



Completion of Mining at Oz Minerals Century Mine: Implications for Gulf Communities

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Centre for Social Responsibility in Mining
Sustainable Minerals Institute
The University of Queensland, Australia
csrm@smi.uq.edu.au
www.csr.uq.edu.au

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Pat Vidler, previously with the Department of Infrastructure and Planning and now with URS, led the writing of the final report.

Research Team

David Brereton (CSRM: Project leader)

Joni Parmenter (CSRM: Researcher)

Pat Vidler (URS: Project Advisor)

Mark Love (UQ: Research Assistant)

Sokar Philpott (CSRM; Research Assistant)

Julia Keenan (CSRM; Research Assistant)

Centre for Social Responsibility in Mining

CSRM is a member of the Sustainable Minerals Institute.

Director: Professor David Brereton

Abbreviations

ABS	Australian Bureau of Statistics
ADBT	Aboriginal Development Benefits Trust
CDEP	Community Development Employment Projects
CEC	Century Environment Committee
CLO	Community Liason Officer or Office
CM	Century Mine
CSRМ	Centre for Social Responsibility in Mining
DOGIT	Deed Of Grant In Trust Community
DFID	The United Kingdom Department for International Development
GCA	Gulf Communities Agreement
GADC	Gulf Aboriginal Development Company
GASDT	Gulf Area Social Development Trust
MoU	Memorandum of Understanding
MUSP	Multiple Use Strategic Plan
LHRPHC	Lawn Hill and Riversleigh Pastoral Company
LIPAs	Local Indigenous Partnership Agreements
NAPCo	North Australian Pastoral Company
NHT	National Heritage Trust
NWQCBGS	North West Queensland Community Benefits Grants Scheme
QRC	Queensland Resources Council
RTN	Right to Negotiate
SD	Statistical Division
SIA	Social Impact Assessment
SPSS	Statistical Package for the Social Sciences
TOR	Terms of Reference
TRM	The Right Mind
WWF	World Wide Fund for Nature
WMS	Waanyi Mining Services

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EXECUTIVE SUMMARY

About the study

Oz Minerals Century Mine (CM) is a large zinc mining and processing operation located in the lower Gulf of the Carpentaria region of North West Queensland, a remote area with a substantial Indigenous population. The mine operates on a Fly in Fly out (FIFO) basis, drawing its workforce from Townsville, Mt Isa and Cairns, as well as the Gulf communities. It is expected to close in 2015, or approximately seven years from now.

This report has been prepared to assist with planning for the completion of mining at Century.

It:

- provides an assessment of the impact of Century Mine to date on the development of the lower Gulf region
- documents the likely impacts of completion of mining on the region
- identifies strategies for mitigating these impacts and maximising long term development outcomes for the region.

The report and associated documents should be read in conjunction with the report of the recently completed 10 year review of the Gulf Communities Agreement – a comprehensive land use agreement negotiated in 1997 between the developers of the mine, Traditional Owners in the region and the Queensland State Government.

The study on which the report is based was a joint initiative between Century's Gulf Communities Agreement (GCA) Support Department, and The Centre for Social Responsibility in Mining (CSR). Funding for the study was provided by Zinifex (now Oz Minerals) and the Queensland Department of State Development and Innovation (now the Department of Tourism, Regional Development and Innovation).

Our approach

The report uses the 'five capitals' framework as a reference point for assessing the contribution of the mine to development in the region and for identifying where and how this contribution could be enhanced.

The key idea underpinning the five capitals approach is that people require a range of assets to achieve positive livelihood outcomes: it is not just a matter of providing them with more of one type of asset such as employment, income, or better services. The five forms of capital are briefly summarised in the table below. For this study, we focused particularly on the areas of financial, physical and human capital.

Asset	Definition
Financial	The financial resources (income, savings, business enterprises and access to credit) that people use to achieve their livelihood objectives. Financial assets are the most liquid form of assets and can be readily used and/or exchanged to acquire other assets.
Physical	Physical capital comprises the basic built infrastructure (roads, buildings etc) and producer goods (tools and equipment) needed to support livelihoods. Physical capital is primarily important as a means to enhance the productivity of other assets.
Natural	Natural capital is the natural resource stock (land, water, forests etc) from which resource flows and services useful for livelihoods are derived.
Human	Human capital represents the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives.
Social/ Institutional	Social capital is taken to mean the social resources upon which people draw in pursuit of their livelihood objectives, developed through: <ul style="list-style-type: none"> - networks and connectedness - membership of more formalised groups - relationships of trust, reciprocity and exchange.

The main data sources utilised were:

- statistical information obtained from the Australian Bureau of Statistics (ABS) and other state and federal government agencies and service providers
- data held by CM – principally relating to training and employment of local people and local expenditure
- a survey and interviews with local Aboriginal people currently employed by CM and contractors, conducted in 2007
- interviews with community leaders, Land Council representatives, key CM personnel, state and local government personnel, service providers, and local business people.

The study focused primarily on the communities of Doomadgee, Mornington Island, Normanton and Burketown. Doomadgee and Mornington Island are both Deed of Grant in Trust (DOGIT) communities in which a very high proportion of the population (85%+) is Indigenous. Normanton and Burketown are 'open' communities, in which around half of the population is Indigenous.

The lower Gulf pre-Century

Previous reports and available statistical data confirm that in the mid-1990s communities in the lower Gulf region rated relatively poorly on most asset measures:

Financial

- Income levels were low in comparison to non-Indigenous Australians and there was a high level of dependence on the welfare system, particularly in Doomadgee and on Mornington Island.
- There were few, if any, examples of Indigenous managed enterprises and there were few sources of financial assistance for developing such enterprises.

Physical

- Housing overcrowding and quality was a significant problem, particularly in Doomadgee and on Mornington Island.
- The majority of roads in the region were not sealed and were subject to extensive wet season closure.
- Health and school facilities were generally adequate, although the quality of service delivery was an issue in some instances.

Natural

- Most of the land in the region was owned by non-Aboriginal pastoralists, the government or mining companies. Delta Downs, north east of Normanton, was the sole example of an Indigenous pastoral operation. There was virtually no Indigenous participation in the commercial fishing industry.
- The region had natural and cultural assets which were culturally significant to Indigenous people and also appealing to tourists (e.g. Boodjamulla or Lawn Hill Gorge) but Indigenous people were not involved in the management of these assets.

Human

- Health outcomes for Indigenous people living in the region were generally poor relative to the broader community, with life expectancy 15-20 years less than that of the non-Indigenous population.
- Very few Indigenous people over the age of 15 who lived in Normanton, Doomadgee and Mornington had formal qualifications.

Social

- There was a legacy of disrupted social structures due to mission era control and administration.
- There was limited institutional development in the communities and, as the Century Mine negotiations indicated, contested ideas on the future development of communities in the lower Gulf area.
- A cyclic relation had developed between crowding, household stress, family social problems and alcohol and drug abuse.

What difference has the mine made?

CM has impacted on the region in two main ways:

Firstly, it has been a major provider of jobs and training opportunities to local Indigenous people, with more than 600 obtaining work at the mine in the period up to mid-2007 and 200 completing mine-based pre-vocational training. Many of these employees had previously been on CDEP, or unemployed. The employee survey conducted in 2007 indicates that working at Century has been a positive experience for most Indigenous employees and that most wanted to remain in fulltime work, in the mining industry or elsewhere.

Secondly, the mine has significantly increased income flows into the region. This has mainly occurred through the payment of wages and salaries to Indigenous employees, which equates to approximately \$65.6m in take home pay between 1998 and 2007 (although this includes Indigenous employees living outside of the Gulf and does not factor where the money is actually spent). The mine is also a major ratepayer, contributing \$1.7 million annually to Burke Shire and \$277,000 to Carpentaria Shire. Other income flows occur through royalty payments to eligible bodies. The mine has also facilitated the development of some Indigenous enterprises, both directly (through contracts to provide mining related services) and indirectly through the GCA, by funding the Aboriginal Development Benefits Trust (ADBT) to provide financial assistance to new Indigenous businesses in the region.

Other changes that can be directly or indirectly attributed to the mine include:

- an increase in the amount of land under Indigenous control, mainly as a result of the transfer of pastoral leases through the GCA
- some improvement in local roads, although Doomadgee is still isolated for considerable periods during the wet season
- increased geographical mobility, especially for those who have found work at the mine.

What challenges remain?

Notwithstanding these positive impacts, the asset base of the region remains under-developed in a number of respects:

- Employment and financial benefits have been unevenly distributed, with Mornington and Doomadgee in particular, faring less well than Normanton. Economic conditions in these latter two communities have shown little sign of improvement since the mine opened.
- Only a small proportion of the increased income associated with mining employment appears to have been converted into savings or long term assets.
- While some successful Indigenous businesses have been established, this has been on much too small a scale to provide the basis for a viable regional economy post-Century.
- Much of the employment generated by the mine has been in entry-level positions, such as truck driving. Relatively few Indigenous employers have acquired trade skills or managerial or supervisory experience.
- The quality and availability of housing continues to be a significant issue in the region. As a fly-in fly-out operation, Oz Minerals has made little direct contribution to the regional housing stock. Increased income flows into the communities have also had no apparent impact on the housing stock.

- Health outcomes remain poor relative to the wider Australian community, although there is some evidence that health conditions in the region are gradually improving, measured in terms of age standardized death rates and hospital admissions.
- There does not appear to have been any significant, measurable, improvement in education outcomes for communities in the region.
- The standard of governance in the communities and representative bodies continues to be problematic.

What will completion of mining at CM mean for the lower Gulf?

The impact of completion of mining on the region will depend, to some extent, on what strategies are put in place between now and 2015 to meet the above challenges. It will also be influenced by whether and when other mining operations start up in the area and the strength of other economic drivers in the region, such as tourism, agriculture and commercial fishing. The 'worst case' scenario is that:

- The stream of income from the mine dries up more or less immediately and several million dollars a year are taken out of the regional economy.
- Local people employed at the mine either go back on to welfare, or leave the region to find other employment.
- Indigenous businesses associated with the mine fail to find alternative work and close
- No alternative use is found for the infrastructure left by the mine (residential village, airstrip, etc.)
- No new mining activity occurs in the region.
- State government focus on the region diminishes and the capacity of local government to deliver services is eroded.

What should be done to ensure a positive legacy?

A range of specific actions can be taken to mitigate potential negative impacts of completion of mining on the region and help ensure a positive post-mining legacy. Suggested actions include:

- facilitating the formation of some form of labour hire management company that works to ensure continued engagement of Indigenous people with the mainstream employment market
- developing a closer match between the skills training provided by the mine and other skill needs in the lower Gulf
- actively supporting the development and diversification of Indigenous businesses which are currently dependent on the mine for their survival
- ensuring that ADBT investments are informed by a long-term development strategy
- formulating and implementing strategies to assist Indigenous employees to save and invest more of their incomes
- using the recently created Gulf Area Social Development Trust (GASDT) to leverage additional support for community support and development initiatives

- investigating opportunities to utilise physical assets of the mine, such as by establishing a regional training centre or converting the residential village into a tourist accommodation centre
- strengthening the focus on education and health by using the link with the Commonwealth commitment to 'close the gap' to leverage an increased level of development support
- Establishing a formal network for Indigenous businesses in the region (as recommended by the 10 Year GCA Review and the Queensland Resources Council (QRC) North West Queensland Initiative¹).
- Implementing the leadership strengthening initiatives recommended in the GCA Review.

A Strategic Approach

Specific initiatives, such as those outlined above, will be more effective if they are situated in a broader strategic framework, rather than being addressed on an ad hoc basis.

Century Mine has now reached a stage of development where the attention of lower Gulf stakeholders will be focussed increasingly on the socio-economic implications of completion of mining. As Oz Minerals has now commenced planning for the completion of mining, an opportunity exists to incorporate a systematic consideration of social impact elements into the process, building on the outcomes of this study and the ten year GCA review.

A proposed way forward is as follows:

1. establish a Completion of Mining Social Planning Group comprising representatives of Oz Minerals, Native Title Parties, Local Government, State and Commonwealth Government
2. utilise the five capitals framework, as applied in this study, as a reference point to structure discussion and planning
3. endeavour to reach agreement on desired development outcomes at completion of mining that are realistic and achievable
4. develop a Social Completion of Mining Strategy that allocates responsibilities and identifies the resources and inputs required to implement the strategy
5. implement a Community Investment Program for Completion of Mining that builds on the GCA, and includes support for other community asset development initiatives that may be desirable
6. establish a monitoring and review framework to track progress.

¹ The QRC Northwest initiative is a partnership between the QRC- through its member companies- and the State Government. It is aimed at creating sustainable Indigenous economic development and employment opportunities in Northwest Queensland.

1. INTRODUCTION

1.1 Background

Oz Minerals Century Mine (CM) is a large open cut zinc mine located in the lower Gulf of the Carpentaria region of North West Queensland (see map below, Figure 1). The mine is owned by Oz Minerals, which was formed in 2008 by a merger of Zinifex (the previous owners) and Oxiana. The main communities in the region are Gununa on Mornington Island, Doomadgee, Burketown, Normanton and Karumba. With the exception of Karumba, all of these communities have large Indigenous populations. The mine operates on a Fly in/Fly out (FIFO) basis, drawing its workforce from Townsville, Mt Isa and Cairns, as well as the Gulf communities. CM is approaching the mid-point of its life span, with completion of mining anticipated to occur in 2015.

In recognition of the need to begin planning for this event, mine management recently commenced a completion of mining planning process. This study is designed to inform the discussion about and planning for completion of mining. Findings from the study have also been used to inform the ten year review of the Gulf Communities Agreement (GCA), which was completed in May 2008.

Figure 1 Location of Century Mine



Source: Century Mine

The project was a joint initiative between Century's Gulf Communities Agreement (GCA) Support Department, and The Centre for Social Responsibility in Mining (CSR). Funding for the study was provided by Zinifex (now Oz Minerals) and the Queensland Department of State Development and Innovation (now the Department of Tourism, Regional Development and Innovation).

Specific aims of the study were to:

1. Provide an objective, empirically grounded, assessment of the contribution to date of Century Mine to the economic and social development of the Gulf communities.
2. Identify and, where practical, quantify the potential economic and social impacts on the region at completion of mining (assuming no other mines of similar size come on line in the intervening period).
3. Develop a framework to provide a focus for planning and action in the lead up to completion of mining, to ensure that Century Mine leaves a positive long-term legacy.

1.2 Century Mine and the Gulf Communities

The relationship between Century Mine and adjacent communities in the Lower Gulf of Carpentaria is mediated generally by the Gulf Communities Agreement (GCA). This is a right-to-negotiate (RTN) agreement made between Pasminco Century Mine Limited,² Queensland Government and representatives from the Waanyi, Mingginda, Gkuthaarn and Kukatj native title groups, signed under the provisions of the Commonwealth *Native Title Act 1993* on 13th February, 1997. The goals of the GCA (listed in Box 1 below) are broad ranging.

In order to contribute to the achievement of these goals, the GCA included obligations on all parties, but particularly the State and Oz Minerals, to implement a range of activities over the life of the Century Mine. These activities, grouped into the GCA Schedules listed in Box 2 below, are capable of making a contribution to more than one goal.

Box 1 GCA Goals

The Native Title Groups and the members of the communities who live in the area today have goals and aspirations for themselves and their communities. Those goals and aspirations include:

- (a) to remove the Native Title Groups and the other members of the communities from welfare dependency and, to the greatest extent possible, promote economic self-sufficiency;
- (b) to participate as fully as possible in the project and mine related ventures;
- (c) to be able to live on their traditional lands;
- (d) to protect fully their natural environment and its resources;
- (e) to identify and protect sites of significance to the Native Title Groups;
- (f) to ensure that the material benefits do not corrupt Indigenous cultures but enable people to re-affirm the cultures and enhance the lifestyles of the members of the Native Title Groups and other members of the communities through community and cultural development initiatives; and
- (g) to ensure that the standard of health, employment rates, education opportunities and other social indices of Native Title Groups and other members of the communities is comparable to ordinary Australian standards.

Source: GCA Introduction, Section E

² In September 1997 Pasminco purchased the Century Mine project from Rio Tinto and in March 2004 Pasminco was relaunched on the stock exchange as Zinifex. In mid 2008, Zinifex merged with Oxiana to create Oz Minerals.

Box 2 GCA Schedule

Schedule One: Queensland Government commitments
Schedule Two: Employment and Training
Schedule Three: Environment
Schedule Four: Heritage and sites of cultural significance
Schedule Five: Lands
Schedule Six: Aboriginal Development Benefits Trust
Schedule Seven: Other benefits
Schedule Eight: Gulf Aboriginal Development Company
Schedule Nine: Project rights
Schedule Ten: Liaison and rights.

The Queensland Government commitments included initiatives in the areas of infrastructure, health and social development, education and training, institutional support and minor compensation payments.

1.3 Conceptual framework

The potential for, and outcomes of, community development are often difficult to define, and hence measure or assess, in either a quantitative or a qualitative manner. In order to make a meaningful assessment of the implications of mine completion of mining for the lower Gulf communities, it is necessary to make some estimate of the current and future contribution of the mine to community development, both up to completion of mining and beyond. A framework upon which to base these assessments that has shown a high degree of utility over the last five to ten years is the so-called Five Capitals model (Meadows, 1998). Capital refers to “a stock of anything that has the capacity to generate a flow of benefits which are valued by humans” (Porritt, 2005). The five capitals are financial, physical, natural, human and social.

The United Kingdom Department for International Development (DFID) embodied the five capitals (or livelihood assets) into a sustainable livelihoods framework that also considered the risk or vulnerability context of a community, and the transforming processes and strategies leading to better livelihood outcomes. DFID maintains that ‘the approach is founded on a belief that people require a range of assets to achieve positive livelihood outcomes; no single category of assets on its own is sufficient to yield all the many and varied livelihood outcomes that people seek’ (DFID 1999). In effect, the five capitals (or core asset categories) are seen as the building blocks for livelihoods.

Adamson et al (2003) expanded asset categories (by including institutional, cultural and legal and political with the basic five) and linked asset development or change with sixteen ‘elements of development’ to capture the qualitative **community development impact** of investment in various asset categories. It is important to note that the level of an asset by itself is not a measure of community well-being. It is how an asset is utilised and transformed that produces a livelihood outcome, or change to an element of community development.

Drawing from these works, this study has defined five main assets types as shown in Table 1. Potential strategies for enhancing or utilising these assets are shown in Box 3.

Table 1 Asset Definitions Utilised in this Report

Asset	Definition
Financial	The financial resources that people use to achieve their livelihood objectives. Financial assets are the most liquid form of assets and can be readily used and/or exchanged to acquire other assets.
Physical	Physical capital comprises the basic infrastructure and producer goods needed to support livelihoods. Infrastructure consists of changes to the physical environment (e.g. better roads) that help people to meet their basic needs and to be more productive, while producer goods are the tools and equipment that people use to function more productively. Physical capital is primarily important as a means to enhance the productivity of other assets.
Natural	Natural capital is the natural resource stock from which resource flows and services useful for livelihoods are derived.
Human	Human capital represents the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. Nurturing the productivity, innovation and creativity of people is foundational to community well-being.
Social / Institutional	Social capital is taken to mean the social resources upon which people draw in pursuit of their livelihood objectives, developed through: <ul style="list-style-type: none"> - networks and connectedness - membership of more formalised groups - relationships of trust, reciprocity and exchange.

Box 3 Strategies for Asset Enhancement

Asset enhancement can encompass a number of strategies such as:

- **creation** (e.g. addition to the housing or road stock, creation of a trust fund, developing a pool of skilled workers)
- **control** (e.g. through the mechanism of a land claim, to control access to and use of land)
- **retention** (e.g. allocation of resources to house and road maintenance)
- **development** (e.g. increasing the value of a pastoral operation through property or herd improvements)
- **utilisation** (e.g. undertaking some productive activity on land not previously used for that purpose)
- **leveraging** (e.g. using trust fund income streams to leverage funding from Government or other bodies for the purpose of development).

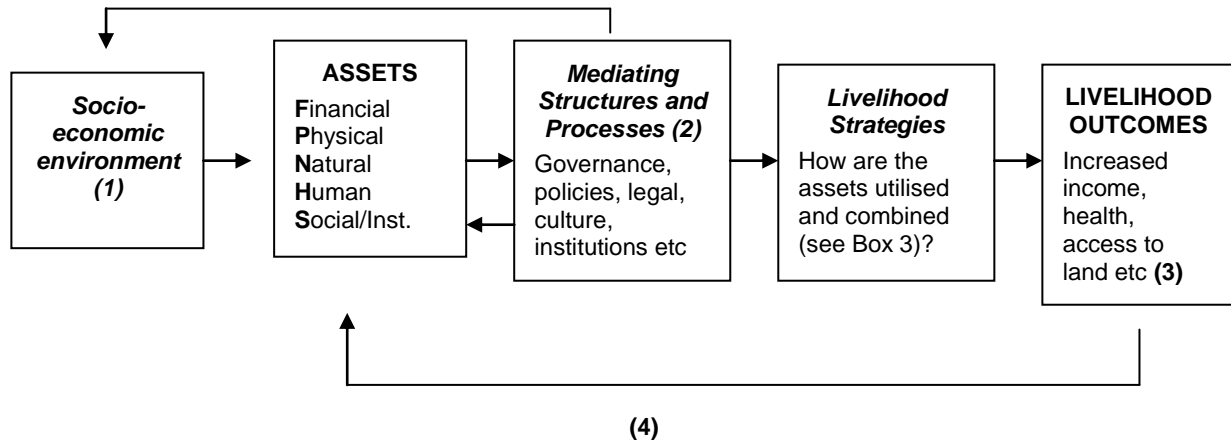
The elements of community development shown in Table 2 can apply at individual, organisational and community level. When considering the contribution of Century Mine to community development in lower Gulf communities, a key question to address is whether and how the mine has contributed to positive outcomes in terms of these different elements.

Table 2 Elements of Community Development

	Element	Description
Economic	Income	Improvements in the financial well-being of a community, not just in income streams, but also in the level of savings and investment
	Business Activity	Changes in the economic relationship between the community and others
	Employment / Skill acquisition	Changes in the level of employment, skills and knowledge in the community
	Asset control	The ability of a community to control their assets in order to create wealth (e.g. land access)
Social	Security and well-being	The sense of security and well-being within the community
	Networking and partnerships with others	The types of networks and collaborative partnerships formed between families, community members and others
	Cultural maintenance	The maintenance and strengthening of traditional knowledge and cultural practices
	Community confidence and values	The level of confidence the community has in it's own ability to problem solve and engage in teamwork, and the level of self-esteem evident
Institutional	Political engagement (internal and external)	The degree to which the community engages in the political and civic life both within and outside the community
	Entrepreneurial spirit	Creativity and entrepreneurial spirit within the community
	Organisational soundness	The integrity and accountability and management capacity of organisations in the community
Future Positioning	Guiding strategy	The extent to which the community engages in long-term visioning and consequent planning
	Community self-investment	The level of investment by a community in its future and its people
	Environmental balance	The environmental or ecological impact of economic activities.

Figure 2, based on the DFID (1999) sustainable livelihoods framework, indicates how assets, strategies and outcomes are linked into a framework that can be used to analyse the community development process.

Figure 2 Schematic Livelihoods Framework (based on DFID 1999)



NOTES:

- (1) This environment needs to be well appreciated, monitored regularly and reflected in the rationale for development strategies selected.
- (2) This is a complex area for Indigenous communities, with Government policies and approaches to service delivery changing regularly. In the lower Gulf, issues include the restricted land tenure available in Doomadgee and Mornington Island, the marginal status of Indigenous community local government arrangements compared to mainstream local Government, limited social capital linking Indigenous communities with mainstream communities, current policy and program approaches to reducing welfare dependence etc.
- (3) The outcomes sought need to be reflected in measurable program objectives.
- (4) Arrows indicate influence rather than direct causality.

1.4 Information sources utilised

Multiple methods were used to gather information to inform the assessments made in this report. These methods included a review of the literature and previous reports on Century Mine, a survey of and interviews with Indigenous people working at Century (Parmenter and Love 2007), semi-structured interviews with 'key opinion leaders', and analysis of socio-economic data collected from Century Mine and the Australian Bureau of Statistics (ABS).

A difficulty in making an assessment of impacts of the Century Project is that a comprehensive socio-economic monitoring framework, referenced against a baseline established prior to the project, has never been established, despite the issue being raised on a regular basis within both Government and company domains. This issue, referenced in the objectives of the TORs for this study, is addressed in Section 5.

The study comprised the following components:

1. Analysis of data collected by ABS and other state and federal government agencies and service providers.

The main data source were the five yearly national census counts, the most recent of which was conducted in July 2006. It should be noted that doubts have been raised about the accuracy of the census as a means of estimating the total population in Indigenous communities. It is possible that the population of some communities is greater than shown. Other official data sources utilised included health and income data.

2. Collection and analysis of data held by CM – principally relating to training and employment of local people and local expenditure.

Under Schedule 2 of the GCA, Oz Minerals is required to “provide employment statistics and other information to communities on a regular basis”. This is the basis for much of the employment data presented in this report, although there remains a shortage of up to date employment and training data on site. This has been identified in several earlier reports (Barker and Brereton 2004; Brereton and Barker 2005).

3. Survey and Interviews with local Indigenous people currently employed by CM and contractors.

Results of this study are in a separate report that should be read in conjunction with this report. It is published on the CSRSM website (Parmenter and Love 2007).

Workforce Survey

The survey was distributed to approximately 140 Indigenous GCA employees working at Century mine, including direct company employees and contractors. A total of 89 responses were received, representing a 64% response rate.

CSRSM drafted a survey of mostly closed, and some open questions. Closed answers asked respondents to select answers from a pre-determined set of questions. Open-ended questions allowed the respondents to provide their own answers. The draft survey was trialled by a local Indigenous GCA support staff member. Feedback was also sought from The University of Queensland’s Ethics Committee, and both funding representatives. The final survey asked the GCA employees about their:

- demographic profile and employment arrangements
- benefits experienced from working for Century Mine
- how their community/town has changed since Century began mining
- intention to work and stay or return to the Gulf area after they leave Century
- predictions of how completion of mining might impact on them and their communities.

The survey was distributed by the GCA support staff via hand delivery. CSRSM distributed a small number of surveys on site as required. Completed surveys were returned to CSRSM by reply paid envelopes, which were available to all respondents.

Closed responses were entered into SPSS to obtain basic frequencies, compare responses between groups and explore relationships between different variables. Open ended responses were entered into NVIVO and grouped according to themes.

Workforce Interviews

A CSRSM research team comprising one male and one female visited Century Mine for eight days to undertake a series of interviews with both male and female GCA employees across all work roles. Fifty-four GCA employees were interviewed; either individually or within small groups. These were conducted face-to-face on-site and were designed to elicit information about the employees' experience of working at Century, future employment intentions and aspirations, and the implications of being employed at CM for community and family life. In most cases, participants were interviewed by a same sex researcher. This methodology was presented as an option to Indigenous participants for cultural reasons. Researchers typed detailed notes from each interview and grouped responses according to themes in NVIVO. To minimise the risk of responses being misinterpreted by non-indigenous people, local Indigenous employees were involved in the design, administration and interpretation of data.

4. **One-on-one Interviews with 'key opinion leaders'**. These included community leaders, Land Council representatives, key CM personnel, state and local government personnel, service providers, and local business people. Three CSRSM research staff visited Mount Isa, Doomadgee and Mornington Island to conduct 'key opinion leader' interviews. Some phone interviews were conducted with representatives from Burketown.

To avoid duplication and 'consultation overload', the community consultations for this project were integrated into the broader consultation process that was required for the GCA Ten Year Review, which included Normanton. The focus was on obtaining peoples' views about the impact that CM has had to date on their community and discussing with them the likely effects of completion of mining and how these should be managed.

Ethical Considerations

This project incorporated the ethical issues of informed consent, cultural considerations, confidentiality and participant feedback.

Informed consent

All GCA employees and key opinion leaders were invited to participate voluntarily. Project information sheets were given out to all participants and informed consent was gained before recording any data.

Cultural considerations

One male and one female Indigenous employee were involved in coordinating the interviews and survey distribution for the GCA Indigenous workforce.

Confidentiality

All names were given a code and not recorded either in the researchers' notes or in the final report. Any information that is potentially identifiable is kept securely at The University of Queensland.

Participant feedback

Results of the workforce survey and interviews were sent to the GCA department for dissemination. The report is also available online on the CSRSM website.

Limitations of the Research

There were some methodological limitations which emerged through this research that should be flagged out the outset.

One significant limitation is that, for logistical reasons and out of our desire to minimise the 'consultation load' with the 10 year review being conducted around the same time, CSRSM researchers spent relatively little time in the communities and spoke to only selected community representatives. This has limited the capacity to assess the crucial question of whether and to what extent the presence of the mine has, or has not, impacted on community values (e.g. attitudes towards paid work and the value of education) and social structure (traditional power relations, gender roles, etc). A more comprehensive study of the impacts of Century on the region is needed to enable a proper consideration of such issues.

A second limitation is that in some of the available data were incomplete, unreliable and/or out of date. In some instances this may have resulted in the contribution of the mine to the region being understated: for example, the only data available on post-Century employment is from one survey conducted in 2005 (prior to the current resources boom). In other instances, data problems may have disguised or distorted trends. This means that caution must be exercised in interpreting some of the findings presented here.

A further methodological challenge is that it is very difficult, and at times impossible, to isolate the influence of the mine from the many other factors impacting on the region. This was the case, for example, when it came to considering whether the mine had directly or indirectly contributed to better health outcomes in the communities. A more finely grained – and more resource-intensive - study, using a different methodology, would be required to control for the impact of these broader contextual factors.

1.5 Structure of the report

Section Two of the report provides an assessment of development in the region from pre-Century Mine development to date. It first provides a snapshot of the region as it was prior to mine development and then reviews the asset enhancement strategies embodied in the GCA, estimates the state of community assets in 2008, and seeks to infer the contribution that these assets are making to community development in lower Gulf communities. This section draws on the consultation undertaken as part of this project, as well as on the findings of the GCA Ten Year Review Report (The Right Mind, 2008).

Section Three of the report focuses on the likely asset enhancement strategies that will be employed by the GCA as well as other regional stakeholders over the next eight years in the period leading to completion of mining. Based on the expected outcomes of these strategies, the state of community assets in 2016 is inferred, and the contribution of these assets to community development is estimated.

Section Four then considers the impacts of completion of mining on the future state of community assets (ie will the asset base continue to grow in value or will it decline?), and identifies the possible consequences of this for community development.

Section Five explores the implications of the forecast outcomes for on-going completion of mining planning and the implications for stakeholders (Oz Minerals, the State and Commonwealth Governments, and the Native Title parties to the GCA and the communities). The discussion emphasises that these stakeholders are not merely passive on-lookers in this process. They are active participants with capacity to direct investment to areas of priority need in order to minimise the negative impacts of completion of mining, and to create an environment conducive to maximising longer-term development opportunities.

This report should be read in conjunction with the report of the Ten Year GCA Review (The Right Mind, 2008) and the CSRSM report on the survey of Indigenous employees working at Century (Parmenter and Love 2007).

2. THE REGION TO 2008

2.1 Historical profile

Europeans began occupying the available pastoral lands in the Gulf in the 1860s. Prior to their arrival, many Aboriginal linguistic groups lived in the region. Access to water and land was crucial for both incoming pastoralists and traditional Aboriginal subsistence and competition for these resources resulted in violent conflict (Kinhill, Cameron McNamara 1995).

In 1898, the *Aborigines Protection and Restriction of Sale of Opium Act* allowed the government to remove and relocate Aboriginal individuals and families, and prompted the provision of reserves of lands for Aboriginal people. This Act also regulated the employment of Aboriginal people in the pastoral industry. Normanton was established in 1867 as a regional centre and Aboriginal town camps were established around the centre and used as a cheap labour pool for the pastoral industry. Other town camps were created around the Gulf but by the 1930s, many Aboriginal people lived on the reserves of Mornington Island and Doomadgee missionaries. These societies were controlled by missionaries and government for approximately the next 50 years. The missionary system of social organisation usurped the political and social control of local leaders and broke down traditional kinship responsibilities (Memmott 1991). This is one factor in explaining the socio-economic disadvantage of Aboriginal people in the region today (Memmott 1991).

The majority of land in the Gulf is currently owned by non-Aboriginal pastoralists, the government and mining companies. Aboriginal people have title to the Deed of Grant in Trust (DOGIT) reserve of Doomadgee, the Aboriginal trust land at Gregory and Aboriginal pastoral leases on Troutbeck, Brokera, Tarrant and Bundella and four reserves at Normanton. There are provisions in the Agreement between Century Mine and Gulf Communities for the transfer of pastoral leases held by Century Mine to Aboriginal people, some of which have been completed (see Table 2.3- Natural Assets).

2.2 The region immediately prior to the Century Mine development

An appreciation of the social and economic characteristics of the communities of the lower Gulf region prior to the establishment of the Century Mine may be gained from earlier studies connected with the project and 1996 Census data for the region. Relevant studies include:

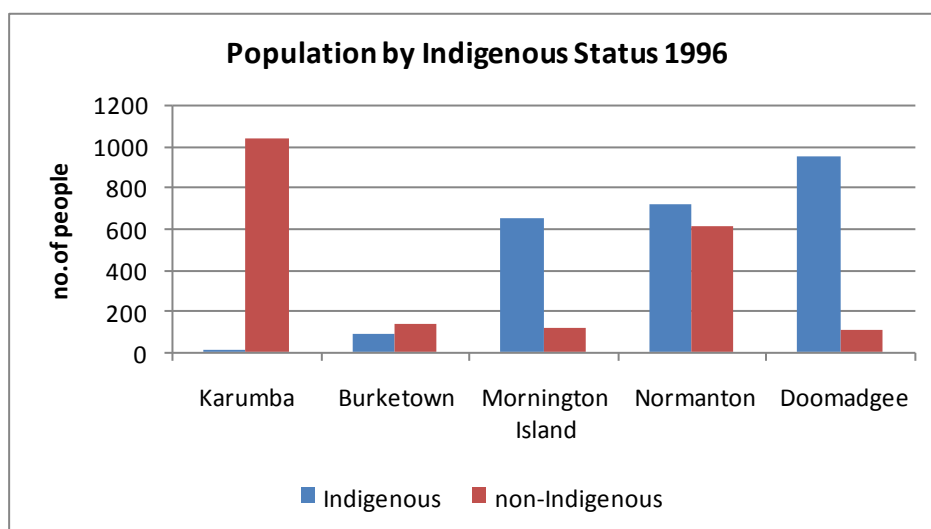
- Trigger and Devitt (1992) – a site survey of the century project area
- Dames and Moore (1994) – a draft impact assessment study report
- Kinhill Cameron McNamara (1995) – a supplementary draft impact assessment study report on Aboriginal issues
- Crough and Cronin (1995) – a socioeconomic study of the southern Gulf region
- Memmott and Kelleher (1995) – a review of potential impact assessment east of Gregory River
- Dwyer C with assistance from AEC Group (1997) – a skills audit of lower Gulf communities.

Salient characteristics of the lower Gulf communities as identified from these sources are as follows:

Population Characteristics

According to 1996 National Census the Northwest Statistical Division had a total population of 33 245, the majority of whom lived in Mt Isa. Indigenous people represented 24% of the total Northwest (SD) population, compared with 3% representation across Queensland. However, this varies considerably throughout local communities in the region (Figure 3). The Indigenous population was concentrated in the communities of Doomadgee, Mornington Island and Normanton. Burketown had a much smaller overall population, although 40% were Indigenous. The figures for Karumba are inflated for the non-Indigenous population because they were obtained during the dry season when there was an influx of tourists. Indigenous people represented a very small amount of the population of this community, as only 12 Indigenous people were counted.

Figure 3 Population by Indigenous Status 1996



Source- ABS Census 1996 Cat. no 2016.3

Labour Force

Labour force participation rates for Indigenous people were low in Gulf communities in 1996. Of the total Indigenous labour force in Doomadgee and Mornington Island Indigenous areas, 64% were Community Development Employment Project (CDEP) employed. Normanton had significantly more Indigenous people employed in 'mainstream' work.

Table 3 Labour Force Characteristics in 1996 15+ population

	Doomadgee	Mornington	Normanton
In the labour force:			
Employed: CDEP	72	241	20
Employed: Other	51	77	104
Unemployed	38	10	29
Total	161	328	153
Not in the labour force			
Unemployment rate	0.24	0.03	0.19
Participation rate	0.43	0.53	0.38

Source- ABS Census 1996 Cat. No. 2020.0

A large majority of employed Indigenous people in the Indigenous areas of Mornington Island and Doomadgee were classified in 'Government Administration and Defence'. Eighty-nine per cent of Mornington Island Indigenous people were employed in this category and 81% in Doomadgee. In Normanton, most Indigenous people were employed in 'Health and community services' (26%), which is likely to include CDEP, 'personal or other' (23%), and 'education' (18%). According to the ABS census, there were no Indigenous people from Doomadgee, Mornington Island or Normanton employed in mining in 1996. However, mining was the highest employer of Indigenous people in the Mount Isa area, with 22% of all employed Indigenous people working in the industry.

Income

Consistent with the employment picture, individual income for Indigenous people was between 25 and 59% of that for non-Indigenous people living in the region, with the lowest levels being found in Mornington Island and Doomadgee.

Educational qualifications

According to ABS data, almost all Indigenous people over the age of 15 in the Indigenous areas of Normanton, Doomadgee and Mornington had no formal qualifications. Only three people from Normanton were identified as completing an Associate Diploma. Only six people from both Mornington and Normanton areas had either skilled or basic vocational work and only three from Doomadgee had skilled vocational work.

Infrastructure

Lack of housing was a significant problem across all Indigenous communities in the Gulf in 1996. In the Mornington Indigenous Area, 50% of the three bedroom houses had six or more people living in them. A similar situation was found in the Doomadgee Indigenous Area, with 59% of the three bedroom houses having six or more people living in them. Normanton was slightly less overcrowded than Doomadgee and Mornington, with 40% of three bedroom houses having six or more people living in them.

Health infrastructure was generally adequate in lower Gulf communities, with more serious cases requiring hospitalisation being flown to Mt Isa or Cairns. Restrictions on services were due in large part to the inability to recruit staff to work in remote communities.

School facilities were adequate, though the availability and suitability of permanent and temporary teacher accommodation was problematic. The Lower Gulf College of TAFE facility in Normanton was a highly functional, but underutilised asset at the time, due to a lack of suitable accommodation for students from outlying communities.

The open townships of Normanton, Karumba and Burketown had basic but adequate facilities for tourists and other visitors, with commercial accommodation facilities, general stores and caravan parks catering for self-contained tourism based on fishing. The small township of Gregory, eighty kilometres east of Century, and the adjacent Bidunggu community were totally unserved.

Roads in the lower Gulf were largely unsealed and seasonally in poor condition, which was a point of contention particularly with the Burke Shire Council. The Shire also had concerns with funding for the upgrading and maintenance of roads that would be used for access to the Century Mine by heavy vehicles.

Health

On almost all health measures, the health of Indigenous people across Australia in the 1990s was generally poorer than that of non-Indigenous Australians (ABS 4102.0 - Australian Social Trends, 1996). The life expectancy at birth of Indigenous people was estimated to be 15-20 years less than that of non-Indigenous people, and death rates were more than double. Indigenous Australians were more likely to suffer from diseases such as diabetes and respiratory disorders than non-Indigenous Australians.

The northwest region was no different, and in some cases even worse comparative to other Indigenous areas. In 1993, Mornington Shire council had the second highest rates of death of all statistical areas in Queensland, with 16.7 deaths per 1000 of mid year population, compared with 6.4 for the State. The statistical areas of Burke (10.8) and Carpentaria (7.5) were also above the State figure (ABS Deaths QLD 1993 Cat no 3312.3).

Land

Leases to most of the land on the region were held by non-Aboriginal pastoralists. There were some Aboriginal pastoral leases, but only one property, Delta Downs north west of Normanton, was a working cattle station.

A summary of the state of community assets (pre 1997), grouped around the five principal capitals, is shown in Table 4.

Table 4 Initial State of Community Asset Base 1997

Asset Group	Description of State
Financial	<ul style="list-style-type: none"> • There was a high level of economic disadvantage, with average incomes of Indigenous people in the communities being between 25 and 59% that of the non Indigenous population in the region. • Very little income for people was derived from sources other than social security payments and CDEP employment, with no income derived from mining. • No known community trust fund investment. • No regional Indigenous businesses of any note.
Physical	<ul style="list-style-type: none"> • No private land ownership in major communities, lack of housing, overcrowding and housing in poor condition. • The majority of roads in the region were not sealed and were subject to extensive wet season closure. • Most commercial vehicles, plant and equipment was in Council ownership or with a small number of non-Indigenous contractors. • All commercial facilities (e.g. community stores) were in State Government or Council ownership.
Natural	<ul style="list-style-type: none"> • The majority of land in the northwest region was either owned by non-Aboriginal pastoralists, the government or mining companies. • Aboriginal people had Title to Doomadgee DOGIT reserve, the Aboriginal Land Trust at Gregory and Aboriginal pastoral leases on Troutbeck, Brokera, Tarrant and Bundella. There was very limited use of these assets to engage in productive activity aimed at deriving income. • Elements of a traditional subsistence economy existed, although to what extent is unknown. • The natural environment supported the pastoral and tourism industries in the region, with commercial fishing in the river estuaries. Delta Downs, north east of Normanton, was the sole example of Indigenous pastoral operations. • There were several culturally important sites and landscapes for Aboriginal people in the region (e.g. Boodjamulla or Lawn Hill Gorge where there was a land claim under the

	Queensland Aboriginal Land Act).
Asset Group	Description of State
Human	<ul style="list-style-type: none"> • Health- Life expectancy was, on average, 15-20 years less than for non-Indigenous people. Significantly above average incidence of diabetes, respiratory diseases and other ailments • Education- almost all Indigenous people over the age of 15 in the Indigenous areas of Normanton, Doomadgee and Mornington had no formal qualifications.
Social / Institutional	<ul style="list-style-type: none"> • Legacy of disrupted social structures due to mission era control and administration (Kinhill Cameron McNamara Pty Ltd 1995) • Cyclic relation between crowding, household stress, family social problems and alcohol and drug abuse (Mommott and Kelleher 1995). • Many overlapping claims under the Native Title Act, highlighting fragmented social networks contributing to a low sense of security and well-being. • Little Indigenous engagement with mainstream regional development forums (e.g. Gulf Savannah Development, Gulf Regional Development Plan)

In summary, the community was almost totally welfare-dependent with limited ownership of either natural capital or other economic assets. The Commonwealth *Native Title Act 1993* had relatively recently afforded native title claimants (not all community members) a negotiating right in the mining approvals process. This introduced significant tension between those favouring mining as the basis for economic opportunity, and those pursuing an agenda of securing rights to land and recognition (which had long been problematic in Queensland) and the strengthening of culture. There was limited institutional development, and as the Century Mine negotiations indicated, contested ideas on the future development of communities in the lower Gulf area.

2.3 Regional Asset Enhancement since 1997

As indicated in the previous section the GCA, which was negotiated in 1997, has provided the framework for much of the development activity that has occurred subsequently in the lower Gulf. The GCA has been, and remains currently, a significant driver of community asset enhancement in the lower Gulf communities, it is important to recognise that it does not operate in isolation. There is other development induced by the presence of the Century Mine and Karumba Port facility (for example, the development of housing at Karumba to facilitate the development of a Oz Minerals residential workforce), other Government investment not linked to the GCA obligations (such as road upgrading and maintenance through the Department of Main Roads Roads Implementation Program), and other private sector investment in the lower Gulf. While these non-GCA investments are not necessarily targeted at Indigenous people, some Indigenous residents of the lower Gulf communities may benefit from these investments, depending on the circumstances.

Table 5 collates the various development initiatives implemented over the last ten years by source and aligns them with the principal asset category to which they make a contribution. The table shows that there have been some initiatives relevant to each asset group, although the primary focus has been on the financial and human capital (training) dimensions. Health and education (primary and secondary) have not been a major focus and the social capital aspect has been addressed only indirectly.

Table 5 Asset Enhancement Strategies in Lower Gulf communities 1997-2008

Asset Group	GCA Obligations (Oz Minerals and Government)	Non-GCA Initiatives Oz Minerals	Non-GCA Initiatives Government	Other Initiatives
Financial	<ul style="list-style-type: none"> • Establishment of the Aboriginal Development Benefits Trust (ADBT) to contribute to community development and support local Indigenous business • Securing individual income from mine employment • On-going compensation payments to Eligible bodies • Establishment of the Lawn Hill and Riversleigh Pastoral Holding Company (LHRPHC) and transfer of 51% to Waanyi people 	<ul style="list-style-type: none"> • Contracts for locally based Indigenous business (e.g. Hookey Contracting, Waanyi Mining Services (WMS)) 	<ul style="list-style-type: none"> • Support for the establishment of Waanyi Mining Services 	<ul style="list-style-type: none"> • None identified
Physical	<ul style="list-style-type: none"> • Upgraded road access to Century Mine, including high-level bridge over the Gregory River • Investment in housing and supporting infrastructure at Bidunggu 	<ul style="list-style-type: none"> • Establishment of Karumba housing and Community Liaison Officers (CLO) offices • On-going support for Bidunggu infrastructure 	<ul style="list-style-type: none"> • On-going road upgrades • Community housing provision • Provision of accommodation at Normanton TAFE • Telecommunication upgrades • Grants through the North West Queensland Community Benefits Grants Scheme (NWQCBGS) to Shire councils for tourism infrastructure 	<ul style="list-style-type: none"> • None identified
Natural	<ul style="list-style-type: none"> • Transfer of Pendine and Konka and Turnoff Lagoons pastoral properties to local ownership • Transfer of Normanton Aboriginal Reserve to local ownership • Strategic planning for marine environment use through the Multiple Use Strategic Plan (MUSP) • Environmental monitoring , formation of the Century Environment Committee and the establishment of an environmental study fund • Support for the Lawn Hill Land Claim 	<ul style="list-style-type: none"> • Implementation of community support program (e.g. barra restocking) • Assistance with regional waste management • Mornington Island ranger support • Chemical handling and weed management training in communities 	<ul style="list-style-type: none"> • Funding through National Heritage Trust (NHT) for Southern Gulf Catchments 	<ul style="list-style-type: none"> • Proposal by World Wide Fund for Nature (WWF) for establishment of a lower Gulf Land and Sea Centre • Fossil research on Riversleigh Station

Asset Group	GCA Obligations (Oz Minerals and Government)	Non-GCA Initiatives Oz Minerals	Non-GCA Initiatives Government	Other Initiatives
Human (Education)	<ul style="list-style-type: none"> • Establishment of and support for mine-based employment and training programs • Establishment of an Employment and Training Committee • Provision of vocational education infrastructure for schools • Support for the establishment of a men's business association • Support for pastoral training on LHRPHC • Recent establishment of trust fund for social and community development with Social Impact Assessment (SIA) balance monies (potential for education investments) 	<ul style="list-style-type: none"> • Apprenticeships program • Tertiary scholarship support • In-kind support for boarding student costs • School liaison and recruitment support 	<ul style="list-style-type: none"> • On-going MoU for training with Oz Minerals • Support for the establishment of the regional training centre at Myuma, near Cammonweal; recent efforts to establish links into the Gulf. 	<ul style="list-style-type: none"> • MoU between LHRPHC and North Australia Pastoral Company (NAPCo) for pastoral trainee employment
Human (Health)	<ul style="list-style-type: none"> • Establishment of Women's Birthing Centres • Recent establishment of trust fund for social and community development with SIA balance monies (potential for health investments) 	<ul style="list-style-type: none"> • 'Deadly Ear' program support 	<ul style="list-style-type: none"> • None identified other than services provided as part of normal Government programs. 	<ul style="list-style-type: none"> • OXFAM health program and school breakfast program at Mornington Island and Normanton
Social	<ul style="list-style-type: none"> • Support for the establishment and operations of the Gulf Aboriginal Development Company (GADC) • Provision of funds for personal development through sport • Cultural heritage protection measures 	<ul style="list-style-type: none"> • Provision of transport assistance in the Gulf region • Support for school vacation program in Normanton 	<ul style="list-style-type: none"> • Establishment of Local Indigenous Partnership Agreements (LIPAs) with Doomadgee and Mornington Island 	<ul style="list-style-type: none"> • Gulf Savannah Development activities.

2.4 State of community assets (2008)

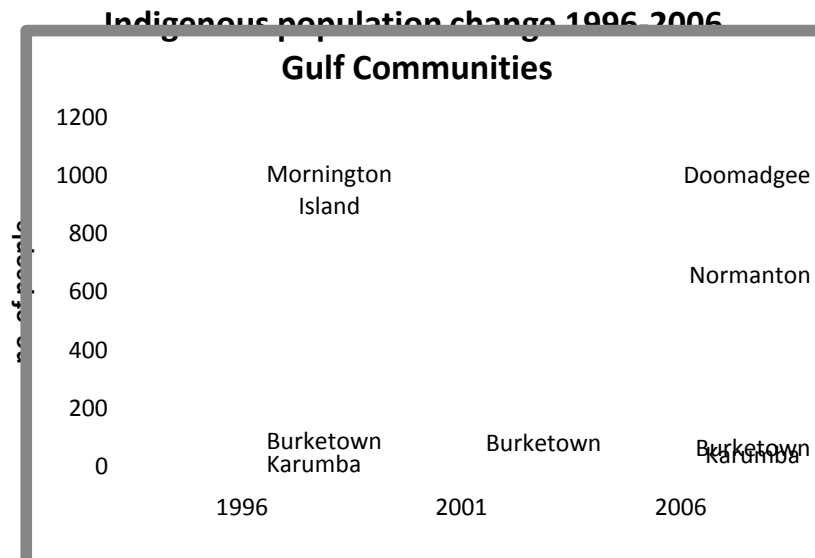
Having outlined the enhancement strategies that have been implemented over the last 10 years, the next task is to ascertain what changes have occurred in the community asset base as a consequence.

The Ten Year GCA Review Report (TRM 2008) gives an indication of the effectiveness of GCA implementation. The survey of Indigenous employees of the mine (Parmenter and Love 2007) likewise gives an insight into their experience of employment, and the personal and community impacts that this has brought to their lives. The broad indications of development of the human resource asset from the lower Gulf communities are captured in Figures 4 to 7 and Table 6 below.

Population

According to Census data, the Indigenous population of the region has remained fairly stable over the period (Figure 4). However, this disguises a likely increase in mobility. Findings from other CSRM studies strongly suggest that mine employment has made it easier for people to shift out of the Gulf to places such as Mt Isa and Townsville (Barker and Brereton 2004; Brereton and Barker 2005).

Figure 4 Indigenous population change 1996-2006

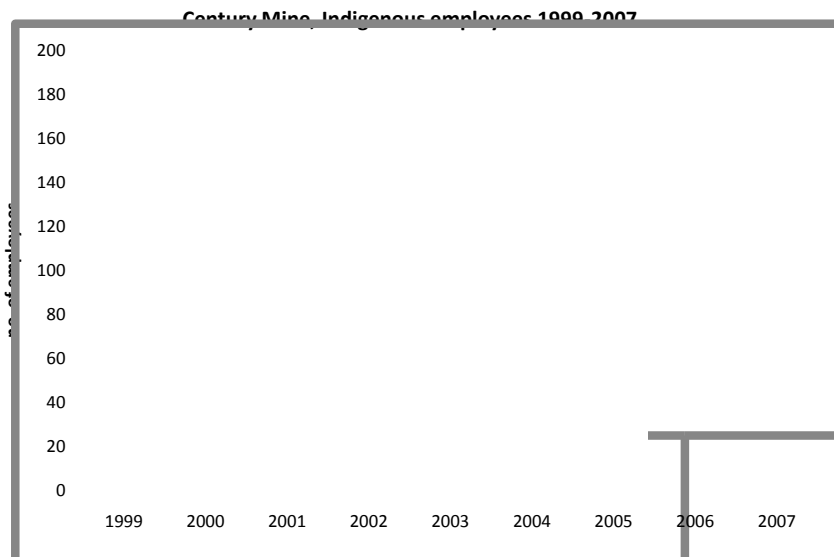


Source- ABS Census 1996 cat. No 2016.3, 2001 and 2006 cat. No 2001.0

Employment

Figure 5, which is based on the data provided by CM, shows that Century has been a major employer of Aboriginal people since 1999, with an average of around 150 employees a year. Overall, more than 600 Indigenous people worked at the mine between 1999 and 2007, with 200 completing mine-based pre-vocational training.

Figure 5 Century Mine Indigenous employees 1999-2007



Source- Oz Minerals Century Mine 2007.

Although the aggregate level of Indigenous representation in the workforce is quite impressive, clearly some communities have been more successful than others in accessing employment opportunities at the mine. Of the three main communities, traditionally Normanton has had the highest level of representation and Mornington Island the lowest. This is still the case as illustrated by Table 6, which is based on CM workforce data for September 2007. It is also noteworthy that, of the 200 Indigenous people working at the mine in that month, 63 or 30% resided outside of the region (although some of these could have originally been from the Gulf).

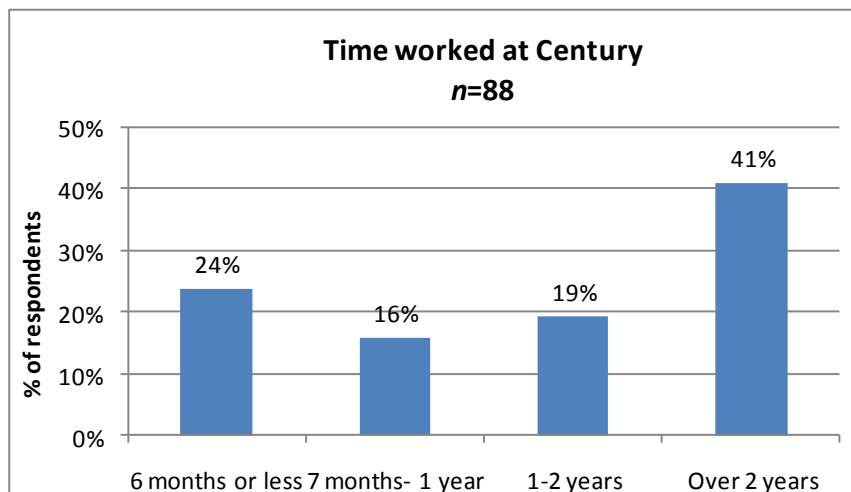
Table 6 Source of current Indigenous Employees

	<i>Community/Town</i>	<i>No. of indigenous employees</i>	Total
Within the Gulf Region	Normanton	46	143
	Doomadgee	34	
	Mount Isa	25	
	Mornington Island	16	
	Bidunggu	5	
	Burketown	5	
	Karumba	2	
	Other	10	
Out of the Gulf region	Townsville	36	63
	Cairns	12	
	Other	15	
			206

Source- Data provided by Century Mine September 2007

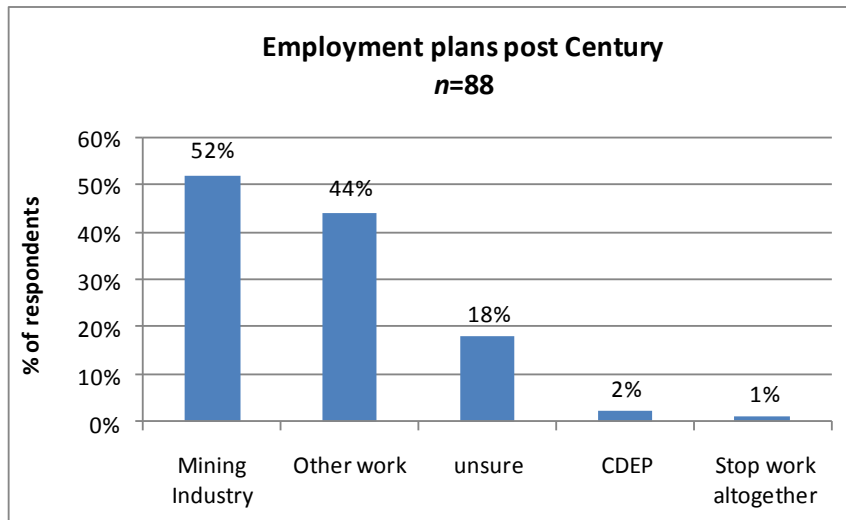
Figures 6 and 7, which are taken from the workforce survey conducted by CSR in early 2007, show that a substantial portion of Indigenous employees have worked for two years or more. It is noteworthy that although many did not have experience of mainstream work prior to Century, most indicated that they wanted to remain in the mainstream workforce.

Figure 6 Time worked at Century



Source- Parmenter and Love, (2007)

Figure 7 Employment plans post Century



Source- Parmenter and Love, (2007)

Notable findings include are:

- 53 % of respondents were either on CDEP (46%) or did not work (7%) prior to Century
- 46 % of respondents worked for CDEP prior to working at Century but only 2% said they planned to work for CDEP post Century
- 7 % did not work prior to Century but only 1% planned to not work post Century
- only 4% of respondents worked in mining previously but 52% said they would work in mining industry post Century
- most (92%) of respondents who were intent on working post Century said they would prefer a full time position.

Overall, these data indicate that the mine has made a positive contribution to the region by providing opportunities for Indigenous people to enter and remain in mainstream employment and promoting positive attitudes towards employment.

Income Flows

In addition to generating significant employment opportunities, the mine has increased income flows into the region. This has mainly occurred through the payment of wages and salaries to Indigenous employees. It is estimated,³ that this totalled \$65.6m in take home pay between 1998 and 2007 (although this includes Indigenous employees living outside of the Gulf and does not factor where the money is actually spent). The mine is also a major ratepayer, contributing \$1.7 million annually to Burke Shire and \$277,000 to Carpentaria Shire. Other income flows occur through ADBT and payments to eligible bodies, and the pastoral properties.

³ This figure was calculated by multiplying the average number of Indigenous employees over the life of the mine by years of operation by the estimated average take home pay per annum.

Summary Table

Table 7 summarises the state of community assets for the five asset groups ten years post the development of the Century Mine. It draws on the previous social research work undertaken by the CSRM, Government information available publicly (including Census data), the five and ten year reviews of the GCA, and first-hand knowledge of conditions in lower Gulf communities.

Table 7 Mid-Project State of Community Asset Base 2008

Asset Group	Description of State
Financial	<ul style="list-style-type: none"> • ADBT has received payments from Oz Minerals of \$10.5 M, current loans outstanding and current funds invested are unknown • Annual wage income from mine employment = \$8-9M approx. • Eligible Body payments = \$5.8M to date, balance not distributed at Jan 08 = \$1.2M • Gulf Area Social Development Trust established under the umbrella of Queensland Community Trust with a capital base of approximately \$5.7M • Century Environment Committee Environmental Activities Fund has a balance of approximately \$274,000. • Some new businesses established both at the mine and in the communities
Physical	<ul style="list-style-type: none"> • Housing: More housing has been established but there is still significant overcrowding and maintenance backlog • Roads: Wills Development Road gradually being upgraded and sealed from Gregory to Burketown, Burketown turnoff to Doomadgee still not a State asset (despite serving a community of up to 1300 people), Doomadgee still isolated for considerable periods during wet season • Gregory to Lawn Hill Road being progressively upgraded • Other assets: Most of the mobile plant and equipment still under ownership of Councils and a small number of private contractors • Some improvement in community facilities with a PCYC on Mornington Island and an aquatic centre in Burketown.
Natural	<ul style="list-style-type: none"> • An increase in Indigenous land, though most properties are not used for income generating purposes and there are no apparent management plans in place • Limited Indigenous involvement in broader Gulf environmental management • Environmental impact from mining and export of concentrate confined to a relatively small area • General community concern for off-lease environmental issues (e.g. impact of tourism, illegal fishing, feral animals, weed incursion) • A greater knowledge base of lower Gulf natural assets in place.
Human (training, education and health)	<ul style="list-style-type: none"> • 600+ Indigenous people have gained employment at the mine, with two hundred completing pre-vocational mine-based training • Some evidence that attitudes to work have improved, with a majority of surveyed Indigenous employees intending to remain in work post Century Mine • Status of health and education of the population is not known with certainty, but published District Health Centre profiles for Doomadgee, Mornington Island and Normanton (http://www.health.qld.gov.au/wwwprofiles/mtisa.asp) indicate ongoing problems with maintaining health services in an effective manner.
Social / Institutional	<ul style="list-style-type: none"> • Some networking occurring between pastoral operations and businesses, although ADBT engagement and leveraging of additional funding is limited. • Many organisations are dysfunctional (e.g. GADC, Eligible Bodies) • Informal networking amongst a significant number of local employees. • Increased mobility for some local Indigenous people who have re-located to Townsville or other larger centres. This may be contributing to the development of 'bridging capital'.

2.5 Contribution of asset base at 2008 to community development in Gulf Communities

While it is important to identify the level of asset development, arguably it is more important to understand how these assets are being utilised and what contribution they are making to improvements in individual and family livelihoods and to community development more broadly. Tables 8 to 12 provide a qualitative assessment of the contribution that the five asset groups are making to the elements of community development in the lower Gulf communities.

Table 8 Financial Asset Contribution to Elements of Community Development

	Element	Financial Asset Contribution
Economic	Income	<ul style="list-style-type: none"> Where businesses are employing extra people who would not otherwise be employed there is a contribution to an increase in personal income.
	Business Activity	<ul style="list-style-type: none"> LHRPHC is generating income from cattle sales and investing in further property development, probably resulting in an appreciation in the value of the asset. Businesses are delivering experience and skill training in business management.
	Employment / Skill acquisition	<ul style="list-style-type: none"> Indigenous majority boards enable greater community control over the asset.
	Asset control	<ul style="list-style-type: none"> Indigenous businesses (e.g. Hookeys, Waanyi Mining Services (WMS)) are generating income and jobs and contributing to development of business skills.
Social	Security and well-being	<ul style="list-style-type: none"> Income spent on consumer goods (see Fig 14 and 15 in Parmenter and Love 2007) leads to an increase in well-being. Businesses are undertaking some external networking (e.g. WMS Joint Venture) but there appears to be limited networking with other businesses and the ADBT.
	Networking and partnerships with others	<ul style="list-style-type: none"> Weakness in the governance of Eligible Bodies limits their contribution to social development.
	Cultural maintenance	<ul style="list-style-type: none"> Effective management of financial entities (ADBT, LHRPHC, WMS) should increase community confidence, however this is restricted by poor reporting and accountability to communities.
	Community confidence and values	
Institutional	Political engagement (internal and external)	<ul style="list-style-type: none"> The ADBT (through the Regional Development Committee) and larger businesses (WMS joint venture) are engaging to a limited extent externally. There is limited political engagement in the region (e.g. regional businesses advocating on a regional basis).
	Entrepreneurial spirit	<ul style="list-style-type: none"> Probably some increase in entrepreneurial spirit, though not on DOGIT communities where other conditions are not supportive (e.g. Council control stifling initiatives).
	Organisational soundness	<ul style="list-style-type: none"> Limited financial and operational reporting from organisations raises questions about the general level of organisational soundness.
Future Positioning	Guiding strategy	<ul style="list-style-type: none"> Some strategic planning with businesses, though no evidence that ADBT or other funds (e.g. Century Environment Committee (CEC)) are working to a strategy.
	Community self-investment	<ul style="list-style-type: none"> Some self-investment (e.g. ADBT investing in community businesses) but limited individual investment in the community. Some community concern about off-lease environmental issues, but limited use of CEC funds to leverage other resources to address concerns.
	Environmental balance	<ul style="list-style-type: none"> Little evidence of self-investment from Eligible Body funds.

Table 9 Physical Asset Contribution to Elements of Community Development

	Element	Physical Asset Contribution
Economic	Income	<ul style="list-style-type: none"> • Road access deficiency continues to have a negative effect on business development and operation • Overcrowding in community housing is not conducive to supporting mine-based employment • Much delivery of infrastructure is done by external providers, which limits the effect on local income.
	Business Activity	
	Employment / Skill acquisition	
	Asset control	
Social	Security and well-being	<ul style="list-style-type: none"> • Poor infrastructure contributes to a low sense of well-being and community confidence • Poor roads continue to restrict transport and contribute to high vehicle expenses, negatively impacting on cultural maintenance and networking with external parties • Bidunggu is an example of a lack of community management capacity, as evidenced by the inability of all parties to build capacity and integrate management with the township of Gregory.
	Networking and partnerships with others	
	Cultural maintenance	
	Community confidence and values	
Institutional	Political engagement (internal and external)	<ul style="list-style-type: none"> • Poor infrastructure is a focal issue for political engagement, though with limited activity to date • Tenure restrictions on DOGIT communities mitigate against the development of entrepreneurial spirit • Poor and limited housing contribute to difficulties in recruitment of external staff and advisers, though the ADBT is attempting, on a small scale, to deliver infrastructure on a commercial basis to address this (e.g. Mornington Island Guest House proposal).
	Entrepreneurial spirit	
	Organisational soundness	
Future Positioning	Guiding strategy	<ul style="list-style-type: none"> • The Gulf Regional Development Plan (GRDP) set out a vision for the lower Gulf; however, there was limited Indigenous input and no additional resources to pursue priority activities. • GRDP was also non-statutory with no penalties for being ignored. • No obvious strategy to link Doomadgee to Burketown and beyond with upgraded infrastructure.
	Community self-investment	
	Environmental balance	

Table 10 Natural Asset Contribution to Elements of Community Development

	Element	Natural Asset Contribution
Economic	Income	<ul style="list-style-type: none"> Lawn Hill and Riversleigh Stations have the potential to generate income in the future for communities and are providing some training and employment opportunities.
	Business Activity	<ul style="list-style-type: none"> Land capability status of the bulk of Indigenous land holding in lower Gulf is unknown
	Employment / Skill acquisition	<ul style="list-style-type: none"> Coastal resources make no apparent contribution to community economic development, though are an important food source Recent Wild River Legislation added further constraints to utilisation of natural capital
	Asset control	<ul style="list-style-type: none"> No evident strategy to develop further economic activity based on natural capital (e.g. acquisition of tourism ventures).
Social	Security and well-being	<ul style="list-style-type: none"> Examples of limited networking amongst three pastoral companies contributing to cultural maintenance (e.g. cattle drive to Longreach) Increased access to land may contribute to cultural maintenance.
	Networking and partnerships with others	
	Cultural maintenance	
	Community confidence and values	
Institutional	Political engagement (internal and external)	<ul style="list-style-type: none"> LHRPHC provides an example of a more professional approach to business management practice; however, it appears to be a limited influence on other Indigenous organisations Limited engagement with Southern Gulf Catchments.
	Entrepreneurial spirit	
	Organisational soundness	
Future Positioning	Guiding strategy	<ul style="list-style-type: none"> LHRPHC commits to a transparent strategy of economic development with a social development dividend Access to land has enabled the community to pursue vocational initiatives such as pastoral industry traineeships Significant landholder status has given the community stakeholder status with catchment management initiatives such as Southern Gulf Catchments.
	Community self-investment	
	Environmental balance	

Table 11 Human Asset Contribution to Elements of Community Development

	Element	Human Asset Contribution
Economic	Income	<ul style="list-style-type: none"> Improved employment outcomes have increased income for individuals, although it would appear that only a limited amount of this additional income is being converted into savings and other financial assets. Indigenous businesses are drawing on increased skill levels within the Indigenous population.
	Business Activity	
	Employment / Skill acquisition	
	Asset control	
Social	Security and well-being	<ul style="list-style-type: none"> Surveys of Century employees indicate an elevated sense of security and well-being. Some Indigenous people are actively seeking partnerships with non-Indigenous businesses. Human capital development observed may or may not contribute to the maintenance of traditional culture, but it is probably contributing to social development in that the employee survey found that most workers are intent on pursuing wage employment when mining at Century ceases, rather than going back on to welfare.
	Networking and partnerships with others	
	Cultural maintenance	
	Community confidence and values	
Institutional	Political engagement (internal and external)	<ul style="list-style-type: none"> Some organisations, mainly businesses, demonstrate a higher level of political engagement; however, DOGIT Councils are still politically marginalised compared to mainstream Local Governments Entrepreneurial spirit developing slowly Contribution to organisational soundness is uncertain.
	Entrepreneurial spirit	
	Organisational soundness	
Future Positioning	Guiding strategy	<ul style="list-style-type: none"> Little evidence of any contribution to these elements, other than some indications that individuals are exercising greater choice and moving to urban areas motivated by the desire for better children's education and a more stable, family life.
	Community self-investment	
	Environmental balance	

Table 12 Social / Institutional Asset Contribution to Elements of Community Development

	Element	Social / Institutional Asset Contribution
Economic	Income	<ul style="list-style-type: none"> • The large number of Century Mine employees supports and encourages new entrants to the mining workforce. • Possible potential to link former workers with wider mining industry human capital needs in North West Queensland. • Some contribution to level of business activity.
	Business Activity	
	Employment / Skill acquisition	
	Asset control	
Social	Security and well-being	<ul style="list-style-type: none"> • There is a positive contribution to the sense of well-being for those in the workforce, and perhaps for those who have acquired skills and experience and who are confident of re-entering the workforce when they choose to do so. • For DOGIT communities, there is little evidence that the enhanced social capital embodied in the workforce is contributing to community confidence.
	Networking and partnerships with others	
	Cultural maintenance	
	Community confidence and values	
Institutional	Political engagement (internal and external)	<ul style="list-style-type: none"> • Little evidence of a positive contribution to political engagement.
	Entrepreneurial spirit	
	Organisational soundness	
Future Decision-making	Guiding strategy	<ul style="list-style-type: none"> • Little or no evidence of a contribution to strategic purpose by organisations such as the ADBT and GADC.
	Community self-investment	
	Environmental balance	

In summary, the picture that this analysis paints is of uneven development. The presence of the mine has created significant employment opportunities for Indigenous people from the region and has contributed to increased income flows and other benefits (e.g. increased self confidence). However, these benefits have been unevenly distributed, with Mornington and Doomadgee in particular, faring less well than Normanton. There has been some increase in the number of Indigenous businesses, but their future post-mine is problematic. Physical infrastructure in the regions (especially housing and roads) remains under-developed. The quality of education and health services also continue to be an issue, as does the standard of governance in the communities and representative bodies. Some individuals and organisations have expanded and strengthened their networks as a result of connections facilitated by the mine, but this has been ad hoc, rather than a broader trend.

3. The Region from 2008 to Completion of Mining (2015)

3.1 Possible future regional asset enhancement strategies

In order to make a realistic assessment the potential impacts of completion of mining (expected in 2015) on the region, it is important to understand: a) the strategies for community asset development that may apply between now and then; and b) what the outcomes for asset development and community development could be if these strategies are resourced adequately and implemented effectively.

Table 13 lists some strategic approaches to asset group development identified through discussions with mine staff and from the recommendations of recent investigations such as the Ten Year GCA Review. There has not, however, been any in-depth discussions with Government (either Local, State or Commonwealth) on this issue, or with any representatives of the private sector (such as grazing or tourism) around the potential for future private sector investment in the lower Gulf area.

Table 13 Possible Future Asset Enhancement Strategies in Lower Gulf communities

Asset Group	Future Asset Enhancement Strategies and Initiatives expected over the period 2008-Completion of Mining (2015)
Financial	<ul style="list-style-type: none"> • ADBT annual contributions are around \$1.0 million. Therefore the ADBT will receive capital funding of approximately \$7.0M between now and completion of mining. Depending on its loan program and current capital base, the ADBT could possibly have between \$5M to \$10M under investment at the time of completion of mining. The ADBT's long term development strategy is unclear. • Training and support measures should be implemented to encourage Indigenous employees to save and invest a larger proportion of their incomes. • Oz Minerals retains 49% of LHRPHC that is earmarked for transfer to Waanyi Advancement Limited at some stage. LHRPHC development strategy is unlikely to change at this stage. • The Gulf Area Social Development Trust (GASDT) has an initial capital base of \$5.7M and is yet to determine areas for community support. The potential for a positive long term contribution to community well-being is substantial if this money is managed effectively and used to leverage additional funding. Oz Minerals may wish to co-fund community initiatives (health or education) with the GASDT, make a contribution to an expanded capital base, or engage with the Government in supporting the effective governance of the fund. • Linkages between the ADBT and the GASDT with Government Indigenous community programs are weak, and there may be some scope to strengthen these links. • Post-mine operations for enterprises that have been established through the GCA initiatives will depend on their development and diversification strategies adopted over the next seven years. There may be a need for assistance with the development of these strategies.
Physical	<ul style="list-style-type: none"> • There will be a high level of community interest in the disposal strategy for mine assets, such as the accommodation village. Consideration of this issue needs to account for community aspirations for the post-mine economy. • The future investment level in roads, power, housing, land tenure etc needs to be considered with relevant Government agencies.
Natural	<ul style="list-style-type: none"> • There is some potential to consider the focus and use of the CEC environmental investigation funds in relation to future natural resource management by Indigenous people in the region. The funding may be able to leverage a greater Indigenous involvement in this area. • The potential impact of carbon trading and the requirement for environmental offsets may offer some potential for use of Indigenous controlled land in the lower Gulf • Future Government supported natural resource management strategies for the lower Gulf, and the linkages to mine closure and rehabilitation, require investigation.

Asset Group	Future Asset Enhancement Strategies and Initiatives expected over the period 2008-Completion of Mining (2015)
Human	<ul style="list-style-type: none"> • As overall mine employment declines, the proportion of workers from the lower Gulf community is expected to increase. • The current training strategy is for pre-vocational courses to be complemented by life skills training and mentoring. There is scope to consider how the current strategy links with other skill needs in the lower Gulf. As an example, some Community Health Centres currently experience difficulty in recruiting administrative support from within the community, resulting in medical staff having to devote additional time to administrative rather than medical duties. This in turn results in a lower level of medical care and the dissatisfaction of medical staff which contributes to more frequent turnover. • While there is a continued focus on pre-vocational training, the potential for increased support for education or health to deliver human capital outcomes should continue to be monitored and considered. A focus on education and health linked with the Commonwealth commitment to 'close the gap' may leverage an increased level of development support. • The substantial investment in training to date is possibly in danger of being dissipated in the absence of some effort to organise labour more formally. This could be through some form of labour hire management company that works to ensure continued engagement with the mainstream employment market.
Social / Institutional	<ul style="list-style-type: none"> • The Ten Year GCA Review has recommended the establishment of a Gulf Business Forum to progress 'ideas pertinent to business operators'. This could link with the Queensland Resources Council (QRC) North West Queensland Initiative⁴ that envisages activity aimed at fostering business networking and linkages to support organisations. • Mainstream Local Government has substantially better access to Government decision makers than Indigenous Councils. Strengthening Indigenous Councils and enabling linkages with local Government to advocate and negotiate with the State and Commonwealth may lead to more effective Governance in the lower Gulf with commensurate community development benefits. • The GCA initiatives have developed and operated in relative isolation from the operations of other mining sites in North West Queensland. In the lead-up to completion of mining a strategy to form partnerships and linkages with other regional stakeholders may contribute to the sustainability of employment and business development outcomes. • Oz Minerals intends to support the development of a youth forum aimed at developing leadership qualities of the next generation in the lower Gulf.

3.2 Desired state of community assets (2015)

There is no evident strategic development planning process in place at this stage to guide future community development. The Ten Year GCA Review has recommended that a strategic plan be developed for the next seven years of operation (Recommendation 13), and it would be appropriate for this plan to be incorporated into the overall Completion of Mining Planning Process now under way.

Given the uncertainty surrounding asset development strategies and the lack of strategic planning to date, it is not possible to be definitive about the expected state of development in the region seven years into the future. It is possible, though, to pose a desired state, or vision. Table 14 below postulates key outcomes for each asset group (which combined form a vision) in order to initiate and stimulate discussion amongst key community stakeholders. This dialogue would ideally occur through the involvement of community stakeholders in the completion of mining planning process.

⁴ The QRC Northwest initiative is a partnership between the QRC- through its member companies- and the State and Commonwealth Governments. It is aimed at creating sustainable Indigenous economic development and employment opportunities in Northwest Queensland.

Should significant progress be made towards these objectives, this would constitute a positive long term legacy for lower Gulf communities.

Table 14 Key Objectives for 2015 by Asset Group

Asset Group	Outcome sought
Financial	A financially strong and effective ADBT with sound governance and a high degree of respect from lower Gulf community stakeholders, Government and private sector business in NWQ. The GACSDT is operating effectively, targeting high priority social and community development needs with strategic investment, and leveraging additional funding through established linkages with Government and the private sector.
Physical	Have established, and secured funding commitments for, a strategic public infrastructure development plan to be implemented by local businesses, with substantial on-the-job training where practical. Viable plans have been developed for the retention of critical infrastructure at the mine site to support the potential development of regional post-mine enterprises (e.g. on-going regional mine training facility or tourism base).
Natural	Lower Gulf Indigenous stakeholders have an investment and involvement in land and sea management through a natural resource management organisation that links communities from Borroloola to Karumba.
Human	Former mine workers organised and linked to a regional labour hire business that is owned by Indigenous people with links to the regional and State mining industry. Substantive and sustainable improvements in the educational outcomes from lower Gulf schools.
Social	More confident and capable leadership in the communities and Indigenous organisations, with strong links to business outside of the region.

4. Possible scenarios for the effects of completion of mining on Gulf Communities

4.1 Immediate

For Century Mine, it is assumed that completion of mining will occur on a planned and orderly basis rather than suddenly. Hence 'immediate' is taken as the first two years past cessation of mining. During that time there may be continued processing of stockpiled ore. 'Longer term' is taken to be the period beyond year two where there may not be the ability to rely further on programs to ease the impacts of transition to a post-mining environment.

The impacts and consequences listed in Table 15 are hypothetical scenarios at this stage, and are not necessarily comprehensive. It is within the power of Oz Minerals and community stakeholders to consider potential negative consequences of completion of mining and to plan for their avoidance or mitigation (i.e. to implement transitional programs). The personal perspectives on closure impacts are described in the report on the employee survey (Parmenter and Love, 2007).

Table 15 Potential Immediate Impacts of Completion of Mining

Asset Group	Impacts on asset development	Consequences for community development
Financial	<ul style="list-style-type: none"> • Cessation of financial contributions to trusts. • Cessation of wage income from local mine. • Cessation of business contracts from Century mine. 	<ul style="list-style-type: none"> • May be limited if the capital base of the trusts is sufficient to allow viable operations from the income derived from investment of the capital. • If people who have been trained and employed at Century are prepared to be mobile and to seek work elsewhere, then the ability to derive wage income should be maintained. However, if people need to go further afield for work this may lead to increased migration away from lower Gulf communities. <p>This could have negative consequences for those remaining in the communities. Local contractors will have to secure work from other sources, most likely out of the lower Gulf area if there are no other major developments in the region.</p>
Physical	<ul style="list-style-type: none"> • Cessation of road funding contribution to Burke Shire Council (BSC) • Less heavy traffic on lower Gulf roads • Possibility of some asset transfers to community (e.g. village, airstrip). 	<ul style="list-style-type: none"> • Less local contract work and associated employment • Potential for enterprise development based on transferred assets if managed effectively.
Natural	<ul style="list-style-type: none"> • Reduced waste water flows to the Norman River • Rehabilitation on mining lease may lead to improved land asset suitable for grazing. 	<ul style="list-style-type: none"> • Limited.
Human	<ul style="list-style-type: none"> • Cessation of pre-voc training on site will limit the addition of trained people to the stock of human capital. • Removal of in-kind support for boarding school students may result in lower numbers completing secondary schooling. 	<ul style="list-style-type: none"> • There could be a positive impact in the lower Gulf communities if those with training and work experience are able to remain and drive alternative economic activities • Possible negative impact if alternative employment is not able to be generated and incomes fall and people with employment experience leave the region.
Social	<ul style="list-style-type: none"> • Absence of the Century Mine will make it harder to maintain Government and non-government linkages and the focus and interest that Century generates. • Loss of in-kind support derived from Century (e.g. transport within and beyond region). 	<ul style="list-style-type: none"> • This could be negative if it results in a more isolated community that is 'off the radar' of decision makers and those with the resources to promote development.

4.2 Longer term

The longer-term impact of the completion of mining at Century will depend on the strength of other regional development drivers in the lower Gulf. The main economic sectors are mining, agriculture (cattle production), commercial fishing and tourism. While there has been active exploration stimulated by high commodity prices, there is no potential large scale mine that could replace the Mine under development in the lower Gulf at this stage. Cattle production and station employment is not likely to expand greatly, though there is a minor potential for the expansion of cropping through the development of irrigation on a limited scale. Tourism is largely confined to the Normanton / Karumba area and the Lawn Hill Gorge, with seasonal through traffic on the Savanna Way between Normanton and the Northern Territory. While there is some potential for the development of additional tourism initiatives with the capacity to generate employment and income for Indigenous people, this will not be sufficient to replace the Century inputs to the lower Gulf.

There is also the possibility that upon completion of mining, the political and administrative focus on the lower Gulf, limited though it may be at present, will diminish with commensurate reductions in Government program funding. Evidence for this can be seen in State Government regional planning processes. While the Gulf Regional Development Plan was largely ineffective, it at least had a place in a state-wide scheme of non-statutory plans. The State is now implementing a system of statutory regional plans. Statutory plans are more powerful than other local plans, policies and schemes and other non-statutory plans which may have been undertaken in the past. The North West Regional Development Plan covers the shires of Cloncurry, Flinders, McKinlay, Mount Isa and Richmond where there are regional service towns and the regional bases for a number of mining companies. Lower Gulf Shires and Indigenous community councils are not included in the statutory plan and it is reasonable to assume that they will be accorded a lower development priority.

This problematic economic development outlook points to the importance of sustaining key GCA initiatives that build capital, in particular financial and human capital, with a view to encouraging mobility to access job markets and income-generating opportunities further afield.

5. Implications for On-going Completion of Mining Planning

The International Council on Mining and Metals has stated the following position on closure planning:

‘An integrated approach to closure - which takes environmental and social considerations into account at an early stage of an activity and throughout its lifecycle – plays a fundamental role in creating long-term value from both the environmental and social perspective.’ (<http://www.icmm.com/document/220>).

Century Mine has now reached a stage of development where the attention of lower Gulf stakeholders will be focussed increasingly on the socio-economic implications of completion of mining. From 1997 to 2008, the GCA has been the reference document guiding community investment. It has been, and still is, a useful document; however, its guiding objectives are set at a very general level and are not linked to a development framework that allows for realistic monitoring and evaluation of the impact of its initiatives on community development. There has been no systematic monitoring of GCA outcomes, or even outputs at the initiative level, and no systematic monitoring of the social environment in lower Gulf communities. Consequently there is little understanding of the influence of community conditions on the effectiveness of GCA activities, or of the impact of GCA activities on community development.

The recent Ten Year GCA Review has made a number of recommendations aimed at improving the governance of GCA implementation, but there is still no answer to the question ***“Will a business-as-usual approach to GCA implementation deliver the outcomes needed to manage effectively the socio-economic impacts of closure?”*** As Oz Minerals has now commenced planning for completion of mining, an opportunity exists to incorporate a consideration of social impact and the effects of GCA elements into the process.

Table 16 outlines a generic approach to this process. This should not exist on a stand-alone basis, but should be integrated with the completion of mining planning process. A central core of the framework would be the utilisation of a sustainable livelihoods framework built on the five capitals model. This report has indicated that the activities implemented under the auspices of the GCA, as well as other Government and community initiatives in the lower Gulf, may be organised and coordinated effectively along these lines, leading to greater clarity of development objectives, and a more robust and productive dialogue with lower Gulf and Government stakeholders.

Table 16 Process for Completion of Mining Planning

Process	Rationale	Comment
<p>Establish Completion of Mining Social Planning Group</p> <p>Representatives of Oz Minerals, Native Title Parties, Local Government, State and Commonwealth Government.</p>	<p>There is a requirement for consultation with the community on completion of mining impacts, which extends beyond just those who are a Party to the GCA.</p>	<p>This would build on to existing consultative mechanisms such as the GCA Management Board.</p>
<p>Dialogue on the Development of Local Capital Stocks</p> <p>Considering the contribution of the GCA and other policy and program mechanisms such as the GRDP, Local Indigenous Partnership Agreements with Doomadgee and Mornington Island.</p>	<p>The sustainable livelihoods framework, built on the five capitals model, provides a useful tool for organising information and considering individual, community and regional development issues and processes.</p>	<p>There appears to be no agreed or easily accessible regional planning frameworks that completion of mining planning could link with. A facilitated dialogue aimed at this end will assist in the development of agreed community capital outcomes with their associated indicators.</p>
<p>Agreement on a Desired State of Capital Development at Completion of Mining that is Realistic and Achievable</p> <p>Basically this could constitute a lower Gulf regional development plan that builds from current community plans, where they exist. This should include specific targets.</p>	<p>There is a need to set outcomes that are achievable, and which the parties agree that, if achieved, will position the lower Gulf to develop a more robust economy post completion of mining at Century.</p>	<p>There is a need to set clear objectives in relation to completion of mining. There is no point in simply monitoring GCA or other outputs in the absence of a development framework that encompasses agreed outcomes.</p>
<p>Development of a Social Completion of Mining Strategy</p> <p>Strategy to incorporate GCA, Oz Minerals non-GCA, Government (including Local Government) inputs and actions to secure resources and implement the strategy.</p>	<p>There is a requirement to develop a defensible strategy to guide investments aimed at preparing the community to adapt to a post-mine economy.</p>	<p>Oz Minerals is in a position to assist community advocacy for an increase in investment in public assets (such as roads) in the lead up to completion of mining. It is also in Oz Minerals's interest to ensure that the recently established GACSDT operates effectively.</p>
<p>Community Investment Program for Completion of Mining</p> <p>Built on the GCA, and including support for other community asset development initiatives that may be desirable, and including advocacy with Government.</p>	<p>For effective strategy implementation there needs to be a community investment plan that is public and that the parties are accountable for.</p>	<p>It would be in the interest of Oz Minerals and the community to report annually on progress with implementation of the community investment program.</p>
<p>Monitoring and Review</p>	<p>Monitoring and Review is required to measure progress toward the outcomes set and to adapt program management as circumstances demand.</p>	<p>Monitoring and review needs to be participative, but based on a robust methodology guided by an independent facilitator.</p>

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APPENDIX A – Data relevant to the Lower Gulf Region

1. Demographic Profiles Compiled from ABS Census Data

Table A1-Doomadgee Indigenous Area Demographic Profile 1996-2006
Indigenous persons only

	1996	2001	2006
Population	651	995	1004
Age %			
0-19	50.7	50.7	50.3
20-39	31	31.8	38.2
40-59	13.7	13.1	15.3
60+	4.6	4.5	4.5
Employment %			
In labour Force	42.7	51.0	53.4
CDEP as % of total employment	44.7	74.6	55.2
Unemployed	23.6	7.0	7.7
Household income %			
\$0-\$26000	10.8	7.6	14.2
\$26001-\$52000	40.5	36.4	28.3
\$52000+	48.6	56	57.5
Family Type %			
Couples with children	61.5	59.8	75
Couples without children	5.7	13.6	0
One parent family	30.3	24.6	20
Other family	2.5	2.0	4.1
Average household size (no)	7.8	7.3	6.3
Household Type %			
One family household	57.8	55.9	58.4
Multi-family household	42.2	40.4	39.2
<i>Subtotal family households</i>	93.3	96.3	97.6
Lone person households	6.7	3.7	2.4

Key Points

- Population continues to increase, but at a lower rate between 2001 and 2006
- Significant numbers of young people, younger age profile than Mornington Island
- The proportion of households earning below \$26,000 pa has risen since the opening of Century Mine, as has the number of households earning in excess of \$52,000. The number of households earning between \$26,000-52,000 has fallen substantially
- Household incomes appear large due to the size of households
- Household sizes have decreased marginally since 1996

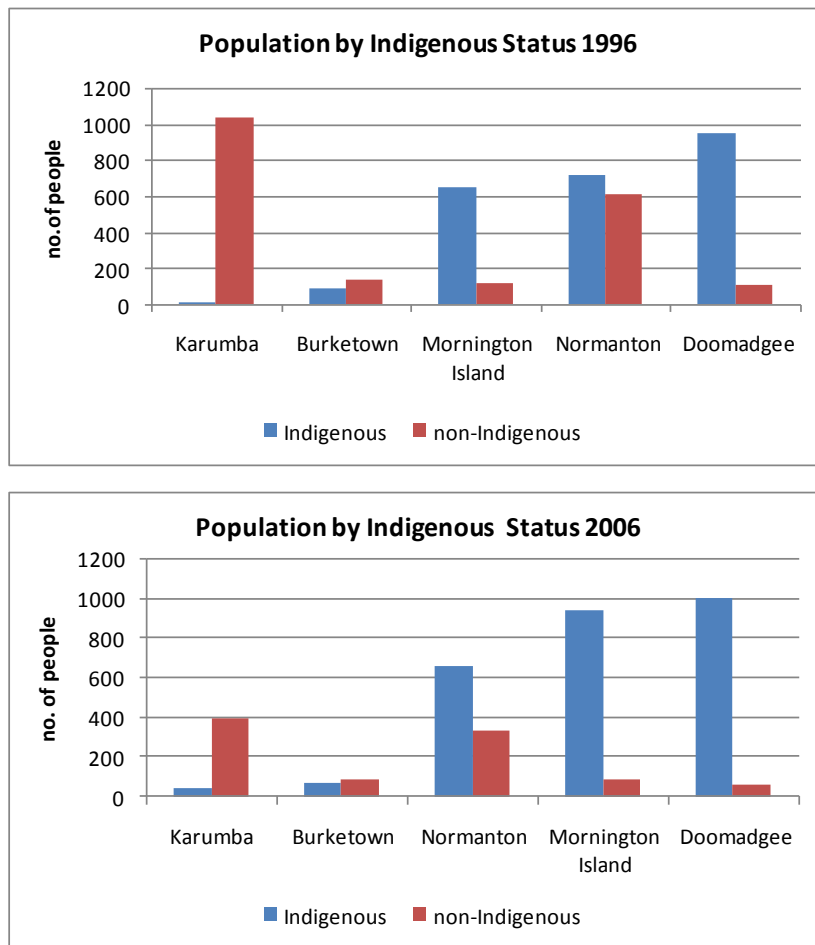
Table A2-Mornington Indigenous area Demographic Profile 1996- 2006
Indigenous persons only

	1996	2001	2006
Population	945	825	944
Age %			
0-19	43	43.5	40.6
20-39	35.8	34.1	42.3
40-59	15.3	16.6	18.4
60+	5.8	5.7	7.4
Employment %			
In labour Force	52.6	52.6	51.6
CDEP as % of total employment	73.5	82.6	72.0
Unemployed	3	2	5.2
Household income %			
\$0-\$26000	30	30.2	38.9
\$26001-\$52000	40.4	47	36.7
\$52000+	29.5	22.8	24.4
Family Type %			
Couples with children	40.3	42.5	48.8
Couples without children	19.7	13.7	20.5
One parent family	37.7	36.9	22.0
Other family	2.2	6.7	8.7
Average household size (no)	6.2	5.1	4.7
Household Type %			
One family household	66.0	74.1	75.6
Multi-family household	34.0	25.9	24.4
<i>Subtotal family households</i>	93.8	92.7	88.9
Lone person households	6.3	7.3	11.1

Key Points

- Overall population numbers are steady
- The proportion of households earning more than \$52,000, and between \$26,000-52,000 have both decreased, with a significant increase in the proportion of households earning between \$0-26,000 (9%)
- Significant decrease in the average household size

Figure A1- Population Centres in the Gulf – 1996 and 2006

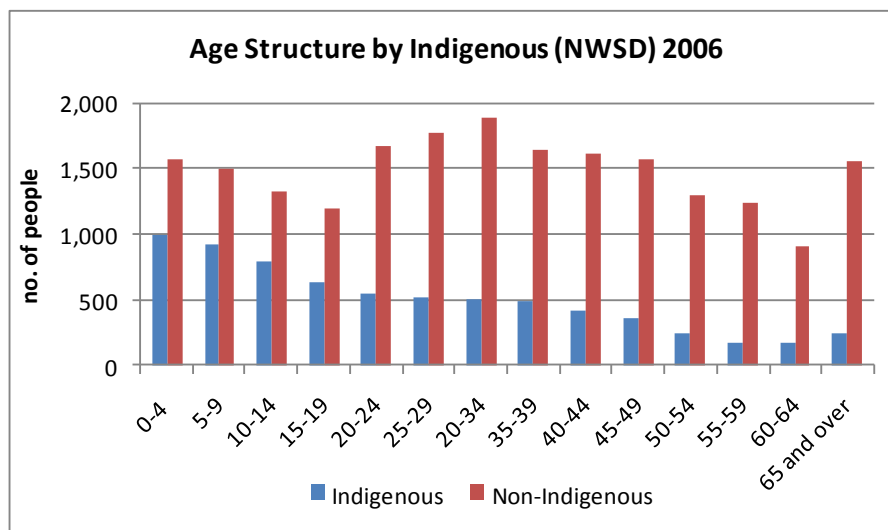


Source- ABS Census 1996 and 2006 Cat. no 2016.3

Key Points

- Overall Indigenous population remains fairly steady at around 2,500 to 3,000

Figure A2- Northwest (SD) Age profile by Indigenous 2006



Source- ABS Census 2006 Cat No 2068.0

Key Point

- Compared to non-Indigenous, there is a higher proportion of the Indigenous population in the younger age cohorts

2. Labour Force

The Indigenous participation rate⁵ in the labour force is 50.6%, compared to 86.6% for non-Indigenous Australians (Table A4). The unemployment rates in Indigenous Gulf communities are understated, primarily due the CDEP⁶ programs (Table A4 and A5). Indigenous people working in the CDEP program represent 8.3% of the working age population.

Table A4 Indigenous Labour force Northwest (SD) 2006.

	Indigenous NW (SD)	% of working age population (4313)
Employed: CDEP ⁷	360	8.3
Employed: Mainstream ⁸	1,567	36.3
Unemployed	258	6
Total labour force	2,185	50.6%
		Non-Indigenous (86.6%)
Not in the labour force	1,649	38.2%
Unemployment rate	11.8%	n/a
	Non-Indigenous (2.3%)	

Source- ABS Census 2006 Cat No. 2002.0

Table A5 Indigenous labour force by local government area

	NW (SD)	Doomadgee LGA)	Carpentaria (LGA)	Mornington (LGA)	Burke (LGA)
Employed: CDEP ⁹	360	132	0 ¹⁰	210	3
Employed: Mainstream ¹¹	1,567	107	226	83	64
Unemployed	258	20	29	16	0
Total labour force	2,185	259	255	309	64
Not in the labour force	1,649	226	172	287	18
Unemployment rate	11.8%	7.7	11.4	5.2	0
	Non-Indigenous (2.3%)				

Source- ABS Census 2006 Cat. No 2002.0

⁵ Labour force as % of 15+ population

⁶ The Community Development Employment Projects (CDEP) program is an Australian Government funded initiative for unemployed Indigenous people outside of major urban and regional centres.

⁷ Census based CDEP employment

⁸ Census based non-CDEP employment

⁹ Census based CDEP employment

¹⁰ CDEP numbers for Normanton were not available

¹¹ Census based non-CDEP employment

APPENDIX B- Assessment of Century's Contribution to the Regional Asset Base

This appendix reviews available data about the contribution of Century Mine (CM) to the regional asset base, utilising the 'five capitals' model as the organising framework, with a particular focus on the domains of financial, built and human capital.

Financial capital

CM's contribution to financial capital of the lower Gulf region comprises:

- wages and salaries paid to people living in the region, or who live outside the region and remit some portion of their incomes to their home communities
- payments made to eligible bodies under the GCA
- payments to trusts: specifically, the ADBT and the Gulf Area Social development Trust
- support for the establishment of local Indigenous owned and/or run businesses either on the mine or in the broader region
- payment of rates to local government
- financial and in-kind support for community programs and initiatives (including donations).

Income from Wages

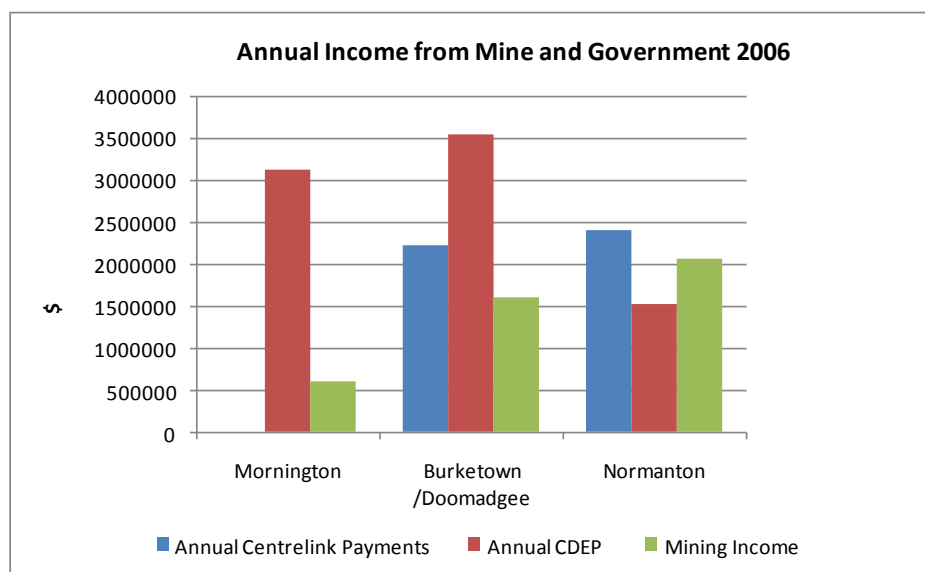
Over the life of the mine, the estimated income received by Indigenous employees of CM to the end of 2007 was \$65.6m¹². However, because this figure includes Indigenous employees who were living outside of the Gulf when they were recruited, or who subsequently re-located, it significantly overstates the extent of direct income flows into the Gulf proper.¹³

A more finely grained picture can be obtained by comparing estimated income flows into individual communities. Figure A3 shows estimated income derived from mining employment paid to residents of Mornington Island, Burketown/Doomadgee, Karumba and Normanton in 2006 and compares this with Government data on Centrelink and CDEP payments. (Note that Centrelink data for Mornington Island was unable to be disaggregated from the wider area and hence is not shown in Figure A3.)

¹² This figure was calculated by multiplying the average number of Indigenous employees over the life of the mine by years of operation by the estimated average take home pay per annum.

¹³ It is likely that some employees living outside of the region remitted a portion of their wages to family members and relatives who were still living in the Gulf. Conversely, those living in the Gulf would have spent a proportion of their incomes outside of the region (e.g. on the purchase of motor cars). It was beyond the scope of this study to attempt to quantify these aspects.

Figure A3 Annual Income from Century Mine and Government



The figure indicates that the largest recipient of employment income from the mine is Normanton, which has been the case since Century was established. Mornington is a distant third, reflecting its geographical isolation and lack of a 'job ready' workforce. In both Doomadgee/Burketown and Mornington, CDEP continues to be a much more significant source of income than the mine. Likewise, in the two communities for which data are available – Normanton and Doomadgee/Burketown – the value of Centrelink payments exceeds that of mining wages by a considerable amount.

Eligible Body Payments

The Gulf Aboriginal Development Company (GADC) was established under schedule 8 of the GCA to represent or act as an agent for the Native Title groups. The GADC is responsible for distributing royalties paid by Zinifex to six 'eligible bodies'¹⁴. As of the end of January 2008, \$5.8 million in compensation payments had been paid to the GADC, with an unspent balance of \$1.2m (TRM 2008). Included in this amount are administrative funds of \$50,000 per year. This amount has not been enough to employ staff and the GADC now relies on ADBT to carry out its services *gratis* (Scambury 2007). The current study did not collect any data how this royalty money is spent, saved or invested by the individual recipients. However, the recently completed second five-year review of the GCA identified serious governance issues and expressed concern that the benefits had been concentrated in just a few families.

Trusts

The Aboriginal Development Benefits Trust (ADBT) was established under Schedule 6 of the GCA to promote Aboriginal development programs. The ADBT's role is to provide: loans, grants and start up funding for new business; finance and equity for other ventures and/or land purchases; finance for training and assist in community development programs such as sport. The ADBT board comprises 8 Indigenous representatives from the Gulf, one representative from Century Mine, one financial director and one independent director.

¹⁴ As a result of the 2002 sit in, money set aside for 'unidentified Waanyi interests' was paid to the newly formed 'eligible' Waanyi Nation Corporation.

At the end of 2007, the ADBT had received **\$10.5m** in funds from Zinifex. Only limited information is available about how these funds have been disbursed, but significant activities have included construction of a bakery, and more recently, a roadhouse in Doomadgee, a joint venture with Bynoe Aboriginal Corporation in Normanton to run a general store, and a grant to enable the purchase of Nowlands Engineering in Burketown (This is a combination mini-mart, fuel outlet and engineering workshop).

Recently, the Queensland Treasurer approved the investment of funds of \$5.75 million with the Queensland Community Fund to support investments in social infrastructure needs. This money represented the unexpended amount allocated by the GCA to fund a trust to address social development needs in the Gulf.

Business support activities

In addition to the funding provided to the ADBT to support business development activities, CM has facilitated the establishment of some Indigenous businesses at the mine site itself.

The most long standing of these is Hookeys Contracting, which was established in 1998 with bank finance. Hookeys provide civil maintenance site services to Century Mine such as earth works for dam walls and creek diversions, road maintenance and supply of plant equipment and labour. The business is owned by an Indigenous local family based in Mt Isa. Over the past nine years it has grown from three employees and one truck at start-up to its current status of 25 employees with over 40 pieces of equipment (Vidler 2007). Although the business is in a position to tender for contracts the majority of Hookeys work is dependent on Century Mine. Long term viability for Hookeys could be assisted by increased road funding to the area by the state in the lead up and post completion of mining, to improve regional infrastructure (Vidler 2007).

Waanyi Mining Services (WMS) is owned by Waanyi Nations Aboriginal Corporation. Its main business activity has been a joint venture with Exactix operating a rock crushing business at Century Mine. This venture has been operating since 2004 and has a five year contract. WMS also engages in labour hire to Century Mine through an association with the Doomadgee Community Development Employment Project (CDEP) (Vidler 2007). Funding was received through an equity contribution from WNAC and grants from the State Government Indigenous Business Development Grants Scheme.

Moungibi Association has recently secured a site cleaning contract for Century Mine, worth approximately \$2.4m over a three year term. It currently employs 28 local Indigenous people from Burketown and Doomadgee.

Century Mine also engages two Indigenous contractors who are owner-operators for items of plant, namely a water cart and an excavator. In addition, the Mine is actively considering the development of a number of additional businesses, such as a pest control operation, that may be able to access a regional market post completion of mining.

Lawn Hill and Riversleigh Pastoral Holdings Company (LHRPHC)

LHRPHC was formed in 1999 as part of the Gulf Communities Agreement, and is a joint venture between the Waanyi People (through the Waanyi Special Purpose Company Pty Ltd, 51%) and Zinifex Century Mine (49%). It is the registered proprietor (Crown Lessee) of Lawn Hill and Riversleigh Pastoral Holdings in the lower Gulf surrounding the Century Mine. Its core business is cattle production, through a combination of developing its own herd and agisting other cattle to generate income for development purposes. The Board is composed of nine directors, of which five are appointed by the Waanyi SPC Pty Ltd and four are appointed by Zinifex Century Mine. LHRPC is generating income from cattle sales and investing in further property development, which may lead to a long term appreciation in the value of the asset. It also provides some employment and training opportunities for local people.

Local Government rates

According to data provided by CM, in 2007/08 payments to the two local shires were:

Burke Shire Council - \$1,699,983
Carpentaria Shire Council - \$277,000

These amounts represent significant income to both local governments, in particular Burke Shire. This would appear to be in addition to the 'Roads Partnership' Agreement that Zinifex has with Burke Shire for the upgrade to sealed standard and maintenance of mine access road from Gregory.

Community programs and donations

CM provides financial and in-kind support for various community programs in the Lower Gulf, including the Deadly Ear Program in Doomadgee (see below for more details), an Indigenous Youth Program – Surf and Turf – conducted in conjunction with LHPRC, and the Normanton Youth Rural Skills Program. In addition, CM frequently makes seats available on its flights for community members who need to travel for compassionate and medical reasons. No accurate data are available on the financial value of these contributions

Outcomes to date

While individual employees and their families, some business operators and recipients of royalty payments have benefitted financially from the presence of the mine, economic conditions in the two DOGIT communities of Mornington Island and Doomadgee have shown little sign of improvement.

A comparison of data from the 1996 and 2006 censuses shows that real median individual income actually fell slightly in Doomadgee and rose only marginally in Mornington Island (Table A6). In Normanton, by contrast, there was a 28% increase in real per capita income for the Indigenous population, which basically mirrored the scale of the increase for the non-Indigenous population. This reflects a greater level of economic engagement with the mine, plus the fact that Normanton, as an open community, is more integrated into the mainstream economy

Table A6- Median individual income Gulf communities 1996 and 2006¹⁵ (2006 prices)

	<i>Doomadgee</i>	<i>Normanton</i>	<i>Mornington</i>	
	Ind	Ind	Non-Ind	Ind
2006 median individual income (\$/weekly)	218	334	654	199
1996 median individual income (\$/weekly)	237	260	439	189

Source- ABS Census 2006 Cat. No 2002.0

¹⁵ There is no 2006 data available for Burketown and Karumba.

Shifting the focus to household income (see Table A1 and A2), highlights one area of difference between Doomadgee and Mornington Island. In Doomadgee, the proportion of households with a net income of \$52k + increased by 18% between 1996 and 2006, notwithstanding a reduction in average household size over that period, whereas the number of households in this category in Mornington Island declined slightly. This is consistent with data from Century showing a greater number of people being employed from Doomadgee than Mornington. In both communities, however, the proportion of households reporting an income of \$26k or less actually increased slightly over same period, indicating the absence of any significant 'trickle down' or multiplier effect.

Where incomes have increased as a result of mining employment, it does not necessarily follow that this has translated into an increase in the financial capital of the community. For this to occur, a portion of the income received has to be saved, or invested into assets of activities that have the potential to retain and increase value over the longer term. The study did not investigate this aspect in any detail, but anecdotal evidence is that many employees have difficulty saving. In the interviews conducted for the workforce survey, many respondents noted a deficit in money management skills and several identified the need for a savings scheme or salary sacrificing scheme, or something similar. Numerous respondents expressed concern that, after completion of mining, individuals and families would be in more debt than before they had started work at the mine. The survey also found that most respondents had invested primarily in depreciating assets, such as cars and white goods, since they had begun working at Century and only 8 per cent had purchased a house (see below). These findings suggest that only a small proportion of the income that is being received is being converted into long term assets and investments.

On the business development front, LHPRC has the potential to become an asset that could generate an ongoing income stream. In the communities, some viable businesses have been established with the assistance of ADBT funding, such as the Doomadgee bakery, Nowlands Engineering, Normanton traders and, potentially, the Doomadgee roadhouse. At the mine, there are now several functioning Indigenous-owned businesses and some of these have the potential to diversify so that they are not dependent on the mine for their long term survival. However, while there are some encouraging initiatives, business development has been nowhere near on the scale required to provide the basis for a viable regional economy post-Century.

Physical Capital

The most prominent infrastructure that has been established in the region, and that may have local benefit post completion of mining, is the mine accommodation village, accommodating up to 600 people, and the mine airstrip. Both are in close proximity to Boodjamulla National Park and Lawn Hill Gorge. The airstrip is not available for public use, but as noted above, seats on flights that utilise this facility are made available quite frequently to community members.

As part of its commitment under the GCA, the State Government funded the upgrade and sealing of the Wills Development Road from Fiery Creek to Gregory at the time of mine construction, but many of the roads in the region remain unsealed. At the time of the Five Year Review of the GCA the investment in the Wills Development Road between Gregory and the Doomadgee turnoff was approximately \$500,000 per annum. Since that time it is believed that the annual investment has increased to approximately \$1,500,000 per annum. Zinifex maintain a "Roads Partnership" Agreement with the Burke Shire Council to upgrade and maintain the Gregory –Lawn Hill Gorge Road up to the mine turnoff. The annual value of this agreement is unknown, though it is resulting in the progressive upgrading of the road pavement with sealing of the first section from Gregory occurring in 2008.

CM also provides Bidjunggu, a community on the edge of Gregory, with on-going infrastructure support in the form of maintenance of a generator and water infrastructure and provision of diesel for the generator. However, this cannot be considered a long term contribution to the physical capital of the community, as this support is unlikely to be maintained once the mine closes.

Housing

As a fly-in fly-out operation, Century has made little direct contribution to the regional housing stock, apart from establishing 10 houses in Karumba to accommodate some employees of the port operation. There is also little evidence of an indirect impact on the housing stock as a result of increased income flows into the communities.

At the time of the 1996 Census, lack of housing was a significant problem across all Indigenous communities in the Gulf. At the time of the 2006 Census there were still major problems with Aboriginal housing in the region. For example in Doomadgee, the average household size is 7.3 people compared to 1.8 for non-Indigenous people (Table A7). Many of the existing houses are in poor condition. In the past, lack of housing and recreation facilities has been a major contributor to Aboriginal social problems in Normanton (Memmott and Kelleher 1995).¹⁶

Table A7 Housing

2006 Census data	NW QLD		Doomadgee		Normanton		Mornington	
	Indigenous	Non-Indig	Indigenous	Non-Indig	Indigenous	Non-Indig	Indigenous	Non-Indig
Average number of persons per bedroom	1.6	1.1	2.5	1	1.5	1.1	1.8	1.1
Average household size	4	2.5	7.3	1.8	4.3	2	4.7	1.9

Source- ABS Census 2006 Cat. No 2002.0

In the case of Doomadgee and Mornington Island, one obvious reason why income from mining has not had a measurable effect on the quality or quantity of housing is that there is no private housing market. The situation is little better in Normanton, where a limited market does exist. According to the 2006 census, 26 of the 134 houses (19%) in this community that contained Indigenous households were fully owned or being purchased; this was up only slightly from 2001, when the equivalent number was 21. By contrast, around 40 per cent of non-Indigenous households owned or were purchasing their houses. There did not appear to be any increase in the overall housing stock during this period.

Another contributing factor is that purchasing a house does not appear to be a priority for most Indigenous employees. Only 8% of respondents to the 2007 Indigenous employees survey had purchased a house since commencing work at Century. Of the seven employees who had taken this step, all were living outside of the Gulf and it can be assumed that they also bought their properties outside of the region. Only two of the seven were from the Gulf, one from Doomadgee and one from Normanton, and both had moved out of the Gulf since working at Century.

Human Capital

CM's contribution to the human capital of the region can be assessed under four headings:

1. employment and training
2. personal development
3. workforce and community health
4. education

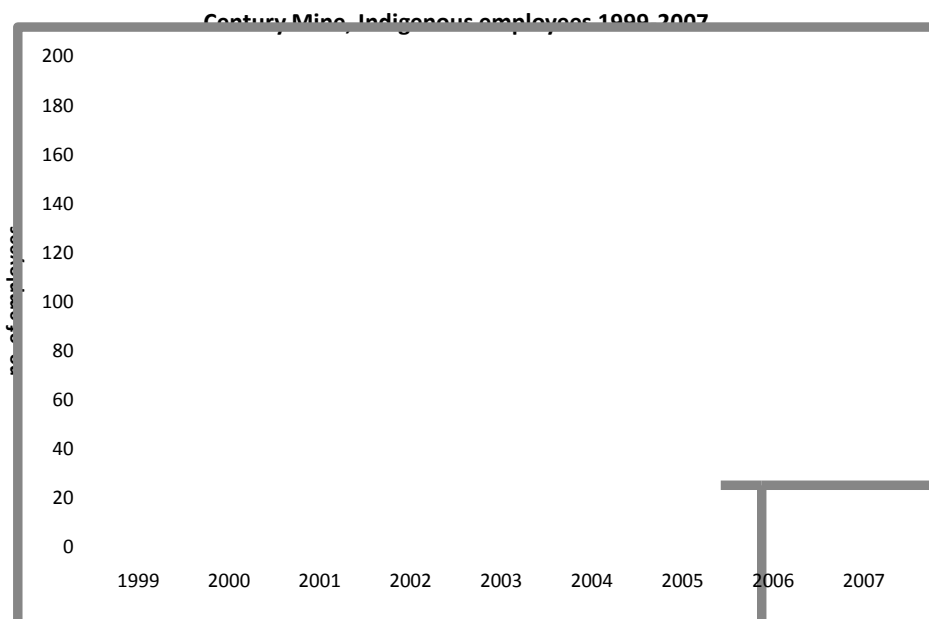
¹⁶ Data on the condition of community owned and controlled housing, understood to be maintained by the Department of Housing, has not been available to the Ten Year GCA Review or to the CSRSM study. This is unfortunate, as living conditions in the communities possibly quite have a significant influence on workforce turnover, as well as influencing fitness for work following roster breaks.

Employment and Training

Under Schedule Two of the GCA, the company and the Queensland Government committed to 'giving Local Aboriginal People employment and training opportunities which can in turn help them learn and maintain relevant skills, be productive members of the workforce and provide the needs and wants of themselves and their families' (GCA 1997). This is where the contribution of the mine to the regional asset base has been greatest.

Since mine start up, in excess of 600 Indigenous people from the region have been employed at the mine. Numbers initially declined following the completion of construction, as shown in Figure A4, below, but have increased steadily since 2002. According to the GCA department, in September 2007 there were 206 permanent Indigenous employees. This total includes 55 Indigenous women, representing 27% of the total Indigenous workforce.

Figure A4 Century Mine number of Indigenous employees



Most of the jobs that have been provided have been in 'entry level' positions such as truck driving.

Personal development

As noted, Century has been a major employer of Indigenous people in the region. This has not only provided these people with economic benefits and increased skills, but in the majority of cases appears to have had an overall positive impact on their self esteem and confidence (see Parmenter and Love 2007). CM has also supported some initiatives aimed at contributing to the personal development of children and youth in the region. The most prominent have been:

Surf n Turf

This is an Indigenous youth program where participants are involved in a range of activities travelling from Mt Isa to the coast.

The program includes:

- medicals and a session on sexual health and appropriate behaviour (delivered by Qld health.
- horsemanship, Leatherwork, Scuba Diving, Century Mine tour to look at job opportunities and Personal Development.

- a visit to Sea World resort
- high Ropes, Canoeing, Raft Building and Surfing at Tallebudgera Active Recreation Centre

This program was a joint effort between the LHRPHC and Morr Morr Pastoral Company forming the Lower Gulf Indigenous Beef Alliance to partner with the Department of Sport and Recreation. It was funded by Century Mine (\$30K), LHRPHC (\$18K) and the Department.

Normanton Youth Rural Skills Program

The Normanton Youth Rural Skills Program runs over the six week Christmas school holiday period and teaches local children horsemanship skills, equipping Normanton youth with vocational skills for the local cattle industry. Local businesses, Carpentaria Shire Council and CM contributed substantially with in-kind support and monetary donations. Supervisors from Normanton Police, Queensland Ambulance, Carpentaria Shire Council, local indigenous corporations, Delta Downs Station, Morr Morr Pastoral Group and local contract musterers gave their time to oversee the smooth running of the program.

Anecdotal feedback about the benefits of both programs has been very positive, although neither has been formally evaluated.

Workforce and community health

It is well documented that Indigenous communities have significantly worse health outcomes than non-Indigenous Australians. The major causes of death and illness for Indigenous peoples in the region include: stroke, CHD, diabetes, suicide, unintentional injury and mental health. (Queensland Health 2004). Health determinants of significant impact in this population include: poor diabetes management, overweight and obesity, poor nutrition, physical inactivity, harmful alcohol consumption, high blood pressure, poor blood cholesterol management, and risk and protective factors for mental health (Queensland Health, 2004).

CM has not invested in or supported any community health programs until very recently, when it signed on to support the Deadly Ear program.¹⁷ This means that any positive impact that the mine might have had on health outcomes in the region will have been an indirect consequence of employment and increased income flows, rather than the result of any targeted intervention.

There are two main ways in which the mine may have indirectly contributed to better health outcomes for the workforce and, possibly, the wider community:

Firstly, it can be argued that the 'industrial discipline' associated with running the mine and camp (e.g. random drug and alcohol tests, limits on the amount of alcohol that can be consumed at the canteen, the need to work long hours and keep regular times), has influenced some Indigenous employees to adopt healthier lifestyles. In turn, some of these employees may have acted as role models back in their communities, thereby influencing others.

¹⁷ This is an initiative run by the Aboriginal and Torres Strait Islander Ear Health Program at the Royal Children's Hospital in Brisbane to provide volunteer outpatient clinics and surgery to treat ear disease within remote Queensland communities. Otitis Media (OM) is a common childhood disease - 75% of all children have had one episode by the age of five - and for some it may continue throughout school life. As many as eight out of ten Aboriginal children could have a middle ear infection and associated hearing loss at some time during the school year. Hearing loss can compound the disadvantage experienced by Aboriginal children for whom standard English is a second dialect, particularly in schools which do not take account of the implications. Put simply, if children can't hear properly, they can't learn properly

The second possibility is that some of the additional income that mine workers have brought into the communities has contributed to improved living conditions, diet, and access to medical care for some sections of the community. These factors are all known to be associated with better health outcomes over the longer term.

The evidence in respect to the first of these scenarios is inconclusive. Hall and Driver (2002) posited a positive contribution of mine mess and alcohol consumption rules on the health of long-term employees at Century, but noted that higher salaries could also increase alcohol consumption for individuals, nuclear and extended families. Indigenous employees interviewed for the current study suggested that health could be improved or worsened from working at the mine, depending on the individual. Some said that they chose to cut down on alcohol, eat better food and exercise more than before (utilizing the gym facilities and opportunities to engage in organized sport), while others reported that they had increased their food and drink intake and exercised less, resulting in weight problems (locally referred to as the '*Century spread*'). As is always the case, much seems to depend on the individual.

"Worse on site because too much food, not as much exercise as usual"

"can go either way, can eat too much and get overweight too"

Although employees and their immediate families have derived various benefits from increased incomes, there has been only a limited economic flow through to the broader community (as noted above). Consequently, there is little reason to expect a broader health impact from the presence of the mine. Some informants interviewed for this study reported that employees and their close relatives were now able to buy more, and a wider variety of, food but this was seen as benefitting only a small number of people.¹⁸

"The only impact in terms of health has been that families of mine workers have been able to buy more food" (Key informant)

"Health is not related to the mine, no changes [in communities] since the mine started" (Employee)

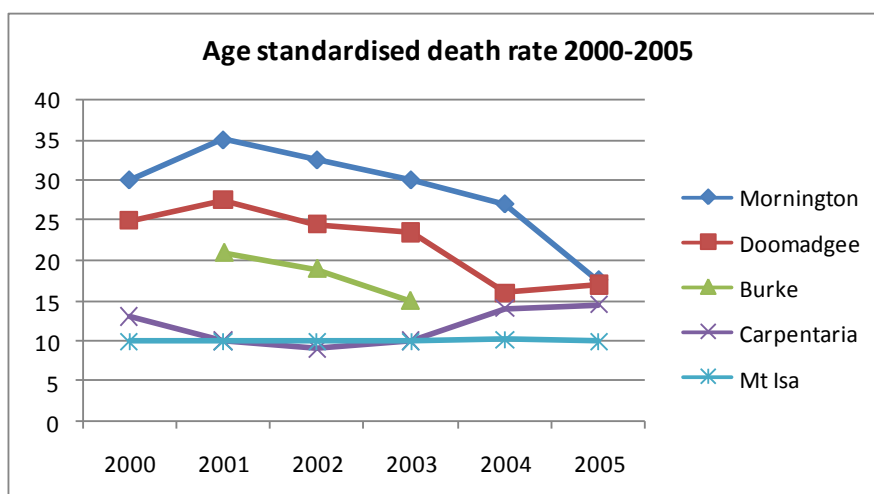
Also, as already noted, substandard and overcrowded housing - which is a significant contributor to poor health outcomes - continues to be an issue in the Gulf communities.

Although it is difficult to make a case that the presence of Century Mine *per se* has had a significant impact on community health in the lower Gulf, there is some evidence that health conditions in the region are gradually improving, measured in terms of age standardized death rates and hospital admissions. This is broadly consistent with national data showing improvements over time in several important indicators of health for Indigenous people, including in infant mortality and 'all cause mortality' (AIHW, 2006).

The age-standardised death rate is defined as the death rate estimated after age-standardisation has been performed. There was a significant decline in the age standardized death rates in the communities of Doomadgee and Mornington Island between 2000 and 2005 (Figure A5), indicating an improvement in health of these communities. This decline is not evident in other areas of the Northwest SD, most notably Mt Isa and Carpentaria statistical areas, where the age standardized death rate has remained constant between 2000 and 2005. It would be drawing a long bow, however, to attribute the decline in the death rate in Doomadgee and Mornington Island to the presence of Century. The trend is more likely attributable to Government efforts to improve health outcomes in DOGIT communities generally and, possibly, the impact of the introduction of Alcohol Management Plans in both communities in the latter half of 2003.

¹⁸ Remote communities, such as those in the Gulf, are characterized by significantly higher food costs. In 2006, for example, the mean cost of the HFAB was \$107.81 (24.2%) higher in *very remote* stores in Queensland but \$145.57 (32.6%) higher in *very remote* stores more than 2000 kilometres from Brisbane compared with the same basket in *major cities* (QHT 2006) <http://www.health.qld.gov.au/ph/documents/hpu/33125.pdf>

Figure A5 : Age Standardised Death Rate



Hospital admission data present a more complex picture. Between 1997 and 2004, there was a trend in communities outside of Mt Isa for admission rates to fall, but the rate of decline varied significantly between communities (Table A8). For example Doomadgee showed only a marginal decline (1.3%) whereas Mornington declined by an average of close to 8% annually. Without additional information about such aspects as hospital staffing levels and admission practices, it is difficult to make sense of such trends.

Table A8: Average Annual % Change Hospital Admissions 1997-2004

Community	Average Annual % Change Hospital Admissions 1997-2004
Karumba	-4.6%
Doomadgee	-1.3%
Mornington Island	-7.98%
Normanton	-6.53%
Burketown	-3.55
Mt Isa	0%

Source -QLD Department of Health 2006: Hospital Admissions data

One other relevant source of data is a recently released report on the impact of alcohol management plans in remote Indigenous communities in Queensland, based on 2005/6 data. Doomadgee and Mornington Island are two of the communities included in the study. Both communities experienced a reduction in hospital admissions following the imposition of restrictions on alcohol sales and up to mid 2006, Mornington Island was one of only a small number of communities to also experience a reduction in the number of reported assaults and offences against the person; Doomadgee, on the other hand, recorded no change.

Drawing these disparate pieces of data together, it can be concluded that there has been some improvement in health outcomes in the Gulf communities in the period since Century was established, most notably in Mornington Island and, to a lesser extent, Doomadgee. However, it is probable that the main drivers of these improvements have been external factors, such as increased attention from Governments on addressing health issues in remote Indigenous communities and the introduction of Alcohol Management Plans, rather than direct or indirect impacts attributable to the mine.

Education

There are essentially two ways in which a mine can potentially contribute to improved education outcomes for a community: (a) by providing direct support, such as by funding facility upgrades, donating equipment, providing scholarships, etc; and (b) by helping to create an environment in which education becomes more valued by the community (e.g. by providing an incentive for students to remain in school for a longer and perform to a higher standard in order to secure employment at the mine).

Education was addressed in the GCA mainly in the context of employment and training, rather than the focus being on improving educational outcomes generally for the communities. Not surprisingly, therefore, education support has not been a major focus of CM, although the mine has funded some tertiary scholarships and provided in-kind support for boarding student costs.

There is no evidence that State Government has allocated any additional educational resources into the lower Gulf as a result of the mine being established.

This study did not investigate the question of whether there has been any change in community attitudes towards education since Century was opened. There is anecdotal evidence from the employee surveys that some employees recruited from Gulf communities have re-located to larger communities such as Townsville, in part to provide better educational opportunities for their children. However, it is not known whether there has been any impact on attitudes in the communities themselves. It is also not possible to tell from the available data whether there has been any significant improvement in education outcomes in the communities since Century was established. As was the case with health outcomes, even if such data were available, it would be very difficult to show that any improvements were attributable to the mine.

Social Capital

Social capital is a complex phenomenon to measure and was not a significant focus of this study. To undertake such an analysis would require significant fieldwork in the Gulf communities, which was outside the scope of the research.

While there has been no rigorous assessment of the development of social capital in the lower Gulf communities, there is some indication that communities and organisations now have a higher level of connectivity to support networks than that which existed in 1996. A number of businesses have established joint ventures or links with supportive organisations, and some community groups are working with organisations that were not in the area previously (eg Oxfam). However, many of the committees/companies/organisations set up to implement parts of the GCA, have lacked functionality due to being inappropriately designed and/or under resourced (TRM, 2008).

It is apparent that Indigenous DOGIT community councils and shires have markedly less political capital and influence than mainstream local government, and are not able to leverage development capital to the same extent (eg Burke Shire Council has recently completed an aquatic centre in Burketown (population 300) whereas Doomadgee (population 900 has no such facility).

Increased mobility for some local Indigenous employees of the mine who have relocated to Townsville or other larger centres may be contributing to 'bridging' capital.

Natural Capital

Natural capital impacts were also not a major focus of the study. The GCA includes provisions for the hand over of land titles from Century to Native Title holders. Lawn Hill and Riversleigh Pastoral Holdings Company and Turn Off Lagoon Pastoral Company titles have been handed over to Native Title Holders. Konka Title is still awaiting an agreement with Native Title Holders. The extent to which these lands are used by Indigenous people is unknown. According to the GCA review, excluding Bidunggu, the mine has not enabled this to any significant degree, and the absence of clear Government policy with respect to outstations hinders this to some degree (TRM, 2008).

On-going management of the environment in the lower Gulf is important from a number of perspectives. In the Normanton and Karumba areas, it is estimated that tourists inject in excess of \$11 million into the Shire economy annually, with an estimated 180 persons employed in tourism, either directly or indirectly (or 10% of the Shire workforce). This is as significant to the lower Gulf region as the employment and economic impact of the Century Mine. However, Indigenous people are far less involved in tourism than the non-indigenous population and therefore largely miss out on the economic opportunities that tourism provides.¹⁹

In contrast to tourism, Indigenous people utilise the natural environment as a traditional food source, in addition to its importance to them in maintaining cultural and social values for the community. According to the second five year review report, overall the environmental effects of the mine were not a major concern for people interviewed by the Review Team (TRM 2008: 27). The CEC and cultural monitors have ensured that environmental standards and the management of culturally sensitive areas and practices are generally well done (TRM, 2008:41). Some issues were raised about the impact of use of groundwater on flows of a local watercourse (Louis Creek) but according to the review this was unlikely to be due to mine operations (TRM, 2008: 2). Water quality at Karumba, where CM's de-watering facility is located, was also identified as an issue by some stakeholders. There is no evidence that environmental conditions on surrounding pastoral properties have changed since the establishment of CM.

¹⁹ Greiner, R., Mayocchi, C., Larson, S., Stoeckl, N. and Schweigert, R. (2004) Benefits and costs of tourism for remote communities – Case study for the Carpentaria Shire in north-west Queensland. CSIRO Sustainable Ecosystems: Townsville and Tropical Savannas CRC: Darwin