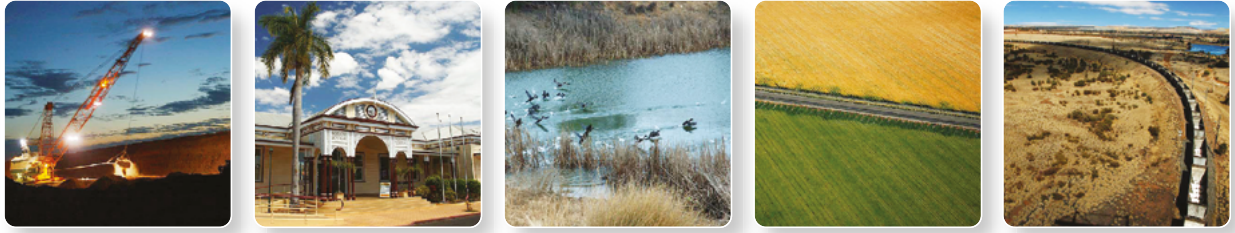


Socio-economics Report

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EASTERN LEASES PROJECT

SOCIO-ECONOMIC IMPACT ASSESMENT

for
South32 Pty Ltd
May 2015

EASTERN LEASES PROJECT

SOCIO-ECONOMIC IMPACT ASSESSMENT

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ABBREVIATIONS

ABA	Aboriginals Benefit Account
ABS	Australian Bureau of Statistics
AFL	Australian Football League
ALC	Anindilyakwa Land Council
ALC Strategic Plan	<i>Anindilyakwa Land Council 15 Year Strategic Plan 2012-2027</i>
ALRA	<i>Aboriginal Land Rights (Northern Territory) Act 1976</i>
Aminjarrinja	Aminjarrinja Enterprises
ARC	Alyangula Recreation Club
ATSI	Aboriginal and Torres Strait Islander
BHP Billiton	BHP Billiton Pty Ltd
CDMP	Community Development Management Plan
CMS	Anglican Church Missionary Society
COAG	Council of Australian Governments
DEEWR	Commonwealth Department of Education, Employment and Workplace Relations
DSS	Commonwealth Department of Social Services
EARC	East Arnhem Regional Council
EIS	Environmental Impact Statement
ELR	Exploration Licence in Retention
FIFO	Fly-In Fly-Out
GEAT	Groote Eylandt Aboriginal Trust
GEBIE	Groote Eylandt and Bickerton Island Enterprise
GEMCO	Groote Eylandt Mining Company Pty Ltd
GEMYDU	Groote Eylandt and Milyakburra Youth Development Unit
HSEC	Health, Safety, Environment and Community
IBA	Indigenous Business Australia
IPA	Indigenous Protected Area
km	kilometre
LGA	Local Government Area
LIP	Local Implementation Plan
MJD	Machado Joseph's Disease
MLN	Mineral Lease (Northern)
Northern EL	Northern Eastern Lease
NT DOE	Department of Education
NT DOH	Northern Territory Department of Housing
NT EPA	Northern Territory Environment Protection Authority
OTL	Australia Government Office of Township Leasing
RJCP	Remote Jobs and Communities Program
RMS Strategy	<i>MAN-4062 Rehabilitation & Mine Services Aboriginal Employment Strategy</i>
RPA	Regional Partnership Agreement
RPA Progress Report	<i>Groote Eylandt and Bickerton Island Regional Partnership Agreement Progress Evaluation</i>
SA2	Statistical Area Level 2

SIA	Socio-Economic Impact Assessment
Southern EL	Southern Eastern Lease
The project	The Eastern Leases Project
TOR	Terms of Reference
Township Lease	Whole-of-Township Lease
UCL	Urban Centre/Locality
WoC	Working on Country

GLOSSARY

2006 Mining Agreement	The 2006 Mining Agreement was signed between the proponent and the ALC, and was the first agreement for the existing mine to include the Anindilyakwa People as direct signatories. Under the conditions of the 2006 Mining Agreement, the proponent is required to continue royalty payments to the Groote Eylandt Aboriginal Trust (GEAT) and to make royalty payments to the ALC on behalf of the Traditional Owners.
Aboriginal	Referring to the Aboriginal population of Groote Eylandt Archipelago
Aboriginal Freehold Land	Land declared under <i>Aboriginal Land Rights (Northern Territory) Act 1976</i> (ALRA) to be Aboriginal Land, held as freehold tenure. On Groote Eylandt, this land is held by a Land Trust as established under ALRA.
Clan	A clan is a group of people generally related by blood or marriage. It is an important unit in Aboriginal society, having its own name and territory, and is the land-owning unit (Welch undated).
Contractor	A person who is employed by a third party and contracted to GEMCO. The majority of the non-resident workforce is employed as contractors.
Employee	A person directly employed by the proponent. The majority of the resident workforce is directly employed by the proponent.
FIFO	The practice of an employee or contractor who regularly travels by plane into a township or area to undertake work for a block-shift period, while maintaining their permanent residence elsewhere, to which the employee or contractor returns by plane following completion of the shift. i.e. proponent employees or contractors who work on Groote Eylandt but do not live there permanently and as such fly into and out of Groote Eylandt on a regular basis.
Fridging	The act of stealing alcohol from the locked or unlocked fridges within people's homes.
Humbugging	Humbugging is the term for an Aboriginal cultural obligation to provide money, goods or favours to relatives. Humbugging often leads to low work motivation as earnings are quickly seized by relatives and clan members with limited reward for the employee (Ferguson 2008).
Indigenous	Defined as Aboriginal and Torres Strait Islander (ATSI)
MJD	Previously referred to as 'Groote Eylandt Syndrome', Machado Joseph Disease (MJD) is a hereditary neuro-degenerative disease affecting the Aboriginal population of Groote Eylandt. Approximately 550 people across the Northern Territory have ancestors with MJD and are therefore thought to be at risk of developing the disease. The majority of sufferers and at-risk persons reside on the Groote Eylandt Archipelago.
Moiety	The moiety system in Australian Aboriginal culture divides all the members of a tribe, such as the Anindilyakwa People into two groups. A person is born into one or other group and this does not change throughout their life. (Welch undated).
New Mining Agreement	Under ALRA, the proponent is required to establish a new Mining Agreement with the ALC for the project. This Mining Agreement is under negotiation at the time of writing this SIA.
Non-resident workforce	Proportion of the workforce which does not reside permanently in the township or area in which they work. This term does not denote a specific mode of travel.

Outstation	Small, rural Aboriginal settlement with varying levels of occupation.
Regional Partnership Agreements	Regional Partnership Agreements are signed agreements between the Federal Government, Aboriginal groups and other key stakeholders, often local governments or mining companies, which aim to enhance the socio-economic development of Aboriginal communities through cross-sector cooperation.
Resident workforce	The proportion of the workforce which resides permanently in the township or area in which they undertake their work, i.e. proponent employees who live permanently on Groote Eylandt.
Sorry Business	Sorry Business is a term used by Aboriginal persons to refer to the death of a family or community member and the cultural obligations associated with the funerary and mourning process. These obligations can last a week or more and often prevent work attendance (SNAICC 2013).
Statistical Area	Statistical Areas are defined by the Australian Bureau of Statistics (ABS). These areas range from the smallest with population between 200 and 800 persons (Level 1) to the largest with populations between 100,000 to 500,000 (Level 4).
Township Lease	A Township Lease is an area of land that remains the property of the Traditional Owners of the land but which is leased to the Federal Government to manage on a long-term basis. A Township Lease 'unlocks' the land and opens up the opportunity for individuals, families and businesses to hold long-term transferable subleases over specific parcels of land. As a result, a mortgage can be obtained to buy or build houses, or start businesses. A Township Lease is negotiated by the Federal Government and the Traditional Owners of the township, who are represented by the associated Aboriginal Land Council and the Land Trust. The Township Lease is held by the Office of Township Leasing on behalf of the Federal Government for a period of time between 40 and 99 years.
Traditional Owners	The Traditional Owners of the Groote Eylandt Archipelago are the Anindilyakwa People.
Trepang	Sea cucumber.

EASTERN LEASES PROJECT SOCIO-ECONOMIC IMPACT ASSESSMENT

for
South32 Pty Ltd

1 INTRODUCTION

Hansen Bailey was commissioned by BHP Billiton Manganese Australia Pty Ltd to complete a Socio-economic Impact Assessment (SIA) as part of the Environmental Impact Statement (EIS) for the Groote Eylandt Mining Company Pty Ltd (GEMCO) Eastern Leases Project (the project).

1.1 THE PROJECT

The project involves the development of a number of open cut mining areas to the east of the existing GEMCO manganese mine on Groote Eylandt in the Gulf of Carpentaria, approximately 650 km south-east of Darwin (Figure 1). The proposed additional mining areas are located on two Exploration Licences in Retention (ELRs), known as the Eastern Leases. ELR28161 is termed the Northern Eastern Lease (Northern EL) and ELR28162 is termed the Southern Eastern Lease (Southern EL).

The Eastern Leases are located 2 km east of the existing GEMCO mine at the closest point. The township of Angurugu is located approximately 6 km to the north-west of the Eastern Leases, and is the closest residential community (Figure 2). The Eastern Leases are located on Aboriginal land, scheduled under the *Aboriginal Land Rights (Northern Territory) Act 1976* (ALRA). The land within the Eastern Leases comprises natural bushland, with the Emerald River and a small section of the Amagula River traversing the Northern EL and Southern EL respectively.

The project involves:

- Developing a number of open cut mining areas (termed “quarries”) within the Eastern Leases and mining manganese ore by the same mining methods that are in use at the existing GEMCO mine;
- Constructing limited mine related infrastructure in the Eastern Leases (dams, water fill points, crib hut, truck park up areas and laydown storage areas); and
- Transporting the ore by truck on a new haul road to be constructed between the existing GEMCO mine and the Eastern Leases.

Ore will be processed at the concentrator at the existing GEMCO mine and the concentrate will be transported to market via the existing port (Figure 2). No changes or upgrades to the existing GEMCO mine facilities are required as a result of the project. Ore mined from the Eastern Leases will supplement production from the existing GEMCO mine, however the project will not increase GEMCO's annual production rate of approximately 5 Million tonnes per annum of product manganese. The SIA does not include a comprehensive assessment of operations within the existing GEMCO mine, given that these operations are subject to existing environmental approvals and will not be altered by the project. However, the SIA assesses the socio-economic impacts of the project in conjunction with the operation of the existing GEMCO mine as this is considered part of the baseline for the SIA.

Mining in the Eastern Leases would take place concurrently with the operation of the existing GEMCO mine. According to current planning, construction in the Northern EL is proposed to commence in 2017 and mining activities would commence in 2018. Construction in the Southern EL is scheduled to commence approximately 4 years later in 2022 and mining would then take place in both of the tenements until approximately 2031.

1.2 PROJECT PROPONENT

The project proponent is GEMCO. GEMCO is a joint venture between South32 (60%) and Anglo American plc (40%), and is operated by South32. BHP Billiton Manganese Australia Pty Ltd was previously a shareholder in GEMCO, however its interest is now represented by South32.

1.3 PURPOSE AND SCOPE

1.3.1 Purpose of the Document

This SIA identifies and assesses the potential socio-economic impacts associated with the project and describes the proponent's commitments to manage potential impacts. In doing so, the SIA demonstrates compliance with the relevant regulatory requirements relating to the content and methodology for SIAs in the Northern Territory. Regulatory requirements are discussed in Section 1.4.

1.3.2 Scope of Work

The scope of this SIA is to provide:

- An overview of the regulatory requirements and associated corporate governance relating to local and regional socio-economic planning in the SIA study area;
- A description of the socio-economic baseline of the communities within the SIA study area (defined in Section 3), including:

- Population and demography;
 - Housing and accommodation;
 - Social infrastructure;
 - Education and employment; and
 - Community values and wellbeing.
- A description of key project details relevant to socio-economic considerations for the construction, operations and decommissioning phases;
 - A description of the predicted socio-economic impacts associated with the project;
 - An analysis of the significance of the predicted impacts using a risk-based approach consistent with the proponent's risk assessment procedure; and
 - Identification of strategies to manage or enhance the potential socio-economic impacts and benefits.

EIS consultation has been conducted with relevant stakeholders to inform the preparation of the socio-economic profile, to identify local community issues and community perceptions and to assist in the prediction of potential social impacts. The findings of the EIS consultation process are discussed in the Consultation Section in the main volume of the EIS, termed EIS Consultation Section in this document.

1.4 REGULATORY FRAMEWORK

The project is subject to the following Northern Territory regulatory requirements and guidelines relating to the conduct of SIA:

- Northern Territory Environment Protection Authority (NT EPA) Terms of Reference (TOR) for the project EIS, termed EIS TOR in this document (NT EPA 2014); and
- The NT EPA *Guidelines for the Preparation of an Economic and Social Impact Assessment Version 2.0* (NT EPA 2013).

Under the NT *Environmental Assessment Act*, the NT EPA has determined that an EIS is required to be prepared for the project. The SIA has been undertaken to satisfy the requirements of the EIS TOR issued by the NT EPA. Compliance with the TOR is demonstrated in the EIS Terms of Reference Section.

The NT EPA has published generic guidelines, titled *Guidelines for the Preparation of an Economic and Social Impact Assessment Version 2.0* (NT EPA 2013), for the preparation of an economic and social impact assessment. Reference to these guidelines is a requirement of the EIS TOR.

1.5 DOCUMENT STRUCTURE

The SIA is structured as follows:

- Section 1 – Introduction (this section) – provides an overview of the project and outlines the regulatory framework and scope of work for the SIA;
- Section 2 – Methodology – defines the SIA study area and provides a detailed explanation of the methodology adopted for the SIA;
- Section 3 – Project Setting – provides a brief description of the existing local and regional socio-economic environment within which the project is located, including settlement history and regional development;
- Section 4 – Profile of Existing Communities – summarises the key socio-economic characteristics of the local and regional study area relevant to the conduct of the SIA;
- Section 5 – Existing GEMCO Mine – describes the socio-economic characteristics of the existing mine, including workforce management arrangements, social investment strategy and stakeholder communications;
- Section 6 – Project Characteristics – presents the workforce and other characteristics of the project relevant to the assessment of socio-economic impacts;
- Section 7 – Impact Identification, Assessment and Management – describes the predicted socio-economic impacts, assesses the significance of each impact using a risk-based assessment process and presents the actions and strategies proposed by the proponent to avoid, mitigate or manage the impacts;
- Section 8 – Conclusions;
- Section 9 – References; and
- Appendix A – Risk Assessment Tables – provides the likelihood, severity and risk ranking of potential negative project impacts.

2 METHODOLOGY

This section defines the SIA study area and describes the methodology adopted for the SIA.

2.1 SIA STUDY AREA

The following sections define the local study area and regional study area for the SIA. In determining the local and regional study areas, consideration was given to the project's setting and the existing and emerging issues within the setting.

2.1.1 Local Study Area

The primary area of influence of the project is the island of Groote Eylandt. As a community isolated from the Australian mainland and as a predominantly Aboriginal community, Groote Eylandt presents a social system that is separate and distinct from the regional area. There are three main townships on Groote Eylandt (Figure 3);

- Alyangula – a primarily non-Indigenous township located on the north-western coast of Groote Eylandt housing the majority of the existing mine workforce;
- Angurugu – an Aboriginal township located inland of the western coast of Groote Eylandt, south of Alyangula; and
- Umbakumba – an Aboriginal township located on the north-eastern coast of Groote Eylandt.

The local study area for the project has been defined as the Australian Bureau of Statistics (ABS) Anindilyakwa Statistical Area Level 2 (SA2) with a focus on the Urban Centre/Localities (UCLs) of Alyangula, Angurugu and Umbakumba. The Anindilyakwa SA2 comprises Groote Eylandt and a smaller, less populous neighbouring island, Bickerton Island (Figure 3).

2.1.2 Regional Study Area

Due to the isolated nature of Groote Eylandt, the project's impacts are likely to be confined to the local study area. However, examination of the region within which Groote Eylandt is located can assist in contextualising data from the local study area. The regional study area is defined as the East Arnhem Local Government Area (LGA) (Figure 3).

2.2 PROFILING THE SOCIO-ECONOMIC ENVIRONMENT

Understanding the local and regional socio-economic setting of the project was important for identifying and analysing potential project impacts. Socio-economic profiling was conducted for the local and regional study areas and included the collection and analysis of a

comprehensive set of quantitative and qualitative data for a range of social and economic indicators. This approach ensured a thorough understanding of the existing socio-economic environment, particularly at the local level. Each township was analysed at the local level against the full set of quantitative indicators.

Local level information was then contextualised by collecting and analysing information at the broader regional and Territory level. Different baseline information is presented in the profiles of Alyangula, Angurugu and Umbakumba due to the significant socio-economic differences between these townships.

2.2.1 Information Sources

A variety of desktop and consultative sources were used to profile the communities of the local and regional study area. The principal sources are discussed in the following sections and include:

- Quantitative data sources;
- Literature review; and
- Project-specific EIS consultation.

Quantitative Data Sources

Quantitative data provided background information for the assessment of socio-economic impacts. Key sources of data included:

- ABS data, including 2006 and 2011 Census data;
- Commonwealth Department of Employment, formerly the Commonwealth Department of Education, Employment and Workplace Relations (DEEWR);
- Commonwealth Department of Social Services (DSS);
- Anindilyakwa Land Council (ALC) website and publications; and
- East Arnhem Regional Council (EARC) website including EARC publications.

These sources provided quantitative data to describe the socio-economic indicators identified in the EIS TOR for the local and regional study area.

Literature Review

A focus of the SIA was to review the wide range of:

- Literature prepared by research institutions and state government agencies related to the socio-economic conditions of Groote Eylandt; and
- Policies and documents published by Local and Territory Government agencies that are relevant to the social, economic and land use planning issues analysed in the SIA.

The purpose of the review was to confirm the identification of the local and regional study areas, identify existing and emerging socio-economic issues in the study areas and identify key groups who may be impacted by the project. All literature reviewed for the SIA and referenced herein is documented in Section 9.

Project Specific SIA Consultation

Consultation for the SIA was undertaken to validate the socio-economic profile of the study area, and assist in the identification and assessment of socio-economic impacts. A total of 38 individual and small group meetings were conducted as either face-to-face meetings or telephone calls with Local Government representatives, proponent employees and contractors, local facility and service providers, residents of Groote Eylandt communities and other interested parties. A total of 54 participants took part in these meetings.

Further detailed information relating to the project EIS and SIA consultation, including a list of the key issues and concerns raised, is available in the EIS Consultation Section.

2.2.2 Information Limitations

The collection of information for the SIA was restricted by limitations on the accuracy of available data relating to Aboriginal populations and the accessibility of the Aboriginal population of Groote Eylandt.

ABS Census results are the primary source of data for the SIA baseline as they are comparable across regions and offer standardised units of measurement for common variables. However, the ABS Census is based upon homogenised definitions of households, families and employment which do not necessarily correlate with Aboriginal understandings of these concepts. As a result, ABS Census data for Aboriginal persons, especially those within remote Aboriginal communities, is often subject to a lower level of accuracy than data collected in non-Aboriginal communities (Morphy, 2011).

The scope of EIS consultation, undertaken as part of the SIA, with the Aboriginal population of Groote Eylandt was influenced by a number of elements, including:

- The presence of established protocols for the proponent's engagement with the Traditional Owners on Groote Eylandt. Consultation conducted by the proponent with Traditional Owners on Groote Eylandt is required to follow the communication protocols described in the current (2006) Mining Agreement for the existing GEMCO mine (described in Section 5.3). In accordance with the 2006 Mining Agreement, the ALC is responsible for authorising or conducting EIS consultation with the Traditional Owners on behalf of the proponent and as a result, the questions asked of Traditional Owners during EIS consultation had to be approved by the ALC prior to consultation taking place.

- Initial reluctance by Traditional Owners to speak with independent consultants with whom they had no established relationship.
- Reluctance by Traditional Owners to speak *for the land*, as they did not identify as the representative of that land. However, many participants were happy to engage once they were made aware that EIS consultation was about their personal feelings and that they were not being asked to represent the concerns of their families or clan groups.
- English is a second language for many of the Aboriginal participants, which led to participants tiring rapidly of conversation. As a result, EIS consultation with Aboriginal participants was limited to key concerns.

Despite the limitations on EIS consultation with Aboriginal stakeholders, a representative sample of stakeholders was achieved and valuable insight gained into the issues and concerns of the residents of Angurugu and Umbakumba in relation to the project.

2.3 IMPACT ASSESSMENT

Impacts were assessed using a risk management approach consistent with requirements of the EIS TOR. The significance of negative impacts was identified using the risk matrix illustrated in Table 1. A detailed risk assessment table is provided in Appendix A.

**Table 1
Risk Matrix**

Likelihood	Almost Certain							
	Likely							
	Possible							
	Rare							
	Very Rare							
Low		1	2	3	4	5	6	7
Moderate		Severity						
High								

Source: adapted from BHP Billiton 2013a

Rankings in this risk matrix were assigned following EIS consultation and reflect the likelihood and the level of severity of the impact. The identification of likelihood and severity is based on the definitions in Table 2.

Table 2
Likelihood and Severity Scales

Likelihood	
Almost Certain	Could be expected to occur more than once during the study or project delivery
Likely	Could easily be incurred and has generally occurred in similar studies or projects
Possible	Incurred in a minority of similar studies or projects
Rare	Known to happen, but only rarely
Very Rare	Conceivable but only in extreme circumstances
Severity	
7	Severe, widespread community health, safety or security impacts (>1000 households) or human rights violations; complete destruction of >1000 houses or community infrastructure; complete irreversible desecration of multiple structures/objects/places of global significance.
6	Extensive community health, safety or security impacts (>200 households) or human rights violations; extended serious disruption to people's lives (>1000 households); extensive damage to >1000 houses or community infrastructure or structures/ objects/places of global cultural significance.
5	Serious community health, safety or security impacts (>50 households) or human rights violations; extended disruption to people's lives (>200 households), extensive damage to >200 houses or structures/ objects/places of national cultural significance.
4	Serious community health, safety or security impacts (<50 households). Multiple allegations of human rights violations; extended disruption to people's lives (>50 households); extensive damage to >50 houses; moderate irreversible damage to structures/ objects/places of national cultural significance.
3	Moderate community health, safety or security impacts (<50 households). Single allegation of human rights violations; moderate disruption to people's lives (<50 households); extensive damage to <50 houses; moderate reversible damage to structures/objects/ places of national cultural significance.
2	Minor community health, safety or security impacts (<10 households) or human rights infringements; inconvenience to livelihoods <6 months; moderate damage to <50 houses or community infrastructure; minor, reversible damage to structures/ objects/places of regional cultural significance.
1	Single low level community health, safety or security impact; low-level inconvenience <2 weeks; minor, reversible, low-level disturbance or minor damage to a single house or structure/object/place of regional cultural significance.

Source: adapted from BHP Billiton 2013a

The final risk ranking was determined from Table 1. Negative impacts were ranked and the appropriate level of management was determined as follows:

- Low – monitor and manage as necessary;
- Medium – actively manage; and
- High – proactively manage.

Positive impacts do not require mitigation. Enhancement measures were identified for positive impacts where possible.

2.4 MITIGATION AND MANAGEMENT MEASURES

The existing mine has operated on Groote Eylandt for more than 50 years. The proponent has an existing framework of socio-economic management procedures. These existing procedures will be applicable to the project and are described in Section 5.6. In addition to these procedures, the SIA identified additional avoidance, mitigation and management actions to address potential project impacts (Section 7.2). These additional measures are based on the outcomes of EIS consultation and technical studies.

3 PROJECT SETTING

This section provides a description of Groote Eylandt, including settlement history and governance. The purpose of this section is to assist the reader in understanding the context in which the project's potential socio-economic impacts have been assessed.

3.1 OVERVIEW

Groote Eylandt is the largest island in the Gulf of Carpentaria and is approximately 2,285 km² in size; approximately 50 km east to west, and 60 km north to south. The island was named by explorer Abel Tasman in 1644. Groote Eylandt is an archaic spelling of the Dutch words for "large island". Groote Eylandt is the largest island in the Groote Eylandt Archipelago, which also includes the neighbouring Bickerton Island and a number of nearby smaller uninhabited islands (Figure 3). The lands and seas of the Groote Eylandt Archipelago are Aboriginal country. The Aboriginal Traditional Owners of the Groote Eylandt Archipelago are the Anindilyakwa People.

There are four main urban centres on the Groote Eylandt Archipelago, namely the mining township of Alyangula, the two Aboriginal settlements of Angurugu and Umbakumba on Groote Eylandt, and the Aboriginal settlement of Milyakburra on Bickerton Island (Figure 3).

There is also a scattering of outstations (small, rural Aboriginal settlements) across Groote Eylandt (Figure 2). Aboriginal participants involved in EIS consultation reported varying levels of use of outstations from occasional visitation to permanent occupation. Many outstations on the island are in poor repair, lack adequate infrastructure or have poor quality road infrastructure. The two closest outstations to the project site are Wurrumenbumanja, colloquially referred to as the Leske Pools outstation, and Yedikba, known as the Emerald River outstation. Aboriginal participants involved in EIS consultation noted that the Leske Pools outstation is occupied sporadically by a number of Aboriginal residents, and the Emerald River outstation is occupied more frequently. At the time the meetings were carried out, neither outstation was occupied.

Table 3 details the population of the main communities on Groote Eylandt, the population of the Anindilyakwa SA2, the East Arnhem LGA and the Northern Territory for comparison. Together, Alyangula, Angurugu and Umbakumba contain over 87% of the resident population of Anindilyakwa SA2.

Table 3
Key Population Characteristics, 2006 and 2011

Population Characteristic	Angurugu UCL	Alyangula UCL	Umbakumba UCL	Anindilyakwa SA2	East Arnhem LGA	Northern Territory
2011 Census						
Population	835	986	441	2,571	14,019	211,943
Indigenous	794	89	413	1,559	8,634	56,778
Indigenous (%)	95.1	8.9	93.7	60.6	61.6	26.8
2006 Census						
Population	813	956	350	2,335	13,943	190,999
Population growth 2006-2011 (%)	2.7	3.1	26.0	10.1	0.5	11.0

Source: ABS 2014

3.2 SETTLEMENT HISTORY

This section acknowledges and describes key events in the history of Groote Eylandt, post European settlement. Events that have specific relevance to the identification and assessment of socio-economic impacts for the project are also described.

3.2.1 Pre Mining on Groote Eylandt

Groote Eylandt was historically inhabited solely by Aborigines, with the occasional visitors from the Indonesian Archipelago. In 1921, the Anglican Church Missionary Society (CMS) established a mission on Groote Eylandt near the present day location of the Yedikba Outstation on the Emerald River (Figure 2). The Emerald River Mission was moved to the current site of Angurugu Township when the Royal Australian Air Force acquired the airstrip at Emerald River for defence purposes during the Second World War (ALC 2012a).

The township of Umbakumba was initially a base for the harvesting of trepang (sea cucumbers) and a service base for Qantas and the Royal Australian Air Force during the Second World War. Following the end of the Second World War, the CMS ran Umbakumba as a second mission until 1966 when the Federal Government took over administration of the town (EARC 2014).

3.2.2 Commencement of Mining

The proponent's mineral leases were established under a private agreement between the CMS and GEMCO in 1963. This private agreement was for the CMS to withdraw its prospecting rights in return for agreed lump sum payments and ongoing royalties, paid to the Groote Eylandt Aboriginal Trust (GEAT). GEAT was established by the CMS for the purpose of receiving these mining payments. The Anindilyakwa People were not legal signatories to

the agreement which first allowed mining on Groote Eylandt because Aboriginal land rights were not recognised at this time.

In 1965, Mineral Leases (Northern) (MLN) 951-953 were granted to the proponent for a period of 21 years with a right of renewal. Parts of the existing mine are located within these mineral leases. Royalties associated with the granting of the mineral leases were transferred to the Aborigines (Benefits from Mining) Trust Fund (now the Aborigines Benefit Account (ABA)).

The township of Alyangula was established by the proponent in 1965 under a Special Purposes Lease with the Northern Territory Government. Alyangula was established as a township to service the workforce of the mine, the majority of whom were not from the island. In 1974, the proponent was granted additional mineral leases (MLN 956-961).

3.2.3 Introduction of Aboriginal Land Rights

In 1976, ALRA was passed, and Groote Eylandt became Aboriginal Freehold Land. ALRA is Commonwealth legislation, which provides a comprehensive scheme for the claiming and granting of freehold title to traditional Aboriginal land in the Northern Territory. It provides Aboriginal landowners with legal title to traditional lands. ALRA also outlines a process for obtaining consent from the Traditional Owners for exploration and mining on Aboriginal land. Consent is obtained in the form of an Exploration Agreement or Mining Agreement with the relevant Land Council.

ALRA allowed for the establishment of Land Councils to govern and administrate Aboriginal Lands. The Northern Land Council was established in 1974, shortly before ALRA was passed. At the time of its establishment, the Northern Land Council's area of administration included Groote Eylandt. However, with the establishment of the ALC in 1991, the Northern Land Council no longer has administration of the Groote Eylandt Archipelago.

3.2.4 Self-Governance

In the late 1970s, the Angurugu mission ceased operations and Angurugu became a self-governing Aboriginal town. Umbakumba achieved self-governance in the early 1980s. Both towns were then administered by independent Aboriginal Town Councils.

In 1991, the ALC was formed to replace the role of the Northern Land Council in the Groote Eylandt Archipelago. The ALC operations are overseen by an Executive Board consisting of two representatives from each of the 14 clan groups on Groote Eylandt and one representative from each of the three Aboriginal townships of Angurugu, Umbakumba and Milyakburra.

In 2006, the existing mineral leases were renewed for a further term of 21 years. The ALC was a signatory to the 2006 Mining Agreement, pursuant to the conditions of ALRA. Under the conditions of the 2006 Mining Agreement the proponent is required to continue royalty payments to GEAT and to make royalty payments to the ALC on behalf of the Traditional Owners. These royalty payments are in addition to the payments made to the Northern Territory Government under the provisions of the *Mineral Royalty Act*.

In 2006, the Federal Government declared the Groote Eylandt Archipelago an Indigenous Protected Area (IPA). An IPA is an area of Indigenous-owned land or sea where traditional owners have entered into an agreement with the Federal Government to promote biodiversity and cultural resource conservation (Department of the Environment 2013). As part of the IPA program, the Federal Government supports the Anindilyakwa People to manage the Groote Eylandt Archipelago for conservation as part of Australia's network of protected areas. The Federal Government supports the work of the Anindilyakwa People through the Working on Country (WoC) Initiatives (DEWHA 2008). WoC is a Federal Government program that provides employment and training opportunities for Aboriginal and Torres Strait Islander (ATSI) peoples living in regional and remote Australia to undertake natural resource management work that aligns with the Federal Government's and local community environmental and cultural priorities (URBIS 2012). The ALC Land and Sea Rangers program operating on Groote Eylandt is an example of a WoC initiative.

3.2.5 Regional Partnership Agreement Stage 1

In 2008, the Groote Eylandt and Bickerton Island Regional Partnership Agreement (RPA) (DSS 2013) was signed by the ALC, the Federal Government and the Northern Territory Government. This was the first RPA to be signed in the Northern Territory. The RPA was an initiative to assist these parties to work together to improve conditions for Aboriginal people living in the Anindilyakwa region. The RPA was designed to address locally identified priorities and support progress towards sustainable and measurable outcomes. It is also a commitment to improve conditions, work more closely with local people and organisations to implement services and programs, and to develop innovative solutions to key issues. The RPA was a direct response to the socio-economic conditions present on Groote Eylandt at that time. The Northern Territory local government system was undergoing significant restructuring at the time that the RPA was signed; hence the EARC was not a signatory.

3.2.6 Governance Changes

In 2008, the EARC was formed under the NT's *Local Government Act* to provide core Local Government Services to nine remote communities of Arnhem Land including Angurugu and Umbakumba on Groote Eylandt and Milyakburra on Bickerton Island (EARC 2014). The area administered by the EARC is the East Arnhem LGA.

In December 2008, the ALC negotiated with the Federal Government Office of Township Leasing (OTL) a Whole-of-Township Lease (Township Lease) over the communities of Angurugu, Umbakumba and Milyakburra. The term of the Township Lease was for an initial period of 40 years with an option exercisable by the Executive Director OTL for a further 40 years. In 2012-13 the Executive Director OTL extended the Township Lease for a further 40 years. The Township Lease will now expire on 3 December 2088.

The Township Lease negotiated by the ALC primarily provides certainty of tenure over the land within Angurugu, Umbakumba and Milyakburra. "Certainty of tenure" means that organisations who want to enter into a sublease over land within one of the townships now have some certainty that they can operate their business activity for the life of their sub lease (Commonwealth Government 2014b). The Executive Director OTL hopes that the recent extension to the Township Lease will assist the attraction and retention of major private investment to Groote Eylandt. The longer term lease will also allow the Executive Director OTL to grant long term home ownership style subleases to community members - should they be interested in entering into lease arrangements (Commonwealth of Australia 2013).

3.2.7 Regional Partnership Agreement Stage 2

In 2009, the proponent and the EARC became signatories to the RPA. The inclusion of the EARC acknowledged the role of Local Government in the development of Groote Eylandt. The inclusion of the proponent acknowledged its significant role in the economic development of Groote Eylandt. The RPA is an important vehicle for the proponent's community development and investment commitments on Groote Eylandt (Section 5.6). The RPA provides direction on potential areas of investment by the proponent.

3.3 ANINDILYAKWA PEOPLE

The Traditional Owners of Groote Eylandt Archipelago are an amalgamation of two cultures, the *Warnindilyakwa*, and the *Nunggubuyu* (ALC 2014). The Traditional Owners are made up of 14 clans groups, divided into two moieties, united by a common culture of kinship, ceremony and language. Both cultures speak, as their first language, Anindilyakwa and the land, people and culture are also referred to by this term. To avoid confusion, the Anindilyakwa land is referred to by the SA2 statistical area or as the Groote Eylandt Archipelago throughout the SIA. Table 4 outlines the clan groups of the Groote Eylandt Archipelago and the main settlements in which these clans reside.

Table 4
Clans of Groote Eylandt Archipelago

Settlement	Clan Groups
Angurugu	Lalara, Maminyamanja, and Wurrawilya
Umbakumba	Originally the Warnindilyakwa Clan who then invited other clans to live in Umbakumba: Bara, Wurrawilya, Maminyamanja, Barabara, Jaragba, Yantarranga.
Milyakburra	Wurramara, Bara, Mamarika, Lalara, Wurrawilya, Yantarrnga, Wurramarrba and Durilla.

Source: ALC 2014

Advice from the ALC indicates that the Eastern Leases are located within land belonging to the following five clan groups:

- Maminyamanja;
- Wurrawilya;
- Amagula;
- Wurramara; and
- Mamarika.

In addition, the Lalara clan is the Jungai (spiritual leader) for the area in which the Eastern Leases are located.

The remote location of the Groote Eylandt Archipelago has fostered a strong attachment to traditional culture among the Anindilyakwa People. Almost all Anindilyakwa speak the language as their first (and sometimes only) language. Ceremony and spirituality play a central role in Anindilyakwa life on the Groote Eylandt Archipelago and traditional practices and cultural norms are still prominent on the Archipelago. Anindilyakwa People are proud and protective of their culture. Throughout the EIS consultation, the value placed on culture and language was evident; this is discussed further in Section 4.2.4.

3.4 GOVERNANCE

3.4.1 East Arnhem Regional Council

The communities of Angurugu, Umbakumba and Milyakburra form part of the East Arnhem LGA, administrated by the EARC (Figure 3). The EARC headquarters is in Nhulunbuy on the mainland, with a service delivery centre located in the Angurugu and Umbakumba communities.

The EARC is responsible for the provision of municipal services, including but not limited to rubbish collection, aged and disability welfare services, maintenance of infrastructure

including roads and street lighting as well as a number of children and family wellbeing programs. These services are provided to all communities on the Groote Eylandt Archipelago including Angurugu, Umbakumba and Milyakburra but excluding any Special Purpose Lease areas (i.e. Alyangula township). The provision of these services to Alyangula is the responsibility of the proponent.

In 2014, the NT Government through reforms to the NT *Local Government Act* introduced a requirement for Regional Councils to establish and maintain a Local Authority in each of the towns and communities within the Regional Council Area. Local Authorities were established in the communities of Angurugu, Umbakumba and Milyakburra in July 2014. The purpose of each Local Authority is to advise and direct the EARC on behalf of the community, empower local representatives, inform elected members and stakeholders of relevant issues and concerns, and respect the cultural structures and complexity of traditional society.

Local Authorities have between six and fourteen members and must meet a minimum of six times each calendar year. Structured meetings provide a platform and opportunities for the community to advise and direct the EARC. The Angurugu and Umbakumba Local Authorities have met twice since July 2014.

3.4.2 Commonwealth Government Office of Township Leasing

Groote Eylandt Township Leases

The Executive Director OTL is responsible for administering the Township Leases over Angurugu and Umbakumba on Groote Eylandt. The position of Executive Director OTL was established under ALRA. The Executive Director is an independent statutory office holder who works with communities to ensure that the townships lease is managed effectively and provides a real benefit to the Aboriginal traditional owners and the broader community (Commonwealth of Australia, 2014a).

For the purpose of the planning process, the Executive Director OTL is the land owner/land holding entity and hence is responsible for providing landowner approval for developers who wish to develop land within the Township Leases.

The Executive Director is responsible for appointing a Township Leasing Consultative Forum on Groote Eylandt. The Groote Eylandt Consultative Forum consists of representatives of Traditional Owners nominated by the ALC. The Consultative Forums are crucial in the governance of the Township Leases; they discuss land use and other issues relating to the performance of the lease and facilitate communications between the Executive Director and Forum members who in turn seek views and share information with the rest of the community. During 2012-2013, the Groote Eylandt Consultative Forum met to discuss road management, sublease proposals and the 40 year extension of the Township Leases (Commonwealth of Australia, 2013).

Financial Components

There are two fundamental financial components of the current Township Leases: an Advance Rental Payment and a Community Benefits Package. Both payments are made by the Federal Government.

The Advance Rental Payment to the ALC was a lump sum upfront payment of \$4.5 million for the first 15 years of sublease rental income from the Federal Government, made upon signing the Township Lease. The Advance Rental Payment provided funding for the Traditional Owners to invest in economic projects located in their Townships or elsewhere. To date the ALC has invested in a wide variety of projects but principally in long-term economic opportunities that are intended to provide for future generations.

The Community Benefits Package is a separate payment to the Advance Rental Payment and delivers whole of community benefits. Projects delivered under this package are usually negotiated and managed by DSS. The Community Benefits Package for the Groote Eylandt Archipelago is administered through the RPA (Section 3.5.2). The Executive Director OTL has facilitated tenure to support a number of projects progressed through the RPA including the development of accommodation at the Angurugu Aged Care Facility, Government staff housing in Angurugu and Umbakumba and a new health clinic at Umbakumba (Commonwealth of Australia, 2012).

3.4.3 Anindilyakwa Land Council

The ALC is the Land Council for the Groote Eylandt Archipelago. Under ALRA, Land Councils are statutory bodies which represent the interests of Aboriginal persons in relation to their land.

The ALC is responsible for supporting the protection of sacred sites on the Groote Eylandt Archipelago, negotiating claims to land within the ALC jurisdiction and creating and enforcing recreation areas on Groote Eylandt and Bickerton Island, which are the only areas that are open for non-Aboriginal access (via a permit system), outside of the townships.

The ALC is the principal voice of the Aboriginal community on Groote Eylandt. In relation to the existing mining operations, the ALC is the conduit for the distribution of relevant information between the proponent and Traditional Owners on Groote Eylandt.

In accordance with ALRA, the ALC was responsible for the negotiation of the 2006 Mining Agreement for the existing mine. The ALC is currently responsible for negotiating a new Mining Agreement with the proponent for the project and an agreement under Section 19 of ALRA for access to the proposed haul road corridor for the project. The ALC is also responsible for negotiating agreements in relation to any further mining activity on the island.

The ALC is also responsible for distributing royalty payments from the proponent's operations to Anindilyakwa individuals and working to elevate socio-economic conditions on the island. The ALC funds an incorporated body, Groote Eylandt and Bickerton Island Enterprise (GEBIE), which funds and manages a number of Aboriginal enterprises on the island. The aim of GEBIE is to elevate the socio-economic status of the residents of Groote Eylandt through access to employment and business opportunities. GEBIE manages the investment of the bulk of the royalties that the ALC receives from the proponent's operations. The royalties are invested in:

- GEBIE Civil and Construction, an Aboriginal construction company which undertakes contract work on Groote Eylandt;
- GEBIE Job Shop;
- GEBIE Investments; and
- A property trust in conjunction with Indigenous Business Australia (IBA). IBA is a commercially-focused organisation that promotes and encourages self-management, self-sufficiency and economic independence for Indigenous persons.

Royalty payments to the ALC have resulted in a number of substantive improvements on Groote Eylandt, including:

- The implementation of the RPA, as described in Section 3.5.2;
- Funding the construction of Knowledge Centres in Alyangula, Angurugu, Umbakumba and Milyakburra to positively engage Anindilyakwa People in the development and protection of their culture;
- Supporting cultural practices associated with funerals and ceremonies; and
- Production of a health DVD on alcohol and safety.

3.5 REGIONAL PLANNING AND DEVELOPMENT

3.5.1 Anindilyakwa Land Council Strategic Plan

The ALC's *15 Year Strategic Plan 2012-2027* (ALC 2012a) (ALC Strategic Plan), recognises that dependence on royalties is not sustainable and planning for the future of the Groote Eylandt Archipelago post-mining is a pivotal issue. The ALC's vision for the plan is to:

- Protect, maintain and promote the Anindilyakwa culture;
- Invest in the present to build a self-sufficient future; and
- Create pathways for youth to stand in both worlds (the Anindilyakwa culture and mainstream Australian society).

The ALC is investigating a number of goals to increase the sustainability of communities on the Groote Eylandt Archipelago, including:

- Creating a carbon-offset economy with solar farming;
- Gaining government protection for the sea surrounding the Archipelago;
- Developing market gardens for food production;
- Increasing health servicing in Angurugu and Umbakumba;
- Refurbishing the Angurugu School;
- Managing substance abuse;
- Increasing employment on Groote Eylandt;
- Promoting strong leadership within the community; and
- Developing a living cultural economy through protecting local knowledge and language, and encouraging cultural enterprises (ALC 2012a).

3.5.2 Regional Partnership Agreement

As noted in Section 3.2.5, the Groote Eylandt and Bickerton Island RPA was the first RPA to be signed in the Northern Territory (DSS 2013). The RPA is now in its second stage of implementation, due for completion in 2014. Major accomplishments during the first and second stages include:

- Establishment of township leases over Angurugu and Umbakumba;
- Establishment of the GEBIE 'Job Shop', which provides employment and job readiness training to Aboriginal residents of Groote Eylandt;
- Building of a basic police office and overnight quarters for officers in Angurugu;
- Sealing and upgrade of the road between Angurugu and Umbakumba;
- Building of 80 new houses and refurbishment of 110 houses in Angurugu and Umbakumba;
- Construction of eight houses for teachers in Umbakumba;
- Upgrade of the Umbakumba Australian Football League (AFL) oval;
- Completion of a study into the future care needs of sufferers of Machado Joseph's Disease (MJD), a degenerative disease affecting the Aboriginal population of Groote Eylandt; and
- Completion of a study into the fluoridation of water on Groote Eylandt.

The RPA was independently reviewed in 2012, and the review found that:

“The Groote Eylandt and Bickerton Island RPA is working very strongly as a government, Indigenous community and industry partnership. It exhibits effective qualities of leadership, an ethos of collaboration and trust and effective management practice” (Browne and MacDonald 2012).

A third stage of the RPA is proposed and a list of potential actions for inclusion in this third stage has been drafted by the ALC (ALC 2012a). However, at the time of writing this SIA, the third stage had not yet been signed off for implementation.

3.5.3 Local Implementation Plans

Local Implementation Plans (LIPs) have been prepared by the Federal Government for both the Angurugu and Umbakumba communities on Groote Eylandt. The LIPs contain long-term commitments based on delivering coordinated and targeted development in Indigenous Communities (Commonwealth of Australia, 2010a,b). The LIPs set out the priorities for each community and include targets, actions, success measures and timelines for achieving those priorities. The LIPs for both the Angurugu and Umbakumba communities are based on the RPA described in Section 3.5.2.

4 PROFILE OF EXISTING COMMUNITIES

This section provides a description of the socio-economic baseline of the main communities on Groote Eylandt. The purpose of this section is to assist the reader in understanding the baseline against which the project's potential socio-economic impacts have been assessed.

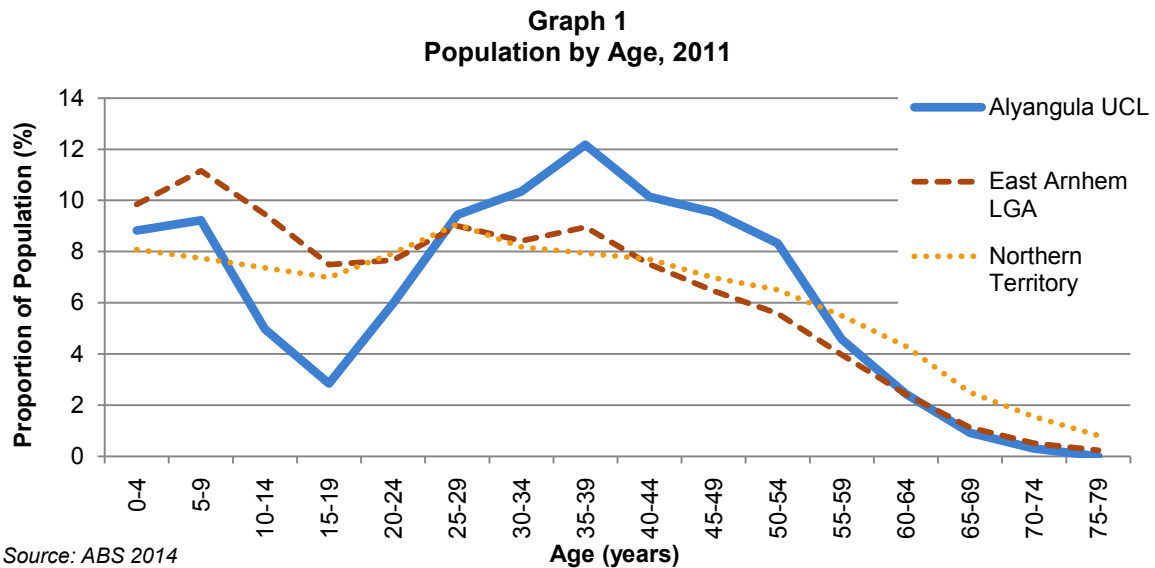
4.1 ALYANGULA

4.1.1 Overview

Alyangula Township is located on the north western coast of the island and had a population of approximately 980 residents in 2011 (ABS 2014). This population is the resident population and does not include the non-residential workforce for the existing mine. In reality, at any time there are an additional 380 persons who reside in Alyangula in accommodation villages and utilise township services. Due to the nature of the Special Purpose Lease over Alyangula, residence in the township is restricted to the proponent's workforce and their families, and service providers such as police and teachers. The proponent has responsibility for the provision of services and facilities to the Alyangula community.

4.1.2 Demography

The population of Alyangula consists primarily of the existing mine workforce and their families. Over 90% of the township's population is non-Indigenous, compared to less than 75% of the Northern Territory population. The age profile of Alyangula is significantly different from that of the East Arnhem LGA and the Northern Territory, as shown in Graph 1. Alyangula is characterised by a high proportion of working-aged persons (76%) and a low proportion of people aged 0-14 years (less than 23%) compared to the East Arnhem LGA and Northern Territory population. Alyangula also has a low proportion of people aged 65 years and older (approximately 1%) compared to the Northern Territory.



The high proportion of working age population in Alyangula is due to the company-owned nature of the township; the majority of people living in the township are working, or recently worked, for the proponent and are therefore of working age. Consultation with Alyangula residents revealed that the township is not ideal for teenagers; there are few opportunities for recreation and socialisation and as a result, families with teenagers often send their teens to boarding school or move off-island.

The population base of Alyangula is stable but transient. Residents reported that most families stay for a period of three years. This timeframe is equivalent to the minimum employment period before the proponent will meet the costs associated with relocation off-island. The township has a significantly higher rate of mobility than the Northern Territory, with over 30% of residents having moved from outside of their current SA2, and therefore the Groote Eylandt Archipelago, within the last year. Comparatively, 19% of people in the Northern Territory had moved between SA2s in the same year (ABS 2014).

4.1.3 Housing and Accommodation

Housing Provision

While the proponent holds a Special Purposes Lease for the township of Alyangula, the underlying land is Aboriginal Land under ALRA and as such, private ownership of housing and land is not permitted. There are approximately 345 dwellings in Alyangula, with the majority of these comprising two and three bedroom raised weatherboard homes.

The majority of housing in Alyangula is provided by two entities:

- The proponent; and
- Northern Territory Department of Housing (NT DOH).

NT DOH is responsible for the provision of housing in Alyangula for government service providers e.g. Northern Territory Department of Education (NT DOE), Northern Territory Department of Health. In addition the Northern Territory Police, Fire and Emergency Services provide three houses in Alyangula for staff.

Non-government service and facility providers e.g. Alyangula Golf Club, and a small number of business owners with businesses in Alyangula or at Milner Bay Port also provide housing in Alyangula.

The ALC, GEBIE and Aminjarrinja Enterprises (Aminjarrinja) (an Aboriginal organisation based in Umbakumba), own houses in Alyangula.

Table 5 summarises the provision of housing in Alyangula.

Table 5
Estimated Number of Houses and Home Ownership in Alyangula, 2014

Owner	Estimated Number of Houses
The proponent	258
NT DOH and Northern Territory Police	52
GEBIE	13
Small business owners	9
Non-government service providers	6
Aminjarrinja	4
ALC	3
Total	345

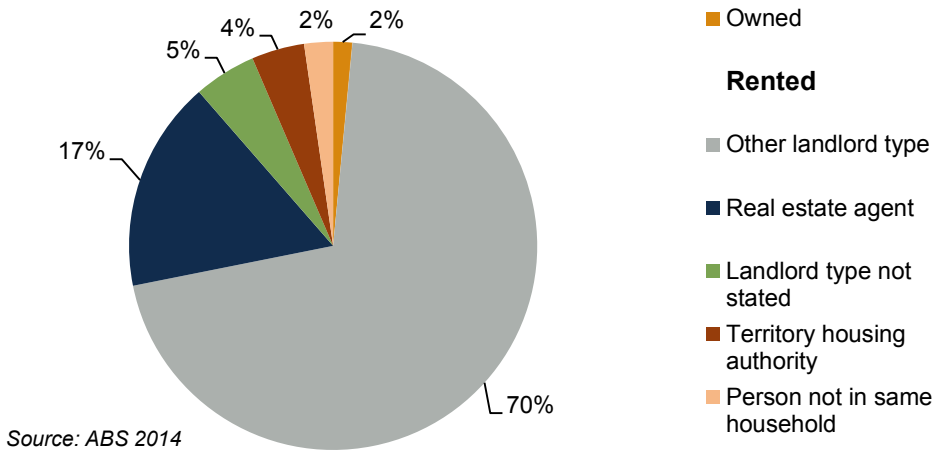
Source: Proponent and ALC provided data

There is no private housing market in Alyangula. It was reported during EIS consultation that the lack of available housing in Alyangula is limiting the ability of service providers and business owners to recruit as many staff as they need. Employers in Alyangula are required to provide accommodation for their staff because there are no private rentals in the township. Each business and service has associated accommodation, with the accommodation for government services being owned or leased by the relevant government department.

Dwelling Tenure

Consultation indicated that the majority of houses in Alyangula are rented from the proponent or leased from the Northern Territory Government. This was supported by ABS Census statistics, which showed that over 70% of private dwellings in Alyangula were rented from an “other landlord type” (Graph 2). There are a small number of houses owned by business owners in the township, which are attached to their respective businesses.

Graph 2
Dwelling Tenure, Alyangula 2011



Accommodation Villages

In addition to the houses in Alyangula, there are a number of accommodation villages. These accommodation villages house the Fly-In Fly-Out (FIFO) workforce for the existing mine, and are described in Section 5.2.4.

Short-Term Accommodation

Short-term accommodation in Alyangula is available at the Dugong Beach Resort, which was developed by GEBIE and the ALC. The Dugong Beach Resort offers 60 rooms and 12 deluxe permanent tents, and is the only short-term accommodation provider on the Groote Eylandt Archipelago. The resort is occasionally utilised by the proponent for short-term workforce overflow and by regulators visiting the existing mine. The general isolation of Groote Eylandt, along with the prohibitive travel costs have meant that tourism has not yet evolved on Groote Eylandt. As a result, the Dugong Beach Resort is largely sustained by the proponent's periodic use and the operation of a small restaurant popular with residents of Alyangula.

4.1.4 Local Values and Community Cohesion

Residents of Alyangula described the township as a relaxed, friendly community. Many residents reported that they valued the community for its coastal amenity, small size and peaceful lifestyle. Residents often noted the township's isolation from the mainland, both in terms of geographical distance and connection with the world off-island, referring to Alyangula as "a time-warp" and "very old-fashioned".

The natural environment of Groote Eylandt is considered a significant feature of life in Alyangula, with fishing and visiting recreation areas, such as Leske and Naked Pools (Figure 2), reported by residents as favourite recreation activities. Access by non-Aboriginal residents to all recreation areas outside the key communities on Groote Eylandt is controlled

by the ALC. In recent years, public access to recreation areas has been the subject of increasing restriction as a result of failure by some non-Aboriginal visitors to comply with ALC access conditions. However, residents noted the proponent's zero-tolerance approach to workforce misbehaviour and there is an awareness that breaches result in immediate and permanent removal from the island.

Volunteer participation in Alyangula was significant in 2011, with over 23% of persons volunteering compared to 16% across the Northern Territory. Sport and recreation clubs are run by volunteers and due to the small population of the township, the diversity of clubs depends primarily on whether there is someone living in Alyangula who is willing to run a specific activity. At the time of EIS consultation, there was an active Scouts group which had up to 70 children in attendance despite only being in operation for less than two years. A dance class for young children, BMX club, fishing club and local AFL teams were also noted as popular activities in the township.

The majority of residents noted changing rosters and an increasing level of FIFO work practices in the town as detrimental to the sense of community. Long-term residents reported that the number of workers employed on a FIFO basis has increased substantially in the past two years, and one resident described this as "crucifying the town". Alyangula residents associated the increase in FIFO with a decrease in community spirit and a marked reduction in the size of the resident population, with one resident stating:

"Now it's [Alyangula] a ghost town. The ARC [Alyangula Recreation Club] was pumping, but now ... the community has shrunken back in on itself."

The increasing prevalence of FIFO work practices has occurred in parallel with an increase in the number of residents employed on a 7-on 7-off roster rather than 5-on 2-off rosters, leading to a decline in community participation as many resident employees no longer have every weekend off. Some Alyangula residents stated that switching from a 7-on 7-off roster to a 5-on 2-off roster was not possible, but indicated that the reverse is an easy process, particularly if you wish to be switched to FIFO employment arrangements.

4.1.5 Crime and Community Safety

The Northern Territory Police Force has a permanent police station in Alyangula which services all of the communities on the Groote Eylandt Archipelago. The Groote Eylandt Police Station is fully-staffed with 12 officers. Police patrol Alyangula frequently and have a visible presence in the township. Court for Groote Eylandt is held in Alyangula for three days each month.

Alyangula was typically described as a safe community by residents, with some participants stating that they were concerned that their children were becoming complacent about personal safety from living in such a sheltered community.

Despite the high level of personal safety reported during EIS consultation, residents in Alyangula did however note an increase in property crime over the last two years, with an increase in the frequency of break-ins and a greater number of items stolen. It was reported that prior to the increase in crime, break-ins were confined to “fridging”, i.e. theft of alcohol from houses. However, during EIS consultation residents reported that, increasingly, electronics and other items are being stolen along with alcohol. Some residents noted that the crimes are opportunistic and are partially the result of lax security shown by residents, as the majority rarely lock their doors in Alyangula. Regardless, the change in the frequency and nature of break-ins has impacted on residents’ sense of personal safety. One individual who awoke to an intruder in the house noted that “my back door was unlocked; but it had been for nine years”.

It is widely believed that the majority of break-ins are executed by youths from outside Alyangula who reportedly enter the town on the premise of visiting family. Despite the decrease in property safety, the majority of Alyangula residents stated that they did not feel physically threatened by these youths as “they’d only attack each other”.

Crime is often underreported in small rural communities due to the presence of informal social controls (Barclay et al 2007). The high rate of underreporting was confirmed by NT Police in Alyangula during EIS consultation. As a result, published crime statistics are not considered to be a complete and accurate source of information regarding crime on Groote Eylandt.

As a response to the increase in property crime and safety concerns raised by Alyangula residents, the proponent is in the process of improving security on all proponent homes in Alyangula.

4.1.6 Social Infrastructure Accessibility

Alyangula boasts a wider availability of services than most communities of its size due to the presence of the existing mine and its workforce. The township’s coastal amenity, natural recreation opportunities (fishing, camping) and the proponent’s comprehensive provision of a range of services, position Alyangula among the more desirable locations for rural and remote service workers, with one service provider noting it as “the Club Med of remote”.

The township has a public-funded health care centre, public prep to year 12 school, and a day-care centre. The township includes a nine-hole golf course, a BMX track, a swimming pool, gym and tennis courts, as well as walking tracks and ovals. These recreation facilities are provided by the proponent for public use.

There are limited commercial and retail facilities in Alyangula; a single supermarket is operated by the proponent, along with a number of small businesses which operate out of the shopping arcade. These businesses include:

- Post Office;
- Bank;
- Boutique gifts and clothing; and
- Coffee Shop.

Alyangula residents generally grocery shop at the local supermarket, however will typically purchase clothes and other goods online or while away on holiday to the mainland. Residents raised shipping times and the cost for household goods as a negative, but not an unexpected aspect of life in Alyangula. A barge operates weekly between Darwin and Alyangula, stopping in Nhulunbuy.

As the island is classed as a remote service location, medical services are largely free, as are most medications. Northern Territory Health covers the cost of basic health services at the Alyangula Health Centre, as well as the cost of emergency patient transfers to the Alyangula Health Centre and medical evacuations from the island. CareFlight runs medical evacuation services for the island from Nhulunbuy and Darwin. Northern Territory Health also funds basic dental services on Groote Eylandt, which are available from a visiting dentist once a month.

The proponent funds the provision of three ambulances and two fire vehicles on Groote Eylandt, which service all communities on the island. Fire response on Groote Eylandt is fully-funded by the proponent and all triple-zero call-outs on the island are transferred from the national call centre to the proponent's emergency services team, which is staffed 24 hours, seven days a week.

The proponent provides water and gas to the three main communities on Groote Eylandt free of charge, although some infrastructure is maintained by the respective communities and the Power and Water Corporation. The proponent provides power to the communities of Alyangula and Angurugu, which is charged on a usage basis. Roads within the mining tenements and within Alyangula are owned and maintained by the proponent.

4.1.7 Transport Accessibility

The Groote Eylandt Airport services the whole of Groote Eylandt and is located 15 km south of Alyangula. The Groote Eylandt Airport offers scheduled commercial flights to Darwin, Gove and Cairns as well as charter flights to Darwin, Cairns and Milyakburra on Bickerton Island.

GEMCO provides a regular shuttle bus service between Alyangula and the Groote Eylandt Airport for Alyangula residents and also provides a bus service between Alyangula and the existing mine.

4.1.8 Education and Employment

Alyangula has a single school which offers prep to year 12, with the senior years of high school being offered through distance education. The Alyangula Area School is run by the NT DOE and has an enrolment of approximately 220 students, primarily in the younger and middle years of schooling. EIS consultation revealed that many students leave the school during the early years of high school with parents electing to either send their children to boarding school or move the family off-island entirely. Challenges with academic success, fewer opportunities for socialising on-island and a limited variety of leisure activities were the main reasons Alyangula parents gave for not keeping their teenagers enrolled at the Alyangula Area School.

At the time of the ABS 2011 Census the unemployment rate in Alyangula was 1% compared to 10% in the East Arnhem LGA and 5% in the Northern Territory. In 2011 the labour force participation rate in Alyangula was 85% compared to 56% in East Arnhem LGA and 64% in the Northern Territory. Approximately 58% of the population aged over 15 years in Alyangula has a post school qualification compared to 31% and 40% of the East Arnhem LGA and Northern Territory population respectively (ABS 2014).

The majority of residents in Alyangula are either direct employees of the proponent or the Northern Territory Government, or they are families of existing employees. General employment opportunities in Alyangula are limited and there are few employment opportunities for school leavers. During EIS consultation residents reported that securing post-school employment at the existing mine was difficult due to the timing of the release of apprenticeship positions and high standards for employment. Despite this, there are a number of families on Groote Eylandt with adult children now working at the mine. Non-mining related employment opportunities in Alyangula are considered limited due to the small size of the local economy.

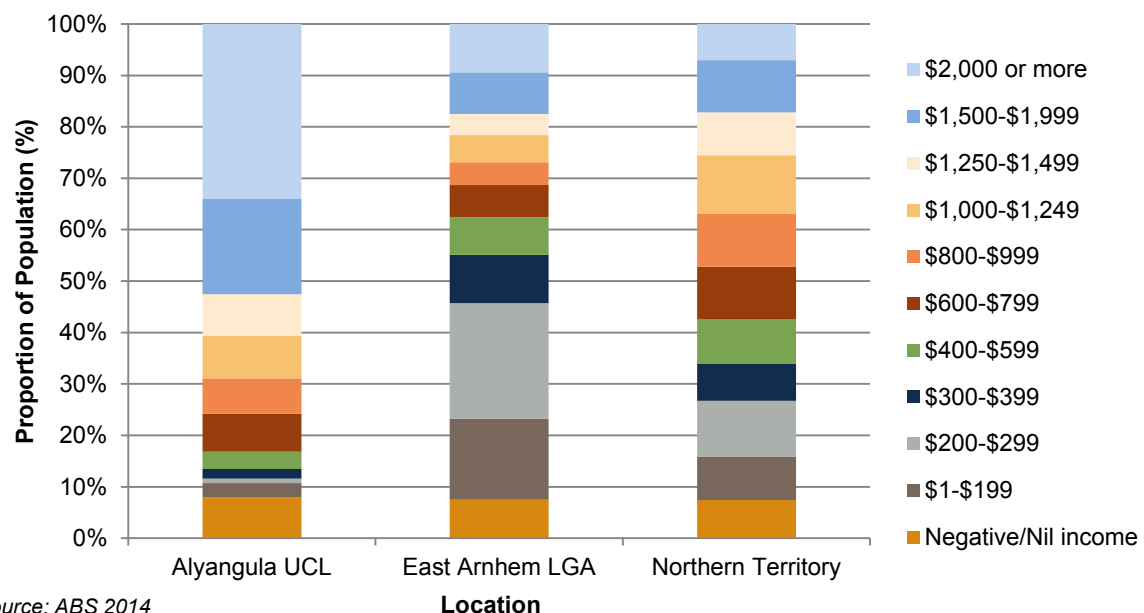
Issues relating to available accommodation further limit employment opportunities on the island because housing is primarily for the proponent's employees. The pool of housing available in Alyangula for people not employed by the proponent is small and there is consequently very limited availability and little variety in accommodation type. The housing limitations in Alyangula mean that non-mining sector businesses in Alyangula can only employ people who are current residents of Alyangula and who have access to existing accommodation i.e. they live with a family member or friend who is employed by the existing mine. Conversely, the accommodation situation means that there are very limited opportunities for people to change jobs from the existing mine to the non-mining sector. The proponent is aware of the difficulties being experienced by local businesses in relation to the

provision of accommodation for employees and has attempted to address the issue through the provision of accommodation to select businesses.

4.1.9 Economic Vitality

The economy of Alyangula is at the present time entirely dependent on the existing mine. The majority of residents are employees of the proponent and earn high salaries relative to the Northern Territory median. The income distribution for Alyangula is significantly higher than that of the Northern Territory. In Alyangula, over 50% of individuals earn more than \$1,500 per week, compared to less than 15% of the Northern Territory population (Graph 3).

Graph 3
Weekly Personal Income, Alyangula 2011



Source: ABS 2014

The proponent's employees are charged rent and power in line with the current Enterprise Bargaining Agreement. The proponent subsidises staple groceries in the Alyangula supermarket to bring prices into line with those in Darwin, and also subsidises additional items for the proponent's workforce. The proponent also provides free water and gas and subsidised fuel for residents of Alyangula. Combined with free medical services and high salaries, these benefits mean the economics of life in Alyangula are considered extremely positive.

The increase in FIFO workforce, however, is affecting local businesses. During EIS consultation, a number of participants noted that the two local recreation venues, the Alyangula Recreation Club (ARC) and the Golf Club were undergoing financial difficulties and the ARC was at risk of closing. Residents noted that the increase in FIFO has led to an immediate decline in local spending as there is a reduced number of local residents frequenting these facilities. The business owners that were interviewed considered their

future business prospects as being limited and that they were considering altered hours or closing down permanently as a result of the reduced patronage.

4.2 ANGURUGU AND UMBAKUMBA

4.2.1 Overview

Angurugu is primarily an Aboriginal community and home to approximately 850 residents from multiple clans and family groups, the majority of whom are of Anindilyakwa descent. The township is located inland of the western coast of Groote Eylandt, along the Angurugu River (Figure 2).

Umbakumba is a small, predominantly Aboriginal community on the north eastern coast of Groote Eylandt. Umbakumba has a population of approximately 450 residents, the majority of whom are Anindilyakwa. Angurugu and Alyangula have resident populations of a comparable size, while Umbakumba has a smaller population, likely due to its isolated location on the eastern side of Groote Eylandt. Until recently, the township was only accessible via an unsealed dirt road. Grading and sealing of this road has significantly improved accessibility and travel times between Umbakumba and the other townships on Groote Eylandt.

The socio-economic profile of Angurugu and Umbakumba are similar to other remote Aboriginal communities in the Northern Territory. Characteristics of Angurugu and Umbakumba that are similar to other remote Aboriginal communities in the Northern Territory include, but are not limited to:

- Low levels of literacy and numeracy;
- Low rates of school attendance and completion;
- Overcrowding of houses;
- Poor environmental health; and
- Endemic issues with drug and alcohol abuse.

4.2.2 Demography

Angurugu had a 2011 Census population of 835, while Umbakumba had a population of 441 (ABS 2014). The populations of Angurugu and Umbakumba are primarily of ATSI origin, with over 90% of the population in each township identifying as ATSI in the 2011 Census. Non-Indigenous persons in these townships are primarily service providers and government staff.

The population of Angurugu increased by approximately 3% (22 persons) over the period 2006-2011, which was significantly lower than the 11% growth experienced across the

Northern Territory. Population growth between 2006 and 2011 was 26% (91 persons) in Umbakumba. There are frequent temporary population movements between the communities of Angurugu and Umbakumba due to familial, ceremonial and seasonal factors. Both Angurugu and Umbakumba have a higher proportion of females than males compared to the East Arnhem LGA and Northern Territory (Table 6). The East Arnhem LGA and Anindilyakwa SA2 have a similar proportion of ATSI persons.

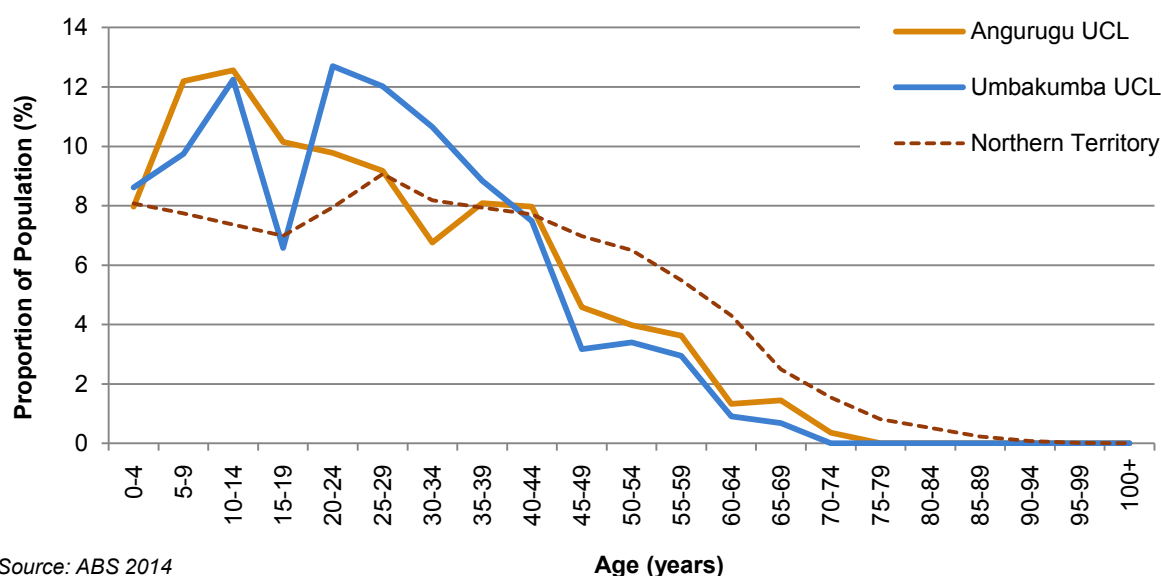
Table 6
Population Characteristics 2011

Characteristic	Umbakumba UCL	Angurugu UCL	Anindilyakwa SA2	East Arnhem LGA	Northern Territory
Female (%)	52.8	50.3	47.1	48.6	48.3
ATSI (%)	93.7	95.1	60.6	61.6	26.8
Speaks Australian Indigenous Language at Home (%)	90.7	87.9	55.1	56.9	16.3

Source: ABS 2014

Angurugu and Umbakumba both have younger populations compared with the Northern Territory, with approximately 62% of the population of each township aged less than 30 years compared to 47% of the population of the Northern Territory (Graph 4). Approximately 32% of Angurugu population and 16% of the Umbakumba population are aged 0-14 years. These population characteristics are likely due to a combination of high birth rates and low life expectancies in Aboriginal communities (ABS 2010, AIHW 2011). The life expectancy of an ATSI male in the Northern Territory was 61.5 years, 14.2 years lower than a non-Indigenous male in the Northern Territory. The ATSI female life expectancy was 69.2, 11.9 years lower than a non-Indigenous Northern Territory female (ABS 2010). Approximately 2% of the Angurugu population and 1% of the Umbakumba population are aged 65 years and older, compared with 6% for the NT.

Graph 4
Population, Angurugu and Umbakumba 2011



Source: ABS 2014

In Angurugu and Umbakumba, over 90% of people speak a language other than English at home (primarily an Australian Indigenous language) (Table 7). Approximately 17% of people who identified English as a second language, reported speaking English either “not well” or “not at all”. The prevalence of a low grasp of the English language across the communities of Angurugu and Umbakumba affects the accessibility of education and employment opportunities for residents of these communities.

School on Groote Eylandt is conducted primarily in English, and job opportunities are constrained by proficiency in English. Table 7 presents the self-rated English proficiency of persons who spoke a language other than English at home.

Table 7
English Language Proficiency, 2011

Spoken English Proficiency	Angurugu UCL		Umbakumba UCL	
	Persons	% of Total Population	Persons	% of Total Population
English as Second Language	761	91.3	400	90.8
Very well	475	57.0	262	59.5
Well	145	17.4	93	21.1
Not well	102	12.2	29	6.6
Not at all	39	4.7	16	3.6
English as first language	74	8.9	41	9.3
Total	835	100	441	100

Source: ABS 2014

Note: Totals may not add to 100% due to rounding

4.2.3 Housing and Accommodation

The majority of housing in Angurugu and Umbakumba is leased from the OTL by the NT DOH and provided to the communities as public housing. Although home purchase is available under the OTL Township Leases, at the time of writing no houses have been purchased in either of these communities. Housing in Angurugu and Umbakumba is characterised by a high proportion of separate houses and low quality of housing stock. In 2009, 40 homes in Angurugu and 23 homes in Umbakumba were considered to be in need of refurbishment or significant capital investment (Commonwealth of Australia 2010a, b). Refurbishment and maintenance of homes in Angurugu and Umbakumba is an aim of the RPA.

In 2011, Angurugu and Umbakumba had significantly larger household sizes than the Northern Territory, with 5.3 and 4.7 persons per household, respectively.

Table 8
Key Housing Statistics

Name	Angurugu UCL	Umbakumba UCL	East Arnhem LGA	Northern Territory
Average household size	5.3	4.7	4.0	2.9
Average number of persons per bedroom	2.0	1.7	1.5	1.2
Median mortgage repayment (\$/monthly)	0	0	1,889	2,058
Median rent (\$/weekly)	75	75	27	225

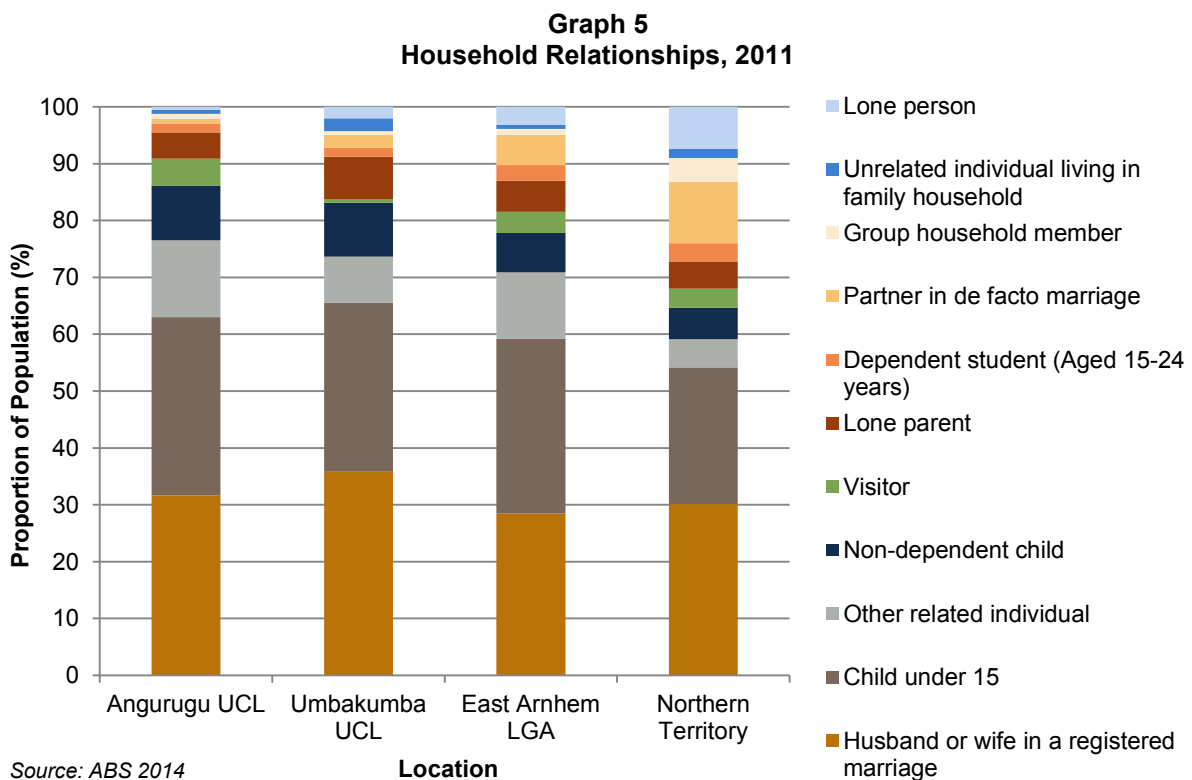
Source: ABS 2014

The Northern Territory and Federal Governments delivered 80 new houses, 43 rebuilds and 60 renovations to Anindilyakwa communities in 2011 and 2012 through the Strategic Indigenous Housing and Infrastructure Program. Although household occupancy rates have decreased significantly as a result of this, overcrowding is still present in these communities. The ALC estimates that an additional 20 houses are needed in Angurugu to meet demand and is considering the possibility of investing royalties into a new home building scheme to be supported by GEBIE (ALC 2012a).

The township of Angurugu, however, is land-constrained due to the boundary of the Township Lease and the proponent's surrounding mining leases. Furthermore, there is a shortage of serviced lots, connected to sufficient power and water supplies in both Angurugu and Umbakumba. Servicing of residential lots is the responsibility of the Northern Territory Government Indigenous Central Services, and is significantly more expensive in remote areas than in large urban centres. During EIS consultation, residents of Angurugu and Umbakumba reported that both townships are experiencing difficulty expanding to accommodate growing populations. In 2009, 65% of Angurugu homes and 63% of

Umbakumba homes were considered to be overcrowded (Commonwealth of Australia 2010a, b). Overcrowding was raised during EIS consultation as one of the main issues affecting Angurugu and Umbakumba Townships.

In 2011 there were a significantly lower proportion of lone persons, groups and unrelated households in Angurugu compared with other areas (Graph 5). There were higher proportions of non-dependent children and other related individuals living in households in Angurugu and Umbakumba compared to all other areas. This is likely due to a combination of the extended kinship networks of Aboriginal families and a lack of housing stock leading to overcrowding.



4.2.4 Local Values and Community Cohesion

Residents of Angurugu and Umbakumba place great importance on the preservation of their country and their culture.

Approximately 90% of Aboriginal persons in Angurugu and Umbakumba speak an Australian Indigenous language (Section 4.2.2). The Anindilyakwa language is one of the oldest and most complex languages in Australia (Yallop 1982). Anindilyakwa forms a strong part of culture on Groote Eylandt, and is highly valued by the Anindilyakwa People. Historical efforts to enforce English language use amongst the Aboriginal population of Groote Eylandt have had limited effect. As one study of Anindilyakwa and its use on Groote Eylandt reports:

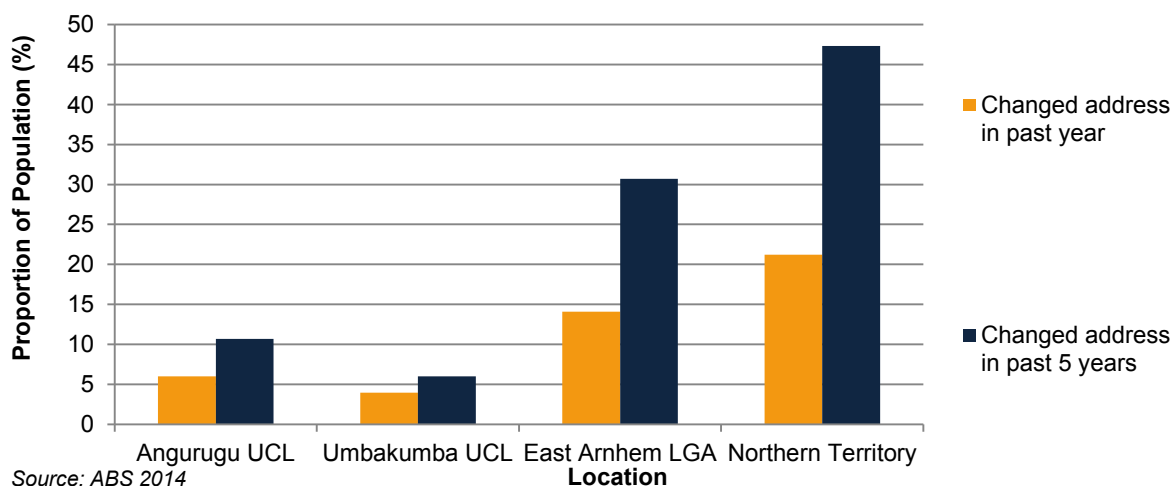
“English could never simply replace Anindilyakwa for Groote Eylandt and its people. What could the English language say about ceremonies, places and relationships? For Anindilyakwa people, the Anindilyakwa Language was irreplaceable. Groote Eylandt’s songs, stories and ceremonies belonged in Anindilyakwa from ‘the old days’ and Anindilyakwa belonged in the mouths of its people” (Rademaker 2012).

During EIS consultation, residents of Angurugu and Umbakumba identified English proficiency as a desired trait for their children primarily for its relationship to economic success. However, preservation of the Anindilyakwa language was also a key concern raised during EIS consultation. The preservation of the Anindilyakwa language is a key aim of the ALC Strategic Plan (ALC 2012a).

The provision of employment opportunities is highly valued by the residents of Angurugu and Umbakumba. Despite structural barriers to the employment of Aboriginal people at the existing mine (Section 5.2.6), residents of Angurugu and Umbakumba identified employment opportunities as a positive outcome of the existing mine. Residents of Angurugu and Umbakumba expressed a desire for sustainable Aboriginal businesses on Groote Eylandt, especially as a method of ensuring the sustainability of Groote Eylandt post-mining. The ALC Strategic Plan focuses on the creation of a sustainable future for Groote Eylandt Archipelago and its population.

While there is a high rate of temporary movement between the townships of Angurugu and Umbakumba, as noted by the ALC (ALC 2012a), there is a lower rate of permanent, recorded movement between these towns when compared with the Northern Territory. Permanent movement within the townships is likely to be limited by available housing, while permanent movement between townships is likely limited by strong familial ties. The lower rate of mobility in Angurugu and Umbakumba suggests a high level of connection to both place and people.

**Graph 6
 Mobility, 2011**



This level of connection to place was confirmed during EIS consultation, as Aboriginal residents of Angurugu and Umbakumba identified strongly with Groote Eylandt as their home and expressed a sense of duty to their traditional lands.

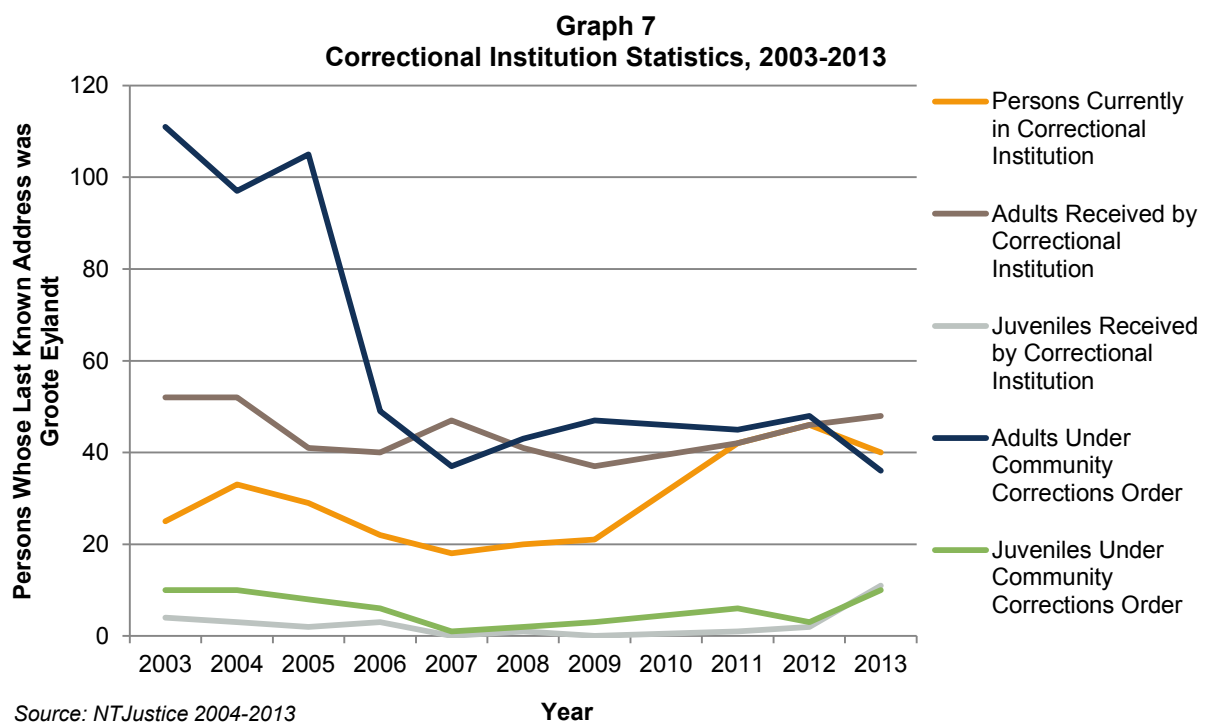
The residents of Angurugu and Umbakumba valued the spiritual attachment to land and water; Aboriginal participants consistently referred to the river systems and ocean as important elements of life on Groote Eylandt.

4.2.5 Crime and Community Safety

The level of crime in the townships of Angurugu and Umbakumba has declined since the introduction of the alcohol management plan in 2005. Between 2005 and 2008, the following improvements in criminality were noted (AIC 2008):

- Sexual assaults down 67%;
- Aggravated assaults down 62.5%;
- House break-ins down 86%; and
- Car and other theft down 52%.

Graph 7 shows a significant decrease in the number of adults of Groote Eylandt origin receiving a Community Corrections Order in the NT after 2005. Other crime statistics remained relatively stable between 2003 and 2013 (NT Justice 2004-2013).



The *Groote Eylandt and Bickerton Island Regional Partnership Agreement Progress Evaluation* (RPA Progress Report) noted that policing on Groote Eylandt is contentious (Browne and MacDonald 2012). Overnight police stations were recently constructed in Angurugu and Umbakumba and representatives of the Northern Territory Police Force reported that overnight stays occur in Umbakumba one night a week. The RPA Progress Report notes that police presence in Umbakumba has improved as a result of the construction of the overnight station in the township.

The RPA Progress Report stated that new police operating standards were developed for the island in response to reports of under-policing from residents in Angurugu and Umbakumba communities. These standards were reported to include a commitment to “a full-time police presence in Angurugu during rostered police shifts seven days a week” (Browne and MacDonald 2012). However, during EIS consultation the Groote Eylandt Police noted that this does not happen; the Angurugu station is visited every day, but generally for very short periods of time, and officers then return to Alyangula, where the majority of communications and IT support networks are located.

4.2.6 Social Infrastructure Accessibility

Angurugu has a range of services and facilities similar to other remote Aboriginal townships in the Northern Territory. The proximity of Alyangula enables access to a wider range of services than would otherwise be available for residents of Angurugu and Umbakumba.

A single supermarket operates in Angurugu and a smaller store is located in Umbakumba. Goods are delivered to Angurugu via the weekly barge which docks in Alyangula. The Umbakumba store is replenished by barge on a fortnightly basis. Residents of Angurugu and Umbakumba reported that they often travel to Alyangula supermarket as it offers a wider range of goods.

Angurugu has a Linguistics Centre and a library. The Groote Eylandt Linguistic Centre works to preserve the Anindilyakwa language and culture and provides translation services to each community on the Groote Eylandt Archipelago. Mobile internet and phone services are available in Angurugu, however there is no mobile reception in Umbakumba. Service providers in Umbakumba highlighted this as an issue affecting the general quality of services in the township.

There are limited recreation facilities in Angurugu and Umbakumba. Northern Territory AFL runs an AFL program in Angurugu and Umbakumba, which is extremely popular with young people in both townships, and each township has an AFL oval. Residents of Angurugu and Umbakumba also frequently utilise the Alyangula Pool.

The EARC has a service delivery office in Angurugu, which manages a number of municipal services in Angurugu and Umbakumba which includes sport and recreation, community patrols, aged care, waste collection and animal management. The EARC also runs a community crèche in Umbakumba.

Roads within and connecting Angurugu and Umbakumba are maintained by the EARC, though often with financial and in-kind assistance from the proponent. The proponent provides main line water and gas to Angurugu and Umbakumba, and power to Angurugu. Distribution of utilities within the townships is the responsibility of the Power and Water Corporation and the respective communities.

In Angurugu and Umbakumba, medical services, along with the majority of general medications and prescriptions, are provided free of charge to local residents, with the provisioning of emergency care funded by the Northern Territory Government (Section 4.1.6).

A number of employment services are also present in Angurugu and Umbakumba, including the Groote Eylandt and Milyakburra Youth Development Unit (GEMYDU) and the Remote Jobs and Communities Program (RJCP). These services are discussed in Section 4.2.9.

4.2.7 Transport Accessibility

The Groote Eylandt Airport services Angurugu and Umbakumba as well as Alyangula (Section 4.1.7). The Airport is located immediately north of Angurugu and is utilised by all residents living on the island.

Umbakumba has a dirt airstrip that can accommodate twin engine light aircraft.

GEAT recently commenced trialling a bus service between Umbakumba and Alyangula for residents to access services in Alyangula. The proponent similarly funds a bus service which is provided by Aminjarrinja and operates between Umbakumba, Angurugu and the existing mine for the mine workforce.

4.2.8 Health and Wellbeing

The RPA Progress Report stated that the Aboriginal populations of Angurugu and Umbakumba have “limited life skills and a poor understanding of the link between health and lifestyle factors” (Browne and MacDonald 2012). Causes of death and illness on Groote Eylandt are perceived by the Aboriginal community to be just as much spiritual as physical (ALC 2012a).

Hygiene

Hygiene is reportedly poor, and chronic disease in the communities is high, leading to further pressure on already strained remote services. Between 2003 and 2008, the hospitalisation rate for diseases associated with poor environmental health was four times the national rate. Teachers in Angurugu reported that a large number of students had ear infections and partial hearing loss due to poor hygiene (Browne and MacDonald 2012).

Dental

Dental hygiene is considered to be poor in both Angurugu and Umbakumba. In 2009/10, seven to twelve year olds in these communities had a rate of permanent tooth decay over 3 times that of the national rate for that age group (Commonwealth of Australia 2010a, b). Key health initiatives highlighted in the Angurugu and Umbakumba LIPs include the attraction of a full-time dentist to the island, and the fluoridation of the Angurugu water supply.

Machado Joseph's Disease

MJD is a hereditary neuro-degenerative disease which affects the ATSI population of the Northern Territory, primarily on Groote Eylandt. MJD is an inherited disorder, and children of persons with the disease have a 50% chance of also developing the disease. Further, the mutation expands as it is passed down, meaning that the symptoms will typically appear 8-10 years earlier than they did for the parent and are more severe (MJD Foundation 2014). It is estimated that there are approximately 550 persons in the Northern Territory currently at risk of developing the disease, the majority of whom reside on Groote Eylandt (MJD Foundation 2014).

Drug and Alcohol

Drug and alcohol abuse were rife within the communities of Groote Eylandt prior to the introduction of an alcohol management plan in 2005 (Browne and MacDonald 2012). The introduction of this plan has resulted in a general reduction of violence and criminal behaviour across the island. Marijuana use has however increased with the decrease in alcohol availability in the communities, and corresponding social problems are beginning to emerge (Browne and MacDonald 2012). A 2011 examination of substance abuse on Groote Eylandt and Bickerton Island revealed that six out of 10 Aboriginal residents of the Groote Eylandt Archipelago regularly smoke marijuana (Lee et al 2011).

The health clinic in Angurugu is open every day except Thursday mornings and every second Saturday morning, while the clinic in Umbakumba is open only on weekdays. Angurugu and Umbakumba health clinics are staffed jointly with Alyangula Health Centre. The Angurugu health clinic is staffed by up to two doctors, from five rotating general practitioners on Groote Eylandt, and two Aboriginal Health workers. The Angurugu health clinic also has two mental health workers and a community worker, as well as administration staff. A public health manager and chronic disease nurse rotate between Angurugu and Alyangula (NTGPE 2012).

Aged care centres are operated by the EARC in Angurugu and Umbakumba. These centres also coordinate additional community services including meals on wheels, palliative care, and domestic assistance.

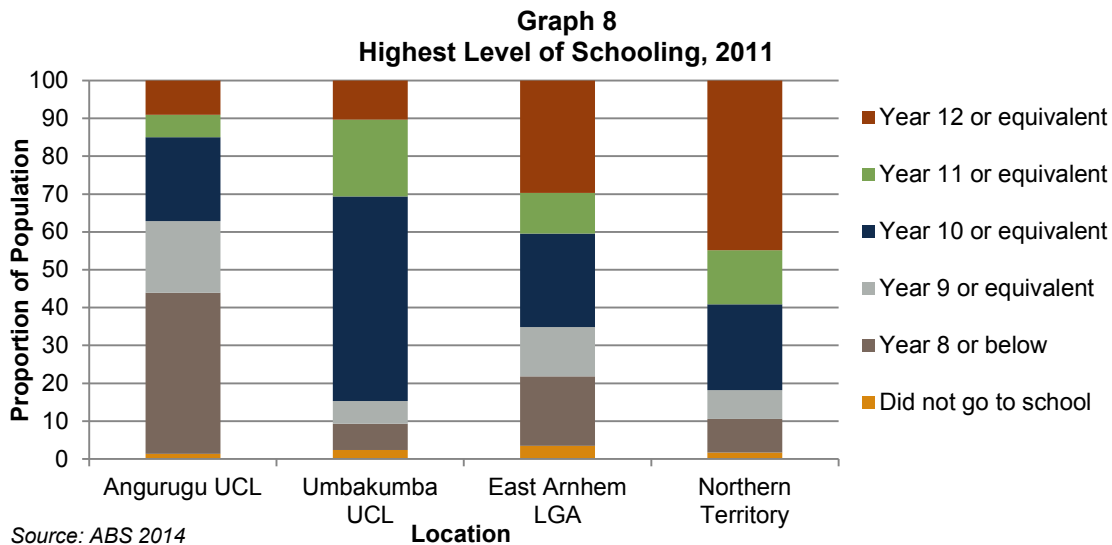
4.2.9 Education

There is a pre-school in Angurugu and a playgroup which operates out of Umbakumba. The ALC Strategic Plan recognises early childhood development as an area of need within the community. The ALC Strategic Plan also includes a desire to incorporate a stronger cultural component in early childhood education (ALC 2012a).

There is one state school (prep to year 12) in each of the Angurugu and Umbakumba townships. In 2014, the Angurugu School had approximately 300 students enrolled with Umbakumba School having 115 confirmed students. However, population movements between Angurugu and Umbakumba has resulted in a degree of fluidity in the enrolment figures for both these schools (ALC 2012a).

Angurugu, Alyangula and Umbakumba Schools, together with Milyakburra School on Bickerton Island, are aligned under a “hub” arrangement, with sharing of services and infrastructure across all four schools.

Angurugu School had the lowest attendance rate of all state schools in the Northern Territory in 2013, at just 36% (equivalent to 107 people) (NT DOE 2013a). Attendance at Umbakumba School was significantly higher at 62% (equivalent to 61 people), but still much lower than the Northern Territory attendance rate of 83% in 2013 (NT DOE 2013b). Low attendance and completion rates are characteristic of remote Indigenous communities in Australia. School attendance rates are significantly lower in the Northern Territory than in any other state or territory in Australia (Buckley & Purdie 2010, Wilson 2013). ABS statistics also indicate that Angurugu and Umbakumba have significantly lower rates of year 11 and 12 completion (15% and 30%, respectively) compared with the Northern Territory (59%) (Graph 8).



Research into common reasons for non-attendance of school in Indigenous communities reveals a range of causal factors, including low parental value on education, lack of recognition of Indigenous culture in education, and unemployment, poverty and poor community facilities in remote Indigenous communities (Buckley & Purdie 2010). These factors are likely to play a part in the low attendance and completion rates at Angurugu and Umbakumba Schools. The ALC Strategic Plan identifies a generational lack of support for school completion, and notes growing support within the community for the establishment of a residential college away from Angurugu to combat this influence (ALC 2012a).

Other issues reported during EIS consultation as having an impact on school attendance and completion included overcrowding of houses, cultural and clan-based tensions within the community and bullying and teasing within the school.

A number of initiatives are being progressed to increase school attendance and completion in remote Indigenous communities, including the 'Closing the Gap' commitments, made by the Council of Australian Governments (COAG) in 2008, which include commitments to:

- Halve the gap between Indigenous and non-Indigenous students in reading, writing and numeracy achievements for children by 2018; and
- Halve the gap for Indigenous student Year 12 (or equivalent) attainment rates by 2020 (COAG 2014).

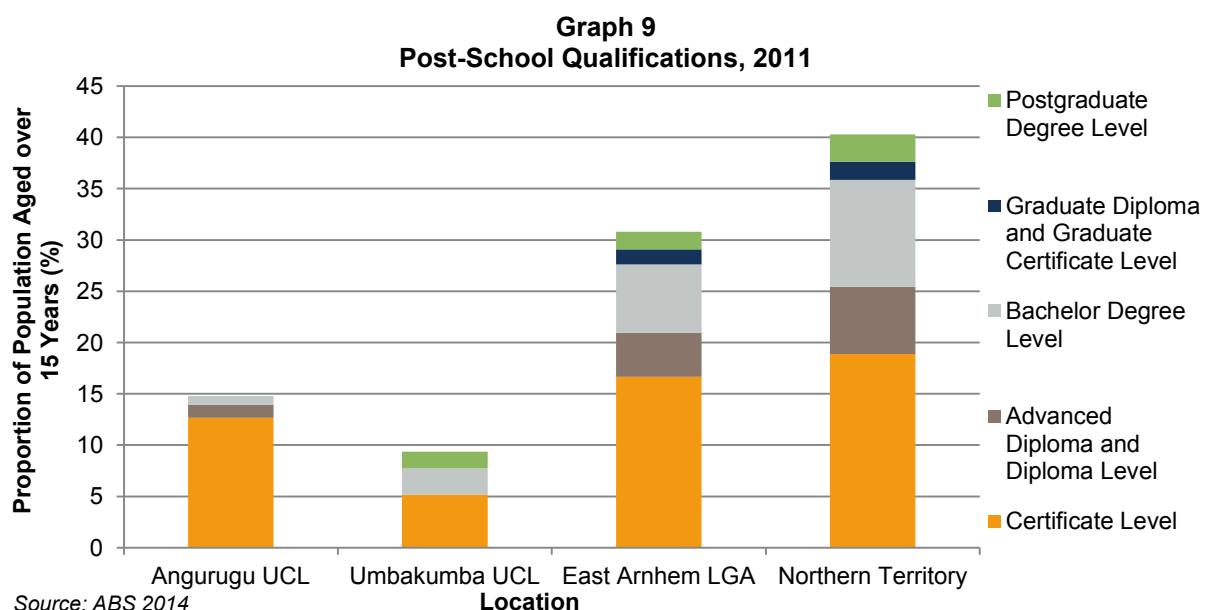
In 2014, the Federal Government committed \$4.8 billion over four years to the Indigenous Advancement Strategy, which will replace the more than 150 individual Indigenous programs and strategies currently implemented nationally (Commonwealth of Australia 2014b).

The objective of the Indigenous Advancement Strategy is to improve outcomes for Indigenous Australians, which include:

- Getting Indigenous children to school, improving literacy and numeracy, and supporting families to give children a good start in life;
- Increasing Year 12 attainment and pathways to further training and education; and
- Addressing the disproportionate disadvantage in remote Australia and the need for strategic grant funding for local solutions.

Angurugu School partners with GEBIE Civil and Construction to implement the Warka Engbuda Work Strong project. This project provides formal job training and develops sustainable employment opportunities for at-risk young Aboriginal males. The Warka Engbuda project aims to demonstrate the importance of completing school to the Angurugu community by establishing pathways to employment post-completion (NAB 2011).

Angurugu and Umbakumba have significantly lower proportions of persons aged over 15 years who have obtained post-school qualifications compared with the Northern Territory. Less than 15% of persons aged 15 years and older in Angurugu and Umbakumba hold a qualification (Graph 9). In 2011, the ABS reported that there were no individuals in Angurugu who held a qualification higher than a bachelor level degree.



Participation in the Northern Territory AFL program, currently running at Umbakumba and Angurugu Schools, is linked to school attendance. Children may only participate in the program, which involves weekly games and off-island trips, if they regularly attend school. During EIS consultation, stakeholders indicated that this program was having some success with increasing attendance rates.

4.2.10 Labour Force and Employment

Labour statistics are based on the assumption of a working age between 15 and 65 years of age. The labour force comprises persons within this age group, who are either employed or looking for work. Persons who are not employed and not currently seeking work are not considered to be part of the labour force, regardless of their age. The size of the labour force in Angurugu and Umbakumba in 2011 was 252 people and 103 people respectively.

The unemployment rate is the number of persons who are not employed and currently looking for work as a proportion of the labour force. Persons who are not employed but not looking for work are not counted as unemployed but instead are considered outside of the labour force. The participation of persons in the labour force can impact on the unemployment rate; if large numbers of persons who are not employed stop seeking work, the unemployment rate will actually fall as these persons are no longer counted as unemployed.

Labour Force Participation

There are limited opportunities for employment in Angurugu and Umbakumba and as a result labour participation is low. In 2011, labour force participation in Angurugu and Umbakumba was less than 45% of persons respectively; compared to over 55% of persons in East Arnhem LGA and 60% of persons in the Northern Territory.

RJCP is delivered by GEBIE on behalf of the Federal Government. This program aims to develop employment capacity and work skills in remote communities. RJCP on Groote Eylandt currently has over 500 individuals enrolled.

Limitations to labour force participation and employment for residents of Angurugu and Umbakumba include:

- Low levels of literacy and numeracy;
- Low levels of education and skills; and
- High rates of marijuana use.

The proponent has a zero-tolerance approach to drugs and alcohol; following a positive drug test, applicants for positions at the existing mine must wait six months before reapplying. As a result, many residents of Angurugu and Umbakumba become discouraged and find it difficult to gain employment with the mine.

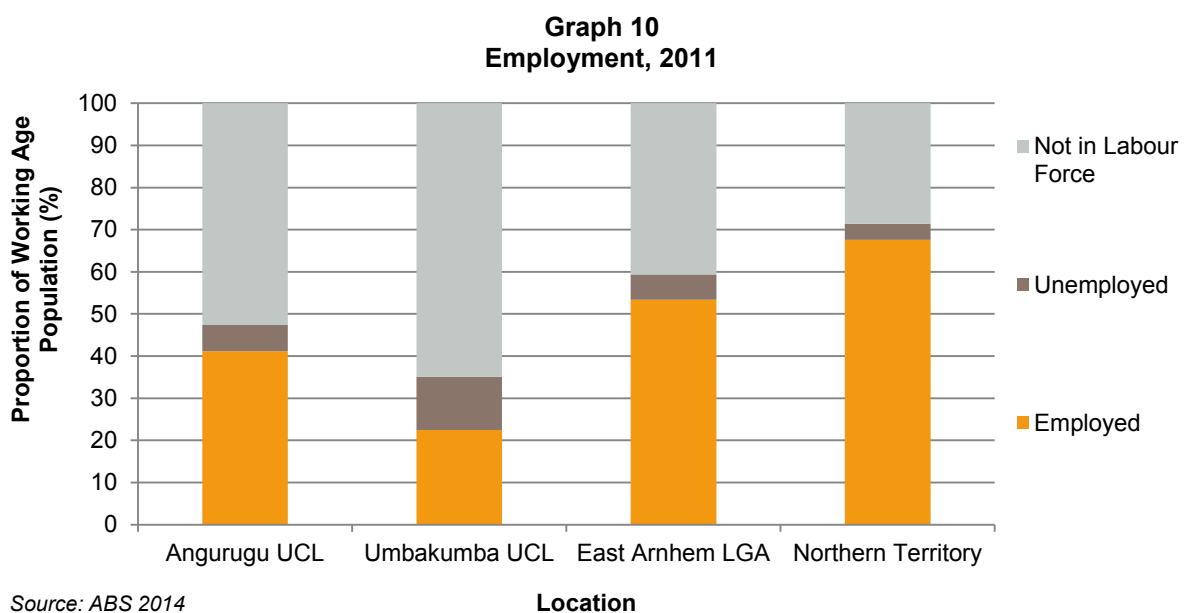
Traditional work practices such as those employed by the proponent also limit Aboriginal participation in the existing mine workforce. As one Aboriginal resident stated:

“If you work for GEMCO, you have to follow GEMCO rules. And those are hard rules. You have to get up early ... no ganja.”

Another limiting factor to workforce participation in Umbakumba is the lack of mobile phone reception and internet connectivity in the township. Residents reported that it is difficult to call an employer if you cannot go into work for personal reasons (often Sorry Business, e.g. funeral and mourning ceremonies). There is a single paid public telephone in Umbakumba, and satellite internet is available but services are restricted and reportedly highly unreliable. Access to the western side of the island from Umbakumba has been historically difficult, but the grading and sealing of the road between Angurugu and Umbakumba has improved access and travel times. During EIS consultation, it was also reported that bus services run by GEAT between Umbakumba, Angurugu and Alyangula had recently commenced.

Unemployment

In 2011, the unemployment rate was 36% (equivalent to 37 people) in Umbakumba and 13% (equivalent to 33 people) in Angurugu. This was significantly higher than the Northern Territory unemployment rate of 5% (Graph 10). Angurugu and Umbakumba labour markets are characterised by a high rate of non-participation in the labour force. There were 17 males and 16 females from Angurugu looking for employment in 2011 and 20 males and 17 females in Umbakumba also looking for employment at the same time.



High unemployment and low labour force participation rates are characteristic of Indigenous communities and a range of Commonwealth and Northern Territory measures are proposed to improve employment outcomes for Indigenous Australians (NT Government 2012). The

'Closing the Gap' strategy and the Indigenous Advancement Strategy both include a commitment to halve the gap in employment outcomes between Indigenous and other Australians by 2018 (COAG 2014, Commonwealth of Australia 2014a).

Table 9 shows the proportion of employed persons who are employed in each of the main sectors of employment, in order to show the scale of each of these sectors in Angurugu and Umbakumba.

Table 9
Main Employment Sectors, 2011

Employment Sector	Proportion of Employed Persons (%)			
	Angurugu UCL	Umbakumba UCL	East Arnhem LGA	Northern Territory
Mining	13.4	0.0	3.0	1.3
Construction	16.6	9.5	2.3	3.8
Retail Trade	7.4	9.5	2.3	3.8
Accommodation and Food Services	1.4	6.3	1.2	2.9
Public Administration and Safety	27.2	27.0	5.0	9.7
Education and Training	6.9	17.5	4.4	4.1
Health Care and Social Assistance	1.8	9.5	3.3	4.7
Other Sectors / Not Stated	25.3	20.7	78.5	69.7
Total Employed Persons	217	63	633	996
Total Persons	835	441	14,019	211,943

Source: ABS 2014

In 2011, approximately 27% (60 persons) of employed persons in Angurugu were employed in the public administration and safety sector, which is the largest sector of employment in the township and includes jobs in local government, health and emergency services (Table 9). These sectors likely employ the majority of non-Indigenous residents of Angurugu and Umbakumba.

The construction and mining sectors were the next largest employers in Angurugu in 2011, with approximately 36 and 29 people employed in each respective sector (Table 9). Although there were no persons recorded as being employed in the mining sector in Umbakumba in 2011, EIS consultation indicated that there are now approximately 6 persons in Umbakumba employed by the proponent.

Consultation with the two largest Aboriginal businesses on Groote Eylandt, Aminjarrinja and GEBIE, revealed that they now employ a larger number of residents from Angurugu and Umbakumba than these figures suggest. GEBIE indicated that it employs approximately 70 Indigenous persons and Aminjarrinja indicated that it employs over 40 residents from Umbakumba.

Gender and Employment

In 2011, there were approximately twice as many males employed in Angurugu and Umbakumba as there were females. However, this was largely the result of low female labour force participation.

Table 10
Gender and Employment, 2011

Employment Status	Gender	Percentage of Labour Force (by Gender)	
		Angurugu	Umbakumba
Employed and working full-time	Male	35.3	23.3
	Female	22.2	12.6
Employed and working part-time	Male	9.1	9.7
	Female	11.5	15.5
Employed, away from work	Male	6.4	2.3
	Female	2.4	0.0
Unemployed, looking for work	Male	6.7	19.4
	Female	6.3	16.5

Source: ABS 2014

Female unemployment is only marginally higher than male unemployment, suggesting that females are given equal opportunity to work in all communities on Groote Eylandt, but choose not to work for social, cultural or personal reasons. The higher rate of part-time employment for females may be due to cultural (women's roles in Indigenous culture), institutional (discrimination by employers) or logistical (limited childcare availability, transport and access to jobs) barriers.

4.2.11 Economic Vitality

In Angurugu and Umbakumba, structural and cultural barriers to education and employment and geographical barriers to market access and infrastructure provision have resulted in low levels of economic activity. Current economic diversity on the island is low and is likely to remain so without holistic economic planning. The majority of economic activity on Groote Eylandt is strongly tied to the existing mining operation and associated investment by the proponent on Groote Eylandt. As a result, the economy of Groote Eylandt would not be sustainable, in its current state, without the existing mine and the proponent. However, the ALC and the proponent are progressing planning to increase economic autonomy.

The future economic vitality of Angurugu and Umbakumba is closely tied to the ALC's management of the economic future of the Archipelago. The ALC Strategic Plan strongly asserts that planning for the future economic development of Groote Eylandt post-mining is imperative to the ongoing wellbeing of the Anindilyakwa People. A number of economic

initiatives are suggested in the document, including business opportunities, power generation and sustainable aquaculture:

“It is the view of this Strategic Plan that it is imperative to explore and establish, over the next 15 years, a large-scale aquaculture industry capable of replacing the current reliance on mining royalty income” (ALC 2012a).

A trepang (sea cucumber) harvesting joint-venture has recently been established between Aminjarrinja in Umbakumba and Tasmania Seafoods in Darwin. During EIS consultation, representatives of Aminjarrinja noted that they were awaiting final licencing approvals to begin work, but were very confident about the prospect. The venture will encourage a sustainable supply chain for ongoing economic benefits.

5 EXISTING GEMCO MINE

This section describes the proponent's existing mining operation on Groote Eylandt, the associated Mining Agreement and royalties distribution process, and the proponent's social investment frameworks.

5.1 DESCRIPTION OF OPERATIONS

The existing mine is an open cut manganese mining operation. It commenced operations in 1964 and has an anticipated remaining mine life of approximately 13 years (equivalent to calendar year 2027). The township of Angurugu is located directly adjacent to the existing mine. The township of Alyangula and the Milner Bay port facility are located approximately 13.5 km to the north of the mine's concentrator and main infrastructure area (Figure 2).

5.2 EXISTING WORKFORCE

5.2.1 Workforce Size

The existing mine has a workforce of approximately 860 persons including both employees and contractors. This is expected to decrease to approximately 835 persons in the next few years as a result of organisational restructuring, as the proponent competes on the international manganese market to remain competitive. The workforce is anticipated to remain stable at around 835 persons for the remainder of the mine life. The existing workforce comprises both employees and contractors.

5.2.2 Workforce Occupation

The occupational characteristics of the existing mine workforce are summarised in Table 11.

Table 11
Project Workforce Occupation – Existing Operations, 2014

Occupation	Proportion (%)	Number of Persons
Senior Management	1	9
Middle Management (Superintendents)	4	34
Technical Specialists and Supervisors	15	129
Operators/labourers	80	688
Total	100	860

Source: Proponent data

5.2.3 Employment Arrangements

The workforce (employees and contractors) associated with the existing mine is employed as either:

- Resident workers – employees who reside permanently on Groote Eylandt and commute on a daily basis between their residence and the existing mine; or
- Non-resident workers – employees or contractors who FIFO to and from Groote Eylandt to undertake work. These workers live in Alyangula temporarily while rostered on, but have their permanent place of residence located on mainland Australia.

Approximately 66% (568) of the existing mine workforce is employed on a FIFO basis, with the proponent's forward planning indicating that this will increase to an optimal level of 70% of the workforce by 2020.

A number of different shift patterns are employed for the existing operations. These include:

- Seven day on, seven day off day shift rosters;
- Seven day on, seven day off rotating afternoon/night shift rosters; and
- Monday to Friday five day shift rosters.

All shift rosters are made up of a combination of 8, 10 and 12 hour shifts.

5.2.4 Workforce Accommodation

There are currently 292 residential (non-FIFO) employees working at the existing mine. Approximately 23 employees live outside Alyangula in the communities of Umbakumba and Angurugu. The remaining 269 residential workers live permanently in Alyangula, in proponent-owned housing.

The proponent owns 258 houses in Alyangula, comprising predominantly of two- or three-bedroom weatherboard homes. A number of houses in Alyangula are occupied by more than one proponent employee.

The non-resident (FIFO) workforce comprises 568 people. Accommodation for the non-resident (FIFO) workforce is provided in a number of accommodation villages. These accommodation villages provide a combined total of approximately 480 rooms. Accommodation village beds are operated on a motel style arrangement. A maximum of two-thirds of the FIFO workforce (375 workers) is on roster at any one time. This leaves a minimum surplus of approximately 100 accommodation beds that can be made available. This arrangement is designed to support the execution and delivery of major construction projects as well as maintenance shut down periods.

5.2.5 Workforce Transport and Logistics

The current non-resident workforce is flown to Groote Eylandt on charter flights from Darwin and Cairns each Tuesday. In addition, commercial flights are also available to and from Groote Eylandt for the community. These commercial flights are also utilised by the proponent employees when roster times do not align with charter flights.

Buses run frequently between Alyangula and the existing mine. Buses for mine employees who reside in Angurugu and Umbakumba are also provided by the proponent.

5.2.6 Local Aboriginal Employment

Labour Availability and Barriers to Indigenous Employment

Despite the size of the Aboriginal population on Groote Eylandt, availability of labour is low. The pool of available labour for mine-related Aboriginal employment on Groote Eylandt includes persons who:

- Identify as Indigenous;
- Are aged between 15 and 65 years of age;
- Do not have a disability which necessitates assistance with core activities;
- Are not currently employed; and
- Are looking for work.

In 2011, there were approximately 1,115 persons in the labour force of the Anindilyakwa SA2 including 118 unemployed people, the majority of whom are Aboriginal and all of whom were aged between 15 and 65 years (ABS 2014). Based on 2011 ABS Census data and taking into account these considerations, the pool available for mine-related employment in the Anindilyakwa SA2 is less than 118 persons (ABS 2014). Additional Aboriginal employment across Groote Eylandt can only be achieved by increasing the labour force participation rate, i.e. increasing the number of Aboriginal persons actively looking, and therefore available for employment.

Aboriginal employment at the existing mine has not only been constrained by the available Aboriginal labour pool, but also by endemic issues within the Aboriginal community of Groote Eylandt. These endemic issues include:

- Low levels of literacy and numeracy;
- Low levels of education and skills;
- Drug use;
- Humbugging; and
- Cultural relationships.

Aboriginal Employment at the Existing Mine

The proponent is required to have an Indigenous employment plan under the conditions of the 2006 Mining Agreement and in order to comply with corporate operational standards. The proponent has a range of Indigenous participation strategies and plans, including:

- *GEM-PRO-3007 Indigenous Employment Strategy* (GEMCO Indigenous Employment Strategy); and
- *MAN-4062 Rehabilitation & Mine Services Aboriginal Employment Strategy (RMS Strategy)*.

The current Indigenous Employment Strategy focuses on:

- Establishing and maintaining a trained and qualified mentor network in the workforce;
- Implementing culturally appropriate recruitment and induction processes; and
- Maintaining a training program that gives the skills necessary for the job.

The proponent's existing RMS Strategy was introduced in 1997 and has focused on increasing local Aboriginal employment within the Rehabilitation and Mine Services (RMS) section of the existing mine as well as building capacity within the local Aboriginal community. The goal of the RMS Strategy is to:

“Provide Groote Eylandt Aboriginals with opportunity to develop necessary skills and knowledge to pursue a meaningful and successful career within mining industry, local community, or mainstream workforce”.

The RMS Strategy includes:

- A literacy and numeracy program;
- A focus on working towards employee permanency;
- Mentoring strategies; and
- Reverse cross-cultural training for Aboriginal employees.

A total of 46 ATSI persons are employed by the proponent at the existing mine. This includes 33 local Aboriginal persons and a further 13 non-local ATSI persons. Local Aboriginal employment at the existing mine has steadily increased since the introduction of the RMS Strategy.

The success of the RMS Strategy is being carried over into a new employment strategy which aims to increase Aboriginal participation in positions across the existing mine operation.

The major objectives of the new Aboriginal Employment Strategy include:

- Developing a partnership between the GEBIE Job Shop, Federal and Northern Territory Government agencies and the proponent that ensures a seamless transition into employment for local Aboriginal persons; and
- Establishing a culturally appropriate training regime on Groote Eylandt that allows participants to achieve Certificate II level skills in appropriate disciplines.

The proponent is working proactively to overcome low education levels and low labour force participation in the Aboriginal communities of Groote Eylandt. The proponent is working with the NT DOE on improving school attendance rates, and offering traineeships rather than apprenticeships, as the latter requires significantly higher literacy and numeracy levels than the former.

5.3 MINING AGREEMENT

The Mining Agreement signed in 2006 for the existing mine (Section 3.2.4) includes requirements to:

- Establish a Mining Liaison Committee to review the progress of mining operations and provide a forum for liaison between the proponent and the Traditional Owners;
- Deal only with the ALC and the Mining Liaison Committee when obtaining information regarding the wishes of the Traditional Owners, or gain approval of the ALC when conducting consultation with Traditional Owners;
- Pay specific royalties directly to the ALC and GEAT;
- Protect known sacred sites and notify the ALC of the discovery of areas of archaeological significance immediately following their discovery and prior to any disturbance; and
- Reimburse the ALC and its members for time taken in negotiating and preparing agreements relating to the existing mine and other costs associated with the administration of the Mining Liaison Committee.

Under ALRA, it will be necessary for the proponent to obtain a new Mining Agreement with the ALC for the Eastern Leases prior to the grant of a ML(s).

5.4 ROYALTY ARRANGEMENTS

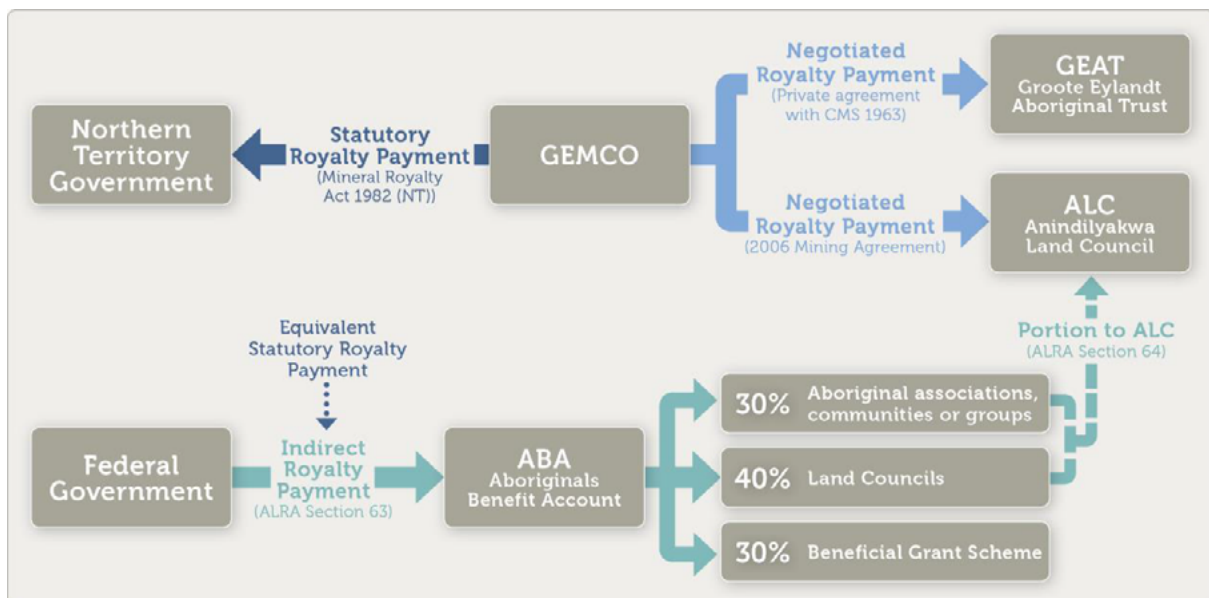
This section describes the current royalty payment arrangements for the existing mine and the associated royalty receipt arrangements for the Northern Territory and Federal Governments, the ALC, and GEAT.

There are three kinds of royalties to which the proponent contributes:

- Negotiated;
- Statutory; and
- Indirect.

Each of these royalty systems are described below and the distribution of these royalty payments is illustrated in Graph 11.

Graph 11
Royalty Arrangements



5.4.1 Negotiated Royalty Payments

Negotiated royalties are royalty payments agreed to under a negotiated agreement rather than in accordance with a statutory requirement. The proponent makes the following negotiated royalty payments for the existing mining operation:

- Royalty payments to GEAT in accordance with the conditions of the private agreement between the proponent and the CMS for the establishment of the existing operations in 1963. GEAT is chartered to utilise royalty funds for charitable contributions towards community-wide programs which enhance the lives of the Anindilyakwa People. The value of these royalties is Commercial in Confidence information and unable to be released in this document.
- Royalty payments to the ALC on behalf of the Traditional Owners of Groote Eylandt as part of the 2006 Mining Agreement. According to ALC Annual Reports between 2005

and 2013, the proponent contributed an average of over \$8 million a year in negotiated royalty payments to the ALC (ALC 2006-2008, 2011, 2012b, 2013).

5.4.2 Statutory Royalty Payments

The proponent is required to pay royalties to the Northern Territory Government under the *Mineral Royalty Act*. Between 2007 and 2013, the proponent paid, on average, nearly \$100 million per annum in royalties to the Northern Territory Government. The Northern Territory Government uses these royalties to fund general revenue.

5.4.3 Indirect Royalty Payments

Indirect royalty payments are made into the ABA as a result of the proponent's royalty contribution to the NT Government. Under the provisions of ALRA, for every dollar of royalties received by the Northern Territory Government for mining on Aboriginal Land, the Federal Government contributes an equivalent amount to the ABA. This contribution to the ABA is sourced from general Australia Government revenue (DSS 2013). The ABA is administered by the Department of Prime Minister and Cabinet.

In the 2012-2013 financial year over 65% of the funds received by the ABA were a result of the proponent's royalty contributions to the Northern Territory Government (DSS 2013).

Under the provisions of the ALRA, ABA royalty receipts are distributed as follows:

- 30% are distributed to incorporated Aboriginal associations, communities or groups for distribution to Aboriginal people affected by mining in the NT. On Groote Eylandt, these funds are distributed to the Traditional Owners through the ALC;
- 40% are allocated to Land Councils in the NT, including the ALC, to administer their statutory responsibilities. The ABA is the primary source of revenue for Land Councils in the Northern Territory, and between 2012 and 2013 ABA contributions accounted for over 60% of the ALC's income (DSS 2013); and
- 30% is used to administer the ABA and to fund a Beneficial Grants scheme to assist the development of Aboriginal people throughout the NT (DSS 2013).

As a result of payments from the ABA substantial development has taken place on Groote Eylandt, through initiatives progressed by the ALC (Section 3.4.3) and through the RPA which is also funded by the ABA (Section 3.5.2).

5.5 ANINDILYAKWA LAND COUNCIL ROYALTY BENEFITS

As detailed in Section 5.4.1, the ALC receives direct negotiated royalty payments from the proponent. These direct payments have enabled the ALC to deliver improved services to the

Traditional Owners on Groote Eylandt. As an incorporated Aboriginal association, the ALC also receives payments from the ABA (Section 5.4.3). Between 2005 and 2013, the ALC received an average of approximately \$21 million a year from the ABA (DSS 2013).

In accordance with the requirements of ALRA and the ABA, the ALC distributes a portion of the royalties received from the ABA as a twice-yearly payment to each Anindilyakwa person over the age of 18 residing on the Groote Eylandt Archipelago. The remainder of annual royalties received from the ABA is invested by the ALC into the Groote Eylandt community in the form of infrastructure, programs and payments.

5.6 SOCIAL INVESTMENT FRAMEWORK

5.6.1 Overview

The proponent has an established social performance framework which outlines the performance requirements of the proponent's projects, specifically in relation to:

- Contributing to sustainable community development programs;
- Managing the potential negative risks and social impacts;
- Governance over community development projects and donations; and
- Enhancement of the company's licence to operate and to grow its business.

The proponent has a Community Development Management Plan (CDMP) for the existing operations. The CDMP includes a social investment framework. Through the CDMP, "*GEMCO seeks to be the Partner of Choice for the Groote Eylandt people as they create social and economic opportunity*". The CDMP is reviewed annually. Strategies in the CDMP for the existing mining operation are implemented using three main methods of social investment:

- Matched-giving;
- Organised donations; and
- Informal and "in-kind" support.

5.6.2 Matched-Giving

The proponent implements a matched-giving program for employees, where employees are paid \$20 an hour for time spent volunteering for a community organisation. Costs incurred by employees while managing local community organisations are reimbursed \$1 for every \$2 spent.

5.6.3 Organised Donations

The proponent supports a number of organisations and programs on Groote Eylandt, including but not limited to:

- Northern Territory AFL Program;
- Alyangula Golf Club;
- Alyangula Fishing Club;
- GEMYDU;
- Schools Pathways Program;
- Alyangula Daycare;
- Sea Safety program;
- Alyangula Scouts;
- Groote Eylandt Children's Christmas Party;
- Groote Eylandt BMX Club; and
- ARC.

The proponent has recently committed \$1 million over four years to the MJD Foundation. The MJD Foundation provides support and services to sufferers of MJD and their families.

5.6.4 Informal and "In-Kind" Support

The proponent currently provides 'in kind' support to a range of local initiatives that are aligned with the overall goals of developing capacity and/or community spirit on Groote Eylandt. Benefits provided to the communities of Groote Eylandt at low or minimal cost include:

- Provision of household gas to Alyangula residents;
- Provision of ice to the communities of Groote Eylandt;
- Provision of an ambulance and fire emergency support services to the communities of Groote Eylandt;
- Transport to work for Aboriginal employees from Umbakumba and Angurugu;
- An annual Picnic Day fair;
- Flights for community support program participants;
- Equipment for the One People One Voice Indigenous festival; and
- Other minor incidental benefits provided at no cost to the company or with minimal surcharge but below general costs in the wider community. Some items are provided at cost plus handling to the community; for example fuel and some hardware items.

These benefits are provided in recognition of support to the community from the company and are generally provided to all members of the community without exception.

The proponent also provides support for community goals and values through non-financial actions, including:

- Maintaining a strict workplace drug and alcohol program that encourages abstinence in the community;
- Actively participating in monitoring the effectiveness of alcohol management policies on Groote Eylandt through membership of the Alcohol Permit Committee;
- Providing mentorship and encouraging school attendance;
- Supporting cane toad exclusion controls to assist in maintaining the biodiversity values of Groote Eylandt; and
- Enforcing employee and contractor behaviour standards which align with the values of the Groote Eylandt community, including enforcement of consequences for violation of Aboriginal protocols (e.g. dismissal of employees or contractors accessing traditional land without a permit).

5.7 COMMUNICATIONS

5.7.1 Overview

The GEMCO External Affairs team is responsible for all external company communications with key stakeholders and communities on Groote Eylandt. A number of different tools are utilised by the GEMCO External Affairs team to communicate with the broader community. These tools are described in the following sections.

5.7.2 Alyangula

Community noticeboards and weekly “round-up” emails serve to inform the community of Alyangula of upcoming events as well as operations at the existing mine site. However, EIS consultation with Alyangula residents indicated a desire for more frequent face-to-face communication from the proponent.

5.7.3 Anindilyakwa Land Council

The ALC is the primary vehicle for the proponent to communicate with the Aboriginal population of Groote Eylandt. It is a requirement of the 2006 Mining Agreement that any community engagement with Traditional Owners is approved by the ALC prior to conduct. The ALC is an important partner for the proponent, and the GEMCO External Affairs team engages with the ALC on a regular basis. Formal engagement includes:

- Monthly meetings with the ALC Mining Officer and the Mining Liaison Committee;
- Closure planning consultation;
- Maintenance of a monthly action tracker; and
- Communication with the ALC Chairman.

Informal liaison is also undertaken on an as-needed basis.

5.7.4 Angurugu and Umbakumba

The GEMCO External Affairs team also interacts on a regular basis with the Aboriginal communities of Angurugu and Umbakumba, though this interaction is regulated by the ALC. As a result, the proponent's communications with the Angurugu and Umbakumba communities are consequently less frequent compared with those residents living in Alyangula.

Formal engagement in Angurugu and Umbakumba is conducted every three years in the form of a Community Perception Survey of residents. This survey includes specific and targeted questions around the regularity and effectiveness of communications from the proponent.

Informal engagement activities are undertaken weekly by the proponent, with ALC approval, and include:

- Community visits;
- Visits to Aged Care Centre; and
- Visits to Linguistics/ Women's centre.

During EIS consultation, residents of Angurugu and Umbakumba expressed a desire to know more about the existing mine and future plans. Residents of these communities acknowledged the provision of this information as the responsibility of the ALC rather than the proponent.

Residents also indicated a desire to have large group meetings in which this information is disseminated to all individuals at once, in order to avoid the misunderstanding of information as it is passed down through existing communication channels.

5.7.5 Northern Territory Government

The GEMCO HSEC team undertakes formal meetings with relevant Northern Territory Government agencies on specific issues and holds regular meetings with senior departmental staff. The HSEC team also attends Education Board meetings on a regular

basis. Proponent representatives also participate in regular meetings of the RPA Committee and subcommittees.

Informal engagement is undertaken with local staff from Territory Government agencies, including health, police and education providers.

6 PROJECT CHARACTERISTICS

This section describes the specific characteristics of the project relevant to the assessment of socio-economic impacts.

6.1 PROJECT SCHEDULE AND WORKFORCE

This SIA refers to Project Years rather than calendar years. Based on current project planning timelines, the first year in which project activities will take place is around 2017 and hence it is assumed that Project Year 1 is 2017. Current planning is subject to change as mine planning progresses. An indicative project schedule is presented in Table 12.

Table 12
Project Schedule

PROJECT STAGE	Project Year 1	Project Year 5	Project Year 10	Project Year 15	Project Year 20
Construction Phase (Northern EL)	Active				
Operations Phase (Northern EL)		Active	Active	Active	
Construction Phase (Southern EL)			Active		
Operations Phase (Southern EL)			Active	Active	
Decommissioning					Active

6.1.1 Construction Phase

It is anticipated there will be two construction periods for the project which correspond with the timing to access and develop the Northern EL and Southern EL, respectively. Both of these time periods will require a construction workforce of around 90 people over a 12-18 month time frame.

Construction in the Northern EL will occur for 12-18 months in Project Years 1 and 2, and would include construction of the main haul road. Construction in the Southern EL is scheduled to occur in Project Years 6 and 7.

6.1.2 Operations Phase

Mining operations in the Northern EL are scheduled to commence in the second half of Project Year 2. Mining operations is scheduled to commence in the Southern EL in Project Year 7. Mining operations will extend until Project Year 15. This equates to a total of 13 years of mining operations (i.e. mining of ore).

A proportion of the existing mine workforce of 835 persons will be gradually transitioned to the project from 2017 onwards, resulting in no increase in the workforce.

Although the project will not increase the existing mine operations workforce, it will extend the life of the mine by an additional four years. It will therefore extend the employment period of the 835 employees and contractors by an additional four years to Project Year 15. Without the project, the existing mine would cease operations in approximately 2027 (Project Year 11).

6.1.3 Decommissioning Phase

A four-year final decommissioning phase will be undertaken in both the Northern and Southern ELs in Project Years 16-19, after mining operations have concluded. The peak decommissioning workforce will be approximately 50 persons in Project Years 16, 17 and 18.

6.2 WORKFORCE OCCUPATION

The occupational characteristics of the project construction workforce will be similar to those of the existing operations workforce, with a slightly higher proportion of labourers. The occupational characteristics of the construction workforce for the project are shown in Table 13.

Table 13
Project Workforce Occupation – Project Construction

Occupation	Proportion (%)	Number of Persons
Senior Management	2	2
Middle Management (Superintendents)	3	3
Technical Specialists and Supervisors	10	9
Operators/labourers	85	76
Total	100	90

Source: Proponent provided data

The occupational characteristics of the project operations workforce will be consistent with those of the existing mine workforce. This is because the project is a redeployment of the existing workforce rather than a new workforce. The occupational characteristics of the existing mine workforce are outlined in Section 5.2.2.

6.3 WORKFORCE EMPLOYMENT ARRANGEMENTS

The project construction workforce will be employed primarily as non-resident workers on a FIFO roster arrangement because of the short-term nature of the construction phases. Rosters for the project construction workforce will be consistent with rosters for the existing operations.

Employment arrangements for the project operations workforce, including FIFO split and roster, will be consistent with current arrangements that are in place with the existing operations workforce.

6.4 WORKFORCE ACCOMMODATION

It is anticipated that majority of the project construction workforce will be employed on a FIFO arrangement. There is sufficient capacity within the proponent's existing workforce accommodation for the project construction workforce (Section 5.2.4).

The project is not anticipated to increase the size of the existing mine workforce, and as such no additional accommodation will be required.

6.5 WORKFORCE TRANSPORT AND LOGISTICS

Workforce transport and logistics for the project will be consistent with those of the existing operations workforce.

7 IMPACT IDENTIFICATION, ASSESSMENT AND MANAGEMENT

This section describes the potential social and economic impacts of the project and presents the strategies to avoid, mitigate or manage these impacts.

7.1 OVERVIEW OF APPROACH

Impacts were identified through targeted EIS consultation with stakeholders and a detailed baseline study of the local and regional study areas.

Multiple issues were raised by stakeholders during EIS consultation, but few of these issues related to the socio-economic impacts of the project. The majority of issues raised in relation to the project were regarding potential impacts to water resources and flora and fauna. These potential impacts are addressed in the relevant chapters of the EIS.

The predicted socio-economic benefits of the project include:

- Short term increase in employment;
- Continuation of employment;
- Continuation of service provision;
- Economic benefits to Australia, the Northern Territory and Groote Eylandt;
- Economic benefits to Traditional Owners; and
- Progression of mine closure planning.

The predicted negative socio-economic impacts of the project relate primarily to:

- Impacts on amenity;
- Loss of land for recreation and traditional practices;
- Anxiety and uncertainty surrounding new mining areas; and
- Impacts on spirituality and sacred sites.

These impacts and benefits are discussed in the following section.

7.2 IMPACTS AND MANAGEMENT MEASURES

7.2.1 Increased Employment

The project will employ approximately 90 persons for 12-18 months across two construction phases (Section 6.1.1).

7.2.2 Continuation of Employment

Based on current mine planning, the project will increase the life of the existing mine by approximately four years. This will enable a continuation of approximately 835 jobs for this period.

The proponent is committed to providing job opportunities to the local residents of Angurugu and Umbakumba. The proponent is currently updating the *GEM-PRO-3007 Indigenous Employment Strategy* for the existing mine. The updated strategy will be applicable to the project. The current employment strategy has been successful in increasing Aboriginal employment in the RMS sector of the existing mine operations, with approximately 33 local Aboriginal persons now employed.

The next stage of the proponent's employment strategy for the existing mine is to increase local Aboriginal representation in roles beyond the mine rehabilitation services sector. Further detail on this strategy is provided in Section 5.2.6.

7.2.3 Continuation of Service and Facility Provision

As a result of the proponent's contributions to infrastructure and services on Groote Eylandt, residents of all three main communities enjoy a greater level of service than would otherwise be provided by public investment alone.

The additional four years of operations will provide opportunity to continue the proponent's management and maintenance of the Alyangula Township and its facilities. These facilities provide benefit not only to Alyangula residents, but also to the wider Groote Eylandt population. The health care centre and pool are utilised by residents of Angurugu and Umbakumba, and the proponent's Milner Bay Port facilities enable produce and cargo shipments to reach Groote Eylandt.

The additional years of operations will also enable the continuation of utilities and public services currently provided to Alyangula, Angurugu and Umbakumba by the proponent. These services include:

- Power to Alyangula and Angurugu;
- Water to Alyangula and Angurugu;
- Gas to Alyangula, Angurugu and Umbakumba;
- Road maintenance in Alyangula; and
- Ambulance and emergency services to the whole of Groote Eylandt.

Many of these services would require substantial government funding provision and management if not managed by the proponent.

7.2.4 Economic Benefits to Australia

Based on current mine planning, the project will increase the life of the existing mine by approximately four years. This will result in an additional four years of corporate tax payments to the Federal Government, equal to approximately \$100 million per year for each additional year.

7.2.5 Economic Benefits to the Northern Territory

Royalties from the project will be paid to the Northern Territory Government. As noted in Section 5.4.2, between 2007 and 2013, the proponent paid, on average, nearly \$100 million per annum in royalties to the Northern Territory Government. The project is expected to result in an additional four years of statutory royalty payments.

As outlined in Section 5.4, the Federal Government makes payments to the ABA equal to the royalty payments made by the proponent to the Northern Territory Government. The increase in Northern Territory royalty payments from the project will result in an increase in funding for the ABA, and a continuation of this funding for an additional four years. The funds from the ABA are used to support Land Councils and Aboriginal development across the Northern Territory.

Capital expenditure during the construction phase of the project will be approximately \$160 million. This expenditure includes purchases of materials equipment and services, as well as salaries and wages for project and construction personnel.

The Northern Territory will also benefit from an additional four years of operational expenditure from the project, equal to approximately \$130 million. This spend is in addition to royalty payments and includes wages and procurement spend.

7.2.6 Economic Benefits to Groote Eylandt

The additional four years of operations will result in an additional four years of operational expenditure on Groote Eylandt equal to approximately \$1.9 million per year. This expenditure includes procurement from local businesses and contracts with local organisations.

7.2.7 Economic Benefits to the Traditional Owners

The project will require the negotiation of a new Mining Agreement and will include the negotiation of new royalty payments to Traditional Owners on Groote Eylandt. While the new Mining Agreement is still to be finalised the project is expected to result in an additional four years of royalty payments to the ALC.

Furthermore, the additional four years of Northern Territory royalty payments will result in an additional four years of Federal Government funding for the ABA (Section 7.2.5). Annual payments to the ABA as a result of the proponent's Northern Territory royalty contributions averaged nearly \$100 million between 2007 and 2013.

7.2.8 Progression of Mine Closure Planning

Given the significant role the proponent plays in supporting the communities of Groote Eylandt, mine closure and the eventual exit of the proponent from the Archipelago is an important consideration for these communities.

During EIS consultation, the majority of non-Aboriginal residents noted that they would want the non-Aboriginal population (including themselves) to leave the island following mine closure, as it was not considered their home. Both the non-Aboriginal and the Aboriginal population stated a desire for the Aboriginal population to be able to sustain the island and its population without the proponent's assistance. Furthermore, residents of all three main communities on Groote Eylandt felt that the proponent has a responsibility to ensure that any infrastructure which remains following closure, specifically the town facilities in Alyangula and utilities infrastructure, is in a functional condition.

The ALC Strategic Plan is focused on preparing for closure of the existing mine and identifies a number of strategies to promote the sustainability of Groote Eylandt post-mining. It is anticipated that the new Mining Agreement negotiated between the ALC and the proponent for the project will incorporate closure planning as a key aim. Current negotiations regarding the new Mining Agreement are based on the following four principles, agreed to by both parties:

- Create a sustainable future;
- Fair to both parties;
- Simple and effective; and
- Negotiations need to strengthen relationships between both parties.

The negotiation of a new Mining Agreement for the project provides an opportunity for the proponent and the ALC to work collaboratively in relation to mine closure planning.

7.2.9 Impacts on Amenity

The EIS Air Quality Section and EIS Noise Section provides for an assessment of the potential for dust and noise from the project to give rise to impacts on residential amenity. Potential impacts on sensitive receptors, including the township of Angurugu and the outstations of Yedikba and Wurrumenbumanja (Figure 2) were assessed. These sections of the EIS also describe proposed mitigation measures and monitoring programs.

7.2.10 Loss of Land for Recreation and Traditional Practices

During EIS consultation, Aboriginal stakeholders reported a number of recreation activities and traditional practices currently carried out on the Eastern Leases. Once construction commences, access to the Eastern Leases will be restricted to the project workforce. Throughout the life of the project Traditional Owners will not have access to the project site for the undertaking of recreation and traditional activities. Recreation activities reported to occur on the Eastern Leases included:

- Swimming in river systems;
- Camping;
- Traversing the project site to access other areas of Groote Eylandt; and
- Using exploration tracks to access areas within and surrounding the project site.

Traditional practices which were reported by stakeholders as being carried out on the project site included:

- Hunting of wallabies, goannas, bandicoots;
- Fishing in river systems;
- Gathering of turtles and mussels from river systems;
- Gathering sugarbag and green plum; and
- Collecting pandanus for weaving baskets, and timber from stringybark and paperbark trees for making spears.

The negotiation of a new Mining Agreement for the project is the primary vehicle for addressing the impacts associated with loss of access to land for Traditional Owners. Land within the project site will be progressively rehabilitated to create self-sustaining open woodland, similar to the pre-mining environment. Rehabilitation of the project site is discussed in the EIS Mine Rehabilitation and Closure Section. The rehabilitation strategy is designed to ensure that the land can be made available again to the Traditional Owners following mine closure.

The unsealed access road which traverses the project site leads to Dalumba Bay on the eastern side of the island and also provides access to Amagula Pools located at the northern end of Leske Pools recreation area. This access road will be realigned prior to mining in the Southern EL, in order to maintain access for Aboriginal residents.

7.2.11 Anxiety and Uncertainty Surrounding New Mining Areas

It is likely that, despite the findings of the comprehensive EIS technical studies, Aboriginal stakeholders will continue to have concerns about potential impacts to the environmental assets of the Groote Eylandt Archipelago. This is due to a range of factors, including:

- Cultural differences between the technical nature of the EIS studies and the spiritual understanding of the environment held by Aboriginal stakeholders;
- Previous changes in river systems which are attributed by the Aboriginal people to the existing mine; and
- Limited information about, and understanding of, the existing mine.

Consultation indicated that many residents of Angurugu and Umbakumba do not feel that they know enough about the existing operations, and therefore had difficulty understanding the project. These residents noted a desire for more information about the existing mine and the project and specified that they prefer this information to come from the ALC rather than the proponent. A lack of understanding of mining on Groote Eylandt led to concern and anxiety about environmental impacts which are not related to the project. For example, some residents of Angurugu and Umbakumba expressed confusion between the project and sea-bed mining.

The proponent is committed to working with the ALC to increase the amount of information received by local Aboriginal residents regarding activities at the existing mine and the project. The proponent has an established communications framework (Section 5.7) and conducts a community perception survey of residents of Angurugu and Umbakumba every three years. The proponent will share these survey results with the ALC and work with the ALC to respond to any issues or concerns raised..

7.2.12 Impacts on Spirituality and Sacred Sites

Spirituality is intrinsically linked to land for Aboriginal Australians. During EIS consultation, the Traditional Owners of Groote Eylandt expressed a strong sense of connection to their traditional lands stemming from generational duty and cultural practices. Traditional Owners raised significant concern in relation to the potential for the project to impact on their spiritual values. These concerns included:

- Sacred Sites – Concerns in relation to disturbance to sites that are considered to have special significance to Anindilyakwa culture.
- Songlines – A number of the river systems on Groote Eylandt form part of the Traditional Owners' spiritual songlines or have connections to songlines. The connection between rivers and the ocean is an integral component of the songlines. Consequently Traditional Owners are concerned about the potential impact of the

project on the Emerald and Amagula Rivers – any impact to these rivers has the potential to impact these songlines.

- Caring for Land and Water - The Traditional Owners' spiritual system is based on the protection of and a connection to the land. Traditional Owners believe that their health and wellbeing is intricately connected to the health and wellbeing of the land. Some Traditional owners link significant adverse changes in the landscape (such as the development of mining areas) to adverse changes in health and wellbeing.

The disturbance of the project site may have emotional implications for some of the Traditional Owners of that land which can only be fully understood by members of the relevant Traditional Owner groups.

The proponent is currently engaged in a process with the ALC in relation to the identification and management of sacred sites (which would include songlines as well as other sites of cultural significance). The sacred sites assessment will ultimately culminate in an application for an Authority Certificate under the *Northern Territory Sacred Sites Act 1989*.

The EIS Archaeology Section describes the archaeological sites (physical sites) identified within the Eastern Leases during the archaeology study undertaken as part of the EIS. Some of these archaeological sites may also be considered to be part of sacred sites. Where sites are considered to be sacred sites, their value will have been addressed separately as part of the sacred sites assessment being undertaken by the proponent and the ALC.

The EIS Surface Water Section and the EIS Mine Water Management Section describes the management measures that will be adopted to avoid disturbance of significant watercourses traversing the project site and protect water quality in the Emerald and Amagula Rivers during project construction and operation.

7.2.13 Loss of Connection to Place

The Anindilyakwa people of Groote Eylandt have experienced considerable social change since the establishment of the Anglican Church Mission in 1921. The Anindilyakwa people are struggling to preserve their language and their cultural traditions in the face of significant social change. The loss of access to the project site during project construction and operation, and the potential for the project to impact Anindilyakwa spiritual values may have a cumulative impact on the ability of the Anindilyakwa people to preserve their cultural traditions.

The economic benefits provided by the existing operation, and proposed to be continued as a result of the project, include the payment of royalties and provision of employment opportunities. These benefits will assist in enabling the Anindilyakwa people to continue to

live on Groote Eylandt in a manner consistent with their culture, despite the pressures and influences of modern Australian culture. Royalty payments to the ALC have been used to:

- Fund the construction of Knowledge Centres in Alyangula, Angurugu, Umbakumba and Milyakburra to positively engage Anindilyakwa People in the development and protection of their culture; and
- Support cultural practices associated with ceremonies and funerals.

In addition the proponent has an established social investment framework through which it supports actions to protect the Anindilyakwa culture and/or enhance cultural learning amongst the Anindilyakwa population, particularly young people.

7.3 MONITORING

The proponent conducts the following monitoring programs consistent with corporate monitoring and reporting requirements:

- Employee and contractor health and wellbeing – monthly;
- Air emissions – monthly;
- Water – monthly;
- Rehabilitation – quarterly; and
- Community complaints – monthly.

In addition the proponent is required to address corporate requirements relating to community engagement, community development and human rights at each stage of the project lifecycle - exploration, development, operation.

Relevant corporate requirements include the:

- Conduct of human rights monitoring;
- Conduct of a social baseline study and impact assessment for key quality of life indicators;
- Preparation of a CDMP; and
- Conduct of community perceptions surveys.

These requirements are discussed in the following sections.

7.3.1 Human Rights Monitoring

The proponent's corporate procedures require an assessment of the impacts of its operations against the Universal Declaration of Human Rights and the Global Compact. The

Human Rights Impact Assessment (HRIA) is required to be conducted every three years and reviewed annually. A HRIA Management Plan is required to be developed, implemented and reviewed annually where material impacts are identified in the HRIA.

A HRIA of the existing mine was last conducted in 2011. This HRIA did not identify any material impacts necessitating the preparation of a HRIA Management Plan. A new HRIA is being progressed by the proponent.

The proponent will continue to conduct these HRIAs on a regular basis and implement the findings as necessary.

7.3.2 Social Baseline Study

The proponent is also required to complete a social baseline study, assess key quality of life indicators and conduct a social impact and opportunity assessment during the project development phase in order to address relevant corporate requirements. This SIA constitutes the social baseline study and impact and opportunities assessment for the project. A social baseline study and impact assessment of the existing mine was last conducted in 2011.

Key quality of life indicators identified through social baseline studies and community perceptions surveys, and agreed with the proponent, will continue to be monitored during the project life of operations.

Community development projects that respond to the key quality of life indicators are required to be identified and implemented during project operations. Community development initiatives are detailed in the CDMP (Section 5.6 and Section 7.3.3).

7.3.3 Community Development Management Plan

The CDMP for the existing mine is described in Section 5.6. The CDMP includes:

- A register of community development projects and donations, commitments and approvals; and
- A register of the employee matched giving program.

The CDMP will be reviewed and its effectiveness evaluated on an annual basis.

7.3.4 Community Perceptions Survey

The proponent conducts a Community Perceptions Survey in the three communities on Groote Eylandt every three years, in accordance with corporate requirements. The

Community Perceptions Survey includes questions in relation to local perceptions of the proponent's performance in environmental and social management, as well as the effectiveness of the proponent's communications channels.

The proponent will continue to conduct Community Perception Surveys and will include consideration of the project in future surveys.

8 CONCLUSION

This SIA has been informed by a thorough examination of qualitative and quantitative data, as well as a tailored EIS consultation process.

The SIA confirmed that the socio-economic setting of the project is unique in its isolation and cultural characteristics. Groote Eylandt is Aboriginal Land under ALRA and a designated IPA. It is home to a predominantly Aboriginal population, almost all of whom are Traditional Owners, united by a strong culture of kinship, ceremony and language.

The SIA also confirmed that the socio-economic characteristics of the Aboriginal communities of Groote Eylandt are similar to other remote Aboriginal communities in the Northern Territory. These characteristics include:

- Low levels of literacy and numeracy;
- Low levels of school attendance;
- Overcrowding of houses;
- Poor environmental health; and
- Endemic issues with drug abuse.

These issues are being addressed through a range of Federal and Territory strategies, notably the Groote Eylandt and Bickerton Island RPA, of which the proponent is a signatory.

EIS consultation identified that the Anindilyakwa Elders struggle to navigate the development of traditional Anindilyakwa culture alongside mainstream 'white' culture. The Elders' desire to see their children and grandchildren access benefits of both worlds, not just one, is captured in the vision of the ALC Strategic Plan.

The proponent's proposed Eastern Leases Project, and importantly the negotiation of the associated new Mining Agreement, is one mechanism for assisting the ALC and Traditional Owners to achieve this vision.

The SIA process has identified the social values of both the Aboriginal and non-Aboriginal communities on Groote Eylandt. The socio-economic impact of the project on these values has been assessed and commitments identified to manage potential impacts.

The potential negative impacts of the project on the socio-economic values of Groote Eylandt will be managed through new and existing strategies.

The potential negative impacts include:

- Impacts on social amenity;
- Loss of land for recreation and traditional practices;
- Anxiety and uncertainty surrounding new mining areas; and
- Impacts on spirituality and sacred sites.

The predicted positive socio-economic benefits of the project for the Aboriginal people of Groote Eylandt include a continuation of direct and indirect employment, continued service provision and investment in the communities. The project will also generate economic benefits for the Traditional Owners in the form of royalties, which will be returned to the wider Groote Eylandt Aboriginal population in the form of community and economic development by the ALC. Importantly, the project provides a vehicle for progressing mine closure planning in a timely manner with the ALC and will support the long-term planning process for the Anindilyakwa People.

Economic benefits will also accrue to the Northern Territory and Federal Governments in the form of royalty and tax payments.

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for

HANSEN BAILEY



Bronwyn Pressland
Principal Social Planner



Peter Hansen
Director

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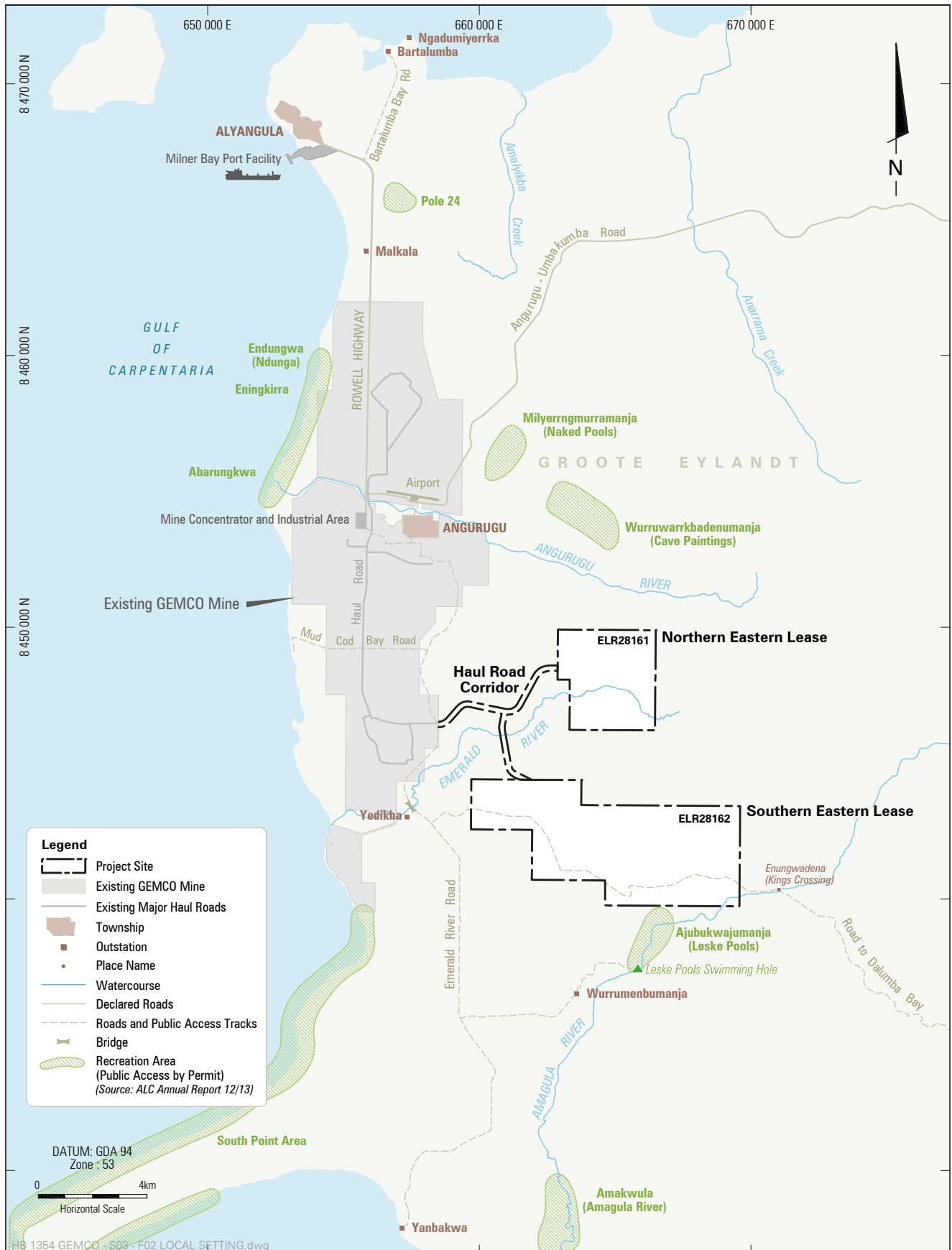
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FIGURES



EASTERN LEASES PROJECT



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Local Setting

FIGURE 2



EASTERN LEASES PROJECT

PLATES



Plate 1
Alyangula Area School



Plate 2
Alyangula Shopping Arcade



Plate 3
Alyangula Coffee Shop



Plate 4
Groote Eylandt Airport

APPENDIX A

Risk Assessment Methodology and Outcomes

**Table A1
 Risk Assessment - Negative Project Impacts**

Likelihood	Almost Certain				Loss of land for recreation and traditional practices.			
	Likely							
	Possible			Anxiety and uncertainty surround new mining areas.				
	Rare		Impacts on amenity.			Impacts on spirituality and sacred sites.		
	Very Rare							
		1	2	3	4	5	6	7
		Severity						

Table A2
Likelihood and Severity Scales

Likelihood	
Almost Certain	Could be expected to occur more than once during the study or project delivery
Likely	Could easily be incurred and has generally occurred in similar studies or projects
Possible	Incurred in a minority of similar studies or projects
Rare	Known to happen, but only rarely
Very Rare	Conceivable but only in extreme circumstances
Severity	
7	Severe, widespread community health, safety or security impacts (>1000 households) or human rights violations; complete destruction of >1000 houses or community infrastructure; complete irreversible desecration of multiple structures/objects/places of global significance
6	Extensive community health, safety or security impacts (>200 households) or human rights violations; extended serious disruption to people's lives (>1000 households); extensive damage to >1000 houses or community infrastructure or structures/ objects/places of global cultural significance.
5	Serious community health, safety or security impacts (>50 households) or human rights violations; extended disruption to people's lives (>200 households), extensive damage to >200 houses or structures/ objects/places of national cultural significance.
4	Serious community health, safety or security impacts (<50 households). Multiple allegations of human rights violations; extended disruption to people's lives (>50 households); extensive damage to >50 houses; moderate irreversible damage to structures/ objects/places of national cultural significance.
3	Moderate community health, safety or security impacts (<50 households). Single allegation of human rights violations; moderate disruption to people's lives (<50 households); extensive damage to <50 houses; moderate reversible damage to structures/objects/ places of national cultural significance.
2	Minor community health, safety or security impacts (<10 households) or human rights infringements; inconvenience to livelihoods <6 months; moderate damage to <50 houses or community infrastructure; minor, reversible damage to structures/ objects/places of regional cultural significance.
1	Single low level community health, safety or security impact; low-level inconvenience <2 weeks; minor, reversible, low-level disturbance or minor damage to a single house or structure/object/place of regional cultural significance.

Source: adapted from BHP Billiton2013a