

**Section 14****Socio-Economic Issues****14.1.1 Regional Context**

The Maud Creek project area falls within the Katherine Region, according to the socio-economic regionalisation of the Northern Territory (shown in Figure 14-1) used by the Australian Bureau of Statistics (ABS). The Katherine Region covers 336,674 km<sup>2</sup>, which comprises 25% of the Northern Territory. The proposed Maud Creek operation is located approximately 20 km east northeast of Katherine, within the Katherine municipal area. Currently less than five per cent of land mass in the NT is covered by Local Government, however, this is set to change in 2008 with the announcement of a new framework for Municipal and Shire Councils for the NT ([www.lgant.nt.gov.au](http://www.lgant.nt.gov.au), 2007).

The underlying tenure of the proposed operation is NT Freehold Title owned by Terra Gold (MLN 1978). The Maud Creek project area has been mined since 1890. Further information on historical activities in the area is presented in Section 11, however the leases have been worked intermittently from 1890 to 1973 by various mining companies for a range of resources. Most recently, Kilkenny Gold developed a plan to mine gold in oxide deposits at Maud Creek using open cut mining methods (URS 2006).

In the current Maud Creek project proposal, gold will be mined using underground mining methods (Section 2) and gold ore will be trucked to the URGM processing plant near Pine Creek, which is in the Darwin Region (Figure 14-1). However the socio-economic impacts of the Maud Creek project will occur primarily in the Katherine municipal area and the Katherine Region, and this is the focus of the assessment in this section of the EIS.

**14.2 Regional Economy**

Katherine is situated 320 kilometres south east of Darwin on the Katherine River. Katherine is a regional centre and is the fourth largest town in the Northern Territory. The town is strategically located on the junction of the Stuart Highway and the Victoria Highway. Katherine has a broad economic base supported by the north-south road and rail corridor and the east west road corridor.

The Katherine River was named by the explorer John McDouall Stuart in 1862, after the daughter of one of his sponsors, James Chambers. The town of Katherine has had several locations since the days of the crossing of the Katherine River at Knott's Crossing. The overland telegraph and original post office were sited upstream of Knott's Crossing. With the completion of the railway bridge, the present site of Katherine, on the south eastern side of the river, was gazetted on 15th July, 1926. The new area was presumed to be less susceptible to flooding.

Katherine is a thriving regional centre with a population of over 10,000 people and provides services to communities from the WA border to the Gulf of Carpentaria. As well as road and rail infrastructure, there is an existing north-south gas pipeline that runs from the Amadeus Basin field in Central Australia through Katherine to Darwin. There are also plans to extend a natural gas pipeline from a planned onshore processing facility at Wadeye near the mouth of the Daly River to join the existing pipeline in Katherine.

Historically, agriculture was the main industry. Katherine is the crossroads to the live cattle export industry, trucking cattle from the Kimberley region, North Queensland and the Northern Territory to the ports of Darwin, Wyndham and Broome. As at March 2000 the Australian Bureau of Statistics reported that there were 1.57 million head of cattle in the Northern Territory of which properties in the Katherine Region held 38.2%, or 599,439 head. Grain production is in its infancy. However, development of silo storage facilities in the region have the potential to provide sorghum, sesame, mung-beans, and hay products to the Asian market. Katherine has a rapidly growing mango industry with over 180,000 trees and is renowned for the quality of the product sold mainly to the southern markets.



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Consequently, Katherine is home to the Territory's only Rural Training Institution. The Northern Territory Rural College, a College of Charles Darwin University, is located 16 km north of the town on the Stuart Highway. The College offers training to pastoral industry workers and pastoral land managers and supports the training needs of the beef industry across northern Australia. The University also has a town annex located in Katherine specialising in information technology and business management training programs.

Katherine is a regional centre to an area as large as the State of Victoria and is the central provider of many NT Government services. The Government Centre in First Street houses all the Government providers including Sport and Recreation, Housing, Local Government, Health, Motor Registry and Family and Children Services. Police, Transport and Works and Primary Industry and Research, Parks and Wildlife also operate offices in Katherine.

Mining has also played a major role in the Katherine area with a number of mines opening and closing with the changing profitability of the gold industry in particular. The cattle and mining industries are still major components in the economy of Katherine.

In recent times however, tourism has taken over as the number one industry for the Katherine area and changed the face of the town. The 100 year plan of an Alice Springs to Darwin Railway line is now operational. The Ghan rail service now arrives twice a week in Katherine and has boosted the tourism industry.

The RAAF Base at Tindal situated 15km south of the town, cost \$241 million to construct and is now a fully functional northern defence base. The RAAF community population, including families in the Katherine area, is currently 2,200.

Over the past century, the Katherine area has been a significant player in the economic life of the Top End. Business activity in the region falls into five broad categories:

- agriculture;
- mining and services to mining;
- community and other services;
- tourism and hospitality; and
- defence.

Currently, business activity is buoyed by an active mining sector in the region. This is predominately due to Terra Gold, its parent company GBS, Compass Resources NL and Territory Resources Ltd. Housing and community service infrastructure has expanded in step with mining activity (NTACC 2002). Further activity leading to population growth will potentially strain existing health services and housing availability in Katherine.

### 14.2.1 Demographic data

Existing socio-economic conditions were assessed on a regional and individual town basis. Data from the towns in the Katherine area (hereafter referred to as the 'local region'), namely Katherine, Pine Creek, Adelaide River, and Mataranka were used in this assessment due to their proximity to the project area, and their relative importance in providing support to Maud Creek mine. Data for Darwin and the NT has been included for comparison where appropriate.

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Obtaining meaningful data for the area and individual towns is difficult due to the large scale of regional data sets. The most recent comprehensive data sets for these towns were recorded in the 2006 Australian Bureau of Statistics (ABS) Census. The smallest scale regional data set available is the Department of Business, Economic and Regional Development (DBERD) Katherine Region socio-economic snapshot (Figure 14-1).

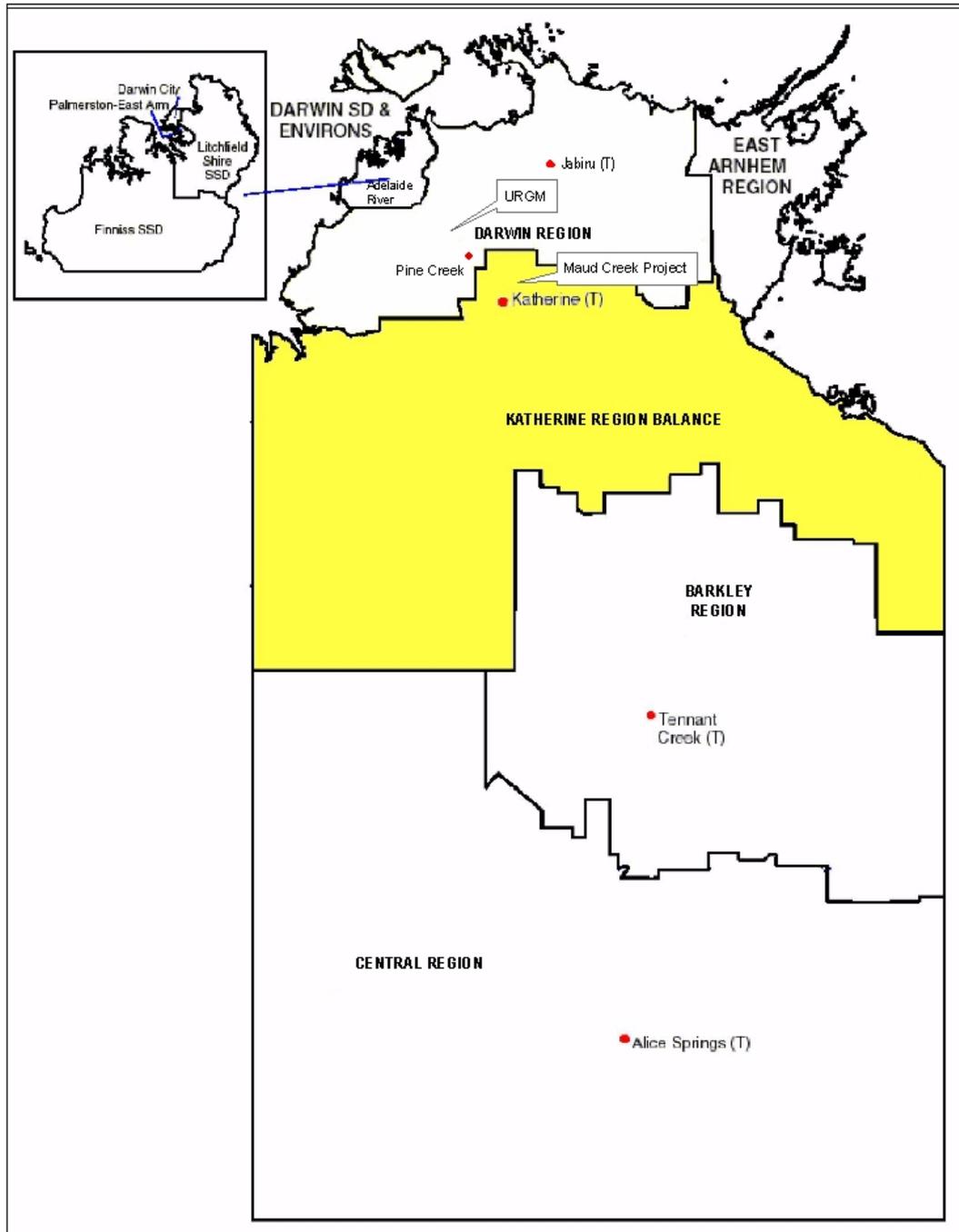
However, by liaising directly with local stakeholders and relevant government departments, information was collected to assess the potential socio-economic impacts of the proposed Maud Creek operations, and to identify the management strategies required to address these impacts.



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Figure 14-1 Katherine Region – socio-economic snapshot area



Client Terra Gold Mining Ltd	Project MAUD CREEK GOLD PROJECT	Title Katherine Regional Balance - Socio Economic Snapshot		
<b>URS</b>	Drawn: JD Job No.: 42213775	Approved: IH File No.: 42213775-14-1.mxd	Date: 22/8/2007	Rev. A A4
	Figure: 14.1			

**Section 14****Socio-Economic Issues****14.2.2 Socio-economic profile of the Katherine region**

The local area is home to 17,212 people and has the following demographic characteristics (ABS 2006):

- 49.1% Aboriginal population;
- 8.0% unemployment;
- high participation rate in the Community Development Employment Program (CDEP);
- higher than average employment in government, administration, defence and agriculture;
- average wage 6.5% below Northern Territory average;
- higher than average rate of jobseekers under the Centrelink Newstart allowance;
- over-representation of Aboriginal people within the health system;
- considerably higher rate of violent crime in the region compared to Northern Territory average;
- 1,122 business entities were registered in the Katherine region - sectors with the most number of businesses included agriculture, business and property services, construction, retail and tourism related services;
- tourism generated \$83 million in 2004, representing 6.9% of the total Northern Territory industry; and
- mining generated about \$201 million in 2004, representing 13% of the total Northern Territory industry.

Alcohol abuse has been identified as a major issue that disrupts social cohesion within the Katherine community. Recent estimates of the mean annual consumption per capita of pure alcohol by persons  $\geq 15$  years was 16.88 litres. This consumption rate is nearly twice the Australian average of 9.67 litres (MSOHR, 1999)

The perception that excessive consumption is confined to a small segment of the community has dominated the public debate, which defines the issue narrowly as one of anti-social behaviour.

The main factors causing anti-social behaviour are considered to be:

- lack of employment and other opportunities in remote communities;
- lack of drinking facilities in remote communities;
- lack of planning and infrastructure to meet the needs of Aboriginal people living in and around Katherine;
- weakening of Aboriginal cultural traditions;
- declining training and employment opportunities for Aboriginal people in Katherine;
- irresponsible practices by some licensees; and
- ineffectual mechanisms for enforcing provision of the Liquor Act.

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**14.3 Population Characteristics of the Local Region**

Table 14-1 presents the town population demographics that relate to the Maud Creek proposal and compares them with Darwin and the Northern Territory as a whole. The town closest to the proposed operation is Katherine. The other population centres in the Katherine area include Adelaide River, Pine Creek and Mataranka, and are considerably smaller than Katherine. Terra Gold expects that most of the local potential workforce will come from Katherine and Pine Creek, because of the historic association of these population centres with mining activity.

Indigenous people comprise approximately a quarter of the Adelaide River and Katherine communities and one third of the Mataranka community. The community of Pine Creek, however, comprises less than one tenth indigenous people; the centre of the Pine Creek indigenous community is 6 km south of the town site at Kybrook Farm. Although Kybrook Farm was originally established as a transit camp it continues to host a range of family groups. The Kybrook Farm population varies seasonally as people return to their homelands during the dry season (NTACC, 2002).

**Table 14-1 Population census data**

	<b>Adelaide River</b>	<b>Katherine</b>	<b>Pine Creek</b>	<b>Mataranka</b>	<b>Darwin</b>	<b>NT</b>
Indigenous	51	1,981	127	84	10,259	53,497
<i>Percentage Indigenous</i>	26.8%	24.2%	9.9%	33.3%	9.7%	28%
Non-Indigenous	139	6,213	218	168	95,732	118,036
<b>Total</b>	<b>190</b>	<b>8,194</b>	<b>345</b>	<b>252</b>	<b>105,991</b>	<b>190,998</b>
Aged between 15 and 55 years	83	4,859	163	135	66,273	117,981
<i>Percentage aged between 15 and 55 years</i>	43.7%	59.3%	47.3%	53.6%	62.6%	61.8%

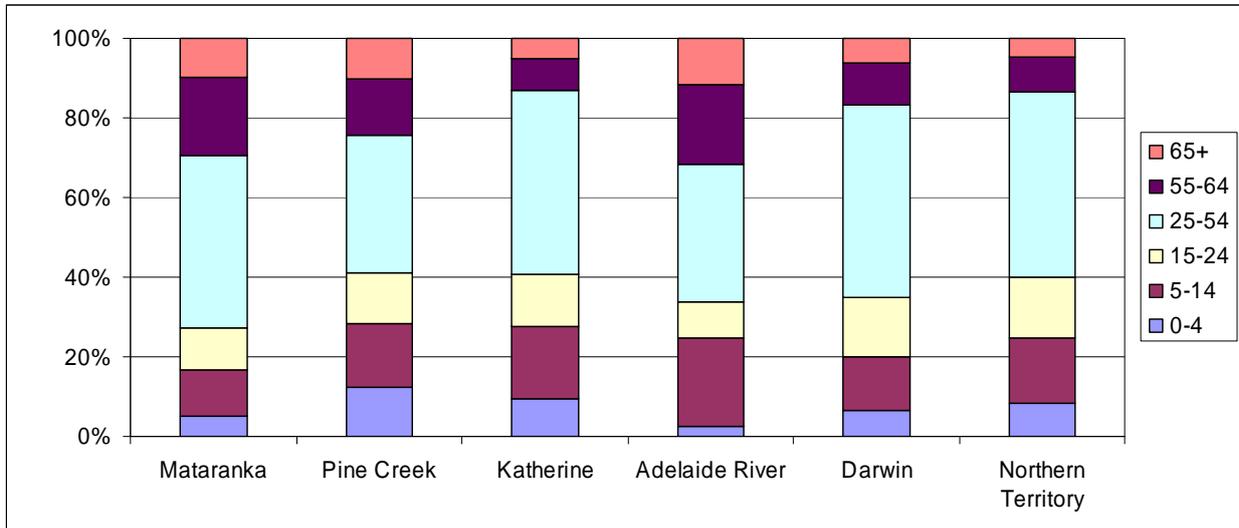
**Source: ABS 2006**

The age of half to two thirds of the population in the towns is between 15 and 55 years (Table 14-1); the age demographics are shown in more detail in Figure 14-2. The 25 – 54 year age group predominates across the region (Figure 14-2). This workforce demographic is strongly linked to the performance of the mining industry, which has flow-on effects to the manufacturing, service and hospitality sectors (NTACC, 2002).

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Figure 14-2 Age distribution for selected towns in the region, 2006



Source: ABS 2006

14.4 Employment in the Local Region

Unemployment statistics for selected population centres are shown in Table 14-2. According to 2006 ABS data, unemployment rates for Adelaide River and Katherine are higher than the Northern Territory average, while Pine Creek and Mataranka are more than twice the Northern Territory average.

Approximately 60 personnel will be employed at the Maud Creek and 5 personnel at URGM operations. According to Terra Gold’s Local Participation Practice, staff will be sourced from the Katherine region. This has the potential to significantly reduce the community cost of local unemployment.

Table 14-2 Unemployment statistics for selected localities (ABS 2006)

	Adelaide River	Katherine	Pine Creek	Mataranka	Darwin	NT
Total labour force (includes employed and unemployed)	71	3,805	126	120	36,388	90,512
Numbers unemployed	4	179	12	11	1,277	3,917
% Unemployed	5.63%	4.70%	9.52%	9.17%	3.51%	4.33%

Employment type

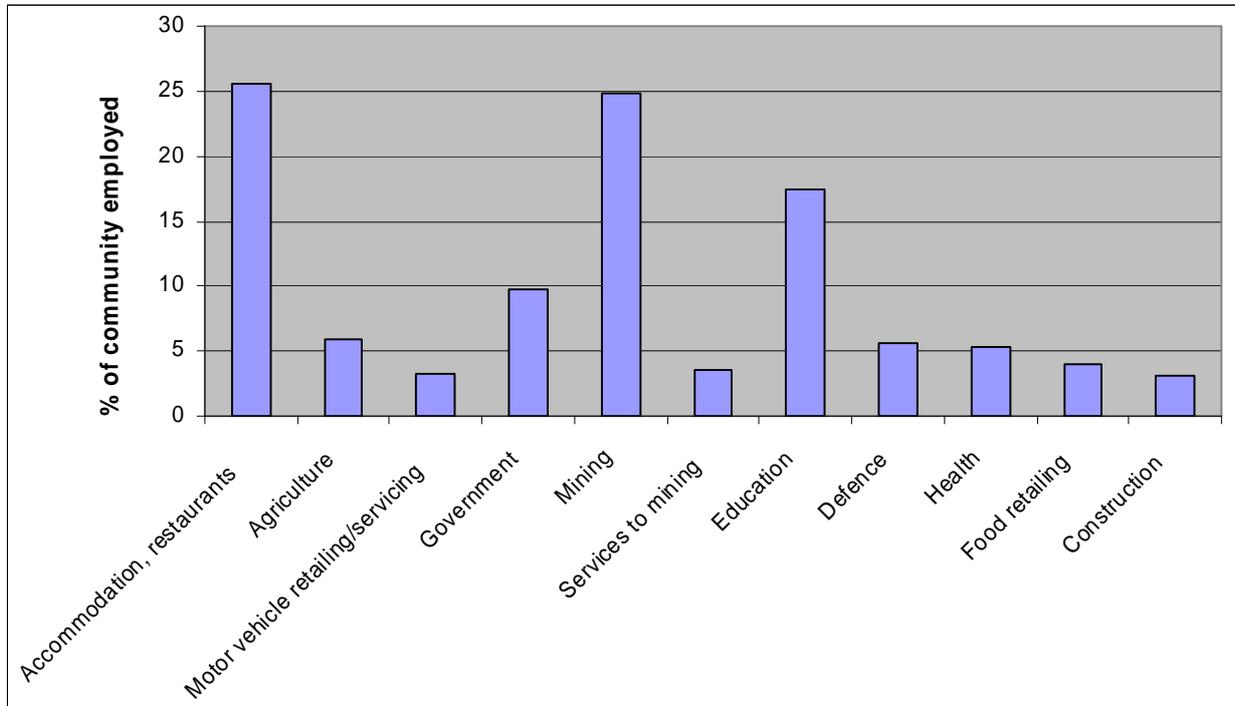
Figure 14-3 illustrates percentage employment across the industries with the greatest numbers of employees in the region. Approximately half the population is employed in the mining, accommodation and tourism and hospitality sectors. Those employed in mining primarily live in Katherine and Pine Creek.



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Figure 14-3 Employment by industry for the local region



Source: ABS 2006

## 14.5 Potential Issues and Impacts

The proposed Maud Creek operation is isolated from Katherine (20 km to the east northeast). In spite of this isolation and the small size of the project, there are a number of socio-economic issues and impacts that will need to be managed to ensure positive outcomes. The major areas of concern raised during community and stakeholder consultations are;

- the creation of employment opportunities for local businesses or personnel living in the region;
- competition for skilled labour and housing;
- increased demand on community services;
- effects on the Nitmiluk National Park;
- volume of heavy vehicle traffic through Katherine;
- movement of dangerous goods; and
- road maintenance.

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**14.5.1 Workforce and resource requirements**

Terra Gold anticipates that the 60 new positions that the mine will create will be filled from recruitment within the local region. Approximately two thirds of these will be contracted positions. It is likely that some existing Terra Gold employees will transfer to Maud Creek. The mine workforce requirements for the Maud Creek mine will include haul truck drivers, loader drivers, geologists, engineers, drillers and surveyors. In addition, support staff including maintenance crew, administration staff and cleaners will be required to service Maud Creek’s workshop and offices.

Terra Gold will use the services of local contractors where possible to work on site from the construction phase to the post closure phase. Goods and infrastructure requirements to support the mining operations are expected to include:

- contract fencing;
- contract earthworks;
- road construction and maintenance;
- road haulage;
- general engineering repairs and fabrication;
- housing;
- mine site rehabilitation services; and
- mining supplies (e.g. fuel, mechanical, explosives, pumps, drilling, parts and equipment consumables).

**14.5.2 Direct economic value**

A statistical summary of the value of mining, construction and expenditure associated with the proposed Maud Creek operation is presented in Table 14-3.

**Table 14-3 Expected value of mined gold, and investment in construction and services**

Description	Estimated Value
Ore mined annually	500,000 tonnes
Contained gold	100,000 oz/year
Value of gold (at \$800/oz)	\$80 M/year
Value of construction	>\$10 M
Value of annual expenditure on goods (\$42/tonne)	\$21 M/year
Value of annual expenditure on services (\$18/tonne)	\$9 M/year
Salaries	\$7 M/year

The proposed mining operation will also contribute royalties and taxes to the Northern Territory and Federal government revenues. Gold mined from Maud Creek and processed at URGM will be sold to the Perth Mint.



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The establishment of mining operations in regional and remote NT contributes directly and indirectly to the local economy. There tends to be a significant multiplier effect on indirect employment, creating some additional four to five jobs for every mining job created. These jobs include people being contracted to the mine including drillers, maintenance crew for shut down and general construction (Ratson 2002).

The multiplier effect produced by mining developments such as Maud Creek also boosts the development and upgrading of local infrastructure including roads and tourism and recreation facilities. While it is difficult to accurately estimate the multiplier effect of mining at Maud Creek, it is conceivable that the proposed development will indirectly generate up to 300 jobs and increase economic activity beyond the mining industry in the Katherine region.

**14.5.4 Access**

Terra Gold intends to transport ore from the mine site for treatment at the URGM processing plant, which is located 120 km northwest of the project area. The preferred route for the transport of ore will be by road train along a new access road to the Stuart Highway (Figure 1-2 and 1-3), then along the Stuart Highway, through Katherine, turning off onto Ping Que Road to URGM.

The alternative (existing) access road passes through GBS Gold freehold property via Ross Road to the Stuart Highway (Figure 1-3). The preferred new road is more direct, has a relatively straight alignment and avoids environmental impacts associated with crossing Gold Creek. The potential impacts from transport through Katherine have been addressed in detail in Section 15.

**14.5.5 Housing and services**

Terra Gold expects that most employees will live in Katherine or Pine Creek. Any contractors or visitors will also be accommodated in Katherine. It is expected that some of the employees will commute to site from the townships of Adelaide River, Pine Creek or Mataranka, and that this will alleviate pressure on housing availability in Katherine.

Terra Gold anticipates that its personnel will increase business activity in the towns of Katherine, Pine Creek, Mataranka and Adelaide River, in particular through the demand for goods and services. There will also be an added demand for medical services. To address this, Terra Gold will operate a first aid centre and ambulance facility at site to reduce pressure on the regional emergency services. Consultation with the Katherine hospital identified that the hospital is fully equipped to deal with potential major injuries and emergencies.

**14.5.6 Competition with existing users**

The Maud Creek mine development will increase the competition for existing local skills and trades within the Katherine region and the town of Katherine in particular. However, it is also likely that the increased economic activity will attract additional businesses and tradespeople into the community and result in little net increase in competition for services and skills.

**14.5.7 Impact on neighbouring land-holders**

During consultation with local stakeholders there were concerns expressed regarding the following issues:

- the potential impact on the quality of Katherine's drinking water, through contamination of ground and surface water in the catchment;
- the potential for contaminated run-off from the site;

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- the nature of processing on site, including chemicals to be used (NB: there will be no processing on site);
- water turbidity during construction, the filtering capacity of the Power and Water Corporation's equipment, and the impact this could have on Katherine's water supply;
- waste rock storage and potential for acid mine drainage;
- the potential for seepage from tailings (NB: there will be no tailings dam on site);
- solute load issues.
- the importance of baseline data so future impacts can be measured;
- the potential impact on significant hunting grounds and Aboriginal sites in the bordering Nitmiluk National Park;
- whether rehabilitation of the waste rock stockpile and tailings dam would be sufficient and what bonds would be paid by the company (NB: there will be no tailings dam on site; waste rock will be returned underground or placed in the pit void);
- the social impacts on availability of housing and tradespeople;
- likely impacts from blasting noise and dust from trucks;
- road and rail traffic management safety; and
- the job and training programs available to local people, including indigenous employment and training programs.

Strategies developed to address the issues raised during community consultation, and the preparation of the EIS, are responded to in Section 20 and Table 20-1.

**14.6 Management**

Terra Gold has undertaken extensive consultation with local, regional and Territory stakeholders and these interactions have been the foundation of constructive working relationships. The consultation process has been used to develop management strategies that will enhance local economic benefits from the project and minimise impacts wherever possible. In particular, benefits will relate to local employment and procurement opportunities. Terra Gold commits to consulting with stakeholders as required to ensure that any concerns or issues can be raised and addressed promptly.

Terra Gold believes in maintaining an open relationship with regional communities, offering information to and providing mechanisms for feedback from the community. Consequently, consultation processes are well developed and Terra Gold publishes regular community updates and fact sheets in both the Katherine Newspaper and the Pine Creek Newsletter to inform local residents of mining operations, activities and employment opportunities. Terra Gold opened a shopfront in Katherine in May 2007 to offer the community current information on planned projects in the local region.

Terra Gold is developing a Local Participation Plan in collaboration with DBERD, Northern Territory Industry Capability Network (NTICN) and the Jawoyn people to maximise local procurement opportunities. The Local Participation Plan will also specify the means by which the local business community and workforce will be kept informed.

Terra Gold has discussed employment and training opportunities at the Maud Creek project with all the concerned aboriginal associations, local and Territory government agencies, namely: DBERD, Katherine Town Council, Pine Creek Town Council, Jawoyn Association, Department of Primary Industry, Fisheries and Mines (DPIFM), Department of Planning and Infrastructure (DPI), Department of Employment, Education and Training (DEET); NT Environmental Protection Agency Program (EPA); and the Commonwealth Department of Employment and Workplace Relations (DEWR). Discussions with the Northern Land Council on an aboriginal employment strategy are in progress.



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Terra Gold has been proactive in training, establishing a scholarship fund to enable two students to study in the areas of geology and environmental sciences, while gaining hands-on experience at the mine site. Terra Gold is developing an indigenous employment policy, and continues to have a good relationship with the Jawoyn Association, Northern Land Council, and Kybrook Farm community.

Terra Gold has developed a traffic management strategy designed to minimise impact on Katherine residents from road trains. Many meetings have been held with DPI to discuss a large number of options, leading to the agreed strategy presented in Section 15. Terra Gold's Emergency Response team will operate a fully functional first aid post and ambulance on site, which will minimise additional demands on critical services and facilities at Katherine Hospital.

Terra Gold will continue to support the local community through direct contribution to community services, and to provide financial support for local community events. Terra Gold plans to work closely with stakeholders and the local community through the life of the project. The records of community consultation undertaken in relation to the establishment of Maud Creek mine site is presented in Section 20 of this EIS.

**14.7 Commitments**

*Terra Gold commits to the development of a Local Participation Plan to maximise local employment and procurement opportunities.*

*Terra Gold commits to ongoing sponsorship of community events where appropriate.*

*Terra Gold commits to ongoing funding for two university scholarships a year in selected mining industry disciplines.*

*Terra Gold commits to consulting with stakeholders as required to address community concerns.*