



# **Department of Primary Industry and Resources**

## **SEIA Rum Jungle Rehabilitation Project Report**

October 2019

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# Glossary of terms

Acronym / term	Full name / definition
AMD	Acid and Metalliferous Drainage
BIITE	Batchelor Institute of Indigenous Tertiary Education
Construction activities	Construction activities are defined as the project site rehabilitation works including: site establishment, earth works, land management (e.g. weed control and fire preparation), revegetation, site disestablishment and clean up. For this project, construction activities would will occur over a ten year period.
Coomalie LGA	Coomalie Local Government Area
DIPL	Department of Infrastructure, Planning and Logistics
DPIR / the proponent	Department of Primary Industry and Resources
EA Act	<i>Environmental Assessment Act</i>
EBFR	East Branch Finniss River
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
FRALT	Finniss River Aboriginal Land Trust
Index of Relative Socio-Economic Disadvantage	Socio-economic advantage and disadvantage are defined broadly by the Index of Relative Socio-Economic Disadvantage (IRSD) in terms of people's access to material and social resources and their ability to participate in society (ABS, 2018b). In order to capture this broad definition, the IRSD includes a range of data points, including income, education, employment, occupation, and housing. The IRSD divides a population into ten equal groups. The lowest scoring 10 per cent of these groups are given a decile number of 1, which indicates the highest level of disadvantage, and the highest scoring 10 per cent of areas are given a decile of 10, which indicates the lowest level of disadvantage.
Monitoring and maintenance	This would include assessment of structures created during construction against design criteria and completion of civil maintenance until vegetation communities are sufficiently mature to limit further erosion. For the Project, intensive monitoring and maintenance would occur over a five year period following the completion of construction.
NLC	Northern Land Council
NTG	Northern Territory Government
SEIA	Socio-Economic Impact Assessment
TOs	Traditional Owners. The Traditional Owners for the site are the Kungarakana People and Warai People.

# 1. Introduction

The Northern Territory Department of Primary Industry and Resources (DPIR), is the proponent for the rehabilitation of the former Rum Jungle Mine site (the Project), located eight kilometres north of Batchelor, Northern Territory. The project aims to address long-term environmental legacy mine issues.

On 30 August 2016, the Northern Territory Environment Protection Authority (EPA) decided that the project requires assessment under the *Environment Assessment Act* at the level of an Environmental Impact Statement (EIS). The EPA issued Draft Terms of Reference to be addressed in the EIS to DPIR in September 2019 (Northern Territory EPA, 2019).

To meet the requirements of the EPA Terms of Reference, DPIR engaged GHD to prepare the Socio-Economic Impact Assessment (SEIA) for the EIS.

## 1.1 Purpose of this report

The purpose of this SEIA is to address Section 2.2.6 of the EIS Draft Terms of Reference. To do so, this SEIA:

- Provides an understanding of the socio-economic context of the project
- Describes and assesses the potential socio-economic impacts that may occur as a result of the project
- Recommends mitigation and management measures to reduce potential negative impacts, and enhance the potential benefits of the project

As per the Terms of Reference, this SEIA relates only to the impacts of rehabilitation of the former mine site which involve construction activities over an eight to 10 year period. This assessment does not include consideration of subsequent land stewardship issues and/or environmental monitoring during the post-rehabilitation period.

## 1.2 Scope and limitations

This report has been prepared by GHD for DPIR and may only be used and relied on by DPIR for the purpose agreed between GHD and DPIR as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than DPIR arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report. Implementation of the community and recreation infrastructure study has not been costed by GHD and has been provided for advice purposes.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

This report is subject to the following limitations:

- This report relies on the data sets available at the time of undertaking the work between May 2019 and October 2019

- All consultation inputs included in the study are based on the opinions and perceptions of the stakeholders interviewed as part of the study in July – August 2019. This report has been prepared in response to the Terms of Reference issued for this project and is limited to the impacts of the rehabilitation of the mine site including construction activities occurring over an 8 to 10 year period. It should be noted that the Terms of Reference were revised in September 2019 to include the first five years of intensive monitoring on the site. This SIA considers these first five years at a high level. This investigation does not include consideration of subsequent land stewardship issues and/or environmental monitoring during the post-rehabilitation period.
- Information on the economic contribution and an economic impact assessment were not available at the time of preparing this SEIA. This SEIA therefore presents a high level, qualitative assessment of the potential economic impacts and benefits based on information available at the time this report was prepared.
- From a socio-economic impact assessment perspective, it is important to assess potential access, connectivity and related safety issues for community members. However, at this stage, information on project related traffic movements and traffic impacts is not available, therefore these issues are not assessed in this study.

## **1.3 Project context**

### **1.3.1 Location**

The Rum Jungle mine and rehabilitation site is located approximately 105 kilometres south of Darwin in the Northern Territory. The site is adjacent to Litchfield National Park and the township of Batchelor, within the Coomalie Local Government Area (LGA). The location of the site is shown in Figure 1-1.

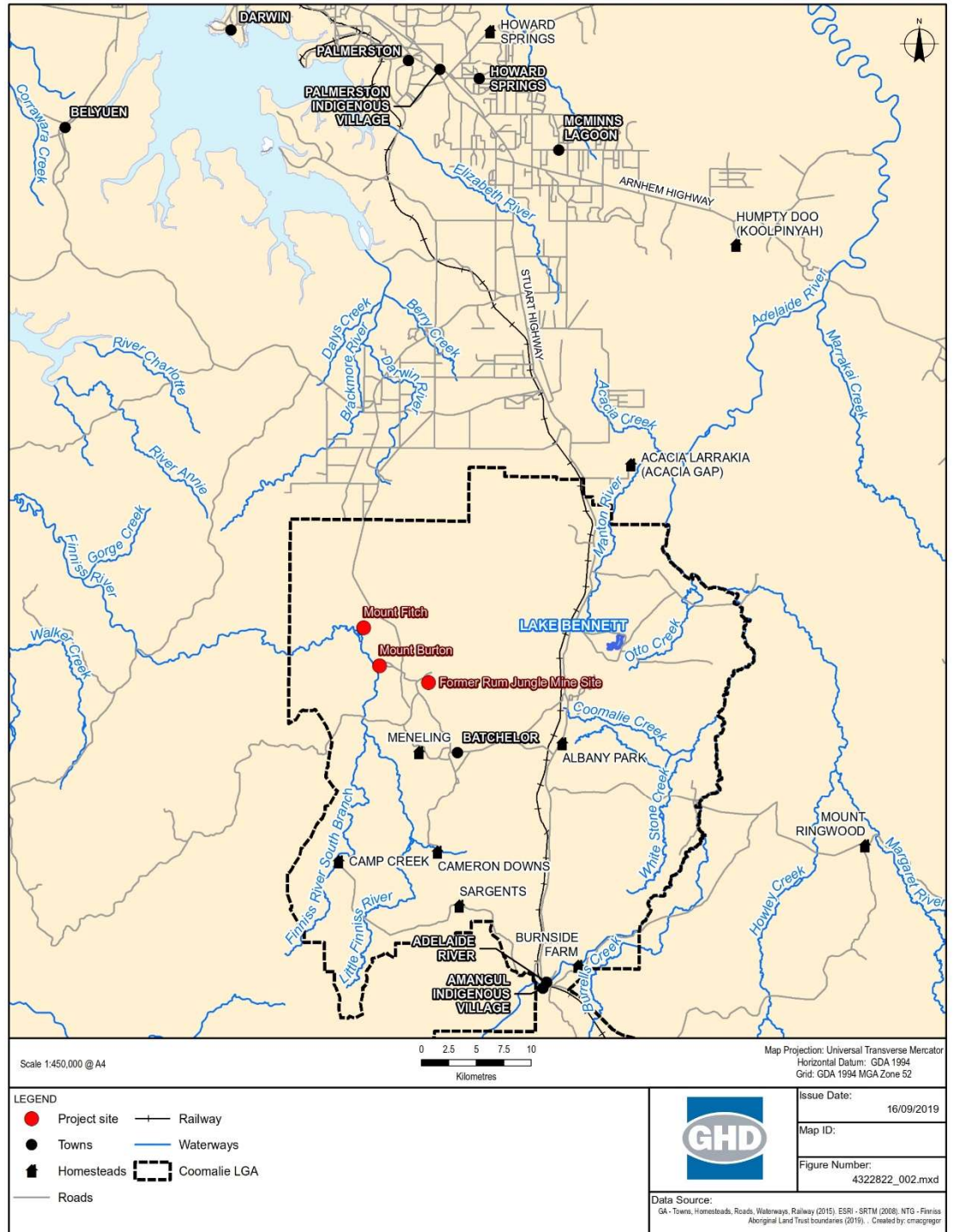


**Figure 1-1 Location of Rum Jungle Rehabilitation Site**

## Locality Plan

Rum Jungle Rehabilitation Project | Social and Economic Impact Assessment

FIGURE 1-1



G:\43\22822\GIS\Maps\4322822\_002.mxd



### 1.3.2 Historical context

The Rum Jungle uranium ore body was discovered in 1949. Mining and mineral processing occurred from 1954 to 1971 producing 3,530 tonnes of uranium oxide and 20,000 tonnes of copper concentrate (Northern Territory Department of Primary Industry and Resources, 2018). Additional material was mined at nearby Rum Jungle Creek South, Mt Burton and Mt Finch and hauled to Rum Jungle for processing.

All mining and processing operations at Rum Jungle Mine site ceased in 1971. While no longer operational, the former Rum Jungle Mine site consists of three waste rock dumps, two water-filled mine pits and one mine pit backfilled with tailings and overlain with low grade copper ore.

Mining activities resulted in onsite and downstream environmental impacts as a result of historic mine waste storage practices. Rehabilitation investigations and works were carried out in the 1980s, but these works have since deteriorated and do not meet contemporary rehabilitation standards.

The Rum Jungle Mine site is a Commonwealth legacy site located on NT Government owned land. The NT Government is committed to developing a rehabilitation design that will meet contemporary social and environmental standards.

### 1.3.3 Traditional Owners

The site is located within Area 4 of the Finnis River Land Claim (1981) which was excluded from the grant to the Finnis River Aboriginal Land Trust (FRALT) due to the concerns of the joint Traditional Owners of the site - Kungarakan People and Warai People. A decision in respect of the grant of the former Rum Jungle mine site is still pending (Department of Primary Industry and Resources, 2018).

The previous land use occurred in an era prior to the *Aboriginal Land Rights Act 1976 (Northern Territory)* and the *Native Title Act 1993*, which both provide rights to Aboriginal Traditional Owners and Native Title Holders with respect to mining activities. The activities also occurred prior to the *Northern Territory Aboriginal Sacred Sites Act 1984* which protects registered sacred sites. Contemporary Aboriginal land rights standards and practices in Australia seek prior and informed consent of Aboriginal Traditional Owners, and seek to create benefits and opportunities for the economic inclusion of Aboriginal Traditional Owners in developments.

The Kungarakan People and Warai People, as the joint Traditional Owners of the site, outline the following vision for rehabilitation in the Conceptual Rehabilitation Plan which draws from their cultural and social principles:

*“Kungarakan and Warai desire that Rum Jungle will be returned to a natural, living environment that also provides for a return to traditional ceremony, culture and subsistence use of natural resources. In modern society, this may include development of commercial operations that are managed according to Kungarakan and Warai traditional principles”* (Northern Territory Department of Mines and Energy, 2013, pp 4).

In achieving this vision, the Conceptual Rehabilitation Plan notes that “the post-mining landform must be returned as close as possible to the landform that existed before mining, with no detrimental impacts on the downstream environment or on the neighbours of Kungarakan People and Warai People who live downstream” (Northern Territory Department of Mines and Energy, 2013, pp 4).

## 1.4 Project description

This section presents a summary of the project description based on the detail presented in Chapter 1 and Chapter 5 of the EIS.

### **1.4.1 Project objectives**

Chapter 1 of the EIS outlines the project objectives which are:

1. Improve the environmental condition on site and downstream of site within the East Branch Finniss River (EBFR). This includes the following key outcomes:
  - a. Surface water quality conditions within the EBFR in accordance with locally derived water quality objectives
  - b. Chemically and physically stable landforms
  - c. Self-sustaining vegetation systems within rehabilitated landforms
  - d. Physical environmental conditions supportive of intended land use plan
2. Improve site conditions to support future progress of the Finniss River Land Claim over the Rum Jungle site. This includes the following key outcomes:
  - a. Restore the flow of the EBFR to original course as far as possible
  - b. Remove culturally insensitive landforms from adjacent to Sacred Sites and relocate ensuring a culturally safe distance from the Sacred Sites.
  - c. Return living systems including endemic species to the remaining landforms
  - d. Preserve Aboriginal cultural heritage artefacts and sites
  - e. Isolate sources of pollution including radiological hazards
  - f. Maximise opportunities for Traditional Owners to work on site to aid reconnection to country.

### **1.4.2 Overview of the project**

The project involves rehabilitation of the former Rum Jungle mine and associate satellite mines at Mt Burton and Mt Fitch (the project).

The project components were all formerly part of the Rum Jungle Uranium field and consist of three land parcels as described here:

- Rum Jungle proper – Section 2968 Hundred of Goyder (vacant Crown land recommended for grant by the Aboriginal Land Commissioner Justice Toohey on 22 May 1981)
- Mt Burton – Section 998 Hundred of Goyder (estate in fee simple held privately)
- Mt Fitch – within NT Portion 3283 (Crown Lease Perpetual 862 held by the Northern Territory Land Corporation).

Low permeability and granular materials are required to undertake the project. These materials may be sourced from the following two sites which are a component of the project:

- Pre-disturbed land owned by Coomalie Council which is located next to Rum Jungle Lake
- Former sand mining areas which are located on the Finniss River Aboriginal Land Trust (FRALT).

### **1.4.3 Implementation strategy**

The project will be delivered under a model led by the Northern Territory Department of Infrastructure, Planning and Logistics (DIPL) and inclusive of the proponent (DPIR). Procurement will be managed by the NT Government with a strong weighting in favour of local and Indigenous businesses. While it would be preferable to engage Kungarakana and Warai business to undertake rehabilitation works, the capability of these businesses to complete a

large and complex project in the future is unknown. As a result, joint ventures between larger contractors and Kungarakan, Warai and local business will be strongly encouraged. All procurement packages will be assessed upon their ability to engage and develop Kungarakan, Warai and local businesses for latter stages of the project and other potential regional projects. Further information about the project delivery structure is provided in Chapter 2 of the EIS.

#### 1.4.4 Project activities and timeframes

An estimated start date for the project cannot be determined at this stage given government funding cycles and the project's requirement for Australian Government approvals. Currently, there is no guarantee that the project will receive funding to progress. However, a timeframe has been identified for the purpose of understanding and assessing potential environmental impacts.

A summary of the key activities and indicative timeframes is provided in Table 1-1 below based on information contained in Chapter 5. According to information provided by DPIR, the project schedule has deliberately been staged over a longer timeframe to maximise the opportunity for local and Traditional Owner employment and economic benefit.

**Table 1-1 Summary of Project activities and timeframes**

Indicative timeframe	Activities
Year 1	<p>Site establishment including establish new haul roads, new or upgraded river crossings, office compound facilities and other infrastructure (e.g. workshops, water treatment area)</p> <p>Commence earthworks, land management (e.g. weed control and fire preparation) and revegetation</p>
Year 2 - 7	<p>Earthworks</p> <p>Land management e.g. weed control and fire preparation</p> <p>Revegetation</p>
Year 7 - 8	Construct cultural centre
Years 8 - 12	<p>Monitoring and maintenance</p> <p>Land management e.g. weed control and fire preparation</p>

For the purpose of this study, 'construction activities' are considered to be the activities occurring between years 1 and 6.

#### 1.4.5 Construction work hours

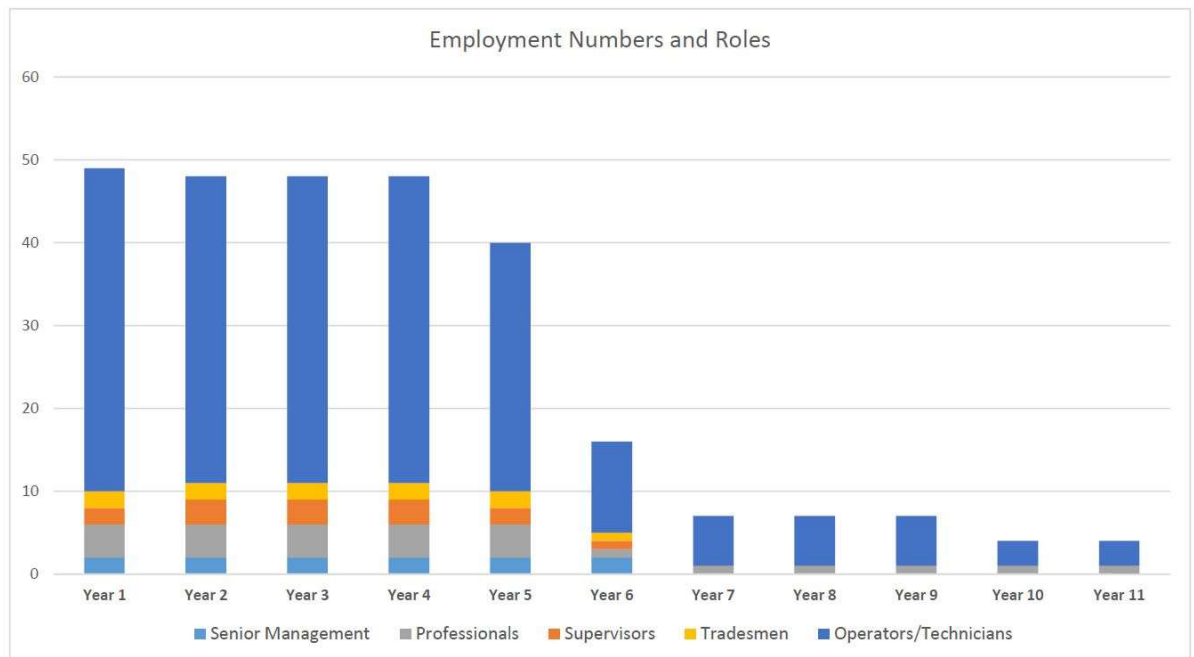
Construction activities will be undertaken on day shift only. Shifts will be 12 hours per day, seven days per week. This excludes maintenance works which may occur outside these hours.

Activities may vary throughout the year due to the impact of seasonal weather on earthworks. To assist with maintaining stable employment in the region, the works have been scheduled to continue at a reduced rate through the wet season (1 October to 1 May).

#### 1.4.6 Workforce profile

Figure 1-2 shows the distribution of roles over the ten year construction period. Between Years 1 and 5, the number of roles would remain steady between 48 and 40 workers, and from Year 6,

there would be a significant reduction with only operators/technicians required as construction is largely completed. The majority of roles required will be operators / technicians.



**Figure 1-2 Distribution of roles over ten year construction period**

Source: Information provided to GHD by project design team

According to information provided by the project design team, there will be approximately three trainee positions per year between Years 1 and 8, dropping to one position from Year 9. These positions will be within the operator / technician category

According to information provided by DPIR, employment opportunities will be prioritised for Traditional Owners and local residents.

A single crew will be used for the construction works, with the exception of maintenance work and security, and non-residential consultants and specialists. Table 1-2 provides a summary of the roles required for construction activities, which is based on information provided by the project design team.

*Note: The construction time period and employment numbers changed post-consultation as the construction methodology was revised. The figures are likely to change again as detailed design and modelling is completed for the project.*

**Table 1-2 Overview of construction roles**

Category	Example of roles
Senior Management	Project manager, communications manager
Supervisors	Site supervisors
Professionals	Project engineer, surveyor, Health and Safety
Tradespeople	Maintenance, First Aid
Operators / Technicians	Truck operators, construction workers, grader operators, drillers, revegetation, laboratory technician, security, trainees

#### **1.4.7 Accommodation**

The project workforce will be accommodated in Batchelor in available rental housing and accommodation facilities.

## 2. Methodology

This SEIA has been prepared according to the Terms of Reference for the EIS (Northern Territory Environmental Protection Agency, 2017) and the following leading practice guidelines:

- *Guidelines for the Preparation of an Economic and Social Impact Assessment* (Northern Territory Environmental Protection Agency, 2013)
- *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects* (Vanclay, *et al.*, 2015).

The following sections outline the steps undertaken to prepare this SEIA.

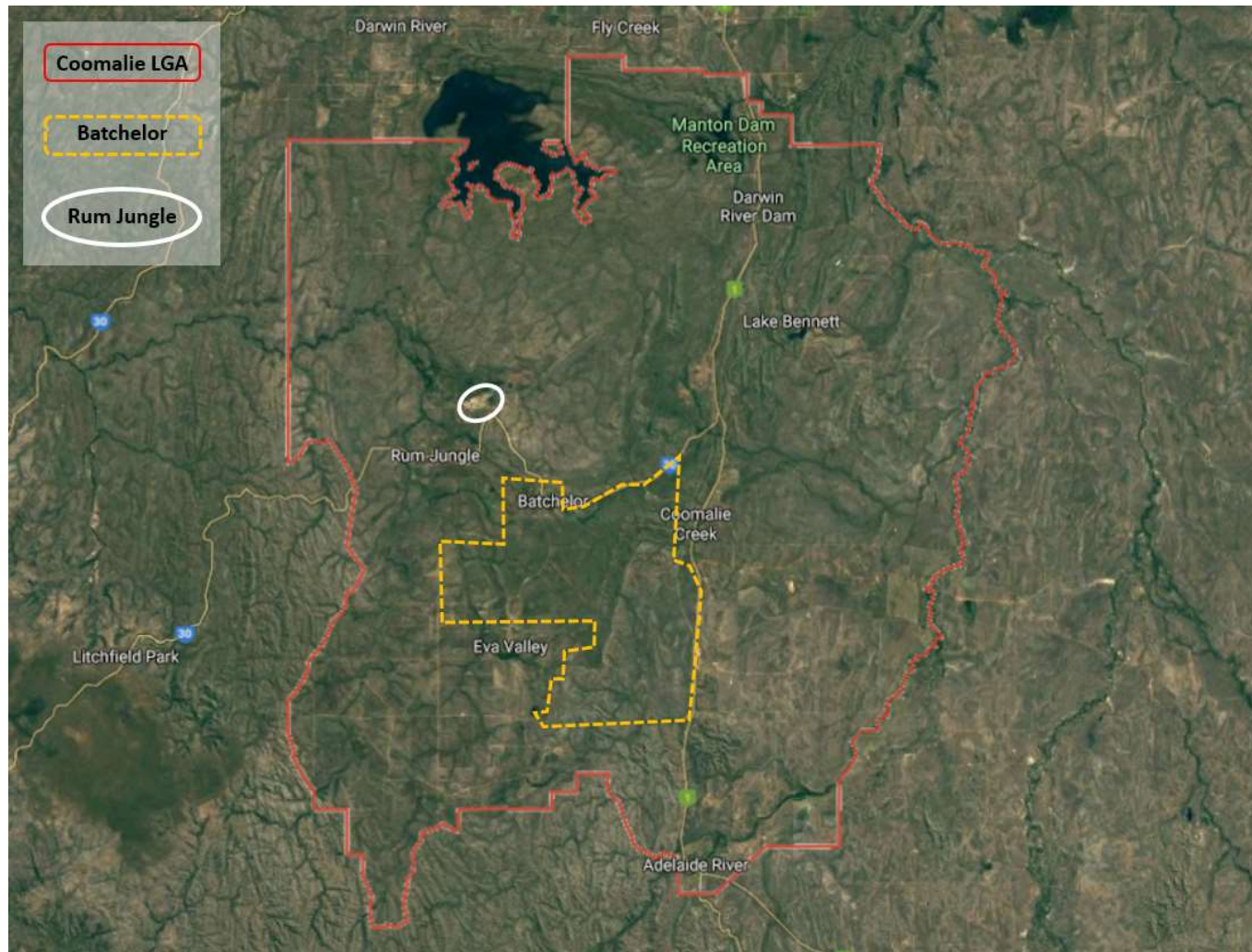
### 2.1 Defining the SEIA study area

The area of socio-economic influence of a project is determined by the project footprint and its interaction with the immediately neighbouring communities, interaction of project activities and its workforce with the nearest urban localities, and interaction of project activities with the wider region.

This SEIA identifies local and regional study areas broadly corresponding to Batchelor and its surroundings, captured by the ABS as the Batchelor State Suburb (Batchelor SSC) and the Coomalie Local Government Area (Coomalie LGA) respectively (refer to Figure 2-1). These communities have been selected as population catchments as well as relevant administrative areas.



**Figure 2-1 Study area**



Source: Figure adapted from Google (2019)



## 2.2 Scoping of socio-economic issues

A preliminary scoping of potential socio-economic issues was undertaken to understand the potential issues and impacts of the project and inform the structure of this report. The scoping exercise was informed by:

- Project activities, the Terms of Reference for the EIS (Northern Territory Environmental Protection Agency, 2017) and the *Guidelines for the Preparation of an Economic and Social Impact Assessment* (Northern Territory Environmental Protection Agency, 2013)
- The project's socio-economic area of influence.

The scoping exercise informed the stakeholder consultation undertaken for the SEIA.

## 2.3 Stakeholder consultation

The SEIA has been informed by a range of stakeholder consultation activities. A summary of these is provided below.

### 2.3.1 SEIA consultation

In line with leading practice, stakeholder consultation was integrated into the socio-economic impact assessment process to inform the baseline and the impact assessment. Hereafter, this consultation is referred to as the SEIA consultation.

#### *Stakeholders and community*

Consultation with stakeholders relevant to this SEIA was undertaken in July and August 2019. The feedback gained during consultation is referenced throughout this report. The consultation activities included a mix of face to face meetings and telephone interviews with Traditional Owners, community members, local service provider organisations, local businesses and representatives of local and Territory government located within the town of Batchelor and the surrounding region.

A total of 20 meetings were held during July and August 2019, as shown in Table 2-1.

**Table 2-1 Stakeholders consulted to inform the SEIA**

Category	Organisation / representatives
Traditional Owners	Representatives of the Kungarakan People located in Batchelor
	Representatives of the Warai People located at 15 Mile Camp
	Representatives of the Kungarakan People located at Amangul Town Camp
	Representatives of the Kungarakan People located in Darwin
Local Government	Coomalie Community Government Council
Local business	Litchfield Regional Tourism Inc
	Ironbark Aboriginal Corporation
	Cookes Tours and RS Gardening
	Litchfield Motel and Rum Jungle Tavern
	Batchelor Institute of Technology

Category	Organisation / representatives
	Browns Oxide Mine
Key government agencies	Parks and Wildlife Commission NT – Batchelor
	Batchelor Area School
	Batchelor Community Health Centre
	Batchelor Police Station
	Department of Infrastructure, Planning and Logistics (Transport Assets and Development)
	Department of Health (Radiation Protection, Environmental Health)
	Bushfires NT
Traditional Owner representatives	Northern Land Council

### ***Discussions with technical specialists and DPIR***

Various discussions between the SEIA team and other project stakeholders have informed this study. These include:

- DPIR - The SEIA team met with DPIR several times between May and September 2019. During these discussions, DPIR shared information about the project and project design, and outcomes from their consultations with various stakeholders.
- EIS technical specialists - The SEIA team had several discussions during August and September 2019 with other technical specialists involved in preparing the EIS. This included teams undertaking studies related to cultural heritage, noise and air quality, biodiversity, landscape and visual amenity, and project design. The SEIA team also participated in one of the project risk workshops.

### **2.3.2 EIS consultation**

Chapter 6 of the EIS describes the consultation undertaken by DPIR with a range of stakeholders.

GHD's SEIA team also attended several of the EIS community and stakeholder engagement sessions to gain an understanding of the local context and concerns.

This included a Community Information Session held by DPIR in Batchelor on 17 July 2019, the purpose of which was to provide information to the local community about the project. GHD's SEIA team also attended a site visit on 18 July 2018 which was facilitated by DPIR and attended by several members of a key stakeholder group established for the project. The outcomes of discussions with stakeholders during these sessions are referenced throughout sections 4 and 5 where relevant.

Refer to Chapter 4 of the EIS for more information about the project Stakeholder Communication and Engagement strategy.

### ***Traditional Owner consultation***

As discussed in Chapter 6 of the EIS, DPIR has been engaging with Traditional Owners since 2018 to provide updates on the current status of the project, involve Traditional Owners directly in the planning for the future of the site and seek input to specific components of work. This

follows several years of consultation with Traditional Owners to inform previous stages of the rehabilitation project.

Consultation activities with Traditional Owners have included:

- Individual face to face and telephone meetings
- Briefings with each Traditional Owner group (held primarily in Batchelor)
- Site visits to review specifics of works and locations within the site
- Establishment of a Stakeholder Working Group (including non-Traditional Owners).

The consultation process has been facilitated by Northern Land Council<sup>1</sup>. It is understood that although NLC do not have a statutory role in the project, as mentioned above, they are a key stakeholder on behalf of the Traditional Owners.

DPIR has developed an engagement framework for the project which outlines key components of the project that require input from Traditional Owners, and outlines timeframes for this to be undertaken. All meetings with Traditional Owners include a representative from the Northern Land Council and where possible, a representative from the Australian Government Department of Industry, Innovation and Science.

DPIR has also engaged Traditional Owners as cultural monitors and advisors to inform various EIS technical studies.

DPIR and other EIS technical teams have shared relevant outcomes of these consultations with the GHD SEIA team to inform this report.

## **2.4 Socio-economic baseline**

The socio-economic baseline was prepared to develop an understanding of the existing socio-economic situation within the study area. It was informed through a review of relevant documents and data as listed below and in the reference list at the end of this report:

- Project overview and background studies provided by DPIR including *Rum Jungle Socio-Economic Baseline* and *Rum Jungle Socio-Economic Development Plan* prepared by Nation Partners (2015)
- Relevant local, regional, territory and commonwealth policy and strategy documents (refer to section 3)
- Demographic, industry and employment data from Australian Bureau of Statistics Census of Population and Housing and Labour Force Survey, and tourism industry data from Tourism Research Australia
- Summaries and notes from previous consultation by DPIR with Traditional Owner groups
- Insights from discussions with the proponent, and preliminary site visits.

The socio-economic baseline was also informed by outcomes of the SEIA consultation (section 2.3) and site visits undertaken by the SEIA team.

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<sup>1</sup> The Northern Land Council is an independent statutory authority of the Australian Government that is responsible for assisting Aboriginal peoples in the Top End of the Northern Territory to acquire and manage their traditional lands and seas. A key responsibility of the NLC is to consult with traditional landowners and other Aboriginal peoples with an interest in affected land (Northern Land Council, 2019)

## 2.5 Assessment of impacts

- Potential socio-economic impacts have been identified and described based on the initial scoping of potential impacts, findings of the socio-economic baseline, SEIA consultation outcomes, and discussion with DPIR and other technical specialists.

The socio-economic impacts within this report have been categorised based on the potential socio-economic impacts identified in the *Guidelines for the Preparation of an Economic and Social Impact Assessment* (Northern Territory Environmental Protection Agency, 2013). Table 2-2 provides an overview of the impact categories for this SEIA.

**Table 2-2 Socio-economic impact categories**

Impact category	Issues discussed
Impacts to Traditional Owners	Potential socio-economic benefits for and impacts to Traditional Owners as a result of the Project. Impacts on cultural values have also been assessed.
Economy and employment	Potential benefits and impacts on the local and regional economy* including opportunities for businesses, employment and training.
Amenity	Changes to the noise levels, air quality, or visual environment as a result of the project. Changes to amenity can affect people's quality of life.
Housing and accommodation	Changes to availability and affordability of housing and accommodation as a result of the project.
Community services	Changes to demand for local community services as a result of the project.
Historical community values	Impacts to community values associated with non-Aboriginal history of the site and region

\*Information on the economic contribution and an economic impact assessment were not available at the time of preparing this SEIA. This SEIA therefore presents a high level, qualitative assessment of the potential economic impacts and benefits based on information available at the time this report was prepared

Impact assessment criteria have been developed to rate the significance of socio-economic impacts, shown in Table 2-3.

**Table 2-3 Impact assessment criteria**

Criteria	Definition
Nature of impact	Positive - Impacts that result in net benefits for the community or specific stakeholder groups
	Negative - Impacts that result in detriments for the community or specific stakeholder groups
	Neutral - A change that does not result in a positive or negative impact but allows continuation of the usual function
Timing of impact	Pre-construction
	Construction – Years 1 to 7 of rehabilitation works
	Monitoring and maintenance – Years 7 to 11
Duration	Short term – one to five years

Criteria	Definition
	Medium term – five to ten years
	Long term – more than ten years
Severity	Negligible - Marginal change from the baseline conditions so no discernible effect is expected and those affected would not notice the change
	Minor – A small but measurable change from the baseline conditions. Changes are expected to be temporary or short term and/or only affect a small number of people
	Medium – Noticeable and relatively substantial change from the baseline conditions. Changes may be short or long term and/or affect a small or large number of people
	Major – Substantial change from the baseline conditions in the community and affecting a large number of people, and/or a moderate number of people over the long-term
	Severe – A change fundamentally altering the baseline conditions with irreversible and unreplaceable changes and functional recovery is expected in the long term, if at all
Sensitivity	Negligible – No vulnerability of community and ability to absorb and adapt to change
	Low – Minimal vulnerability, with a high resilience to change and capability to adapt
	Moderate – A number of vulnerabilities, with some resilience to change and ability to adapt
	High – Multiple vulnerabilities and / or little capacity to absorb or adapt to change
	Very High – Multiple vulnerabilities and very little capacity to absorb or adapt to change

To develop the impact significance rating, the various levels of sensitivity and severity are correlated in Table 2-4 . It should be noted that social impacts are subjective in nature, that is different people perceive social impacts differently, therefore when applying the significance rating, it is assigned using qualitative judgement of the SEIA specialists, based on aggregated and generalised outcomes of the impact assessment.

**Table 2-4 Assessing level of significance**

		Severity				
		Negligible	Minor	Medium	Major	Severe
Sensitivity	Negligible	Negligible	Negligible	Minor	Moderate	Moderate
	Low	Negligible	Minor	Minor	Moderate	High
	Moderate	Minor	Minor	Moderate	High	High
	High	Minor	Moderate	High	High	Severe
	Very high	Moderate	Moderate	High	Severe	Severe

Positive impacts are discussed in this SEIA but are not assigned a level of significance.

## 2.6 Impact management and mitigation

Mitigation and management strategies have been identified to address the potential socio-economic impacts and enhance the benefits of the project. These strategies have been identified based on the outcomes of the socio-economic baseline, SEIA consultation, review of other EIS technical studies, and the experience and knowledge of the SEIA project team.

The development of social impact mitigation and management measures has considered the recommended mitigation measures identified in other EIS technical studies which contribute to mitigating potential social impacts identified in this report.

An assessment of the residual impact is then made based on implementation of the recommended mitigation measures.

### 3. Socio-economic policy context

This section presents a summary of Australian Government, Northern Territory Government, and Coomalie Community Government Council strategic policies and documents relevant to this SEIA.

Table 3-1 presents relevant Australian Government documents.

**Table 3-1 Australian Government strategic documents**

Policy document	Relevance
Our North Our Future White Paper on Developing Northern Australia	<p>This paper sets the strategic direction for governments at all levels to collaborate to build a strong, prosperous economy and a safe and secure Australia. The paper identifies a need to drive down the costs of operating in the north for business; making it a more attractive place to invest and work.</p> <p>One of the key objectives of the paper relevant to this project is to “work with Indigenous communities, business and northern jurisdictions to simplify and modernise land arrangements in the north.” Within this objective, there is a commitment to invest in supporting native title bodies to realise their potential and negotiate more efficiently with business, to support secure property rights and to reduce native title costs and delays. Significantly, the Australian Government aims to have all current native title claims finalised within a decade so that native title holders can use their rights for economic development opportunities, including training and employment.</p>

There are a range of NT Government policies and plans which relate to the socio-economic development of the region surrounding the Rum Jungle mine site. These are outlined in Table 3-2 below.

**Table 3-2 NT Government strategic documents**

Policy document	Relevance
Department of Primary Industry and Resources' Strategic Plan 2018 – 2022	<p>The plan sets out key objectives and goals for DPIR. Within the plan, a number of key objectives are directly relevant to the project:</p> <ul style="list-style-type: none"> <li>• To support Aboriginal and regionally-based business to provide economic and employment opportunities. (DPIR, 2019)</li> <li>• To collaborate and strengthen relationships with stakeholders and the community.</li> </ul>
NT Government 10 Year Infrastructure Plan – 2018 update	<p>This plan outlines the priority infrastructure projects for the Northern Territory over the 10 years from 2017. A number of projects will potentially impact on the local community in which Rum Jungle is located:</p> <ul style="list-style-type: none"> <li>• Upgrades within Litchfield National Park including new experiences and the development of an accommodation resort and transport hub</li> <li>• Upgrades to Litchfield National Park roads</li> <li>• Northern Australian Rail Trail to encounter cultural and heritage sites between Adelaide River, Batchelor and Snake Creek siding</li> <li>• Rum Jungle Creek South project which involves repairing cover systems and drainage structures (being delivered by DPIR)</li> <li>• Upgrades to Batchelor Outdoor Education Centre</li> <li>• Construction of a new health centre for Batchelor</li> <li>• Batchelor Town revitalisation project</li> </ul>



Policy document	Relevance
	<ul style="list-style-type: none"> <li>• Batchelor Airport – provide serviced commercial allotments and aerodrome upgrades</li> <li>• Develop aged accommodation in Batchelor and the Litchfield municipality</li> <li>• Upgrade facilities at the Batchelor Regional Bushfire Response Centre to improve community safety.</li> </ul> <p>There is potential for some of these projects to be under construction at the same time as the Rum Jungle rehabilitation works, which could affect the availability of labour for construction works. However, all of these projects would serve to enhance the region by improving service provision, connectivity and opportunities for economic development.</p>
Our Economic Future: Northern Territory Economic Development Framework	<p>Prepared in 2017, the Northern Territory Economic Development Framework informs the Northern Territory's long-term decision making and provides policy and regulatory certainty for investors, industry and government.</p> <p>A regional snapshot identified that the Palmerston and Litchfield region is home to 24% of the Territory's resident population. The main regional industries are identified as: aquaculture, horticulture, cattle, crocodile farming, defence, liquefied natural gas and helium production. The main economic and employment drivers being retail and construction.</p> <p>The four main areas of focus for economic development in the Northern Territory are agribusiness, tourism, energy and minerals, and international education and training.</p> <p>While the Rum Jungle Project may not directly support these focus areas, it would support economic development for Batchelor and Coomalie LGA.</p>
Planning for a Vibrant Future	<p>Planning for a Vibrant Future supports the direction for development set out in the Northern Territory Economic Development Framework and 10 Year Infrastructure Strategy.</p> <p>It seeks to outline "what our cities, towns and regions must consider to ensure this future growth builds vibrant communities, protecting what Territorians love most, our lifestyle and unique character".</p> <p>The plan recognises the value and character of the Northern Territory's remote and regional areas and seeks to protect its cultural values. It outlines the following directions for regional and remote areas:</p> <ul style="list-style-type: none"> <li>• Investing in art, culture and tourism</li> <li>• Delivering \$1.1 billion to the remote housing program over ten years</li> <li>• Investing in education through new and upgraded schools</li> <li>• Improving and upgrading roads to help connect communities</li> <li>• New and improved power, water and sewerage services to communities, and</li> <li>• Investing in rental facilities, new facilities and outreach services for improved health outcomes.</li> </ul> <p>The Rum Jungle project has the potential to support these directions through the proposed road upgrades around the site.</p>
Masterplan for the Batchelor Airport	<p>The NT Government has developed a master plan for the creation of a commercial general aviation precinct at Batchelor Airport.</p> <p>The development would be in three stages, with Stage 1 involving upgrades to the airport and provision of commercial hangar facilities over a ten year horizon. Stages 2 and 3 will involve incremental expansion of facilities to</p>

Policy document	Relevance
	<p>accommodate aircraft parking, movements and an increased number of hangar sites.</p> <p>The upgrade and expansion of the Batchelor Airport would support the development and economic diversification of Batchelor and Coomalie.</p>
Aboriginal Contracting Framework (draft)	<p>The NT Government has developed a draft Aboriginal Contracting Framework (due for release soon) which is designed to support Aboriginal employment and business opportunities through government contracting, including procurement and grants.</p> <p>This plan will support prioritisation of employment opportunities for Traditional Owners through the project.</p>
NT Government Procurement Policy	<p>The Procurement Rules outline requirements for all NT Government procurement and mandate a local content weighting of a minimum of 30% in all contracts. This requirement is applied across all tiers of procurement.</p> <p>As the NT Government is the project proponent, a minimum 30% local content weighting will apply, with the ability to apply a higher percentage if desired by the department overseeing the project.</p>
NT Government Local Decision Making 10 Year Plan	<p>The NT Government has made a commitment to provide opportunities to transfer government service delivery to Aboriginal Territorians and organisations, based on their community aspirations. This offers the opportunity for government and Aboriginal communities to work together developing strategies and practices for service delivery in areas such as housing, local government, education, training and jobs, health, children and families and law and justice.</p> <p>The training and jobs focus of the plan may be relevant to the Traditional Owners of the Rum Jungle site and support opportunities for them to play an active role in decision making around the economic development potential of the Project. The Local Decision Making Plan also offers grants which may be available to Traditional Owner corporations.</p> <p>The community of Batchelor is already participating in plans being developed by the Department of Education under this model which will see a Local engagement and Decision Making Committee established in Batchelor.</p>
Town Camps Framework 2019-2024	<p>The NT Government committed \$10 million in funding to Town Camps in 2018 and has since established a Town Camp Futures Unit within the Department of Local Government, Housing and Community Development to oversee the <i>Town Camps Framework 2019-2024</i>.</p> <p>The framework is focused on implementing specific action plans over the next five years to improve housing and infrastructure, strengthen and grow the Aboriginal community housing sector, address land tenure and leasing issues, create jobs and support the local economy and work towards residents of town camps being capable, safe and thriving.</p> <p>Several Traditional Owners live at the Amangul Town Camp in the Coomalie LGA, and at the 15 Mile/Palmerston Indigenous Village.</p>
Our North, Our Future White Paper on Developing Northern Australia	<p>The Australian Government's 'Our North, Our Future White Paper on Developing Northern Australia' sets the strategic direction for governments at all levels to collaborate to build a strong, prosperous economy and a safe and secure Australia. The paper identifies a need to drive down the costs of operating in the north for business; making it a more attractive place to invest and work.</p> <p>One of the key objectives of the paper, relevant to this project is to "work with Indigenous communities, business and northern jurisdictions to simplify and modernise land arrangements in the north." Within this objective, there is a commitment to invest in supporting native title bodies to realise their potential</p>

Policy document	Relevance
	and negotiate more efficiently with business, to support secure property rights and to reduce native title costs and delays. Significantly, the Australian Government aims to have all current native title claims finalised within a decade so that native title holders can use their rights for economic development opportunities, including training and employment.

Table 3-3 provides a summary of Coomalie Community Council strategic documents related to the socio-economic development of the LGA.

**Table 3-3 Coomalie Community Government Council strategic documents**

Policy document	Relevance
Coomalie Government Community Council Strategic Plan 2019-2023	<p>This plan sets the strategic direction for the local community council over the next four years and features several key objectives that relate to the Project.</p> <p>To support Goal 2 Advocate, the plan seeks to:</p> <ul style="list-style-type: none"> <li>• Seek and promote partnerships to achieve infrastructure goals</li> </ul> <p>Under the Goal 3 Sustainability, the plan supports:</p> <ul style="list-style-type: none"> <li>• Asset and infrastructure management planning to reflect social, economic, environmental and cultural aspects of council</li> <li>• Engaging with the community in order to identify, assess and prioritise delivery in each sphere.</li> </ul> <p>Under Goal 4 Community Wellbeing, the plan seeks to:</p> <ul style="list-style-type: none"> <li>• Support and attract business and industry development in the area</li> <li>• Promote local employment options to improve individual, family and community wellbeing</li> <li>• Support and develop social and community activities and services</li> <li>• Respect culture and diversity.</li> </ul> <p>The project would support the above goals and objectives by involving the Traditional Owners, providing opportunities for local economic activity and employment, and providing opportunities for the community to be informed about a local infrastructure project.</p>
Coomalie Planning Concepts and Land Use Objectives – 2000	<p>This plan outlines the NT Government's vision for Coomalie for the next 20 – 25 years. The concepts provide the direction and stimulus for public and private developers and the Development Consent Authority. Its aim is to facilitate the development of Coomalie in a manner that preserves its rural nature, while recognising opportunities for continued development at a sustainable development.</p> <p>The plan outlines:</p> <ul style="list-style-type: none"> <li>• Existing land use patterns</li> <li>• Land tenure arrangements (including the Finnis River Aboriginal Land Trust holding in excess of 200km<sup>2</sup>)</li> <li>• Infrastructure and services.</li> </ul> <p>The plan states that Batchelor will continue to be the commercial and civic centre of Coomalie and provides high level direction for the location of intensification and development within Batchelor.</p> <p>The project will be planned and delivered in consultation with Council, and with regard to the land use objectives of the plan.</p>

### 3.1 Key findings

In considering the range of existing policies and strategies, a number of key themes have emerged including:

- Improving infrastructure and services, fostering the growth of tourism and supporting economic development emerge as strong themes in strategies at all levels of government.
- The NT Government has identified several projects to improve infrastructure in and around Batchelor, including the Airport Masterplan, a new health centre, and road upgrades. These projects are identified in the *NT Government 10 Year Infrastructure Plan – 2018 update*, however there is little commitment to funding and delivery of these projects beyond early planning and enabling works.
- Aboriginal participation and economic development are key focus areas for the NT Government, which is in line with the objectives of the project.
- Providing opportunities for local economic and social development, with a focus on social and cultural respect, emerge as key themes for Coomalie Community Council.

## 4. Socio-economic profile of the study area

This section provides an overview of the town of Batchelor and the region of Coomalie LGA. This is based on a review of relevant studies and policies, a site visit and consultations undertaken by the GHD team, analysis of 2016 and 2011 Census data, and desktop research.

### 4.1 Overview of the region

Batchelor is located approximately 100 kilometres south of Darwin, within the Coomalie Shire LGA. Batchelor is the civic and administrative centre of the Coomalie LGA and includes residential settlement and retail, commercial and community services and facilities to service its resident population and visitors. Batchelor is a small community with a large focus on tourism, due to it being the entry to Litchfield National Park.

Post European settlement, the Coomalie region developed a unique character relating to its WWII history, as well as mining and horticultural activity. In 1912 the town of Batchelor was officially named and the area grew during wartime to include expansion of the airstrip and construction of an aerodrome in 1933. This was used extensively during wartime. In 1949 uranium was discovered at Rum Jungle and mining and milling occurred on the site between 1954 and 1971.

Other local mines in the region include the Browns Oxide Mine which is located adjacent to Rum Jungle South and is currently in care and maintenance, and the now closed Woodcutters Mine which is currently being rehabilitated and located 5 kilometres east of Rum Jungle (refer to section 4.3.6). With the decline of mining activity in the Northern Territory in recent years, SEIA consultation indicate that many local stakeholders feel there is a need for diversification of the economy in Batchelor and Coomalie LGA to provide employment opportunities for local residents. This reflects the drive by government agencies to support economic development in the region, discussed in section 3.

As shown in section 4.4, the local economy is limited, with tourism being the main focus. During SEIA consultation (2019), many stakeholders mentioned several new industries that may soon start up in the region, with the hope they will bring local employment and business opportunities. These included a meatworks, a solar farm, and the upgrade of Batchelor Airport.

Outside of Traditional Owners, the level of community awareness and concern about the project has been increasing as a result of DPIR's community engagement activities. DPIR community information sessions in Batchelor in July 2019 were attended by 40 people. Refer to EIS Chapter 6 for more information about the community and stakeholder engagement process.

Community sentiment as reflected in media coverage indicates disappointment in the way the Rum Jungle site has been managed post-mining but hope that the site can be rehabilitated. (ABC News, 2016). There has been recent criticism of the NT Government's management of the project and its resourcing, which suggests the impact could be delays in rehabilitation of the site (ABC News, 2018).

### 4.2 Kungarakana People and Warai People

As mentioned in section 1.2, there are two groups associated with the project who are recognised as Traditional Owners and custodians of the Finnis River Aboriginal Land Trust: Kungarakana People and the Warai People. These groups are recognised as joint Traditional

Owners and custodians of the Finniss River Aboriginal Land Trust under the *Northern Territory Land Rights Act* (Commonwealth of Australia, 1981).

The Rum Jungle site was excluded from the Finniss River Land Claim (1981) due to matters arising from its condition. As outlined in section 5.1, the Kungarakana People and Warai People have a vision for the Rum Jungle Mine site to be rehabilitated to allow for traditional ceremony, culture and subsistence use of natural resources (NT Government, DIIS, 2018).

The Rum Jungle Mine site is known culturally as an important women's dreaming site and spiritually significant to both Traditional Owner groups.

The Kungarakana People are known as the 'paperbark people' and since 1981 have been recognised as one of the Finniss River Land claimants of a large area which extends from Berry Springs to the Batchelor township and beyond into Litchfield National Park.

The Kungarakana People value the fresh waters from the Finniss River and its multiple estuaries and pools. They value the white egret, dragonfly, paperbark trees, water and fire as key to their life and environment.

In the 1970s a descendent of the Kungarakana People, Ida Bishop, began documenting the Kungarakana language and in 2000 published a lexicon using her own phonetic alphabet and based on 30 years of research (Kungarakana Culture and Education Association, 2019).

The Warai People's traditional land extends from the Adelaide River up toward Batchelor, west towards the Finniss River and east towards Ban Ban Springs. The Warai People refer to some areas of Rum Jungle site as 'sickness country'. A modern interpretation of this might be the Warai People believing that their wellness is adversely affected by disturbances in the area and the mineralogy of the site.

### 4.3 Demographic profile

This section summarises key demographic characteristics of the local (Batchelor SSC) and regional (Coomalie LGA) study area.

The Coomalie LGA covers an area of approximately 1,500 square kilometres and includes the townships of Batchelor, Adelaide River and Lake Bennett. As shown in Table 4-1, at the 2016 Census, the Coomalie LGA had a population of 1,319 residents, while the Batchelor had a population of 507 people which accounts for 38.4% of the total population of the LGA.

Batchelor has 187 Indigenous residents, comprising 36.9% of the total Batchelor population, which compares to 24.2% for the LGA.

**Table 4-1 Summary of total resident population**

	Batchelor SSC		Coomalie LGA	
	Indigenous	Total	Indigenous	Total
Female	105	248	173	623
Male	82	259	144	693
Total	187	507	319	1,319
% Indigenous residents	36.9%			24.2%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

The geographic definition of Batchelor and Coomalie LGA areas changed from the 2011 and 2016 Census periods. As such, it is difficult to estimate the change in local and regional populations over this time. However, the Estimated Resident Population, derived annually by the Australian Bureau of Statistics, suggests that the population of the Coomalie LGA has remained relatively stable in the ten years to 2018. By extension, it is assumed that the

population of Batchelor, as the population centre of the Coomalie LGA, has remained similarly stable.

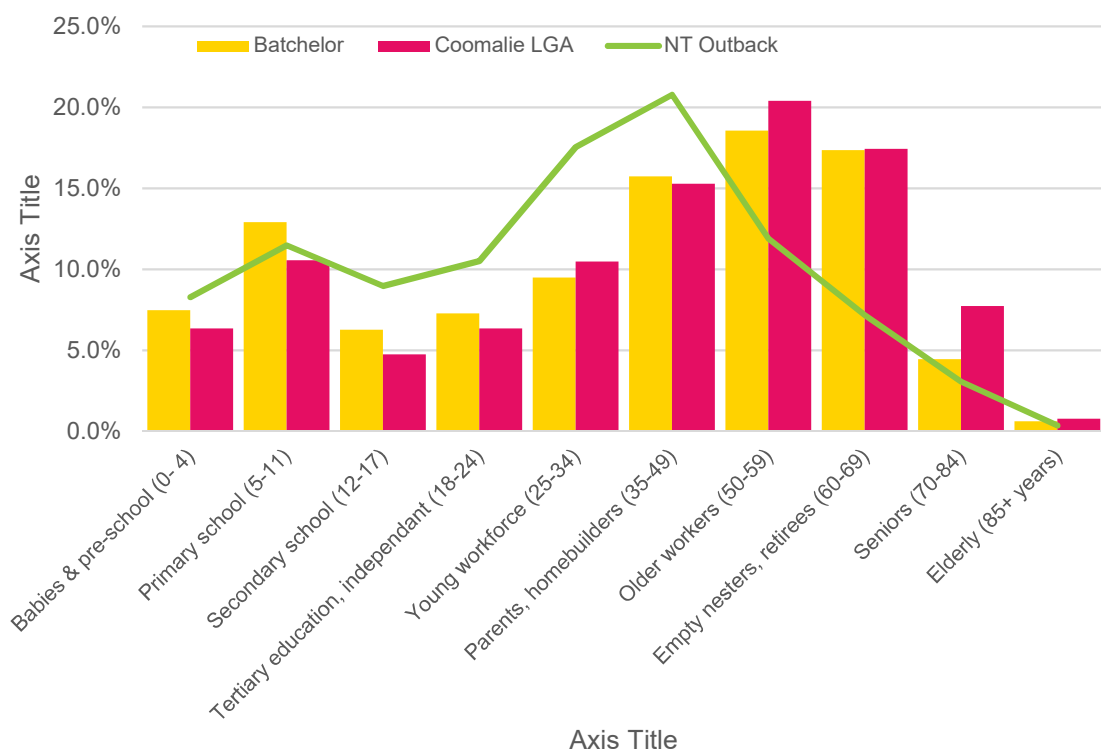
The Coomalie LGA population grew by approximately 160 people between 2008 and 2015 before experiencing a minor decline. The Estimated Resident Population declined by 16 people between 2017 and 2018.

This stable population profile is in line with the slow rate of development in Batchelor and neighbouring townships. The Coomalie Shire Annual Plan 2018-19 (Coomalie Shire Council, 2018, p 5) notes that:

*“...there has been very little development in the towns of Batchelor and Adelaide River since Native Title claims were placed over the towns in 2001. There is an occasional enquiry to develop an industry or business; however none of these have proceeded. Council continues to monitor Native Title resolution.”*

The plan also notes the LGA has an ageing population. This is reflected in a median age of 46 in 2016 compared to 41 in 2006 for the LGA. The median age of Batchelor residents however has decreased; in 2011 the median age was 44 years, and in 2016 it was 40 years. This is compared to a median age of 32 in 2016 for the Northern Territory Outback.

Figure 4-1 shows an age breakdown of the local and regional communities by service age groups, compared with average age profile of the Northern Territory Outback. Figure 4-1 shows that the largest age cohort across both the local and regional study area communities was 50 to 59 years.



**Figure 4-1 Population Age Profile (2016)**

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

#### 4.3.1 Families and households

Table 4-2 shows the breakdown of household types across the study area. The majority of households in Batchelor are family households which comprise just over half of all households (53.7%). This is followed by single or lone person households (36.2%), which is generally on par statistically with the LGA average (34.8%) given the small population sizes; however, both areas



have a higher proportion of single or lone person households than the NT Outback average (23.9%). Of the family households, the largest household type in Batchelor are couples without children (44.1%). This is followed by single parent families at 35.4%, which is higher than the proportion for the LGA (26.1%) and the NT Outback (20.9%).

**Table 4-2 Household profile**

Household and family type	Batchelor SSC		Coomalie LGA		NT Outback
Average people per household	2.3		2.2		3.2
Total family households	95	53.7%	276	59.4%	72.1%
<i>Couple family without children</i>	41	44.1%	125	45.3%	30.8%
<i>Couple family with children</i>	17	17.2%	71	25.7%	45.7%
<i>One parent family</i>	35	35.4%	72	26.1%	20.9%
<i>Other family</i>	-	-	4	1.4%	2.6%
Single (or lone) person households	64	36.2%	154	34.8%	23.9%
Group households	9	5.1%	21	4.7%	3.9%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

The most common type of family household in Batchelor is couple families without children at 44.1% (41 households) followed by one parent families (35.4% or 35 households). The dominance of couple families without children reflects the age of the population, where many households are beyond the years where their children typically are within their household (see section 4.3).

#### 4.3.2 Dwellings and mobility

Despite the trend towards smaller household sizes, as seen in Table 4-3, separate houses remain the predominant dwelling type in both Batchelor and the LGA. Medium and high density housing accounts for only 12.5% of housing stock in Batchelor, with a further 5% of dwellings categorised as 'other'. This dwelling type is typical for regional areas, as is reflected by its predominance in the NT Outback at 72.1%.

**Table 4-3 Dwelling occupancy and type**

Dwelling type	Batchelor SSC		Coomalie LGA		NT Outback
Separate house	142	80.2%	351	79.2%	72.1%
Semi-detached (row, terrace, townhouse)	7	4.0%	15	3.4%	14.6%
Flat or apartment	15	8.5%	14	3.2%	5.9%
Other dwelling	7	4.0%	48	10.8%	6.0%
Not stated	7	4.0%	19	4.3%	1.4%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

In 2016, 20.0% of private dwellings in Batchelor were unoccupied (45 dwellings), which is slightly lower than the average for the LGA at 24.6%; however, it is on par with the Northern Territory Outback at 19.0%. Several stakeholders interviewed in Batchelor during SEIA consultation felt the local housing market is currently depressed, with many houses unoccupied in the area. Stakeholders also mentioned that many private houses had been for sale for several years, with the reason for the decline in the market felt to be due to the end of the mining boom and lack of economic diversity in the area. A search of [www.realestate.com.au](http://www.realestate.com.au) on 21 July 2019 confirmed there are around 35 houses for sale in Batchelor and surrounds.

Table 4-4 shows that almost half of the dwellings in Batchelor are rented which is significantly higher than the LGA (32.7%) but lower than the NT Outback (62.0%). Homes owned outright, without a mortgage, comprise less than a quarter of all occupied dwellings in Batchelor.

**Table 4-4 Dwelling tenure**

Tenure type	Batchelor SSC		Coomalie LGA		NT Outback
Owned outright	39	22.0%	147	33.2%	12.5%
Owned with a mortgage	42	23.7%	113	25.5%	18.8%
Rented	87	49.2%	145	32.7%	62.0%
Other tenure type	-	0.0%	4	0.9%	1.6%
Tenure type not stated	7	4.0%	36	8.1%	5.1%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

Table 4-5 shows there is a high proportion of government housing in Batchelor, which make up almost half of all rented dwellings at 48.3% (42 dwellings). This is higher than the proportion for both the LGA and NT Outback (36.6% and 38.5%). This is supported by SEIA consultation, which found that there is a high proportion of social housing in Batchelor, along with several properties owned by the NT Government which are rented for staff at the primary school, health centre and police station.

**Table 4-5 Rental housing**

Rented dwellings	Batchelor SSC		Coomalie LGA		NT Outback
Real estate agent	4	4.6%	7	4.8%	15.5%
State or territory housing authority	42	48.3%	53	36.6%	38.5%
Person not in same household	24	27.6%	52	35.9%	8.6%
Housing co-operative/community/church group	-	0.0%	6	4.1%	8.5%
Other landlord type	12	13.8%	14	9.7%	24.7%
Landlord type not stated	8	9.2%	14	9.7%	4.1%
Total	87	100%	145	100%	100%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

Compared to the NT Outback, median rental payments are higher in Batchelor and Coomalie LGA. In 2016, the median for Batchelor was \$148/week and for Coomalie LGA it was \$165/week, which compares to \$91/week for the NT Outback. This reflects perceptions by some stakeholders during SEIA Consultation, who stated that rental payments are high in the area. A search of [www.realestate.com.au](http://www.realestate.com.au) on 21 July 2019 revealed there were only four properties available for rent in Batchelor, with weekly rental payments advertised between \$280 and \$390.

As shown in Table 4-6, residents of Batchelor have relatively high rates of residential mobility. At the time of the 2016 Census, just over one third (36.9%) of Batchelor SSC residents lived in the same dwelling as they had done five years previous, which is higher than for the LGA (44.2%) but lower than the NT Outback average (56.3%). Similarly, 59.8% of Batchelor residents were in the same address in the previous year, which is around the same as the LGA average (60.9%) but lower than the average for the NT Outback (73.2%). High levels of mobility are a recognised feature of rural Aboriginal Australia (Warchivker, Tjapangati, & Wakerman, 2000), which is a dominant cohort amongst all statistical areas presented here.

**Table 4-6 Household mobility**

	Batchelor SSC		Coomalie LGA		NT Outback
Residents have the same address 2015-2016	303	59.8%	795	60.9%	73.2%
Residents have the same address 2011-2016	173	36.9%	549	44.2%	56.3%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

Some Traditional Owners live at the Amangul Town Camp and the 15 Mile Indigenous Village. These are discussed below.

#### ***Amangul Town Camp***

Several Kungarakana families reside at the Amangul Town Camp, near the township of Adelaide River. The camp has around 30 residents and 9 dwellings (Department of Housing and Local Government, 2017).

#### ***15 Mile Indigenous Village***

Although not located in Coomalie LGA, several Warai families live at the 15 Mile Indigenous Village in Palmerston. The camp has around 17 houses (Department of Housing and Local Government, 2017).

### **4.3.3 Cultural, linguistic and ethnic diversity**

English proficiency across both local and regional populations is significantly higher than the Northern Territory average.

In addition to English, Kriol, Tiwi, Tagalog languages were commonly spoken by residents of both Batchelor and the Coomalie LGA. Other languages commonly spoken in Batchelor include Dyirbal and Thai.

### **4.3.4 Education levels**

Table 4-7 shows the highest level of schooling attained by residents of Batchelor and Coomalie LGA. It shows that almost half of Batchelor residents (59.6%) have completed year 10 equivalent or above, which is consistent with the LGA (60.5%) and NT Outback (61.9%). However, around 25% of respondents in the study area did not state their level of schooling, which is slightly above that of the NT Outback. Consequently, the data should not be relied upon; given the low levels of current school attendance (see discussion below), there is potential the non-response rates may reflect lower levels of educational achievement.

**Table 4-7 Highest level of schooling achieved**

Level of schooling	Batchelor SSC		Coomalie LGA		NT Outback
Year 12 or equivalent	104	27.1%	279	26.4%	32.6%
Year 11 or equivalent	44	11.5%	119	11.3%	11.1%
Year 10 or equivalent	81	21.1%	241	22.8%	18.2%
Year 9 or equivalent	31	8.1%	74	7.0%	7.2%
Year 8 or below	27	7.0%	66	6.3%	10.3%
Did not go to school	0	0.0%	4	0.4%	2.3%
Not stated	95	24.7%	267	25.3%	18.2%

Level of schooling	Batchelor SSC		Coomalie LGA		NT Outback
Total	384	100.0%	1,056	100.0%	100.0%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

The *Rum Jungle Socio-Economic Baseline* (Nation Partners, 2015) found that:

*“Only one in five children are reportedly attending school more than 80% of the time in the NT’s very remote areas, of which most of the state and all the communities local to the Rum Jungle Rehabilitation Project are encompassed by. Average Aboriginal attendance rates in schools across very remote NT are reported at only 58%, as compared with almost 83% in urban areas”*

SEIA consultation indicate that Batchelor Area School has an attendance rate of around 80%. Refer to section 4.5.4 for more information about the educational institutions located in Batchelor.

### 4.3.5 Socio-economic disadvantage

Socio-economic advantage and disadvantage are defined broadly by the Index of Relative Socio-Economic Disadvantage (IRSD) in terms of people’s access to material and social resources and their ability to participate in society (Australian Bureau of Statistics, 2018b). In order to capture this broad definition, the IRSD includes a range of data points, including income, education, employment, occupation, and housing. The IRSD divides a population into ten equal groups. The lowest scoring 10 per cent of these groups are given a decile number of 1, which indicates the highest level of disadvantage, and the highest scoring 10 per cent of areas are given a decile of 10, which indicates the lowest level of disadvantage.

The Coomalie LGA is ranked in the seventh percentile for relative disadvantage. This suggests that residents experience a higher level of socio-economic disadvantage. It is important to note that low population densities and small populations, such as those found in rural communities, often present as higher rates of disadvantage using this index (Australian Bureau of Statistics, 2016). However, it was noted by several stakeholders during SEIA consultation that Batchelor and Coomalie more broadly, have relatively high rates of socio-economic disadvantage.

### 4.3.6 Health and wellbeing

SEIA consultation with Batchelor Community Health Centre indicated that due to the ageing population of the area, the clinic’s focus is primarily on managing chronic disease and disease prevention in relation to diabetes, renal and cardiac health. Older residents with serious health issues who require hospital care are often evacuated from Batchelor to Royal Darwin Hospital by Care Flight helicopters.

Table 4-8 shows that Indigenous life expectancy continues to lag behind that of non-Indigenous Australians. At a national level between 2015 and 2017, life expectancy at birth for Indigenous males in Northern Territory was estimated to be 66.6 years, 11.5 years less than life expectancy at birth for non-Indigenous males (80.2 years). Life expectancy at birth for Indigenous females in Northern Territory was estimated to be 69.9 years, which is 12.8 years less than life expectancy at birth for non-Indigenous females (83.5 years).

**Table 4-8 Life expectancy by Aboriginal status 2015-2017**

	Aboriginal and Torres Strait Islander	Non-Indigenous	Difference
Northern Territory females	69.9 years	82.7 years	12.8 years
Northern Territory males	66.6 years	78.1 years	11.5 years

	Aboriginal and Torres Strait Islander	Non-Indigenous	Difference
Australian females	74.4 years	83.5 years	9 years
Australian males	70 years	80.2 years	10.3 years

Source: Australian Bureau of Statistics 3302.0.55.003 - Life Tables for Aboriginal and Torres Strait Islander Australians, 2015-2017

Since the last estimates of Aboriginal and Torres Strait Islander life expectancy were produced based on the 2011 Census, life expectancy for Aboriginal and Torres Strait Islander males and females across Australia increased by 2.5 years and 1.9 years respectively, narrowing the gap to non-Indigenous life expectancy 2.0 years for males and 1.7 years for females over the same period.

The *Rum Jungle Socio-Economic Baseline Report* (Nation Partners, 2015) focuses on Aboriginal health issues. It notes the complex notion of Aboriginal health and its relation to the interaction of body, land and spirit. It cites the *Healthy Country, Healthy People Project* (Burgess et al, 2005) and its findings regarding the correlation between participation in caring for country activities and better health outcomes in Aboriginal communities. In promoting the wellbeing benefits of investment in caring for country initiatives, the report notes that:

*“Caring for country activities can facilitate opportunities for regular physical activity, dietary improvements, economic independence and improved self-esteem. Study participants engaging in Indigenous Cultural and Natural Resource Management activities demonstrated lower rates of obesity, diabetes, renal disease, cardio-vascular disease, and psychological stress particularly when living in their traditional country.”*

The complex context of Aboriginal health is also a consideration in the concept of physical activity and nutrition. Physical activity is considered part of one’s lifestyle rather than a stand-alone pursuit. As such, most activity comprised walking and being on country.

Access to fresh food and transport options has an impact on the supply and cost of fresh produce, having a flow-on impact on nutrition of local communities. The *Rum Jungle Socio-Economic Baseline Report* (Nation Partners, 2015) notes that the national Aboriginal health gap is, in part, attributable to dietary related causes resulting from low fruit and vegetable intake.

#### **4.3.7 Community safety**

SEIA consultation indicate that local antisocial behaviour and crime can be associated with the lack of activities and employment opportunities for young people. Consultation also indicated that one of the biggest safety concerns is the area is associated with vehicle accidents, particularly for tourists driving through the area.

The *Rum Jungle Socio-Economic Baseline Report* (Nation Partners, 2015) also identifies alcohol as a significant community issue in communities across the broader region.

### **4.4 Economy and employment**

SEIA consultation indicated the local community overall is keen to see the local economy of Batchelor grow, and an increase in local economic and employment opportunities. This is reflected in the various Coomalie Community Government Council strategic documents.

The *Coomalie Community Government Council Annual Report 2017/2018* (Coomalie Community Government Council, 2017) notes that the economy of the region has moved away from heavy reliance on the pastoral and mining sectors, and is diversifying to include education, tourism, aviation and horticulture as major sectors of the local economy.

An overview of key industries in the region as noted in the *Coomalie Community Government Council Annual Shire Plan 2018-2019* is provided in the sections below.

## Tourism

Tourism is a key focus of the NT Government for providing economic opportunities. Batchelor is the primary entry point to Litchfield National Park, which is a significant attraction for visitors to the Northern Territory.

Litchfield National Park is a popular destination for Darwin residents and visitors who may visit for day trips to the waterholes or overnight/extended camping. Overnight visitors to the park are likely to stay at accommodation near or in Batchelor, unless they choose to camp within the National Park itself (which has limited availability).

Litchfield National Park is supported by accommodation, hospitality and retail services in Batchelor as well as some local attractions and spaces such as the Coomalie Arts Centre (refer to section 4.5.1) and Centennial Park.

A recent NT Government media release announced a second round of funding, as part of the Turbocharging Tourism package, valued at \$62.8 million which is largely focused on boosting infrastructure in key locations to attract additional visitors (NT Government, 2019). Such investments may also provide flow on benefits to local communities and Traditional Owner groups in the region. However, SEIA consultation indicated that funding is limited to projects within the boundary of Litchfield Park.

Other regional visitor attractions identified in the Coomalie Annual Shire Plan 2018-2019 are the Adelaide River War Cemetery, Adelaide River Railway Precinct, Lake Bennett, Batchelor Butterfly Farm and Coomalie Arts Centre.

In all, as shown in Table 4-9, Coomalie LGA attracted 281,000 visitors in 2017 including 12,000 international visitors. On average, visitors stayed two to three nights in the area. Given its position at the gateway to Litchfield National Park, it is likely that a large proportion of these visitors pass through and spend some time in Batchelor.

**Table 4-9 Key tourism metrics for Coomalie LGA 2017**

	International	Domestic overnight	Domestic day	Total
Visitors ('000)	12	59	209	281
Nights ('000)	28	180	-	208
Average stay (nights)	2	3	-	3
Spend (\$m)	6	16	16	39
Average spend per trip (\$)	508	269	78	137
Average spend per night (\$)	223	89	-	107
Average spend (commercial accommodation) per night (\$)	313	96	-	122

Source: Tourism Research Australia, Local Government Area Profiles Coomalie LGA

The Coomalie Annual Shire Plan 2018-2019 also notes that:

*“The tourism potential of the Coomalie region is largely undeveloped. The area has an extensive and diverse history. Batchelor is a major tourism opportunity and is on the main road leading into Litchfield National Park. There is a range of accommodation facilities along this*



*road within the shire. These generally cater for the caravanning market with some other specialist accommodation available.” (Coomalie Shire Council 2018, p.5)*

As discussed in section 3, the tourism potential of Batchelor and surrounds is supported by the *NT Government 10 Year Infrastructure Plan* which identifies the following opportunities to support tourism development in the region:

- Develop a Rail Trail from Batchelor to Adelaide River (culture and heritage sites)
- Develop a train journey from Adelaide River Rail Station to Snake Creek siding (culture and heritage sites)
- Promote war, mining and development history of Adelaide River and Batchelor.

SEIA consultation confirmed that tourism is a key focus for local businesses and stakeholders.

### **Mining**

The Coomalie region has a long association with mining, particularly due to the Rum Jungle mine which operated from 1954 to 1971 (section 1.3.2). This was followed by the Woodcutters Mine which operated between 1985 and 1998, and the Browns Oxide mine which operated for a short period in 2008 before going into care and maintenance (Coomalie Community Government Council, 2018b).

The Council's Annual Shire Plan 2018-2019 notes that the Coomalie region is 'subject to boom and bust cycles', particularly due to the 'boom and bust' nature of the mining sector (Coomalie Community Government Council, 2018b).

### **Education**

Education is noted in the *Coomalie Community Government Council Annual Shire Plan 2018-2019* as the most stable industry in the region. This is primarily due to Batchelor Indigenous Institute of Tertiary Education (BIITE) and two primary schools being located in the region (refer to section 4.5.4). Between the three facilities, around 250 staff are employed across the three facilities (Coomalie Community Government Council, 2018b). However, it is understood from SEIA consultation that most BIITE staff are not residents of Coomalie LGA, and BIITE provides a daily bus services for its staff from Palmerston and Darwin.

### **Agriculture**

Agriculture in the region includes cattle, hay making, mangoes, vegetables and horticulture (including a certified organic farm). In the past, the biggest share of this sector has come from livestock slaughterings from the previous meatworks that operated in Batchelor. (Regional Development Australia, 2015-16 Economic Profile). This facility has now closed but is being prepared to re-open in 2019.

### **Aviation**

As mentioned in section 3, the NT Government has released a master plan to create an aviation precinct at Batchelor Airport. The master plan has three stages, with the first stage estimated to be delivered over a ten year timeframe, with a thirty year timeframe for completion. SEIA consultation indicates that the master plan is a concept plan intended to test the level of interest from the market. Overall, the three stages of the master plan would support around 20 to 30 jobs in Batchelor (SEIA consultation).

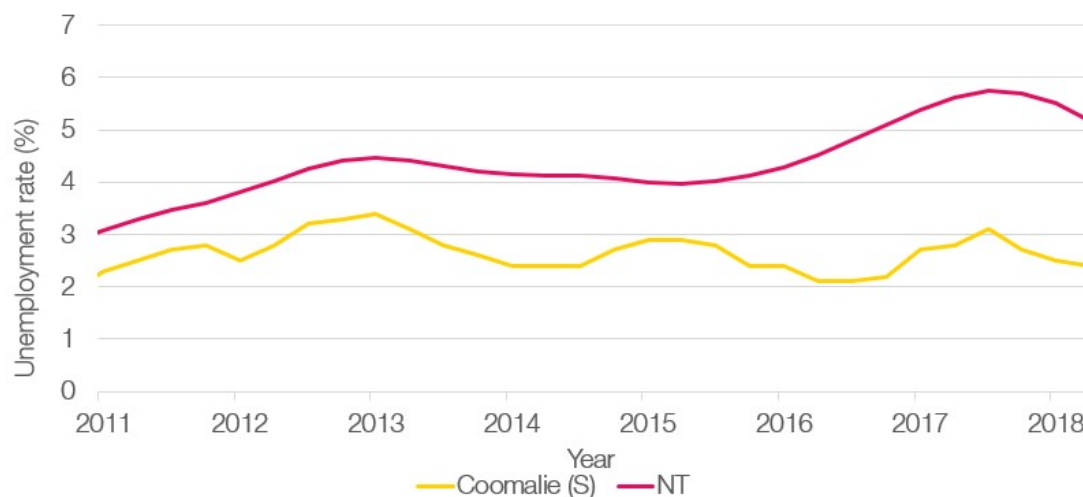
#### **4.4.1 Labour force and employment opportunity**

Figure 4-2 shows the smoothed unemployment rate for the Coomalie LGA and the Northern Territory since 2011. Data is not available for Batchelor SSC and NT Outback.



As shown in Figure 4-2, the Coomalie unemployment rate is consistently below that of the Northern Territory. However, the low level of unemployment in the Coomalie LGA should be contextualised by the lower level of participation of 47.1% compared to 61.5% in the Northern Territory. Put simply, the low level of unemployment reflects that there is a lower proportion of people aged over 15 years who are seeking work or working.

**Figure 4-2 Unemployment rate**



Source: Small area labour markets publication (Department of Jobs and Small Business, 2019).; 6202.0 - Labour Force, Australia, Jul 2019 (ABS, 2019)

Table 4-10 details a number of key employment indicators for the study area. The labour force participation rate in Batchelor SSC (49.5%) and Coomalie LGA (47.1%) are generally in line with that of the NT Outback (51.5%) – with the slight differences in numbers not statistically significant given the small size of populations. As discussed above, the labour force participation in this area is around 10% lower than of the Northern Territory overall.

The number of jobs per worker ratio is understood to represent labour market opportunities, and is particularly significant for rural areas where there are often not enough jobs per worker. Based on the jobs to workers ratio in Coomalie LGA, there is slightly more than one job available per worker. As with the unemployment ratio, this would in part reflect the lower labour force participation rate.

The proportion of workforce within the private sector incorporates those employed within industries that are not typically dominated by public sector employment, which tends to indicate the wider potential for employment beyond service delivery. As with the jobs per worker ratio, this indicator is significant for rural areas, where there may not be sufficient industry to generate employment beyond government funded roles. Reflectively, the proportion of persons employed in private industry at the 2016 Census in Batchelor was 57%, which was lower than the Coomalie LGA (72%), NT Outback (69%) and the NT (71%), all of which were generally on par. This indicates that Batchelor has a lower level of industry generated employment.

**Table 4-10 Key employment data**

Indicator	Batchelor SSC	Coomalie LGA	NT Outback	NT
Labour force participation(a)	49.6%	47.1%	51.5%	61.5%
Jobs to workers ratio	NA	1.01	NA	1.03
Proportion of workforce within the private sector	57.2%	72.6%	69.2%	71.4%

(a) The number of persons in the labour force expressed as a percentage of persons aged 15 years and over.

Source: Regional Development Australia Northern Territory Economic Profile (.id The Population Experts, 2019) and Australian Bureau of Statistics 2016 Census of Population and Housing.

#### 4.4.2 Employable skills and education

In September 2015, ECB Training Services consulted with local Traditional Owner groups as part of a skills audit to outline preparedness for, and skills development needs, relating to possible future mine rehabilitation and environmental management activities. The Skills Matrix establishes the current skills and qualifications of Kungarakana and Warai individuals and training and development needs and priorities according to their career aspirations. The investigation identified:

*“An impressive amount of educated, qualified and skilled Traditional Owners with a very wide range of skills. A number of individuals show trade qualifications and university degrees. On the other hand, the matrix also highlights a number of inexperienced and unqualified individuals; another small group have minimal formal qualifications but some work history”*

The matrix identified a number of self-motivated individuals developing skills through further study including those enrolled in Batchelor Institute of Indigenous Tertiary Education. Furthermore, it identified 140 candidates deemed to be work ready for rehabilitation works at the Rum Jungle Mine site including those with qualifications and experience in civil earthmoving and environmental management.

#### 4.4.3 Industry of employment

Table 4-11 shows the distribution of employment by industry category. The cells shaded green indicate the top industries of employment for each of the areas investigated. The top industries of employment are largely consistent for both Batchelor and Coomalie LGA. For Batchelor, these are education and training (35.7%), accommodation and food services (8.9%), healthcare and social assistance (9.5%), and public administration and safety (8.9%), and construction (5.4%).

The Coomalie Annual Shire Plan 2018-2019 notes that the largest industry employers within the LGA are BIITE, the Batchelor Area School and the Adelaide River Primary School.

**Table 4-11 Industry of employment**

	Batchelor SSC		Coomalie LGA		NT Outback
Agriculture, Forestry and Fishing	3	1.8%	30	6.6%	4.1%
Mining	5	3.0%	24	5.3%	3.3%
Manufacturing	0	0.0%	8	1.8%	1.3%
Electricity, Gas, Water, Waste Services	0	0.0%	4	0.9%	1.1%
Construction	9	5.4%	35	7.7%	5.7%
Wholesale Trade	3	1.8%	3	0.7%	1.0%
Retail Trade	6	3.6%	16	3.5%	7.0%
Accommodation and Food Services	15	8.9%	49	10.7%	7.1%
Transport, Postal and Warehousing	7	4.2%	23	5.0%	3.5%
Information Media, Telecommunications	3	1.8%	7	1.5%	0.8%
Financial and Insurance Services	0	0.0%	0	0.0%	0.6%
Rental, Hiring and Real Estate Services	3	1.8%	4	0.9%	1.0%
Professional, Scientific, Technical Services	3	1.8%	11	2.4%	3.3%
Administrative and Support Services	4	2.4%	15	3.3%	3.0%
Public Administration and Safety	15	8.9%	36	7.9%	17.2%
Education and Training	60	35.7%	105	23.0%	12.3%
Health Care and Social Assistance	16	9.5%	28	6.1%	14.9%
Arts and Recreation Services	7	4.2%	8	1.8%	2.2%
Other Services	0	0.0%	13	2.9%	5.8%
Inadequately described, not stated, n/a	9	5.4%	37	8.1%	4.8%
Total	509	100.0%	1,318	100.0%	100.0%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

#### 4.4.4 Income

Table 4-12 shows that the median personal income for working age residents of Batchelor is \$606 per week. The median weekly household income is slightly less than double the personal median at \$1,125.

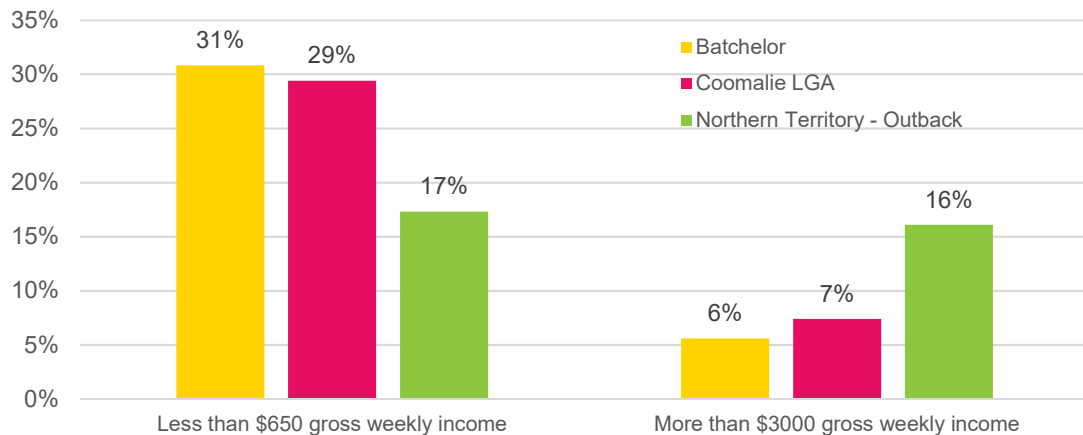
**Table 4-12 Median weekly income**

Median weekly incomes (People aged 15 years and over)	Batchelor SSC	Coomalie LGA	Northern Territory - Outback
Personal	\$606	\$610	\$525
Family	\$1,375	\$1,327	\$1,352
Household	\$1,125	\$1,128	\$1,561

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

Figure 4-3 provides a snapshot of the proportion of low income households (less than \$650 gross weekly income) and high income households (more than \$3000 gross weekly income). It

shows that almost one third of households in Batchelor (31%) and Coomalie LGA (29%) are considered low income, which is higher than the NT Outback (17%). Overall, this indicates that there is a higher level of poverty in Batchelor SSC and Coomalie LGA.



Source: Australian Bureau of Statistics 2016 Census of Population and Housing

**Figure 4-3 Low income and high income households**

#### 4.4.5 Local businesses

Batchelor provides retail and services for local residents and visitors to Litchfield National Park. As such, food, accommodation, tourism and retail services are represented amongst local businesses and the local community is well serviced to meet day-to-day needs. The Rum Jungle Socio-Economic Baseline (Nation Partners, 2015) identified 41 businesses located in Batchelor in 2015. The list of businesses is provided in Appendix A.

Appendix A demonstrates the value of tourism to Batchelor as an important employer, with a high number of accommodation and food service businesses located in the area. This is supported by Tourism Research Australia's 2017 Local Government Area Profile for Coomalie LGA which identified 26 tourism businesses in the region. Although 12 of these businesses were listed as 'non-employing'. The remaining 13 listed businesses employed between 1 and 19 people.

Appendix A also shows that there are a range of sectors represented in Batchelor, including construction, maintenance, transport and manufacturing. Local businesses and regional education, health and civic services are also major employers for the local community.

However, given its relative close proximity to Darwin, it is likely that communities may access specialised or higher order services from the metropolitan centre.

### 4.5 Community infrastructure

Batchelor is the administrative centre of Coomalie LGA. The Coomalie Community Government Council offices are located in Batchelor, along with a variety of local services and facilities. The following provides a discussion of the services and facilities available locally within Batchelor and immediate surrounds, and services that are relevant to the project.

#### 4.5.1 Community and recreation

Key community facilities include the Coomalie Arts Centre and Batchelor Community Library, both provided by BIITE (see section 4.5.4), a public swimming pool, and a football oval. Batchelor Museum is also a key community and tourism facility which focuses on interpreting the town and region's strong historical association with mining and World War II (Batchelor

Museum Development Association, 2019). SEIA consultation indicated that several community facilities provided by Council are run down and dated as Council struggles to fund ongoing maintenance due to the small rate base.

The area provides opportunities for a range of recreational activities such as fishing, bird watching, bushwalking, swimming, camping, horse riding and four wheel driving. Parks and Wildlife have a Ranger Station located in Batchelor.

The Batchelor Outdoor Education Centre is used extensively by schools across the region, as well as schools in the Darwin and Katherine regions. The centre is also available for hire by business and community groups for conferences. Activities provided by the centre include high and low rope courses, rock climbing, flying fox, canoeing, orienteering, archery, bird watching, snorkelling and cycling (Batchelor Outdoor Education Centre, 2017). It is understood from SEIA consultation that the centre uses Rum Jungle Lake for recreational activities such as canoeing and diving.

Active recreation is supported through facilities such as tennis courts, bowling greens, Batchelor football oval and the swimming pool. Coomalie Shire has identified actions in the *Coomalie Shire Annual Plan 2018-19* to upgrade a number of key facilities including the Batchelor Oval and the swimming pool, and to investigate opportunities for new facilities and infrastructure including a regional rail trail. The rail trail has also been identified in the *NT Government 10 Year Infrastructure Plan – 2018 update* (refer to section 3).

#### **4.5.2 Health services**

Batchelor Community Health Centre is the primary health facility for residents of the local area, and also responds to medical emergencies for non-residents. The regional health network also includes the Adelaide River Community Health Centre and Red Cross Home Care.

The Batchelor Community Health Centre has several doctors and nurses, however there is no after-hours doctor, and a nurse covers any after-hours issues, referring to a District Medical Officer for advice and high level decisions (SEIA consultation).

The closest major hospital (Palmerston Regional Hospital) is approximately half an hour's drive from Batchelor. If an incident was of a serious nature, patients may be referred on to the Royal Darwin Hospital which is approximately one hour's drive from Batchelor.

As mentioned in section 3, a new aged care facility has been identified for Batchelor in both the *NT Government 10 Year Infrastructure Plan – 2018 update* and the *Coomalie Shire Strategic Plan 2014-19*.

The NT Government has also identified a new health centre for Adelaide River which could be provided in the next five years (NT Government, Department of Infrastructure, Planning and Logistics, 2017).

#### **4.5.3 Emergency services**

Batchelor has a local police station to service the local community. Another station is located in Adelaide River.

There is a Volunteer Fire Brigade stationed in Batchelor which responds to emergencies within the town boundary. Bushfires NT also has an office based in Batchelor and manages any fires outside of the town boundary. A new Bushfires NT Headquarters was announced in 2018 which will be located in the rural area of Greater Darwin and will replace the Batchelor office (McLennan, C. 2018).

The Batchelor Community Health Centre responds to medical emergencies for both residents and non-residents. Any medical emergencies that occur within Litchfield National Park are

reported to the District Medical Officer and Careflight assist with evacuations as needed (SEIA consultation).

#### **4.5.4 Education**

##### ***Schools***

The following primary and secondary educational facilities are located in the local area:

- Batchelor Area School – located in Batchelor and providing preschool to year 12 public education. At the time of SEIA consultation there were 125 students enrolled, with an approximate 80% attendance rate. Students who attend the school live across the region, with around 40% travelling to school via school bus services from locations such as Acacia Hills, Lake Bennett, Adelaide River and Amangul (SEIA consultation). The school offers some school-based apprenticeships in partnership with the Batchelor Institute.
- Woolaning Homeland Christian College – located near Litchfield National Park, provides secondary school education to 60 Indigenous students who live on campus (EducationHQ, nd).

There is also a primary school located at Adelaide River.

##### ***Tertiary education***

BIITE is an Aboriginal and Torres Strait Islander tertiary education provider. The institute also provides vocational education training. The tertiary courses are across education, health, Indigenous language and knowledge and policy areas and include Associate Degrees, Diplomas and Bachelor courses.

In the vocational education and training (VET sector) BIITE offers certificate courses across:

- Business
- Community Services
- Construction
- Conservation, land management and horticulture
- Early childhood education and care
- Education
- Family wellbeing
- Health (Aboriginal and Torres Strait Islander Primary Health Care)
- Literacy, numeracy and foundation skills
- Media
- Resources and infrastructure
- Visual arts.

As mentioned in section 4.4, BIITE is a significant facility in the region and the largest employer. According to SEIA consultation, BIITE employs around 150 staff.

Annual enrolments range from 1500 to 2500 students at the Batchelor Campus, with another 50 based at the institute's Casuarina or Alice Springs campuses. The majority of enrolments come from within the Northern Territory however, only around 12 students per year are local to Batchelor (SEIA consultation).

Enrolled students study remotely for part of each semester and travel in for 1-2 week intensive study sessions based at the BIITE campus. The BIITE campus has accommodation for students, with SEIA consultation indicating there are 130 rooms on site, and an onsite kitchen and dining room that is open seven days a week. Based on consultation, there are up to 100 students accommodated onsite each year

#### **4.5.5 Employment and training**

There are several key employment and training organisations operating in the Coomalie region which focus on employment and training opportunities for Indigenous people. These include Ironbark Aboriginal Corporation, and BIITE.

Ironbark Aboriginal Corporation is a community development provider for urban, regional and remote communities from Darwin to the Daly River region. SEIA consultation indicated that Ironbark Aboriginal Corporation plays a key role in connecting Indigenous residents of the region with employment and training opportunities.

The organisation has a number of key objectives which are particularly relevant to the project including:

- Provide and promote education, training, employment and business creation opportunities
- Advise and educate Aboriginal people in the region in relation to support services available and facilitate advocacy on their behalf.

In addition to providing tertiary education, BIITE is also a Registered Training Organisation (RTO) and delivers certificate courses across a range of curriculum as discussed in section 4.5.4 above. BIITE is registered with Supply Nation as over 50% Indigenous-owned and has previously delivered training on behalf of the Australian Government.

### **4.6 Community participation**

The *Coomalie Annual Shire Plan 2018-2019* identifies a range of active community groups in Batchelor. These groups encourage social interaction, participation and community cohesion.

Local emergency services such as the Batchelor and Adelaide River Fire Emergency Response Groups, and St John's Ambulance provide a platform for community involvement, as do the Friends of Northern Australia Railway Adelaide River Show Society, Council of the Ageing, and Batchelor Museum and Development Association.

SEIA consultation indicated many of these community groups rely on the drive and interest of individual community members to be active, and therefore are inconsistent in their services and activities. Consultation also indicated the majority of volunteers are aged over 50 years with limited involvement from younger community members to take on the roles longer term, which limits participation and the programs that can be offered in the community.

### **4.7 Access and connectivity**

Road transport and walking are the primary modes of transport in Batchelor. Key transport services operating in the region include:

- Daily buses travelling between Palmerston and Darwin to transport workers to and from BIITE
- School buses
- A local tour bus/shuttle service that operates primarily within the region
- Tourist buses departing from Darwin daily in the dry season to Litchfield National Park.



As discussed in section 4.4, there is a significant investment in roads within Litchfield National Park to facilitate access to natural features and attractions within the park however, the investment and upgrades are limited to within the park boundary.

As shown in Table 4-13, residents of Batchelor tend to travel shorter distances to get to work with 45.2% working within 2.5 kilometres of home. This would suggest that a higher proportion of Batchelor residents are employed by local businesses and facilities, or work from home. The increase in residents who travel 50 to 250 kilometres to work may be attributable to commuters travelling to locations such as Darwin or Palmerston for work.

**Table 4-13 Distance travelled to work**

	Batchelor SSC		Coomalie LGA		NT Outback
Nil distance	13	7.3%	56	12.9%	19.5%
Less than 2.5 km	80	45.2%	105	24.2%	22.9%
2.5 km to 10 km	16	9.0%	30	6.9%	31.7%
10 km to 30 km	9	5.1%	61	14.1%	9.8%
30 km to 50 km	14	7.9%	62	14.3%	1.6%
50 km to 250 km	26	14.7%	79	18.2%	7.6%
250+ km	19	10.7%	41	9.4%	6.9%
Total	177	100.0%	434	100.0%	100.0%

Source: Australian Bureau of Statistics 2016 Census of Population and Housing

A skills audit of Traditional Owner groups undertaken in 2015 by ECB Training Services found that despite more than half of individuals in the local and regional labour force having a driver's licence, the lack of transport options and car ownership was an issue for those consulted.

The Batchelor aerodrome became an important base for the transport of allied forces troops and supplies during the Second World War (Batchelor Museum Development Association Inc., 2011). Today, the aerodrome is primarily used for recreational uses such as sky diving, and does not play a significant role in the region's connectivity. However, as discussed in section 3, the Batchelor Airport Masterplan aims to increase use and function of the airstrip over the next 30 years, which will improve connectivity and access in the future.

## 4.8 Key findings

Drawing on the data and information available, it is considered that the local and regional populations of Batchelor and Coomalie display some indicators of vulnerability which are broadly consistent with other regional and remote communities across Northern Territory.

The Warai People and Kungarakana People share a vision for the rehabilitation of the Rum Jungle Mine site as culturally significant country.

A skills audit undertaken in consultation with local Traditional Owner groups in 2015 (ECB Training Services, 2015) indicates there is a substantial workforce of skilled, motivated and work-ready residents, including many with skills applicable to the rehabilitation works. However access to transport and driver's licences were identified as constraints for the local workforce.

The review of local and NT Government strategies and plans identifies tourism as a key driver for economic development opportunities in Batchelor and the region, as well as for providing a platform to leverage community and cultural development for Traditional Owner groups.

The location of Batchelor at the gateway to Litchfield National Park makes it a regional hub for tourism, accommodation and retail services which provide employment and access to day-to-day services and facilities to support the local communities. In addition to these services, the



local business network provides a range of services across construction, transport, and maintenance.

Overall, the local community of Batchelor is characterised by smaller and more fluid household arrangements suggesting a relatively transient population, which is also reflective of the nature of Aboriginal family structures. The increasing median age of residents over time, along with SEIA consultation also indicates that the region's population is ageing.

A number of educational institutions are located in Batchelor, including the Batchelor Area School and the regionally significant BIITE. In addition to providing local opportunities for tertiary and vocational education opportunities, these facilities provide significant employment opportunities in the education and training industry sector.

## 5. Impact assessment

This section presents a description and assessment of the potential socio-economic impacts that may result from the project. Potential impacts on Traditional Owners, the local and regional economy and employment, amenity, housing and accommodation, access and connectivity and safety, and community services have been assessed according to the methodology described in section 2.5. A summary of the impact assessment is presented at the end of each section.

### 5.1 Impacts on Traditional Owners

As discussed in section 1.3.3 the Warai People and Kungarakan People are the joint Traditional Owners of the Rum Jungle site. They have a shared vision for the site which focuses on preserving Aboriginal cultural heritage, returning the site as close to its natural state as possible, and maximising employment and business opportunities through the rehabilitation works. This section discusses the potential benefits and impacts on Traditional Owners as a result of the project, with a summary of the socio-economic impact assessment presented in Table 5-1. Business opportunities

Section 1.4.3 outlines that the project implementation strategy will prioritise procurement and employment opportunities as far as possible for Traditional Owners to achieve their vision. As discussed in section 4.2 Kungarakan People and Warai People live in various locations throughout the region including in Batchelor, Adelaide River, and Amangul Town Camp, as well as locations such as Palmerston Indigenous Village at 15 Mile and Darwin, and even further afield. It is also understood from SEIA consultation that the Traditional Owners are diverse in terms of individual circumstances, employment and education levels. This means there is diversity across the Traditional Owners in terms of skills, capacity and readiness to take advantage of the business and employment opportunities the project would bring.

As mentioned in section 2.3.2, DPIR have been consulting with Traditional Owners through the EIS and planning phase of the project, including to gain an understanding of their readiness to take advantage of future business and employment opportunities on the project. SEIA consultation indicated that there are some Kungarakan and Warai People within the community who already hold appropriate certificate qualifications and experience required for the project in fields such as earthworks operations, horticulture and land management. SEIA consultation indicated that there are several Traditional Owner families interested in establishing businesses which would be responsible for land management inputs.

The full extent of businesses owned by Traditional Owners that would suit the nature of the project works is not yet fully known. However, it is understood from SEIA consultation that in order to take advantage of the businesses opportunities potentially arising from the project, several families are currently working with support organisations to establish corporations in readiness for the project. Businesses that are expected to benefit directly from the increased demand for goods and services to supply the project may include earthmoving, construction, drilling, automotive and mechanical, and land management businesses.

Should Traditional Owner businesses become engaged on the project directly or through joint ventures, this would result in increased revenue for these businesses. It is expected the families and communities associated with the owners and employees of these businesses would directly benefit from this income.

#### Employment

As discussed in section 1.4.6, the project will provide around 48 direct job opportunities in the first six years of construction, reducing after that as construction is progressively completed.

Construction will require a range of skilled workers such as managers, professionals, supervisors, tradespeople, and operators / technicians. It is understood that the majority of roles identified in section 1.4.6 will require some level of formal qualification and training.

There is also potential for indirect job opportunities to be generated by the project if businesses need to increase their staffing numbers to meet increased demand from the project.

Based on the *Kungarakan and Warai Skills Matrix Report* (ECB Training, 2015) described in section 4.4.2, there were 140 individuals who were 'work ready' in 2015 and were in a position to undertake works involving civil earthmoving and environmental management. This suggests there will likely be enough individuals with the relevant qualifications and skills to fill many of the direct jobs on the project, as well as skilled indirect jobs through the businesses contracted to the project. However, it is also understood from SEIA consultation that some Traditional Owners will require upskilling or further training to be qualified for the project roles. It is also understood from SEIA consultation that several Traditional Owners were in the process of gaining qualifications in land management in preparation for the project, and for other projects in the region.

It is also expected that some indirect employment opportunities (e.g. food and beverage, accommodation, retail) will be unskilled roles which may also become available. It is understood from SEIA consultation that there will be Traditional Owners ready and available to meet the demand for unskilled labour.

The project employment opportunities would lead to increased personal and household income, which would directly benefit Traditional Owners employed on the project. For those communities with high levels of unemployment and socio-economic disadvantage, this is expected to be a particularly positive outcome. Given Traditional Owners live in various locations, it is expected these benefits would be distributed across different families and communities, depending on who is employed on the project.

### **Training**

The project also provides an opportunity for Traditional Owners to undertake formal training and development to take advantage of the project's direct and indirect job opportunities. Section 1.4.6 identifies there would offer approximately three trainee positions on the project per year between Years 1 and 6.

As discussed in section 4.5.5, there are several Aboriginal training providers active in the region. These include BIITE which provides tertiary and VET training courses from its Batchelor campus for Indigenous students, including certificate courses directly relevant to the project (e.g. civil construction, engineering, automotive, and business). Ironbark Aboriginal Corporation also provide relevant courses.

Traditional Owners therefore have access to local training providers which will help position them for traineeships with the project. Gaining a trainee position will provide formal training, a short term employment opportunity and associated income for Traditional Owners who gain these positions. In addition, undertaking training will also provide longer term benefits beyond the project as those who receive training will be ready for other employment opportunities in the future.

### **Finniss River Aboriginal Land Trust**

As discussed in section 1.4, sand will be sourced from a previous sand mine area close to the mine site which is located on the Finniss River Aboriginal Land Trust (FRALT). It is understood that DPIR would be required to pay royalties to FRALT for the sand that is extracted from this site. While it is not known how royalties are distributed to beneficiaries of FRALT, it is expected that Kungarakan People and Warai People will experience some benefit as a result.

### **Cultural values and wellbeing**

As mentioned in section 2.3.2 consultation has been ongoing for several years with Traditional Owners about rehabilitation of the site. Based on discussions with DPIR, the cultural heritage team and other technical specialists, it is understood the consultation process reached a broad representation amongst Traditional Owner groups, and the continual feedback has shaped the design of the rehabilitation project to reflect cultural values and priorities. This is reflected across a number of aspects including sacred sites and cultural heritage, culturally significant flora and fauna, and land management.

It is understood there are several sacred sites within the project site. In the Northern Territory, sacred sites are protected under the *Aboriginal Sacred Sites Act* (1989), which is overseen by the Aboriginal Areas Protection Authority (AAPA). It is understood AAPA is currently working towards completion of an Authority Certificate which will include enforceable conditions associated with Restricted Work Areas Work Areas. The Authority Certificate will be specifically developed with reference to the proposed work areas and works.

According to information provided by the cultural heritage team, several archaeological surveys have also been undertaken across the site and borrow areas, which have involved consultation with Traditional Owners. These consultations confirmed that the archaeological places and objects hold high cultural significance to Traditional Owners, as they provide a tangible connection with the lives of their ancestors. The Traditional Owners have expressed a strong preference for archaeological places and objects to be preserved in situ wherever possible. According to the cultural heritage team, the recorded archaeological places and objects will not be affected by the proposed works, and the project has been designed to avoid all known Archaeological places and objects. In addition, a Cultural Heritage Management Plan will be developed that will outline procedures for the appropriate management of any further archaeological material that may be encountered during the life of the project. These procedures will include ongoing consultation with Traditional Owners.

Consultation has also been undertaken with Traditional Owners to identify culturally significant flora and fauna species. The *Rum Jungle Impact Assessment* (Hydrobiology, 2016) was prepared to define local water quality objectives for the EIS. This report discusses consultation with Traditional Owners in 2012 to identify culturally significant aquatic reptiles in the East Branch Finniss River and the Finniss River. These include water monitors, freshwater crocodiles and saltwater crocodiles. The report recommends these species should be a focus of future monitoring programs.

The biodiversity team indicated that consultation with Traditional Owners identified the multi-stemmed Darwin Cycad as significant to them. The project design has been developed in consultation with Traditional Owners to take these culturally significant species into account, and according to the biodiversity team, a number of mitigation measures will be recommended to avoid and manage impacts to these, such as designing new facilities around clusters of cycads, and salvaging and replanting the cycads as part of the rehabilitation process.

The project will involve rehabilitation works such as land management and revegetation. As discussed in earlier sections, it is understood from SEIA consultation that several Traditional Owners already have experience and qualifications in these fields, and other groups are either undertaking formal training, or are planning to, in readiness for the project. As discussed in section 4.3.6, undertaking Caring for Country activities has demonstrated health and wellbeing benefits for Indigenous people. Should Traditional Owners be successfully employed on the project for these activities, it is expected they will experience health and wellbeing benefits, whilst also contributing to a positive benefit for broader cultural and biodiversity values.

Overall, it is expected that the ongoing consultation with Traditional Owners, which has shaped the project design and construction activities, is expected to contribute to the cultural values of

Traditional Owners. As discussed in section 1.4.1 a key objective of the project is to improve the environmental conditions on site and downstream within the East Branch Finniss River. Achieving the project objectives, through ongoing consultation and facilitating opportunities for Traditional Owners to work on the project and care for their country, is expected to deliver an overall positive impact for the cultural values and wellbeing of Traditional Owners.

### ***Impacts on amenity***

This section discusses the potential impacts on Traditional Owners as a result of amenity changes, for example changes to noise levels, air quality, and visual amenity resulting from the project. Impacts to other community members as a result of amenity changes are described in section 5.1.

It is understood from SEIA consultation that Traditional Owners may use bushland areas surrounding the site for traditional activities and to spend time on country. There is potential for Traditional Owners engaging in these activities to be disturbed by noise and dust as a result of construction activities. Given the consultation process that has been undertaken with Traditional Owners to inform the planning and design of the project, it is expected that most Traditional Owners will adapt to these changes.

The visual and landscape team indicated there will be visual changes that occur within the project site as a result of the construction earthworks. In particular, visual changes will occur over time as the waste rock dumps are moved to a new location. The construction methodology and landform designs have been developed in consultation with Traditional Owners to align with their aspirations. While Traditional Owners working on the site will experience visual changes during construction, it is expected most Traditional Owners will adapt to these changes given the consultation process that has been undertaken. Overall, the final landforms are expected to be an improvement to the existing conditions, which is expected to be a positive impact in terms of cultural values.

### ***Cultural centre***

As mentioned in section 1.4.4, it is intended that a Kungarakan and Warai cultural centre will be constructed on the site in consultation with Traditional Owners. It is understood the centre will provide a place for Traditional Owners to promote their culture to visitors. It is expected this could generate some income for Traditional Owners, depending on the types of programs and activities provided for visitors, and the operational model of the centre. These details will be determined by Traditional Owners. A cultural centre on the site could also contribute to the existing tourism industry in the region, providing broader benefits for Batchelor and Coomalie communities.

**Table 5-1 Socio-economic impact assessment – Traditional Owners**

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
Direct and indirect procurement opportunities for Traditional Owner businesses, leading to increased revenue and benefiting business owners and employees, their families and communities. This would depend on Traditional Owners establishing relevant businesses by the time the project commences and being successfully engaged on the project.	Direct and indirect Positive	Construction Monitoring and maintenance	Short – long term	Traditional Owner businesses  Traditional Owner families and communities	Minor	High	N/A
15 to 48 direct employment and indirect generated by the project, benefiting Traditional Owners through increased personal and household income.	Direct and indirect Positive	Construction Monitoring and maintenance	Short – long term	Traditional Owners	Minor	High	N/A
Increased opportunity for Traditional Owners to undertake training and gain formal qualifications. This would help to facilitate employment on the project and in the longer term.	Indirect Positive	Pre-construction Construction Monitoring and maintenance	Short - long term	Traditional Owners	Minor	Moderate	N/A
Increased income for FRALT who will be paid royalties for sand extracted from land owned by FRALT for the project. Although it is unknown how funds are distributed to Traditional Owners, this is expected to be a high level benefit.	Direct and indirect Positive	Construction	Short – medium term	FRALT Traditional Owners	Minor	Moderate	N/A

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
<p>The consultation process with Traditional Owners over several years has shaped the design of the rehabilitation project to reflect cultural values and priorities. This is reflected across a number of aspects including sacred sites and cultural heritage, culturally significant flora and fauna, and land management.</p> <p>Overall, it is expected that achieving the project objectives through ongoing consultation and facilitating opportunities for Traditional Owners to work on the project and care for their country are expected to deliver an overall positive impact for the cultural values and wellbeing of Traditional Owners.</p>	Direct and Indirect Positive	Construction Monitoring and maintenance	Short - long term	Traditional Owners	Medium	High	N/A
Noise and dust may disturb Traditional Owners using areas surrounding site for cultural practices. Given the consultation process that has been undertaken with Traditional Owners to inform the planning and design of the project, it is expected that most Traditional Owners will adapt to these changes.	Direct Negative	Construction	Short to medium term	Traditional Owners	Minor	High	Moderate
There will be visual changes within the site resulting from earthworks and moving waste rock dumps. While Traditional Owners	Direct Negative	Construction	Short – medium term	Traditional Owners	Medium	Low	Minor



Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
working on the site will experience visual changes during construction, it is expected most Traditional Owners will adapt to these changes given the consultation process that has been undertaken to inform the landform designs.				employed on site			
Overall, the final landforms which have been designed in consultation with Traditional Owners are expected to be an improvement to the existing conditions, which is expected to be a positive impact for cultural values.	Direct Positive	Construction Monitoring and maintenance	Medium - long term	Traditional Owners	Medium	Moderate	N/A
It is intended that a Kungarakkan and Warai cultural centre will be constructed on the site in consultation with Traditional Owners. It would provide a place for Traditional Owners to educate and share their culture with visitors, which generate some income for Traditional Owners, depending on the types of programs and activities provided for visitors, and the operational model of the centre. These details would be determined by Traditional Owners.	Direct Positive	Construction Monitoring and maintenance	Medium – long term	Traditional Owners	Medium	Moderate	N/A
A cultural centre on the site could also contribute to the existing tourism industry in the region, providing broader benefits for Batchelor and Coomalie communities.	Indirect Positive	Construction Monitoring and maintenance	Medium – long term	Batchelor and Coomalie communities	Minor	Low	N/A

## 5.2 Economy and employment

This section presents a high level, qualitative assessment of potential impacts to the regional and local economy as a result of the project. This section also discusses potential opportunities for businesses, employment and training for study area communities. A summary of the socio-economic impact assessment is presented in Table 5-2.

### *Impacts on economy*

Overall through employment and procurement opportunities, the project construction will contribute to the local and regional economy. This will be achieved through direct and indirect contribution to businesses and direct and indirect employment opportunities of the project, discussed in the sections below.

As mentioned in section 4.4, SEIA consultation indicate that local community members and stakeholders are keen for the local economy to diversify, and they view the project positively provided it will deliver local opportunities for businesses and residents. Several stakeholders also indicated the need for construction workers to live locally, rather than fly or drive in and out each day. Given the project will prioritise local recruitment and employment where reasonably possible, and non-residential workers will be accommodated in Batchelor during their rostered days, it is expected these benefits would be realized, supporting local values and aspirations. However, SEIA consultation also indicated there are high expectations about actual benefits the project may deliver for local communities. It will be important to manage these expectations to ensure communities remain supportive of the project.

### *Business opportunities*

As the project will be delivered by the NT Government through t DPIR and DIPL, there will be a minimum 30% local content weighting applied to the project procurement in line with the *NT Government Procurement Governance Policy* (NT Government, Department of Trade, Business and Innovation, 2019) (refer to section 3). As discussed in section 1.4.3, local businesses will be prioritised as far as possible after Traditional Owner businesses for procurement opportunities.

It is understood from consultations with DPIR that the most significant direct business opportunities on the project will be related to the earthmoving contract and the bulk supply of lime and fuel required for construction. It is understood there are some existing contractors within the region that could deliver these services. Some of these opportunities may not directly benefit regional businesses, however it is expected they may be fulfilled by businesses located with the Northern Territory.

Section 4.4.5 identifies that there are a number of businesses located in Batchelor and Coomalie LGA that could take advantage of the direct project procurement opportunities based on the types of goods and services likely to be required e.g. construction, automotive and mechanical, transport, land management. SEIA consultation indicated that residents of Batchelor have already given thought to the potential flow-on economic opportunities that may stem from the project through the opportunity to provide services such as accommodation, laundry services, equipment hire and food and beverage supplies to the workforce. As discussed throughout section 4, due to the location of Batchelor near Litchfield National Park, there are many tourism-related businesses in the region which may indirectly benefit from the project, such as food and beverage, retail and accommodation businesses. It is expected that these businesses may benefit from the small increased demand from the non-resident construction workforce that may be engaged on the project if all positions are not filled by local workforce, and who would be accommodated in Batchelor during their rostered days.

Direct business opportunities are expected to lead to increased revenue for local and regional businesses, which would directly benefit business owners, and have flow-on benefits for their

households. Indirect business opportunities are also expected to lead to increased business revenue, although this is expected to be at a much smaller scale.

Depending on the type of business and nature of the goods and services they provide, some businesses may increase their employee numbers to meet demand generated by the project. The social implications associated with employment opportunities are discussed below.

### **Employment**

As discussed in section 5.1, if any of the 15 to 48 direct employment opportunities on the project are not filled by Traditional Owners, they would then flow on for local workforce from the Coomalie LGA, where possible. As discussed throughout section 4, lack of local employment opportunities is identified as a key issue for Batchelor and the Coomalie LGA. The project will provide local communities with an opportunity for local employment.

In order to take advantage of most direct project job opportunities, local residents would need to have relevant qualifications or undertake training.

As discussed in section 5.1, it is expected that some indirect employment opportunities would be for an unskilled workforce. Although Coomalie LGA has a relatively low level of unemployment and a lower level of labour force participation (section 4.4.1), according to SEIA consultation, it is understood there will be sufficient availability of an unskilled workforce.

As discussed in section 5.1, direct and indirect employees and their families are expected to benefit from increased personal and household income. Overall, the direct and indirect employment opportunities generated by the project are expected to contribute to a small decrease in the regional unemployment rate.

### **Training**

As discussed in section 5.1, the project will provide three trainee positions on the project each year in the first six years of construction, which would be included in the total 15 to 48 positions. Given there are local Aboriginal training providers in the region, it is likely many these positions will be filled by Traditional Owners. However, there may be some traineeships that may be filled by other regional residents, providing them with formal training and short term employment.

**Table 5-2 Socio-economic impact assessment – economy and employment**

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
Project procurement and employment opportunities would result in direct and indirect contribution to the local and regional economy.	Direct and indirect Positive	Construction	Short - long term	Batchelor town and Coomalie region	Medium	Moderate	N/A
Business and employment opportunities would support local values related to local economic opportunities. However there are high expectations about actual benefits the project may deliver for local communities. It will be important to manage these expectations to ensure communities remain supportive of the project.	Indirect Positive	Construction	Short – long term	Batchelor and Coomalie residents	Minor	Moderate	N/A
Direct and indirect procurement opportunities for local and regional businesses, leading to increased revenue and benefiting business owners and employees	Direct and indirect Positive	Construction Monitoring and maintenance	Long term	Local and regional businesses	Medium	Moderate	N/A
Direct and indirect employment opportunities generated by the project, benefiting local residents through increased personal and household income, and contributing to a decrease in the regional unemployment rate.	Direct and indirect Positive	Construction Monitoring and maintenance	Long term	Batchelor and Coomalie residents	Minor	Low	N/A
Three direct trainee positions per year required on the project during first six years of construction. These are likely to be filled	Indirect Positive	Pre-construction Construction	Long term	Batchelor and Coomalie residents	Minor	Low	N/A

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
by Traditional Owners however, some positions may be filled by other regional residents providing them with formal training and short term employment.							

## 5.1 Amenity

This section discusses the potential impacts that may occur due to changes to amenity such as changes in noise levels, visual amenity, and air quality. It has been informed by discussions with the teams preparing the noise, air quality and visual and landscape studies for the EIS.

Changes to amenity can impact the quality of life of affected community members. A summary of the socio-economic impact assessment is presented in Table 5-3.

### *Noise, vibration and dust*

Given the project is located approximately eight kilometers from the main residential areas of Batchelor, it is unlikely that most community members would be affected by noise, vibration and dust impacts resulting from the project. According to noise and air quality team, there is one rural residential property located within two kilometers of the project site and one rural residential property located within 500 meters of the Mt Burton site. There is potential for residents within 1.5 kilometres of the Mt. Burton site to experience noise impacts as a result of construction activities during the day. This could cause a nuisance for residents, and potentially lead to people spending less time outdoors in backyards, or closing windows while indoors, which overall can affect quality of life of these residents. Noise from the Mt. Fitch site is unlikely to result in noise impacts at the nearest residential dwellings. Given there are no scheduled night time works, and residents near the Mt Burton site will be notified about any unscheduled night time works, noise is unlikely to disturb sleep and affect wellbeing of nearby residents.

The site is adjacent to the Browns Oxide Mine, which shares the same access road as the project site, and is currently in care and maintenance (section 4.4). SEIA consultation found that a small number of staff members access the Browns Oxide Mine several times a week. There is potential for workers at this site to be exposed to noise and dust impacts as a result of project construction activities. However it is expected that standard noise and dust mitigation measures will manage these impacts to a safe level for workers on site, and for any workers at the Browns Oxide mine site. Therefore, the amenity of workers is not expected to be impacted.

It is understood from SEIA consultation that local residents and visitors from outside the region undertake recreational activities such as hunting and riding motorbikes in the areas surrounding the site. There is potential for these occasional users to be affected by noise and visual changes and dust as a result of construction activities. This could potentially reduce the peaceful amenity and enjoyment of these areas by these users. However, given the use of these areas is likely to be sporadic, and there would be other nearby places to carry out the same activities, it is expected users will adapt to these changes.

There is also potential for recreational users of Rum Jungle Lake to experience reduced amenity as a result of activities at the clay borrow area which is located close to the lake. As discussed in section 4.5.1, the Batchelor Outdoor Education Centre regularly uses Rum Jungle Lake for activities such as snorkelling and canoeing. An increase in dust and noise at the clay borrow site has the potential to interrupt activities of recreational users of the lake, and reduce their enjoyment of the lake.

The visual and landscape team indicated that there will not be any visual impacts that occur outside of the project site. This means there are not expected to be any visual changes that affect nearby residents or community members.

**Table 5-3 Socio-economic impact assessment – amenity and community values**

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
Potential noise impacts for a rural residential property located within 1.5km of the Mt Burton site. Noise during the day time could cause nuisance and disrupt daily activities. Given there are no scheduled night time works, and residents near the Mt Burton site will be notified about any unscheduled night time works, noise is unlikely to disturb sleep and affect wellbeing of nearby residents.	Direct Negative	Construction	Short term	Residents adjacent to Mt Burton site	Minor	Low	Minor
Potential dust and noise generated by construction works may affect some workers at Browns Oxide Mine which is adjacent to the project site. It is expected that standard noise and dust mitigation measures would manage these impacts to a safe level for workers on site, and for any workers at the Browns Oxide mine site Therefore, the amenity of Browns Oxide workers is not expected to be impacted.	Direct Negative	Construction	Short term	Workers at Browns Oxide Mine	Negligible	Low	Negligible
Recreational users may use bushland areas for recreational activities. These users may be affected by noise, dust and visual changes, which could reduce their enjoyment of these areas. However it is expected these users could find alternate places to undertake these activities	Direct Negative	Construction	Short term	Recreational users	Minor	Low	Minor



Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
Potential for construction activities at the clay borrow area near Rum Jungle Lake to create dust and noise. This could reduce the amenity of the lake for users', which could disrupt activities and reduce enjoyment	Direct Negative	Construction	Short term	Recreational users of Rum Jungle Lake	Minor	Low	Minor

## 5.2 Housing and accommodation

This section discusses potential impacts on local housing and accommodation as a result of the project. A summary of the socio-economic impact assessment is presented in Table 5-4.

Section 1.4.6 states that the project will prioritise employment for Kungarakana People and Warai People, followed by local residents as far as reasonably possible. There will be from 15 to 48 direct employment opportunities during the first six years of construction. At this stage it is not possible to predict how many workers will be local to the region and how many will be non-residential. This section therefore provides a high level assessment of the potential for an incoming population to Batchelor who will require accommodation.

As discussed in section 1.4.7 all workers would be accommodated in Batchelor during their shift. As per the project accommodation strategy, the non-residential workforce will be accommodated in existing rental housing and accommodation facilities in Batchelor. As discussed in section 4.3.2, there are currently four houses available in Batchelor for rent, and approximately 35 houses available for sale. SEIA consultation indicated that several houses have been listed for sale for several years, and private property owners would likely be willing to rent their property to project construction workers. SEIA consultation also indicated that there are private properties leased as holiday rentals in the region, and these property owners may also be willing to rent their properties to project workers. This will benefit these property owners who will earn rental income. As part of the project's accommodation strategy, procurement of local accommodation will need to be undertaken in line with the NT Government's procurement process.

Due to its location at the entry to Litchfield National Park, there is a range of tourism accommodation options close to and within Batchelor. As discussed in section 4.4 and confirmed during SEIA consultation, the tourism industry is highly valued by the local community for providing employment and economic opportunities. SEIA consultation indicated that most tourism accommodation has limited availability during the dry season, and that tourism accommodation providers would not necessarily want to make their accommodation available for project workers.

A non-residential workforce will lead to a small increase in demand for accommodation in Batchelor and surrounds. As accommodation facilities are generally at capacity during the tourist season, demand from a non-residential project workforce could impact on the regional tourism industry. However, a number of other accommodation options for the project workforce could be available, which will avoid impacts on tourism and as well as generate benefits for local housing and accommodation providers. These options are listed below and could be considered part of the project accommodation strategy:

- Long term leases with available rental or sale housing properties, or BIITE campus accommodation
- Increase capacity of existing temporary accommodation facilities.

**Table 5-4 Socio-economic impact assessment – housing and accommodation**

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
Potential for non-residential workforce to be accommodated in Batchelor in existing rental housing and accommodation facilities.  This would benefit property owners by providing them with rental income.	Direct Positive	Construction	Short - medium term	Private property owners	Minor	Low	N/A
Potential impact on regional tourism industry due to non-residential workforce requiring accommodation.	Indirect Negative	Construction	Short – medium term	Regional tourism industry	Minor	Moderate	Minor

### **5.3 Community services**

There is potential for local and regional community services to experience increased demand as a result of project activities (e.g. emergency services, health services) and as a result of a potential incoming non-residential worker population. A summary of the socio-economic impact assessment is presented in Table 5-5.

#### ***Emergency response***

Potential emergencies and bushfires which occur at the project sites could lead to an increase in demand on local emergency service providers.

It will be a requirement for the project to have an emergency response plan in place to ensure any emergencies that occur at the project site are responded to in a coordinated way with local emergency service providers. This will need to be developed in consultation with NT Bushfires, NT Fire and Rescue, Batchelor Area Police, Batchelor Community Health Centre and the Volunteer Bush Fire Brigade (section 4.5.2 and 4.5.3). The emergency response plan should also include strategies to deal with emergencies and health-related needs as a result of any non-resident workers (discussed below).

#### ***Increased demand on community services***

As discussed in section 5.2, there is potential for a small non-residential workforce to relocate to Batchelor and surrounds to take advantage of the employment opportunities during construction, particularly given most roles would be required for around six years. At this stage it is not possible to predict how many workers may move to the region as permanent residents, and how many dependents they may have. It is also not possible to predict how many workers would be non-resident workers i.e. they may stay in Batchelor during their shift and return to their home on weekends. This section therefore provides a high level assessment of the potential for an incoming resident and non-resident population to Batchelor, which could increase demand for community services.

The types of community services that may experience increased demand as a result of an incoming resident population include health, emergency services, and education. Based on SEIA consultation with these service providers in Batchelor, it is understood they will be able to absorb the demand. Several stakeholders noted that any additional resident population would be positive for service providers as it would help to maintain or increase funding for their service provision, particularly given the small population size of the region. Given the small workforce required for the project, a small increase in the population is not expected to result in an increase in funding for services.

The type of community services that may experience increased demand as a result of an incoming non-resident population include health and emergency services. It is expected that an emergency response plan (discussed above) would establish protocols for how any non-resident emergencies and medical issues would be treated. It is understood from SEIA consultation that Batchelor Community Health Centre only treats residents, and non-residents are only treated for medical emergencies. Non-resident workers could therefore be at risk of untreated health issues unless these protocols are established.

### ***Coomalie Community Government Council***

As discussed in section 1.4, clay may be sourced from a site owned by Coomalie Community Government Council, located adjacent to the Rum Jungle Lake. It is understood that DPIR will be required to enter into an agreement with council to extract clay from the site. This agreement may provide some income to Council which may assist with its service provision. As discussed in section 5.3, council struggles to fund ongoing maintenance of its community facilities due to its small rate base. As a result, any additional income is expected to directly benefit council, with a flow on benefit for Coomalie LGA residents.

**Table 5-5 Socio-economic impact assessment –community services**

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
Potential emergencies at the project site and a small non-residential workforce will increase demand for local emergency services. An emergency response plan will be required to ensure emergency services are responded to in a coordinated way.	Direct Negative	Construction  Mitigation and management	Short to long term	Local emergency service providers	Minor	Low	Minor
Small increase in demand on community services such as health, emergency services and education as a result of an incoming resident population during construction. According to SEIA consultation, this would be a positive impact for service providers as may provide opportunity to maintain or increase funding and staffing levels.	Direct Positive	Construction	Short to medium term	Local community service providers	Negligible	Low	N/A
Small increase in demand on community services such as health and emergency services as a result of an incoming non-resident population during construction. Non-resident workers could be at risk of untreated medical issues.	Indirect Negative	Construction	Short to medium term	Non-resident construction workers	Minor	Low	Minor
Increased income for Coomalie Community Government Council due to extraction of clay from council-owned site for the project.	Direct Indirect Positive	Construction	Short to medium term	Coomalie Community Government Council	Medium	Moderate	N/A

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
This is expected to benefit council and residents of Coomalie LGA.				Coomalie LGA residents			



## 5.4 Historical community values

This section presents an assessment of potential impacts of the project on community values related to historical places and objects. This section is based on discussions and information provided by the cultural heritage team. A summary of the socio-economic impact assessment is presented in Table 5-6

As discussed throughout sections 1 and 4, the town of Batchelor has a strong historical association with mining and World War II, with the Batchelor Museum (section 4.5) heavily focused on recording and interpreting these themes (Batchelor Museum Development Association, 2019).

While there are no historical places or objects in the project area listed on any heritage registers, there are historical features that have been documented on the site. These include a number of World War II features in the northeast of the mine lease, including dry stone walls and rifle pits that were most likely used as a training area during the war. These features will not be at risk of impact due to the proposed works.

There are also several historical features which date to the mining occupation of the site, including concrete slabs, sheds, a concrete tank, building foundations and a drill rig. Of these, only the drill rig has been determined to have potential significance and interest to key stakeholders. Staff from the Batchelor Museum have indicated during previous consultation about the drill rig they would like to see it protected. There have been discussions about preserving the drill rig within the mine lease, or moving it to the grounds of the Batchelor Museum.

Community members associated with the Batchelor Museum and with an interest in local history will likely place a strong value on the features described above. The avoidance direct impacts on historical features, along with the protection of the drill rig, are likely to be a positive impact on these community values.

**Table 5-6 Socio-economic impact assessment – historical community values**

Description of impact	Nature and type of impact	Timing of impact	Duration of impact	Stakeholders impacted	Severity	Sensitivity	Significance
<p>Historical features will not be impacted by project works. There has been consultation with Batchelor Museum to protect an historical drill rig on site or relocate to the museum.</p> <p>Community members associated with the Batchelor Museum and with an interest in local history would likely place a strong value on the features described above. The avoidance of direct impacts on historical features, along with the protection of the drill rig, are likely to be a positive impact on these community values.</p>	Indirect Positive	Construction  Mitigation and management	Short to long term	Community members with an interest in local history	Minor	Moderate	N/A

## 6. Mitigation measures

This section presents the measures and strategies to be implemented by the proponent to avoid, manage and mitigate the potential socio-economic impacts identified and described in section 5. These measures have also been identified to support and enhance the potential socio-economic benefits associated with the Project. The socio-economic impact measures described in Table 6-1 have been developed with consideration to mitigation measures that will be recommended in other EIS technical studies which would also contribute to mitigating potential impacts identified in this report.

**Table 6-1 Socio-economic mitigation measures**

Impact	Mitigation measures	Refer to EIS technical studies for additional mitigation measures
Overall socio-economic impacts	<p>A Stakeholder Communication and Engagement Strategy will be implemented by DPIR/DIPL to provide a coordinated approach to consultation and communication with key stakeholders and communities. The strategy will be prepared prior to construction commencing and as project funding becomes available, and be implemented over the course of the project. The key components of the plan will include:</p> <ul style="list-style-type: none"> <li>Identifying all relevant stakeholders</li> <li>Developing consistent key messages for the construction project</li> <li>Alerting stakeholders to key milestones and likely impacts throughout construction</li> <li>Informing stakeholders of how they will be communicated with throughout the project</li> <li>Providing a mechanism for enquiries and complaints to be managed</li> </ul>	N/A
Economic and employment opportunities for Traditional Owners and locals	<p>Through the <i>NT Government's Procurement Policy</i>, DPIR/DIPL will adopt a local procurement and employment policy for the project which will form part of the terms and conditions the construction contractor must comply with.</p> <p>The policy will include preparation of a Local Procurement Plan and a Workforce Management Plan which will include (but not be limited to):</p> <ul style="list-style-type: none"> <li>Prioritisation of Traditional Owner and local businesses where possible through the procurement process</li> <li>Prioritisation of Traditional Owner and local employment where possible</li> <li>Share procurement opportunities through established local procurement communication channels</li> </ul>	N/A

Impact	Mitigation measures	Refer to EIS technical studies for additional mitigation measures
	Upon funding allocation, DPIR/DIPL will also support skills development and work readiness for Traditional Owner groups	
Training opportunities	<p>DPIR/DIPL will prepare a workforce plan which will including (but not be limited to):</p> <ul style="list-style-type: none"> <li>• A traineeship program which identifies appropriate opportunities across the project (e.g. land management, environmental management, construction) to maximise trainee opportunities</li> <li>• Work with local training providers (e.g. BIITE and Ironbark Aboriginal Corporation) to inform available traineeship programs so that they match job role availability</li> <li>• Work with local training providers to communicate training and other business support opportunities/support so that Traditional Owners and locals can leverage existing programs to prepare for potential work on this project</li> </ul>	N/A
Traditional Owner wellbeing and cultural values	<p>Impacts to cultural heritage will be managed as per the mitigation measures outlined in the cultural heritage study. In addition to these measures, the Stakeholder Communication and Engagement Strategy implemented by DPIR/DIPL will include:</p> <ul style="list-style-type: none"> <li>• Ongoing consultation with Traditional Owners leading up to and during construction</li> <li>• Consultation with Traditional Owners to plan construction of a cultural centre on site</li> </ul> <p>DPIR/DIPL will also be required to ensure all employees undergo a cultural induction as part of their initial project induction.</p>	Cultural heritage
Amenity	<p>Amenity impacts will be managed as per mitigation measures outlined in the Noise and Air Quality, and Visual Impact studies. In addition to these measures, DPIR/DIPL will develop a Stakeholder Communication and Engagement Strategy which will include targeted consultation with the following stakeholders to provide early notification and regular updates about the project works and potential amenity impacts:</p> <ul style="list-style-type: none"> <li>• Property owners of residences adjacent to the project sites</li> <li>• Traditional Owner groups</li> <li>• Coomalie Community Government Council</li> <li>• Batchelor Outdoor Education Centre</li> <li>• Browns Oxide Mine</li> </ul>	Noise, air quality and visual

Impact	Mitigation measures	Refer to EIS technical studies for additional mitigation measures
	The plan will also include a complaints management procedure including a range of contact mechanisms (e.g. direct phone number and email address) and a timeframe for responses to be managed within.	
Housing and accommodation	DPIR would be required to prepare an Accommodation Strategy in consultation with Coomalie Community Government Council. The strategy would undertake an assessment of available housing and accommodation in Batchelor and the Coomalie region and seek to: <ul style="list-style-type: none"> <li>• Encourage any non-residential workers to be housed locally</li> <li>• Manage accommodation demand for the project so that impacts on the tourism industry are minimised.</li> </ul>	N/A
Emergency response	The project's Emergency Response Plan will be prepared in consultation with local emergency service providers including NT Bushfires, NT Fire and Rescue, Batchelor Area Police, Batchelor Community Health Centre and the Volunteer Bush Fire Brigade.  The plan should include a medical access protocol which identifies a process to manage potential non-resident emergencies and health concerns.	Human health and safety
Increased demand on local community services	As part of the project Stakeholder Communication and Engagement Strategy prepared by DPIR/DIPL, the following stakeholders will be notified about the project timeframes and expected workforce: <ul style="list-style-type: none"> <li>• Coomalie Community Government Council</li> <li>• Batchelor Community Health Centre</li> <li>• Batchelor Area School</li> <li>• Batchelor Police</li> <li>• NT Fire and Rescue</li> <li>• Bushfires NT</li> </ul>	N/A
Impact on historical values	As part of the project Stakeholder Communication and Engagement Strategy prepared by DPIR/DIPL, share information about the avoidance of impacts to and protection of significant historical features.	Cultural heritage

## 6.1 Residual impact

Table 6-2 presents the impacts identified in section 5, the socio-economic mitigation measures that would apply to each impact, and the residual impact once those measures have been applied. Overall, once the recommended socio-economic mitigation measures have been implemented, residual socio-economic impacts are expected to have a rating of negligible or minor.

**Table 6-2 Summary of socio-economic impacts, recommended mitigation measures, and residual impact rating**

Impact category	Description of impact	Impact rating pre-mitigation	Mitigation measures	Impact rating post-mitigation
Impacts on Traditional Owners	Direct and indirect procurement opportunities for Traditional Owner businesses, leading to increased revenue and benefiting business owners and employees, their families and communities. This would depend on Traditional Owners establishing relevant businesses by the time the project commences and being successfully engaged on the project.	N/A	Stakeholder Communication and Engagement Strategy Local procurement plan Workforce plan Support skills development and work readiness for Traditional Owner groups Workforce management plan	N/A
	15 to 48 direct employment and indirect generated by the project, benefiting Traditional Owners through increased personal and household income.	N/A		N/A
	Increased opportunity for Traditional Owners to undertake training and gain formal qualifications. This would help to facilitate employment on the project and in the longer term.	N/A		N/A
	Increased income for FRALT who will be paid royalties for sand extracted from land owned by FRALT for the project. Although it is unknown how funds are distributed to Traditional Owners, this is expected to be a high level benefit.	N/A	N/A	N/A
	Achieving the project objectives through ongoing consultation and facilitating opportunities for Traditional Owners to work on the project and care for their country is expected to deliver an overall positive	N/A	Stakeholder Communication and Engagement Strategy Ongoing consultation with Traditional Owners	N/A

Impact category	Description of impact	Impact rating pre-mitigation	Mitigation measures	Impact rating post-mitigation
	impact for the cultural values and wellbeing of Traditional Owners.		Cultural induction for all employees	
	Noise and dust may disturb Traditional Owners using areas surrounding site for cultural practices. Given the consultation process that has been undertaken with Traditional Owners to inform the planning and design of the project, it is expected that most Traditional Owners will adapt to these changes.	Moderate		Minor
	There will be visual changes within the site resulting from earthworks and moving waste rock dumps. While Traditional Owners working on the site will experience visual changes during construction, it is expected most Traditional Owners will adapt to these changes given the consultation process that has been undertaken to inform the landform designs.	Minor		Negligible
	Overall, the final landforms which have been designed in consultation with Traditional Owners are expected to be an improvement to the existing conditions, which is expected to be a positive impact for cultural values.	N/A		N/A
	A Kungarakana and Warai cultural centre will be constructed on the site in consultation with Traditional Owners. It would provide a place for Traditional Owners to educate and share their culture with visitors, which generate some income for Traditional Owners, depending on the types of programs and activities provided for visitors, and the operational	N/A	Stakeholder Communication and Engagement Strategy  Consultation with Traditional Owners to plan construction of a cultural centre on site	N/A



Impact category	Description of impact	Impact rating pre-mitigation	Mitigation measures	Impact rating post-mitigation
	model of the centre. These details would be determined by Traditional Owners.			
	A cultural centre on the site could also contribute to the existing tourism industry in the region, providing broader benefits for Batchelor and Coomalie communities.	N/A		N/A
Economy and employment	Project procurement and employment opportunities would result in direct and indirect contribution to the local and regional economy.	N/A	Local procurement plan Workforce plan Stakeholder Communication and Engagement Strategy	N/A
	Business and employment opportunities would support local values related to local economic opportunities. However there are high expectations about actual benefits the project may deliver for local communities. It will be important to manage these expectations to ensure communities remain supportive of the project.	N/A		N/A
	Direct and indirect procurement opportunities for local and regional businesses, leading to increased revenue and benefiting business owners and employees	N/A		N/A
	Direct and indirect employment opportunities generated by the project, benefiting local residents through increased personal and household income, and contributing to a decrease in the regional unemployment rate.	N/A		N/A

Impact category	Description of impact	Impact rating pre-mitigation	Mitigation measures	Impact rating post-mitigation
	Three direct trainee positions required on the project per year during first eight years of construction. These are likely to be filled by Traditional Owners however some positions may be filled by other regional residents providing them with formal training and short term employment.	N/A		N/A
Amenity	Potential noise impacts for a rural residential property located within 1.5km of the Mt Burton site. Noise during the day time could cause nuisance and disrupt daily activities. Given there are no scheduled night time works, and residents near the Mt Burton site will be notified about any unscheduled night time works, noise is unlikely to disturb sleep and affect wellbeing of nearby residents.	Minor	Stakeholder Communication and Engagement Strategy  Targeted communication with affected residents	
	Potential dust and noise generated by construction works may affect some workers at Browns Oxide Mine which is adjacent to the project site. It is expected that standard noise and dust mitigation measures would manage these impacts to a safe level for workers on site, and for any workers at the Browns Oxide mine site. Therefore, the amenity of Browns Oxide workers is not expected to be impacted.	Negligible	Stakeholder Communication and Engagement Strategy  Targeted communication with affected community members and key stakeholders	Negligible
	Recreational users may use bushland areas for recreational activities. These users may be affected by noise, dust and visual changes, which could reduce their enjoyment of these areas. However it is	Minor		Negligible

Impact category	Description of impact	Impact rating pre-mitigation	Mitigation measures	Impact rating post-mitigation
	expected these users could find alternate places to undertake these activities			
	Potential for construction activities at the clay borrow area near Rum Jungle Lake to create dust and noise. This could reduce the amenity of the lake for users', which could disrupt activities and reduce enjoyment	Minor		Minor
Housing and accommodation	Potential for non-residential workforce to be accommodated in Batchelor in existing rental housing and accommodation facilities.  This will benefit property owners by providing them with rental income.	N/A	Stakeholder Communication and Engagement Strategy  Accommodation strategy	N/A
	Potential impact on regional tourism industry due to non-residential workforce requiring accommodation.	Minor		Negligible
Community services	Potential emergencies at the project site and a small non-residential workforce will increase demand for local emergency services. An emergency response plan will be required to ensure emergency services are responded to in a coordinated way.	Minor	Stakeholder Communication and Engagement Strategy	Negligible
	Small increase in demand on community services such as health, emergency services and education as a result of an incoming resident population during construction. According to SEIA consultation, this would be a positive impact for service providers as may provide opportunity to maintain or increase funding and staffing levels.	N/A	Stakeholder Communication and Engagement Strategy	N/A

Impact category	Description of impact	Impact rating pre-mitigation	Mitigation measures	Impact rating post-mitigation
	Small increase in demand on community services such as health and emergency services as a result of an incoming non-resident population during construction. Non-resident workers could be at risk of untreated medical issues.	Minor	Stakeholder Communication and Engagement Strategy  Emergency Response Plan to include protocol for non-resident workers	Negligible
	Increased income for Coomalie Community Government Council due to extraction of clay from council-owned site for the project. This is expected to benefit council and residents of Coomalie LGA.	N/A	N/A	N/A
Historical values	Impacts to historical features will not be impacted by project works. There has been consultation with Batchelor Museum to protect an historical drill rig on site or relocate to the museum.  Community members associated with the Batchelor Museum and with an interest in local history would likely place a strong value on the features described above. The avoidance of direct impacts on historical features, along with the protection of the drill rig, are likely to be a positive impact on these community values.	N/A	Stakeholder Communication and Engagement Strategy	N/A

## 7. Conclusion

This SEIA identifies and describes the potential socio-economic benefits and impacts resulting from the project.

Overall, key socio-economic benefits are expected to be:

- Business, employment and training opportunities for Traditional Owners and locals
- Supporting cultural values due to ongoing consultation with Traditional Owners, facilitating caring for country opportunities, and providing a cultural centre on site

Key socio-economic impacts are expected to be:

- Localised amenity impacts for Traditional Owners, residents and recreational users close to project activities during construction
- Small localised increase in demand for accommodation resulting from potential non-residential workforce, which could impact the local tourism industry
- Small localised increase in demand for local emergency and community services resulting from project activities and workforce

This SEIA recommends the following mitigation measures to address identified socio-economic impacts, and enhance benefits:

- Stakeholder Communication and Engagement Strategy including targeted communication with key stakeholders and affected community members
- Local Procurement Plan
- Workforce Management Plan
- Cultural induction for all employees
- Accommodation Strategy
- Health protocol for non-resident workers

Overall, once the recommended socio-economic mitigation measures have been implemented, residual socio-economic impacts are expected to have a rating of negligible or minor.

## 8. References

*\*Please note that some of the references listed below have been provided to GHD by DPIR and they are not publicly available.*

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# Appendices

## Appendix A - List of businesses located in Batchelor in 2015

The table below presents a summary of businesses located in Batchelor as identified in the *Rum Jungle Socio-Economic Baseline* (Nation Partners, 2015)

Industry category	Business
Accommodation	Batchelor Holiday Park Rum Jungle Bungalows Batchelor Butterfly Farm
Aviation	Batchelor Aviation Pty Ltd Outback Helicopters
Beauty	Cut It! Hair designs by Keiryn
Building contractors	Batchelor Building Services NT
Bushfires NT	Bushfires Council NT
Child care and playgroup	CSSU Yera Early Learning Children's Services Support Unit Inc Batchelor Playgroup
Council	Coomalie Community Government
Drilling	Diverse Resources Group Pty Ltd
Education	Batchelor Area School Batchelor Outdoor Education Unit
Electrical	Bruce Verburg Electrical
Emergency services	Batchelor Police
Engineering	Rum Jungle Engineering
Fuel and mechanical	Batchelor Service Centre Stewarts Diesel & Welding Rum Jungle
Gardening	RS Gardening Care
General store	Batchelor General Store
Health	Batchelor Community Health Centre
Libraries	Batchelor Library
Livestock	Livestock Mt Keppler Station Mt Ringwood Station
Parks	Parks & Wildlife Commission
Plant hire	Rural & Remote Services Rick Erkenes Earth Moving Ptd Ltd
Plumbing	Mobile maintenance & renovations
Post office	Batchelor Post Office

Industry category	Business
Real estate agents	McGorman O'Leary Real Estate Elva Pearce – LJ Hooker
Swimming pool	Batchelor Swimming Pool
Tourism	Batchelor Visitor Information Centre Batchelor Museum Cooles Tours Charter Bus Hire Food, dining & catering Rum Jungle Tavern Batchelor Take Away Batchelor Thompson's Farm Rum Jungle

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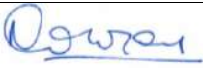
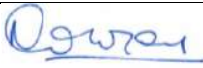
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