

# ***CHAPTER 13- Social, economic, cultural and heritage risks***

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## **13.1 Introduction**

This chapter will discuss the social, economic, cultural and heritage risks of the Twin Bonanza project.

## **13.2 Socio-economic risks**

### **13.2.1 Staged approach to development designed to minimise risk and maximise return**

The Old Pirate deposit within the Twin Bonanza project is typical of gold deposits in the region and has similar geological characteristics to the Coyote Gold Mine (45 kilometres NW) and the Callie Gold Mine (100 kilometres to east southeast). The deposit contains sporadically distributed fine gold (<0.5mm) and coarse gold (>0.5mm) hosted in quartz veins ranging from 5 centimetres to >6 metres in width. More than 15 individual gold bearing veins have been identified to date at surface and cover an overall strike length of ~ 2 kilometres. In terms of understanding the mining metrics and the risks one must understand the process under which ABM is undertaking work.

ABM is instigating a risk managed staged approach to development where the scale of the project is grown incrementally based on the knowledge derived during trial and mining phases. ABM strongly believes that this is a better approach to standard feasibility studies as the level of disturbance and amount of capital is applied incrementally rather than upfront.

### **13.2.2 Staged approach versus feasibility studies**

In modern day mining and exploration it is typical that a company conducts a detailed assessment of the technical merits and the risks involved along with the scope of works and value of the project. This is what is referred to as a feasibility study and is noted in the JORC Code 2012.

A feasibility study is not a guarantee of success and in the modern era of mining approximately 70% of projects with detailed and positive feasibility studies generally fail to achieve the target valuation. This failure of projects to achieve the value noted in typical feasibility studies is well documented (e.g. MCarthy, 2013). The reasons for failure of a project to achieve the outcome predicted in the feasibility study are numerable but include misestimating of resource, mining dilution factors, overall costs and future value of the product.

As with other gold systems, the Twin Bonanza project has a number of technical risk factors to understanding the scale and the value of the project. These are noted in Table 13-1 below.

Table 13-1. Technical risk factors for Twin Bonanza Project.

| Risk factor  | Generic comment   | Applied to Twin Bonanza  |
|--|---|--|
| Resource estimation  | Resource estimation contains application of geological understanding and low-relative sampling compared to the overall size of the resource reserve. There are at least 5 factors for uncertainty including sampling representation, variance (spatial variability), arbitrary use of top cutting of samples and errors in estimating width or volume of the ore-system and specific. | Coarse gold system means that samples have a high degree of variability. i.e. two samples from the same place (e.g. two halves of drill core) can be very different.                       |
| Geological model   | 3D geological interpretation is subject to considerable error due to paucity of information.  | There is approximately 80% surface exposure currently at Twin Bonanza reducing overall risk to geological interpretation. However the geology may differ at depth compared to the surface. |
| Geotechnical risks   | Ground conditions and strength of the rock may have high variability.   | Typical knowledge base established from geotechnical reports.  |
| Mining parameters e.g. minimum mining width, mining dilution assumptions and ore loss. | Dilution will result in a net reduction of grade  | Quartz veins change in thickness over relatively short strike lengths.   |
| Metallurgical recovery   | Modelled recovery may differ from actual recovery.  | Twin Bonanza has a high gravity gold recovery rate. However, the metallurgical recovery parameters may vary from those estimated in laboratory tests.                                      |
| Future metal price assumptions   | Metal prices are subject to the vagaries of global economic conditions.   |  |

As a result of the above factors, ABM considers the “staged approach” to development (as alternative to typical feasibility study) as being the best way to manage risk. This ensures that the overall feasibility and life of mine of the project is not based on pre-development knowledge-base and estimations of the project but is alternatively presented in individual stages where each stage is deemed economic based on parameters established in the previous stage.

The latest resource estimation model for the project was completed in February 2013 with the resource as presented below:

Table 13-2. February 2013 resource estimation for Old Pirate within the Twin Bonanza project.

| Category     | Tonnes           | Gold Grade (g/t)<br>(300g/t top-cut) | Gold Grade (g/t)<br>(uncut) | Ounces Gold<br>(300g/t top-cut) | Ounces Gold<br>(uncut) |
|--------------|------------------|--------------------------------------|-----------------------------|---------------------------------|------------------------|
| Indicated    | 889,000          | 8.19                                 | 8.93                        | 234,100                         | 255,300                |
| Inferred     | 993,000          | 11.80                                | 14.67                       | 376,900                         | 468,500                |
| <b>Total</b> | <b>1,882,000</b> | <b>10.10</b>                         | <b>11.96</b>                | <b>611,000</b>                  | <b>723,800</b>         |

The resource estimation model is defined as compliant with JORC 2012 reporting. As per the definition in JORC 2012, inferred resource estimations are not to be used in assessing economic parameters and in feasibility studies. However, as ABM progresses the staged approach it anticipates converting aspects of the inferred resource into indicated resource category.

### 13.3 The project's contribution to the Northern Territory and Australian economy

#### 13.3.1 Estimated total project revenue for the duration of the project and contribution to gross domestic product (GDP) and Gross State Product

The total project revenue (not including costs) is based on the amount of gold extracted multiplied by the Australian dollar gold price. Gold is an international traded commodity and future gold prices may be different from those presented here.

Stage two (109 000 ounces modelled to be produced) is considered the base case and will generate a project revenue of between A\$130 million (based on A\$1 200 gold price) and A\$174 million (based on A\$1 600 gold price).

Stage three, whilst conceptual in nature and assuming that stage three is proven to be economically viable, and assuming a the 70% conversion of resources into mining inventory, will generate project revenue of between \$408 million (based on A\$1 200 gold price) and \$544 million (based on A\$1 600 gold price).

Given that this is a primary industry with a direct international export market for the product and the contribution to the GDP is the total value of the export minus the total value imported goods or services. ABM intends to use Australian contractors and suppliers

for nearly all services. As a result GDP contribution is estimated at a total of 95% of the total revenue.

Some of the goods and services and workforce will be sourced from interstate or overseas and as a result the GSP is estimated at 80% of the total revenue.

*Table 13-3. Stage two estimated contribution to GDP / GSP.*

| <b>Stage two - 109,000 ounces gold</b>   | <b>Gold price A\$1 200</b> | <b>Gold price A\$1 400</b> | <b>Gold price A\$1 600</b> |
|--|----------------------------|----------------------------|----------------------------|
| Contribution to GDP (expected 95% of total revenue) with 5% allocated for imported goods and services              | \$124 260 000              | \$144 970 000              | \$165 680 000              |
| Contribution to GSP (expected to 80% of total revenue) with 20% allocated for imported goods / interstate services | \$104 640 000              | \$122 080 000              | \$139 520 000              |

*Table 13-4. Stage three – conceptual contribution to GDP and GSP based on 70% conversion of resource to mining inventory. Extending mine life 3 to 5 years.*

| <b>Stage three conceptual- 340,000 ounces gold</b>   | <b>Gold price A\$1 200</b> | <b>Gold price A\$1 400</b> | <b>Gold price A\$1 600</b> |
|--|----------------------------|----------------------------|----------------------------|
| Contribution to GDP (expected 95% of total revenue) with 5% allocated for imported goods                           | \$387 600 000              | \$452 200 000              | \$516 800 000              |
| Contribution to GSP (expected to 80% of total revenue) with 20% allocated for imported goods / interstate services | \$326 400 000              | \$380 800 000              | \$435 200 000              |

### 13.3.2 Estimated workforce

The estimated work-force for the project is based on 3 shift work force working 2 weeks on 1 week off roster.

Table 13-5. Estimated work-force for the Twin Bonanza project

|   | Per shift | x 3 shifts |
|---|-----------|------------|
| Mine management / engineering   | 2         | 6          |
| Geologists / technicians  | 4         | 12         |
| Mining contractors  | 4         | 12         |
| Mill operators  | 4         | 12         |
| Support staff (electricians, fitters, boilermakers, camp maintenance) | 4         | 12         |
| Environment and safety  | 2         | 6          |
| Head office   | 8         | 8          |

**Total work force 68 people**

*(note the above work-force does not include exploration team).*

### 13.3.3 Indirect employment and opportunities to regional centres

ABM intends to source a variety of supplies and services from regional centres. The nearest regional centres are Alice Springs and Halls Creek. Supplies and services that are required, and which will support local jobs, include:

1. food and catering
2. fuel supply
3. aircraft charter
4. hardware supplies
5. vehicle servicing
6. environmental
7. laboratory services
8. legal services

### 13.3.4 Planned Indigenous employment and training opportunities

During past exploration activities ABM has had a policy to hire Indigenous Australians from the local communities as per ABM's agreements with the CLC. To date and at various stages a total of 7 Indigenous Australians have been employed by ABM.

The project is on Aboriginal land trust land and is subject to a mining agreement between ABM and the CLC on behalf of the Traditional Owners. The mining agreement has provisions



for employment opportunities for Indigenous persons whereby ABM must advertise and offer employment to local Indigenous Australians for any role (subject to experience and competency). ABM will have an Indigenous work force liaison officer who will source appropriate personnel as roles become available.

Training opportunities will be provided to Indigenous Australians with an emphasis on skills that may be appropriately utilised in their own communities including but not limited to; construction, machinery operation, servicing of vehicles, servicing of generators, servicing and maintenance of water, pumps and sewerage, and operation of heavy machinery.

ABM does not plan to provide formal training programs to non-Indigenous Australians.

### **13.3.5 Expected level of overseas recruitment**

ABM has two geologists who are working under the 457 visa program. ABM does not expect to recruit further staff from overseas subject to suitable staff being available in Australia.

### **13.3.6 Availability of goods and services**

Other than the export of gold and possibly gold by-products, the project will not provide other goods and services.

### **13.3.7 Residual infrastructure**

All plant, accommodation and other infrastructure will be installed on a temporary basis and will be removed following the completion of the mine.

Infrastructure that is likely to stay in place, and may be used by Traditional Owners in the future (this is all on Aboriginal land the general public is precluded from entry without a permit) includes the main access road from the Tanami Road, as well as water bores.

## **13.4 Economic and social impact assessment**

### **13.4.1 Discussion on the project's social value**

The economic and social impact assessment examines economic and social impacts on three groups of stakeholders:

1. Indigenous Australians / Traditional Owners
2. non-specified Australians principally Northern Territorians and the Australian population as a whole.
3. ABM shareholders.

### **13.4.1.1 Regional community structures and vitality**

The project is located within the Central Desert, which is a remote and sparsely populated region of Central Australia. The nearest community to the project is Balgo (120 kilometres west). Other communities in the region include Mulan / Lake Gregory (160 kilometres west); Lajamanu (250 kilometres north-east); Yuendumu (360 kilometres south-east); Billiluna and Ringer Soak (Kundat Djarau) in WA. Alice Springs is located 800 kilometres to the south-east; and Halls Creek is located 400 kilometres to the north-west (Figure 13-1).

The Balgo community (being the closest to the project) has a population of 460 (Census 2006). The community is a predominantly Indigenous community serviced with an airstrip, health clinic, school, community services, a shop and sports facilities. Accommodation in Balgo is predominantly standard free standing housing. Balgo is an alcohol free community. Unemployment in Balgo is high (above the national average) and the health and well-being of residents endures the typical challenges of remote communities. The EIS guidelines request that a skills audit and surveys be conducted in affected communities. Surveys have not been conducted in Balgo as the community is remote from the mine site. There are no shared points of access between the community and the mine. ABM will work closely with the CLC's employment unit and the relevant local employment organisation in Balgo. A skills audit will form part of this process. Community consultation has been carried out as part of the mining agreement with the CLC / Traditional Owners. This consultation has involved detailed description of the project scope and the staged approach which ABM is undertaking. ABM has received strong support from the Traditional Owners.

Alice Springs is the principal regional centre (population 25186 (Census 2011)) that services the project area. The largest employer in Alice Springs is the Northern Territory Government, with 7.5% of employed people working in government administration, 6.6% in school education, and 3.7% in the Alice Springs Hospital. The economy of Alice Springs is reliant on domestic and international tourism, with 3.8% of its workforce employed providing accommodation (Australian Bureau of Statistics 2007).

Alice Springs has a full range of public amenities including primary, secondary and tertiary education, hospital, sporting facilities, social groups and a vibrant arts and culture scene. Alice Springs has a light engineering industry and is a supply and logistics hub to the Central Desert. Alice Springs is not considered a regional mining centre and hence there is not a large population of mining trained personnel available. There are, however, several resource projects in the Alice Springs region which are, similar to ABM, supported by workforce in Alice Springs.

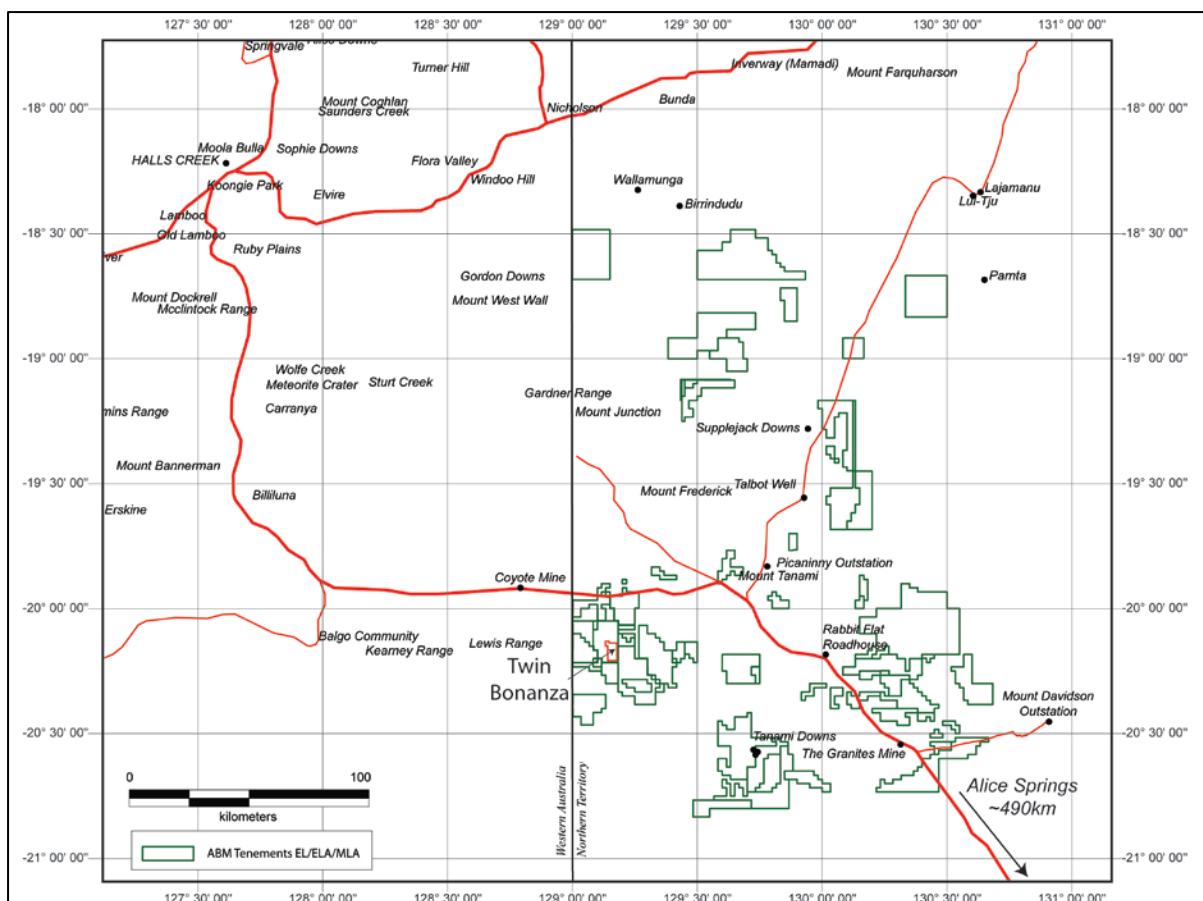


Figure 13-1. Proximity of Twin Bonanza to communities and stakeholders.

### 13.4.2 Economic and social impact assessment on Indigenous Australians/Traditional Owners of the project

The Twin Bonanza project is located on Aboriginal land owned by the Mt Frederick No2 Aboriginal Land Trust. Access to the land is overseen by the CLC and exploration work conducted over the past 10 years has been through exploration access agreements which provide provisions for annual rents, payments pro-rata on exploration expenditure and employment opportunities. A mining agreement has been negotiated with the CLC on behalf of the Traditional Owners. The mining agreement sets out:

1. rents on the mineral lease
2. protection of sacred sites
3. royalty payments on production (percentage of total production paid quarterly)
4. capital expenditure payments (percentage of capital and sustaining expenditure)
5. major activities and infrastructure
6. indigenous employment programs
7. rehabilitation

## 8. liaison

The details of the mining agreement with the CLC on behalf of the Traditional Owners are confidential and cannot be disclosed in this document. However, ABM can state that it has had open and honest dialogue with the CLC and Traditional Owners and that the CLC has negotiated a favourable agreement to protect the land and provide strong economic benefits to the Traditional Owners. The estimated financial contribution cannot be disclosed due to confidentiality restrictions of the CLC and existing agreements.

Under the *Aboriginal Land Rights Act (1976)*; liaison with the Traditional Owners is via the CLC. ABM is not permitted, by law, to enter direct negotiation without the CLC.

The economic and social impacts are summarised in the following table and discussed further below.

*Table 13-6. Summary of economic and social impact on Indigenous Australians/Traditional Owners of the project.*

| Activity  | Positive effects   | Negative effects  | Mitigation strategies of negative effect   |
|---|--|---|--|
| Payments to Traditional Owners via the CLC, including royalties.  | Details are confidential and cannot be disclosed. Money to be used to support communities, individual family groups and instigate community and social programs. ABM does not administer how these proceeds are distributed. | Jealousy by others not in receipt of money.   | ABM does not have any input on the direction of the funds. This is administered by the CLC and trustees / Traditional Owners. The CLC has a Community Development Unit that assists Traditional Owners with community development projects and programs. |
| Voluntary contributions by ABM to individual programs. For example, ABM recently donated \$15,000 to Billiluna School for a school trip.          | ABM is estimating a further \$100,000 per annum available to support individual requests for funds. Each request is judged on merits and ABM has discretion whether or not to supply funds.                                  | Similarly to above, the contribution to one group may lead to assumption for another group to ask for a contribution. If turned down, may cause friction. | ABM will establish a committee to assess requests. ABM will liaise with the CLC and Traditional Owners to minimise negative effects.   |
| Voluntary construction of infrastructure if requested, i.e. Traditional Owners ask for a track to be put in, or road graded, or a new water bore. | If heavy equipment or drilling equipment available and if requested ABM will be open to providing services on an ad hoc basis to increase infrastructure   |   |  |
| Disturbance of habitat in traditional hunting and bush food gathering areas.  | ABM installed tracks will enable increased access to potential hunting and bush food gathering   | Disturbed area may impact local biodiversity  | ABM is committed to biodiversity and habitat protection. Refer Appendix D -  |

| Activity   | Positive effects  | Negative effects   | Mitigation strategies of negative effect  |
|--|---|--|---|
|  | areas.  |  | Biodiversity Management Plan.   |
| Disturbance of Sacred Sites.                     |   | ABM may inadvertently affect a sacred site.  | Sacred Sites and exclusion zones are provided to ABM from Traditional Owners and surveys provided by the CLC. ABM has a management plan to avoid all sacred sites /exclusion zones Refer Appendix U – Cultural Heritage Risk Management Plan. |
| Indigenous employment and training opportunities | Employment of Indigenous Australians is included in ABM’s agreements. This provides training in skills and income. Employees will be paid wages commensurate with their role. | Employees will be required to spend time on site and hence may not be available to their families and communities. | Should an Indigenous employee be required to return to the community for family or community business ABM will not take any adverse action against the individual employee.   |
| Ad hoc support by virtue of our presence.        | In event of accident or emergency near to our site; the use of paramedic, medication, airstrip for RFDS etc..<br><br>Support for stranded vehicles / people.                  | A sense of reliance on something may not always be available may be developed.                                     | Assistance will be rendered when ABM representatives are available.   |

### **Payments to Traditional Owners**

The agreements with the CLC (Traditional Owners) cover a wide range of topics including the responsibilities of ABM to avoid exclusion zones (sacred sites), protect the environment and heritage, provide employment opportunities and provide infrastructure. The agreements also cover set payments to be made to the CLC for the Traditional Owners and these payments include rents (for Mineral Lease and Section 19 land leases) and payment of a metal based (not profit based) royalty to the Traditional Owners.

The details and magnitude of payments is, at the request of the CLC, confidential and cannot be disclosed in this document.

The injection of monies from proceeds of mining to Traditional Owners will have many positive effects on the communities. The monies will likely be used for:

1. infrastructure

2. equipment supplies and vehicles
3. education initiatives
4. health initiatives
5. general living expenses

ABM does not have any control over which individual groups or community programs receive funding from the payments made by ABM. ABM will not interfere at all with this process and believes that this autonomy resides strongly with the CLC and the Traditional Owners themselves.

#### **13.4.2.1 Voluntary and discretionary contributions by ABM to individual programs for support of Indigenous Australians**

In addition to the compulsory payments noted above, ABM intends to set up a discretionary fund. ABM has been approached in the past to assist with individual requests for assistance. For example, in 2013 ABM was asked by the Kurrungku School in Billiluna to sponsor an educational and orientation school trip. Following consultation with the CLC, ABM provided \$15 000 to the school to support this trip. Following the granting of the Mineral Lease and commencement of operations ABM intends to form an internal committee to manage such requests. The emphasis will be on one off support for education, health and infrastructure outcomes and each request will be assessed individually. The requesting party will likely need to have a low-level of documentation and justification when requesting funds (an easier process than other grant applications) as long as the ultimate use of proceeds is legitimate and a recognised entity such as a school, sport team, cultural group or health centre. Upon request ABM will consult with the CLC to establish the appropriateness and legitimacy of such a request. The fund may support outcomes for other Traditional Owners in the region as well as ones directly associated with the trust land on which the Twin Bonanza project resides. ABM proposes that this fund is approximately \$100 000 per annum.

The voluntary and discretionary contributions will have a positive impact on those programs which it supports. However, as with all discretionary distribution of funds there is a risk that one group demands the same as another group (i.e. if funds were supplied to one school, another school may request the same). In order to mitigate any friction ABM intends to consult with the CLC on individual requests and subsequent requests.

#### **13.4.2.2 Voluntary construction or infrastructure assistance if requested**

ABM will have heavy equipment and drilling capability during the life of the project. Should Traditional Owners request that some of ABM's equipment be utilised to assist with small

scale infrastructure projects ABM will respond favourably (subject to availability). Requests may include grading a new or existing track, drilling a new water bore, building a new dam or general earthworks. ABM will ensure that the requestor has all relevant permits in place to conduct the work. The presence of heavy equipment in the region will have a net positive effect and enable response by ABM.

#### **13.4.2.3 Disturbance of habitat in traditional hunting and bush food gathering areas**

By the very nature of open-pit mining there will be a disturbed area footprint which reduces areas for hunting and bush food gathering. However, this area is very small relative to the overall vastness of the Central Desert. ABM is also instigating biodiversity plans to ensure that impact is minimised (refer Appendix D). ABM's presence in the area results in tracks being established and in order to mitigate impact ABM makes all tracks available for Traditional Owners to use the tracks to access hunting areas.

#### **13.4.2.4 Disturbance of sacred sites**

The CLC and Traditional Owners have conducted clearances over the Mineral Lease area and surrounds and have documented areas where ABM is not permitted to enter. These areas include sacred sites and areas of other cultural significance. The sites are provided to ABM as exclusion zones. The actual locations are confidential and cannot be disclosed in this document but are NOT in proximity to proposed areas for mining and processing. ABM has a management plan to ensure that the areas are not encroached upon or disturbed.

#### **13.4.2.5 Indigenous employment and training opportunities**

As per agreements with the CLC ABM is required to offer employment to Indigenous Australians, and particularly Traditional Owners or members of nearby communities. In the past ABM has employed people from different communities (Balgo, Billiluna, Yuendumu and Nyirippi) across its project areas. These employees have covered the roles of maintenance, rehabilitation, drill support and general field hands. Formal ticketed training in machinery operation (e.g. backhoe and loader) as well as on the job training on maintenance of vehicles, generators, water bores, pumps and reverse osmosis water purification systems has been provided.

As ABM progresses into mining phase the intention is to seek further Indigenous employees across the whole spectrum of operations including excavation, transport, mill operation, security, geotechnical, catering, environmental and safety. On the job training will be provided. In many cases the basic support required for a remote mine-site location is similar to the logistics support required for a remote community. As a result many of the skills learned can be progressed back into the communities by the employees.

There are a number of challenges that require patience and understanding to overcome Indigenous employment. The Social Impact Management Plan (SIMP) covers procedures for Indigenous employment (refer Appendix T).

Negatives of Indigenous employment include that employees will likely be required to spend 1 to 2 weeks away from their families and communities. ABM has a policy that means that should an employee be required to return to their community at short-notice, ABM is supportive of that need. No employee's status or employment will be affected by the need to leave a shift and return to the community.

Any employees of ABM will have confidential access to ABM's independently managed employee assistance program should they require counselling and advice.

#### **13.4.2.6 Ad hoc support by virtue of our presence**

A mine-site and accommodation by virtue of its presence is the equivalent of a small and temporary community. On site there will be a certain amount of logistical support that is available in the event of emergencies. For example, if there is a medical emergency close to our site, the on-site paramedic may be the closest to respond. The Wilson's Camp airstrip will be made available for Royal Flying Doctor Service or Medical Flights if requested.

When travelling on public roads (i.e. the Tanami Road) our staff are instructed to carry extra water, fuel and food as well as satellite telephone communications. From time to time ABM's employees have encountered stranded motorists travelling between the remote Aboriginal communities. All employees are instructed to render assistance where they can and have helped with water, fuel, food and communications. On several occasions company employees in the past have also helped to jump start or tow broken down vehicles. ABM considers this ad hoc support as being part of our community relations and responsibilities as being resident in the Central Desert. Employees are requested to assist where appropriate. Spare fuel or other supplies will only be rendered from the camp in the event of emergency. The only negative effect of this is a sense of reliance maybe developed which will be monitored as part of the SIMP.

#### **13.4.3 Economic and social impact assessment on non-specified peoples\* principally Northern Territorians and Australian population as a whole**

*\*Indigenous and non-Indigenous Australians including the general public, businesses, governments.*

The Twin Bonanza project is located in a remote location in the Northern Territory and the nearest non-specific communities (i.e. not a recognised specific Indigenous community) are



Halls Creek, Western Australia (~400 km to northwest) and Alice Springs, Northern Territory (~800 kilometres to southeast).

The economic and social impact assessments are noted in the table below.

*Table 13-7. Summary of economic and social impact assessment on non-specified peoples\* principally Northern Territorians and Australian population as a whole (\*Indigenous and Non-Indigenous Australians including the general public, businesses, governments).*

| <b>Activity</b>   | <b>Positive effects</b>   | <b>Negative effects</b>  | <b>Mitigation strategies of negative effect</b>   |
|---|---|--|---|
| Government rents and payments including royalty payments                          | Increased payments and revenue to the Government of the Northern Territory                                      |  |   |
| Company and other taxes   | Increased payable tax to the Commonwealth Government  |  |   |
| Contribution to GDP and GSP   | Increased contribution to GDP and GSP   |  |   |
| Direct employment opportunities   | Reduction of unemployment   |  |   |
| Indirect employment and contract services   | Increase in regional revenues and business growth supporting the mine site                                      |  |   |
| Work-place safety and occupational risks  | Implementation of new safe working practices and training that can be transferred to other sites and industries | Injury, disability and fatality  | Company work place safety and occupational health programs, policy and procedures   |
| Increased use of public amenities and infrastructure                              | Previous government infrastructure investment being utilised  | Increased use of public roads may results in more maintenance required   | Liaison with NT government to source funding for improved maintenance of roads  |
| Disturbance of areas and overall environmental impact                             | Some offsets and positive impacts on flora and fauna as noted in Biodiversity Management plans                  | Disturbed areas requiring rehabilitation following completion of mining. Visual effects during mining            | Progresses monitoring and rehabilitation plans including lodging of bonds   |
| Increased exploration funded by revenues from mining                              | Further discovery and long-term mining projects could be developed  | Requires further mining impact assessment  | As controlled by the Department of Resources and CLC access   |
| Perception of the Northern Territory Resources Industry being "open for business" | Encouraging overseas investment in the Northern Territory resources industry                                    | Increase in mining activity in the Northern Territory could affect the image of an isolated wilderness of the NT | Footprint of disturbance is low compared to overall land area of the NT. Project is away from World Heritage Areas or regional / national parks |

### **13.4.3.1 Government rents, levies and royalties**

The mineral lease is subject to government rents, levies and royalties. The largest of these government payments is the royalty as determined by the *Mineral Royalty Act 1982*. The Northern Territory Mineral Royalty is a net profit based royalty and payable on the profitable gains from mineral production.

Stage two of ABM's operations (open pit mining) will have a net profit of approximately \$100M and hence the payable royalty (depending on associated credits and deductions of previous and ongoing exploration and future gold price) is anticipated at between \$10M and \$20M and will be payable in the first two years of production.

The economics of stage three (continued open pit mining) will be at a larger scale (as discussed in section 13.2.2 above) and the project economics (profitability) are yet to be established and hence it is not possible to present modelled projections of net-profits. However, the stage three economics would suggest an operation at two to three times the scale of stage two and hence potentially adds \$30M to \$60M over life of mine royalties.

Further government charges will apply including the recently established 1% levy on environmental bond lodgement.

### **13.4.3.2 Company and income taxes**

#### **Payable income tax.**

The work force of approximately 68 people will have an average salary of \$130,000 and hence a gross payroll of \$8.8M. While individual marginal income tax rates are dependent on individual deductions and circumstances it is likely that employees will be earning in a range of \$80,000 and \$180,000 per annum dependent on available personnel and market conditions. As a result the direct mine-site employees and support staff will have an annual payable income tax of between \$1.6M and \$2.4M per annum (\$3.2M to \$4.8M over 2 year mine life) and a potential further \$6.4M to \$9.6M of payable income tax over the four year life of Stage Three.

Australian Company Tax is a flat-rate of 30% of profits. Whilst tax treatment of previous accrued losses by ABM will need to be established and ongoing exploration factored in (accrued Company losses may be equal to profit), based on the straight stage two net profit is likely to be approximately \$80M to \$100M and hence Company tax on the order of \$0 to \$30M.

The stage three profit cannot be determined until further understanding of the mineral economics, mining and processing costs can be established. However, costs are likely on the

order of \$700 to \$1000 per ounce resulting in a net profit (depending costs versus gold price range of \$1200 to \$1600 per ounce) of between \$60M and \$300M with resulting company tax being \$20M to \$100M.

The contribution to taxes is summarised in Table 13-9 below.

### **Other taxes**

Other Territory, State and Federal taxes include levies on bonds, GST, carbon tax, payroll tax. It is not possible to estimate those tax levels at this stage, but a range of \$5M to \$10M for stage two and \$10M to \$20M for stage three is considered reasonable.

*Table 13-8. Contribution to taxes and royalties.*

| <b>Taxes</b>  | <b>Stage 2</b> | <b>Stage 3</b> |
|---|----------------|----------------|
| Government Royalties (low range)                                      | 10M            | 30M            |
| Government Royalties (high range)                                     | 20M            | 60M            |
| Income Tax (low range)  | 1.6M           | 6.4M           |
| Income Tax (high range)   | 2.4M           | 9.6M           |
| Company Tax (low range)   | 0              | 20M            |
| Company Tax (high range)  | 30M            | 100M           |
| Other levies state / federal including bond levies & GST (low range)  | 5M             | 10M            |
| Other levies state / federal including bond levies & GST (high range) | 10M            | 20M            |
| Tax Contribution (low range)  | \$16.6M        | \$66.4M        |
| Tax Contribution (high range)   | \$62.4M        | \$189.6M       |
| Rental for ML29822 ( per annum) &                                     | \$61,883*      | \$61,883*      |
| DME annual admin fee  | \$214*         | \$214*         |

**Note – These are presented here as a guideline only and are presented to the best of the knowledge of ABM at the time of writing. There are many uncertainties to achieving the outcome of the above table including economic factors, labour availability, tax credits / deductions, on-going investment in exploration, changes in taxes regime as well as the overall uncertainty in stage three. \*depending of treatment of previously accrued losses in ABM.**

**\* thousand**

### **Contribution to GDP / GSP**

The contribution to GDP/GSP is as discussed in Section 13.3.1 above.

### **Direct employment opportunities**

As stated above, there is anticipated to be a work force of approximately 68 people directly employed and related to the mining at Twin Bonanza. This is the standing work force. Given that stage two is an evolution of stage one mining the construction work force is likely to be minimal.

ABM will retain and potentially grow its exploration team for regional work utilising proceeds from mining. This is not included in the mining team and potentially adds a further 10 jobs for regional work.

#### **13.4.3.3 Indirect employment opportunities / supporting regional businesses**

The Twin Bonanza project's remote location in Central Australia means that it will be required to source services from both regional and national centres. Outsourcing and procurement will include, but will not be limited to, sourcing services and goods such as noted in the table below.

Table 13-9. Outsourcing and procurement of services from both regional and national centres.

| Item   | Likely source                                   | Examples of Companies used in the past   | Expected service fees per annum under mining at Twin Bonanza. |
|--|---|--|---|
| Air charter services and commercial air services | Perth, Broome, Kununurra, Alice Springs         | Chart Air (Alice Springs), Shoal Air (Kununurra), Broome Air Services (Broome); Qantas (national), Virgin (national), Air North (regional north), Sky West (regional west and north) | >\$0.75M  |
| Food and camp supplies                           | Alice Springs                                   | Shorty's Meats (Alice Springs); Coles (Alice Springs); IGA (Halls Creek)   | \$0.4M to \$0.7M  |
| Logistics supplies                               | Alice Springs                                   | Territory Hirex (Alice Springs)  | \$0.5M  |
| Transport logistics                              | Alice Springs, Perth, Darwin, Adelaide, Sydney. | Toll Logistics (Alice Springs), G&V Roberts (Perth and regional).  | \$0.5M to \$1M  |
| Fuel   | Alice Springs, Darwin                           | AusFuel (Alice Springs), Kimberly Fuel Supply (Kununurra)  | \$5M to \$10M   |
| Equipment / infrastructure rental                | Darwin, Alice Springs, Adelaide, Perth.         | Cat (Perth), Territory Hirex (Alice Springs), WestTanks (Perth)  | \$0.5M to \$1.5M  |
| Environmental and archaeological services        | Darwin, Perth                                   | EcOz (Darwin), GHD (Darwin), Tim Hill Heritage Mgt (Alice Springs), CLC (Alice Springs), Soilwater Group (Perth), and 4DG (Perth)  | \$0.2M to \$1M  |
| Survey services                                  | Alice Springs                                   | Brian Blakeman Surveys (Alice Springs)   | <\$0.1M   |
| Drilling services                                | Alice Springs, Perth, Darwin, Kalgoorlie        | Top Drill (Kalgoorlie) Gorey and Cole (Alice Springs)  | \$1M to \$5M  |
| Mining contract and earth moving                 | Perth, Darwin, Kalgoorlie, Alice Springs        | MLG Oz (Kalgoorlie), Chambers Engineering (Alice Springs)  | \$4M to \$10M   |
| Safety systems and medical                       | Perth, Darwin                                   | Sanax Systems (Perth)  | \$0.1 to \$0.3M   |
| Laboratory services                              | Perth, Darwin, Alice Springs                    | ALS Global (Alice Springs / Perth); Genalysis (Darwin)   | \$1M to \$3M  |
| Light vehicles and vehicle service               | Alice Springs, Darwin, Perth                    | Alice Springs Toyota, Country Diesel (Alice Springs)   | \$0.05M to \$0.2M   |
| Light vehicle rental                             | Alice Springs                                   | Central Car Hire (Alice Springs)   | <\$0.1M   |
| Contract personnel                               | Alice Springs, Darwin, Perth                    | Orebody (Perth), Allegro Human Resources (Perth)   | \$0.2M to \$0.5M  |
| Legal services                                   | Darwin, Adelaide, Perth                         | Ward Keller (Darwin); Piper Alderman (Adelaide); Steinpreis Paganin (Perth).   | \$0.2M to \$0.5M  |
| Gold refining services                           | Perth   | Perth Mint   | \$0.5M  |

### 13.4.3.4 Work-place safety and occupational risks

A key economic and social impact is work-place safety and occupational risks. Work place injury, disability and fatality will have a net negative effect on society with financial costs associated with rehabilitation, workers compensation, and civil liability. The non-financial costs include subsequent pain and suffering, mental health, grief and loss.

ABM is committed to providing a safe working environment and follows all regulations for implementation of safe working programs, policy and procedures. ABM carries all relevant insurance and also has an employee assistance scheme whereby employees can seek counselling. This section is governed under ABM's risk management approach (refer Chapter 5: Risk assessment), NT and federal occupational health and safety legislation and ABM's role as a responsible corporate citizen.

### 13.4.3.5 Increased use of public amenities and infrastructure

The principal public infrastructure to be used in the project is the Tanami Road. The Tanami Road is (for most part) a wide unsealed highway linking Alice Springs to Halls Creek. The support and logistics requires the use of the public road on regular occasions which will increase the wear on the road. Estimated trips are:

*Table 13-10. Estimated use of public roads (TB refers to Twin Bonanza).*

| Vehicle Type  | Journey             | Trips per week (including return = 2) | Purpose                               |
|---------------|---------------------|---------------------------------------|---------------------------------------|
| Light vehicle | TB to Halls Creek   | 2                                     | Personnel and supplies                |
| Light vehicle | TB to Alice Springs | 2                                     | Personnel and supplies                |
| Light vehicle | TB to Balgo         | 2                                     | Indigenous employees / personnel      |
| Light vehicle | TB to Granites      | 4                                     | Personnel (if using Granites flights) |
| Heavy vehicle | TB to Alice Springs | 2                                     | Fuel                                  |
| Heavy vehicle | TB to Alice Springs | 2                                     | Supplies, logistics and equipment     |

The governments of the Northern Territory and Western Australia maintain the road. From time to time the road closes due to flooding or wash-outs. ABM observes all road closures and reports any road problems to the relevant authorities. ABM would ideally like to see more sections of the road sealed to reduce the number of closures and will hold discussions with the relevant authorities.

A 2010 Senate Rural and Regional Affairs and Transport Legislation Committee (Cummings Economics (tabled by Senator Alan Eggleston, 2010) studied road usage on the Tanami Road including the impact of upgrading the Tanami Road. The work included detailed estimates

of the number of vehicles using the road on a daily basis. Below table estimates the increase in the overall usage compared to the statistics presented in Senator Eggleston's tabled report.

*Table 13-11. Estimates the increase in the overall usage compared to the statistics presented in Senator Eggleston's tabled report (Cummings Economics (tabled by Senator Alan Eggleston, 2010).*

| <b>LIGHT VEHICLES</b>              | <b>2010 Estimation (daily)</b> | <b>2010 Estimation Weekly</b> | <b>Increase with Twin Bonanza gold project Weekly</b> | <b>% increase</b> |
|------------------------------------|--------------------------------|-------------------------------|---|-------------------|
| Turn off to Wolfe Creek            | 35                             | 245                           | 2   | 0.8%              |
| Wolfe Creek to Billiluna           | 29                             | 203                           | 2   | 1.0%              |
| Billiluna to Balgo turnoff         | 23                             | 161                           | 2   | 1.2%              |
| Balgo turnoff to Coyote            | 17                             | 119                           | 4   | 3.4%              |
| <b>Coyote to Lajamanu turn-off</b> | 15                             | 105                           | 4   | 3.8%              |
| Lajamanu turn-off to Granites      | 20                             | 140                           | 6   | 4.3%              |
| Granites to Yuendumu               | 27                             | 189                           | 2   | 1.1%              |
| <b>Average</b>                     | <b>23.7</b>                    | <b>166.0</b>                  | <b>3.1</b>  | <b>1.9%</b>       |
|                                    |                                |                               |   |                   |
| <b>HEAVY VEHICLES</b>              | <b>2010 Estimation (daily)</b> | <b>2010 Estimation weekly</b> | <b>Increase with Twin Bonanza gold project weekly</b> | <b>% increase</b> |
| Turn off to Wolfe Creek            | 7.1                            | 49.7                          | 0   | 0.0%              |
| Wolfe Creek to Billiluna           | 6.1                            | 42.7                          | 0   | 0.0%              |
| Billiluna to Balgo turnoff         | 5.1                            | 35.7                          | 0   | 0.0%              |
| Balgo turnoff to Coyote            | 2.1                            | 14.7                          | 0   | 0.0%              |
| <b>Coyote to Lajamanu turn-off</b> | 1.1                            | 7.7                           | 4   | 51.9%             |
| Lajamanu turn-off to Granites      | 2.1                            | 14.7                          | 4   | 27.2%             |
| Granites to Yuendumu               | 10.1                           | 70.7                          | 4   | 5.7%              |
| <b>Average</b>                     | <b>4.8</b>                     | <b>33.7</b>                   | <b>1.7</b>  | <b>5.1%</b>       |

#### **13.4.3.6 Disturbance of areas and overall environmental impact**

The disturbance of the land will have an impact on native flora and fauna as well as change the overall topography (waste dumps etc.). The management and protection of flora and fauna is presented in other parts of this document. Environmental bonds will be lodged to cover costs of rehabilitation should ABM not be able to meet obligations.

It is important to note that ABM's staged approach is designed to not only mine at increasing stages of development but also conduct disturbance to the land in a staged manner. Should a decision be made not to proceed to the next stage, ABM will not have conducted disturbance beyond what is required. By having a stepwise process ABM will not disturb areas beyond the current stage thus managing environmental liabilities and aiding progressive rehabilitation.

The project or any waste rock dumps will not be visible from the Tanami Road and hence will not impact tourist driving and visual aesthetics of the wilderness of the Tanami Road.

#### **13.4.3.7 Increased exploration funded by revenues from mining**

ABM Resources is the largest exploration licence holder in the Central Desert. With more than 33,000 square kilometres of licenses and applications ABM has generated numerous regional targets and discoveries. ABM is considering diverting \$5M to \$10M of mining proceeds per annum to regional exploration. ABM strongly believes that the Central Desert is one of the most underexplored parts of Australia and large scale to potentially world-class discoveries remain to be found. An analogy to this is North Flinders Mines Ltd in the 1990s, which with relatively small scale mining continued exploration and then made the world-class Callie discovery. Callie has added 20+ years mine life to the Granites Gold Mine. By continuing exploration in the region ABM increases the chances of new large scale discovery which will have increased benefit to the mineral wealth of the Northern Territory.

#### **13.4.3.8 Perception of the Northern Territory resources industry being "open for business"**

There has not been a new discovery gold mine opened in the Northern Territory since the Callie discovery in the mid-1990s. The Twin Bonanza gold project can be used as a flagship for modern mining and scalable development. The government and other relevant groups will be able to use the opening of the Twin Bonanza gold project as an example of the low sovereign risk and encouragement of government to support the industry. This may result in increased investment in the exploration and mining industries from within Australia and overseas.



A negative impact could be that some may consider that new mines opening affect the image of the Northern Territory as a pristine and isolated wilderness. This is mitigated by the fact that the project is a considerable distance from World Heritage Areas, regional parks, nature reserves and national parks. The Southern Tanami Indigenous Protected Area and the Northern Tanami Indigenous Protected Area are located within the broader Tanami region. The Twin Bonanza project is located approximately 50-60 kilometres away from the closest boundary of both IPAs.

### **13.5 Social Impact Management Plan – mitigation and monitoring**

The SIMP presents the structure whereby ABM monitors its impacts on key stakeholders as a result of mining at the Twin Bonanza gold camp.

The key stakeholders include:

1. Traditional Owners / Indigenous Australians of the region surrounding of the project
2. governments, people and businesses of the Northern Territory and Australia as a whole.

The social impact assessment has been completed (refer to section 13.4) as part of the Environmental Impact Statement (EIS) for the project. The social impact assessment aids in identifying social benefits and impacts and their significance arising from the project's activities. Impact identification, stakeholder engagement and expert advice will be used to assist in developing the mitigation strategies discussed in the SIMP.

The purpose of the SIMP is to:

- describe ABMs impact management activities and commitments to minimise negative social impacts and enhance identified benefits to communities and other stakeholders
- describe the mechanisms to monitor these impacts and adjust mitigation strategies and action plans
- identify and establish stakeholder partnerships to develop and implement the mitigation strategies throughout the life of the Project
- determine a timeframe for the development and implementation of the management strategies
- provide guidance to ABM's future social performance activities.

The full SIMP is available as Appendix T: Social Impact Management Plan. The implementation of the plan will be the responsibility of all senior personnel and the board of ABM.

### **13.5.1 SIMP methodology - stakeholder engagement strategies**

There are 4 forms of stakeholder engagement strategies that ABM Resources employ:

1. formal Engagement with Traditional Owners / Indigenous Australians – through the CLC (CLC)
2. informal Engagement with Traditional Owners / Indigenous Australians – inadvertent through visitors, employees and colleagues
3. engagement with the Government of the Northern Territory
4. engagement with the people, businesses and Northern Territory as a whole.

### **13.5.2 SIMP management of economic and social impact assessment**

#### **13.5.2.1 Indigenous Australians / Traditional Owners.**

##### **Appointment of an Indigenous liaison officer**

The company will appoint an Indigenous / Traditional Owner liaison officer (who may be an Indigenous employee) who will report directly to the managing director and company secretary and whilst on site will report to the site manager. The role of the Indigenous liaison officer is to:

1. oversee interaction, schedule meetings and coordinate visits of Traditional Owners
2. be a primary contact for Traditional Owners and the company
3. assist with Indigenous employment and training programs
4. coordinate cultural awareness training for employees
5. monitor social impact of the company's mining activities.

The CLC and Traditional Owners are to be notified of the contact details of the Indigenous / Traditional Owner Liaison Officer.

##### **Payments to Traditional Owners via the CLC**

The company will adhere to agreements with the CLC on behalf of the Traditional Owners. A register of scheduled payment dates is to be kept and the senior management is to ensure that all commitments are met.

### **Voluntary financial contributions made by the company**

The company will establish a committee to respond to individual or group requests for financial support. Subject to available funds, the company proposes \$100,000 per annum to be made available. This may be a request from a local school, health clinic, sporting group, or cultural group. The committee:

1. will assess each request on its merits
2. will contact the CLC to see if the request is appropriate and to understand if responding to the request or providing a payment will not have any adverse flow-on effects
3. give priority to requests which involves education, health, sporting and cultural activities
4. will check the legitimacy of the request
5. will make the process quick and streamlined and provide the funds readily.

### **Voluntary contributions including requests for construction**

From time to time local communities may request that the company helps provide temporary use of equipment for items such as earthworks, road or track construction / grading, or water bores. If such a request is made to project management they must contact senior management as soon as possible. If the company is able, at relatively minimal costs to help with the request, the company will do so ensuring that:

1. the request is legitimate and made directly by someone who is authorised to do so
2. the CLC is notified of the request and able to comment
3. all relevant permits are in-place.

### **Disturbance of habitat in traditional hunting and bush food gathering areas**

The company acknowledges that by virtue of the nature of mining that it will disturb areas that may be used for traditional hunting and bush food gathering. The disturbance and impact of flora and fauna is covered in the Biodiversity Management Plan (Appendix D).

A Traditional Owner / Indigenous Australian is not to be denied access to any part of the project area or surrounding lands for hunting or bush food gathering (except for reasons of mine safety). The company will endeavour to provide support, including maps and track use, to aid with this activity.

### **Disturbance of sacred sites**

Locations of exclusion zones (which may be sacred sites) are provided to the company by the CLC on a confidential basis. The company may not display these locations on any maps or publications. Company personnel are provided with the location on a needs to know basis.

In order to prevent anyone from inadvertently entering a sacred site the following rules apply.

1. For mine site personnel the following transport routes on the designated direct tracks only are allowed without seeking permission:
  - a. Wilsons Camp to mining areas Old Pirate / Golden Hind
  - b. Wilsons Camp to Corsair Bore and other authorised bores
  - c. Wilsons Camp to Buccaneer
  - d. Wilsons Camp to processing plant
  - e. Wilsons Camp to airstrip.
  - f. Wilsons Camp to Tanami Road.
2. For exploration personnel or other personnel (such as environmental monitoring) exploring the wider area you must:
  - a. file a travel management plan with the site manager who will check against sacred site / exclusion zone locations and approve the plan
  - b. not deviate from the travel plan without authority.

In addition, documented sacred sites close to personnel activity are clearly flagged and marked, to prevent inadvertent access and disturbance (with permission from the CLC).

### **Indigenous employment and training opportunities**

As per agreements with the Traditional Owners, should there be roles that become available for which local people are suitable or may be trained for, ABM must seek to employ via the communities first.

As positions become available:

1. contact the CLC employment officer with a description of the position
2. place an advertisement on the notice board in Balgo
3. notify existing Indigenous employees that a new role has become available.

### **Training opportunities**

Skills based training is to be offered to Indigenous employees. In particular, there will be an emphasis on vocational training that is considered useful to the worker back in their own community. This includes but is not limited:

1. heavy machinery operation
2. mechanical skills
3. construction
4. maintenance of pumps and water bores
5. maintenance of generators
6. first aid
7. environmental rehabilitation

#### Supporting Indigenous employees

Indigenous employees may endure pressures that are different to non-Indigenous employees. Often their presence in the community is required on short notice. ABM will support employees who need to return to the community on short notice. The employee's overall position or status in the company will not be affected if they are required to return to the community.

As with all employees, Indigenous employees are to be made aware of the company's employee assistance program (counselling service) and a phone option is available on this program.

#### Ad hoc support by virtue of our presence

ABM is, essentially with its mining village and infrastructure, building a new community in the Central Desert with the mine and logistics. These developments will result in increased road traffic. Employees and site managers are encouraged to support the surrounding region by

1. providing emergency medical attention (using our on-site paramedics) if requested
2. allowing access and coordinating medical air evacuation (from our airstrip)
3. assisting stranded vehicles by:
  - a. always carrying extra food and water when travelling on the Tanami Road
  - b. providing basic mechanical assistance (e.g. jump starting a stranded vehicle)
  - c. providing emergency communications (e.g. with satellite phones).

#### **13.5.2.2 Non-Indigenous Australians, the people, businesses and Northern Territory as a whole**

##### **Impact on businesses with priority to business in the Northern Territory**

In many cases local or regional centres do not have businesses which can efficiently provide all the services and supplies which the company requires. The company will prioritise and select service providers on a best efforts basis, within the reasonable expectation of free-market principals / efficiency of service based on their locality and proximity to the project area. Given that the project is located in the Northern Territory, and notwithstanding the

fact that Halls Creek (WA) is one of the closest regional centres the company will apply the following order of priority:

1. businesses in local communities (Balgo, Lajamanu, Yuendumu etc.)
2. businesses in Alice Springs
3. businesses domiciled in other regional centres in the Northern Territory
4. businesses in Darwin
5. businesses in Northern Australia (e.g. Halls Creek, Fitzroy Crossing, Kununurra, Mt Isa, Broome etc.)
6. businesses in Australia.

### **13.5.3 SIMP monitoring of socio-economic and cultural impacts**

#### **13.5.3.1 Monitoring of socio-economic impacts**

Monitoring of socio-economic and cultural impacts will be coordinated by the Indigenous / Traditional Owner liaison officer. The officer will report regularly to the ABM board. Monitoring is to include:

1. maintaining dialogue with the CLC and developing a register of concerns
2. reporting on any direct approaches or comments from Traditional Owners
3. performing analysis of retention rates and skills training register of Indigenous employees
4. regular attending Traditional Owner liaison committee meetings under the mining agreement also provide a forum for the ongoing monitoring of socio-economic impacts.

Due to the nature of agreements with Traditional Owners, and restrictions on direct negotiation, the company will not monitor the use of proceeds of compulsory payments, royalties and rents. ABM respects the autonomy afforded to Traditional Owners and the CLC in this matter.

#### **13.5.3.2 Outcome and threshold criteria / early warning of adverse social impacts or initiatives not working**

The key performance indicators of the SIMP are outlined in Table 13-13. Not all of the identified social impacts require management.

Table 13-12. Key performance Indicators of SIMP.

| Issue   | Mechanism  | Early warning signs  | Corrective action  |
|---|--|--|--|
| Formal engagement with Traditional Owners                                 | Via the CLC  | No or few requests from the CLC for meetings.  | 1. Consult with CLC.   |
| Indigenous employment   | Maintain register including: <ol style="list-style-type: none"> <li>1. Number of employees</li> <li>2. Length of employment</li> <li>3. Retention rate</li> <li>4. Training provided</li> <li>5. Requests to return to community</li> <li>6. Feedback</li> </ol> | Changes in: <ol style="list-style-type: none"> <li>1. Employment levels</li> <li>2. Retention rate</li> <li>3. Willingness to undertake training</li> <li>4. Check if training is useful in communities as well as work</li> <li>5. Number of requests to return to community</li> </ol> | <ol style="list-style-type: none"> <li>1. Consultation</li> <li>2. Increase variety of training available</li> <li>3. Establish reasons for leaving / absenteeism and try to remedy</li> </ol> |
| Voluntary financial contributions / fund to Indigenous communities.       | Committee to review requests and ensures prompt response.  | Company receives few or no requests.<br>Company turns down requests on grounds of concern of legitimacy or availability of company funds.  | Discuss with CLC and Traditional Owners about programs available for funding.<br>Approach schools, sporting groups, cultural groups etc. with offers of sponsorship.                           |
| Zero tolerance on racism or prejudice                                     | All employees' responsibility.   | Increasing reports of inappropriate acts, familiarity or racism.   | Increase work-force education.<br>Increase in cultural awareness training programs.<br>Issue written warnings.   |
| Disturbance of habitat in traditional hunting / bush food gathering areas | Monitor of environmental footprint as per company's environmental management plans.  | Reports of reduction in species for hunting or certain bush foods hard to find.  | Assess impact and implement changes as per the plan. Consult with affected peoples to see if new areas can be offset programs can be implemented.  |
| Disturbance of sacred sites / exclusion zones.                            | Monitor travel plan management and reporting, and CarCom technology.   | Inadvertent access to an exclusion zone or near miss.  | Full investigation into action. Consult with CLC about signage if required or re-affirm company policy.  |
| Effect on businesses of under geographical / regional priority basis.     | Maintain register and audit of location of service supply. Chart changes.  | National centres supply rates increasing relative regional centres.  | Search for new businesses to supply and offer tender locally / regional centres.   |

### **13.5.3.3 Reporting**

Complaints and enquiries for the calendar year will also be reported in the mining management plan (MMP) under the *Mining Management Act 2001* and with the CLC and Traditional Owners through on ground meetings, discussing the scope and project direction, and through technical reporting under the mining agreement with the CLC.

## **13.6 Risks to historic and cultural heritage**

### **13.6.1 Sites of historic or cultural heritage**

The aims of the survey of the area for sites of historic and cultural heritage are threefold:

1. providing clearances by the CLC and Traditional Owners
2. identifying areas of potential Aboriginal archaeological significance
3. identifying areas of potential non-Aboriginal archaeological significance.

### **13.6.2 Clearances by the CLC and Traditional Owners**

This project sits on Aboriginal land trust land owned by the Mt Frederick No.2 Aboriginal Land Trust and as a result is subject to a number of agreements with the CLC, including the recently completed mining agreement.

The CLC has approved all previous exploration work, and the CLC anthropology team and Traditional Owners have conducted several surveys. There a number of exclusion zones defined in proximity to the mineral lease application area, though none of these are actually on the mineral lease.

The exclusion zones address sacred sites or areas of other relevance to the Traditional Owners, principally the Jaru people of Balgo / Billiluna areas.

The location of the exclusion zones is confidential and cannot be published in this document. Suffice to say, that the company's agreements involve avoiding and not disturbing the exclusion zones.

The avoidance of exclusion zones is covered in the SIMP and is ensured by conscientious planning and travel management.



### 13.6.3 Archaeological surveys by ABM

As part of the preliminary review a search of the Northern Territory Heritage Register covering the mineral lease and surrounds covered by Exploration Licence 28322 was completed. As illustrated in Figure 13-2 no nominated, proposed or declared heritage places and no prescribed Aboriginal archaeological sites were located.

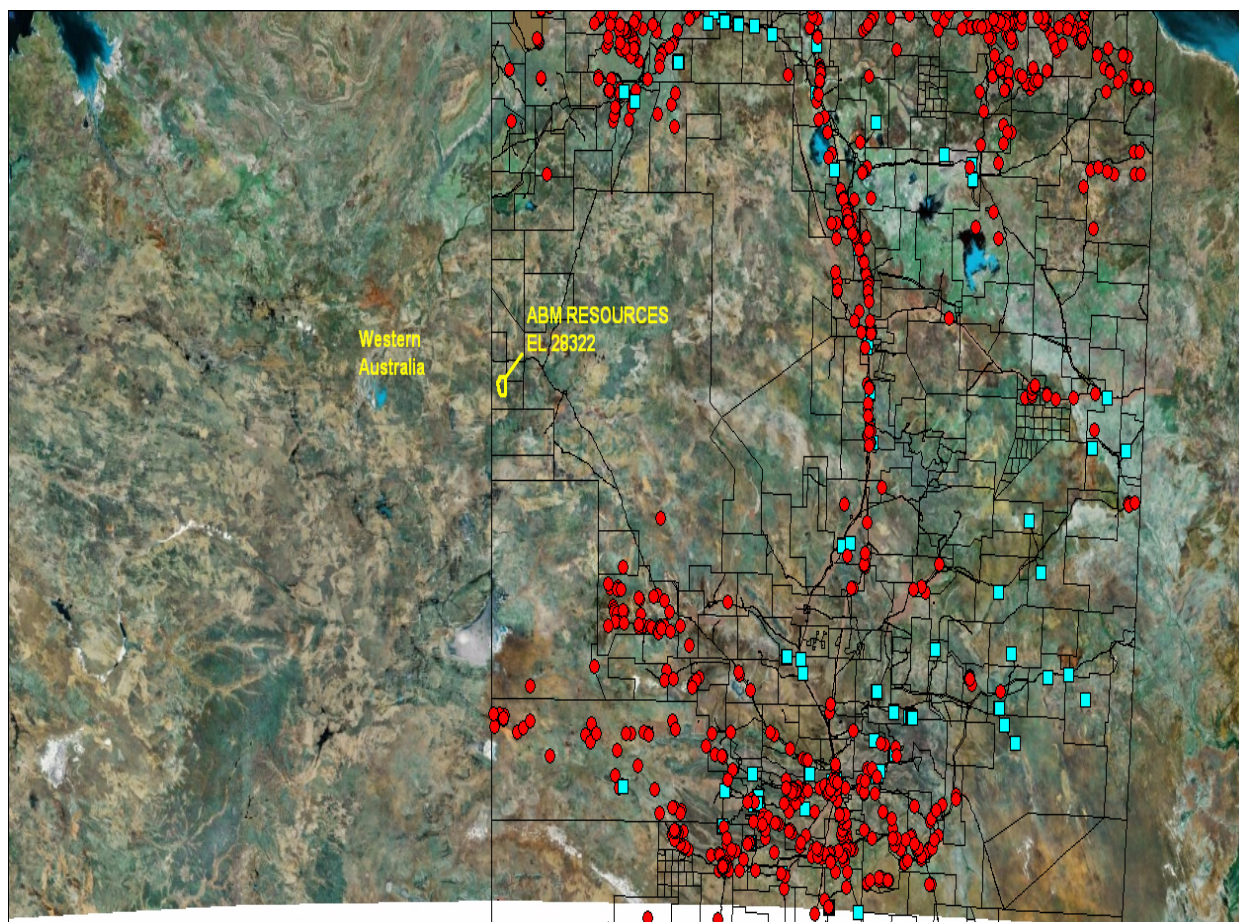


Figure 13-2. Map detailing the location of recorded archaeological sites (red dots) and declared heritage places (blue squares) relative to Exploration Licence 28322 that surrounds the Twin Bonanza Project. (Map supplied by the Department of Lands, Planning and the Environment 2013)

In 2013 the company conducted an Aboriginal and non-Aboriginal archaeological survey over the area. The survey was conducted by Tim Hill Heritage Management and Planning (THHMP). The results and report from the work is presented in Appendix V.

The surveys and report were prepared with reference to the guidelines for the Burra Charter: Procedures for Undertaking Studies and Reports. ABM is defined as the client and THHMP defined as the practitioner as per section 2.0 of the guidelines.

The assessment of risk is presented in reference to the Burra Charter Process (see below). The Burra Charter is published by ICOMOS (International Council on Monuments and Sites). The Burra Charter sets a standard of practice for those who provide advice, make decisions

about or undertake works to places of cultural significance, including owners, managers and custodians.

The THHMP surveys covered 37.8 kilometres of transects and used a predictive model to search for locations of archaeological sites.

Six Aboriginal archaeological sites or objects (sites TB1 to TB6) were recorded during the survey – one being a spatially extensive / low density stone artefact scatter (TB3), two spatially discreet / low density stone artefact scatters with small ephemeral clay-pans (TB5 and TB6) and three isolated artefacts (TB1, TB2 and TB4). The predominant stone material for tool / production was chert and silcrete. Of note is that only a very low relative percentage of flakes were produced from stone materials sourced within the study area and most artefacts/flakes were produced from high-quality materials indicating that quarries are located outside the study area.

Archaeological sites within the Twin Bonanza study area are determined to be of low significance. While the scientific significance is noted, this assessment considers the following;

1. The sites and area were not identified as being culturally significant during anthropological investigations.
2. The artefacts located during the survey appear not to be a reflection of the local geology and therefore there is a likelihood that a larger quarry and occupation sites are located in the greater area outside of the proposed disturbance footprint.

The CLC has been notified of the findings from THHMP surveys.

### **13.6.3.1 Surveys of areas for potential non-Aboriginal cultural significance**

#### **Non-Aboriginal history**

The first recorded non-Aboriginal visitors to this region were members the Davidson Expedition – Explorations of Central Australia (1898-1900) (Davidson, 1905). According to Davidson's maps the closest the expedition got to the project area was approximately 16 kilometres northwest of the current airstrip (Davidson Camp 51) and 35 kilometres south-southwest of Old Pirate (Davidson Camp 55). Davidson's route took him south-west of Camp 51 into Western Australia before crossing back over the border to the Northern Territory (then called Central Australia) heading south-east at approximately 20.4degrees latitude.

Davidson's expedition was, in part, to search for gold. Davidson recorded quartz veins and undertook extensive sampling at Camp 55 (24th July, 1900), however the search failed to

yield any gold. If Davidson had taken a route through the Old Pirate area he would have undoubtedly identified gold and sparked a gold rush to the area. Davidson describes the area surrounding Old Pirate from a distal rocky granite promontory as “open scrub and flats”.

As a result of Davidson’s circuitous route he missed Old Pirate but did head on to a water hole to the northwest where he did discover gold (the “Tanami” Discovery) on 11th of August, 1900.

There are no recorded non-Aboriginal visits to the Old Pirate project area between 1900 and 1990s (when North Flinders Mines first identified the mineral occurrences).

#### *Results of survey*

Unsurprisingly, the THMM report noted that there were no sites identified that have non-Aboriginal cultural significance.

### **13.6.4 Protection of Indigenous cultural heritage and associated AAPA clearances**

To prevent destruction of Indigenous cultural heritage via the damaging of sacred sites ABM has undertaken a data extract from the Aboriginal Areas Protection Authority (AAPA) to identify the presence of any sacred sites. Additionally on ground sacred site clearances with the CLC have been undertaken to identify any sacred sites in the area. To this end no sites have been identified within the footprint of the operation.

Refer to Appendix W for the AAPA search results.

### **13.6.5 Assessment of risk to areas of cultural / heritage significance**

Notwithstanding the confidential clearances conducted by the CLC, the company follows the Burra Charter process (Figure 13-3).

ABM is committed to preserving sites that have, or have the potential for cultural / heritage significance.

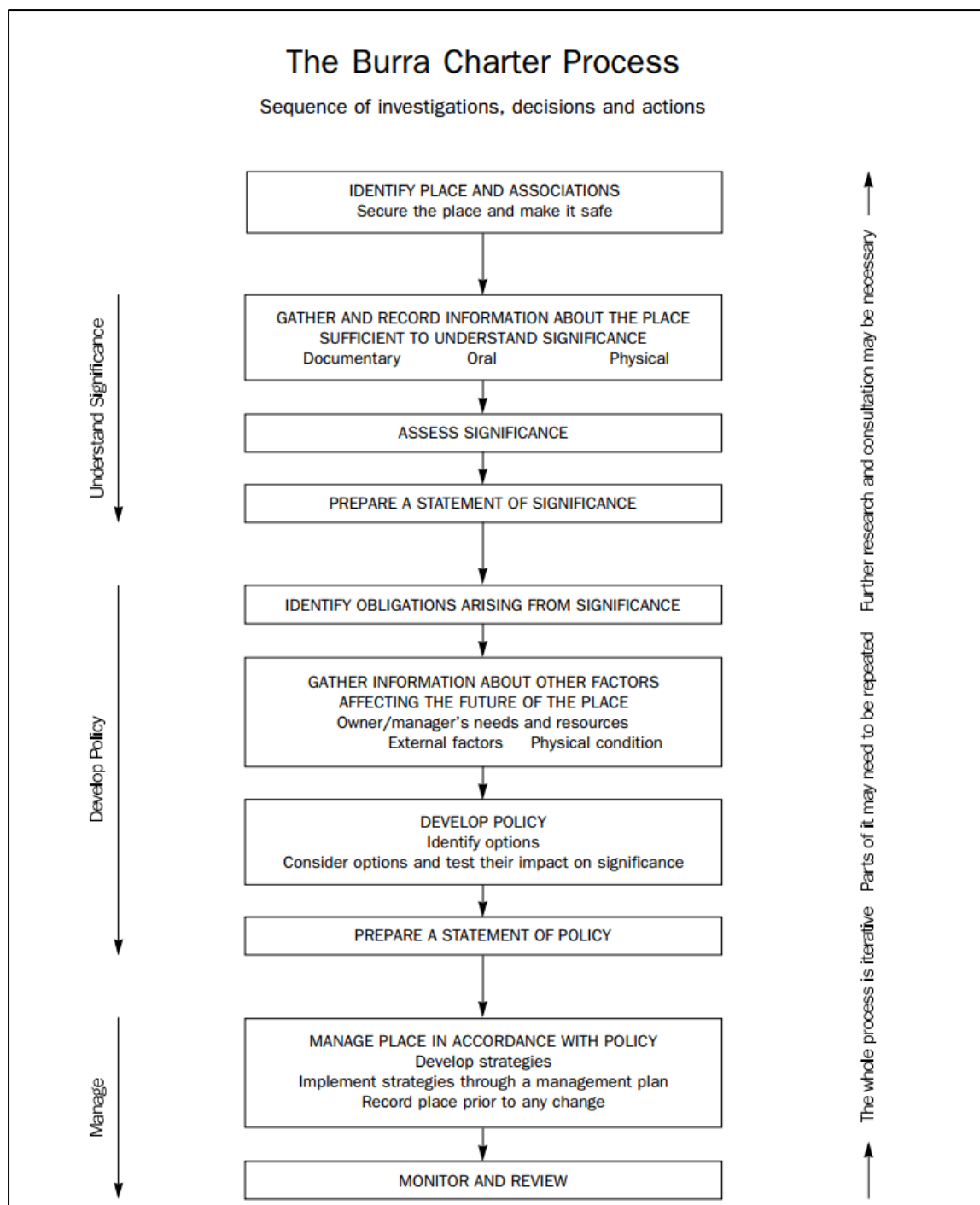


Figure 13-3. The Burra Charter process.

#### 13.6.5.1 Identify place and associations

A total of 6 sites (TB1-TB6) have been identified are presented in Appendix V.

#### 13.6.5.2 Gather and record information about the place sufficient to understand significance

The survey recorded the location, number of artefacts, and description of the physical landscape for the sites. Refer Appendix V.

#### **13.6.5.3 Assess significance & statement of significance**

All the six sites are stone tool sites, however, given the rock type differs from those found locally it is noted that the artefacts were likely produced from a quarry outside of the study area.

The significance of the sites is assessed as low to moderate.

#### **13.6.5.4 Identify obligations arising from significance**

ABM identifies the following obligations:

1. notifying the CLC and other relevant authorities
2. recording and protecting significant areas from disturbance from the planned mining activities
3. should any sites require disturbance (in the future) the company will request ministerial and land council authority to do so.

#### **13.6.5.5 Gather information about other factors affecting the future of the place**

The company is undertaking a staged approach to development to mining. This entails a staged increasing footprint to mining. As the mining project grows, some sites have the risk that they may be encroached upon. Therefore the company requires a robust management plan to ensure preservation and consultation.

#### **13.6.5.6 Prepare a statement of policy**

The Company has prepared a policy as noted in the Cultural Heritage Risk Management Plan (CHRMP) see Appendix U.

#### **13.6.5.7 Manage place in accordance with policy**

The CHRMP includes strategies to implement the plan.

#### **13.6.5.8 Monitor and review**

The CHRMP includes on-going training for identification.

Table 13-13. Risk assessment of known sites

| Site | Description of site   | Description of risk potential  | Mitigation of risk potential   |
|------|---|--|--|
| TB1  | Semi opaque siliceous chert flake located on small clay-pan | Close to Bandit South prospect. Risk of disturbance in exploration activity.   | Mark area and do not disturb during exploration as per the CHRMP.  |
| TB2  | Semi opaque siliceous chert flake located on small clay-pan | South of Golden Hind deposit in area of potential exploration activity.  | Mark area and do not disturb during exploration as per the CHRMP.  |
| TB3  | Numerous chert and quartz flake pieces.                     | South west of Old Pirate South. Risk of disturbance on expanded open-pit footprint or area of mining activity                        | Mark area and do not disturb during mining. Consider location when siting waste dumps or expanded activities as per the Cultural Heritage Management Plan CHRMP. |
| TB4  | White siltstone flake piece                                 | West of Buccaneer, in area of potential future exploration.  | Mark area and do not disturb during exploration as per the CHRMP.  |
| TB5  | Dark chert flake  | South west of Golden Hind away from exploration areas. Close to southern margin of channel. In area of potential future exploration. | Mark area and do not disturb during exploration as per the CHRMP.  |
| TB6  | Opaque chert flake  | East of Buccaneer in area of potential future exploration.   | Mark area and do not disturb during exploration as per the CHRMP.  |

## 13.7 Cultural Heritage Risk Management Plan

The CHRMP (Refer to Appendix U) is particularly for areas of potential archaeological significance. For areas designated as exclusion zones please refer to the SIMP (Refer to Appendix T).

### 13.7.1 Company policy on cultural heritage

ABM is committed to the preservation and conservation of areas of cultural heritage. These primarily relate to areas of archaeological significance.

It is ABM policy to:

1. conduct regular surveys carried out by professionals and review of areas where disturbance may occur
2. consult regularly with the CLC
3. train on site personnel in the identification of sites

4. not interfere with any sites and to preserve and conserve all sites for the current and future generations
5. notify the relevant authorities, including the CLC and government agencies should any new sites be identified.

### **13.7.2 Responsibilities**

All employees, contactors and visitors to site will be inducted on the company's CHRMP.

The environmental manager will be responsible for the plan and for updating and maintaining sites.

The site manager will liaise with the environmental manager to ensure that correct protocols are adhered to in all disturbance activities.

The Indigenous liaison officer will also be notified of all sites and will communicate regularly on the plan with the environmental manager.

### **13.7.3 Methodology**

#### **13.7.3.1 Assessment of risk to areas of cultural / heritage significance**

Notwithstanding the confidential clearances conducted by the CLC, the company follows the Burra Charter Process. The assessment of risk follows the Burra Charter Process (Figure 13-3).

ABM is committed to preserving sites that have, or have the potential for cultural / heritage significance.

### **13.7.4 Management and mitigation**

#### **13.7.4.1 Maintain a register of sites**

ABM will maintain a register of sites and these sites will be marked on maps, development plans and advertised at the site (unless the location of the site is deemed confidential by the CLC).

#### **13.7.4.2 Avoidance of known sites and ongoing protection work**

There are 6 sites currently identified in the mineral lease area. These sites are to be avoided for exploration and mining development work. All employees and contractors will be advised of cultural and heritage sites, as well as exclusion zones (see SIMP), in the site induction.



1. The sites will not be fenced (in case of risk to fauna).
2. The sites will be marked with a 20 metre buffer with blue permanent pickets.
3. A check-list covering sites is to be added to all disturbance work.
4. Travel Management as per the SIMP will be adhered to.



*Figure 13-4. A blue marker indicates a 20m buffer zone around an existing known archaeological site.*

### **13.7.4.3 Conduct regular surveys and reporting**

ABM will conduct surveys of any sites that are subject to development or disturbance. These surveys will be conducted by a professional practitioner and where applicable will be carried out in conjunction with the CLC.

In addition, members of ABM staff will be trained on how to identify new areas. Posters will be put up in common areas stating the plan and how to recognise new sites.

All new sites will be reported to executive management who will report the findings to the CLC and other government organisations as appropriate.

#### **If in doubt – mark it out policy**

ABM and employees will adhere to a “if in doubt – mark it out” policy to areas of potential new sites. Should an employee identify a potential site they will mark it out with blue pegs (Figure 13-4) and not disturb the site until an archaeological survey is arranged by ABM.



The marker pegs are not to be removed until it is established that the area is, in fact, not a site of significance.

### **13.7.5 Monitoring and review**

The environmental manager will monitor all sites for disturbance on a quarterly basis. A quarterly report will be presented to the company's board of directors.

The quarterly report to the board will contain:

1. a review of all known sites and confirmation that there are no changes or disturbance
2. notification to relevant authorities of any incidence of accidental disturbance
3. details of any new sites identified during the quarter
4. evidence of notification of the new sites to the CLC and the relevant authorities
5. an update of plans and procedures.

#### **13.7.5.1 Reporting**

ABM has a policy to notify the relevant authorities, including the CLC and, if deemed appropriate, relevant government agencies should any new sites be identified.

Any relevant complaints and enquiries for the calendar year will also be reported in the MMP under the *Mining Management Act 2001* and to the CLC and Traditional Owners through on country meetings, discussing the scope and project direction, and through technical reporting under the mining agreement with the CLC.