prices, more young families and a median age of 30: considerably lower than the median age of 34 in Darwin and 37 in Litchfield (ABS 2016). Households in Palmerston tend to be larger, with an average of 2.9 people per household, compared with 2.7 in Greater Darwin. This may reflect the higher proportion of families living in Palmerston. The median monthly mortgage is also slightly higher than the Greater Darwin median, sitting at \$2253 compared with \$2200.

### 3.3.4 Litchfield

The Litchfield Local Government Area accounts for 91.8 per cent of Greater Darwin's land, but only a small portion of this land is residential, with a lower population density. Other land uses include conservation, horticultural and pastoral. An estimated 25,566 people lived in Litchfield in 2020 (ABS 2020), with the 2016 Census suggesting that 9.7 per cent were Aboriginal and Torres Strait Islanders (ABS 2016). The region's Aboriginal unemployment rate is about half that of the rest of Greater Darwin, sitting at 6.6 per cent. People in Litchfield are typically older (median age of 37) and more likely to work in Defence as the main sector of employment (6.2 per cent).

Litchfield offers larger land parcels than Darwin and Palmerston, with rural residential blocks generally clustered around the four key activity centres of Howard Springs, Humpty Doo, Berry Springs and Coolalinga (Planning Commission 2015). The municipality contains many scenic and conservation attractions, from Gunn Point beaches popular with recreational fishers and campers, to the Berry Springs Nature Park that is a significant tourism draw card.

### 3.3.5 Greater Darwin values

The three municipalities have community and strategic plans that provide valuable insights into the values of their residents. All have a focus on quality of life, lifestyles, being attractive places for families and the natural environment, as well as a lesser focus on economic development.

Darwin's strategic plan, 'Darwin 2030: City for people. City of colour' (City of Darwin 2019) includes a focus on a safe, liveable and healthy city. Its values include:

- a unique, laidback, connected, active and safe lifestyle

- diversity and acceptance that create a sense of belonging
- a sense of community
- equality through collaborative and transparent decision-making
- long-term planning for a sustainable environment.

Palmerston’s Community Plan (City of Palmerston 2018) has the vision of ‘a place for people’ and a “welcoming vibrant family city that fosters diversity and unity” where everyone belongs and feels safe. Six desired outcomes of the plan start with family and community wellbeing: “Family values will determine everything we do, and we will find new hope in the voices of our children and young people” (p.10). The plan notes that rapid change and modern social challenges have put pressure on the community. Therefore, an objective is to consider the social impact of all planning decisions and develop community impact principles “to make sound decisions that align with the community’s aspirations”.

Litchfield’s vision focusses on families, community wellbeing and a rural lifestyle which make Litchfield “the best place to live in the Top End” and where population growth is balanced with environmental protection. The Litchfield Strategic Plan 2018-22 outlines a vision for a “place where social and community wellbeing stems from four unique attributes”, being:

- natural and scenic: large blocks with attractive scenic outlooks
- spacious: but close to everything
- opportunity and prosperity: full employment, strong industries and business
- family-friendly and connected.

### 3.3.6 Greater Darwin demography

The following table provides key characteristics of Greater Darwin and its three Local Government Areas.

*Table 3-1: Key demographic features. Source: ABS Quick Stats and ABS Regional data. Greater Darwin is Darwin, Palmerston, Litchfield*

	<b>Darwin Local Government Area</b>	<b>Palmerston Local Government Area</b>	<b>Litchfield Local Government Area</b>	<b>Greater Darwin SA4</b>
Land area	11131.8 ha	5265.6 ha	290 314.6 ha	316 390.6 ha
Estimated residential population 2020	82 030	39 032	25 566	147 231 (136,828 in 2016: 52.5% male, 47.5% female)
% working age (15-64) 2019	71.3	69.7	73.5	71.2%
Unemployment rate 2016**	4.7	5.1	3.9%	4.1%
Aboriginal unemployment 2016) (IARE, IREG for Darwin)	13.7%	12.4%	6.6%	12.2%
Aboriginal not in the labour force (over 15) (IARE, IREG for Darwin)	40.7%	34.8%	59.8%	43.4%

Main sector of employment	State Government Administration 7.6%	State Government Administration 6.5%	Defence 6.2%	State Government Administration 7.0%
Estimated Aboriginal and TSI 2016	5828 (7.4%)	3809 (11.3%)	2309 (9.7%)	11 960 (8.7%)
Median weekly household income 2016	\$2164	\$2197	\$2228	\$2183
Aged 15+ and achieved Certificate, Year 12 or above as highest level of educational attainment	65%	62.6%	52.6%	62.3%
Year 12 = highest level of educational attainment	14.7%	15.4%	11.3%	14.2%
Average household size 2016	2.6	2.9	2.9	2.7
Average number bedrooms	2.9	3.1	3	1.1
Median monthly household mortgage 2016	\$2167	\$2253	\$2400	\$2200
Median monthly household rent	\$418	\$430	\$400	\$1835
Median age 2016	34	30	37	33
Born overseas 2016	43%	29.4%	29.2%	37.3%
Number of local businesses 2020	7284	1626	1904	11 024
People who need help with core activities 2016	2.7%	2.9%	2.3%	2.9%

### 3.4 Key events or activities creating change processes

Key events or activities creating change processes that may lead to positive or negative impacts to communities:

- mobilisation of construction workforce changing the demographic composition of the social area of influence
- increased industrial traffic and workers commuting to the site
- increased marine traffic and dredging.

### 3.5 Key risks and opportunities for people and communities

Potential impacts for people and communities	
Potential beneficial impacts	Potential detrimental impacts and residual ratings
	Reduced feelings of safety as a result of road trauma (MEDIUM)
	Reduced sense of marine safety as a result of dredging, increased marine activity on the harbour (LOW)

### 3.6 Impact assessment for people and communities

This section provides a brief outline on how the Darwin Ship Lift Project might impact on the existing values and demography of the Darwin region. Impacts on values is covered in [Section 7](#).

#### 3.6.1 Impacts on people and communities

In general, the scale of change to the people and communities of Greater Darwin is predicted to be inconsequential. The relatively small construction and operational workforce is unlikely to induce any noticeable demographic change, with workers mostly drawn from the existing labour force. Any increase in population will be incremental, over the next decade, which is likely to be readily absorbed and indistinguishable from general growth stimulated by overall industrial activity.

It is possible that increased haulage and industrial traffic will impact on a sense of safety and increase perceived risks of road trauma to other road users, including pedestrians, particularly given high profile multiple fatalities at the intersection of Berrimah Road and Tiger Brennan Drive. However, this risk should be mitigated by a proposed overpass at this intersection. Triple road trains would bring fill and quarried rock from Channel Island (along Elrundie Avenue between Marlow Lagoon and Moulden) and from quarries at Mount Bunday (along the Arnhem Highway), as well as workers commuting to site from residential areas. Given that most of the haulage route already hosts large volumes of industrial traffic and passes through mostly non-residential areas, this risk is rated as unlikely and easily mitigated with good traffic management, as outlined in the Transport Impact Assessment (Appendix M). However, given the consequences of road trauma may include fatalities, high profile media coverage and potential to undermine a community's sense of safety, the residual rating for this risk is LOW.

Previous marine dredging programs, such as for the INPEX's Bladin Point LNG plant and Marine Supply Base, saw collisions between recreation boating traffic and dredging equipment. The geographic extent and physical scale of INPEX dredging covered a broader area of the harbour. Dredging for the ship lift is localised and will take place closer to existing marine infrastructure rather than in the navigation routes of recreational and commercial marine traffic. This risk should be readily mitigated with appropriate safety management, public education and Harbour Master's Notices to Mariners. Operational traffic will share an approach channel with the Multi-user Barge Ramp Facility. With appropriate management, project activities are not predicted to substantially increase risk from marine activities on Darwin Harbour. This potential impact therefore has a residual risk rating of LOW.

The key potential impact on people and communities is disturbance from industrialisation of the harbour detracting from family friendly values, wellbeing, quality of life, outdoor lifestyle and scenic values associated

with the Top End. This is a cumulative, not a project specific impact, so is dealt with in [Section 10](#) on cumulative impacts.

### 3.7 Mitigation and management

The proposed measures to mitigate or manage impacts on people and communities are:

- contractor to prepare traffic and marine works management plans for construction, in line with the Transport Impact Assessment at Appendix M), covering issues such as avoiding heavy transport movements during peak hour traffic
- collaboration with Darwin Port's traffic management plan
- bus transport for workers to reduce individual vehicles commuting to site and consequent traffic and parking congestion
- marine safety plans, Harbour Master's Directions
- good communication during the design and construction phase, through community updates, Harbour Master's Notices to Mariners and alerts to recreational fishers through AFANT (to be addressed in an NT Government proactive communication and engagement plan).

## 4. Social Infrastructure and Services

### 4.1 Overview

What is covered by Social Infrastructure and Services	What the Terms of Reference asked for
The quality, accessibility and affordability of social infrastructure and services, such as housing, health, education, transport, emergency services, utilities.	Not requested except for impacts on transport infrastructure (dealt with in other sections).

### 4.1 Overview

Infrastructure projects can put pressure on social infrastructure if they lead to substantial demographic change. An influx of families or temporary construction workers may lead to increased demand for services such as housing, education, transport, policing and community infrastructure.

The proposed construction workforce for the Darwin Ship Lift Project is relatively small, at about 100 direct jobs. Stakeholder interviews suggest contractors are likely to draw mainly on workers already living in the Greater Darwin Region. While specialist positions may be filled from elsewhere, the size of any external workforce relocating to Darwin is unlikely to exceed the absorptive capacity of existing social infrastructure.

A social and environmental assessment for TNG's proposed processing facility on Middle Arm (Elton Consulting 2019) assumed 158-225 construction workers were likely to live in the local community, 43 per cent of whom were assumed to be households with children. Elton assessed there was sufficient capacity in surrounding schools, childcare and healthcare facilities to accommodate these additional residents (p.80). The increased population was considered as likely to have a negligible impact on the Palmerston and Litchfield Local Government Areas, representing an increase of 0.5 to 0.8 per cent in the overall population.

Of TNG's likely operational workforce of 600, it was assumed that 75 per cent would come from outside the region. Of these, 60 per cent were estimated as likely to be FIFO workers and 40 per cent to choose short or long-term residential accommodation. It was assumed that 43 per cent of workers choosing to settle in Darwin would be households with children, constituting 395 new residents. The Elton report for TNG considered this increased population could be absorbed by existing social infrastructure.

The Darwin Ship Lift Project is likely to have substantially fewer workers, with a small FIFO workforce. Thus, the analysis for TNG would support a conclusion that no potential impacts on social infrastructure are likely to accrue from the ship lift project.

Cumulative industrial development, however, could put pressure on the availability, quality and affordability of social infrastructure in the catchment area for workers, particularly given current pressures on the housing, rental and accommodation markets (REINT 2021). This is best assessed at a more strategic level, such as the current Middle Arm Strategic Assessment.

## 5. Economies and Jobs

What is covered by Economies and jobs	What the Terms of Reference asked for
Jobs, economic opportunities and community development, including the employment and training of Aboriginal people, local procurement and distribution of economic benefits and harms.	<p>Details of the economic benefits of the project.</p> <p>Describe and quantify the potential social and economic opportunities and impacts with an analysis of the social and economic values, benefits and potential impacts of the proposal on a local/regional, NT and national scale, including but not limited to:</p> <ul style="list-style-type: none"> <li>• a summary of the workforce and source of workers.</li> <li>• projected economic costs and benefits, including a cost/benefit analysis or similar, the estimated capital and annual operational expenditure and total estimated revenue</li> <li>• costs and benefits of alternative options</li> <li>• training and employment opportunities</li> <li>• opportunities for local and regional businesses</li> <li>• risk of the project not realising its proposed economic and social benefits.</li> </ul>

### 5.1 Overview

The purpose of an economic impact assessment is to identify the positive and negative economic impacts of a project at a national, Territory, regional and local level. This includes the likely distribution of positive and negative impacts on local communities, with a particular focus on local employment and income effects and other local industry impacts, such as on local suppliers (Queensland Government 2017; NSW Government 2015).

The following section provides a baseline description of the Northern Territory's economy, derived mainly from the Territory's 2021 Budget papers and Territory Economic Reconstruction Commission's (TERC) December 2020 Report. The impact assessment that follows draws on material provided by the Northern Territory Government, other independent reports and the expert judgement of key industry stakeholders (gleaned through stakeholder interviews). This Economics and Jobs section addresses the expected economic uplift of the project, based on the NT Government's vision for the Darwin Ship Lift Project (DSLIP), and assesses the likely benefits and potential negative effects on local businesses and jobs, including a failure to meet expectations.

### 5.2 Baseline description of the Northern Territory economy

The Northern Territory Government is aiming for a \$40 billion economy by 2030 to drive growth and accelerate jobs and population growth (TERC 2020). A proposed \$1.62 billion investment in infrastructure in the 2021 Budget includes enabling economic infrastructure in Darwin, such as the \$400 million Darwin Ship Lift Project at East Arm, and development of a gas-based manufacturing precinct on Middle Arm Peninsula to support downstream processing and manufacturing.

The 2021 budget papers forecast a \$1.4 billion deficit for the upcoming financial year, with the Territory's net debt expected to reach \$9 billion in 2021-22, \$1 billion better than previously forecast. The deficit is expected to expand to \$11.4 billion by the end of the forward estimates period in 2024-25, hence the Government's ambition to grow private sector investment and return the economy to a more sustainable footing.

The structure of the Territory's small open economy reflects its wealth of natural resources, strategic defence capabilities, tourism, and relatively large government and community services sector. In 2019-20, the Territory's Gross State Product (GSP) was \$26.2 billion, an increase of 5.3 per cent from 2018-19. Budget papers note that, after a strong rebound in the domestic economy in 2020-21, economic growth is forecast to average 2.4 per cent a year to 2024-25, compared with average growth of 1.9 per cent in the five years to 2019-20. GSP is estimated to increase by 4.7 per cent in 2021-22 and State Final Demand by 4.2 per cent. Growth in 2019-2020 was supported by many NT and Australian Government COVID-19 stimulus measures, limited trading restrictions and low interest rates (Department of Treasury and Finance 2021).

Economic growth in 2021-22 and 2022-23 is forecast to moderate after two years of strong growth and as government stimulus measures are removed. Economic growth is expected to be driven by stronger private and public sector investment, such as the Barossa offshore gas project, new Charles Darwin University campus in the Darwin CBD, the Darwin Ship Lift Project, defence-related works and significant investments in transport infrastructure (Department of Treasury and Finance 2021).

However, the Budget papers note that the Northern Territory economy remains heavily reliant on government and community services, which accounted for 23.8 per cent of the Territory's GSP and 42.3 per cent of employment in 2019-20, compared with 17.4 per cent and 28.8 per cent respectively nationally. The Territory's service industries, the third most important sector, accounts for 19.7 per cent of the Territory's output and 32.3 per cent of employment in 2019-20 compared with national contributions of 34.8 and 37.8 per cent respectively.

The mining and manufacturing sector contributed a substantial 31.6 per cent of GSP (see [Table 5.1](#) below). Historically, growth has been driven by international demand for resources and commodity prices and heavily influenced by liquefied natural gas (LNG) production, including the INPEX and Santos LNG plants on Middle Arm Peninsula. However, the Budget papers comment that LNG production will be affected by an expected 18-month gap in 2023-24 as Santos transitions from reliance on Bayu-Undan feedstock to gas from the offshore Barossa field. Despite the mining and manufacturing sector's contribution to GSP, it accounts for only 4.6 per cent of the Territory's residential employment, compared with 8.8 per cent nationally. This is influenced by interstate fly-in-fly-out (FIFO) workers not being included in the Territory's labour force figures (Department of Treasury and Finance 2021).

The mining and manufacturing sector has a significant flow-on effect to the construction industry, the Territory's fifth largest economic sector. This dependence leads to cyclical fluctuations in construction activity. The sector peaked between 2013 and 2018 with the Ichthys LNG project. Output has been declining since completion of Ichthys construction phase and in 2019-20 fell by 15.7 per cent, returning to historical levels. A \$2.76 billion government infrastructure program is expected to stimulate economic activity and jobs. Projects such as the ship lift and marine industries, investment in solar generation activity and road infrastructure is expected to increase the value of engineering construction work, which fell from \$9.2 billion to \$1.1 billion between 2014-15 and 2019-20 (Department of Treasury and Finance 2021). An economic brief (Department of Treasury and Finance 2021c) suggests that in the June quarter of 2021, seasonally adjusted construction work in the Territory increased by 35 per cent to \$655 million. This was due to a 22.4 per cent increase in building work to \$244 million and a 46.8 per cent increase in engineering work to \$412 million. In 2020-21, the value of construction work in the Territory was \$2.3 billion, an increase of 24.5 per cent on the previous year. The value of engineering work in 2020-21 increased by 28.6 per cent to \$1.4 billion.

Defence is the fourth most important economic sector in the Northern Territory, with a commitment of \$8 billion over the next decade in recognition of the Territory's strategic position in the Indo-Pacific region. A number of major defence projects under way include the \$221 million Larrakeyah Defence Precinct which will support Arafura-class offshore patrol vessels in Darwin. The NT Government's Defence and National Security Strategy 2018 reinforces the Territory's role as a key defence and national security hub, and as the primary centre for maintenance and sustainment of facilities and assets deployed in the region. The strategy outlines key areas to support a strong defence and national security presence and to enhance local industry and business opportunities as part of developing northern Australia. Local industry participation in defence projects has increased in recent years and is now at more than 80 per cent (Department of Treasury and Finance 2021).

The retail and wholesale trade sector represented 4.5 per cent of Territory GSP in 2019-20, compared with 7.9 per cent nationally. However, the sector is the third largest employer, accounting for 10.8 per cent of the Territory's workforce in 2019-20. The agriculture, forestry and fishing sector accounted for 2.5 per cent of the Territory's GSP in 2019-20, compared with 1.9 per cent nationally. The sector's contribution to GSP has been declining in recent years. Despite its relatively small contribution, the agriculture, forestry and fishing sector generates vital economic activity and jobs in regional areas. Tourism has been strongly impacted by the COVID-19 pandemic but remains an important employer in the Territory (Department of Treasury and Finance 2021).

*Table 5-1: Key economic sectors: Source NT Budget Papers: Industry Outlook. Note that ABS labour market statistics exclude defence personnel. The rise in mining and manufacturing economic outputs but decline in jobs reflects growing LNG exports.*

Sector	GSP			Employment		
	Value \$M 2020-21	Annual change %	Share of GSP %	Number	Change %	Share %
Mining and manufacturing	8503	31.9	31.6	6026	-12.6	4.6
<i>Mining</i>	<i>7521</i>	<i>39.7</i>	<i>27.5</i>	<i>2213</i>	<i>-32.4</i>	<i>1.7</i>
<i>Manufacturing</i>	<i>982</i>	<i>-7.5</i>	<i>4.1</i>	<i>3813</i>	<i>5.4</i>	<i>2.9</i>
Government and community services	6186	2.0	23.8	55,625	7.6	42.3
Service industries	5056	-5.8	19.7	42,578	-10.5	32.3
Defence	2244	7.0	8.8	5433	0.9	n.a
Construction	1466	-15.7	5.9	10,810	-2.9	8.2
Retail and wholesale trade	1112	-9.1	4.5	14,197	9.0	10.8
Tourism	852	-26.8	3.3	7300	-12.1	5.5
Agriculture, forestry & fishing	649	-5.9	2.5	2414	34.8	1.8

### 5.2.1 The maritime sector

The maritime sector nationally is driven by the fact that 85 per cent of Australians live within 50 kilometres of the coast, supporting a trade-driven economy. Australia's 10 million square kilometre marine estate is a significant and growing source of wealth for Australians (AIMS 2020). The Australian Institute of Marine Science (AIMS) Index of the Marine Industry project, which began in 2008, estimates the output of Australia's 'blue economy' at \$81.2 billion in 2017-18. Marine-based activities employ 34,000 people in Australia and contributed \$62.9 billion of economic value to Australia's economy in 2017-18. Increased offshore natural gas production, naval activities, ship building and repair and strong growth in international and domestic marine tourism (AIMS 2020) has driven growth in marine centres in areas such as Cairns, Perth (Henderson) and Adelaide (Osborne).

In the Northern Territory, a diverse maritime sector has evolved over generations to service trade, naval activities, offshore oil and gas, fishing, pearling, cruise shipping, coastal barges and tugs. Existing maritime districts in the Darwin region are the Frances Bay Mooring Basin and Hudson Creek industrial estate. Government's long-term vision for Frances Bay is a mixed-use waterfront that retains the area's historic character while consolidating most marine activities at the East Arm Marine Industry Park (Department of Industry, Tourism and Trade 2021).

In 2021, the NT Chamber of Commerce established a Maritime Industry Group to better position industry to take advantage of opportunities such as the ship lift and marine industries precinct, better harbour access for deep-water vessels, increased defence needs, and growth in oil and gas and coastal shipping. The group, renamed the Marine Industry Council, has 22 members. Its aims are to:

- maximise commercial opportunities and economic benefits for the industry
- provide a conduit between industry, governments, supply chains and key stakeholders
- provide advice, advocacy and support to council members and the broader industry
- promote the growth of the maritime industry sectors.

The council's priorities include a master plan for Darwin Harbour, improved and affordable infrastructure and workforce skills and capacity development (Chamber of Commerce NT 2021).

### 5.2.2 Use of Darwin Port

The Darwin Port is Australia's northern gateway for trade with Asia and beyond, the terminus of the AustralAsia Railway and a support hub for the offshore oil and gas fields in the region. Darwin is the only natural deepwater port in northern Australia and supports international and coastal trade throughout the region. In 2019-20, the following vessels entered Darwin Port (Darwin Port 2021).

- 1472 trading vessels
- 85 container and general cargo vessels
- 67 liquid bulk vessels
- 32 car carrier vessels
- 313 rig tender vessels
- 61 cruise ship vessel visits.

### 5.2.3 Economic growth

In November 2020, the Territory Economic Reconstruction Commission (TERC) released its final report, with recommendations to accelerate an economic rebound post COVID-19. The report identifies mining and manufacturing, tourism, agribusiness and national defence and security as underpinning the Territory's future

growth. The TERC report notes (p.8) that the Territory is “starting from a narrow economic base focussed on primary resources and raw materials, with relatively few value adding activities”. The TERC report highlights the opportunity to rapidly grow a broader-based regional maritime industry, with more than 7500 vessels operating within 850 nautical miles in the 12 months to March 2020, and Darwin’s potential as a busy naval port. It recommends investing in infrastructure that enables growth, pointing to the importance of strategic infrastructure and development planning. Its focus for growth includes the following goals:

- create jobs in the near, medium and long-term
- attract private sector investment as the ‘engine room of growth’
- support current and emerging industries
- build on the Territory’s competitive advantage
- unlock the potential of the Territory’s regions
- foster Aboriginal economic leadership.

Achieving a \$40B economy by 2030 will require a sustained average annual GSP growth of 3.9 per cent, based on the NT Government de-risking investment and facilitating as opposed to actively pursuing investment, the TERC report suggests. In response, the NT Government has established the roles of Major Projects Commissioner and Investment Commissioner to attract private investment.

The \$5 billion Northern Australia Infrastructure Facility (NAIF) was established by the Australian Government to provide loans for infrastructure projects in northern Australia. NAIF has provided \$700 million for projects in the Territory, including the Darwin Ship Lift Project, Northern Territory Airports expansion, Hudson Creek power station, Batchelor solar farm, Charles Darwin University’s CDU campus and Humpty Doo Barramundi expansion, with a combined capital expenditure of \$1.1 billion (NT Treasury and Finance 2021).

Reflecting Darwin’s proximity to Asian markets, the Territory’s three major export markets are Japan (41.7 per cent of goods exported in 2020, largely LNG), China (accounted for 22.5 per cent of goods exported in 2020, largely LNG and mining commodities such as manganese), Taiwan (10 per cent of the Territory’s exported goods in 2020), Korea (5.4 per cent of goods exports) and Indonesia (3.9 per cent of exported goods, with exports of live cattle increasing by 11 per cent in 2020) (Department of Treasury and Finance 2021).

#### 5.2.4 Population

The Territory’s population is expected to increase from 2020-21 as economic activity strengthens, supporting jobs growth and reducing net interstate outflows, according to 2021 Budget papers. In the two years to the December quarter of 2019, the Territory reported declining population as the economy normalised after construction of the Ichthys LNG project. The population was static in 2019-20 as growth from natural increase and overseas migration offset net interstate outflows. In the September quarter of 2020, the Territory’s population of 246,500 accounted for 1 per cent of Australia’s population, about 60 per cent of whom live in the Greater Darwin area. In June 2016, the Aboriginal population was estimated at 74,546, about 30 per cent of the Territory’s population, with 80 per cent living in remote and very remote regions. The Territory’s population is characterised by its younger profile, with a median age of 33.6, compared with 37.8 nationally. Males outweigh females by 105.4 to 100, likely due to the prevalence of male-dominated industries such as mining, construction and defence. Fluctuations in the Territory’s annual population growth are due largely to variations in interstate migration, which tends to reflect employment opportunities. The Territory’s population is predicted to grow by about 8900 people over the five years to 2024-25, increasing by an average of 0.7 per cent a year (Department of Treasury and Finance 2021).

The Greater Darwin Region includes the cities of Darwin and Palmerston, the Litchfield Shire, East Arm and Robertson Barracks. The region is home to about 147,200 people or 60 per cent of the Territory's population. Greater Darwin has the lowest proportion of young people, with about 32 per cent aged 24 years or under, and the highest proportion of people aged 65 years and over (about 9 per cent) (Department of Treasury and Finance 2021). See the [People and Communities](#) in section 3 for more detail.

### 5.2.5 Labour force

Territory employment is highly cyclical and heavily influenced by investment and construction activity for large, resource-based projects such as the Ichthys LNG project. Significant project-related employment growth is usually followed by a period of declining employment as the economy adjusts. Monthly labour force statistics for the Territory are volatile, with unemployment falling from 7.5 per cent in July 2020 to 5.6 per cent in March 2021. The labour market is characterised by a substantial public sector, with government and community services accounting for 42 per cent of employment in 2019-20, and a relatively large defence and FIFO workforce that is not captured in Territory data reported by the ABS. According to the 2016 Census, there were about 8700 FIFO workers in the Northern Territory (Department of Treasury and Finance 2021).

Budget papers note that skills shortages in 2020-21 were being experienced in many industries, particularly construction, tourism and agriculture. In March 2021, Northern Territory internet job vacancies were up 86 per cent compared with March 2020, indicating further demand for labour. As part of its COVID-19 stimulus measures, the NT Government has provided funding through a \$2 million Critical Worker Support Package to attract hospitality and tourism workers to the Territory and a \$0.75 million recruitment campaign and business support package to find 200 melon pickers for the upcoming season (NT Treasury and Finance 2021).

The TERC report (2020) identified priority areas to develop the economy, with a goal of creating 35,000 new jobs by 2030. Important industries to achieve this include mining and manufacturing, renewable energy, agribusiness, tourism, defence and maritime and digital and space industries.

### 5.2.6 Housing

One factor in attracting workers and their families to the Territory is a strengthening of the Territory's property market, due to increased demand. The Department of Treasury and Finance (2021) suggests the residential population has increased more rapidly than official statistics due to people working remotely from the Territory to escape COVID-19 lockdowns in other jurisdictions but not necessarily reporting a change of address. The Real Estate Institute of the NT (REINT 2021) reports a tight property market across the Territory, with a corresponding increase in rental and purchase prices. Low interest rates and incentive schemes, such as the Territory's BuildBonus grant, contributed to a 48 per cent increase (361 approvals) in residential building approvals in the second half of 2020, with a 56 per cent increase in Greater Darwin (237 approvals). Palmerston's population has increased substantially in recent years with the release of house and land packages in suburbs such as Zuccoli, Durack and Mitchell Green.

## 5.3 Key events or activities causing impacts

Key project-related events or activities creating change processes that may lead to positive or negative impacts to economies and jobs includes:

- mobilisation of the project's construction workforce
- procurement of services and supplies, including the extent of local content
- construction and dredging activities
- the commissioning and operations of the ship lift facility and associated services over the next 40 years
- marketing and investment attraction activities by government and the private sector.

## 5.4 Key risks and opportunities

Potential impacts under Economies and Jobs	
Potential beneficial impacts	Potential detrimental impacts and residual ratings
Strong and more diverse economy from enabling economic infrastructure and capacity-building (BENEFICIAL over the longer-term) (Section 5.3.3)	Frustration by businesses who fail to win tenders or who have unrealistic expectations of opportunities (LOW) (Section 5.3.7)
Local businesses benefit from winning work and enhanced capabilities (NOTICEABLE) (Section 5.3.4)	Detrimental impacts on competing businesses (LOW) (Section 5.3.8)
Enhanced employment and training of local people (NOTICEABLE) (Section 5.3.5)	Crowding out of other economic sectors on the harbour, such as tourism, recreational fishing (LOW) (Section 5.3.9)
Aboriginal jobs and training as a result of the project (NOTICEABLE) (Section 5.3.6)	

## 5.5 Assessment of economic impacts

This section draws on the baseline data outlined above, government reports and consultation with key stakeholders to predict and assess the significance of potential positive and negative economic impacts.

### 5.5.1 Strong and more diverse economy from enabling economic infrastructure

The NT Government's vision is for the Darwin Ship Lift Project as enabling economic infrastructure that will grow the maritime sector and enhance Darwin's competitive advantage as a marine repair and maintenance and sustainment centre for Northern Australia, unlocking direct and indirect benefits. Current large ship lifts in Darwin are at HMAS Coonawarra in Larrakeyah, which has a capacity of 750 tonnes, and Pearl Marine Engineering, a subsidiary of the Paspaley Group, which operates a 1982 mechanical lift with a 2000-tonne capacity (ACIL Allen 2019). This compares with the proposed 5000-tonne capacity of the new ship lift, substantially expanding the range of vessels that can be serviced.

The Northern Territory Government sees the Darwin ship lift facility as supporting the Territory's long-standing strategic vision of building a trade route between Asia and Southern Australia, capitalising on Darwin's strategic potential as a multi-modal transport hub and service and supply base for the offshore oil and gas industry. Government and business stakeholders interviewed for this study (see Consultation Report at Appendix B) suggest the facility will be foundational infrastructure for a marine services precinct, consolidating a range of marine services on the East Arm Peninsula.

A marine services hub in northern Australia is designed to meet the current and emerging needs of marine operations in the Indo-Pacific region, including plans to develop regional maintenance centres in strategic locations such as Darwin to sustain Australia's naval fleet. Marine capabilities are likely to be attractive to the Navy's northern fleet and Australian Border Force, which the Northern Territory Government estimates will account for 40 to 45 per cent of work in the proposed marine industries hub at East Arm. Stakeholder interviews suggest commercial use will also come from vessels supporting the offshore oil and gas industry, tugs and pilot vessels, commercial fishing, pearling, prawning and larger recreational vessels. Value creation includes time savings for vessel owners and operators able to access marine services closer to their area of operations and savings in fuel and labour costs.

Government’s investment of \$400 million (\$100 million from the Northern Territory Government and a \$300 million concessional loan from the Northern Australia Infrastructure Facility – NAIF) is designed to act as a catalyst for increased marine repair, maintenance and sustainment work on East Arm Peninsula. The development of the ship lift and associated marine precinct complements a cluster of multi-modal transport and logistics industries on East Arm: the nearby Darwin Port, marine supply base, railway terminal and East Arm Business Park (see Figure 5.1).

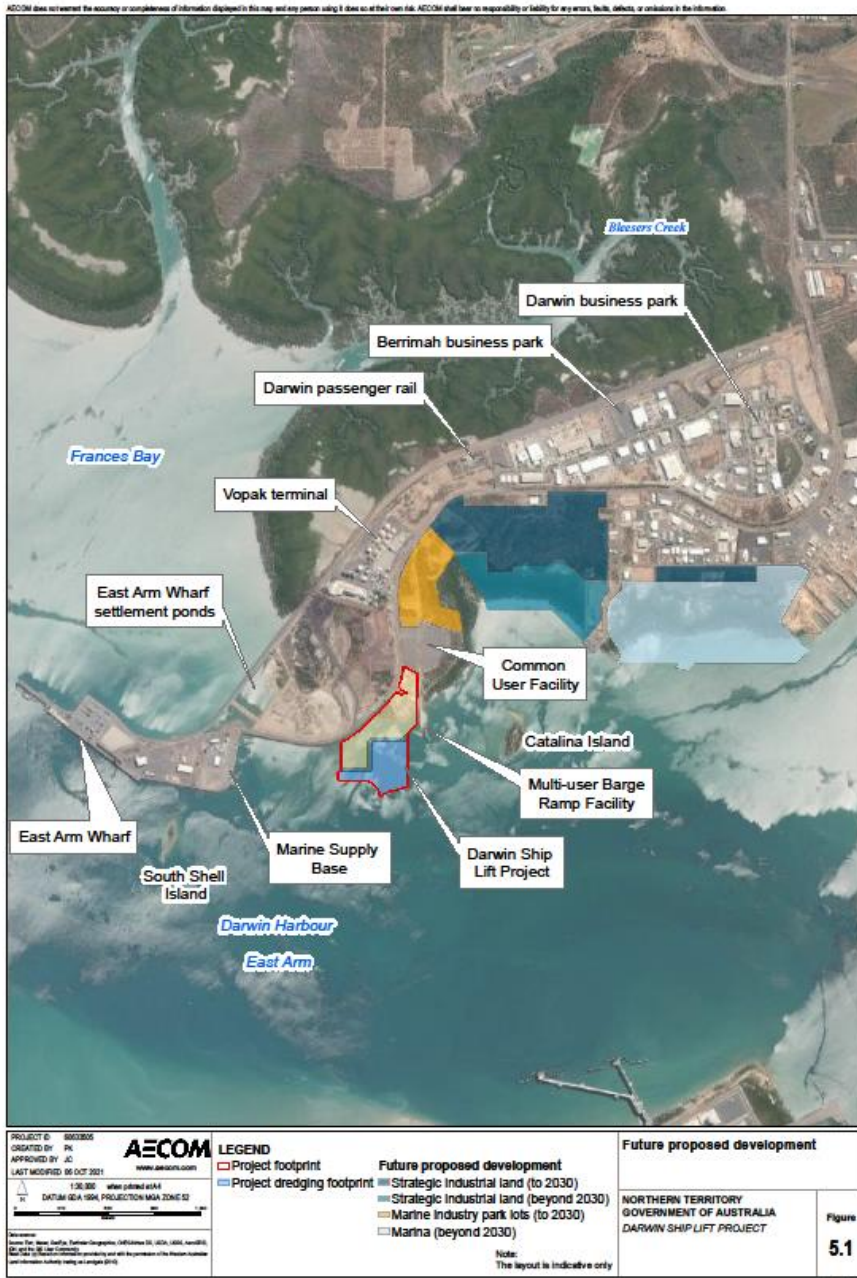


Figure 5-1: Marine Industry Park master plan (Source: AECOM)

Government and private sector investment in the service and supply sector is designed to diversify the economy, boost the capabilities of existing Territory businesses and attract new service providers to Darwin.

Based on a qualitative assessment, the benefits of a stronger economy are predicted to occur at a Territory and regional level based on the experience of the local construction industry supporting major projects. However, stakeholder interviews suggest the benefits are likely to grow exponentially in the medium to longer-term, once the Darwin Ship Lift Project and marine industry park are fully operational, generating increased economic output, diversifying and stabilising the economy, enhancing the marine industry's skills base, attracting private sector investment and increasing government taxation revenue. These benefits are considered likely and consequential, therefore this positive impact is rated as BENEFICIAL.

### 5.5.2 Local businesses benefit from winning work and enhanced capabilities

The Northern Territory Government advises that works packages for the construction phase of the Darwin Ship Lift Project are likely to be:

- clearing of vegetation
- land reclamation
- dredging to create access channels and manoeuvring basins
- installation of piling and wharf superstructure along the water's edge
- quarry and supply of sand, aggregate and protective rock armour
- consolidation and levelling of material used as the base of the hardstand area
- installation of light, medium and high strength paving
- installation of the platform, winches and control mechanisms for the ship lift
- construction of roads, perimeters, fencing, security systems and onsite buildings
- installation of utilities, lighting, draining, water treatment and waste management.

The Northern Territory Government estimates that 15 to 20 per cent of construction costs may be spent on materials and inputs not manufactured in the Northern Territory, including structural steel, the platform and winches for the ship lift and self-propelled modular transport system (personal communication, ship lift team, NTG). This is difficult to quantify until a design and construct contract is awarded. However, the ICN NT in 2021 conducted a capability mapping and gap analysis study of businesses in the Greater Darwin Region associated with servicing the marine industry. The report, commissioned for the Maritime Industry Development Plan (DITT 2021), identified 522 businesses with the capacity to service 81 scopes of work analysed. The ability of these businesses to realise economic benefits is likely to depend on many factors, including the sequencing of other major projects, contractors' procurement policies and existing relationships with interstate and local suppliers.

Government expects most labour will come from the Darwin region, drawing on existing civil works and engineering capacity. The Master Builders Association of the NT (MBANT) concurs that the local civil and construction industries have sufficient experience with defence and other major projects to compete for work on the project. MBANT CEO David Malone (stakeholder interview) believes that, while construction activity has been growing, the industry has capacity to take on more work.

A report for the Northern Territory Government and Industry Skills Advisory Council of the NT (Deloitte 2020) found that maritime stakeholders see the opportunities in an expanded maritime sector, but success is contingent on the development of workforce capability. At a national level, benefits are most likely to accrue in the shape of increased trade and naval activities being based in Darwin.

Potential benefits at a local and regional level include new jobs, population growth and sustainable business opportunities in the Greater Darwin Region. The Cities of Darwin and Palmerston and Litchfield Council, which

constitute the likely catchment areas for procurement and workers for East Arm, all have strategic or community plans that aspire to prosperous, growing municipalities that are safe, healthy and liveable.

- The **City of Darwin's Strategic Plan**, "*Darwin 2030 City for people. City of colour*" (2020) aims to develop an economic development plan to retain people and jobs in the municipality.
- **Palmerston's Community Plan** (2010) has the vision of being a "place for people" and to be the "family city" of the Northern Territory, with a vibrant economy. For Palmerston, a vibrant economy means the city can grow and prosper because it is a place where people shop locally, retail spaces are full, employment rates increase, the population is growing because families stay, more tourists visit, there are more funds for council to invest and more businesses.
- As with Palmerston, **Litchfield Council's Strategic Plan 2018-22** has a focus on being a family-friendly locality and "the best place to live in the Top End". Litchfield also aspires to economic opportunity and prosperity, based on full employment and strong industries and businesses. It is predicted that the Darwin Ship Lift Project will have no detrimental impact on these aspirations.

It is predicted that short-term economic benefits during construction are likely to be IMPERCEPTIBLE at a local, regional and Territory level. However, given likely incremental growth, the residual rating increases to NOTICEABLE given government's strategic focus on maximising skills and industry development through the Marine Industry Development Plan. Economic and social benefits are likely to accompany an expanding marine repairs and maintenance industry as it employs locals, and direct and indirect benefits flow through the local economy.

### 5.5.3 Enhanced employment and training of local people

As outlined above, a key objective for economic growth is to drive jobs and training for Territorians. However, the level of skills development is difficult to quantify given the complexities of the labour market, uncertainty regarding trajectories of development and the extent to which construction of the Darwin Ship Lift Project competes with labour force demands of other projects (see Section 10.3).

An assessment by Deloitte (2020) for the Northern Territory Government and Industry Skills Advisory Council of the NT (ISACNT) suggested the ship lift and naval investments in Darwin represent "a unique opportunity" to invest in a skilled maritime workforce. The report notes established capability across a variety of sustainment activities, vessel types and clients but finds a thin market may hinder capacity development.

Among the report's findings:

- the Territory maritime industry is reliant on FIFO workers
- there are areas of acute demand for training, compounded by competition with the interstate maritime industry for workers, particularly South Australia
- there is alignment between skills gaps and skills covered by the NT Designated Migration Arrangement
- a need for increased training capacity that addresses gaps in education pathways, such as vocational education and training (VET) and addressing the needs of Aboriginal people
- projects such as the ship lift are needed to ensure the NT maritime industry remains competitive.

The report suggests a strategic and coordinated approach to advanced training, including scale achieved by collaboration with other industry sectors, such as extractive industries.

The likely short-term construction workforce for the ship lift facility is relatively small, at 100 workers. Stakeholder interviews suggested most construction workers are likely to come from the Greater Darwin Region although some skilled labour may come from interstate. The population profile (see [Section 4](#) of this report) would suggest workers are more likely to be drawn from Palmerston, as the nearest residential area.

Previous analysis for the proposed TNG processing plant on Middle Arm (2019, p.98) suggested Palmerston suburbs have a higher proportion of workers with trade backgrounds, working in construction, mining and manufacturing. However, the transience of Darwin's construction workers has been noted in previous reports, including the East Arm Wharf Expansion (URS 2011).

Uncertainty is compounded by the current COVID-19 pandemic, which has put pressure on all industry sectors, reduced the mobility of workforces and created a tight and more expensive housing and rental market (REINT 2021). The 2021 Budget papers, cited above, note the high dependency of the mining industry in the Northern Territory on FIFO workers and skills shortages across industry. ACIL Allen (2019) noted that defence, oil and gas and maritime industries are competing in a tight labour market for a limited pool of workers with the appropriate skills and experience.

The key workforce benefits of the Darwin Ship Lift Project are likely to accrue as industry capacity expands and employs a more permanent local workforce. The NT Government estimates that jobs generated and supported by infrastructure delivered by the project will range from 78 to 146 full-time equivalents (FTE) a year in Year 3 (start-up) and between 187 and 369 additional FTE a year by Year 20 (see Table 5-2).

The ability to realise and capitalise on jobs and skills development opportunities is likely to depend on economic conditions at the time, competition from other projects, government skills development programs and the attraction and retention of a suitably skilled workforce.

While short-term benefits are predicted to be IMPERCEPTIBLE, stakeholder interviews suggest that longer-term benefits will grow incrementally and be consequential. The likelihood of growing a local marine workforce is enhanced by the Maritime Industry Development Plan, which covers a workforce analysis, identification of skills gaps and recommendations for industry training and capacity development. The residual rating for this potential opportunity is therefore assessed as NOTICEABLE.

#### 5.5.4 Aboriginal jobs and training as a result of the project

The Master Builders Association of the NT suggested at interview that local civil and construction contractors have long experience of employing and training Aboriginal workers and many have Aboriginal-owned subsidiaries. The Northern Territory Government is preparing an Australian Industry Participation Plan, to meet the conditions of its \$300 million NAIF concessional loan, and will require its successful design and construct contractor to prepare a Territory Benefit Plan. The NT Government has highlighted to prospective bidders the importance of ship lift contractors maximising local and Aboriginal participation. The Larrakia Development Corporation expressed a concern that many contractors give tokenistic consideration to partnering with Aboriginal enterprises. The Corporation wants to ensure a high level of accountability on this issue. Success will be influenced by the relatively small scale and duration of work, competition from other construction projects and available skills levels. Despite some uncertainty, this beneficial impact was given a residual rating of NOTICEABLE.

#### 5.5.5 Frustration if opportunities fail to materialise

Major projects can raise unrealistic expectations by local businesses of winning construction work or paint an overly optimistic picture of potential economic growth. Several factors mitigate this risk for the Darwin Ship Lift Project, including:

- enhanced local capacity from recent major projects, such as INPEX's LNG plant, the marine supply base and East Arm Wharf expansion
- MBANT believes Territory civil and construction companies have the capacity to do most of the work required for ship lift construction

- government’s weightings in tender documents that reward local industry participation and a requirement by contractors to prepare a Territory Benefit Plan
- early market analysis by the Land Development Corporation, detailed market analysis by industry specialists Royal Haskoning and a preliminary market analysis commissioned from ACIL Allen (2019)
- Government’s consultation with the Royal Australian Navy and Border Force around the future servicing requirements of the northern fleet
- development of a Territory-wide Maritime Industry Development Plan, which includes capability mapping by the ICN and workforce analysis (as outlined above)
- the need for the ship lift was identified as part of the Land Development Corporation’s strategic planning for the East Arm Marine Industry Park and complements existing land use at East Arm
- the influence of the NT Chamber of Commerce, which has set up a Marine Industry Council, which is advocating for greater engagement by the NT Government with the entire maritime industry.

Stakeholder interviews described Darwin’s competitive advantage as its strategic location and deep-water port. While Darwin may not be able to compete on price with centres such as Perth, Singapore and Batam in Indonesia, a more multi-faceted marine industry offers convenience for time-sensitive customers seeking repairs and maintenance services close to their area of operations. Reports commissioned by government recognise a competitive market, that vessel operators may choose other locations and competing suppliers may have labour costs and capabilities that Darwin operators may find difficult to match. While a risk remains, the confluence of strategic opportunities and collaboration between the public and private sectors should help address these issues, therefore this potential risk is assigned a residual rating of LOW.

#### 5.5.6 Detrimental impacts on competing businesses

Several marine businesses in Darwin have smaller ship lifts or travel lifts that can service vessels from 50 to 500-tonnes. These businesses may be concerned at competition from the new marine precinct taking market share from existing businesses with drydocking facilities, particularly given the government funding for the project. On the other hand, they may benefit from an expanded maritime industry and the ability to grow their business, for example by taking advantage of land and common user infrastructure in the Marine Industry Park. The NT Government believes that development of a Territory-wide Maritime Industry Development Plan, with input from local industry, is likely to help existing businesses make informed decisions as they navigate sectoral growth.

Some stakeholders interviewed for this assessment queried the pricing regime for the ship lift and were concerned they may be priced out of the market by larger users. The Northern Territory Government is preparing legislation that will incorporate an access and pricing regime. Stakeholders also welcomed the ship lift’s common user status, which means they will have access to a range of providers. However, the maritime industry wants greater certainty from government that their needs have been considered. Support may be contingent on visible progress on ship lift procurement and commitment from foundation customers (including Defence) before smaller existing operators are prepared to “bet the house” (comment in interview) on investing in business growth and relocating to East Arm.

Mitigating potential detrimental impacts remains uncertain, given the role of market forces. This risk is assigned a residual rating of LOW, given the strong forces that appear to be driving growth, however the rating has a level of uncertainty.

### 5.5.7 Crowding out of other economic sectors over time

The operations of the Darwin Ship Lift Project could have a crowding out effect on other industry sectors if changes to land or sea use were at a scale that impacted on the amenity of the area for marine tourism (such as sunset cruises) and recreational fishing. Given the relatively localised impacts of the project in an existing industrial area, this is considered unlikely at a project level but could occur on a cumulative scale.

Other economic displacement could occur if an expanded marine sector competed for staff or created inflationary pressures. Again, the scale of the project would suggest these impacts are unlikely. Stakeholders considered the Darwin Ship Lift Project is more likely to complement than detract from other marine and logistics businesses

Another potential impact is opportunity costs for other industry sectors wanting to use the project site. The ship lift facility creates limited change of land or sea use as it will be built between the marine supply base and Multi-user Barge Ramp Facility (MUBRF) and will share an access channel with the MUBRF. The site is designated Zone DV (Development) under the Northern Territory Planning Scheme 2020. The purpose of this zoning is to facilitate the development of major strategic industries that are important to the future economic development of the NT, including gas, road, rail or port-related industries. East Arm Peninsula was earmarked for port and industrial development in the Darwin Regional Structure Plan 1984, Darwin Regional Land Use Structure Plan 1990 and East Arm/Middle Arm Peninsulas Masterplan 2008. More recently, East Arm was designated Strategic Industry in the Darwin Regional Land Use Plan (Planning Commission 2015). The ship lift facility was recognised as a common user facility for maritime and defence use in the 10 Year Infrastructure Plan 2017-2026 published by the Department of Planning, Infrastructure and Logistics (Department of Infrastructure, Planning and Logistics 2017).

The risk of crowding out of other sectors is assessed as LOW. At a cumulative scale, however, increasing industrialisation of the harbour is perceived by stakeholders as a risk to social, cultural, ecological and economic values. This is discussed in the cumulative impacts at Section 10 of this report.

### 5.5.8 General

The following paragraphs respond to additional specific information requested in the NT EPA's Terms of Reference.

#### *5.5.8.1 The project's economic costs and benefits, including a cost/benefit analysis or similar studies*

The Northern Territory Government suggests that, over the next decade, the Darwin Ship Lift Project should act as enabling infrastructure. The NT Government estimates that the infrastructure delivered by the project will contribute to additional industry spend on marine repairs and maintenance of between \$130 and \$260 million a year, generating and supporting an additional 187 to 359 additional jobs (see Table 5-2).

While ACIL Allen modelled costs and benefits of the project as part of a market analysis in 2019 (see Table 5-2), it is suggested the analysis be used with caution as the design of the facility and related costs had not been finalised. The report also preceded several changes to the project engineering and footprint, changes in Australia's defence posture in the north and a renewed focus on economic reconstruction from COVID-19. ACIL Allen notes the limitations of its study, including gaps in available data and uncertain development scenarios. As government stakeholders note, the ship lift facility will operate in a competitive market and future revenue streams and benefits cannot be guaranteed.

### 5.5.8.2 The estimated capital and annual operational expenditure and estimated total revenue

The NT Government has supplied the consultant with an outline of its projected capital expenditure and jobs against five project stages (see Table 5-2). These are described at a high level because of uncertainty about each of the phases and their associated effects.

Capital expenditure of \$400 million on design and construction of the ship lift and adjacent hard stand is likely to be concentrated in the years 2022 to 2024/25. The design of the facility and related costs have not been finalised, but Government suggests that 35-40 per cent of the capital cost of construction may be expended on marine and civil engineering work that could be delivered by firms operating in the Northern Territory. The balance represents the cost of purchasing, delivery and commissioning of imported items, project management, consulting and contingency costs. The Northern Territory Government suggests these are broad estimates. A more reliable picture is unlikely to be determined until the design and construct contractor is selected and the construction contract awarded.

Government will make complementary investments in the adjacent Marine Industry Park to enable the operations of existing and prospective marine service providers. The MIP is operated by the Land Development Corporation, which operates on commercial principles, so it is assumed the delivery of these blocks will be self-funded.

The NT Government estimates the additional industry spend on marine repairs and maintenance at between \$2283 and \$4505 million over 20 years (see Table 5-2 below). The following table outlining costs and benefits is based on a preliminary report by ACIL Allen (2019), with adjustments to reflect changes in the scale and delivery of the facilities assumed.

Table 5-2: Estimated project capital expenditure, revenue, direct and indirect employment estimates of the Darwin Ship Lift (Source: NT Government)

		Drivers of project economic and social opportunities and effects					
Phase <sup>1</sup>	Approx. duration <sup>2</sup>	Upfront capital expenditure <sup>4</sup>	Ongoing capital expenditure <sup>5 6</sup>  Assuming a level of activity in the base case	Estimated additional industry spend on marine repairs and maintenance, which benefits the NT economy <sup>5 7 11</sup>		Additional employment opportunities arising from the Project <sup>5 7 11</sup>  Average additional FTE/ per annum	
				Base case	High case	Base case	High case
Planning, design, procurement, contracting	2 years	\$15 M	N/A	N/A	N/A	N/A	N/A
Construction and Commissioning	2-3 years	\$385 M	N/A	N/A	N/A	100 FTE <sup>9</sup>	100 FTEs <sup>9</sup>
Start-up	3 years	N/A	\$1.83 M	~\$159 M	~\$314 M	78 FTE	147 FTE
Consolidation	10 years	N/A	\$11.73 M	~\$1,195 M	~\$2,358 M	170 FTE	324 FTE
Expansion	7 years	N/A	\$10.29 M	~\$930 M	\$1,834 M	187 FTE <sup>10</sup>	359 FTE <sup>10</sup>
<b>All phases</b>	<b>~20 years<sup>3</sup></b>	<b>~\$400 <sup>4</sup> M</b>	<b>~\$23.85 M</b>	<b>~\$2,283 M <sup>8</sup></b>	<b>~\$4,505 M <sup>8</sup></b>		

**Explanatory notes to Table 5.2 (Northern Territory Government 2021)**

1. The project involves delivering new marine infrastructure so that the Darwin-based marine repairs and maintenance industry can utilise and leverage these facilities to gain market share in a growing market, generate additional income, and employ more people. The benefits are assumed to arise from five sequential phases from planning through to consolidation and expansion, after local industry has established a reputation and comparative advantage in the market. Gradually phasing in the estimated economic effects recognises that the Darwin-based industry will be a new entrant to a mature market, competitors may act to limit competition, and it may take time for the Darwin-based industry to establish successful and sustainable growth strategies. The government is currently developing a Territory wide Maritime Industry Development Plan to inform and underpin this growth opportunity for local industry.
2. The phases are simply a mechanism to gradually introduce the benefits of the opportunity. The duration of these phases is an estimate, and could be shorter or longer than assumed.
3. The estimated economic effects arising after the facilities are delivered and operational have been estimated over 20 years, even though the facilities will be built to a design life of 40 years and regular maintenance and upgrades could see the facilities operational for longer. Twenty years is consistent with the forecasting horizon adopted by ACIL Allen's 2019 study and was deemed to be acceptable, as forecasting accuracy beyond 20 years is questionable.
4. The project budget is \$400 million, covering all phases and aspects of the project. The estimates assume the project-related infrastructure will cost \$385 million to deliver, although this is not certain as the design has not been finalised and a contract has not yet been signed.
5. The estimates of ongoing capital expenditure, additional industry spend on marine repairs and maintenance, and additional NT employment are based on a 2019 preliminary study by ACIL Allen Consulting Pty Ltd (ACIL Allen) commissioned by the NT Department of Trade Business and Innovation (the *Assessment of SLAMI Complex: Preliminary Market, Financial and Economic analysis, February 2019, ACIL Allen*). Changes in the scale and delivery of the facilities occurred since ACIL Allen completed its study in early 2019 and a number of minor adjustments were made to align some ACIL Allen's estimates to the approach assumed for the EIS submission in late 2021. The ACIL Allen study adopted three different scenarios to estimate varying levels of use of the new facilities, and the associated expenditure and employment effects – a low case, a base case and a high case. The table notes which ACIL Allen scenarios the estimates in the table are drawn from.
6. The level of ongoing capital expenditure will be directly affected by the design, and the level and intensity of use of the facilities. The estimates in the table align to the level of activity assumed by ACIL Allen in their base case, and adjusted to recognise that the capital expenditure will be lower in the early years of operation than in later years because newly installed facilities will be covered in the early years by manufacturer's warranties, and the liability of the builder for any defects arising from construction, etc.

**Explanatory notes to Table 5.2 (Northern Territory Government 2021)**

7. ACIL Allen effectively assumed that all benefits would arise as soon as the facilities were operational, but subsequent discussions with industry and the operator of the facilities confirmed that a more conservative, phased approach is warranted (see point 1). Hence, the benefits estimated by ACIL Allen for the early years of operation have been adjusted to align to the phasing assumptions, and it is not until around Year 8 after the facilities are commissioned that the full increase in expenditure on marine services and supply, and increased employment, assumed by ACIL Allen are reflected in the projections.
8. The total additional industry spend on marine repairs and maintenance is over 20 years, and the numbers in the table reflect the base and high level of activity assumed by ACIL Allen, but with activity and expenditure gradually increasing over the first 10 years of operation (see point 1).
9. The project is assumed to create 100 direct jobs per annum (FTE) during the two to three year construction phase, although the actual number will be determined by the design and delivery methods chosen by the contracted builder. Analysis of the nature of the work required suggests that much (but not all) of this work could be undertaken by local firms with the existing labour in the Darwin market. If this is the case, there will be limited spill over effect in supporting additional indirect jobs because the 100 FTE are assumed to be already in the Darwin labour force. A conservative approach has been adopted, and the table does not include an estimate of the number of indirect jobs supported during the construction phase.
10. The estimate of additional annual employment once the facilities are fully operational includes both direct and indirect employment opportunities invoked by the use of the facilities the project will deliver. The level of activity and expenditure is assumed to gradually increase over the early years of operation (see point 1), and it is assumed that it takes until Year 8 for the full employment effects to arise. The table includes the estimated additional employment per annum made by ACIL Allen for the base and the high case.
11. The increased spending by the Darwin-based marine repairs and maintenance industry, and the increased workforce will generate broader benefits for the NT and Australian economies because they will consume inputs that create opportunities for other businesses and employees, generally known as the multiplier effect. It is difficult to predict how much of the multiplier effect will be captured within the NT economy because of the confounding effects of the NT's relatively small, existing manufacturing and white collar/ technical services base, the difficulty forecasting how demand for various inputs may change as sub-sectors grow, and many of the inputs consumed within the NT are, and may continue to be, produced elsewhere. The challenges of forecasting these effects into the future with a high level of confidence has encouraged the adoption of a conservative approach, and the table does not include estimates of the potential multiplier effects for the broader NT economy, although they are expected to arise.

#### 5.5.8.3 *Details of relevant costs and benefits of alternative options to the proposed action.*

The project involves the construction and operation of new marine infrastructure in Darwin Harbour. The NT Government's expectation is that this will expand the capacity of local industry to service a regional maritime market including commercial, defence and border security vessels. It should also broaden and deepen the capabilities of the local marine industry, which would generate spill-over benefits for smaller coastal, tourism, research and recreational vessels. The location chosen for the facility is on the East Arm peninsula of Darwin Harbour, next to East Arm Wharf, the Marine Supply Base, the Multi-user Barge Ramp Facility, a Common User Facility, and the Marine industry Precinct.

The alternative to the proposed action is to not proceed, or to proceed in an alternative location. Government has already committed to delivering the ship lift facility because of the broader economic benefits, including additional jobs and the industry growth it is expected to deliver. The NT Government believes that not proceeding with the proposed action would involve an opportunity cost, in terms of forgoing the expected benefits. Government has evaluated alternative locations for the ship lift facility within Darwin Harbour and concluded that the current site presents the most attractive and commercially feasible option, provided relevant environmental, social and cultural effects can be acceptably managed.

#### 5.5.9 Summary of economic and jobs opportunities and risks

The Darwin Ship Lift Project is expected by the NT Government to deliver important enabling infrastructure that will underpin growth in the Darwin-based marine service and supply industry. This would generate substantial economic benefits, particularly in terms of long-term economic uplift, jobs and increased skills levels. It is difficult to quantify the distribution of these impacts, which will rely on the Territory's ability to gain market share, attract private sector investment and boost local business and workforce development capacity. However, to maximise the local distribution of benefits, it will be important to ensure that benefits are distributed across Darwin's long-established maritime sector, grow a skilled workforce, and are driven by a collaboratively-developed master plan for the maritime industry. This will instil greater confidence among small to medium enterprises that the project will benefit more than "gold plated" customers, as one interviewee commented.

At a project level, potential negative impacts are assessed as unlikely and of low consequence, particularly given the relatively small scale of construction and location in a master-planned precinct intended to support multi-modal transport and logistics industries. Disturbance is likely to be localised and readily absorbed rather than disruptive.

## 5.6 Mitigation and management

Realising economic opportunities from the Darwin Ship Lift Project will require the attraction of private sector investment – both local and external - that grows the capacities and sustainability of the marine industries sector. These challenges are being addressed by a Marine Industry Development Plan, a whole-of-government strategic blueprint for the Territory's maritime industry. Components of the plan, as discussed above, comprise relevant management strategies for the economic impact assessment, including:

- capability mapping by the NT Industry Capability Network (ICN)
- analysis of the regional labour market, skills shortages and training approaches, including a study commissioned by the Industry Skills Advisory Council NT (ISACNT) and Northern Territory Government to examine the feasibility of a maritime academy (Deloitte 2020)
- ongoing market analysis, including by the Land Development Corporation for the Marine Industry Park.

In relation to grow the economy and attracting private sector investment, the Northern Territory Government's response to the Territory Economic Reconstruction Commission has included the appointment of three infrastructure and investment commissioners.

Other specific mitigation strategies to manage the risks and opportunities identified:

#### **Planning and whole-of-life operations**

- better whole-of-government engagement with the local maritime industry on master planning and business development approaches
- collaborative approaches between the Maritime Industry Development Plan, oil and gas industry, construction, aviation and mining on workforce development and business planning
- a transparent access and pricing regime (legislation is being developed by the Northern Territory Government)
- ongoing market analysis and engagement by the Land Development Corporation and investment attraction arms of government.

#### **Procurement for the ship lift**

- ICN capability mapping, to guide short-listed design and construct contractors on local industry capacity
- use of ICN Project Gateway to advertise opportunities with the successful design and construct contractor
- good communication and industry briefings, in conjunction with the Northern Territory ICN, to enhance the preparedness of local businesses to win work (and manage expectations) for the ship lift construction
- proponent (NT Government) to prepare an Australian Industry Participation Plan, to meet the requirements of the NAIF funding and the Project's Major Project Status)
- selected design and construct contractor to prepare a Territory Benefit Plan, in line with the requirements of the Territory Benefit Policy, to maximise opportunities for Territory businesses and workers during construction and operations
- an Aboriginal Engagement Strategy, required as part of NAIF's funding, including workforce development and Aboriginal enterprise development
- adherence to the NT Government's Aboriginal Contracting framework, designed to create opportunities for Aboriginal-owned businesses as well as development and training of Aboriginal workers
- demonstrated compliance and reporting against local participation provisions by prime contractors and their sub-contractors.

For more detail, see the Social Impact Management Plan at Appendix C to this report.

## 6. Cultural Identity

What is covered by culture and identity	What the Terms of Reference asked for
<p>Covers connections to kin and country, cultural authority and respect for Aboriginal worldviews and cultural values. Cultural identity can be affected by reduced access to land and traditional livelihoods, damage to sacred or important cultural sites, threats to traditional leadership or dilution of shared values. This dimension also covers the shared culture and values of communities.</p>	<p>Provide sufficient information to enable assessment of whether the Proposal is likely to meet the NTEPA's objective to protect the rich social, economic, cultural and heritage values of the Northern Territory.</p> <p>Identify all places and items with historic and/or Indigenous cultural heritage values, that are protected or listed on registers of historic and/or cultural heritage.</p> <p>Describe the location of Aboriginal and non-Aboriginal sites and AAPA certificates.</p> <p>Potential risks at a project and cumulative level of impacts on cultural and historic heritage values on land, in the intertidal zone or submerged in the harbour - from dredging, reclamation or marine traffic.</p> <p>Measures to protect and avoid such impacts.</p>

### 6.1 Overview

Cultural identity covers disturbance to both material (archaeological) and living (anthropological) culture. This chapter, therefore, draws on the separate Archaeological and Heritage Assessment by Earthsea (EIS Appendix N) and broader consideration of potential cultural impacts, based on disturbance to Larrakia values and spiritual connections to Darwin's land and seas. It also considers the extent to which non-heritage listed historical sites are important to Territorians' cultural identity.

East Arm Peninsula has played a strong role in Darwin's unique history, first as home to Darwin's traditional owners, the Larrakia 'saltwater' people, who have lived, fished and foraged along its shores for centuries. East Arm also has a rich post-settlement history. The project site was originally an island hosting a quarantine station, which operated from 1931 until it was largely demolished in the 1990s to develop East Arm Port. A leprosarium operated from 1955 to 1982 (demolished to make way for the new railway). East Arm made an important contribution to Darwin's World War II activities, including a Catalina Flying Boat Base on Quarantine Island and Z Force activities. The flying boat base is within the project area, while the site of a lugger maintenance section is 200 metres to the East (Earthsea Heritage Surveys 2020).

#### 6.1.1 Larrakia connections

Larrakia people retain strong cultural and spiritual connections to Darwin Harbour. Based on observations during AECOM studies for the Marine Industry Park in 2015, some Aboriginal people still frequent the broader East Arm shoreline for traditional hunting and foraging activities and picnics (personal communication at the time). The area was surveyed with Larrakia woman Lorraine Williams for the East Arm Wharf Expansion EIS (see 1.12.13 of the East Arm Wharf Environmental Impact Statement Executive Summary). An Aboriginal Areas Protection Authority (AAPA) certificate was issued to Northern Territory Government in 2011 as part of the East Arm Wharf Expansion plans. An AAPA certificate was also issued to the Northern Territory Government in 2019 for the Darwin Ship Lift Project. A report by Earthsea Heritage Surveys for the East Arm Wharf Expansion EIS (2011) notes that Larrakia people consulted during the archaeological and cultural heritage

survey “expressed concern regarding the potential destruction of important ecological habitats for natural resources such as mangroves” (p. 74).

Catalina Island, east of the project area, is known as “Yirra” by the Larrakia and has been identified as a sacred site. Nearby, Old Man Rock is a registered archaeological site. INPEX’s Environmental Impact Statement (2011) cites research for the Darwin LNG plant by Dames & Moore in 1997 and 1998, which describes the Kangaroo Dreaming associated with the site.

*There is a large shell midden on the site, surrounded by smaller middens. The same location is also littered with small amounts of crumbling concrete and steel remnants, and other industrial waste.*

*The area of water around the island is believed to be dangerous: people approaching should do so in a certain way so that the Kangaroo does not thrash its tail and swamp their boats. The sand bars extending from the island represent the tail of the Kangaroo. Aboriginal families utilise the area for fishing and foraging and to pass their knowledge of this Dreamtime story on to their children.*

### 6.1.2 World War II and maritime heritage and history

As outlined in the Earthsea Archaeological and Heritage Assessment (EIS Appendix N), the East Arm Peninsula played a crucial role during World War II when it became a refuelling base and defence headquarters.

Defence infrastructure included the strategically significant Catalina Flying Boat Base (FBB), occupied by the Royal Australian Air Force (RAAF) during the war. The base consisted of 70 buildings spread over a large area. The flying boat base included a large tarmac hardstand, hangar, workshop and stores with associated maritime infrastructure including a large concrete ramp enabling Catalinas to be taken in and out of the water, a concrete slipway with iron rails and a timber jetty. It included offshore marine infrastructure, such as permanent Catalina and vessel moorings. Maintenance and repair activities mostly took place on the hardstand at the East Arm Flying Boat Base, however some maintenance works were carried out on the Catalinas while they were on their moorings or under tow. About 200 metres east of the project site is the former Lugger Maintenance Section (LMS), which supported Z Special Unit’s operations in South-East Asia during the war.

A number of aircraft wreck sites in the general East Arm area include the Catalina 2 (RAAF Catalina A24-69), which is close to the proposed boundary. The Archaeological and Heritage Assessment (Earthsea at Appendix N) recommends an exclusion zone. The Catalina 3 (RAAF Catalina A24-206) is to the south of Catalina Island, more than a kilometre from the project site. Other maritime wreck sites to the south of the project area, include Catalina 4 (United States (US) Navy Patrol Wing 10 28-5MNE) and Catalina 5 and 6 (US Navy Patrol Wing 10 PB4-4). The Catalina wreck sites are not protected under the *Shipwrecks Act (Cwlth) 1976* and none are considered to be war graves.

Most of the flying boat base has been demolished to make way for industrial development. The surviving features as of 2015 were the Catalina ramp, crash boat slip way, a mooring pile and some fragments of a fuel pipeline (Earthsea). Four of the Catalina flying boat wrecks have Northern Territory heritage status. However, in 2014 and 2015 a decision was made not to declare the Catalinas 2 and 3, the Catalina Flying Boat Base and World War II Lugger Maintenance Section.

Other nearby historical sites have been lost to industrial development on East Arm. The quarantine station was on an island separated from the peninsula by mudflats and mangroves. In 1931, it replaced a quarantine station built at Channel Island in 1885, which then became a leprosarium. Most of the quarantine station buildings were demolished in the 1990s, as East Arm Port was developed. The old Catalina ramp was used as a recreational fishing boat ramp until recently.

The 24-metre wooden vessel, the *Rushcutter*, is currently on a hard stand in the Bhagwan laydown area after sinking in 2016 and being retrieved from Darwin Harbour in 2018. The *Rushcutter* is a former harbour defence motor launch involved in Z Special Unit command raids on islands north of New Guinea. Earthsea suggests the vessel has heritage value as it is likely the last of its kind in Australia. As noted by ABC Radio in early 2021:

“The *Rushcutter*, renamed since its wartime registration title of HDML 1321, has had a patchy history since its launch in Hobart in 1943. But its darkest days may be ahead. It is listed on the 600-strong Australian Register of Historic Vessels.” (Byrne 2021).

Earthsea’s Archaeological and Heritage report at EIS Appendix N recommends the current owner of the *Rushcutter* remove it, in recognition of its historical association with Darwin.

## 6.2 Key events or activities causing impacts

Key events driving change processes include:

- dredging, clearing, reclamation and construction which causes the loss of degradation of Larrakia and World War II cultural, heritage and historically significant sites
- fencing of land reducing access to traditional activities, such as caring for country, hunting, fishing, camping and foraging.

## 6.3 Key risks and opportunities

Potential impacts – cultural identity	
Potential beneficial impacts	Potential detrimental impacts and residual ratings
	Damage to remnants of European heritage and history, namely World War II heritage sites (MEDIUM)
	Damage to cultural heritage (MEDIUM)

## 6.4 Impact assessment for cultural identity

Heritage impacts are covered by Earthsea’s Archaeological and Heritage Assessment (Appendix N), to which this section cross-references.

### 6.4.1 Loss of World War II heritage

As Earthsea’s report notes, some World War II sites on East Arm have been nominated for heritage declaration. However, a decision was made not to declare them. Darwin’s wartime history is highly valued by veterans who served there and their families (Earthsea). The cumulative loss of World War II historical sites was of particular concern to Margaret Clinch, convenor of the Planning Action Network Group (PLAN) during stakeholder interviews. Ms Clinch commented that heritage should be seen as an asset but that many tangible remnants of Darwin’s World War II history are being lost.

Going by the media campaign to save and restore the *Rushcutter* (James 2018) after it sank in Darwin Harbour, any loss or further damage to the *Rushcutter* would be a sensitive issue for some members of the community.

As noted by Earthsea, the loss of World War II heritage features within the project footprint are certain, as they will be demolished or buried by reclamation and construction works. This loss is unable to be mitigated, so attracts a high rating under risks to heritage (Earthsea). Based on previous reports and feedback from the Planning Action Network, the loss of both marine and terrestrial heritage and historical sites will be of concern to heritage and historical groups. While individually insignificant, the continued loss of historical and heritage sites reduces consideration of their interrelatedness with other World War II sites around Darwin and visible remnants of the war effort. The consequences may be able to be mitigated slightly through interpretive signage. This risk is given a residual rating of MEDIUM.

#### 6.4.2 Damage to cultural heritage

A recurrent theme in previous assessment documents (eg for East Arm Wharf Expansion: Elton Consulting and URS 2011) is concern by Aboriginal stakeholders at the potential damage of identified Larrakia sites, which are seen as important cultural heritage. The loss of formal Larrakia cultural heritage is determined by Earthsea as unlikely, due to legislative protections. Earthsea's Archaeological and Heritage Assessment (Appendix N) notes concerns about the potential of tidal flows and sedimentation from dredging around Catalina Island to erode the sand bar at the northern end of the Catalina Island, which would cause distress to Larrakia traditional owners. Although it is likely that the technical risk of damage to cultural heritage can be mitigated through an appropriate management plan, the consequences of damage to cultural heritage would cause distress, therefore the significance of this potential impact is assessed as MEDIUM.

#### 6.4.3 Other cultural impacts

Previous assessments have identified Larrakia concerns about the potential loss of culture from development around the harbour. For example, Larrakia people interviewed for the East Arm Wharf Expansion EIS (URS and Elton Consulting 2011) wanted assurance that existing access rights to the harbour will be maintained for hunting and food gathering. They suggested consultation with the Larrakia Rangers and incorporation of Larrakia traditional knowledge in studies of the harbour.

Potential impacts on Aboriginal cultural identity screened out as negligible include potential impacts on Larrakia spiritual and cultural connections to their land and seas and traditional livelihoods. While Larrakia people hunt, fish and camp around Darwin Harbour, the ship lift site is relatively small and is already fenced off and inaccessible for such activities. However, cumulative impacts on the cultural values of Darwin Harbour are assessed as HIGH. See [Section 10](#) for further discussion.

### 6.5 Mitigation and management

Key mitigation and management strategies are covered in the Earthsea Archaeology and Heritage Assessment (Appendix N). A summary of key recommendations from Earthsea include:

- monitor changes in tidal flow and sediment mobility around Catalina Island
- monitor changes in tidal flow and sediment mobility around Old Man Rock for changes in sediment deposition or erosion during construction and at the end of construction
- a maritime archaeological inspection of the Catalina 3 site before construction starts
- a second site inspection and condition assessment report for the Catalinas 3 wreck sites before the start of operations to identify any changes resulting from hydrological change

- a maritime archaeological inspection and condition assessment of the Catalinas 3 wreck sites before construction starts
- install in a public place appropriate heritage signage describing the flying boat base and lugger maintenance section and their role in Darwin's history
- the owner of the *Rushcutter* to move the boat, in recognition of its potential heritage value
- a qualified maritime archaeologist to be on call during dredging operations to investigate significant artefacts located in any spoil
- a site-specific Heritage Management Plan (HMP) for the Ship Lift planning and construction period, to include information on site heritage for contractor inductions
- work to stop if further Aboriginal sites, artefacts or human remains are located during construction
- Aboriginal Areas Protection Authority Certificate (obtained by NT Government in 2019).

## 7. Healthy Land and Seas

What is covered by Healthy Land and Seas	What the Terms of Reference asked for
Healthy land and seas covers values associated with the use and enjoyment of the natural environment. This is sometimes described as socioecological systems or ‘ecosystem services’, which are the commercial, cultural, recreational and aesthetic benefits, goods and services we derive from the use of our land, clean air and water.	In addition to a range of specific environmental factors, under ‘social, economic and cultural surroundings’, the Terms of Reference asked for a description of environmental values of the harbour that may be impacted by the proposal, including commercial and recreational values.

### 7.1 Overview

This section covers the importance of healthy socioecological systems from the perspective of the people who use and value Darwin Harbour for social (including recreational), cultural and economic purposes. While it concludes that project-level impacts on the values of the harbour are likely to be low, a technical assessment may not reflect the subjective values and levels of concern at potential disturbance to environmental values, particularly at a cumulative level. The section provides a baseline description of the diverse values of Darwin Harbour, as specified in the NT EPA Terms of Reference for the Darwin Ship Lift Project (2019).

### 7.2 Description of Darwin Harbour and its values

Darwin Harbour is a large bay that includes East, Middle and West Arms. The Elizabeth and Darwin Rivers drain into the harbour. The city of Darwin is on the north-east shore of the harbour, while East Arm Peninsula sits between the city and Middle Arm Peninsula.

The harbour is integral to the lifestyle, commercial activities and sense of place for Top End residents. It has been described “as an internationally significant conservation area that supports native flora and fauna, provides recreation spaces and generates cooling breezes” (Darwin Central Area Land Use Plan, Planning Commission 2019); as the “jewel in the Territory’s crown” providing a “wealth of ecosystem services that directly support the environmental, economic, social and cultural wellbeing of the communities that make the region their home” (NTEPA 2010, p.2); “a biologically rich and diverse marine and terrestrial environment” (Darwin Harbour Strategy 2010) and a “unique coastal lifestyle... providing a beautiful backdrop to the daily lives of Darwinites” (ECNT 2020).



Figure 7-1: Values of Darwin Harbour as a working harbour and contribution to Darwin’s lifestyle

So integral is the sense of connection with the harbour, that several studies have explored its diverse values. The 2003 Darwin Harbour Plan of Management (DHAC 2003) found the harbour's environmental, cultural, commercial and recreational values generate employment and revenue, in addition to providing a source of pleasure and enjoyment for those who live in and visit the region. Consultation by DHAC for its 2003 plan of management suggested high conservation values, cultural values for Larrakia people and the importance of recreational fishing (with 40 per cent of Darwin residents pursuing this activity each year). The harbour's scenic values encourage recreational activities such as boating, swimming, birdwatching, diving and cycling. Economic values support a working harbour and growing industry base.

A report by Dr Tom Brewer (2015) on the values of the harbour found that participants felt it was important to maintain a healthy harbour. There was strong agreement with the statement that "the harbour has fragile environments that are being permanently degraded and disagreed that it was necessary to sacrifice natural environments to improve the quality of life for residents". The most highly rated landscape values of the harbour in this study were, in order of priority: aesthetic, recreation, biodiversity, economic, heritage, life-sustaining, wilderness, therapeutic, future, knowledge, intrinsic and spiritual. Preferences for development of the harbour were for it to be where most coastal industry already exists, rather than spreading to other parts of the harbour.

The 2020-2025 Darwin Harbour Strategy (Darwin Harbour Advisory Committee 2020), is intended to guide responsible stewardship and sustainable development of the Darwin Harbour region. The goal of the strategy is to "protect and enhance social, recreational and lifestyle use and enjoyment of Darwin Harbour in an ecologically sustainable manner" (p.14). "Darwin Harbour is widely recognised as a vital element in Darwin being a liveable and vibrant city providing quality choices where people want to live, play, work and visit," the report comments.

The DHAC strategy outlines five key goals.

1. **Foster partnerships:** To protect and enhance Darwin Harbour through integrated management and in a partnership between government, industry and the community.
2. **Protect and preserve:** To protect and enhance the natural environment of Darwin Harbour.
3. **Celebrate connection:** To protect and enhance the cultural values and heritage of Darwin Harbour.
4. **Maintain our unique lifestyle:** To protect and enhance social, recreational, lifestyle use and enjoyment of Darwin Harbour in an ecologically sustainable manner.
5. **Sustainable industry:** To protect and enhance the economic value of Darwin Harbour in accordance with ecologically sustainable development principles.

### 7.3 Key events or activities causing impacts

Key project-related activities driving change processes or impact pathways include:

- dredging and construction disturbing the use and enjoyment of the harbour, including fishing, eco-tourism and boating
- increased maritime activity during operations, including risks from pollution, pests, discharge of water and stormwater run-off.

## 7.4 Key risks and opportunities

Potential impacts – Healthy land and seas	
Potential beneficial impacts	Potential detrimental impacts and residual ratings
	<p>No significant impacts on the cultural and social values of Darwin Harbour were identified.</p> <p>See amenity impacts in Living Environment</p>

### 7.4.1 Detrimental impacts on the diverse values of Darwin Harbour

The Northern Territory Government has been developing land at East Arm for marine industries since 2004, as part of its aim to develop East Arm Peninsula as a logistics and transport precinct. Land is already zoned DV - Development, set aside for strategic development, surrounded by Darwin Port, Marine Supply Base, Multi-user Barge Ramp Facility (MUBRF), common user facility, proposed marine industrial area and East Arm business park and railway facilities.

Minimal land and sea use change is proposed for the Darwin Ship Lift Project. A one-hectare stand of mangrove vegetation will be cleared from the area to be reclaimed. This is an isolated stand between the port and a private industrial lot.



Figure 7-2: Photos taken on site visit 2020

Previous environmental impact studies, such as for the East Arm Wharf Expansion (URS 2011) and the social impact assessment for TNG's proposed processing plant (Elton Consulting 2019) identified a high level of concern regarding the potential impact of construction and reclamation works on harbour dynamics, particularly tidal and creek flows. Concerns were expressed regarding potential impacts on fish stocks and recreational amenity in the harbour, marine flora and fauna such as turtles and dolphins and on the eco-tourism industry. The topic of detrimental impacts on environmental and conservation values did not emerge as a major issue of concern during stakeholder consultation for the Darwin Ship Lift Project. AFANT's main concern in relation to the ship lift project is that any disruption to access and marine safety risks be well-communicated in advance of works, either directly or through Harbour Master's Notices to Mariners.

The risk in this category is assessed collectively as LOW to NEGLIGIBLE at a project scale. However, potential impacts on the health of the environment have close links to most other categories in the SIA. The issue is further discussed in [Section 10](#) on cumulative impacts.

## 8. Living Environment

What is covered by Living Environment	What the Terms of Reference asked for
<p>Our living environment incorporates what is often described as a ‘surroundings’ and includes the community’s experience or perceptions of factors that cause annoyance or disturbance to the amenity of places where people and families live, work and play. This includes disturbance from industrial noise, dust, lights, vibrations, traffic congestion, destruction of landscapes or pollution that detracts from the quality of our environs. Technical studies might assess the likelihood and consequences of impacts on receptors. A social perspective explores who these ‘receptors’ might be, their values and their sensitivity to disturbance.</p>	<p>Under Traffic and Transport, describe land and water traffic and transport activities, including frequency, access, haulage routes and volumes of traffic.</p> <p>Describe environmental values that may be impacted, including commercial and recreational values.</p> <p>Studies covering factors such as air and water quality, noise and traffic.</p>

### 8.1 Overview

The living environment covers changes to people’s sense of place, enjoyment of their natural surroundings and impacts on their amenity from nuisance impacts, such as traffic congestion, noise, dust, pollution, vibration and light pollution.

[Sections 3](#) (people and communities) and [7](#) (healthy land and seas) characterised the communities in the project’s footprint and described the diverse values of Darwin Harbour, which are aligned with Darwin’s unique living environment. Impacts on individual and community living environments are derived from the way people experience the changes invoked by construction activities. The potential impacts are likely to vary depending on sensitivity to disruption, which is a subjective judgement influenced by sense of place, lifestyles, perceived contribution to quality of life and strength of values associated with the environmental qualities of land and seascapes.

### 8.2 Key events or activities causing impacts

Key project activities triggering change processes are likely to be:

- dredging and reclamation activities that degrade the marine environment
- construction activities that generate noise, vibrations and light pollution
- increased traffic on roads leading to East Arm Port, including haul roads and workers’ vehicles.

### 8.3 Key risks and opportunities

Potential impacts on the living environment	
Potential beneficial impacts	Potential detrimental impacts and residual ratings
	<p>Reduced residential amenity due to construction activities (considered collectively), such as noise, vibrations from piling and traffic congestion (LOW)</p>
	<p>Project-level impacts on recreational values and activities (LOW).</p>

## 8.4 Impact assessment for living environment

Impacts on the living environment identified in previous studies have included the potential for dust, noise, pollution, loss of recreational spaces, visual impacts on the harbour, traffic congestion and a reduced sense of place from an influx of workers.

### 8.4.1 Reduced recreational amenity and values of the harbour

Potential impacts on the amenity of the harbour from project-related activities are assessed as being unlikely, given the project's relatively small footprint. Despite this, fears of impacts may be consequential, given the extent to which the people of Darwin value the health of Darwin Harbour. Impacts from dredging are likely to be relatively small scale and of short duration. They should be mitigated to a LOW residual risk with the implementation of appropriate management plans and continued engagement and communication with key stakeholders.

### 8.4.2 Reduced residential amenity

Earlier reports have identified stakeholder concerns about amenity impacts such as construction noise from earthmoving equipment, cranes, concrete mixers and pumps, generators, compressors, pile drivers and pneumatic and hydraulic breakers (TNG SIA 2019). The East Arm Wharf Expansion SIA (URS 2011) identified concerns with potential noise, dust, pollution, visual impacts on the harbour, traffic congestion, changed sense of place and reduced safety on the harbour. Consultation for the East Arm Wharf (2010) and INPEX LNG plant at Bladin Point on Middle Arm Peninsula (2011) saw concerns expressed at potentially reduced access to nearby creeks and port facilities for commercial and recreational vessels.

Given the generally low likelihood and consequence of potential amenity impacts, traffic and noise in particular, these are dealt with collectively (and addressed in more detail in relevant technical reports). In summary:

- **Noise and vibration impacts** on residential suburbs are possible, but short-term. Pile-driving is expected to include 485 steel piles for the ship lift and concrete finger wharves, with two a day for 240 days (see project description). Similar construction, dredging and piling occurred for the East Arm Wharf Expansion and Marine Supply Base, with no record of complaints or community sensitivity to these impacts. The noise assessment (Appendix L) concludes that likely noise and vibration levels are likely to be minimal and within EPA guidelines.
- **Disruption from road traffic:** Increased congestion and inconvenience from project traffic is unlikely, given the existing volumes of traffic, upgrades to arterial roads such as Tiger Brennan and Berrimah Roads and haul routes passing mainly through industrial areas. Some increased traffic may be experienced between quarries in the rural area and East Arm Port, but this is predicted to be barely noticeable in residential areas or to existing road users (see Traffic Impact Assessment Appendix M). Workers can be bussed to site to avoid traffic and parking congestion at site. Darwin Port suggested that additional construction traffic would be absorbed within existing traffic volumes. Construction and operational traffic management plans are proposed.
- **Disruption from marine traffic.** Marine activities for construction of the Darwin Ship Lift Project are likely to be localised and relatively short-term.
- **Reduced air quality** on residential areas from dust or pollutants is unlikely to be consequential (see Appendix K).
- **Visual impacts:** While permanent, the scale of change is relatively small and in line with existing industrial activities.

- **Turbidity:** There may be concerns that turbidity from dredging could detract from the aesthetics of the harbour or that reduced water quality could impact on fish stocks and recreational fishing in nearby creeks. Technical studies suggest that turbidity is likely to be localised, short-term and dispersed with tidal flows, with minimal impact on access to recreational fishing spots in the harbour (see Appendix I).

In summary, some amenity impacts are likely. However, these are expected to be of short duration and intensity and fairly readily mitigated, therefore the residual risk of amenity impacts collectively is LOW. However, this should be monitored by the design and construction contractor to inform responsive management of environmental incidents that disturb public amenity.

## 8.5 Mitigation and management

Recommended mitigation and management of the above risks includes:

- traffic, air quality, noise management plans (see separate studies)
- regular community updates throughout the construction and dredging phase on potentially disruptive activities (to be incorporated in NT Government proactive communication and engagement plan for construction)
- The NT Government requires the construction contractor to set up, maintain and publicise a complaints register to record and respond to any complaints. This should also identify any patterns in complaints that might suggest the need for adaptive management. The Noise and Vibration Assessment (AECOM, at Appendix L) suggests an environmental incident report form to appropriately record and respond to noise complaints.

## 9. Having a Voice, Governance

What is covered by Having a Voice and Governance	What the Terms of Reference asked for
A strong voice means having influence over decisions and contributing to our own governance. Communities may feel ineffectual if their voice is not heard.	The NTEPA identified that comprehensive stakeholder consultation (is) required, especially recreational fishing organisations, tourism operators, tourism agencies and commercial operators to assess social impacts.

### 9.1 Overview

Having a voice means being well-informed and able to influence project and policy decisions before they are set in stone. This includes proactive engagement to ensure people who are disadvantaged or marginalised are properly informed of the implications of projects and provided with the time and resources to raise issues. Having an influential voice in decision-making is in line with the NT EPA's consultation guidelines and United Nations Declaration on the Rights of Indigenous Peoples (2007), which espouses the importance of Free, Prior and Informed Consent.

Governance covers long-term structures that provide the access and input necessary to have input and influence, which might include working through existing structures (such as the Northern Land Council, Aboriginal Areas Protection Authority, Larrakia Development Corporation and Larrakia Nation Aboriginal Corporation). It may include project-specific governance structures such as reference groups or advisory committees.

Previous consultation reports have suggested Larrakia people want ongoing communication regarding projects on their land (East Arm Wharf) and better consultation regarding development in the harbour (James 2020). Larrakia perspectives were taken account of in the Archaeological and Heritage Assessment (Appendix N).

No concerns were raised at a project level, however there is a desire to be heard regarding cumulative impacts on the harbour, which is discussed below in [Section 10](#).

## 10. Cumulative

### 10.1 Overview

*“Territorians clearly revere their harbour and want to see it well managed for future generations to enjoy”* (Darwin Harbour Advisory Committee Chair, Foreword to first DHAC Strategy 2003).

Cumulative impacts are defined by the NT EPA (2021) as impacts that can accumulate as a result of additive or interactive processes and actions, a combination of multiple minor impacts over time and impacts resulting from the activities of multiple projects operating in a region.

### 10.2. Development around the harbour

Until about 2000, there was little development on East Arm Peninsula except Northern Cement and the Hudson Creek shipyards. Rooney’s Shipping operated a private port at Hudson Creek to export cattle and buffalo to Indonesia, Brunei, the Philippines and Malaysia.

Over the past 20 years there has been incremental, but rapid, development of the entire peninsula as an industrial precinct. The new East Arm Port opened in 2000. The first freight train arrived in January 2004, followed closely by the first transcontinental *Ghan* tourist train. The Land Development Corporation operates a Business Park that has grown from the site of the old Trade Development Zone to support logistics-oriented businesses along the railway line that terminates near East Arm Port. In June 2014, the Marine Supply Base opened to service the oil and gas industry. The Land Development Corporation is developing a Marine Industry Park, including a common user area, multi-user barge ramp and lots to support marine industry development. Australian Government funds have supported progressive upgrading of Tiger Brennan Drive (linking Palmerston with the city) and Berrimah Road to facilitate transport connections to the Port. The ship lift is likely to stimulate the relocation of marine based services from Frances Bay to East Arm and away from the city precinct.

While recognised as a ‘working harbour’ (DHAC 2020) which supports an important industry hub and diverse economic opportunities, growth has been accompanied by land clearing, dredging and industrial activities around and on the harbour. Some resultant concerns are discussed below.

#### 10.2.1 Commentary on the impacts of growth

While land use planning around Darwin Harbour has been guided by a series of formal land use plans, a literature review suggests the topic of cumulative impacts of development has been a recurrent theme over the past two decades. For example, the Darwin Harbour Advisory Committee comments (2020, p.i):

*“Our harbour and its catchment are currently in good condition however, we all need to invest in maintaining and where appropriate improving (its) condition so that our legacy is a healthy and productive harbour for future generations. Pressures associated with population growth and the developing industry base in the region compel us to ensure the environment and resources of the harbour are sustainably managed.”*

The Keep Top End Coasts Healthy alliance (KTECH) in 2020 produced a Darwin Harbour Health Check report on threats to Darwin Harbour and actions needed to safeguard it (Smyth 2020). The report stresses the importance of a healthy harbour and outlines increased pressure from a range of industrial and urban developments. The alliance recommends implementing the Darwin Harbour Strategy, conducting a strategic environmental assessment of the harbour, developing a harbour-wide dredging management plan and

implementing the NT Coastal and Marine Management Strategy. A KTECH submission to DHAC (2020) identifies the following threats from urbanisation and industrialisation of the harbour: expansion of East Arm Wharf, dredging, Middle Arm industrial development, air pollution, urban development, clearing the mangrove forest, water pollution, introduced marine pests, cultural impacts and disappearing dolphins.

Environmental impact studies have similarly reflected community concerns at the creeping impacts of industrialisation on the harbour's natural landscape and beauty (East Arm Wharf, URS and Elton Consulting 2011; TNG SIA, Elton Consulting 2019) and the need for a strategic assessment. ECNT's submission to TNG supplementary (2020) criticised project-based and piecemeal environmental assessment of projects on Middle Arm and Darwin Harbour more broadly, while the KETCH Darwin Harbour Health Check (Smyth 2020) criticised "ad hoc management of the harbour". DHAC (2020) called for a cumulative impact assessment framework to "address cumulative impacts and pressures that may interact and cause additive or antagonistic outcomes far greater than the outputs generated by each industry alone."

### 10.2.2 Larrakia perspectives

Larrakia stakeholders, too, have commented (eg East Arm Wharf Expansion 2011) about the impact of industrialisation on both material cultural sites and ongoing cultural activities. The Darwin Harbour Strategy (DHAC 2003, p.5) notes that:

Larrakia people maintain an innate connection to the land and sea in the region. Cultural, spiritual and heritage sites of significance are located throughout the region where traditional harvesting remains an important practice to the Larrakia people.

Larrakia people continue in their traditional use of natural resources in the Darwin Harbour region. In the recent past, Larrakia enjoyed everyday consumption of the bountiful food resources from the land and sea; bush tucker and medicine could be found everywhere, such as mangrove worms (Darla), long bums (Danijarra), fish, mud crabs, ducks, magpie geese (Gakingga), wallabies, possums, goannas and turtle eggs.

The CEO of the Larrakia Development Corporation, Nigel Browne, was quoted by the ABC in December 2020 as fondly remembering "catching fish and mud crabs with his knowledgeable father, in little-known pockets of Darwin Harbour as a boy". Many of these places no longer exist because of industrialisation of the harbour (James 2020).

### 10.2.3 Dredging

Dredging campaigns for large projects has evoked particular concern, to the point that INPEX established an independent scientific advisory committee to monitor the impacts of its dredging campaign for the Bladin Point LNG plant. Consultation for the East Arm Wharf Expansion (Elton Consulting 2011), which covered the proposed Marine Supply Base, Multi-user Barge Ramp Facility and hardstand and expansion of East Arm Wharf, found that dredging was an important issue for stakeholders, who wanted evaluation of dredging impacts to take account of multiple projects. The Assessment Report for East Arm Wharf (EPA 2011) found that a gap in the EIS was "the identification and quantification of cumulative impacts from concurrent dredging campaigns as well as from ongoing operating expanded port and other projects in the Harbour, and the combined impacts of underwater noise, increased vessel movements, turbidity and sedimentation on regional marine ecosystems and megafauna."

### 10.2.4 Mangroves

Mangroves feature in many reports as a sensitive issue for Territorians. Consultation for the East Arm Port Expansion EIS (URS and Elton Consulting 2011) reports stakeholder concerns about the clearing of mangroves at the port and the need to take account of mangroves' ecological functions (breeding ground for fish, water filtering and greenhouse gas emissions reduction). The Darwin Harbour Strategy (DHAC 2020, p.17) notes that:

“Mapping in 2018 shows that 269 ha or 1.3 per cent of mangroves have been cleared for infrastructure development since 1996 and 51 ha (0.3 per cent) of salt flat/samphire. These diverse communities fringe our coastal zone buffering storm surge and effects of cyclones, provide habitat for marine and terrestrial fauna, process nutrients and serve as effective carbon stores and sink for sediments.”

A fact sheet produced by the former Department of Natural Resources, Environment, the Arts and Sport (not dated) on sites of conservation significance in Darwin Harbour notes that the shoreline is dominated by mangroves, which account for five per cent of the Northern Territory's mangrove population.

“Darwin Harbour has one of the richest coastal environments anywhere in the Asia Pacific region, and occurs within one of the world's least impacted marine regions. The coastal and mangrove environments are backed by savannah woodlands and patches of monsoon rainforest.”

While it is widely accepted that Darwin is a ‘working harbour’, a key issue for many stakeholders, including the Darwin Harbour Advisory Committee, is finding a balance between development and environmental protection. The Territory Economic Recovery Commission's final report (2020) highlights the economic value of developing Darwin's capacity as a maritime service and supply hub and transport and logistics precinct on East Arm, combined with gas-based manufacturing on Middle Arm, while protecting Territorians' quality of life as a key element of attracting and retaining a skilled workforce.

While the removal of mangroves for the ship lift project is assessed as having low biological significance, the cumulative loss of mangroves due to past, present and future industrial and residential growth around Darwin Harbour remains a concern for stakeholders.

### 10.3 Competing construction projects

While other construction projects are likely to occur in the Darwin region during the ship lift construction period, stakeholders felt the ship lift was not of a scale that would create noticeable cumulative impacts such as workforce pressures or industrial traffic. However, it is difficult to be definitive about this given the level of uncertainty or lack of detail surrounding some projects. Potential construction projects that may take place on the East Arm Peninsula in the same time scale as the ship lift facility are:

- Sun Cable's proposed solar panel manufacturing facility on 7.8 hectares of land in O'Sullivan Drive in the East Arm Business Park;
- In mid-September 2021, a tender was awarded to an American firm to build additional storage facilities for the US Defence Force on land owned by the Land Development Corporation next to the existing VOPAK fuel terminal at East Arm. This will add 300 million litres in storage capacity to VOPAK's existing 174 million litre capacity. The project is yet to obtain development or development approvals, establish an Australian entity for construction, ownership and operation of the facility, or define its workforce and construction needs (source Northern Territory Government).

- The Airport Development Group is planning an 80 million litre new diesel fuel storage facility at East Arm supported by \$30 million in funding from the Australian Government. The site for this project is yet to be confirmed.

### 10.3 Key events or activities causing cumulative impacts

Cumulative impact assessment takes account of past, present and reasonably foreseeable activities in a region or ecosystem. In addition to the ship lift project, multiple complex activities may create pathways for noticeable cumulative changes to values of the harbour, including:

- other construction projects competing for workers or compounding traffic impacts
- dredging and land reclamation for multiple projects
- growing industrialisation of the harbour, including the growth of gas-based manufacturing and processing industries on Middle Arm
- increased marine traffic
- growing risks from spills, pollution, stormwater discharge and loss of species from urban population growth around the harbour.

### 10.4 Key risks and opportunities

Potential cumulative impacts	
Potential beneficial impacts	Potential detrimental impacts and residual ratings
	Cumulative impacts on values of Darwin Harbour (high)

### 10.5 Cumulative impact assessment

In general, stakeholders interviewed were positive about the ship lift but wanted to be heard on broader impacts on Darwin Harbour. This SIA finds that the cumulative additive and interactive impacts of development on the values of Darwin Harbour are likely to be substantial unless mitigated. However, the contribution of the Darwin Ship Lift Project to these cumulative impacts is minimal, hence cumulative impacts are best addressed in a harbour-wide strategic assessment, proposed harbour dredging management plan or perhaps by the proposed Middle Arm Strategic Assessment. While the project's contribution to cumulative impacts is likely to be low, these are rated as HIGH at a cumulative level.

### 10.6 Mitigation and management

Many cumulative impacts may be difficult to manage and may require trade-offs and offsets in order to balance economic growth with protection of economic, environmental, social and cultural values of Darwin Harbour. Some of this may be addressed by other programs already planned or in progress. These include:

- monitoring and management of all project impacts to guide adaptive responses
- a broader strategic assessment and master plan that predicts and manages the cumulative social, cultural, economic impacts of development in Darwin Harbour (which may be partially addressed by the proposed Middle Arm Strategic Assessment)
- support for the Darwin Harbour Advisory Committee's Integrated Monitoring of Darwin Harbour project as an approach to considering diverse values and perspectives
- the proposed Darwin Harbour Dredging Strategy (being developed by a government working party, which intends to start broader stakeholder consultation in late 2021).

## 11. Summary

Scoping for the proposed social impact assessment suggested a low-scale study was appropriate based on a preliminary assessment of likely risks and opportunities and sensitivity analysis of these impacts.

In general, this SIA and consultation report find the Darwin Ship Lift Project is a relatively small industrial activity with a localised footprint. Project activities, during construction and operations, are likely to be in accord with the site's industrial zoning and existing maritime and logistics activities on East Arm Peninsula. The scale of dredging is similar to that for the nearby Marine Supply Base.

We assess that the direct potential negative impacts of the project are likely to be limited and able to be managed with good communication and appropriate mitigation and enhancement measures.

Although there are sensitive cultural heritage and heritage sites nearby, there are no sacred sites in the project's immediate footprint. However, a decision by the Northern Territory Government not to declare sites such as the former Catalina boat ramp, lugger maintenance section and Catalina 2 in 2014 and 2015, does not mitigate against community interest or concern at their heritage and historical value.

The major potential negative impact identified by the SIA is cumulative impacts on the social, cultural, ecological and economic values of Darwin Harbour, given the scale of projects under discussion around the harbour. The potential for cumulative impacts on the values of the harbour was rated as HIGH, although mitigation at a project level would be difficult and the project-level contribution is rated as LOW.

The key potential beneficial impacts are economic benefits likely to be unlocked by the project, which is expected to enhance Darwin's maritime service and supply sector, enhance Darwin's skills base and grow maritime related businesses. These beneficial impacts are likely to accrue over many years. Therefore, realising the benefits of this enabling infrastructure will require a coordinated and collaborative effort by the public and private sectors to build a thriving marine service and supply sector.

## 12. Qualifications

### Dr Jane Munday

The lead consultant for this Social Impact Assessment was Jane Munday, who has lived in the Northern Territory since 1994. Jane worked in senior government communication positions for 10 years, then established strategic communication consultancy Michels Warren Munday in 2004. She has worked part-time as Senior Advisor to the company (rebranded True North Strategic Communication) since selling the business in late 2015. Jane has provided community engagement and social impact assessment to several projects in the past 15 years, most recently for Arafura Resources' Nolans Project near Aileron; Jemena's Northern Gas Pipeline from Tennant Creek to Mount Isa and Verdant Resources' Ammaroo Project near Ampilatwatja in the Barkly Region of the Northern Territory.

Jane is a Graduate of the Australian Institute of Company Directors (GAICD). She has a Master of Business Administration (MBA) from the University of Southern Queensland; a Graduate Certificate in Public Sector Executive Management (Charles Darwin University); a Bachelor of Arts (Psychology) from Charles Darwin University; a Certificate in Public Participation and Advanced Certificate in Community Engagement (International Association for Public Participation) and two Certificates in Social Impact Assessment (International Association for Impact Assessment). She was recently awarded her PhD, which researched a model of social and cultural impact assessment that would deliver socially, culturally, ecologically and economically sustainable development of Northern Australia. She has published a Guide to Social Impact Assessment (2020), prepared a report on the social and cultural impacts of seabed mining for the Northern Territory Government (2017) and contributed to a study for the Australian Government on maximising the benefits of onshore gas development in the Beetaloo Basin (Charles Darwin University).

Jane is a member of IAP2, IAIA, the Environment Institute of Australia and New Zealand (Secretary of the NT committee and part of a national social impact assessment working group), the Australian Research Society (ASR) and a Fellow of the Public Relations Institute of Australia (PRIA). She is Deputy Chair of the Northern Territory Natural Resource Management and on the NT Attorney- General's Community Benefit Fund Committee.

### Claire Butler

Claire, a senior consultant with True North Strategic Communication, worked with Jane Munday to deliver this social impact assessment. Claire has extensive experience in marketing, corporate communication and community and stakeholder engagement. In recent years, Claire's focus has expanded to incorporate the study of social and cultural impacts of projects in the Northern Territory. Claire most recently led a social impact assessment Core's lithium project and co-led a number of social impact assessments for major projects in Central Australia and the Top End. She is working with Jane to deliver a social impact assessment for Sun Cable's Australia-Asia Power Link (AAPowerLink) project.

Claire has studied social impact assessment with the Community Insights Group and the University of Strathclyde. This course was provided by senior SIA practitioners, Gabriela Factor, Dr Ana Maria Esteves and Professor Frank Vanclay. She also completed an intermediate Social Impact Assessment training course conducted by Professor Frank Vanclay and Dr Ana Maria Esteves through the Centre for Social Responsibility in Mining at the University of Queensland. Claire has a certificate in Social Impact Assessment from the International Association for Impact Assessment (IAIA).

Claire's training and experience in social impact assessment is strengthened by her extensive resource, construction and Indigenous communication and community engagement work across the Northern Territory over the past 15 years.

Claire has a Bachelor of International Business, Graduate Diploma of Management and Certificate of Public Participation with the International Association for Public Participation (IAP2). She has completed Indigenous cross-cultural training with Why Warriors and has worked extensively in remote communities across the Top End, including three years working remotely in Nhulunbuy in north-east Arnhem Land. She is now based in Cairns.

### **Bethany Thornton**

Bethany is experienced in working on complex stakeholder engagement projects and producing creative and innovative marketing and communication strategies. She has worked across a range of industries including infrastructure, major projects, local government, not for profit and Defence.

While with True North, Bethany worked on two social impact assessment projects in 2018 and 2020-21. As part of this work, Bethany conducted baseline research, attended and documented stakeholder meetings and briefings, coordinated community information stalls and wrote the consultation reports.

Bethany has a Bachelor of Strategic Communication from La Trobe University, Melbourne, and has completed the IAP2 Certification in Public Participation. Bethany grew up and completed her schooling in Darwin and has comprehensive local networks and a solid understanding and connection to the Territory.

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## **14. Appendices**

- A. Scoping study
- B. Consultation Report
- C. Social Impact Management Plan

# Darwin Shiplift Facility

## Social impact assessment scoping

Prepared by True North Strategic Communication

December 2020

Version No.	Issue Date	Prepared by:	Approved by:	Approval Date
V1	8/12/2020	Jane Munday	Elena Madden	10/12/2020
V2	16/12/2020	Jane Munday	Elena Madden	16/12/2020

*Recipients are responsible for eliminating all superseded documents in their possession*

### Consultation statement

True North Strategic Communication is guided by the principles of good community engagement, based on people's level of interest and concern as outlined by the International Association for Public Participation (IAP2).

Our role is to provide stakeholders and the general public with objective information so they can provide informed feedback on consultation projects. We give people the opportunity to provide input that is balanced and reflective of the range of community views to independently provide the best possible guidance to decision makers.

Our practice reflects professional standards and ethical standards for human research including anonymity, confidentiality, record storage and keeping people informed.

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## 1. Overview

There has been substantial publicity regarding the proposed Darwin Ship Lift Project (the 'Project'), with commentary from the Chief Minister and business community about the economic benefits likely to be unlocked by the shiplift facility and associated marine activities.

Scoping for the proposed social impact assessment suggests a low-scale study is appropriate based on a preliminary assessment of likely risks and opportunities and sensitivity analysis of these impacts.

In general, the Project is an industrial activity in accord with its industrial zoning and existing maritime and logistics activities on East Arm Peninsula. While dredging may be controversial, the scale of dredging is similar to other campaigns, such as the Marine Supply Base. We assess the direct negative impacts are limited and can be managed with good communication and appropriate mitigation and enhancement measures.

Although there are sensitive cultural heritage and heritage sites nearby, none are in the immediate Project footprint (to be covered by the Earthsea Cultural Heritage Report). This will be addressed in the Earthsea report.

The major sensitive impact to be covered by the social impact assessment will be that of cumulative impacts on the social, cultural, ecological and economic values of Darwin Harbour, given the scale of projects under discussion around the harbour.

The key beneficial impact to be studied will be the social and economic benefits unlocked by the Project, which are expected to enhance Darwin's maritime service and supply sector. Key issues to be explored will be the distribution of benefits to Territorians (in particular Larrakia people and local businesses), likely level of local industry and employment participation and whether any existing businesses might suffer detriment as a result of losing business to the ship lift facility.

The following issues analysis predicts issues likely to be raised in community and stakeholder consultation.

This document lists all potential issues that might be considered in a social impact assessment, applies a sensitivity analysis and prioritises impacts for further analysis. Additional impacts may be added if:

- they are raised during consultation
- there are changes to the assumptions we are working to
- situational factors (such as debate about the future of the harbour) make certain issues topical during our research period.

## 2. Issues analysis

Category	Issues	Stakeholders
Social infrastructure and services (impacts on quality and availability of housing, education, roads, policing, health services)	None raised.	nil
Cultural identity, impacts on cultural heritage, sacred sites and Larrakia culture and connections to land and sea. Impacts on European heritage.	Not raised, but likely to be raised under cumulative impacts (see below). To be covered by cultural heritage report: Impacts of sedimentation of Catalina Island. The <i>Rushcutter</i> currently on site attracted media attention when it was brought up from the floor of Darwin Harbour and may attract community and media interest if seen at risk.	Larrakia custodians and traditional owners. Heritage groups, including Heritage Branch, Heritage Advisory Council, National Trust, Historical Society, Darwin Military Museum Larrakia Rangers Larrakia Nation, LDC AAPA, NLC.
People and communities: Safety and wellbeing, cohesion, health and wellbeing	Not raised. Could be concern regarding marine and transport safety.	nil
Healthy land and seas, impacts on the marine environment and biodiversity that impacts on social and cultural values	Environmental issues were raised at a Darwin Harbour Advisory Committee briefing in December 2020 as a potential impact on existing economic infrastructure, such as the port and marine supply base, due to strong tides and the potential changes to bathymetry as a result of dredging. There have been concerns expressed by fishing and tourism groups in local media about the impacts of development on fish health. This was a key issue raised in consultation for the TNG Middle Arm processing plant (Elton 2019). Although a relatively small area of mangroves will be removed as part of land reclamation, cumulative impacts on mangroves is likely to be an issue. The harbour is recognised for its mangrove communities, which are also breeding habitat for fish and crabs.	Larrakia people AFANT DHAC ECNT, Keep Top End Coasts Healthy alliance, environmental groups Planning Action Network Tourism operators Darwin Port AIMS, researchers

<p>Living environment (amenity disturbance such as noise, dust, light pollution, traffic)</p>	<p>None raised, although may become an issue during construction so should be considered. Noise was predicted for Marine Supply Base but did not become an issue. Increased self-drive traffic and worker parking was raised as an issue for the TNG Middle Arm processing plant (Elton 2019).</p>	<p>Nearby residential areas, eg in Palmerston.</p>
<p>Economic (jobs, livelihoods, general economic stimulus for Darwin and marine services and supply sector)</p>	<ul style="list-style-type: none"> <li>• Substantial government publicity regarding the benefits of the project, including media releases and articles in Territory Q. Reference to the ship lift as enabling infrastructure that will support Darwin’s capacities in the marine services and supply area, grow the proposed East Arm Marine Industry Park and attract new marine industries and maritime activity to Darwin.</li> <li>• The ship lift is referenced in many government documents and the recent Territory Economic Reconstruction Commission as contributing to the Territory’s economic future. It will contribute to immediate and long-term jobs, grow economic activity and contribute to population growth.</li> <li>• Given the current economic climate, there is substantial interest by Ministers, government departments and the community in jobs likely to be generated by projects such as a ship lift.</li> <li>• The main negative commentary on the Project that emerges from a search of media and social media commentary is cynical or negative opinions on whether the business case stacks up.</li> </ul>	<p>Industry associations and business, including Master Builders, Chamber of Commerce, ICN; Land Development Corporation; Landbridge; Department of Defence; Property Council; Darwin Major Business Group; NT Seafood Council; Tourism Top End; Palmerston Regional Business Association; Port users.</p>
<p>Having a voice on decisions, governance</p>	<p>Not raised, no complaints of poor consultation to date, although Larrakia Development Corporation has complained in the media about poor consultation in relation to the harbour more broadly.</p>	<p>Nil</p>
<p>Cumulative impacts</p>	<p>Industrialisation of the harbour is topical. There are likely to be concerns about cumulative impacts on the values of the harbour from dredging and industrialisation. Factors elevating sensitivity to cumulative impacts include:</p> <ul style="list-style-type: none"> <li>• plans for gas-based development on Middle Arm, including manufacturing, a petrochemical precinct, minerals processing plants;</li> <li>• the release of the Territory Economic Construction Commission (TERC’s) report in early December 2020;</li> </ul>	<p>Darwin Harbour Advisory Committee; Larrakia people and organisations; Environmental groups; Recreational fishing groups; Harbour cruises, fishing charters and tourism operators;</p>

	<ul style="list-style-type: none"> <li>• climate change and reduction of greenhouse gas emissions has become increasingly topical, with concerns about rising sea levels and cyclonic activity damaging coastlines (see DHAC, p.17).</li> </ul> <p>The CEO of the Larrakia Development Corporation, Nigel Browne told ABC Radio (James 2020), of fishing and crabbing in the harbour with his father but that many places had become inaccessible due to industrialisation of the harbour.</p> <p>The Darwin Harbour Strategy 2020-2025, published in July 2020, outlines a strategy for the ‘sustainable management’ of Darwin Harbour. It refers to maintaining Darwin’s unique lifestyle, protecting cultural values and heritage, sustainable development of economic values and protecting the harbour’s natural values.</p> <p>The strategy (p.i) describes a ‘working harbour’ that is highly valued by the community for its ‘significant natural, cultural and social values’ while presenting diverse economic opportunities.</p>	<p>Community groups such as Plan Researchers All residents who enjoy the harbour lifestyle Economic sectors dependent on the harbour.</p>
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### 3. Preliminary significance assessment and screening of impacts for further study

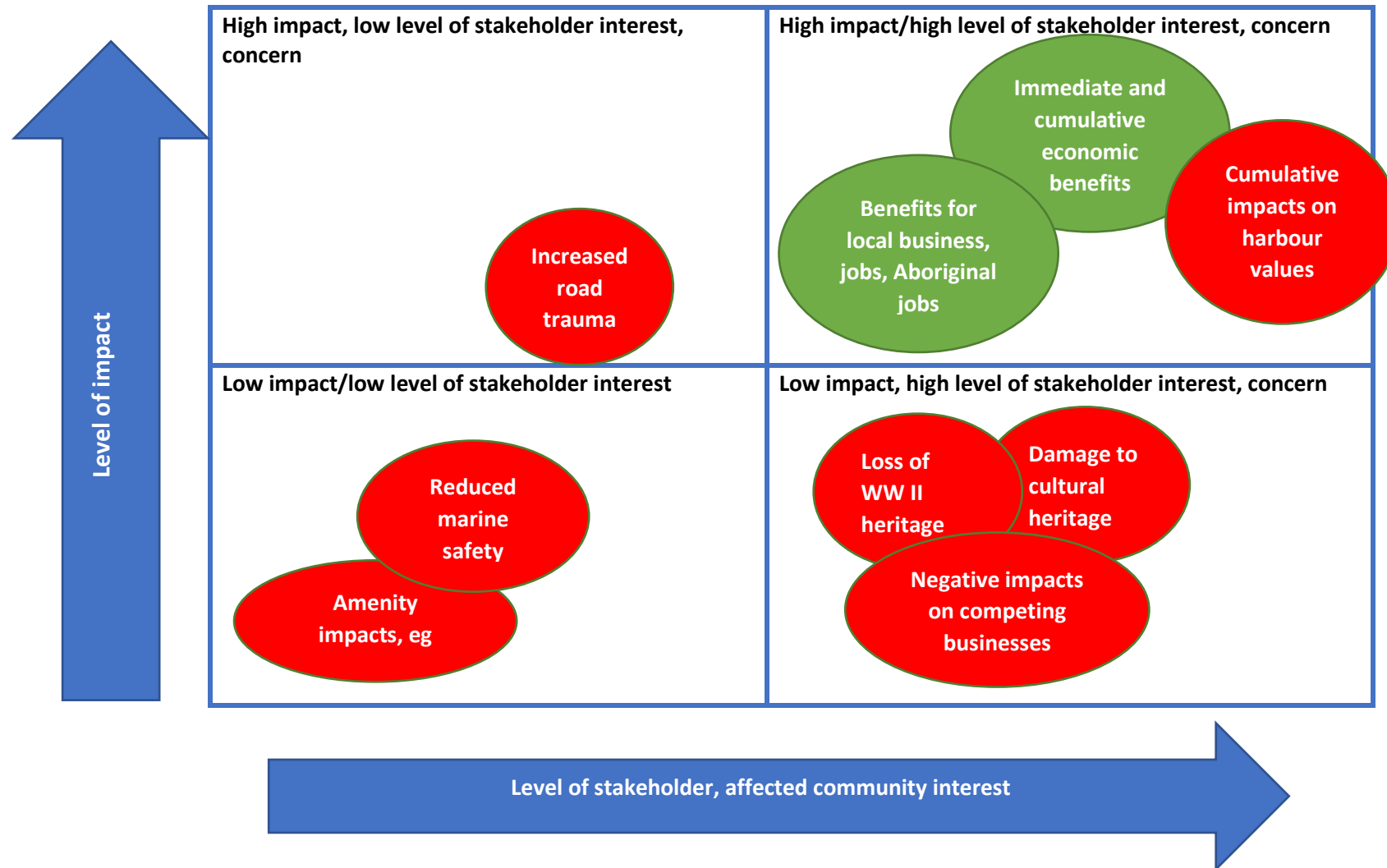
The following table lists potential impacts that might be considered in a social impact assessment for a large infrastructure project in Darwin. The potential impacts are listed by category. A sensitivity analysis considers the likelihood of the impacts combined with their extent, duration, scale of change and level of community concern or perceptions of impacts. The assessment is based on a literature review, drawing on the findings of other technical studies, community feedback and expert judgement (for example, issues considered likely but that the community may not have raised).

Mitigation measures and residual ratings are provided for beneficial impacts (opportunities) and detrimental impacts (risks). The table will be refined based on research and community consultation and included in the final social impact assessment.

The sensitivity analysis informs a screening process, which suggests the key areas to be covered by the social impact assessment are, in order of priority.

- economic benefits, particularly the long-term benefits of economic infrastructure
- cumulative impacts on the social, cultural, ecological and economic values of the harbour
- cultural heritage
- concerns at negative impacts on competing businesses
- increased road trauma
- construction noise disturbing residential amenity

This accords with the Northern Territory Environment Protection Authority (NTEPA) Terms of Reference issued in December 2019.



Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
<b>Social infrastructure and services (housing, schools, roads, policing, health, utilities, community centres)</b>								
Housing and short-term accommodation	Pressure on affordability and availability of public and private accommodation.	Mobilisation of construction workforce creates sudden population increases and demographic change	Rare	Insignificant	Not raised as an issue of concern. The construction workforce is relatively small (x100 direct) and likely to be drawn from the existing population, with some FIFO for specialist positions. While longer-term direct and indirect jobs will be more substantial, it is assumed the scale of population change will be gradual and readily absorbed as part of overall economic development and population growth. Also that some jobs are transferring from existing operations.	Negligible (-)	n/a	Negligible Screened out
Education: schools and childcare	Pressure on quality and availability of childcare and educational services.	As above	Rare	Insignificant	As above	Negligible (-)	n/a	Negligible Screened out
<b>Cultural identity (cultural heritage and Larrakia cultural ties to the land and seas)</b>								
Sacred and sites of	Loss of cultural heritage due to damage, or	Construction and dredging activities or	Possible	Moderate	Although there is no cultural site within the project footprint, the consequences of damage to	High (-)	AAPA certificate	Medium

<sup>1</sup> Based on extent, duration, scale of change and level of community interest or concern: see explanation of sensitivity analysis and ratings

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
cultural significance	reduced access, including fears and anxieties of damage to sites or custodians' responsibilities, particularly Catalina Island.	changes to tidal activities causing silting			nearby cultural heritage would cause distress, therefore this impact has a higher rating.		Close working relationship with custodians to monitor and avoid damage Restricted works areas Cultural protocols	Priority issue  Covered by cultural heritage assessment
Cultural values	Reduced cultural values of the site through reduced physical and spiritual connection to land and seas.	Construction and security reducing access to site	Unlikely	Minor	The site is already heavily disturbed and fenced off. Additional impacts on the site are likely to be inconsequential but are considered as more substantial under cumulative impacts.	Low (-)	Respect for Larrakia cultural connections to land and sea	Negligible  Screened out
Traditional livelihoods	Reduced ability to engage in traditional hunting, fishing, foraging or other livelihood activities.	Construction and security restricting access, contamination of food sources	Unlikely	Minor	The site is relatively small and is already inaccessible for such activities. Scale of Project not likely to lead to offsets to enhance traditional livelihoods in other parts of the harbour.	Low (-)	Confine negative impacts to existing disturbed area to mitigate against this becoming an issue.	Negligible  Screened out

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
Cultural services	Opportunities for ranger groups to provide cultural and environmental monitoring services.	Environmental studies and ongoing monitoring	Unlikely	Minor	Some opportunities during environmental studies but short-term and inconsequential.	Imperceptible (+)	Proactive efforts to engage Larrakia land and sea rangers	Negligible/ Low  Screened out
Strength of culture	Reduced ability to pass on culture, traditional knowledge, undermining of cultural authority due to loss of cultural heritage or access.	Loss of cultural sites or access	Unlikely	Insignificant	Project unlikely to have significant impacts in isolation but will have a minor contribution to cumulative impacts (see below).	Low (-)	Cultural respect to avoid this becoming an issue	Negligible  Screened out
European heritage	Loss or damage to declared or valued European heritage sites, including World War Two (WW II).	Construction, land reclamation and dredging disturbing heritage sites	Possible	Minor	Concerns about disturbance to heritage sites has been raised as an issue previously, particularly the rich WW II heritage at East Arm and the <i>Rushcutter</i> , which sits on the Bhagwan Marine site. While no registered heritage site is affected, concern is likely to remain	Medium (-)	Avoiding heritage sites, information boards acknowledging East Arm's history and heritage.	<b>Medium</b>  To be covered by EarthSea

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
					about the loss of heritage and historical sites in the area.			
<b>People and communities, including impacts on social fabric, health and wellbeing, vulnerable community segments</b>								
Road safety	Higher levels of road trauma through interaction with workers commuting and Project traffic.	Mobilisation of construction activity increases industrial traffic, including fill and quarrying materials, workers.	Possible	Major	The scale of change is likely to be inconsequential given existing traffic to the port, however the consequences would be severe. Mainly confined to construction, including transport of fill and quarrying materials, additional workers commuting to site from residential areas.	Catastrophic (-)	Traffic management plans, avoiding peak hour, organised worker transport	Medium  Link to traffic study
Community wellbeing, sense of place	Reduced sense of wellbeing, sense of place, cohesion, fears and anxieties	Mobilisation of workforce changing demographics and community values, FIFO workers in public places, increased alcohol consumption.	Unlikely	Minor	The Project is in an existing industrial area. There is no change of land use but a continuation of maritime activities at East Arm. There are unlikely to be FIFO workers congregating or disturbance to the values of residential areas.	Low (-)	Minimising FIFO, drawing from existing workforce, codes of conduct	Negligible  Screened out

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
Health	Reduced health and wellbeing	Workforce mobilisation creating fears and anxieties, fears of contamination	Rare	Insignificant	Not raised as an issue, unlikely give the scale and duration of the Project.	Low (-)	As above, good communication	Negligible Screened out
Marine safety	Reduced feelings of safety due to marine incidents during dredging, construction.	Start of dredging and construction, including dredging pipelines	Unlikely	Moderate	Previous dredging operations have resulted in collisions by recreational boating traffic with dredging equipment (eg 2012). Duration and scale of dredging reduces the likelihood and consequences.	Medium (-)	Strong safety standards, advertising, communication with recreational boating community	Low To be covered in study
Community investments	Opportunities for community development, negotiated benefits or sponsorship.	Proponents establish sponsorship program or negotiate benefits with traditional owners	Unlikely	Insignificant	Not raised as an issue, Native Title extinguished, proponent is government.	Low (+)	Proactive efforts to distribute benefits	Negligible Screened out
<b>Healthy land and seas (see under amenity and cumulative impacts)</b>								
Marine biodiversity	Reduced recreational	Dredging and construction activities	Possible	Minor	Relatively short duration, of a similar scale to marine supply base.	Low (-)	Minimise turbidity, maximise	Negligible

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
	fishing due to poor fish health.	causing turbidity and noise			Rating might increase if stakeholders express concern.		dredging in the Wet, communicate monitoring results.	Screened out (covered in technical reports)
	Reduced health of harbour and fish stock due to clearing of mangroves and breeding habitat.	Dredging and land reclamation creating turbidity and dredge plumes	Possible	Minor	While clearing of mangroves would be permanent, it is relatively small and isolated stand of mangroves.	Low (-)	Communicate extent of clearing and likely implications, including photos	Negligible Screened out (covered in technical reports)
	Reduced quality of marine biodiversity, foraging habitat and iconic species such as turtles, dolphins.	Dredging and land reclamation	Possible	Minor	Likely to be raised as more of a cumulative issue	Low (-)	Communicate the results of technical studies	Negligible Screened out (covered in technical reports)
Terrestrial biodiversity	Reduced species valued by the community, eg migratory birds.	Dredging, land reclamation, disturbance from construction and operations	Possible	Minor	Small scale of construction. Not expected to impact migratory birds. May be included if stakeholders express concern. Covered as a cumulative impact.	Medium (-)	Communicate results of technical studies	Low Screened out (to be covered in technical reports)

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
<b>Living environment</b>								
Recreation values	Reduced access to recreational activities in the harbour, such as fishing, boating, yachting.	Security and restriction zones, dredging equipment, during operations.	Possible	Insignificant	Small footprint, next to existing industrial activities such as barge ramp, marine supply base, relatively short duration.	Low	Communicate exclusion zones	Negligible stakeholder consultation
Noise	Reduced amenity due to project noise, particularly at night.	Construction activities, particularly piling at night	Possible	Insignificant	Construction activities, particularly piling, may be perceptible in nearby residential areas. However, piling noise was not a cause of complaints for the marine supply base.	Low (-)	Monitor community feedback during construction	Low Link to technical study
Dust	Reduced amenity due to dust from clearing.	Clearing	Unlikely	Insignificant	The amount of land to be cleared is relatively small, the site is already used for industrial purposes and is several kilometres from residential areas in Darwin and Palmerston.	Low (-)	Dust suppression	Negligible Screened out Reference air quality study
Traffic	Congestion, slower travelling time due to more	Increased industrial traffic	Possible	Insignificant	There is already substantial traffic in this industrial area.	Low (-)	Traffic management plan	Negligible

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
	trucks on roads leading to East Arm and the Port.				Additional traffic should be absorbed.			Screened out (for traffic study)
Light pollution	Annoyance due to increased light pollution at the site.	Site lit up during night-time construction operations	Possible	Insignificant	Short duration, part of existing industrial area, next to Darwin Port. Not raised as an issue.	Low (-)	Minimise light pollution, eg screens	Negligible Screened out
Visual	Reduced aesthetic value of the harbour's natural environment.	Land clearance, industrialisation of the harbour	Unlikely	Minor	While permanent, the scale of change is relatively small and in line with existing industrial activities.	Low (-)	Communicate project activities	Negligible Screened out
<b>Economic (jobs, industry participation, livelihoods, economic development)</b>								
Economic benefits	Strong and more diverse economy from enabling economic infrastructure and capacity building.	Construction and operation of ship lift	Likely	Important	Positive and negative economic impacts are the most uncertain impacts of the project, given that design and construction is not complete and to some extent enhances existing capacity. This aspect of the Project has invoked most community commentary (see issues). Analysis to be based on	Beneficial (+)	Government's economic and investment attraction strategies to maximise benefits unlocked by the infrastructure	High (beneficial) A priority issue to be covered in SIA

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
					NT Government study and stakeholder interviews.			
	Local businesses benefit from winning work and enhanced capabilities.	Planning, construction and implementation of the project	Possible	Minor	Some cynicism about the benefits to be delivered and level of local, Indigenous procurement.	Beneficial (+)	Communicate opportunities, commitment to local participation.	Medium (noticeable) To be covered
Boom bust	Businesses suffer detriment by over-investing due to unrealistic expectations of benefits during the construction phase.	Transition from construction to operations	Unlikely	Insignificant	Unlikely given the small scale of the project and likelihood that benefits will increase during operations, not decrease.	Low (-)	Good communication	Negligible Screened out
Benefits don't materialise	Frustration by businesses who fail to win tenders or have unrealistic expectations of opportunities.	Planning, construction and implementation of the project	Possible	Minor	Some cynicism that the project won't benefit local businesses.	Medium (-)	Communicate opportunities, local participation plan	Low To be covered
Jobs and training	Enhanced employment and training of locals	Planning, construction and	Likely	Minor	An estimated 100 direct and 400 indirect jobs during construction. More jobs as	Noticeable (+)	Local and Indigenous	Medium (noticeable)

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
	as a result of the project.	implementation of the project			project is implemented and unlocks marine servicing capabilities.		participation plans.	To be covered
Aboriginal jobs and training	Aboriginal jobs and training as a result of the project.	Planning, construction and implementation of the project	Possible	Minor	Immediate benefits for Aboriginal workers with companies winning work on the project, particularly if Larrakia or other Indigenous businesses win work.	Noticeable (+)	Local participation plans, partnerships.	Noticeable To be covered
Crowding out	Cumulative crowding out of other economic sectors if the project competes with or displaces other local sectors.	Dredging, construction in particular	Unlikely	Minor	Potential for dredging, exclusion zones and land reclamation to reduce access to tourism and fishing charters, but more likely to happen as a cumulative impact (temporal and spatial).	Low (-)	Work with tourism and recreational fishing organisations, communication on access during dredging	Low Interviews to see if this is an issue
Project competes with other businesses	Detrimental impacts on competing maritime businesses.		Possible	Minor	May be concerns that existing companies are disadvantaged by the ship lift facility, concerns at government enhancing the competitive prospects of a private business (NB both common user facility and private facilities).	Medium (-)	?? to be explored	Low See if raised in interviews

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
Inflationary effects	Inflationary effects on other businesses and economic sectors (labour, rental, services and supplies).	Construction and implementation	Rare	Insignificant	A project of this scale is unlikely to generate inflationary impacts.	Low (-)	n/a	Negligible  Screened out
<b>Having a voice (consultation that incorporates people's views into decision-making, good governance structures)</b>								
Early and meaningful engagement	Disempowerment of Aboriginal and other community groups who feel they have not been afforded an influential voice in decision-making.	Decision-making on project planning, regulatory approvals and project implementation	Possible	Minor	The community, including Larrakia Development Corporation, has been critical of poor consultation in relation to development of the harbour generally but has not raised issues specific to the ship lift.	Medium (-)	Proactive and early consultation of key stakeholders identified for the Project.	Negligible?  Rating to be decided after consultation
Human rights	Human rights breached, in particular the right of affected Aboriginal people and communities to Free Prior and Informed Consent (FPIC).	Planning, construction and implementation	Unlikely	Minor	Larrakia people will not have an opportunity to provide PFIC as key decisions have already been made for the project. However, AAPA has consulted with custodians in order to prepare a sacred sites certificate, cultural heritage study will ensure Larrakia perspectives are	Low (-)	Respect for Larrakia cultural connections to land and sea, good process	Negligible?  Screen out

Category	Potential positive and negative impacts	Impact pathway triggering change process	Sensitivity analysis				Mitigate (negative), enhance (positive)	Residual rating
			Likelihood of a measurable impact	Consequence <sup>1</sup>	Explanation	Rating - positive or negative		
					considered and consultation will provide an opportunity to raise issues.			
<b>Cumulative impacts as a result of multiple projects</b>								
Values of the harbour	Reduced social, cultural, recreational and ecological values of the harbour due to large-scale changes to land and sea use.	Multiple dredging campaigns, marine traffic, industrial activities and population growth	Likely	Moderate	A high level of interest in the harbour's diverse values and a high level of concern at the loss of values from incremental industrialisation and population pressures. The harbour is integral to the Territory's unique lifestyle. Industrial development touches strongly held values so there is high sensitivity to disturbance. Distributive equity and rights will be considered.	High (-)	Darwin Harbour Strategy, government policy and planning for projects that accord with all values of the harbour	High  Priority area for study

Other cumulative impacts considered under economic include potential crowding out of other economic sectors and cumulative benefits for the economy.



# Darwin Ship Lift Project

## Consultation report

Prepared by True North Strategic Communication

2021

Version No.	Issue Date	Prepared by:	Approved by:	Approval Date
V1		Jane Munday	Claire Butler	August 2021
V2		Jane Munday	Claire Butler	September 2021
V3	7 September	Jane Munday	Julie Carpenter, AECOM	7 September 2021
V4	5 October	Jane Munday		

*Recipients are responsible for eliminating all superseded documents in their possession*

### Consultation statement

True North Strategic Communication is guided by the principles of good community engagement, based on people's level of interest and concern as outlined by the International Association for Public Participation (IAP2).

Our role is to provide stakeholders and the general public with objective information so they can provide informed feedback on consultation projects. We give people the opportunity to provide input that is balanced and reflective of the range of community views to independently provide the best possible guidance to decision makers.

Our practice reflects professional standards and ethical standards for human research including anonymity, confidentiality, record storage and keeping people informed.

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## Abbreviations and terminology

AAPA	Aboriginal Areas Protection Authority
AFANT	Amateur Fishermen’s Association of the NT
DCA	Development Consent Authority
DCMC	Department of the Chief Minister and Cabinet
DHAC	Darwin Harbour Advisory Committee
DIPL	Department of Infrastructure, Planning and Logistics
DITT	Department of Industry, Tourism and Trade
ECNT	Environment Centre of the Northern Territory
EIS	Environmental Impact Statement
HMP	Heritage Management Plan
IAIA	International Association for Impact Assessment
IAP2	International Association for Public Participation
ICN	Industry Capability Network
LDC	Larrakia Development Corporation
LDC	Land Development Corporation
MBANT	Master Builders Association of the Northern Territory
MIC	Marine Industry Council (of the Chamber of Commerce)
MIDP	Maritime Industry Development Plan
MUBRF	Multi-user Barge Ramp Facility
NLC	Northern Land Council
NT	Northern Territory
NTEPA	Northern Territory Environment Protection Authority
NTG	Northern Territory Government
PLan	Planning Action Network
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
SSC	Sacred Sites Certificate (AAPA)
TIA	Traffic Impact Assessment
ToR	Terms of Reference (issued by the NTEPA)
VET	Vocational Education and Training

## Executive Summary

The Northern Territory Government is building the largest ship lift in northern Australia on East Arm Peninsula, in Darwin. The Darwin Ship Lift Facility (the 'Project') will enable the maintenance and servicing of Defence, Australian Border Force and commercial and private vessels, including from the oil, gas and marine industries.

The Project is seen by the NT Government as critical enabling infrastructure that supports the Northern Territory's vision of establishing a world-class maritime service and supply industry for northern Australia.

In 2020, the Northern Territory Government engaged environmental consultancy AECOM to coordinate environmental studies and an Environmental Impact Statement (EIS), to be lodged with the Northern Territory Environment Protection Authority (NTEPA) by the end of 2021.

The Northern Territory Government will submit a referral to the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*. A development application to the Development Consent Authority will cover construction and dredging activities.

True North Strategic Communication was engaged as a sub-contractor by AECOM to coordinate consultation and prepare a social impact assessment for the EIS.

The following report provides an outline of the methodology used to guide consultation and the key issues raised in stakeholder interviews.

True North Strategic Communication's engagement was guided by the Northern Territory Environment Protection Authority's guidance for proponents on stakeholder engagement and by the core values of the International Association for Public Participation (IAP2).

Initial stakeholder mapping, issues analysis and scoping suggested the Project would have relatively few significant social and cultural impacts and relatively substantial long-term economic benefits.

Given the predicted scale of change and likely level of stakeholder concern, engagement was proposed at the levels of **inform** (providing people with relevant information and opportunities for feedback) and **consult** (actively seeking stakeholder insights and perspectives).

The primary method of engagement was to proactively send fact sheets to identified stakeholders, inviting feedback, then to contact those stakeholders most likely to have an interest in the Project.

Most consultation for the EIS and SIA took place in August 2021. The main issues raised were the long-term economic benefits of the ship lift as enabling infrastructure, the economic and labour force benefits but critical skills shortages, the need to better engage with the local maritime industry and the strategic nature of the project.

From a social and cultural perspective, the ship lift facility was seen as invoking limited change processes. No stakeholders raised topics such as social infrastructure or impacts on community cohesion and wellbeing. Environmental, social and cultural issues were confined to questions regarding the management of waste water, potential sedimentation impacts on Catalina Island (a sacred site) and the progressive loss of Darwin's World War II heritage and history. Several stakeholders commented that their concerns related more broadly to the cumulative impacts of dredging and industrialisation of the harbour.

## 1. Standards and statutory framework

The primary standards guiding consultation and social research for this SIA are:

- *Stakeholder Engagement and Consultation: Environmental impact assessment guidance for proponents* (NTEPA 2021). The guideline adopts as best practice the IAP2 principles for stakeholder engagement. It outlines expected formal feedback processes for projects on public exhibition and encourages proactive approaches to early engagement during preparation of environmental impact statements, starting at the scoping phase. The guideline defines engagement as including ‘communication, dialogue, listening and responding’ (see Section 2 for more detail).
- International Association for Impact Assessment (IAIA), *Social Impact Assessment Principles* (Vanclay, 2003), which is regarded as leading practice for social impact assessment.
- International Association for Public Participation (IAP2) *Core Values, Spectrum of Participation and Quality Assurance Standard* (2015) which are regarded as industry best practice for public participation (or community and stakeholder engagement) (see [www.iap2.org.au](http://www.iap2.org.au)).

## 2. Stakeholder engagement

A requirement to consult was a key aspect of the Statement of Reasons and Terms of Reference for the Darwin Ship Lift Project, issued by the NTEPA in 2018.

The objects of the Northern Territory *Environment Protection Act 2019* (sections 3(d) and 3(e)) expressively:

- provide for “broad community involvement during the process of environmental impact assessment and environmental approval;
- recognise “the role that Aboriginal people have as stewards of their country as conferred under their traditions and recognised in law, and the importance of participation by Aboriginal people and communities in environmental decision making process”.

The Northern Territory EPA’s *Stakeholder Engagement and Consultation Guidance for Proponents* (updated January 2021) recognises that stakeholder consultation is an important component of social, cultural and health impact assessments, over and above formal opportunities for feedback on documents placed on public exhibition.

The guidance note stipulates that a purpose of impact assessment in the Northern Territory is to involve the community in planning for projects. This requires a proactive approach to early stakeholder engagement, in order to identify and address issues “before key decisions are made and when alternatives are still an option” (p.8).

“The NTEPA considers that both proponents and the community benefit from respectful decisions, deeper dialogue, and collaborative decisions that result from ongoing stakeholder engagement rather than being limited to specific consultation activities.”

The guidance note recommends that proponents adopt the International Association for Public Participation (IAP2) core values as principles for best practice stakeholder engagement. These core values are shown in Fig 2-1 below.

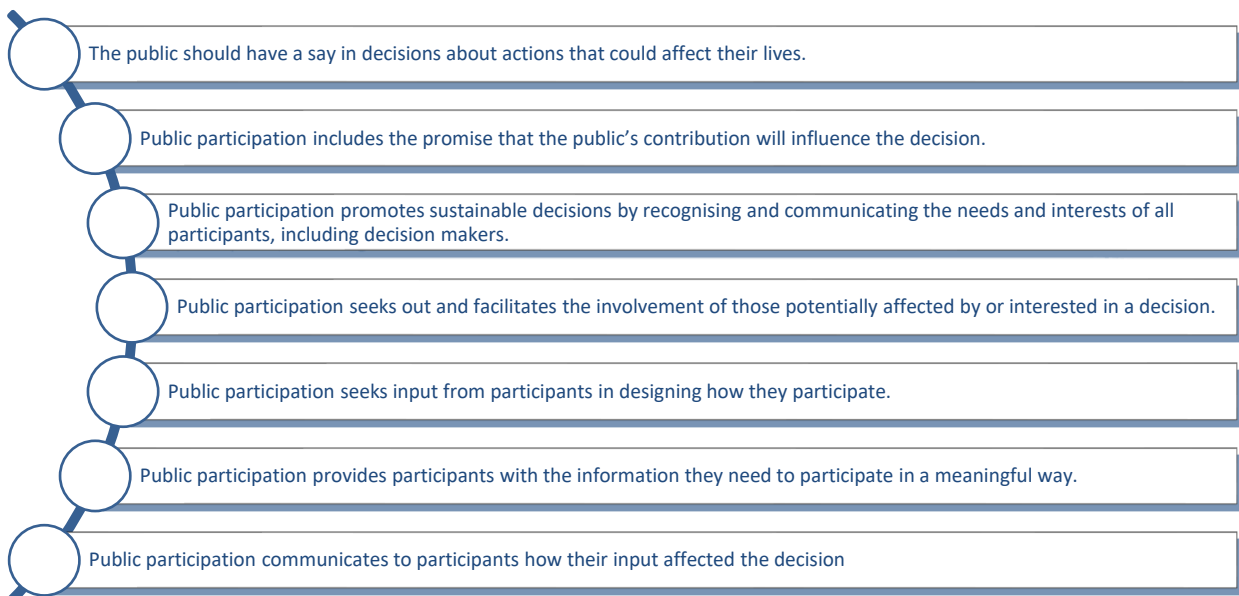


Fig 2.1: IAP2 Core values

## 2.1 Methodology

True North Strategic Communication was engaged in mid-2020 by AECOM, the environmental consultancy appointed by the Northern Territory Government to prepare the Environmental Impact Statement (EIS) for the Project.

True North prepared a communication and engagement strategy in mid-2020, outlining our proposed approach to consultation for a social impact assessment and the EIS more broadly. The approach was informed by our experience of working on similar projects and a review of regulatory studies for projects at East Arm Peninsula and in Darwin Harbour. A literature review incorporated reports produced over the past 20 years by groups such as the Darwin Harbour Advisory Council (DHAC). We also explored media coverage that captured attitudes towards development in the harbour.

Stakeholder mapping identified key stakeholders who may be impacted by the Project or who were likely to have an interest in or influence on the future of the Project. The engagement strategy suggested approaches commensurate with stakeholders' predicted level of concern or sensitivity to impacts. It outlined key messages, consultation materials, an internal question and answer sheet and a topic guide for interviews. The strategy and materials were approved by the client and a draft fact sheet prepared to ensure the Project and any implications were clearly explained.

In general, a low-key, targeted approach to communication and engagement was felt appropriate. This is because there has been significant communication and consultation on industrial development in the region already, including the East Arm Wharf Expansion, Darwin Marine Supply Base, the Multi-user Barge Ramp facility and aspects of the adjacent Marine Industry Park. The Project has a relatively small footprint and is in an industrial area that has seen significant development in recent years. There has been substantial communication about the Project in the form of media releases, media coverage and direct business communication by the Northern Territory Government and Industry Capability Network (ICN).

However, issues analysis did recognise the strong role East Arm Peninsula has played in Darwin's unique history and Territorians' strongly held values in relation to Darwin Harbour, which is covered in the Social Impact Assessment.

Preliminary analysis suggested that the key issues of interest to stakeholders would be the economic benefits of the project, reflecting the Northern Territory Government's economic reconstruction agenda, as well as potential impacts on Darwin Harbour and cultural heritage. This aligned with the Terms of Reference issued by the NTEPA in December 2019.

Consequently, engagement was at the IAP2 levels of:

- **inform:** proactive communication about the Project to ensure interested and impacted stakeholders were aware of the Project, the regulatory processes and how they could seek briefings and provide feedback
- **consult:** we proactively contacted those stakeholders we felt most likely to have an interest in the Project to seek their insights and perspectives.

### 2.1.1 Early works dredging

On 3 November 2020, the NT Government announced plans to submit an early works dredging application with the Development Consent Authority. Stakeholders were emailed a fact sheet, which included an outline of how they could provide feedback. The development application was submitted on 25 November and placed on public exhibition from 27 November to 11 December 2020. The Darwin Harbour Advisory Committee, which represents a diverse cross-section of stakeholders with an interest in the harbour, was briefed on 3 December 2020.

There were no public submissions and three from Northern Territory Government departments (Transport, Power and Water and Medical Entomology). The development application was subsequently withdrawn when it was agreed with the NT Environment Protection Authority (NTEPA) not to proceed with the early works dredging. All impacts of the Project will now be considered by an Environmental Impact Statement (EIS under the *Environment Protection Act (NT) 2019* and Development Application under the *Planning Act (NT) 2020*.

### 2.1.2 Consultation for Environmental Impact Statement

A second NT Government fact sheet was emailed to stakeholders on 26 July 2021 outlining the Project, environmental studies and opportunities to provide feedback (see Appendix). Recipients were primarily government departments, Members of Parliament and the leaders of various industry, heritage and community groups.

The fact sheet was posted on the Northern Territory Government's ship lift website, which has been maintained since Government became the proponent for the Project (<https://cmc.nt.gov.au/advancing-industry/ship-lift>).

**Priority Two stakeholders:** Of the priority two group of 32 stakeholders emailed the fact sheet, none responded, sought further information or requested a briefing. No feedback was received on the inquiries email address promoted in the fact sheet and on the government website.

**Priority One stakeholders:** An additional 21 targeted stakeholders were sent the fact sheet and advised that they would be contacted by True North Strategic Communication to seek an interview. These stakeholders had been identified as those most likely to have an active interest in the Project. The interviews took place over a three-week period from 6 to 27 August, 2021. Most of those contacted were keen to provide a response. Some expressed an interest, but said they were busy and had more pressing commitments. Some commented that the Project seemed to have a fairly localised footprint and their concerns lay more with broader activities in the harbour, such as dredging, the need for a strategic assessment of the harbour or development on Middle Arm (the subject of a separate strategic assessment).

The timing of interviews coincided with a short COVID-19 lockdown in Darwin, which meant some interviews were rescheduled or done by phone. The interview period also coincided with the lead-up to the Northern Territory's local government elections, so two municipalities (Darwin and Litchfield) suggested a briefing of newly elected members later in 2021.

A small number of stakeholders did not respond to emails and phone calls.

For face-to-face interviews, True North Strategic Communication was accompanied by members of the Northern Territory Government ship lift team, who provided a Project briefing and answered stakeholder

questions, before True North asked specific questions about awareness, specialist insights or perceptions of the Project. Where stakeholders' quotes are included in this report, they were sent to the interviewee for checking and in some cases were amended.

Interviews of varying depth were conducted with:

- Amateur Fishermen's Association of the Northern Territory
- Chamber of Commerce, Marine Industry Council
- City of Darwin
- Darwin Port
- Department of Industry, Tourism and Trade (regarding the Marine Industry Development Plan)
- Industry Capability Network (ICN)
- Land Development Corporation
- Larrakia Development Corporation
- Litchfield Council
- Master Builders Association of the Northern Territory (MBANT)
- Paspaley Group
- Planning Action Network (PLan).

In addition to a scheduled meeting, the Planning Action Network (PLan) provided a written submission. Comments from the submission are incorporated in the summary of issues raised at Section 3 of this report.

A briefing of the Port Users Group is scheduled for mid-October.

A separate archaeological and heritage assessment has been prepared by EarthSea Heritage Surveys (Appendix N).

### 2.1.3 Additional consultation by the ship lift team

Planning for the Project has been guided by a Project control group. Additional consultation by the ship lift team has included:

- a briefing of the Northern Territory Environment Protection Authority (NTEPA) by members of the government ship lift team and AECOM on 21 June 2021, with follow-up meetings planned
- an inter-agency working group
- Heritage Branch (which advised the area had been well-surveyed and there are no protected heritage items in the Project footprint)
- Aboriginal Areas Protection Authority (obtaining Sacred Site Clearance Certificates)
- a Darwin Harbour Advisory Committee sub-group to discuss a Darwin Harbour Dredging Strategy
- meetings with the Transport section of Department of Infrastructure, Planning and Logistics and Darwin Harbour Infrastructure Projects Working Group
- Darwin Port, about the use of the port's spoil ponds and property boundaries along Berrimah Road.

In relation to consultation with Larrakia custodians, in 2018, as part of the application process for an Authority Certificate from the Aboriginal Areas Protection Authority (AAPA), the Northern Territory Government was involved in engagement with Aboriginal Custodians with the then project Proponent, Northern Ship Support. This engagement was arranged through AAPA and resulted in the issuing of an Authority Certificate and conditions for construction of the project. No major concerns were raised by Custodians during this consultation, with hydrodynamic modelling suggesting there would be no significant impacts on Catalina

Island, a sacred site. The Northern Territory Government agreed to provide updated modelling, resulting from the final design, to Custodians to allay any concerns of construction impacting on Catalina Island.

## 2.2 Objectives of stakeholder engagement

Early and meaningful engagement is an authentic process of involving people in solutions and decisions, listening to understand their perspectives, providing an honest account of their input and taking seriously the lived experience of communities (Munday 2020). The objectives of consultation for the Environmental Impact Statement (EIS) and Social Impact Assessment (SIA) of the Project were to:

- listen to and understand the perspectives of all stakeholder groups
- ensure concerned groups have a chance to provide early input
- manage stakeholder expectations
- provide early identification of potential issues or concerns that may contribute to better Project outcomes, avoid mistakes or mitigate negative impacts
- support delivery of a Project that is environmentally, economically, culturally and socially acceptable to the community and key stakeholders
- provide regulators with confidence that all positive and negative impacts are well understood and can be managed through all phases of the Project
- provide guidance for the Project proponent's long-term social performance.

Communication objectives were to:

- build awareness of the Project
- provide objective and accurate information so stakeholders could provide informed feedback
- provide a tailored approach to communicating with different stakeholder groups
- build understanding, trust and relationships with individuals or groups likely to be positively or negatively impacted by the Project.

### 3. Consultation results

The following is a summary of issues raised and comments made by targeted stakeholders during interviews. In line with True North's initial scoping of issues, the main focus of comments was on the potential strategic, economic and labour force benefits of the Project.

Key issues raised by the maritime industry related to the need for better engagement by government, ensuring the needs of smaller businesses were considered and the importance of addressing critical skills shortages.

Comments on environmental, social and cultural issues were fairly minimal and related more to cumulative impacts on the harbour, such as dredging and industrialisation of the harbour from multiple projects. Stakeholder comments are also incorporated in the social impact assessment for the EIS.

Stakeholders will have a further chance to provide formal feedback to the NT EPA once the EIS is on public exhibition, likely to be in early 2022.

Topics covered	Detail	Raised by	Addressed in EIS
Interview topics			
Building the capacity of Darwin's marine industry	<p>This was the most frequently raised topic, with substantial detail provided.</p> <p>Currently, most repairs and maintenance are done in Batam, Indonesia and Singapore. Darwin struggles to be competitive because of higher operating and labour costs. However, Darwin's competitive advantage is its geographic location. It is the closest Australian Port to Asia and the only deep water port, providing safe anchorage and access for deeper draught vessels, between Broome and Brisbane.</p> <p>The East Arm ship lift facility of 5000 tonnes will double the capacity of the current two largest ship lifts at Frances Bay and Coonawarra, both of which are aged and due for decommissioning.</p> <p>The modern, larger ship lift will accommodate more vessels, including naval patrol boats. The common user facility and expanded marine industry park will expand Darwin's marine repairs and maintenance capabilities. This should be attractive to time-sensitive fleets such as oil and gas, naval and border force vessels, saving up to 10 days' sailing time for emergency repairs. It should also prove attractive to other sectors, such as coastal barges, however companies are unlikely to commit until they see the pricing regime.</p> <p>Darwin Port gave the example of a cruise ship having to go to Singapore recently to get a generator repaired, which was lost time.</p> <p>COVID-19 and the current geopolitical environment make Darwin more attractive as an alternative to sending crews to Asian ports.</p> <p>Defence is going to tender for a northern regional maintenance provider in late 2021. The LDC has identified blocks in recent</p>	<ul style="list-style-type: none"> <li>• Darwin Port</li> <li>• LDC</li> <li>• Paspaley</li> <li>• Master Builders</li> <li>• MIC</li> <li>• DITT</li> <li>• ICN</li> <li>• PLan</li> </ul>	<ul style="list-style-type: none"> <li>• Economic section of SIA</li> </ul>

	<p>plans where it thinks the Navy could establish a regional maintenance centre. With international tensions, the Navy has a stronger presence in Darwin and is using facilities such as the barge ramp in the Marine Industry Park.</p> <p>Plan commented that it is pleasing that the NT Government is developing its own maintenance and repair establishment in Darwin, as a strategic asset to be available locally to both public and commercial vessels.</p> <p>Specific comments by stakeholders:</p> <p>“Projects like the ship lift create a stronger base and a more balanced economy.” (David Malone, MBANT)</p> <p>“I think people under-estimate how much work will come out of the ship lift, the ship lift itself is just a vehicle.” (Kevin Peters, ICN)</p> <p>“We (Paspaley Pearling Company) has a fleet of vessels and so we are a marine facilities user. We want to continue to home base our fleets in Darwin. A big part of home-basing is accessing a repairs and maintenance capacity. Paspaley has developed support capability over several generations as a result of having a fleet here.</p> <p>“There are a lot of boats coming and going from Darwin. Having a repairs and maintenance capacity in Darwin is an important part to getting those vessels to home base here. For home-basing to stay here and grow, improved infrastructure is needed, including for marine maintenance. Typically, the suite of supporting infrastructure is best when concentrated in a precinct. The historical use of Frances Bay precinct is no longer an optimal location, and we agree that a Marine Industry Park (MIP) at East Arm is the logical location to build and develop the marine industry. East Arm has road and rail connections and an industrial precinct to support this type of development.</p> <p>“The company’s outlook is to continue to grow its Darwin home-based maritime business. Paspaley supports the Northern Territory Government’s aims to grow a strategic, durable and viable long-term marine industry in Darwin by developing a marine industry precinct at East Arm.” (Dr Sam Buchanan).</p>		
Reservations about the ship lift	<p>More cautious comments about the ship lift were that:</p> <ul style="list-style-type: none"> <li>• companies are unlikely to make a commitment to the ship lift before they see the pricing regime</li> <li>• industry supports the Project but there has been cynicism about delays in starting work and apparent loss of momentum in delivering the ship lift</li> <li>• smaller operators want to see a master plan and bigger companies moving from Frances Bay and the Duck Pond before they make strategic investments in their businesses (see below)</li> <li>• there are perceptions that the ship lift is for the ‘big end of town’</li> <li>• the Land Development Corporation has prepared a master plan for the adjacent Marine Industry Park and felt it important to promote the whole precinct not just the ship lift. The LDC is finding that prospective</li> </ul>	<ul style="list-style-type: none"> <li>• MIC</li> <li>• LDC</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

	<p>customers are waiting for greater certainty about the timing and evidence of a foundation customer before committing to developments in the MIP</p> <ul style="list-style-type: none"> <li>Defence is seen as a foundation customer, as part of a stronger naval presence in northern Australia and a proposed regional maintenance centre, but is yet to 'put down the money or make decisions'.</li> </ul>		
Poor engagement	<p>The Marine Industry Council of the Chamber of Commerce expressed concern that government's focus was on the 'gold plated' customers (navy and large boats) and not the many 'bread and butter' businesses that serve a diverse maritime industry in Darwin. Much of the Darwin industry revolves around vessels of less than 50 metres, e.g. Paspaley fleet, commercial fishing, tugs and commercial boats. The sector supports the oil and gas industry, fishing fleets, super yachts, coastal fishing and defence.</p> <p>Other concerns expressed by the MIC:</p> <ul style="list-style-type: none"> <li>lack of engagement with industry to get input to the design of the facility to ensure facilities accommodate the needs of the local industry from multiple facets, eg including a travel lift;</li> <li>at what stage in the design and construct tender process would short-listed proponents have to engage with local industry?</li> <li>whether smaller boats will be priced out of use and whether a sling lift would be available;</li> <li>Cairns is looking at a 'sling lift' to allow for rapid turnaround of smaller vessels;</li> <li>industry would have more confidence if key players like Paspaley, Austal and Norship were seen as making commitments to the East Arm precinct and moving operations from Frances Bay and the Duckpond;</li> <li>industry wants to see a master plan, or the big picture, to guide costly and strategic investment decisions</li> <li>need for a whole-of-government approach, whereas government appears to work in silos. There are complex issues being considered by government in isolation.</li> </ul> <p>Response: Government is looking at opportunities for a sling lift, so the whole ship lift doesn't need to be used for smaller vessels. There is a Marine Industry Development Plan looking at a range of strategic and workforce issues and Land Development Corporation is doing a master plan for the Marine Industry Park.</p> <p>In relation to design, it's currently a high-level conceptual design.</p>	<ul style="list-style-type: none"> <li>MIC</li> </ul>	<ul style="list-style-type: none"> <li>Economic section</li> </ul>
Rationale for government investment	<p>Enabling economic infrastructure projects such as the ship lift are not always commercial in their own right, particularly in thin markets. But such projects have played a key role in the development of Northern Australia.</p> <p>"Since Self-Government, government has invested in enabling infrastructure which would not be commercially</p>	<ul style="list-style-type: none"> <li>MBANT</li> <li>Paspaley</li> </ul>	<ul style="list-style-type: none"> <li>Economic section of SIA</li> </ul>

	<p>viable but which is important to growing and diversifying the economy.</p> <p>“The problem for the NT is having to start from scratch, unlike places like Sydney, where there is 250 years of infrastructure and the next person who comes along just bolts on.</p> <p>“We are a strong supporter of the NT’s approach to development of the ship lift... Someone has to lean forward and make it happen... If government doesn’t invest in it, no one will.” (David Malone, MBANT)</p> <p>“This type of endeavour is not a straight-forward commercial proposition but rather a ‘nation building’ project. In Australia, large marine facilities have been created by governments with a long-term vision, e.g. the Australian Maritime Complex in Henderson (Perth) was built by the WA Government.</p> <p>“One of the key economic drivers around the ship lift as an economic enabler is that it promotes local use and is attractive for people to plan and grow modern maintenance based in Darwin. It’s supported by the Northern Territory Governments and also the Australian Government through the Northern Australia Infrastructure Facility (NAIF).</p> <p>“The Ship Lift’s technical viability and integration with a Marine Industry Park at East Arm has already been demonstrated.” (Dr Sam Buchanan)</p>		
<p>Boost to jobs and marine industry training</p>	<p>While the project will provide some immediate construction jobs, stakeholders generally felt the key benefits of the project would be a longer-term growth in the marine industry sector, supporting growth, sustained employment and a broader range of trade training in the Territory.</p> <p>The construction workforce tends to be mobile across the NT, Queensland and WA and secure, long-term work should support a more permanent marine industry workforce.</p> <p>“It will be a powerful enabler for workforce growth. As a small capital city, and a quite isolated location, we do not have the critical mass that other capital centres enjoy. Darwin struggles to build a locally housed workforce.</p> <p>“Australia has become very focussed on FIFO. It tends to concentrate labour in major centres who fly up to work and then fly home. Economically, this isn’t perhaps the best model. COVID has highlighted the vulnerability of this model and supply chains and the importance of establishing regional capability.</p> <p>“Most people need job security which means the long-term probable demand for the skills they have. Establishing the critical infrastructure to support that skills base is an important part of that process of workforce capability.</p> <p>“A major project construction provides an immediate ‘sugar hit’ benefit but longer-term sustainable demand is what really provides long-term capacity building. The initial capital investment of enabling infrastructure is therefore needed to</p>	<ul style="list-style-type: none"> <li>• DITT</li> <li>• Paspaley</li> <li>• MBANT</li> </ul>	<ul style="list-style-type: none"> <li>• Economic section of SIA</li> </ul>

	create the long-term workflow which leads to workforce development.” (Dr Sam Buchanan)		
Types of jobs	<p>Construction jobs may be limited, as some will be specialised (eg dredging crews generally come self-contained). However, there will be opportunities with civil works, such as truck drivers, and in the production of pre-cast concrete armour units for the revetment walls.</p> <p>Longer-term, the ship lift and associated marine activities will support a range of trades.</p> <p>“Many trades are required at a facility of this sort that are not necessarily limited to what people may usually imagine is marine works. Skills required include boiler making and heavy fabrication, machining and manufacturing, diesel and hydraulic systems, electrical systems, propulsion, corrosion control, preparations and painting, electronic services, refrigeration, civil and utilities, a wide range of engineering skills, project management, IT, supporting administration skills and many and various specialties.</p> <p>“These facilities will be a crucible for technology development and implementation. With the growth and diversity of opportunity these types of precincts can stimulate and support, we hope to attract and keep people in Darwin and grow trade and specialised skills and capability.” (Dr Sam Buchanan)</p>	<ul style="list-style-type: none"> <li>• NTG</li> <li>• Paspaley</li> <li>• MBANT</li> </ul>	<ul style="list-style-type: none"> <li>• Economic section of SIA</li> </ul>
Skills shortages	<p>Particular skills shortages in Darwin include marine engineers and vessel masters and skilled, experienced vessel crews.</p> <p>For repairs and maintenance, it is hard to attract people in all fields. Darwin is competing with mining and oil and gas, which often pay high wages.</p> <p>Darwin is a small city, so has a small pool of skills. It’s important to take a multi-sectoral approach.</p> <p>The Marine Industry Council referred to a substantial skills shortage across Australia, across all sectors. It is hard finding apprentices and workers or getting people to move to the NT. Darwin is competing with Cairns, Henderson (WA) and Osborne (SA).</p> <p>Skills shortages could be addressed by ‘growing our own’, with education pathways for Territorians, so they don’t ‘go south’ and find careers elsewhere. Pathways include:</p> <ul style="list-style-type: none"> <li>• better VET training in schools</li> <li>• using the Howard Springs workers’ camp to boost skilled migration and get back overseas students, some of whom may then stay</li> <li>• a proposed maritime academy: adopting a similar model to the aviation skills centre at the airport and working across industries. The maritime industry covers many trades and skills are transferrable to other sectors.</li> <li>• getting skilled migration back on track (eg by using Howard Springs) and overseas students, who may stay and build a career in Darwin</li> </ul>	<ul style="list-style-type: none"> <li>• Paspaley</li> <li>• DITT</li> <li>• MIC</li> <li>• LDC</li> <li>• PPlan</li> </ul>	<ul style="list-style-type: none"> <li>• Economic section of SIA</li> </ul>

	<ul style="list-style-type: none"> <li>• there are opportunities to build new capabilities, eg digital certification of fabrication</li> <li>• there will be a need for secure storage of data (LDC is looking at a potential data centre at Wishart).</li> </ul> <p>Question: How will the project benefit Charles Darwin University?</p> <p>Response: The Maritime Industry Development Plan is looking at industry capacity and skills development across the Territory.</p>		
Diversified economy	<p>Darwin remains too dependent on the 'boom and bust' construction phases of large projects. Diversification of the marine and oil and gas sectors will diversify and strengthen the economy longer-term. A diverse economy is good for the construction sector, which tends to work across sectors.</p> <p>The City of Darwin felt there would be a positive impact from jobs, an increased population and enabling infrastructure that would help drive the economy.</p>	<ul style="list-style-type: none"> <li>• City of Darwin</li> <li>• Paspaley</li> <li>• MBANT</li> </ul>	<ul style="list-style-type: none"> <li>• Economic section of SIA</li> </ul>
Boost to the Port	<p>The Port of Darwin is likely to benefit from imports of Project materials. For example, the port is being used as a laydown area for piling for the Larrakeyah Barracks work, which are then shuttled by barge to site.</p>	<ul style="list-style-type: none"> <li>• Darwin Port</li> </ul>	<ul style="list-style-type: none"> <li>• Economic section of SIA</li> </ul>
Labour market	<p>Darwin's construction workforce is highly mobile between Darwin, Western Australia and Queensland. There are national skills shortages in some areas.</p> <p>A key issue for industry is the short-term nature of projects. Being able to sequence large projects, such as the ship lift, allows for the development of local industry competencies.</p> <p><i>"Darwin suffers from a "chicken and egg" situation: We would like to have better workforce capability but to build that workforce you need secure demand. It's difficult to attract demand when you have limitations in capability or infrastructure.</i></p> <p><i>"Critically, without the infrastructure to attract secure demand, you don't have the opportunity for iterative growth to support labour force development. This project goes a long way to enabling those opportunities." (Dr Sam Buchanan)</i></p>	<ul style="list-style-type: none"> <li>• DITT</li> <li>• MBANT</li> <li>• Paspaley</li> </ul>	<ul style="list-style-type: none"> <li>• Economic section of SIA</li> </ul>
Capacity of Territory firms and ensuring preparedness	<p>Darwin's construction industry has strong experience of major projects. The industry is currently working at less than full capacity, but is picking up.</p> <p>MBANT estimates there are currently 13,000 workers in the construction industry, with 1500 additional jobs since January 2021. The land-based nature of the work should suit the local civil industry which has experience of large projects such as the Larrakeyah/Coonawarra, RAAF Darwin and Tindal, Robertson Barracks and other defence work.</p> <p>Territory industries tend to work across sectors, rather than specialise in just one.</p>	<ul style="list-style-type: none"> <li>• MBANT</li> <li>• ICN</li> <li>• Darwin Port</li> <li>• MIC</li> <li>• LDC</li> </ul>	<ul style="list-style-type: none"> <li>• Economic section of SIA</li> </ul>

	<p>There has been a substantial mindset with Defence, which is now looking at basing infrastructure here to support Darwin as a local base.</p> <p>There could be opportunities with clusters of businesses that include partnerships with larger companies operating out of Henderson in Perth.</p> <p>“There is enormous capacity in the NT construction industry across the board.</p> <p>“The ship lift is a significant Project but it won’t cause industry to burst at the seams.” (David Malone)</p> <p>Anecdotally, ICN gets comments about Darwin lacking capacity for some projects, but it might also reflect contractors’ willingness to see what local companies can do.</p> <p>“The best advice is to get in early and map out the requirements... against what exists at the moment. Then, if we need to, we can see where the gaps are and do some training.” (Kevin Peters, ICN)</p> <p>No major construction projects are envisaged by the Port during the ship lift construction period, which would cause competition for labour or sub-contractors at East Arm. Near-term projects include reclamation of Pond B to support an expanded stockpile area for mining, a cross-land conveyor, tug pen and another bulk ore shed.</p>		
Local Industry Participation Plans	<p>“Industry in the NT has always had a strong commitment to Indigenous employment and training. Indigenous people are attracted to the type of work that construction offers. We have always worked hard to keep those pathways open. All local contractors have Indigenous-owned firms and employment pathways.</p> <p>A key issue is continuity of work and gaining competencies on short-term projects. However, the construction industry uses day labour a lot, which provides flexibility.” (David Malone)</p>	<ul style="list-style-type: none"> <li>• MBANT</li> <li>• Larrakia Dev Corp</li> </ul>	<ul style="list-style-type: none"> <li>• SIMP</li> </ul>
Preparing for industry development	<p>The Department of Industry, Tourism and Trade is coordinating a Maritime Industry Development Plan for the Northern Territory, as a recommendation of the Territory Economic Reconstruction Commission to build capacity and workforce development.</p> <p>The Land Development Corporation is working on a master plan for the Marine Industry Park and recently surveyed established marine service industries at Osborne (SA), Henderson (WA) and Cairns. Survey results will inform detailed design for a five-lot subdivision by determining industry’s needs and potential common user facilities. The LDC’s aim is to have detailed design and approvals in order to be construction-ready when needed. If the ship lift is to be ready in 2024, the LDC will be construction ready by the 2022 dry season (its development application was approved in 2018).</p> <p>The LDC expects prime contractors to be predominantly ‘white collar’, with larger lots in the Marine Industry Park to be</p>	<ul style="list-style-type: none"> <li>• DITT</li> <li>• LDC</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

	<p>occupied mainly by larger small to medium enterprises (SMWs).</p> <p>The LDC is also looking at data networks needed to support industry and is examining potential data locations. Defence security requirements will be an issue.</p>		
Accountability for commitments	<p>Nigel Browne noted that Larrakia are often approached to be part of tender bids in a tokenistic way, which may not translate to real benefits when bids are successful. How will the NT Government ensure accountability of the Project's design and construct contractor with local industry and Aboriginal participation commitments?</p> <p>NTG response: There will be requirements for local and Indigenous employment in the construction contract and Aboriginal participation is a requirement of the NAIF agreement. Government is asking short-listed proponents to outline how they will meet – and hopefully exceed – the minimum employment requirements. The Department of Infrastructure, Planning and Logistics (DIPL) Compliance Unit will do regular compliance audits.</p>	<ul style="list-style-type: none"> <li>• Larrakia Dev Corp</li> </ul>	<ul style="list-style-type: none"> <li>• SIMP</li> </ul>
Loss of heritage	<p>The Planning Action Network (PLan) is concerned about the progressive loss of heritage sites in Darwin and impact on World War II sites around the harbour.</p> <p>Margaret Clinch pointed to the importance of acknowledging Darwin's wartime heritage, which is being progressively lost:</p> <p><i>"We should acknowledge the loss of life and the brave people who went up to Singapore. Our heritage should be recognised as an asset."</i></p> <p>The PLan submission rued the loss of the Catalina boat ramp and suggested other places of heritage significance should be conserved, heritage listed and made accessible to the public. PLan recommends that information boards or shelters be erected to the Heritage Branch, documenting the work of the Catalina aircraft and the lugger maintenance depot in World War II.</p> <p>Paspaley felt the heritage values of the site were relatively small scale and could be recorded.</p>	<ul style="list-style-type: none"> <li>• PLan</li> <li>• Paspaley</li> </ul>	<ul style="list-style-type: none"> <li>• Archaeological and Heritage Assessment (Appendix N)</li> <li>• SIA</li> </ul>
Environmental disturbance	<p>PLan's written submission expressed concern about the footprint of the facility, querying whether 27 hectares is needed and noting that 8.5 hectares is a large area of reclamation, that will include mangroves. Mangroves are important in protecting the water's edge in times of cyclones and are marine nurseries, so their destruction should be minimised.</p> <p>PLan's submission highlighted the importance of properly managing silt movement, water quality, sediment and waste and protecting marine animals such as dolphins, dugong and their feeding grounds.</p> <p>Stakeholders commented that the project is in an industrial precinct, next to a working port. They saw dredging and</p>	<ul style="list-style-type: none"> <li>• PLan</li> <li>• Paspaley</li> </ul>	<ul style="list-style-type: none"> <li>• Chapter 8 of EIS</li> <li>• Healthy country section of SIA</li> </ul>

	<p>construction of the ship lift as having short-term, localised impacts.</p> <p>Paspaley commented that, with the growing emphasis on environmental and governance issues, companies need to be confident that their assets won't be involved in an environmental incident.</p> <p>"I think the risk of environmental impacts of the ship lift are low and controllable. It will be a modern facility that will be designed to control and manage the risks of environmental impacts. The facility is located in an industrial zone where industrial activities are expected, and utility infrastructure of the precinct will have to be designed to manage the activities envisioned.</p> <p>"From the perspective of the Paspaley Group, and being a marine aquaculture company, we are very alive to the importance of environmental hygiene and the importance of environmentally sustainable development. We have always been very supportive of an excellent standard for environmental design and developments for the ship lift project and the MIP precinct. When new precincts are built, they can be built with forward thinking, modern design and appropriate standards and so avoid the risk of creating future environmental issues." (Dr Sam Buchanan)</p>		
Biosecurity	From a biosecurity point of view, there's an advantage in being able to take boats out of the water by ship lift and bund them.	<ul style="list-style-type: none"> <li>• Paspaley</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
Dredging	<p>Some stakeholders are concerned at the cumulative impacts of dredging in Darwin Harbour, including for proposed developments on the Middle Arm Peninsula.</p> <p>Consultation suggested no other harbour projects were planning major dredging campaigns during the likely Project timeframe. The MIC suggested INPEX may be planning a dredging campaign. INPEX confirmed that it plans maintenance dredging of 225,000 cubic metres over a two to three-week period sometime in the next two years but no time has been set.</p> <p>Darwin Port (Landbridge) may use the opportunity to do a relatively small amount of dredging in approach channels to the marine supply base as the major cost of dredging is mobilisation.</p>	<ul style="list-style-type: none"> <li>• DHAC</li> <li>• ECNT</li> <li>• Darwin Port</li> </ul>	<ul style="list-style-type: none"> <li>• Cumulative section of SIA</li> <li>• Appendix J of EIS</li> </ul>
Reduced access for fishing	AFANT's key concern was potentially reduced access to the harbour and creeks from construction and dredging activities, safety during dredging and the importance of forewarning recreational fishing of Project-related activities. AFANT would like to see advance notice through Harbour Master's Notices to Mariners. The NTG and Darwin Port also suggested variable boards and notices at boat ramps.	<ul style="list-style-type: none"> <li>• AFANT</li> </ul>	<ul style="list-style-type: none"> <li>• SIA</li> </ul>
Recreational and aesthetic values	PLan's submission called for the harbour's recreational and tourist values to be maintained and called for landscaping and shelter to be provided, rather than leaving the hardstand area bare.	<ul style="list-style-type: none"> <li>• PLan</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

Traffic	<p>Darwin Port felt extra construction traffic shouldn't cause problems for the port. There is already significant industrial traffic along Berrimah Road and the capacity to accommodate more.</p> <p>The Port has an internal traffic management plan and provides details daily to other operators. During construction of the ship lift, it would be a good idea to collaborate on traffic movement information.</p>	<ul style="list-style-type: none"> <li>• Darwin Port</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic Impact Assessment</li> <li>• SIA</li> </ul>
Waste run-off	<p>LDC: How will waste run-off be managed?</p> <p><b>Response:</b> By the angle of the ground and drainage systems for high-risk areas.</p> <p>PLan: Rubbish and cleaning processes and materials, particularly those that are toxic, should not be allowed to pollute the harbour.</p> <p><b>Response:</b> All waste materials and rubbish is required to be contained on site or treated before discharge.</p>	<ul style="list-style-type: none"> <li>• Larrakia Dev Corporation</li> </ul>	
Tenure	<p>Q: Is the ship lift on port land operated by the Chinese company Landbridge? For strategic reasons, it is essential that the facility remain in Australian hands.</p> <p><b>Response:</b> No, the project is not part of the lease. It is next to Darwin Port.</p>	<ul style="list-style-type: none"> <li>• PLan</li> </ul>	
Cultural impacts	<p>Nigel Browne noted that the area of the ship lift is an old Larrakia fishing ground.</p> <p>More broadly, Larrakia are concerned at the loss of cultural sites around the harbour. Larrakia people are not anti-development "but if you are putting businesses on country and you are damaging country, it isn't good business. We still have one of the most pristine harbours in the country." (Nigel Browne)</p> <p>Response: The ship lift team noted that the Government was aware of the significance of Catalina Island (and has Aboriginal Areas Protection Authority certificates). It will be important to avoid sedimentation of the island.</p> <p>PLan noted that it was important that the Aboriginal Areas Protection Authority is consulted and that Larrakia elders should be consulted about the conservation of places of significance such as middens.</p> <p><b>Response:</b> AAPA has consulted with custodians and an AAPA certificate obtained. There are no shell middens in the project footprint.</p>	<ul style="list-style-type: none"> <li>• Larrakia Dev Corporation</li> <li>• PLan</li> </ul>	<ul style="list-style-type: none"> <li>• Archaeological and Heritage Assessment</li> <li>• Cultural identity section of SIA</li> </ul>
Workplace safety	<p>LDC has received comments about workplace safety in relation to people walking on wharves on either side of the synchrolift, crane capacity/operations and the safety of crews moving around. There will need to be good separation.</p>	<ul style="list-style-type: none"> <li>• LDC</li> </ul>	<ul style="list-style-type: none"> <li>• SIMP</li> </ul>
Cumulative	<p>Several stakeholders were less concerned with the ship lift Project than with broader industrialisation of the harbour, the cumulative impacts of dredging and the need for strategic assessments of activities impacting on values of the harbour and the cumulative impacts of dredging.</p>	<ul style="list-style-type: none"> <li>• DHAC</li> <li>• ECNT</li> <li>• Larrakia Dev</li> </ul>	<ul style="list-style-type: none"> <li>• Cumulative impacts chapter</li> <li>• SIA</li> </ul>

	<p>The Darwin Harbour Advisory Committee plans to release its integrated report framework for Darwin Harbour in October 2021. The framework reports against multi-disciplinary indicators that reflect the varied values of the harbour, including Larrakia cultural values.</p> <p>Nigel Browne commented on the importance of having systems and controls in place to protect the harbour: <i>“We are catching crabs and pumping gas.”</i></p> <p>Several stakeholders commented on the recent TNG proposal on Middle Arm, poor consultation and the unacceptability of the project. Nigel Browne commented that the bar was set <i>“way too low”</i> for approval of such projects.</p> <p><b>Response:</b> Provided background on relevant strategies, including Middle Arm Strategic Assessment and proposed dredging working party.</p>	Corporation	
General questions and responses given at meetings	<ol style="list-style-type: none"> <li>1. Timelines of the project? <i>Construction will take about two years.</i></li> <li>2. Progress on awarding the design and construct tender? <i>NTG is currently seeking detailed requests for tender responses from five short-listed consortia, it hopes to award a tender and start construction and dredging in 2022, after environmental and planning approvals are received.</i></li> <li>3. When will the facility be operational? <i>Construction will take two years.</i></li> <li>4. Who is the operator of the ship lift? <i>Paspaley will be the operator of the government-owned common user facility, which will support a number of marine businesses. Paspaley will also operate an adjacent privately-owned facility.</i></li> <li>5. Will the ship lift service American naval ships? <i>Not sure, American naval vessels tend to use only American firms.</i></li> <li>6. Will there be a third-party access regime? <i>Yes. A draft Bill is being prepared.</i></li> <li>7. Can the facility handle naval patrol boats? <i>Yes, it will be able to handle small frigates, such as the new Armidale patrol boats. It will be the only ship lift of its size between Cairns and Fremantle.</i></li> <li>8. Is Singapore a competitor? <i>Yes, a number of Asian marine complexes are competitors and have cheaper labour forces. Darwin’s competitive advantage is its location.</i></li> <li>9. Has the ADF committed to using the ship lift? <i>Not at this stage, but government expects Defence and the Australian Border Force to be anchor tenants. The ship lift at Coonawarra is being decommissioned.</i></li> <li>10. It’s important that the NTEPA’s work in considering the impacts of the development and construction on all environmental aspects of the Project. This work must be done with absolute integrity. <i>All environmental aspects should be addressed in the Terms of Reference and EIS studies. The NTEPA is an independent statutory authority.</i></li> </ol>	<ul style="list-style-type: none"> <li>• PPlan</li> <li>• Larrakia Dev Corporation</li> <li>• MBANT</li> </ul>	<ul style="list-style-type: none"> <li>• Project description</li> </ul>
Suggestions and recommendations for mitigation and enhancement			
Skills development	Contractors need to work with industry bodies such as the ICN to identify their needs so ICN can map local capabilities,	<ul style="list-style-type: none"> <li>• ICN</li> <li>• DITT</li> </ul>	SIMP

	provide advice and have sufficient time to help companies address gaps in capacity.  A whole of industry approach and long-term perspective was advocated to provide critical mass for local skills development across the marine, oil and gas and mining sectors.		
Industry capacity	Use of ICN Project Gateway and capability mapping to determine the availability of local capacities and skills gaps	• ICN	SIMP
Traffic management	Collaboration with Darwin Port on traffic movement information.	• Darwin Port	TIA SIMP
Heritage	Interpretive signage at appropriate locations	• PJan	SIMP
Dredging	DIPL has convened a Darwin Harbour dredging working party to look at the cumulative impacts of dredging. It is currently at the stage of scoping the work to be done and will circulate a discussion paper to stakeholders.	• DIPL	SIMP
Communication	DIPL is already working closely with the ICN's Project Gateway. Industry groups such as the ICN and Chamber of Commerce can convey information on Project progress and opportunities to their members. This includes the Port Users Group (which has about 50 members and meets twice a year), ICN and Chamber's Marine Industry Council (currently has 22 members).  The Regional Harbour Master in DIPL can issue Notices to Mariners about dredging and reclamation issues covering disrupted access or safety concerns. AFANT can also convey messages to its members.	• ICN • Darwin Port • AFANT	SIMP

## 4. Conclusion

Engagement for the project suggests the Project is either supported as enabling economic infrastructure or not actively opposed as detrimental to the values and health of Darwin Harbour.

However, some operators are reserving judgement until they see the pricing regime for the ship lift and whether the facility accommodates their needs. The local maritime industry can see the potential of a new precinct at East Arm, including the Marine Industry Park, and many are willing to relocate and invest in business growth. However, this investment is contingent on:

- greater engagement in the design of the facility, to ensure the ship lift and broader marine industry park meets the needs of broader maritime businesses not just the 'gold-plated customers'
- greater certainty about the timing of tenders and construction
- access to a master plan, or the big picture on maritime development in Darwin
- a collaborative approach to skills development
- seeing foundation customers relocate to East Arm.

The Social Impact Assessment deals with issues raised in this consultation report in greater detail, while the Social Impact Management Plan draws from stakeholder suggestions for ways to enhance the benefits and reduce any negative impacts or harms from the project, including ongoing stakeholder engagement during the construction and dredging phase of the Project.

Attachments: project fact sheets

# Darwin's Ship Lift Project

July 2021



## Fact Sheet #2



[shiplift.nt.gov.au](http://shiplift.nt.gov.au)



## This fact sheet provides an update on progress with the Darwin Ship Lift Project and expected timelines.

Key activities in the next few months include:

- lodging a referral to the Commonwealth Department of Agriculture, Water and the Environment for assessment under the Environment Protection and Biodiversity Conservation Act 1999
- lodging an Environmental Impact Statement (EIS) to the Northern Territory Environment Protection Authority (NT EPA) by the Darwin-based office of AECOM
- an application to the Development Consent Authority (DCA)
- final procurement stages to appoint a design and construct contractor.

## Overview of the project

The Northern Territory Government is building the largest ship lift in northern Australia. The Darwin Ship Lift Facility will enable the maintenance and servicing of Defence, Australian Border Force, commercial and private vessels, including from the oil, gas and marine industries.

The project is critical enabling infrastructure that supports the Northern Territory Government's vision of establishing a world-class maritime services and supply industry for Northern Australia.

Better marine facilities should unlock private sector investment and complement a marine industries precinct at East Arm, capitalising on Darwin's deep-water port, strategic location and multi-modal transport and logistics capabilities.

The project has been funded by a \$300 million concessional loan from the Northern Australian Infrastructure Facility (NAIF) and \$100 million from the Northern Territory Government.

## Location

The Darwin Ship Lift Project will be built at the end of the East Arm Peninsula between the Marine Supply Base at the Port of Darwin and the multi-user barge ramp facility (MUBRF) at the Marine Industry Park.

Land use zoning under the NT Planning Scheme 2020 is DV – Development, which allows for major industries with strategic importance to the future economic development of the Territory.

## Environmental studies

In December 2019, the NT EPA issued terms of reference for an environmental impact statement (EIS) for the Darwin Ship Lift Project.

In May 2020, the Northern Territory Government awarded a tender to the national environmental and engineering consultancy, AECOM, to prepare the EIS.

Studies covered by the EIS include:

- marine water quality
- marine sediment sampling and analysis
- benthic (sea floor) habitat mapping, including seagrass
- marine ecology, including mangroves and marine animals such as dolphins, turtles and dugongs
- terrestrial (land-based) soil sampling
- social and economic impact assessment
- heritage and cultural heritage
- noise, vibration, light and air quality.

The above studies will be incorporated into the draft EIS, which will go on public exhibition, along with a summary document, for comment by the public. Other regulatory approvals include a development application to the Development Consent Authority (DCA) NT, a dredge management plan, a waste discharge licence and an Aboriginal Areas Protection Authority sacred sites clearance certificate.

The Darwin Ship Lift Project location and indicative layout (next to East Arm Port)





Draft concept layout showing what the facility may look like

## Construction

Procurement for the design and construction for the facility commenced with a call for expressions of interest (EOI). The EOI stage is complete and the following respondents will be invited to participate in the request for proposals (RFP) stage:

- Clough Projects Australia Pty Ltd
- McConnell Dowell Constructors (Aust) Pty Ltd
- Sitzler Pty Ltd
- Territoria Civil
- Watpac Construction Pty Ltd.

The RFP stage will involve more detailed assessment to further shortlist the respondents to proceed to the final detailed design development stage.

The procurement process is being promoted by the NT Industry and Capability Network, which focuses on buying local and supporting local businesses.

A construction contractor is expected to be appointed in the first half of 2022. Subject to regulatory approvals and awarding of contracts, construction is expected to start in mid-2022.

## Dredging

Dredging will create a manoeuvring basin, as well as the berth and ship lift pockets.

The dredging volume for the project is expected to be about 500,000 cubic metres. This compares with 685,000 cubic metres dredged for the Marine Supply Base.

Most of the dredge spoil will be used in land reclamation for the project. Subject to agreement with Darwin Port, some of the finer dredged material may be pumped to the Port of Darwin dredge spoil ponds if it cannot be used for reclamation.

Approvals for the dredging campaign (Dredge and Dredge Spoil Placement Management Plan, Waste Discharge Licence and development consent) will be submitted at the same time as the EIS.

## Operations of the Darwin Ship Lift Facility

This critical piece of enabling infrastructure will be a common user facility and a Northern Territory-owned asset. Access to facilities and infrastructure will be available to anyone on a user-pays basis subject to access and pricing legislation and regulated by the Utilities Commission.

Vessel owners will be able to choose and manage their own service and maintenance providers. This means that multiple providers will be able to operate concurrently at the facility.

## What will people see and hear?

Construction is expected to take about two years after a design and construct contractor has been appointed, subject to reclamation consolidation and seasonal effects. While general construction will take place during normal working hours, tide-dependent activities (dredging and piling) may need to be done at night. This is similar to work done for the Marine Supply Base in 2012.

There is likely to be some additional turbidity in the water during dredging, however mitigation measure will be deployed to reduce these effects, which will be short-term. The dredge spoil will be pumped straight to dredge spoil ponds at East Arm or recycled for reclamation works at the site.

A key aspect of the environmental studies is to avoid disturbance to any cultural and heritage sites in the Harbour. While surveys have been undertaken and cultural and heritage clearances gained to remove this risk, there will be further engagement with key stakeholders to comment on and provide feedback that will be taken into account.

## Safety during dredging and construction

Construction contractors will be required to comply with the Regional Harbour Master's directions for marine safety during dredging, piling and reclamation works, including public notices and exclusion zones marked with buoys and navigation lighting at night.



Draft concept of the facility layout

## Components of the project

The proposal covers waterside and landside infrastructure across 27 hectares. This area includes 4.5 hectares of existing land, 8.5 hectares of reclaimed land and 9.0 hectares of water (see the photo above). The waterside infrastructure includes:

- a common user ship lift (103 metres long and 26 metres wide, capable of lifting vessels up to 5000 tonnes)
- all-tide wet berths for vessel mooring
- a manoeuvring basin
- access channel
- navigation aids.

The facility is designed to lift vessels out of the water so they can be serviced, repaired or stored, including for safety during cyclones.

The landside infrastructure includes:

- a vessel wash-down area with a separate contained drainage system
- dry berths for vessel maintenance and repair works
- a blast and paint facility
- vessel transfer area
- hardstands and laydown areas
- internal roads, car parks, utility services and site office

- stormwater system to capture and treat runoff water before discharge.

Once operational, the ship lift will have capacity to lift several vessels a week, and there will be sufficient hardstand area and covered areas to undertake a range of work on multiple vessels. In the early days of operation, it is expected that one to two vessels would use the ship lift each week, accessing it via the existing multi-user barge ramp facility (MUBRF) channel.

### Useful links

For more information on the project, go to [Darwin Ship Lift Project – Department of the Chief Minister and Cabinet](#)

To read the NT EPA's terms of reference for the environmental studies, go to [ntepa.nt.gov.au/your-business/public-registers/environmental-impact-assessments-register/assessments-in-progress/assessments-in-progress-register/darwin-ship-lift-and-marine-industries-project](https://ntepa.nt.gov.au/your-business/public-registers/environmental-impact-assessments-register/assessments-in-progress/assessments-in-progress-register/darwin-ship-lift-and-marine-industries-project)

For general inquiries on the project contact [shiplift@nt.gov.au](mailto:shiplift@nt.gov.au)

To register for updates on potential works packages for the project, go to NT Industry Capability Network (NTICN) at [icn.org.au/northern-territory](https://icn.org.au/northern-territory)

# Darwin's Ship Lift Project



## Fact Sheet #1 Early Works



## Darwin Ship Lift Facility

The Northern Territory Government plans to build the largest ship lift in northern Australia. The Darwin Ship Lift Facility (the Facility) will enable the maintenance and servicing of Defence and Australian Border Force vessels and commercial and private vessels, including from the oil, gas and marine industries.

The Darwin Ship Lift Project (the Project) has been funded by a \$300 million concessional loan from the North Australia Infrastructure Facility (NAIF) and \$100 million from the Northern Territory Government.

The NT Government aims to drive local industry, create local jobs and consolidate Darwin's position as a regional hub for marine maintenance and servicing. The project is expected to inject \$260 million into the Northern Territory economy every year.

As well as being able to undertake in-water maintenance, the Facility is designed to lift vessels out of the water so they can be serviced, repaired or stored, including for safety during cyclones.

### Location

The Project site is at the end of the East Arm Peninsula between the Marine Supply Base at the Port of Darwin and the multi-user barge ramp facility (MUBRF) at the marine industry park.

Land use zoning under the NT Planning Scheme 2020 is DV – Development, which allows for major industries with strategic importance to the future economic development of the Territory.



The ship lift facility and marine industries location (next to East Arm Port)

### Key components of the Project

Waterside and landside infrastructure across 28 hectares including:

- 4.2 hectares of existing land
- 14.6 hectares of reclaimed land
- 9.2 hectares of water

Waterside infrastructure includes:

- Common user ship lift
  - 103 metres long
  - 26 metres wide
  - Lift capacity - vessels up to 5000 tonnes
- all-tide wet berths for vessel mooring

- a manoeuvring basin
- access channel
- navigation aids

Landside infrastructure includes:

- a vessel wash-down area with a separate contained drainage system
- dry berths for vessel maintenance and repair works
- a blast and paint facility
- vessel transfer area
- hardstands and laydown areas
- internal roads, car parks, utility services and site office
- stormwater system to capture and treat runoff water before discharge

## Early Works - dredging

### Overall Program

The Project design dictates that a 6m draft vessel must be able to access the facility on 85% of all calendar days and remain at berth during all tides. Therefore dredging will deepen the access channel and manoeuvring basin, as well as the berth and ship lift pockets. The material to be dredged comprises soft marine muds which overlays harder, rocky materials. While the harder material can be used in the project's land reclamation, the softer marine muds are not suitable without being treated.

Dredging generally is done with a cutter suction dredge (CSD) or a back hoe dredge (BHD). The CSD is designed to dredge sands, soft clays and silts and will discharge the spoil as a slurry (10% dredged material and 90% water). The dredge spoil will then need to be retained in a basin/pond for the solid material to settle out before the tailwater can be released. The BHD is essentially a large excavator mounted on a pontoon. The BHD is used to dredge harder material, which can be placed on land with minimal associated tailwater to be managed.

### Current Proposal

The NTG is planning an early works dredging campaign to remove the softer unconsolidated material from the surface of the ship lift, manoeuvring basin and berth areas using a small CSD. The reasons for the early works dredging are:

- to use the existing Darwin Port ponds for this dredging campaign, negating the need to create ponds at the ship lift project site;
- the Darwin Port ponds have been successfully used already to manage dredge spoil;



- if the soft dredge spoil was placed at the Project site, there would be a need to either let the material settle for a period of time, or surcharge the material (place weight on top of it to facilitate compaction). This would involve additional costs and time for the project;
- if the softer material were to be removed as part of an early works dredging campaign, the main Project dredging campaign (to remove the firmer underlying consolidated material) and use of this material for reclamation, can be done with a BHD which can increase project efficiencies and negate the need to manage large volumes of water on the project site.

No early works dredging will be done until the work receives:

- formal consent from the Darwin Port to use the ponds;
- approval from the NT Environment Protection Authority (NT EPA);
- approval from Development Consent Authority (DCA).

These approvals will be independent of the Environmental Impact Statement (EIS) for the Project. The early works dredging will be assessed by the NT EPA and DCA on its own merits. The outcomes of these approvals will in no way impact the approvals processes for the Project.

Early works dredging will involve the removal of approximately 190,000m<sup>3</sup> of material from the project site. The main project dredging campaign will remove a further 310,000m<sup>3</sup> of material. This compares with the 685,000m<sup>3</sup> of material dredged for the Marine Supply Base while 16,900,000 m<sup>3</sup> was dredged for the INPEX project.

Pending agreement with Darwin Port, the dredge spoil will be pumped via a floating or submerged pipeline to Pond K within the existing settlement ponds at East Arm Wharf (EAW).

The dredge spoil will flow through Pond K allowing the larger particles (sands and silts) to settle out.

The resultant tailwater will then flow into Pond E (north) where it will be retained until the finer particles drop out. Silt curtains will also be installed in Pond E (north) to assist in this process.

Similarly, Pond E (south) will provide a final settlement stage before discharge to Darwin Harbour via a permeable section of the bund wall. Testing of the water will take place prior to discharge to ensure all environmental targets are met.

Early works dredging will not be undertaken if agreement cannot be reached to use the Darwin Port ponds.



## Approvals

The early works dredging approvals will comprise the following:

### NT Environment Protection Authority

The following documents will be submitted to the NT EPA for approval:

- Dredge and Dredge Spoil Placement Management Plan (DDSPMP) - demonstrates that reasonable and practicable steps have been taken to manage the risks associated with, and the potential environmental impacts arising from, the dredging and spoil placement activities during the early works dredging. The DDSPMP will also include an environmental monitoring program to be implemented during dredging works to ensure water quality targets are not exceeded. The DDSPMP will be assessed by the NT EPA as per all other referred projects and include an opportunity for public comment on the submission.
- Water Discharge Licence (WDL) - regulatory instrument used to regulate the quality and quantity of waste discharged to water in the Northern Territory. The WDL will include water quality targets that are required to be met prior to the discharge of any tailwater from the Darwin Port ponds.

### Development Consent Authority

All dredging in Darwin Harbour requires consent as per section 3.9 of the NT Planning Scheme. The purpose of the consent is to ensure that dredging within Darwin Harbour does not degrade the environmental value of the harbour waters. The development consent process includes a public comments period.

## Environmental Impact Statement (EIS)

In December 2019, the NT Environment Protection Authority issued terms of reference for an environmental impact statement (EIS) for the Project.

In May, 2020, the Northern Territory Government awarded a tender to the Darwin office of national environmental and engineering consultancy, AECOM to prepare the project EIS.

Approvals for the main dredging campaign (DDSPMP, WDL and development consent) will be submitted at the same time as the EIS. As stated earlier, these approvals are entirely independent of the early works approvals. The outcomes of the early works approvals will in no way influence the approvals process for the main dredging campaign, or the EIS itself.

## Contact information

### Useful links

For more information on the project, go to [Darwin Ship Lift Project](#)

For general inquiries on the project contact [shiplift@nt.gov.au](mailto:shiplift@nt.gov.au)



# Darwin Ship Lift Project

## Social Impact Management Plan

Prepared by True North Strategic Communication  
August 2021

Version No.	Issue Date	Prepared by:	Approved by:	Approval Date
V1		Claire Butler	Jane Munday	23 August 2021
V2	19 Sept 21	Jane Munday		
V3	30 Sept 21	Jane Munday		
V4	15 October	Jane Munday		

*Recipients are responsible for eliminating all superseded documents in their possession*

#### **Consultation statement**

True North Strategic Communication is guided by the principles of good community engagement, based on people's level of interest and concern as outlined by the International Association for Public Participation (IAP2).

Our role is to provide stakeholders and the general public with objective information, so they can provide informed feedback on consultation projects. We give people the opportunity to provide input that is balanced and reflective of the range of community views to independently provide the best possible guidance to decision makers.

Our practice reflects professional standards and ethical standards for human research including anonymity, confidentiality, record storage and keeping people informed.



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## Executive Summary

The Social Impact Management Plan (SIMP) has been prepared by True North Strategic Communication and provides an outline of the key potential positive and negative impacts identified in the Social Impact Assessment (SIA) for the Darwin Ship Lift Project. The SIA and SIMP form part of the Environmental Impact Statement (EIS) being coordinated by environmental consultancy AECOM on behalf of the Northern Territory Government as proponent of the project. The project comprises a common user ship lift facility and privately operated facility to the west.

The SIA covers the construction and operations of the ship lift facility, including dredging, reclamation, haulage of materials, construction activities and longer-term operations. The SIA assessed a total of 14 priority impacts, including four potentially positive and 10 potentially negative. These impacts were identified at the scoping stage and ratings were refined during preparation of the SIA.

Once potential mitigation and enhancement measures were taken into account, residual ratings were determined. All positive impacts were assessed as either BENEFICIAL, meaning benefits may be felt across the region but may be of a smaller scale or incremental scale, or NOTICEABLE (benefits are noticeable but may be quickly absorbed). Of the negative impacts, only cumulative impacts rated as HIGH, three were rated as MEDIUM while six were rated as LOW (see Section 1.5 of the SIA for methodology).

### **Positive:**

- strong and more diverse economy from enabling economic infrastructure and capacity-building (positive, beneficial)
- local businesses benefit from winning work and enhanced capabilities (positive, noticeable)
- enhanced employment and training of local people (positive, noticeable)
- Aboriginal jobs and training as a result of the project (positive, noticeable).

### **Negative:**

- cumulative impacts on the values of Darwin Harbour (negative, high)
  - damage to remnants of European heritage and history, namely World War II heritage sites (negative, medium)
  - damage to cultural heritage (negative, medium)
  - reduced feelings of safety due to potential road trauma (negative, low)
  - project-level impacts on recreational values and activities (negative, low)
  - crowding out of other economic activities on the harbour, such as tourism and recreational fishing (negative, low)
  - frustration by businesses who fail to win tenders or have unrealistic expectations of opportunities (negative, low)
  - detrimental impacts on competing maritime businesses (negative, low)
  - reduced marine safety (negative, low)
-



- reduced amenity due to construction activities (considered collectively in the section on ‘Living Environment’), such as traffic congestion, noise and vibrations from piling (negative, low).

This SIMP is intended as a stand-alone document that summarises the social and economic risks and opportunities of the project, then outlines ways to enhance positive and manage or mitigate negative impacts. This includes advice for ongoing consultation and communication during the construction phase. It outlines how potential positive and negative impacts will be monitored and managed and sets up a framework for reporting against the commitments made to cover construction and operations.

The project proponent’s commitments are to:

- require the preferred design and construct contractor to prepare a Territory Benefit Plan that meets the requirements of the Northern Territory Government’s Territory Benefit Policy (2019) and Australian Government’s Australian Industry Participation (AIP) National Framework, in particular:
  - local workforce development and employment
  - regional and Aboriginal economic and community development
  - local business participation and small to medium enterprise capability development
- require the design and construct contractor to demonstrate how commitments under this plan will be met and reported against
- require the contractor to collaborate with the Industry Capability Network (ICN) to provide advance notice on works packages on ICN’s Project Gateway
- implement a compliance strategy for reporting the level of local and Aboriginal participation during construction (as a Major Project and recipient of a NAIF concessional loan, the proponent is required to prepare a Territory Benefit Plan/Australian Industry Participation Plan)
- collaborate with the Chamber of Commerce’s Marine Industry Council and the Department of Industry, Trade and Tourism (DITT) on a proposed Marine Industry Development Plan, including planning for marine industry skills training
- the Department of Infrastructure, Planning and Logistics (DIPL), in conjunction with the Department of Chief Minister and Cabinet and contractor, to prepare a communication and engagement plan to cover the design and construction period, including community updates, briefings, Harbour Master’s Notice, message boards at boat ramps and public advice on any traffic disruption
- require the contractor to provide relevant information to DIPL to inform the communication strategy, including dredging and construction schedules, potential disruption to commercial and recreational activities in the harbour and any complaints received
- report against key economic indicators (workforce numbers, local expenditure, number of local works packages awarded) to quantify immediate and long-term economic benefits of the project.

- require the contractor to prepare a traffic management plan and collaborate with the Darwin Port's traffic management plan and daily notifications
- contractor to establish environmental incident reports (see Noise and Vibration Assessment at Appendix L)
- DIPL to establish a complaints register and hotline, recording issues raised, how they were responded to and project activities that require modification (eg noise)
- an annual review of the Social Impact Management Plan and amendments as needed.



## Abbreviations and terminology

AAPA	Aboriginal Areas Protection Authority
DEPWS	Department of Environment, Parks and Water Security
DHAC	Darwin Harbour Advisory Committee
EIS	Environmental Impact Statement
IAP2	International Association for Public Participation
IAIA	International Association for Impact Assessment
IMMRP	Integrated Marine Monitoring and Research Program
MUBRF	Multi-User Barge Ramp Facility
NAIF	Northern Australia Infrastructure Facility
NT	Northern Territory
NT EPA	Northern Territory Environment Protection Authority
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan



## 1. Project description

The Northern Territory Government is building the largest ship lift in Northern Australia. The \$400 million facility will enable the maintenance and servicing of Defence and Australian Border Force vessels and commercial and private vessels, including from the oil, gas, pearling, fishing and cruise shipping industries. The project will provide a synchro lift, or ship lift, facility and related hardstand and berthing to cater for wet and dry dock ship maintenance.

The ship lift will be about 26 metres (m) wide and 103 m long and capable of lifting vessels weighing up to 5,500 tonnes (t) including associated platform, blocking trestles and vessel transfer system. This is double the capacity of Darwin's two large ship lifts at Pearl Marine Engineering in Frances Bay and Coonawarra naval base in Larrakeyah, both of which are old and due to be decommissioned.

The Darwin Ship Lift Project (DSLPL) has been funded by a \$300 million concessional loan from the Northern Australian Infrastructure Facility (NAIF) and \$100 million from the Northern Territory Government.

The ship lift will be built at the end of East Arm Peninsula, between the Marine Supply Base at the Port of Darwin and the Multi-user Barge Ramp Facility (MUBRF), Common User Area and Marine Industry Park operated by the Land Development Corporation.

The area is zoned DV - Development under the NT Planning Scheme, which allows for major industries with strategic importance to the future economic development of the Territory.

The project footprint covers 27 hectares, including land and water components. The land component of 15.5 hectares will comprise 8.5 hectares of reclaimed land and 4.5 hectares of existing land. In all, the project comprises:

- 13 hectares of hardstand for ship repair and maintenance, about 8.5 hectares of which will be reclaimed land
- a self-propelled modular transportation vessel transfer system and garage
- vessel wash area with separate contained drainage and treatment system
- stormwater system to capture and treat runoff water before discharge
- enclosed blast and paint facility with separate contained drainage system
- site services and utilities
- security infrastructure
- ancillary facilities including an administration building and ship lift control room
- access channel and dredged manoeuvring areas
- six wet berths
- heavy lift platforms suitable for a 100-tonne crane at each berth
- 2.5 hectares of revetment wall (designed to protect against erosion).

About 9.2 hectares will be dredged for construction to cover:

- 6 hectares for the ship lift and wet berths (to accommodate boats with a draught of six metres at low tide)



- manoeuvring basin area of 3.2 hectares.

Dredging to deepen the access channel and manoeuvring basin, berth and ship lift pockets will remove 185,000 cubic metres of silt, clay and sands and about 315,000 of rock materials. Most of the dredge spoil will be used in land reclamation for the project. Some of the finer dredged material may be pumped to the Port of Darwin dredge spoil ponds if it cannot be used for reclamation. These ponds have been used to receive similar types of dredge spoil in the past.

The following table shows the extent of dredging for the Darwin Ship Lift Project compared with other key dredging campaigns in Darwin Harbour:

*Table 1-1: Comparison with other dredging campaigns*

Project	Amount of dredging in the harbour
INPEX	16 million cubic metres
Marine Supply Base	685,000 cubic metres
Darwin Ship Lift Project	500,000 cubic metres
Charles Point Patches	105,000 cubic metres
Multi-user barge ramp	16,000 cubic metres

Approvals for the dredging campaign (Dredge and Dredge Spoil Placement Management Plan, Waste Discharge Licence and development consent) will be submitted.

The landside component of the project will include:

- about 315,000 cubic metres of consolidated material, comprising stiff clays and rock from dredging
- about 400,000 cubic metres of sand fill sourced from local borrow pits or clean fill sources within 20 kilometres of the site
- 90,000 cubic metres of pavement material and subgrade material
- 1.2 hectares of interlocking concrete block pavers
- about 46,000 cubic metres of rock from a commercial quarry or pre-cast concrete blocks
- about 16,500 m<sup>3</sup> of revetment filter rock sourced from a commercial quarry.

The likely haulage route for quarried material will be via Berrimah Road to East Arm Wharf.

### **Design, construction and operations**

The completed facility will comprise:

- a Northern Territory Government-owned an NTG owned facility (Darwin Ship Lift Facility) that will lease areas/berths on a common user basis under a principal operator, the Paspaley Group
- a privately owned berthing and maintenance facility (privately-owned facility).

Multiple marine service providers will operate at the common user facility and provide vessel operators with a range of maintenance services within a secure area. The ship lift and transfer system will accommodate servicing of naval offshore patrol vessels expected to be based at the nearby HMAS Coonawarra.



Construction is likely to begin in 2022 and take from 24 – 36 months, with operations due to start in late 2025.

**Workforce**

Construction is expected to create about 100 direct jobs during construction, across a range of trades, including civil works. Dredging and some works packages will require specialist equipment and skilled labour.

For the ship lift’s operational phase, about 15 workers are expected to transfer from Paspaley’s Pearl Marine Engineering at Frances Bay to operate the common user facility. Paspaley expects its contractors to move another 25 staff from Frances Bay to provide associated services. The main contribution to the maritime workforce, however, will come from expected business growth across the sector over the next 20 years, with the ship lift complementing expanded marine services in the East Arm Marine Industry Park.

The Department of Industry, Tourism and Trade is coordinating a Maritime Industry Development Plan to map workforce development across the industry, identify gaps and explore options for local training pathways, such as a potential maritime training academy. Because many workers in the Darwin market work across sectors, enhanced maritime training would also benefit the mining and oil and gas sectors.



## 2. Social Impact Management Plan

This Social Impact Management Plan (SIMP) is intended as a stand-alone document that summarises social impacts and opportunities of the Darwin Ship Lift Project and outlines the proponent and lead contractor's required management plans for construction and operations. In essence, it covers impacts and opportunities from the perspective of the expected economic and social uplift of the project and social and cultural consequences for people positively or negatively affected by the project.

The Northern Territory Government is committed to:

- ongoing communication and engagement during construction and operations
- ongoing strategies to capitalise on the project's economic potential
- ongoing measurement against key indicators so progress can be monitored
- regular reporting of outcomes against key indicators
- an annual review of the SIMP to assess progress and effectiveness of the SIMP and to identify any necessary adjustments or improvements
- implementing improvements to the SIMP as necessary.

The SIMP is intended to be a practical, succinct and readable document and allows for a flexible, adaptive approach to identify and respond to emerging issues.

### 2.1. Methodology

The Social Impact Assessment (SIA) profiles the communities affected by the project using baseline data and a literature review. Qualitative data from interviews completes a picture of the project's social, cultural and economic context and enables a prediction of potential impacts and opportunities. Analysis was informed by cross-referencing to other technical studies. The impacts are both positive and negative, direct and indirect and long and short-term. Some impacts may be unintended or difficult to manage.

Key potential impacts were categorised using the dimensions of social impacts adapted for a North Australia context (Munday 2020). These were adapted from the International Association for Impact Assessment (IAIA) Principles (Vanclay 2003) and Guidelines (Vanclay et al., 2015) description of social impacts. These dimensions are illustrated in [figure 1](#) below.



Figure 2-1: Dimensions of social impacts adapted for a North Australia context (Munday2020)

## 2.2 The concept of social sustainability

The concept of social sustainability is based on ensuring a positive legacy beyond the life of a project. For a project to be ‘sustainable’ it must be economically, technically, environmentally and socially beneficial for both the company and the community, taking particular account of impacts on vulnerable or disadvantaged peoples.

## 2.3 Requirements of the Northern Territory Environment Protection Authority

This Social Impact Management Plan (SIMP) has drawn on the Northern Territory Environment Protection Authority’s (NT EPA) Terms of Reference for the Darwin Ship Lift Project (2019) and Guidelines for Preparation of an Economic and Social Impact Assessment (2013). In line with these guidelines, the SIMP:

- includes a project summary
- illustrates how social impacts were identified, plans for mitigation or enhancement, and management commitments
- explains how engagement informed the SIMP, details the engagement strategy and future activities, and describes how these will inform monitoring and management
- provides measurable and defined targets and actions for monitoring, reporting, auditing and review progress, with clear numbering, wording and commitments to locations, timing, frequency, method, and responsibilities
- commits to measure results and report these findings via the project website
- includes how shortfalls will be addressed – for example if a target is not being met or an impact is being inadequately managed, the SIMP should indicate steps to address and report on the shortfall.



### 3. Community and stakeholder engagement

#### 3.1 Principles of stakeholder engagement

The NT EPA’s Stakeholder Engagement and Consultation Guidance for proponents (updated January 2021) recognises that stakeholder consultation is an important component of social, cultural and health impact assessments, over and above formal opportunities for feedback on documents placed on public exhibition.

The communication and engagement for the Darwin Ship Lift Project was based on the principles of best practice stakeholder engagement, in line with the International Association for Public Participation (IAP2) core values, outlined below.

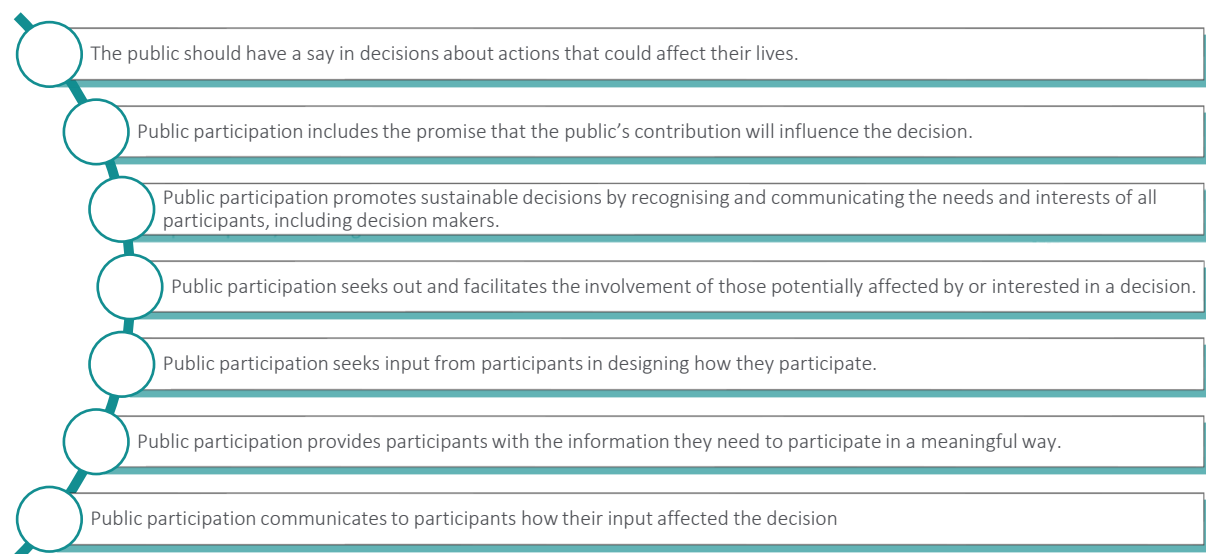


Figure 3-1: IAP2 Core values

#### 3.2 Engagement objectives

The objectives of engagement for the Ship Lift Project were to:

- listen to and understand the perspectives of all stakeholder groups
- ensure concerned groups have a chance to provide early input
- manage stakeholder expectations
- provide early identification of potential issues or concerns that may contribute to better project outcomes, avoid mistakes or mitigate negative impacts
- support delivery of a project that is environmentally, economically, culturally and socially acceptable to the community and key stakeholders (i.e. earn social licence to operate)
- provide regulators with confidence that all positive and negative impacts are well understood and can be managed through all phases of the project
- provide guidance for the project proponent’s long-term social performance.



The communication objectives were to:

- build awareness of the project
- provide a tailored approach to communicating with different stakeholder groups
- build understanding, trust and relationships with individuals or groups likely to be positively or negatively impacted by the project.

### 3.3 Darwin Ship Lift Project stakeholder engagement activity

A communication and engagement strategy was prepared in mid-2020 outlining the proposed engagement approach. The strategy outlined key messages for consultation materials and a suggested approach. The strategy was approved and a draft fact sheet prepared.

Stakeholders were advised of plans to submit an early works dredging proposal with the Development Consent Authority in late 2020 and sent a fact sheet by the Northern Territory Government. This elicited two responses, with no issues raised. The DA was subsequently withdrawn when it was agreed with the NTEPA not to proceed with the early works dredging.

The Northern Territory Government consulted with groups such as the Darwin Harbour Advisory Committee (DHAC) in late 2020.

A second NT Government fact sheet was distributed in July 2021 to stakeholders likely to have an interest in the project. This fact sheet outlined the project, environmental studies and opportunities to provide feedback. A number of these stakeholders were then approached to arrange briefings and seek feedback (covered in the consultation report).

As the outcome of the scoping exercise suggested limited impacts on nearby people and communities, consultation generally adopted a low-key, targeted approach while using media releases to build awareness of the project and ensure all Darwin residents had a chance to comment.

The Northern Territory Government has maintained a Darwin Ship Lift Project website since the project was first announced (<https://cmc.nt.gov.au/advancing-industry/ship-lift>).



## 4. Key findings

The initial scoping exercise for the Darwin Ship Lift Project led to many significance ratings of negligible, hence most potential impacts likely to result from a typical marine infrastructure project were screened out from further study (see scoping study at Appendix 1 for a full list of potential impacts identified).

After screening out impacts rated as negligible or imperceptible, 14 priority impacts remained for assessment in the SIA, four potentially positive and 10 potentially negative. The ratings for these impacts were refined during research for the SIA. Residual ratings were determined after considering recommended management strategies to mitigate negative or enhance positive potential impacts.

All of the positive impacts rate as BENEFICIAL, meaning benefits may be felt across the region but at a smaller or incremental scale, or NOTICEABLE (benefits are noticeable but may be quickly absorbed). Of the negative impacts, only cumulative impacts rated as HIGH, two were rated as MEDIUM while seven were rated as LOW.

The four potentially **positive impacts** are:

- strong and more diverse economy from enabling economic infrastructure and capacity-building (positive, beneficial)
- local businesses benefit from winning work and enhanced capabilities (positive, noticeable)
- enhanced employment and training of local people (positive, noticeable)
- Aboriginal jobs and training as a result of the project (positive, noticeable).

The 10 potentially **negative impacts** identified are:

- cumulative impacts on values of Darwin Harbour (negative, high)
- damage to remnants of European heritage and history, namely World War II heritage sites (negative, medium)
- damage to cultural heritage (negative, medium)
- reduced feelings of safety due to potential road trauma (negative, low)
- project-level impacts on recreational values and activities (negative, low)
- cumulative crowding out of other economic activities on the harbour, such as tourism, recreational fishing (negative, low)
- frustration by businesses who fail to win tenders or have unrealistic expectations of opportunities (negative, low)
- detrimental impacts on competing maritime businesses (negative, low)
- reduced marine safety (negative, low)
- reduced amenity due to construction activities (considered collectively in the section on 'living environment'), such as traffic congestion, noise and vibrations from piling (negative, low).

The ratings for each of the key impacts listed in this document are the expected positive or negative social impacts after mitigation and enhancement.

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## 4.1 Social Impact Monitoring and Reporting commitments

Table 2 below outlines recommended mitigation and management strategies for negative impacts and enhancement strategies for the potentially beneficial impacts of the project. This SIMP aligns with and supports other management plans for the project.

### **Approach to Environmental Management Framework (EMF)**

The Project's environmental management framework is designed to be consistent with the AS/NZS ISO14000 standards for environmental management. The framework references a suite of documents that will guide the delivery of the Project and provides a basis for incrementally improving management practices over time.

### **Environmental management plans**

Site/activity-based construction environmental management plans (CEMPs) and operational environmental management plans (OEMPs) will be prepared by the construction and operational contractors before the start of construction and operations. An outline of the CEMP and OEMP requirements are discussed separately in the Environmental Impact Statement.

The CEMP's and OEMP's will interact and cross-reference a suite of other documents that will guide the delivery of the Project, such as:

- this Social Impact Management Plans (SIMP)
- Construction Noise and Vibration Management Plan (CNVMP)
- Traffic Management Plans
- Dredging and Dredge Spoil Placement Management Plan (DDSPMP)
- Erosion and Sediment Control Plan (ESCP)
- Biosecurity Management Plan
- Heritage Management Plan (HMP).

The Department of Infrastructure, Planning and Logistics' (DIPL) Standard Specification for Environmental Management (DIPL 2019) details requirements for environmental management of projects. This includes guidelines for construction contractors on preparation of Contractor's Environmental Management Plans and other supporting plans (DIPL, 2019).

A Marine Spill Response Plan will be developed and implemented in line with the existing Darwin Port Oil Spill Contingency Plan (OSCP). The plan should also reference the NT OSCP (Department of Transport Marine Safety 2014).

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## 4.2 Risk and opportunity matrix, mitigation and management

Table 4-1: Risk and opportunity table

Social impact or opportunity	Project Stage	Initial rating	Objective	Mitigation/Management Action	Residual rating	Targets/ Performance Indicators	Monitoring methods	Response	Reporting
<b>People and communities, including impacts on social fabric, health and wellbeing, vulnerable community segments</b>									
Reduced sense of safety as a result of road trauma	Construction	High	Sense of safety when using roads in the region	<p>Traffic Management Plan covering construction traffic and haul roads and an Operational TMP.</p> <p>Organised bus transport for workers to reduce the number of vehicles travelling to site and potential traffic and parking congestion.</p> <p>Limited industrial traffic through residential areas at peak hour.</p> <p>Collaboration with Darwin Port's traffic management plan for Darwin Port.</p> <p>Communication with other road users during any peak transport tasks, such as haulage of equipment and materials.</p> <p>Government's proposed overpass at the intersection of Berrimah Road and Tiger Brennan Drive.</p>	Low	<p>No traffic project related fatalities or serious injuries.</p> <p>No unresolved complaints about driver behaviour in project vehicles.</p>	<p>Ongoing monitoring of measures outlined in the contractor's Traffic Management Plan.</p> <p>Maintain a record of any traffic incidents involving project traffic or identified road safety risks.</p> <p>DIPL to maintain a complaints hotline and register.</p>	<p>Ensure proactive identification of any road safety risks and appropriate responses in line with the Traffic Management Plan.</p> <p>Conduct comprehensive reviews in response to any incident.</p>	<p>Reporting against indicators in Traffic Management Plan.</p> <p>Reporting on complaints received, how they were resolved and satisfaction levels of complainants.</p>



Social impact or opportunity	Project Stage	Initial rating	Objective	Mitigation/Management Action	Residual rating	Targets/ Performance Indicators	Monitoring methods	Response	Reporting
Reduced sense of marine safety as a result of dredging and increased marine activity on the harbour	Construction Operations	Medium	Safe use of the harbour around the project site and project works	<p>Vessel speed and movement within the Project area will be governed by navigational restrictions and a Marine Works Management Plan, which should minimise nuisance to recreational traffic.</p> <p>In the operational phase of the Project vessels will need to comply with navigational restrictions.</p> <p>Given the slow speeds of vessel traffic expected during construction and the limited likelihood of susceptible marine fauna occurring within the Project area, it is unlikely that the works would result in any significant risk of boat strike, or disturbance to marine fauna species.</p> <p>DIPL communication and engagement strategy to ensure good communication with other harbour users, including recreational fishing/boating community before the start of marine works and during the design and construction phase to advise of operations and safety requirements. This can be achieved through community updates, notice boards at boat ramps, through AFANT and Harbour Master's Notices to Mariners</p>	Low	No marine incidents or accidents involving project vessels and dredging equipment or as a result of the project.	<p>Ongoing monitoring of safety standards in line with marine safety plans.</p> <p>Maintain a record of any marine incidents involving project vessels or project activity or identified safety risks.</p> <p>Monitoring of feedback from other harbour users regarding communication, awareness and safety.</p>	<p>Marine Works Management Plan</p> <p>Ensure proactive identification of any relevant marine safety risks and appropriate responses. Conduct comprehensive reviews in response to any incident.</p>	<p>Report against indicators in marine safety plans.</p> <p>Report on implementation of DIPL communication and engagement plan for construction.</p>
<b>Healthy land and seas</b>									
Project-level impacts on recreational values and activities	Const Ops	Low	This impact and mitigation and management are discussed in the section on cumulative impacts						



Social impact or opportunity	Project Stage	Initial rating	Objective	Mitigation/Management Action	Residual rating	Targets/ Performance Indicators	Monitoring methods	Response	Reporting
<b>Cultural identity (cultural heritage and Larrakia cultural ties to the land and seas)</b>									
Loss of cultural heritage due to damage, or reduced access, including fears and anxieties of damage to sites or custodians' responsibilities.	Construction Operations	High	<p>Aboriginal people maintain access to areas of traditional and cultural significance.</p> <p>No damage to cultural heritage sites.</p> <p>Custodians confident that cultural or significant sites will be adequately protected.</p>	<p>Aboriginal Areas Protection Authority (AAPA) Certificate. Restricted work areas and cultural protocols for sacred sites.</p> <p>Close working relationship with custodians to monitor and avoid damage.</p> <p>Workforce codes of behaviour and cultural awareness training.</p> <p>A summary of recommendations contained in Earthsea's archaeological and heritage assessment:</p> <ul style="list-style-type: none"> <li>• Monitor changes in tidal flow and sediment mobility around Catalina Island. This should include monitoring the sand bar on the northern end of the island for changes in sediment deposition or erosion during construction and at the end of construction.</li> <li>• Monitor changes in tidal flow and sediment mobility around Old Man Rock for changes in sediment deposition or erosion during construction and at the end of construction.</li> </ul>	Medium	<p>AAPA Certificate.</p> <p>No unresolved complaints or concerns raised about access to areas of traditional or cultural significance.</p> <p>No damage to cultural heritage sites.</p> <p>No unresolved complaints or concerns about damage or fears about damage to cultural sites or custodian responsibilities.</p>	Ongoing communication and monitoring of feedback from custodians and AAPA	<p>Heritage Management Plan</p> <p>Record and appropriately respond to any feedback, concerns or complaints by custodians.</p>	Adherence to Heritage Management Plan



<p>Loss or damage to declared or valued remnants of historical or heritage sites, World War II sites.</p>	<p>Construction</p>	<p>Medium</p>	<p>East Arm's WWII history and heritage is acknowledged</p>	<p>A summary of recommendations from Earthsea's archaeological and heritage assessment:</p> <ul style="list-style-type: none"> <li>• A maritime archaeological inspection of the Catalina 2 site before construction starts.</li> <li>• Establish an exclusion zone around the wreck of the Catalina 2 wreck site.</li> <li>• A maritime archaeological inspection of the Catalina 3 site before construction starts to provide a baseline study against which future impacts, if any, can be assessed.</li> <li>• Surveys at the end of construction.</li> <li>• Install appropriate heritage signage describing the flying boat base and lugger maintenance section and their role in Darwin's history. This should be installed in a public place, possibly the current recreational boat ramp to the north-east of the lugger maintenance section.</li> <li>• The current owners to move the <i>Rushcutter</i> to a more appropriate location.</li> <li>• A qualified maritime archaeologist to be on call during dredging operations to investigate significant artefacts located in any spoil. Significant artefacts include aircraft engines, airframes, weapons, propellers etc. It is recommended using the Northern Territory Government Heritage Branch maritime archaeologist where possible.</li> <li>• Develop a site-specific Heritage Management Plan (HMP) for the Ship Lift planning and construction period. This HMP should include information on site heritage for contractor inductions.</li> <li>• Should further Aboriginal sites or artefacts be located during construction, work should stop immediately in that area and the Director of NT</li> </ul>	<p>Medium</p>	<p>Agreement and progress working with heritage bodies on interpretative signage.</p>	<p>Feedback from historical and heritage bodies on interpretive signage regarding WWII sites at East Arm.  Condition assessment reports</p>	<p>NT Government to pursue with Heritage Branch</p>	<p>Implementation of signage.  Relocation of the <i>Rushcutter</i></p>
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Social impact or opportunity	Project Stage	Initial rating	Objective	Mitigation/Management Action	Residual rating	Targets/ Performance Indicators	Monitoring methods	Response	Reporting
				Heritage Branch contacted for further instructions. If human remains are located, refer to Attachment B, Heritage Management Plan for instruction.					
<b>Living environment</b>									
Reduced residential amenity due to traffic and noise during construction	Construction	Low	Minimise disruption to residential amenity in nearby urban areas.	<p>Management plans in place, including:</p> <ul style="list-style-type: none"> <li>Traffic Management Plan</li> <li>Air Quality Management Plan</li> <li>Construction Noise and Vibration Management Plan</li> <li>Marine Works Safety Plan.</li> </ul> <p>Environmental incident reports on exceedances that create amenity impacts, such as noise and vibrations from piling, road and sea traffic congestion, dust and dredge plumes.</p> <p>DIPL to maintain a hotline and complaints register to record and respond to complaints, communication plan to ensure the residents of affected residential areas are kept informed on road train movements.</p>	Low	No unresolved complaints about disturbance to residential amenity.	Ongoing monitoring of: <ul style="list-style-type: none"> <li>traffic impacts as outlined in the Traffic Management Plan</li> <li>air quality as outlined in the Air Quality Management Plan</li> <li>noise as outlined in the Noise Management Plan.</li> </ul>	Record and appropriately respond to any concerns about impacts to amenity.	Reporting against indicators in each of the relevant management plans: <p>Reports on complaints register, how complaints resolved, any patterns in complaints.</p>



Economic (jobs, industry participation, livelihoods, economic development)									
<p>Strong and more diverse economy from enabling economic infrastructure and capacity building</p>	<p>Construction Operations</p>	<p>Noticeable (positive)</p>	<p>The ship lift provides enabling economic infrastructure in a marine precinct at East Arm that enhances capabilities as a marine repair and maintenance centre for northern Australia.</p>	<p>Northern Territory Government's economic and investment attraction strategies to maximise benefits unlocked by the infrastructure:</p> <ul style="list-style-type: none"> <li>• collaborative strategic planning between the Marine Industry Development Plan, gas industry task force and Middle Arm master planning</li> <li>• contractor to prepare a Territory Benefit Plan for the project, to maximise local industry participation and jobs</li> <li>• NTG to do an Australian Industry Participation Plan.</li> </ul>	<p>Beneficial (positive)</p>	<p>Demonstrated economic uplift from the project and growth of marine capabilities in Darwin</p>	<p>Reporting against key economic indicators:</p> <ul style="list-style-type: none"> <li>• workforce and economic value of marine sector in northern Australia</li> <li>• number and size of vessels home-based in Darwin</li> <li>• the number and value of vessels seeking repairs and maintenance in Darwin</li> </ul>	<p>Communicate progress against objectives and the reason for any failure to achieve targets.</p>	<p>Reporting of outcomes in line with the Marine Industry Development Plan, and other strategic plans</p>
<p>Local businesses benefit from winning work and enhanced capabilities</p>	<p>Construction Operations</p>	<p>Imperceptible (positive)</p>	<p>Maximise local content. Contribute to building capacity of local small businesses.</p>	<p>Design and construct contractor's local industry and Aboriginal participation plan, to meet NTG's Territory Benefit Plan. To include outline of how tenders will be packaged and promoted to suit local capacity, procurement processes that prioritise the local market and good communication of opportunities for local businesses.</p> <p>ICN capability mapping to highlight local capacity and address any gaps.</p> <p>Maritime Industry Development Plan.</p> <p>Industry briefings in conjunction with the Northern Territory ICN to enhance the preparedness of local businesses to win work and manage expectations.</p> <p>Accountability and reporting requirements for prime contractors and their sub-contractors against local participation provisions.</p> <p>NT Government's compliance framework explained.</p>	<p>Noticeable (positive)</p>	<p>Number and total value of local contracts awarded in line with industry/community expectations.</p>	<p>Monitoring of the value and number of local contracts awarded/percentage of local contracts.</p> <p>Contractor reporting on local participation commitments.</p> <p>Monitoring of feedback from business and industry on level of local employment and local contracts awarded.</p>	<p>Communicate progress against objectives and the reason for any failure to achieve targets.</p>	<p>Report against indicators including the number and value of local contracts awarded.</p>



<p>Frustration by businesses who fail to win tenders or have unrealistic expectations of opportunities</p>	<p>Construction</p>	<p>Low</p>	<p>Maximise local content.  Local content meets community expectations.</p>	<p>Contractor to prepare Territory Benefit Plan, including measures such as packaging and promoting tenders to suit local capacity, procurement processes that prioritise the local market and good communication of opportunities for local businesses.</p> <p>Industry briefings in conjunction with the Northern Territory ICN to enhance the preparedness of local businesses to win work and manage expectations.</p> <p>Accountability and reporting requirements for prime contractors and their sub-contractors against local participation provisions.</p> <p>Ongoing communication to manage local content expectations and provide early advice of opportunities.</p>	<p>Low</p>	<p>Number and total value of local contracts awarded in line with industry/ community expectations.</p>	<p>Monitoring of the value and number of local contracts awarded/percentage of local contracts.</p> <p>Contractor reporting on local participation commitments.</p> <p>Monitoring of feedback from business and industry on level of local employment and local contracts awarded.</p>	<p>Communicate progress against objectives and the reason for any failure to achieve targets.</p>	<p>Report against indicators including the number and value of local contracts awarded.</p>
<p>Enhanced employment and training of local people</p>	<p>Construction Operations</p>	<p>Imperceptible (positive)</p>	<p>Maximise the recruitment and retention of local workers, both directly and with contractors</p>	<p>Contractor to prepare a Territory Benefit Plan, including recruitment processes prioritising the local market.</p> <p>Maritime Industry Development Plan on workforce development.</p> <p>Good communication about jobs available on the project.</p>	<p>Noticeable (positive)</p>	<p>Number of local jobs awarded in line with industry/ community expectations.</p> <p>Territory Benefit Plan and contractor participation plans, including recruitment processes prioritising the local market.</p> <p>Good communication about jobs available on the project.</p>	<p>Reporting on construction jobs, proportion of new jobs, retention and skills development of workers.</p> <p>Contractor reporting on numbers of local jobs awarded/local retention rates.</p> <p>Monitoring of feedback from business and industry on level of local employment.</p>	<p>Communicate progress against objectives and the reason for any failure to achieve targets.</p>	<p>Report against indicators including the local job figures for the project.</p>



<p>Aboriginal jobs and training as a result of the project</p>	<p>Construction Operations</p>	<p>Imperceptible (positive)</p>	<p>Maximise local Aboriginal employment on the project both directly and with contractors.</p>	<p>Aboriginal Engagement Plan (required by NAIF) to maximise Aboriginal employment and Aboriginal enterprises winning work on the project.</p> <p>Territory Benefit Plan to outline approach to employment and training of local Aboriginal people.</p> <p>Ongoing development of workforce development and skills development for the marine sector, through the Marine Industry Development Plan.</p> <p>Good communication about jobs available on the project.</p> <p>Compliance framework to ensure accountability by contractors against commitments.</p>	<p>Noticeable (positive)</p>	<p>Number of local Aboriginal people winning work during construction.</p> <p>Number and success rates of longer-term employment and training programs in the marine industry sector, including skills/certificates gained.</p>	<p>Feedback from Aboriginal stakeholders, government departments and the community on participation rates and level of satisfaction with construction and operational jobs on the ship lift and in the broader marine industry.</p> <p>Reviews of participation/ completion rates for Aboriginal people in training programs construction and operations.</p>	<p>Ongoing collaboration with Aboriginal organisations and employment providers.</p> <p>Communicate progress against objectives and the reason for any failure to achieve targets.</p>	<p>Report against indicators including Aboriginal employment and training figures.</p>
<p>Crowding out of other economic sectors on the harbour such as tourism and recreational fishing</p>	<p>Operations</p>	<p>Low</p>	<p>No displacement of other economic sectors</p>	<p>While the project is predicted to have negligible to no impact on recreational and tourism businesses, monitor during construction, this can be further mitigated by good communication during construction.</p>	<p>Low</p>	<p>No complaints of disrupted business during construction.</p>	<p>Feedback from harbour tourism and recreational fishing organisations. Public inquiry line and grievance register.</p>	<p>Ongoing collaboration with harbour tourism and recreational fishing organisations.</p>	<p>Seek feedback from Tourism Top End and AFANT</p>



<p><b>Detrimental impacts on competing maritime businesses</b></p>	<p>Planning Operations</p>	<p>Medium</p>	<p>Existing marine businesses benefit from an expanded maritime industry through construction of a common user facility.</p>	<p>Development of a common user facility and expanded marine repairs and maintenance industry grows the sector.</p> <p>Development of a Maritime Industry Development Plan with input from local industry to enhance capacity development.</p>	<p>Low</p>	<p>Increased economic output for the local maritime sector.</p> <p>? Collaboration and partnerships ? Investment in local business growth</p> <p>Development of the Maritime Industry Development Plan.</p>	<p>Monitor key economic indicators, eg economic output, expenditure on business growth, workforce development indicators, ability to fill local positions, reduced reliance on FIFO.</p> <p>Market sounding exercises.</p> <p>Survey of satisfaction levels, eg through Chamber's Marine Industry Council</p>	<p>Industry input into the Maritime Industry Development Plan</p>	<p>Develop economic indicators to report against in the Marine Industry Development Plan</p>
<p><b>Cumulative</b></p>									
<p><b>Cumulative impacts on the social, cultural, ecological and economic values of Darwin Harbour</b></p>	<p>Construction Operations</p>	<p>High</p>	<ul style="list-style-type: none"> <li>Development in Darwin Harbour is balanced: protecting the diverse economic, environmental, social and cultural values of the harbour.</li> </ul>	<p>Given project-level disturbance is likely to be short-term and localised, mitigation of cumulative impacts is largely beyond the control of the proponent and is more likely to be addressed by other strategies, such as:</p> <ul style="list-style-type: none"> <li>strategic harbour-wide assessments</li> <li>support for the Darwin Harbour Advisory Committee's Integrated Marine Monitoring and Research Program (IMMRP) for Darwin Harbour</li> <li>harbour-wide dredge management strategy (DIPL).</li> </ul>	<p>High cumulative (low at project level)</p>	<p>Delivery of a strategic assessment and dredging strategy for Darwin Harbour.</p> <p>DHAC reporting on maintenance of the harbour's diverse values</p> <p>(Outside the responsibility of the project)</p>	<p>DHAC integrated reporting on multi-disciplinary indicators during construction and operations of the marine industry precinct (will require ongoing support of DHAC and implementation of the strategy)</p>	<p>Department of Environment, Parks and Water Security and DHAC</p>	<p>Adaptive management of impacts on Darwin Harbour and its catchments.</p> <p>Report against implementation of dredge management strategy</p>

Table 4-2: Social Impact Monitoring and Reporting



## 5. Commitments register

Below is a summary of the Northern Territory Government’s commitments for the Darwin Ship Lift Project:

Table 5-1: Commitments register

Commitment	Responsibility	Accountability
1. Stakeholder and community engagement	<p>NT Government commits to an ongoing engagement and communication strategy for construction and operation of the Darwin ship lift common user facility and broader marine industry precinct, including coordinated messaging.</p> <p>Request for tender process includes a requirement for design and construct contractor to input to DIPL communication staff on project activities, particularly those likely to be disruptive (significant traffic movements, piling, dredging, reduced access or safety issues for recreational fishing, how to report complaints, responsiveness to complaints).</p>	<p>Project information and updates posted on project website (DIPL and DCMC)</p> <p>DIPL to prepare a communication and engagement strategy for construction (including complaints register, public hotline, community updates, Harbour Master’s Notices, variable message boards at boat ramps).</p>
2. Build industry capacity	<p>NTG to work with the ICN, Maritime Industry Development Plan and Chamber of Commerce Marine Industry Council to develop a blue print or master plan for development of the maritime sector that identifies opportunities, capacity and workforce gaps and plans industry-wide workforce development.</p> <ul style="list-style-type: none"> <li>Contractor to report on number, proportion and value of construction packages awarded to local businesses;</li> <li>Contractor to report on number of local and Aboriginal workers for the construction phase, including retention rates and skills development;</li> <li>Contractor to report on skills gaps and how they might be addressed;</li> <li>Contractor to prepare a Territory Benefit Plan outlining how local jobs and contracts will be maximised and approaches to maximising Aboriginal employment and enterprises.</li> </ul> <p>Contractors to work with the ICN to provide and advise to industry on potential works packages.</p>	<p>Chamber of Commerce, ICN</p> <p>Design and construct contractor for operations</p> <p>Marine Industry Development Strategy (DITT) for operations</p>
3. Reporting	<p>Report against agreed economic indicators, both during construction and incremental growth of the marine sector, including:</p> <ul style="list-style-type: none"> <li>number and size of marine industries home-based in Darwin</li> <li>number and skills of workers in the sector</li> <li>number and value of vessels visiting Darwin for marine services and supplies</li> </ul>	<p>Marine Industry Action Plan to set indicators against which to gather data</p>



Commitment	Responsibility	Accountability
	<ul style="list-style-type: none"> <li>• number and value of joint ventures/collaboration with interstate firms</li> <li>• skills and capacity gaps and how they are being addressed</li> </ul>	
4. Management plans	All issues raised in this SIMP will be addressed in other appropriate management plans, as outlined above	Any reportable social issues covered by other management plans will be covered in regular reporting to stakeholders.

## 6. Monitoring and review

The Northern Territory Department of Infrastructure, Planning and Logistics is responsible for implementation and oversight of the SIMP during the design and construction phase. The Department will conduct an annual review to assess progress and effectiveness of the SIMP and to identify any necessary adjustments or improvements.

## 7. Ongoing communication and engagement

DIPL, in conjunction with the contractor and Department of the Chief Minister and Cabinet, to prepare an ongoing communication and engagement strategy for construction. This will include:

- community updates
- media releases
- use of radio, online and social media advertising
- letter box drops for people living and working in affected areas (eg residential areas along haulage routes, businesses in the East Arm industrial estate)
- maintain project website
- complaints register, including procedures for responding and reporting on complaints and community satisfaction with the process
- public hotline
- Harbour Master’s Notices
- alerts to recreational fishers through AFANT
- variable message boards at boat ramps
- maintain engagement register and contacts for people wanting to be kept informed.

See also Noise and Vibration Report (Appendix L) and outline of Environmental Incident Reporting



## 8. Stakeholder communication and engagement plan

### Outline of Darwin Ship Lift communication and engagement plan (to be developed by DIP)

Project activity/topic	Detail	Stakeholders	Communication approach
<b>Pre-construction</b>			
<b>Complaints, concerns and feedback</b>	<ul style="list-style-type: none"> <li>Establish a complaints hotline and email address</li> <li>Before start of work, as part of project updates, provide information on the grievance hotline and email address to stakeholders and the community</li> <li>Number and type of complaints to be reported to stakeholders through updates, together with an outline of how complaints were resolved</li> </ul>	<ul style="list-style-type: none"> <li>Department of Infrastructure, Planning and Logistics</li> <li>Department of the Chief Minister and Cabinet</li> <li>City of Darwin</li> <li>City of Palmerston</li> <li>Litchfield Council</li> <li>Members of Parliament</li> </ul>	<ul style="list-style-type: none"> <li>Email updates</li> <li>Seek support of councils, businesses and groups to share information</li> <li>Posters for local noticeboards and boat ramps with the complaints hotline and email contacts</li> <li>Share on relevant social media pages and Darwin Ship Lift Project website</li> </ul>
<b>Employment and contracts</b>	<ul style="list-style-type: none"> <li>Aboriginal employment and contracts</li> <li>In conjunction with Aboriginal organisations, identify opportunities for Aboriginal contracts and employment in line with workforce capabilities and project requirements</li> <li>Report to relevant stakeholders on progress</li> </ul>	<ul style="list-style-type: none"> <li>Larrakia Development Corporation</li> <li>Larrakia Nation Aboriginal Corporation</li> <li>Larrakia Rangers</li> <li>ICN</li> <li>National Indigenous Australians Agency</li> <li>NT Indigenous Business Network</li> <li>Ironbark</li> <li>Design and construct contractors</li> </ul>	<ul style="list-style-type: none"> <li>Territory Benefit Plan and Aboriginal Engagement Plan to outline approach</li> </ul>
	<ul style="list-style-type: none"> <li>Local employment and contracts</li> <li>Work with NT Government, ICN and Chamber of Commerce to communicate opportunities, package and promote tenders to suit local capacity and prepare businesses for competitiveness and standards required by Core</li> <li>Prioritise local market for recruitment and procurement processes where possible</li> <li>Monitor feedback from business and industry</li> </ul>	<ul style="list-style-type: none"> <li>Department of the Chief Minister and Cabinet</li> <li>Department of Industry, Tourism and Trade</li> <li>Industry and business bodies, including NT Chamber of Commerce and Industry, Civil Contractors' Federation, Master Builders Association of the NT, Palmerston Regional Business Association</li> <li>ICN</li> <li>Design and construct contractor</li> <li>Local councils</li> </ul>	<ul style="list-style-type: none"> <li>Outline approach of Territory Benefit Plan</li> <li>Report on progress</li> <li>Manage expectations about the number and type of jobs available short and long-term</li> <li>ICN Project Gateway</li> <li>Darwin Ship Lift Project website</li> <li>NT business media</li> </ul>
	<ul style="list-style-type: none"> <li>Employment and contract opportunities and announcements</li> <li>Communicate any work or contract opportunities to stakeholder groups and contacts database</li> </ul>	<ul style="list-style-type: none"> <li>Larrakia Development Corporation</li> <li>Larrakia Nation Aboriginal Corporation</li> <li>Ironbark Aboriginal Corporation</li> </ul>	<ul style="list-style-type: none"> <li>Community updates</li> <li>Darwin Ship Lift Project website</li> <li>ICN Project Gateway</li> </ul>



Project activity/topic	Detail	Stakeholders	Communication approach
	<ul style="list-style-type: none"> <li>• Announcements about key local/major contracts awarded</li> <li>• Announcements about key Aboriginal contracts awarded</li> </ul>	<ul style="list-style-type: none"> <li>• ICN</li> <li>• NT Indigenous Business Network</li> <li>• Chamber of Commerce NT</li> <li>• Department of Industry, Trade and Tourism</li> <li>• Employment and training providers</li> </ul>	<ul style="list-style-type: none"> <li>• NT business media</li> </ul>
<b>Before start of construction</b>	<ul style="list-style-type: none"> <li>• Official announcements about the start of construction for the project</li> </ul>	<ul style="list-style-type: none"> <li>• All local stakeholders and government</li> <li>• Local media</li> </ul>	<ul style="list-style-type: none"> <li>• Media announcement</li> <li>• Darwin Ship Lift webpage</li> </ul>
<b>Construction phase</b>			
<b>Progress updates</b>	<ul style="list-style-type: none"> <li>• Provide regular progress updates to the local communities and stakeholders on progress of the project and timeframes, including when mining will start at the site</li> </ul>	<ul style="list-style-type: none"> <li>• All project stakeholders</li> <li>• Local communities</li> <li>• Local representatives</li> <li>• Contacts database</li> </ul>	<ul style="list-style-type: none"> <li>• Email updates</li> <li>• Regular reports to all stakeholders</li> <li>• Updates on Darwin Ship Lift Project website</li> <li>• Ability to register for updates</li> </ul>
<b>Mining and processing</b>			
<b>Traffic</b>	<ul style="list-style-type: none"> <li>• Publicise in community updates</li> <li>• Collaborate with Darwin Port's daily traffic updates</li> </ul>	<ul style="list-style-type: none"> <li>• DIPL</li> <li>• Contractor</li> <li>• Darwin Port</li> <li>• DIP Darwin Harbour Master</li> </ul>	<ul style="list-style-type: none"> <li>• Community updates</li> <li>• Project schedules</li> <li>• Darwin Port Users Group</li> </ul>
<b>Progress updates</b>	<ul style="list-style-type: none"> <li>• Provide relevant ministers with project updates and information on key project milestones</li> <li>• Provide advance notice to key stakeholders of project milestones, for potential media coverage</li> <li>• Provide departmental communication staff with alerts of any significant emerging issues</li> </ul>	<ul style="list-style-type: none"> <li>• All relevant government departments and ministers</li> <li>• Contractors</li> </ul>	<ul style="list-style-type: none"> <li>• Alerts</li> <li>• Media releases</li> </ul>
<b>Closure and rehabilitation</b>			
<b>N/A</b>	<ul style="list-style-type: none"> <li>• Given the type of development on existing industrial land, land use won't change</li> </ul>	<ul style="list-style-type: none"> <li>• n/a</li> </ul>	<ul style="list-style-type: none"> <li>• n/a</li> </ul>
<b>Ongoing/Regular communication throughout the life of the project</b>			

Table 8-1: Stakeholder engagement and communication plan



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