

BGM Clearing (Purpose) Permit Geophysics Proposal Hume Tank 2005-2006

Proposal

1 INTRODUCTION

ORIGINAL

1.1 LOCATION AND ACCESS - HUME TANK GEOPHYSICAL SURVEY 2005/2006

Geophysical survey exploration activities are planned in the Hume Tank area, between Hume Tank Road and Wells Drive (Figure 1) within the Wells and Duncan forest blocks. The planned area of activity is located within tenements E70/1148, E70/1965 and ML264SA(1).

1.2 OBJECTIVES

The objective of the Boddington Gold Mine Joint Venture (BGMJV) is to extend existing oxide and bedrock gold resources surrounding the Boddington Gold Mine in a manner that is consistent with the Joint Venture mission statement. Incorporated in this philosophy is BGM's commitment to their Environmental, Safety and Health and Community Relations Policies.

The objective of this document is to seek approval from the Department of Industry and Resources (DoIR) to explore for gold and other minerals in the area. A similar proposal to this has been sent to the Department of Conservation and Land Management (CALM) to gain approval to work in State Forest.

2 PROPOSED EXPLORATION

2.1 GEOPHYSICAL PROGRAM

The proposed Hume Tank geophysical survey is made up of six 2 km lines which are 200m apart. One line will be surveyed at a time. It is expected to take 18 days to complete the survey. Given contractor availability the survey is planned to commence in early 2006.

The proposed survey utilises the MIMDAS (Mt Isa Mines Distributed Acquisition System) geophysical surveying method. The system uses distributed acquisition units (DAU's) that collect data. Electrical current is applied to the ground via transmitter current pits and the responding data is collected at the potential electrode receiver pits and recorded on the DAU's. These pits are 15 cm deep with a diameter up to 50 cm. This data is relayed to a central recording unit (CRU) also referred to as the 'dogbox', via local area network (LAN) cables. These pits are established every 50 metres along the survey lines. In addition there are Back Current Electrode Pits (approximately one to five, similar dimensions as other pits, grouped together) which will be three to five kilometres from the survey lines. These pits are connected back to the 'dogbox' via a cable. Transmitter voltage varies from 300 to 800 volts and corresponding amperage varies from 3 to 10 amps. Vehicle access will be required to lay the cable and periodically check moisture of the pits as they need to be damp like the transmitter points. The Back Current line needs to run in a perpendicular direction to the survey lines. Where possible, the cable will follow established tracks.

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3 GEOPHYSICS OPERATIONS

3.1 SURVEY ACCESS

Survey areas will be accessed via existing tracks, namely Wells Formation, Pindalup Road, Hume Tank Road and Wells Drive. It is proposed to use a four wheeled motorbike to check the lines. A front-end loader may be required to push aside surface obstacles e.g. dead logs for access to lines. All use of a front end loader to move obstacles will be conducted with minimal disturbance to vegetation. Dieback and Armillaria infected areas will be segregated from disease-free and uninterpretable areas.

3.2 GEOPHYSICAL SURVEY PITS

Geophysical survey pits are shallow and small, typically to a depth of 15 cm and up to 50 cm diameter. Transmitter current pits will be lined with hessian material, aluminium foil and grease proof paper, filled with soil and moistened with water. Potential Electrode pits will be lined with grease proof paper, a steel plate placed within it, then covered with bentonite.

3.3 FLUID CONTAINMENT

All wetting agents are to be biodegradable. Precautions against accidental oil or fuel leakage will be implemented e.g. lined bunds to store fuel requirements for generators. Any vehicle maintenance will be performed in contractor yard at the mine site. The BGM Environmental Incident Procedure will be followed in the case of an oil spill or any other environmental incident. All employees and contractors are inducted in this procedure. Any spilt hydrocarbon and the contaminated soil will be removed and the site rehabilitated as required.

3.4 FIRE PREVENTION

All vehicles and stationary equipment are required to carry a serviceable fire extinguisher. BGM and CALM have an "Interagency Agreement on Prescribed Burning and Wildfire Suppression" which will be followed in the event that a fire occurs.

3.5 COMMUNICATIONS

The following call in roster will apply for all field employees:

- If working in groups they call in at 10 am, 2 pm and 6 pm to BGM gatehouse (Note: BGM receives advice on total movement bans by 10 am and informs field employees);
- If working alone they call in every two hours at 10 am, midday, 2 pm, 4 pm, 6 pm to BGM gatehouse.

Their call in must occur within 15 minutes of the scheduled time. If not received within 15 minutes, BGM gatehouse will attempt to contact field employees and/or commence search and rescue operations.

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4 ENVIRONMENTAL MANAGEMENT

4.1 FOREST HYGIENE

4.1.1 DIEBACK CONSIDERATIONS

Forest hygiene mapping was last conducted in November 2002 (Figure 2). The forest hygiene boundaries in the area will be re-mapped prior to the geophysical program commencing by Glevan Consulting.

The following hygiene measures will be adopted for the State Forest area:

- Cleandown on entry and exit to/from forest off approved access tracks (Note: All vehicles clean down when entering the BGM project area and are then classified as “disease-free”).
- Clean down when moving from a “diseased area” to “disease-free area”.
- Clean down when moving from a “diseased area” to an “uninterpretable area”.
- Clean down when moving from an “uninterpretable area” to “disease-free area”.
- Operation in dry soil conditions only.

4.1.2 STATE FOREST WORKING ARRANGEMENTS

All activities carried out in the State Forest will be conducted under the BGM working arrangements with CALM. All vehicles will carry a Blue DRA sticker as required under the working arrangements.

4.2 INFORMAL RESERVES

There are two CAR Informal Reserve areas within the proposed survey area which exist around stream zones. Digital mapping of the CAR Informal Reserves (based on aerial photographic interpretation with some field verification) was obtained from CALM in 2003. BGM employed Matiske Consulting Pty Ltd (Matiske) in 2003 to verify the boundaries of the stream zones and the adjacent Jarrah woodland areas by foot traverse as defined by structural and floristic composition of the communities that occur in the swamp and valley systems (Figure 3).

It would be preferable to access the survey lines via the four wheeled motorbike within the CAR Informal Reserves, but it is understood that this will be subject to CALM’s approval.

The Bibbulmun track is to the south-east of the proposed exploration area as shown in Figure 3. A CAR Informal Reserve buffer exists 200 metres each side of the track. This area will not be entered during the course of the program.

4.3 VEGETATION MAPPING

Matiske were recently requested by the BGM expansion team to review the flora in the vicinity of their gold mining operations at Boddington. A total of seven vegetation complexes were defined for the BGM and Hedges lease areas, see below. The majority of these vegetation complexes are well represented in the conservation estate (based on data in the *2003 Forest Management Plan* – Conservation Commission), namely:

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- Cooke (Ce) – 34.85% of the 1750 pre-European representation in formal and informal reserves.
- Dwellingup (D4) – 26.14% of the 1750 pre-European representation in formal and informal reserves.
- Pindalup (Pn) – 35.10% of the 1750 pre-European representation in formal and informal reserves.
- Michibin (Mi) – 7.10% of the 1750 pre-European representation in formal and informal reserves.
- Yalanbee (Y6) – 22.91% of the 1750 pre-European representation in formal and informal reserves.
- Swamp (S) – 47.50% of the 1750 pre-European representation in formal and informal reserves.
- Williams (Wi) – 0.45% of the 1750 pre-European representation in formal and informal reserves.

The proposed geophysical survey is located within the Pindalup, Swamp, Cooke and Dwellingup complexes (Figure 4).

A total of 406 vascular plant taxa have been recorded on the BGM and Hedges lease areas. No Declared Rare Flora species gazetted under the *Wildlife Conservation Act (1950-1980)* have been located on the BGM and Hedges lease areas. Nine Priority species have been recorded on the BGM and Hedges lease areas. These are *Stenanthemum coronatum* (P3), *Stylidium marradongense* (P3), *Halgania corymbosa* (P3), *Acacia gemina* (P2), *Eucalyptus latens* (P4), *Gastrolobium* sp. Prostrate Boddington (M. Hislop 2130) (P1), *Templetonia drummondii* (P4), *Lasiopetalum cardiophyllum* (P4), and *Senecio leucoglossus* (P4). All of these species have been recorded in the native plant communities and the latter three have been recorded in rehabilitation areas within the mining leases. Some of the Priority species listed previously for the Boddington Gold Mine area have been removed from the Priority list because more populations have been located or have had their Priority ranking changed. These changes are predictable as the conservation status of the respective species changes in response to research. No endangered or vulnerable species, pursuant to s178 of the *Environmental Protection and Biodiversity Conservation Act (1999)* have been located on the Boddington Gold Mine lease areas. Digital data from the CALM WA Herbarium shows that there are two populations of priority species *Hakea oldfieldii* (P3) at the northern end of the proposed survey line and one population of priority species *Senecio leucoglossus* (P4) adjacent to the Back Current line (Figure 5). These species will be identified to the exploration crew so survey pits will not disturb these priority species.

4.4

HERITAGE

Aboriginal Heritage Survey's, involving both ethnographic and archaeological components were conducted in the Hume Tank area in January and March 1997 on behalf of Hedges Gold Pty Ltd.

The survey found there to be three sites within the area (Figure 6):

- HEA01 (Department of Indigenous Affairs site 18749) – Sparse and diffuse artefacts and scatters of quartz
- HEA02 – Two scarred trees 12 m apart
- HEA03 – One scarred tree

As recommended by Veitch and Hook 1997, a 100 m radius buffer will apply to HEA01 and 50 m radius buffer will apply to sites HEA02 and HEA03. No pits will be established within these buffer areas. The connecting wires between the shallow electrode pits will be laid through these buffers and will be checked by foot only. The wires will not affect or move any artefacts in these areas.

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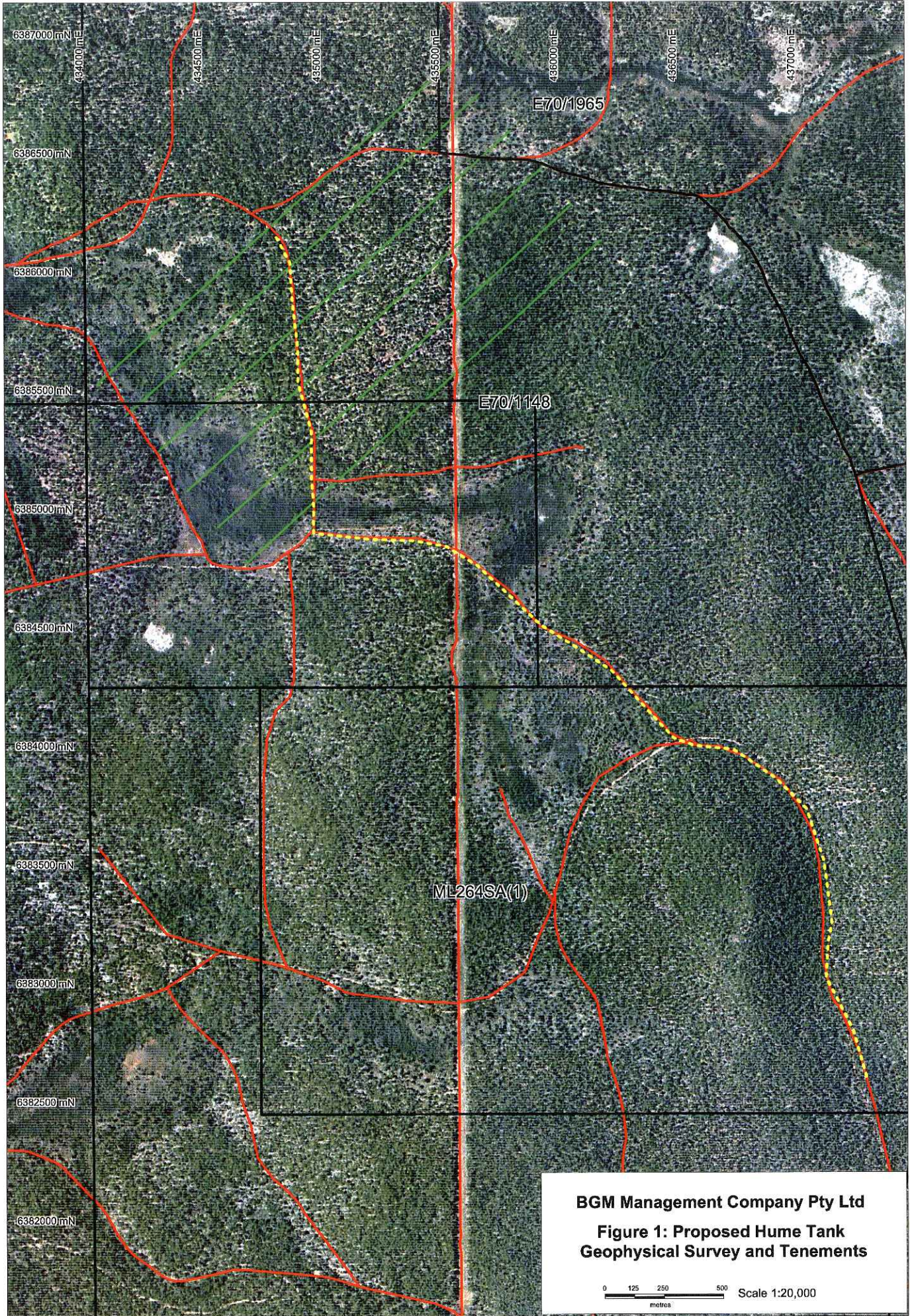
4.5 DRAINAGE AND WATER MANAGEMENT

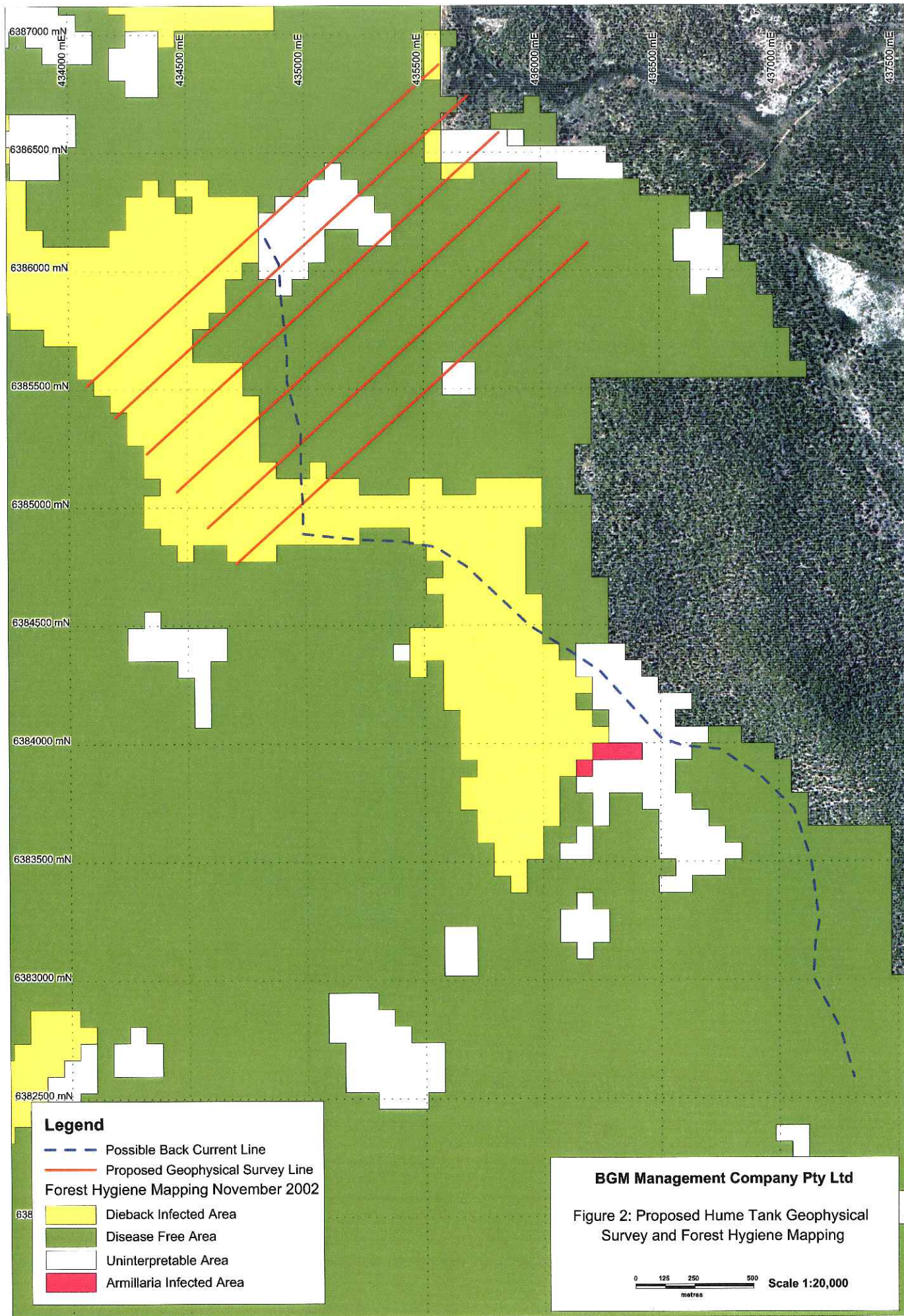
No pits will be dug in vicinity of a watercourse. No water is produced in the survey process, but water is required to moisten the pits, and will be potable water sourced from BGM.

4.6 REHABILITATION

Rehabilitation of the geophysical pits will involve the removal of hessian material and steel plates. The small pile of stockpiled soil at each pit will be raked back into the pit and levelled over. It is not planned to remove the aluminium foil or grease proof paper from the pits as rehabilitation of these pits has shown that the aluminium foil and grease proof paper breaks down within a matter of months. All cables and equipment will be removed from the area at the completion of the program.

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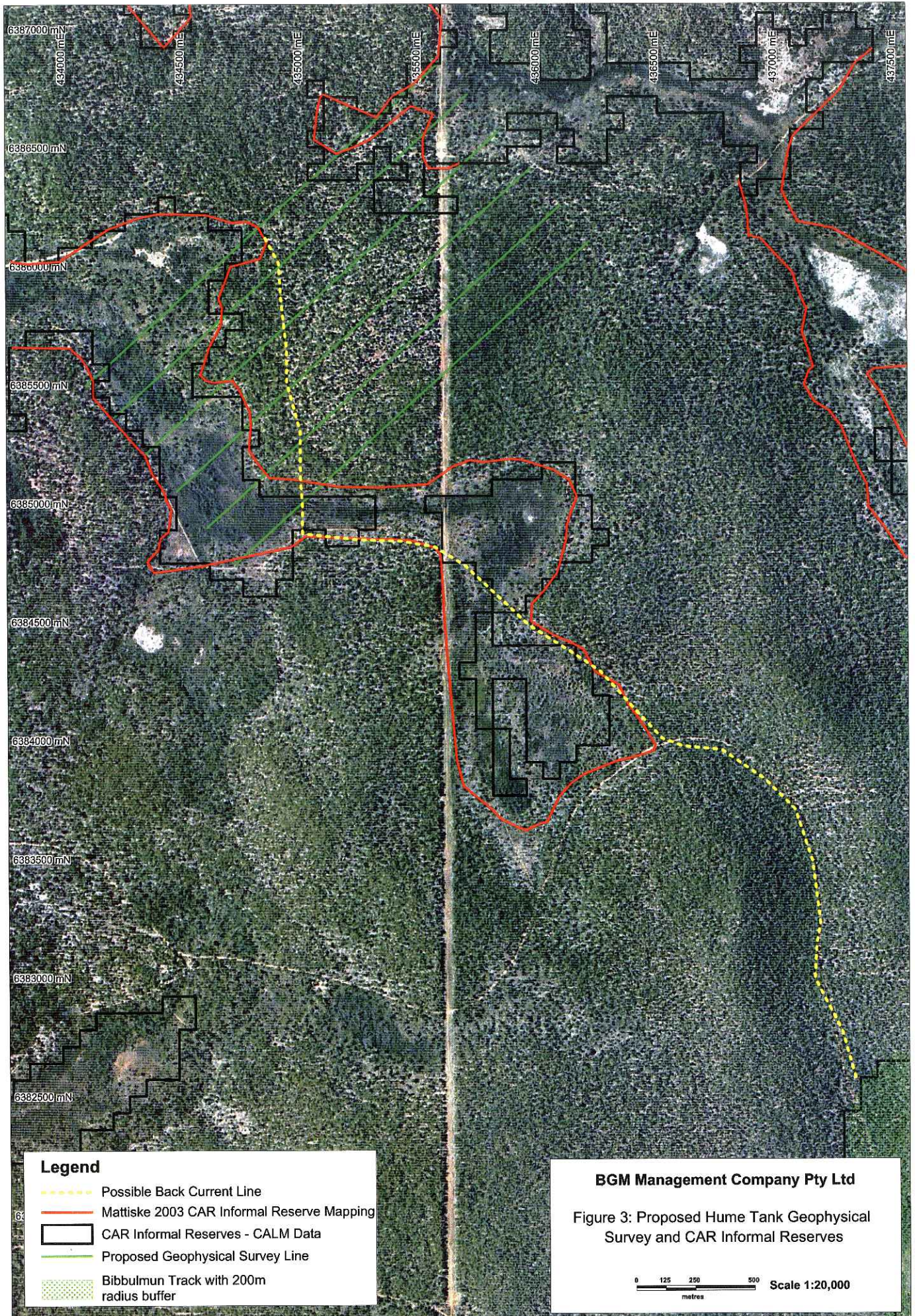
Legend

- - - Possible Back Current Line
 - Proposed Geophysical Survey Line
- Forest Hygiene Mapping November 2002**
- Dieback Infected Area
 - Disease Free Area
 - Uninterpretable Area
 - Armillaria Infected Area

BGM Management Company Pty Ltd

Figure 2: Proposed Hume Tank Geophysical Survey and Forest Hygiene Mapping

0 125 250 500 metres Scale 1:20,000



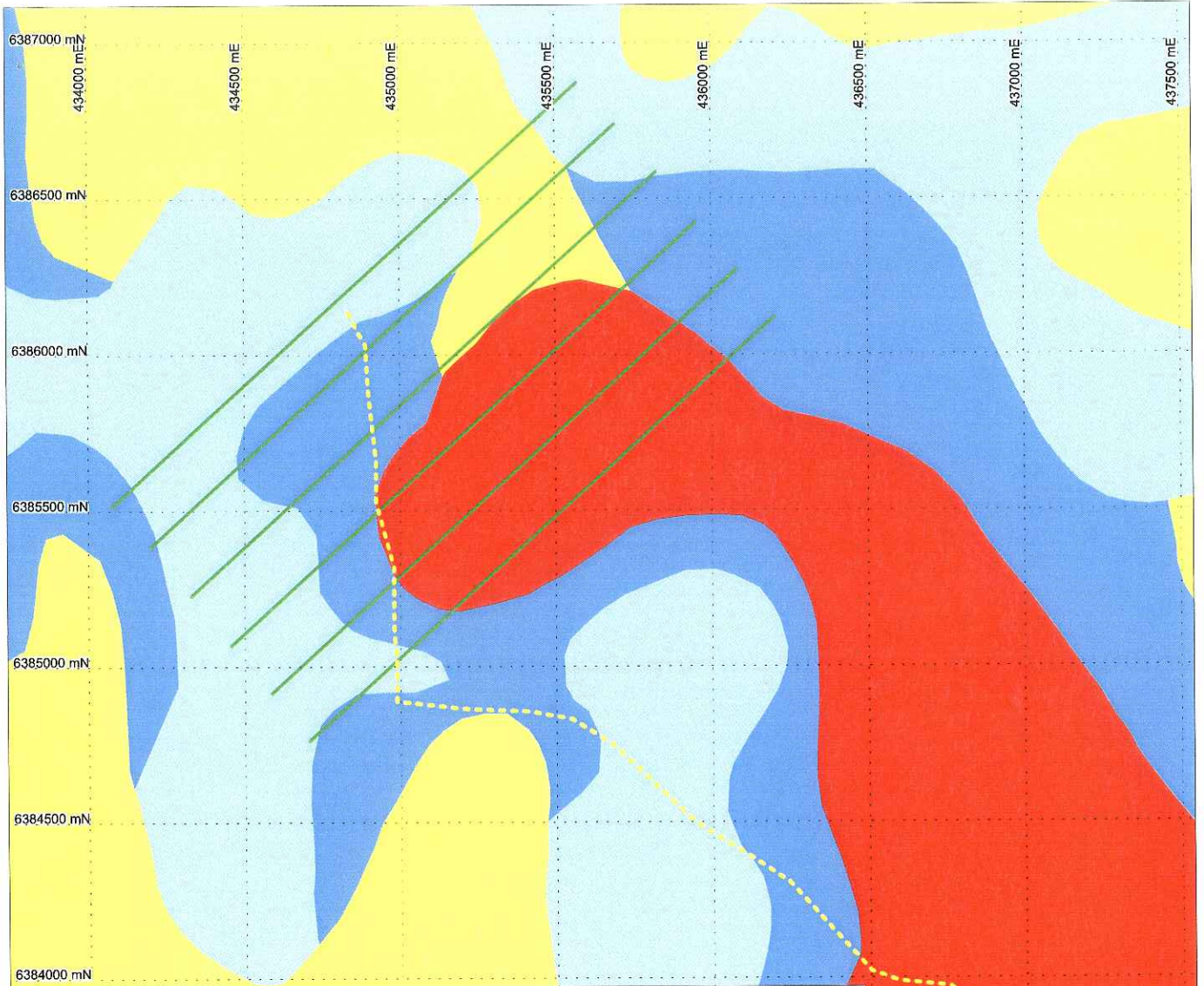
Legend

- Possible Back Current Line
- Mattiske 2003 CAR Informal Reserve Mapping
- CAR Informal Reserves - CALM Data
- Proposed Geophysical Survey Line
- Bibbulmun Track with 200m radius buffer

BGM Management Company Pty Ltd

Figure 3: Proposed Hume Tank Geophysical Survey and CAR Informal Reserves

0 125 250 500 metres Scale 1:20,000



Legend

- - - Possible Back Current Line
- Proposed Geophysical Survey Line

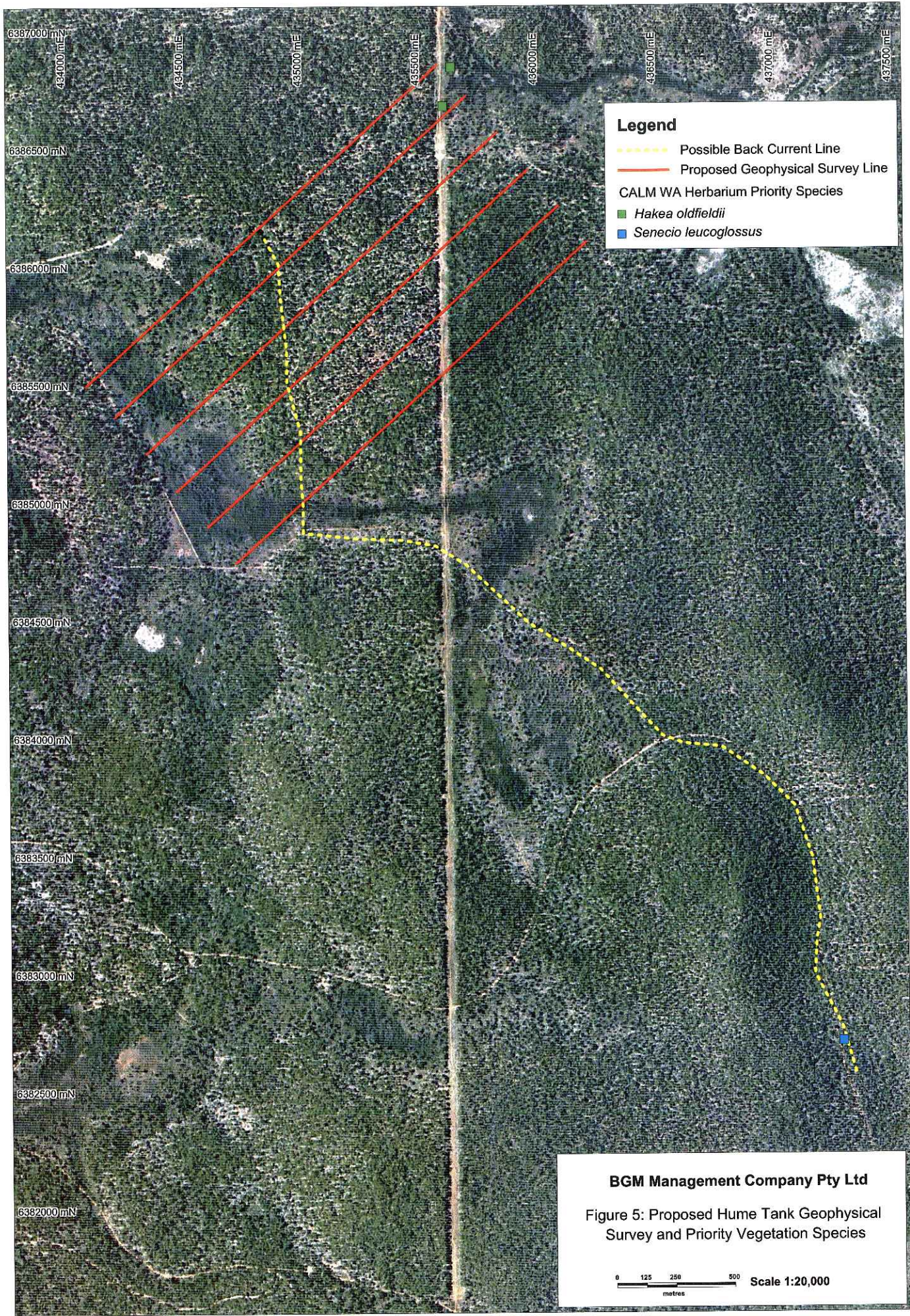
Regional Vegetation Mapping

- COOK COMPLEX
- COOLAKIN COMPLEX IN LOW RAINFALL
- DWELLINGUP AND HESTER COMPLEX IN HIGH RAINFALL
- DWELLINGUP AND HESTER COMPLEX IN MEDIUM TO HIGH RAINFALL
- DWELLINGUP, YALANBEE AND HESTER COMPLEX IN LOW TO MEDIUM RAINFALL
- GOONAPING COMPLEX
- MICHIBIN COMPLEX
- PINDALUP AND YARRAGIL COMPLEX IN LOW TO MEDIUM RAINFALL
- SWAMP COMPLEX
- WILLIAMS - AVON - BROCKMAN - MUMBALLUP COMPLEX
- YALANBEE AND DWELLINGUP COMPLEX IN LOW RAINFALL
- YALANBEE COMPLEX IN LOW RAINFALL
- YARRAGIL COMPLEX (MAXIMUM DEVELOPMENT SWAMPS) IN MEDIUM TO HIGH RAINFALL

BGM Management Company Pty Ltd

Figure 4: Proposed Hume Tank Geophysical Survey and Regional Vegetation Mapping

0 125 250 500 metres **Scale 1:20,000**



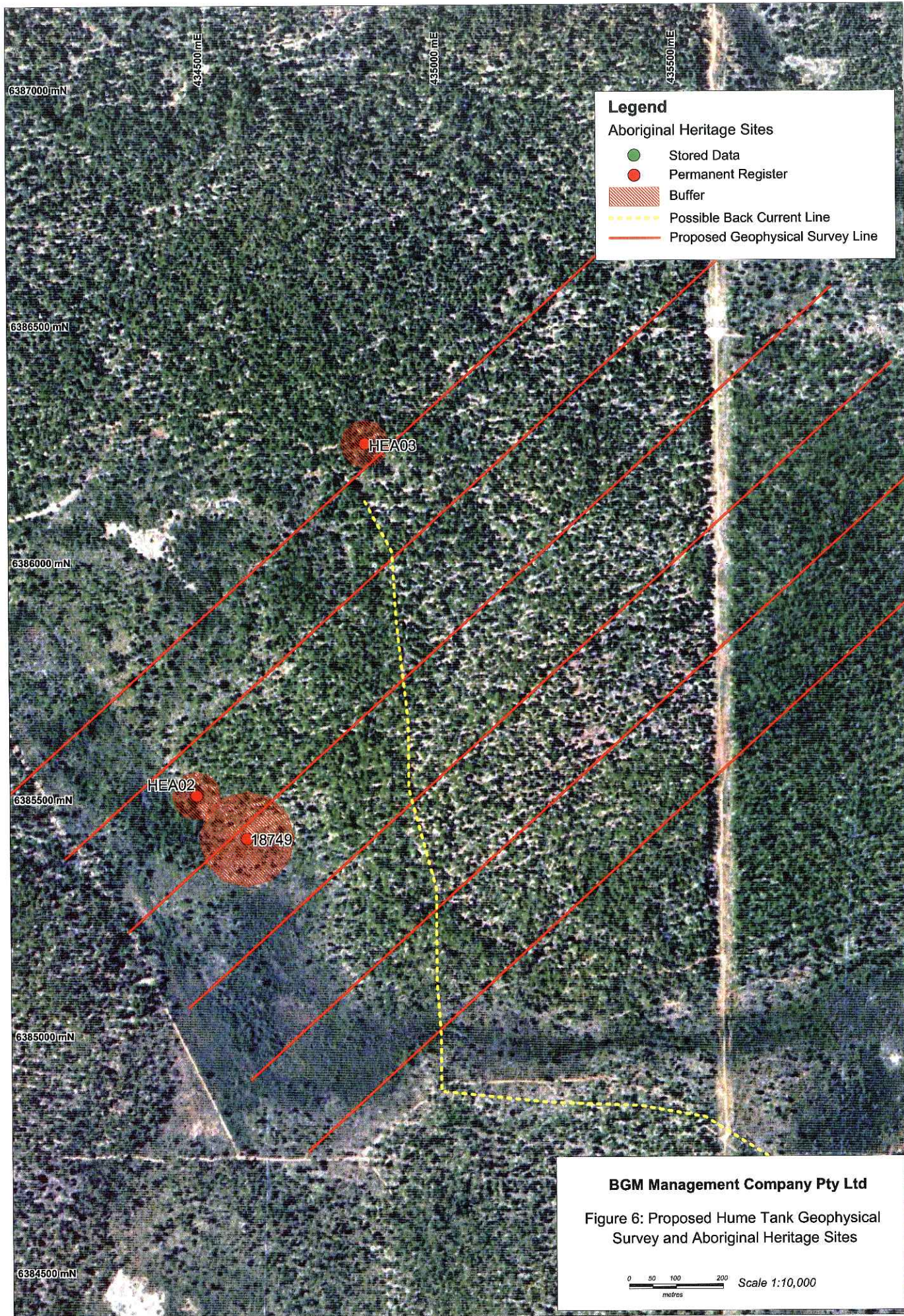
Legend

- Possible Back Current Line
- Proposed Geophysical Survey Line
- CALM WA Herbarium Priority Species
- *Hakea oldfieldii*
- *Senecio leucoglossus*

BGM Management Company Pty Ltd

Figure 5: Proposed Hume Tank Geophysical Survey and Priority Vegetation Species

0 125 250 500 metres Scale 1:20,000



Legend

Aboriginal Heritage Sites

- Stored Data
- Permanent Register
- ▨ Buffer
- Possible Back Current Line
- Proposed Geophysical Survey Line

BGM Management Company Pty Ltd

Figure 6: Proposed Hume Tank Geophysical Survey and Aboriginal Heritage Sites

0 50 100 200 metres Scale 1:10,000

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ORIGINAL

1 INTRODUCTION

1.1 LOCATION AND ACCESS- CONVEYOR GEOPHYSICAL SURVEY 2005/2006

Geophysical survey exploration activities are planned to cover the proposed conveyor route for the Boddington Expansion. The survey location extends south-west into the Hedges Forest Block within State Forest. The planned area of activity is located in tenements ML264sa(2), M70/1031, M70/24, M70/22, M70/25 and M70/564 (Figure 1).

1.2 OBJECTIVES

The objective of the Boddington Gold Mine Joint Venture (BGMJV) is to extend existing oxide and bedrock gold resources surrounding the Boddington Gold Mine in a manner that is consistent with the Joint Venture mission statement. Incorporated in this philosophy is BGM's commitment to their Environmental, Safety and Health and Community Relations Policies.

The objective of this document is to seek approval from the Department of Industry and Resources (DoIR) to explore for gold and other minerals in the area. A similar proposal to this has been sent to the Department of Conservation and Land Management (CALM) to gain approval to work in State Forest.

2 PROPOSED EXPLORATION

2.1 GEOPHYSICAL PROGRAM

The proposed conveyor route geophysical survey is consists of five 2 km lines which are 175m apart. Three lines will be surveyed at a time with overlap on one line. It is expected to take 15 days to complete the survey. Given contractor availability the survey is planned to commence in December 2005.

The proposed survey utilises the MIMDAS (Mt Isa Mines Distributed Acquisition System) geophysical surveying method. The system uses distributed acquisition units (DAU's) that collect data. Electrical current is applied to the ground via transmitter current pits and the responding data is collected at the potential electrode receiver pits and recorded on the DAU's. These pits are 15 cm deep with a diameter up to 50 cm. This data is relayed to a central recording unit (CRU) also referred to as the 'dogbox', via local area network (LAN) cables. These pits are established every 50 metres along the survey lines. In addition there are Back Current Electrode Pits (approximately one to five, similar dimensions as other pits, grouped together) which will be three to five kilometres from the survey lines. These pits are connected back to the 'dogbox' via a cable. Transmitter voltage varies from 300 to 800 volts and corresponding amperage varies from 3 to 10 amps. Vehicle access will be required to lay the cable and periodically check moisture of the pits as they need to be damp like the transmitter points. The Back Current line needs to run in a perpendicular direction to the survey lines. Where possible the cable will follow established tracks.

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3 GEOPHYSICS OPERATIONS

3.1 SURVEY ACCESS

Survey areas will be accessed via existing tracks and gridlines where possible. It is proposed to use a four wheeled motorbike and light vehicle to access the survey lines. Where no track or existing gridline exists, minimal clearing will be required by a front-end loader. Larger trees (>200 mm in diameter) will be avoided. Banksia and sheoaks are removed in preference to Jarrah or Marri trees. Line width must not exceed 2.5 m. Where possible, vegetation will be traversed over rather than removed. Where minimal vegetation removal is required, it will be conducted with the initial push over cast to the side of the lines. Minimal soil movement will be achieved with the loader bucket kept above the ground surface.

There are no Dieback, Armillaria or uninterpretable areas within the proposed geophysical area.

3.2 GEOPHYSICAL SURVEY PITS

Geophysical survey pits are shallow and small, typically to a depth of 15 cm and up to 50 cm diameter. Transmitter current pits will be lined with hessian material, aluminium foil and grease proof paper, filled with soil and moistened with water. Potential Electrode pits will be lined with paper, a steel plate placed within it, then covered with bentonite.

3.3 FLUID CONTAINMENT

All wetting agents are to be biodegradeable. Precautions against accidental oil or fuel leakage will be implemented e.g. lined bunds to store fuel requirements for generators. Any vehicle maintenance will be performed in contractor yard at the mine site. The BGM Environmental Incident Procedure will be followed in the case of an oil spill or any other environmental incident. All employees and contractors are inducted in this procedure. Any spilt hydrocarbon and the contaminated soil will be removed and the site rehabilitated as required.

3.4 FIRE PREVENTION

All vehicles and stationary equipment are required to carry a serviceable fire extinguisher. BGM and CALM have an "Interagency Agreement on Prescribed Burning and Wildfire Suppression" which will be followed in the event that a fire occurs.

3.5 COMMUNICATIONS

The following call in roster will apply for all field employees:

- If working in groups they call in at 10 am, 2 pm and 6 pm to BGM gatehouse (Note: BGM receives advice on total movement bans by 10 am and informs field employees);
- If working alone they call in every two hours at 10 am, midday, 2 pm, 4 pm, 6 pm to BGM gatehouse.

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4 ENVIRONMENTAL MANAGEMENT

4.1.1 DIEBACK CONSIDERATIONS

Forest hygiene mapping was last conducted on the BGM Mining Leases within State Forest during 2005 by Glevan Consulting. As this data is currently being compiled, boundaries mapped in 1999 are displayed in Figure 2. The 2005 boundaries will be added to the maps prior to the commencement of the survey. Forest hygiene boundaries within the BGM private property were re-mapped in 2004 and are displayed in Figure 2.

The following hygiene measures will be adopted for survey area:

- Cleandown on entry and exit to/from forest off approved access tracks (Note: All vehicles clean down when entering the BGM project area and are then classified as “disease-free”).
- Clean down when moving from a “diseased area” to “disease-free area”.
- Clean down when moving from a “diseased area” to an “uninterpretable area”.
- Clean down when moving from an “uninterpretable area” to “disease-free area”.
- Operation in dry soil conditions only.

The proposed conveyor route geophysical survey is entirely within a “disease-free area”.

4.1.2 STATE FOREST WORKING ARRANGEMENTS

All activities carried out in the State forest will be conducted under the BGM working arrangements with CALM. All vehicles will carry a Blue DRA sticker as required under the working arrangements.

4.2 INFORMAL RESERVES

There are no CAR informal reserves within the proposed exploration area.

4.3 VEGETATION MAPPING

Vegetation mapping has been conducted by Mattiske Consulting and has recently been updated for the proposed Boddington Expansion project. The proposed conveyor route geophysical survey is predominately located within open forest of *Eucalyptus marginata* and *Corymbia calophylla*. One line extends into an open woodland of *E. patens* with some *E. wandoo* (Figure 3). An explanation of vegetation types is given in Appendix A.

A total of 406 vascular plant taxa have been recorded on the BGM and Hedges lease areas. No Declared Rare Flora species gazetted under the *Wildlife Conservation Act (1950-1980)* have been located on the BGM and Hedges lease areas. Nine Priority species have been recorded on the BGM and Hedges lease areas. These are *Stenanthemum coronatum* (P3), *Stylidium marradongense* (P3), *Halgania corymbosa* (P3), *Acacia gemina* (P2), *Eucalyptus latens* (P4), *Gastrolobium* sp. Prostrate Boddington (M. Hislop 2130) (P1), *Templetonia drummondii* (P4), *Lasiopetalum cardiophyllum* (P4), and *Senecio leucoglossus* (P4). All of these species have been recorded in the native plant communities and the latter three have been recorded in rehabilitation areas within the mining leases.

Some of the Priority species listed previously for the Boddington Gold Mine area have been removed from the Priority list because more populations have been located or have had their Priority ranking changed. These changes are predictable as the conservation status of the respective species changes in response to research. No endangered or vulnerable species, pursuant to s178 of the *Environmental Protection and Biodiversity Conservation Act (1999)* have been located on the Boddington Gold Mine

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lease areas. There are no declared rare or priority species within the proposed conveyor route geophysical survey (Figure 4).

4.4 HERITAGE

Original Aboriginal heritage surveys were conducted over the BGM and Hedges leases areas the 1980s. An Archaeological Site Audit was conducted by Yates Heritage Consultants in 2003. There are no permanent Aboriginal Heritage Sites within the proposed area of geophysics. There are several sites classified as "Stored Data" on the register (Figure 5). The exploration team will be made aware that sites did exist here, but all artefacts and scatters have been removed and stored.

4.5 DRAINAGE AND WATER MANAGEMENT

No pits will be dug in vicinity of a watercourse. No water is produced in the survey process, but water is required to moisten transmitter pits, and will be potable water sourced from BGM.

4.6 REHABILITATION

Rehabilitation of the geophysical pits will involve the removal of Hessian material and steel plates. The small pile of stockpiled soil at each pit will be raked back into the pit and levelled over. It is not planned to remove the aluminium foil or grease proof paper from the pits as rehabilitation of pit has shown that the aluminium foil and grease proof paper breaks down within a matter of months. All cables will be removed from the area at the completion of the program. Where removal of vegetation has occurred, it will be raked back over the lines.

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5 Appendices

5.1 Appendix A Vegetation Mapping Codes

A – 20SMs: Tall shrubland to open heath of *Melaleuca lateritia*, *Hakea varia*, *Melaleuca viminea* and *Melaleuca incana* subsp. *incana*. Other indicator species – *Baumea juncea*, *Isolepis nodosa* and *Meeboldina coangustata*.

AX: Open woodland of *Eucalyptus rudis*. Other indicator species – *Acacia saligna*, *Melaleuca incana* subsp. *incana* and *Hypocalymma angustifolium*.

AY – 28Er: Open woodland of *Eucalyptus rudis* – *Eucalyptus wandoo*. Other indicator species – *Acacia saligna*, *Hakea prostrata* and *Hypocalymma angustifolium*.

B: Open woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Mesomelaena tetragona*, *Adenanthos obovatus* and *Baeckea camphorosmae*.

D – 19JHl: Open forest of *Corymbia calophylla* – *Eucalyptus marginata*. Other indicator species – *Hakea lissocarpha*, *Macrozamia riedlei*, *Acacia alata*, *Baeckea camphorosmae*, *Hypocalymma angustifolium* and *Phyllanthus calycinus*.

DG – 19JHl/23HDc: Open forest of *Corymbia calophylla* – *Eucalyptus marginata* with dense layer of low shrub species. Other indicator species – *Hakea lissocarpha*, *Macrozamia riedlei*, *Pericalymma ellipticum*, *Grevillea bipinnatifida*, *Allocasuarina humilis*, *Acacia alata*, *Baeckea camphorosmae*, *Hypocalymma angustifolium* and *Phyllanthus calycinus*. Influence of G3 – 23HDc in understorey.

E: Open woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Mesomelaena tetragona*, *Kingia australis*, *Leptospermum erubescens* and *Baeckea camphorosmae*.

G3 – 23HDc: Open heath of *Dryandra squarrosa* subsp. *squarrosa*, *Hakea incrassata*, *Hakea undulata*, *Petrophile heterophylla* and *Petrophile serruriae*. Other indicator species – *Eucalyptus drummondii*.

G4 – 29HEs: Open scrub and tall shrubland with admixtures of Mallee species – *Eucalyptus latens* and *Eucalyptus aspersa*. Other indicator species – *Hakea trifurcata* and *Hakea undulata*.

H – 19JPs: Open forest to woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Petrophile striata*, *Daviesia decurrens*, *Daviesia longifolia* and *Daviesia rhombifolia*.

HG – 19JPs/23HDc: Open forest to woodland of *Eucalyptus marginata* – *Corymbia calophylla* with dense layer of low shrub species. Other indicator species – *Petrophile striata*, *Daviesia decurrens*, *Daviesia longifolia*, *Pericalymma ellipticum*, *Grevillea bipinnatifida* and *Allocasuarina humilis*. Influence of G3 – 23HDc in understorey.

J: Open woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Conospermum stoechadis*, *Patersonia rudis* and *Baeckea camphorosmae*.

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L-27Y: Open woodland of *Eucalyptus patens* with some *Eucalyptus wandoo*. Other indicator species – *Xanthorrhoea preissii*, *Macrozamia riedlei*, *Trymalium ledifolium*, *Acacia saligna* and *Hakea prostrata*.

M-11W1: Open woodland of *Eucalyptus wandoo*. Other indicator species – *Trymalium ledifolium*, *Macrozamia riedlei* and *Hakea lissocarpha*.

MG-11W1/23HDc: Open woodland of *Eucalyptus wandoo* with dense layer of low shrub species. Other indicator species – *Trymalium ledifolium*, *Macrozamia riedlei*, *Pericalymma ellipticum*, *Hypocalymma angustifolium*, *Grevillea bipinnatifida*, *Allocasuarina humilis* and *Hakea lissocarpha*. Influence of G3-23HDc in understory.

O: Open forest to woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Daviesia decurrens*, *Daviesia preissii* and *Bossiaea ornata*.

P-19JLc: Open forest of *Eucalyptus marginata* – *Allocasuarina fraseriana* with admixtures of *Corymbia calophylla* and *Banksia grandis*. Other indicator species – *Lasiopetalum cardiophyllum*, *Lasiopetalum floribundum*, *Lechenaultia biloba* and *Ptilotus drummondii* var. *drummondii*.

PW: Open forest of *Eucalyptus marginata* – *Allocasuarina fraseriana* with admixtures of *Corymbia calophylla* and *Banksia grandis*. Other indicator species – *Lasiopetalum cardiophyllum*, *Lechenaultia biloba* and *Hypocalymma angustifolium*.

R: Open woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Trymalium ledifolium*, *Phyllanthus calycinus* and *Hypocalymma angustifolium*.

S-19JBg: Open forest of *Eucalyptus marginata* – *Corymbia calophylla* with admixtures of *Allocasuarina fraseriana*, *Banksia grandis* and *Persoonia longifolia*. Other indicator species – *Acacia celastrifolia*, *Hovea chorizemifolia*, *Daviesia preissii*, *Leucopogon capitellatus* and *Styphelia tenuiflora*.

SP-19JBg/19JLc: Open forest of *Eucalyptus marginata* – *Corymbia calophylla* and *Allocasuarina fraseriana* with admixtures of *Banksia grandis*. Other indicator species – *Lasiopetalum cardiophyllum*, *Acacia celastrifolia*, *Styphelia tenuiflora*, *Daviesia decurrens* and *Trymalium ledifolium*.

ST-19JSd: Open forest of *Eucalyptus marginata* – *Corymbia calophylla* with admixtures of *Allocasuarina fraseriana*, *Persoonia longifolia* and *Banksia grandis*. Other indicator species – *Stylidium dichotomum*, *Acacia urophylla*, *Acacia celastrifolia*, *Leucopogon verticillatus*, *Clematis pubescens* and *Leucopogon capitellatus*.

SW: Open forest of *Eucalyptus marginata* – *Corymbia calophylla* with moisture indicators including *Hypocalymma angustifolium* and *Baeckea camphorosmae*. Other indicator species – *Acacia celastrifolia*, *Hovea chorizemifolia*, *Daviesia preissii*, *Leucopogon capitellatus* and *Styphelia tenuiflora*.

W: Open forest of *Corymbia calophylla* – *Eucalyptus marginata* – *Eucalyptus patens*. Other indicator species – *Hakea lissocarpha*, *Hypocalymma angustifolium*, *Acacia extensa* and *Synaphea petiolaris*.

Y-11W2: Open woodland of *Eucalyptus wandoo*. Other indicator species – *Gompholobium marginatum*, *Acacia nervosa*, *Baeckea camphorosmae*, *Hypocalymma angustifolium*, *Macrozamia riedlei*, *Phyllanthus calycinus* and *Gastrolobium calycinum*.

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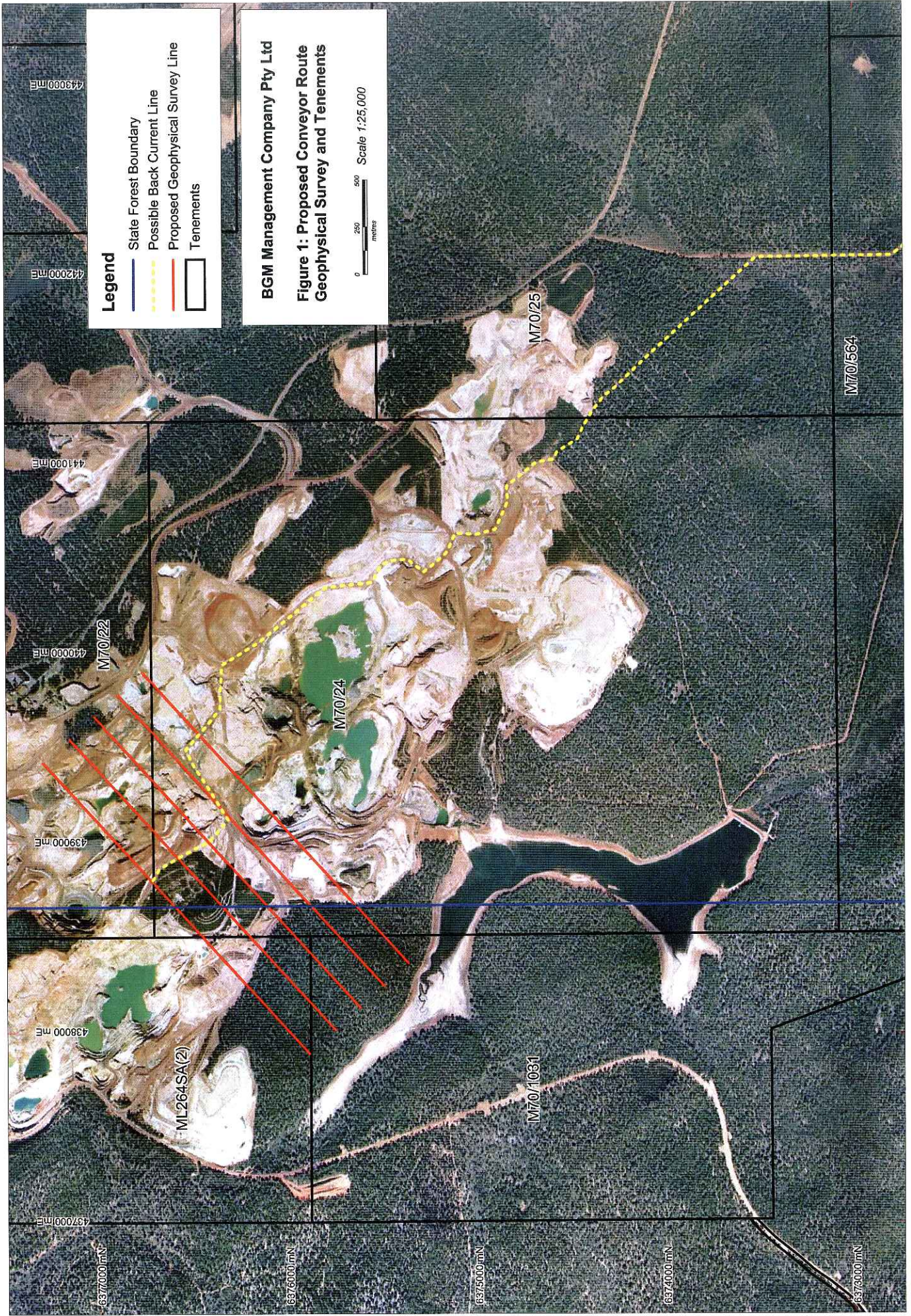
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YG – 11W2/23HDc: Open woodland of *Eucalyptus wandoo* with dense layer of low shrub species. Other indicator species – *Gompholobium marginatum*, *Acacia nervosa*, *Baeckea camphorosmae*, *Hypocalymma angustifolium*, *Macrozamia riedlei*, *Pericalymma ellipticum*, *Grevillea bipinnatifida*, *Allocasuarina humilis*, *Phyllanthus calycinus* and *Gastrolobium calycinum*. Influence of G3 – 23HDc in understorey.

Z – 19JMr: Open forest of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Macrozamia riedlei*, *Xanthorrhoea preissii*, *Hakea lissocarpa* and *Phyllanthus calycinus*.

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Legend

- State Forest Boundary
- Possible Back Current Line
- Proposed Geological Survey Line
- Tenements

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Figure 1: Proposed Conveyor Route Geological Survey and Tenements

Scale 1:25,000

437000 mE 438000 mE 439000 mE 440000 mE 441000 mE 442000 mE 443000 mE

6374000 mN 6375000 mN 6376000 mN 6377000 mN

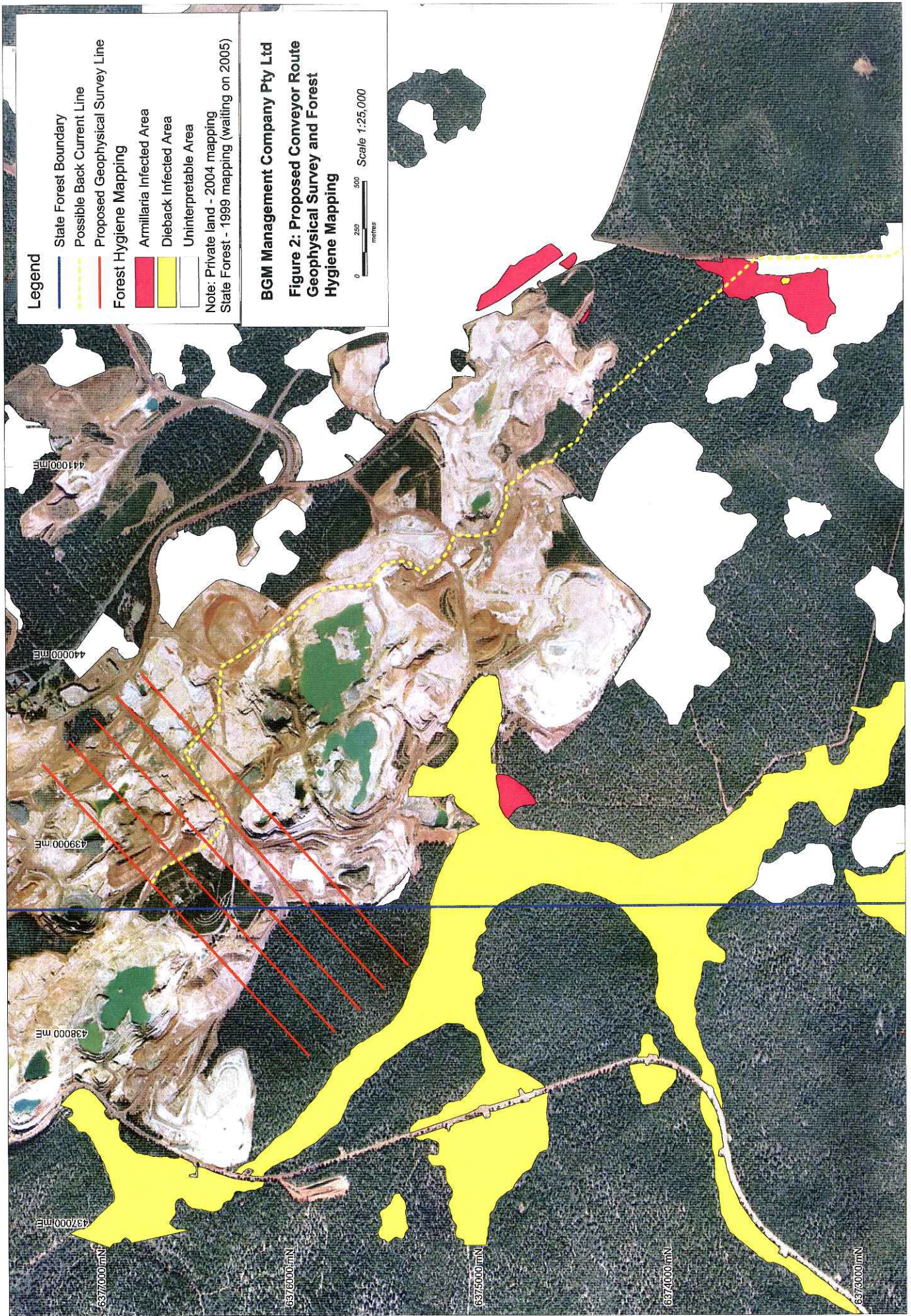
ML-264SA(2)

M70/24

M70/25

M70/1031

M70/564



Legend

- State Forest Boundary
 - Possible Back Current Line
 - Proposed Geophysical Survey Line
 - Forest Hygiene Mapping
 - Armillaria Infected Area
 - Dieback Infected Area
 - Uninterpretable Area
- Note: Private land - 2004 mapping
State Forest - 1999 mapping (waiting on 2005)

BGM Management Company Pty Ltd
Figure 2: Proposed Conveyor Route
Geophysical Survey and Forest
Hygiene Mapping

Scale 1:25,000

0 250 500 metres

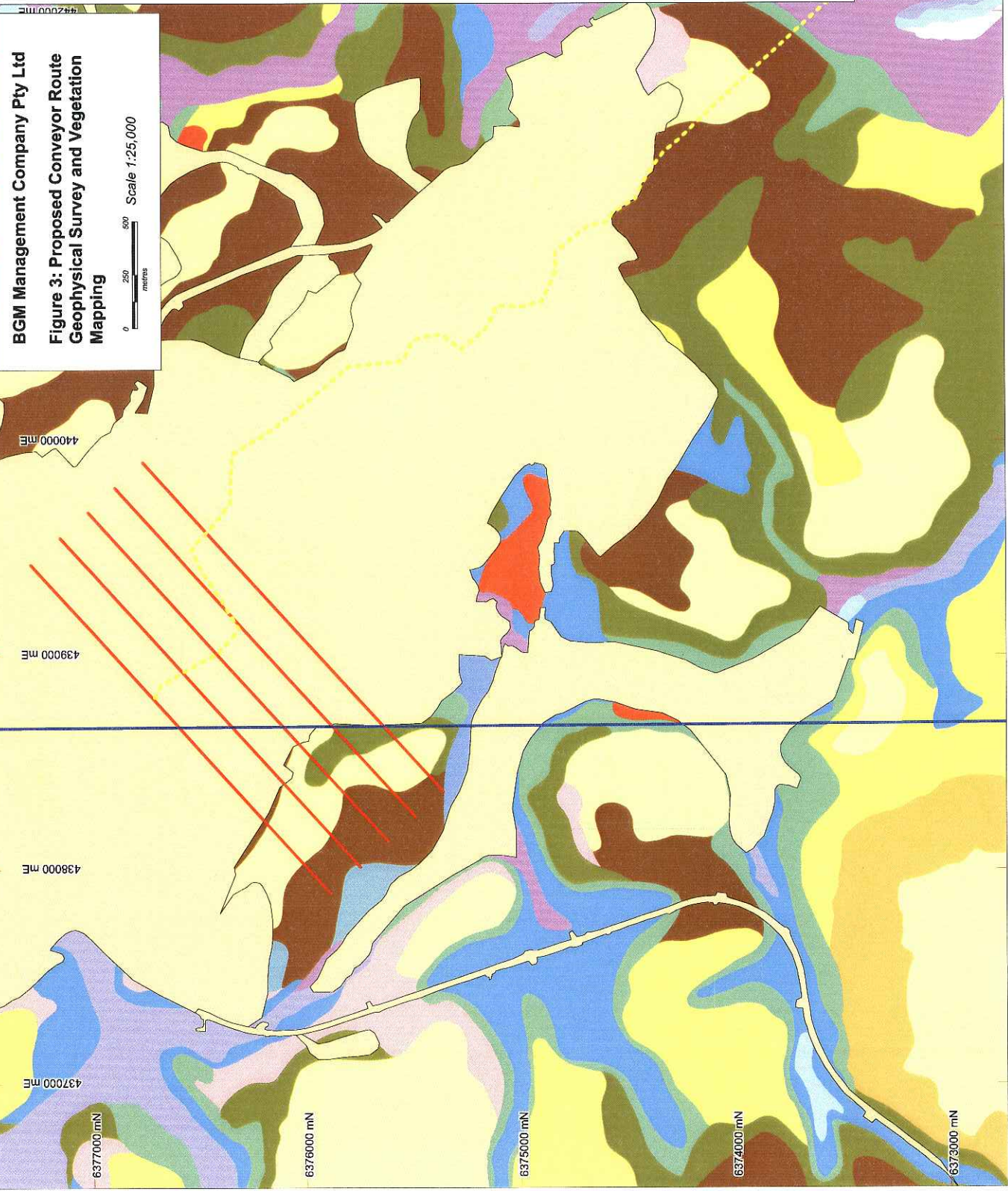
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Figure 3: Proposed Conveyor Route
Geophysical Survey and Vegetation
Mapping

Scale 1:25,000



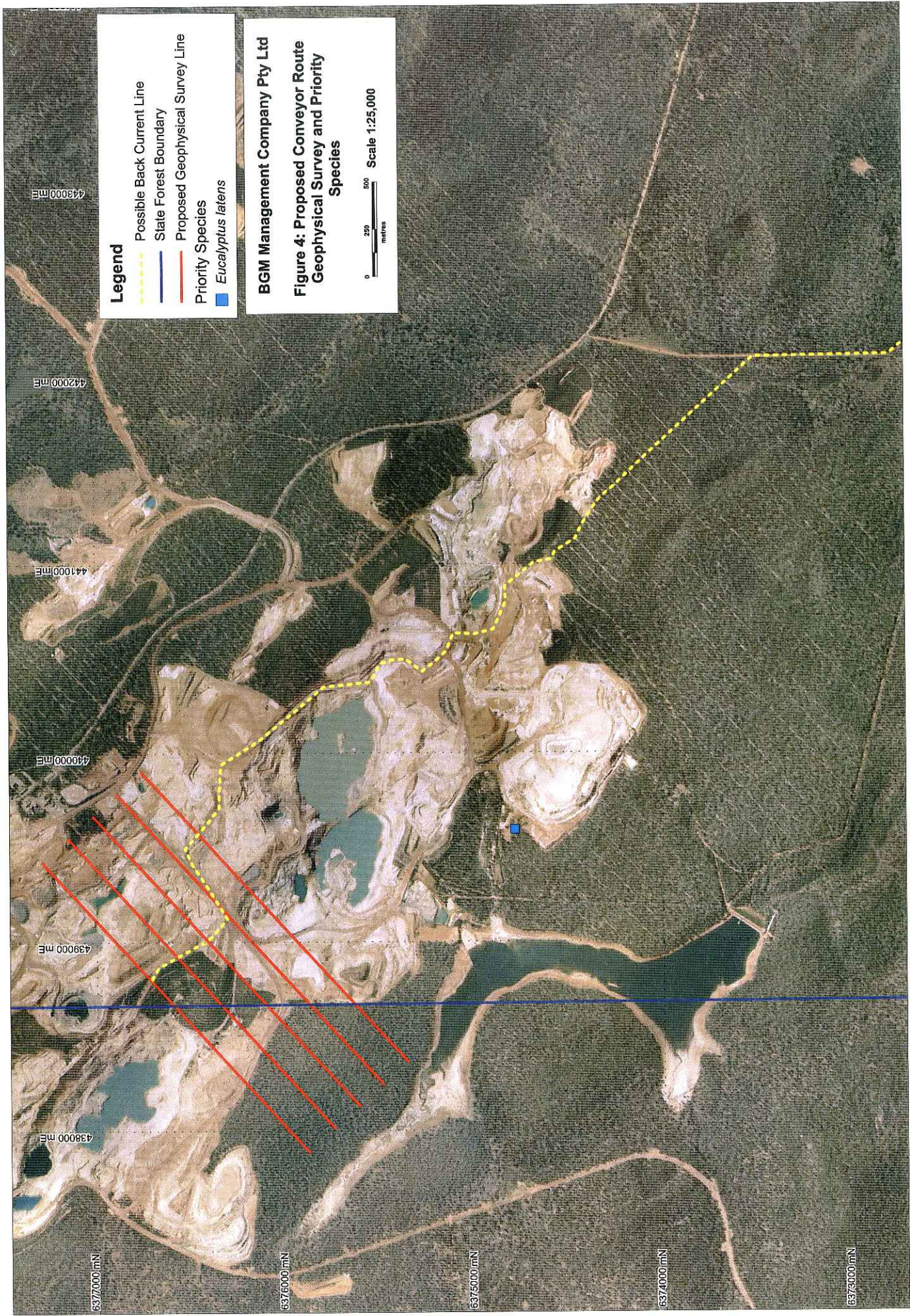
437000 mE
 438000 mE
 439000 mE
 440000 mE

6377000 mN
 6376000 mN
 6375000 mN
 6374000 mN
 6373000 mN



Legend

- Line
 - Possible Back Current Line
 - Proposed Geophysical Survey Line
 - Cleared Area
- Vegetation Mapping Codes**
- A-20Ms
 - AX
 - AY-28Er
 - B
 - D-19JH1
 - DG-19JH1/23HDc
 - E
 - G3-23HDc
 - G4-29HES
 - H-19JPS
 - HG-19JPS/23HDc
 - L-27Y
 - M-11W1
 - MG-11W1/23HDc
 - O
 - P-19JLc
 - PW
 - R
 - S-19JBg
 - SP-19JBg/19JLc
 - ST-19Jsd
 - SW
 - W
 - Y-11W2
 - YG-11W2/23HDc
 - Z-19JMr



Legend

- Possible Back Current Line
- Slate Forest Boundary
- Proposed Geophysical Survey Line
- Priority Species
- Eucalyptus latens*

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**Figure 4: Proposed Conveyor Route
Geophysical Survey and Priority
Species**

0 250 500 metres
Scale 1:25,000

443000 mE

442000 mE

441000 mE

440000 mE

439000 mE

438000 mE

6377000 mN

6376000 mN

6375000 mN

6374000 mN

6373000 mN



Legend

Aboriginal Heritage Sites

- Stored Data
- Permanent Sites
- Buffer
- State Forest Boundary Line
- Possible Back Current Line
- Proposed Geophysical Survey Line

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Figure 5: Proposed Conveyor Route Geophysical Survey and Aboriginal Heritage Sites

0 200 300 metres

Scale 1:25,000

443000 mE
442000 mE
441000 mE
440000 mE
439000 mE
438000 mE
437000 mE

6378000 mN
6376000 mN
6375000 mN
6374000 mN
6373000 mN

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1 INTRODUCTION

1.1 LOCATION AND ACCESS- PROPOSED WASTE DUMP GEOPHYSICAL SURVEY 2005

Geophysical survey exploration activities are planned to cover the proposed Boddington Expansion waste dump. The proposed survey extends west into the Hedges forest block within State Forest and is located within tenements E70/1148, ML264SA(2), M70/1031, M70/24, M70/22, M70/25 and M70/564 (Figure 1).

1.2 OBJECTIVES

The objective of the Boddington Gold Mine Joint Venture (BGMJV) is to extend existing oxide and bedrock gold resources surrounding the Boddington Gold Mine in a manner that is consistent with the Joint Venture mission statement. Incorporated in this philosophy is BGM's commitment to their Environmental, Safety and Health and Community Relations Policies.

The objective of this document is to seek approval from the Department of Industry and Resources (DoIR) to explore for gold and other minerals in the area. A similar proposal to this has been sent to the Department of Conservation and Land Management (CALM) to gain approval to work in State Forest.

2 PROPOSED EXPLORATION

2.1 GEOPHYSICAL PROGRAM

The proposed waste dump geophysical survey consists of four areas; A, B, C, and D. There are 25 lines proposed in total between 1 and 2 km in length which are 200m apart. It is expected to take two months to complete the survey. Given contractor availability the survey is planned to commence in early 2006.

The proposed survey utilises the MIMDAS (Mt Isa Mines Distributed Acquisition System) geophysical surveying method. The system uses distributed acquisition units (DAU's) that collect data. Electrical current is applied to the ground via transmitter current pits and the responding data is collected at the potential electrode receiver pits and recorded on the DAU's. These pits are 15 cm deep with a diameter up to 50 cm. This data is relayed to a central recording unit (CRU) also referred to as the 'dogbox', via local area network (LAN) cables. These pits are established every 50 metres along the survey lines. In addition there are Back Current Electrode Pits (approximately one to five, similar dimensions as other pits, grouped together) which will be three to five kilometres from the survey lines. These pits are connected back to the 'dogbox' via a cable. Transmitter voltage varies from 300 to 800 volts and corresponding amperage varies from 3 to 10 amps. Vehicle access will be required to lay the cable and periodically check moisture of the pits as they need to be damp like the transmitter points. The Back Current line needs to run in a perpendicular direction to the survey lines. Where possible the cable will follow established tracks.

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3 GEOPHYSICS OPERATIONS

3.1 SURVEY ACCESS

Survey areas will be accessed via existing tracks and gridlines where possible. It is proposed to use a four wheeled motorbike and light vehicle to access the survey lines. Where no track or existing gridline exists, minimal clearing will be required by a front-end loader. Larger trees (>200 mm in diameter) will be avoided. Banksia and sheoaks are removed in preference to Jarrah or Marri trees. Line width will not exceed 2.5 m. Where possible, vegetation will be traversed over rather than removed. Where minimal vegetation removal is required it will be conducted with the initial push over cast to the side of the lines. Minimal soil movement will be achieved with the loader bucket kept above the ground surface.

Dieback/Armillaria infected areas will be segregated from dieback free and uninterpretable areas.

3.2 GEOPHYSICAL SURVEY PITS

Geophysical survey pits are shallow and small, typically to a depth of 15 cm and up to 50 cm diameter. Transmitter current pits will be lined with hessian material, aluminium foil and grease proof paper, filled with soil and moistened with water. Potential Electrode pits will be lined with grease proof paper, a steel plate placed within it, then covered with bentonite.

3.3 FLUID CONTAINMENT

All wetting agents are to be biodegradable. Precautions against accidental oil or fuel leakage will be implemented e.g. lined bunds to store fuel requirements for generators. Any vehicle maintenance will be performed in contractor yard at the mine site. The BGM Environmental Incident Procedure will be followed in the case of an oil spill or any other environmental incident. All employees and contractors are inducted in this procedure. Any spilt hydrocarbon and the contaminated soil will be removed and the site rehabilitated as required.

3.4 FIRE PREVENTION

All vehicles and stationary equipment are required to carry a serviceable fire extinguisher. BGM and CALM have an "Interagency Agreement on Prescribed Burning and Wildfire Suppression" which will be followed in the event that a fire occurs.

3.5 COMMUNICATIONS

The following call in roster will apply for all field employees:

- If working in groups they call in at 10 am, 2 pm and 6 pm to BGM gatehouse (Note: BGM receives advice on total movement bans by 10 am and informs field employees);
- If working alone they call in every two hours at 10 am, midday, 2 pm, 4 pm, 6 pm to BGM gatehouse.

Their call in must occur within 15 minutes of the scheduled time. If not received within 15 minutes, BGM gatehouse will attempt to contact field employees and/or commence search and rescue operations.

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4 ENVIRONMENTAL MANAGEMENT

4.1 FOREST HYGIENE

4.1.1 DIEBACK CONSIDERATIONS

Forest hygiene mapping was last conducted on the BGM Mining Leases within State Forest during 2005 by Glevan Consulting. As this data is currently being compiled, boundaries mapped in 1999 are displayed in Figure 2. The 2005 boundaries will be added to the maps prior to the commencement of the survey. Forest hygiene boundaries within the BGM private property were re-mapped in 2004 (Figure 2).

The following hygiene measures will be adopted for the State Forest area:

- Cleandown on entry and exit to/from forest.
- Clean down when moving from a “diseased area” to “disease-free area”.
- Clean down when moving from a “diseased area” to an “uninterpretable area”.
- Clean down when moving from an “uninterpretable area” to “disease-free area”.
- Operation in dry soil conditions only.

Sections of the proposed waste dump geophysical survey are located within Dieback, Armillaria and Uninterpretable areas.

4.1.2 STATE FOREST WORKING ARRANGEMENTS

All activities carried out in the State Forest will be conducted under the BGM working arrangements with CALM. All vehicles will carry a Blue DRA sticker as required under the working arrangements.

4.2 INFORMAL RESERVES

There is one CAR Informal Reserve area within the proposed survey area which exists around the Thirty-four Mile Brook. Digital mapping of the CAR Informal Reserves (based on aerial photographic interpretation with some field verification) was obtained from CALM in 2003 (Figure 3).

It would be preferable to access the survey lines via the four wheeled motorbike within the CAR Informal Reserves, but it is understood that this will be subject to CALM’s approval. There will be no vehicular access within the Thirty-four Mile Brook.

4.3 VEGETATION MAPPING

Vegetation mapping has been conducted by Mattiske Consulting and has recently been updated for the proposed Boddington Expansion project. The proposed conveyor route geophysical survey is located within various vegetation types ranging from open woodland of *Eucalyptus rudis* and *Eucalyptus wandoo*, open forest of *Corymbia calophylla*, *Eucalyptus marginata* and *Eucalyptus patens* (Figure 4). Three lines extend into the G3 vegetation type which is typically heath type vegetation. No vehicular access will occur within this vegetation type. An explanation of vegetation types is given in Appendix A.

A total of 406 vascular plant taxa have been recorded on the BGM and Hedges lease areas. No Declared Rare Flora species gazetted under the *Wildlife Conservation Act (1950-1980)* have been located on the BGM and Hedges lease areas. Nine Priority species have been recorded on the BGM and

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Hedges lease areas. These are *Stenanthemum coronatum* (P3), *Stylidium marradongense* (P3), *Halgania corymbosa* (P3), *Acacia gemina* (P2), *Eucalyptus latens* (P4), *Gastrolobium* sp. Prostrate Boddington (M. Hislop 2130) (P1), *Templetonia drummondii* (P4), *Lasiopetalum cardiophyllum* (P4), and *Senecio leucoglossus* (P4). All of these species have been recorded in the native plant communities and the latter three have been recorded in rehabilitation areas within the mining leases. Some of the Priority species listed previously for the Boddington Gold Mine area have been removed from the Priority list because more populations have been located or have had their Priority ranking changed. These changes are predictable as the conservation status of the respective species changes in response to research. No endangered or vulnerable species, pursuant to s178 of the *Environmental Protection and Biodiversity Conservation Act (1999)* have been located on the Boddington Gold Mine lease areas. One population of Priority Species *Eucalyptus latens* (P4) occurs between two survey lines (Figure 5). There will be no disturbance to *E. latens* during the proposed geophysical survey.

4.4 HERITAGE

Original Aboriginal heritage surveys were conducted over the BGM and Hedges leases areas the 1980s. An Archaeological Site Audit was conducted by Yates Heritage Consultants in 2003. There are no permanent Aboriginal Heritage Sites within the proposed area of geophysics. There are several sites classified as "Stored Data" on the register (Figure 6). The exploration team will be made aware that sites did exist here, but all artefacts and scatters have been removed and stored.

4.5 DRAINAGE AND WATER MANAGEMENT

No pits will be dug in vicinity of a watercourse. No water is produced in the survey process, but water is required to moisten the pits, and will be potable water sourced from BGM.

4.6 REHABILITATION

Rehabilitation of the geophysical pits will involve the removal of hessian material and steel plates. The small pile of stockpiled soil at each pit will be raked back into the pit and levelled over. It is not planned to remove the aluminium foil or grease proof paper from the pits as rehabilitation of pits has shown that the aluminium foil and grease proof paper breaks down within a matter of months. All cables will be removed from the area at the completion of the program. Where removal of vegetation has occurred, it will be raked back over the lines.

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5 Appendices

5.1 Appendix A Vegetation Mapping Codes

A – 20SMs: Tall shrubland to open heath of *Melaleuca lateritia*, *Hakea varia*, *Melaleuca viminea* and *Melaleuca incana* subsp. *incana*. Other indicator species – *Baumea juncea*, *Isolepis nodosa* and *Meeboldina coangustata*.

AX: Open woodland of *Eucalyptus rudis*. Other indicator species – *Acacia saligna*, *Melaleuca incana* subsp. *incana* and *Hypocalymma angustifolium*.

AY – 28Er: Open woodland of *Eucalyptus rudis* – *Eucalyptus wandoo*. Other indicator species – *Acacia saligna*, *Hakea prostrata* and *Hypocalymma angustifolium*.

B: Open woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Mesomelaena tetragona*, *Adenanthos obovatus* and *Baeckea camphorosmae*.

D – 19JHl: Open forest of *Corymbia calophylla* – *Eucalyptus marginata*. Other indicator species – *Hakea lissocarpha*, *Macrozamia riedlei*, *Acacia alata*, *Baeckea camphorosmae*, *Hypocalymma angustifolium* and *Phyllanthus calycinus*.

DG – 19JHl/23HDc: Open forest of *Corymbia calophylla* – *Eucalyptus marginata* with dense layer of low shrub species. Other indicator species – *Hakea lissocarpha*, *Macrozamia riedlei*, *Pericalymma ellipticum*, *Grevillea bipinnatifida*, *Allocasuarina humilis*, *Acacia alata*, *Baeckea camphorosmae*, *Hypocalymma angustifolium* and *Phyllanthus calycinus*. Influence of G3 – 23HDc in understorey.

E: Open woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Mesomelaena tetragona*, *Kingia australis*, *Leptospermum erubescens* and *Baeckea camphorosmae*.

G3 – 23HDc: Open heath of *Dryandra squarrosa* subsp. *squarrosa*, *Hakea incrassata*, *Hakea undulata*, *Petrophile heterophylla* and *Petrophile serruriae*. Other indicator species – *Eucalyptus drummondii*.

G4 – 29HEs: Open scrub and tall shrubland with admixtures of Mallee species – *Eucalyptus latens* and *Eucalyptus aspersa*. Other indicator species – *Hakea trifurcata* and *Hakea undulata*.

H – 19JPs: Open forest to woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Petrophile striata*, *Daviesia decurrens*, *Daviesia longifolia* and *Daviesia rhombifolia*.

HG – 19JPs/23HDc: Open forest to woodland of *Eucalyptus marginata* – *Corymbia calophylla* with dense layer of low shrub species. Other indicator species – *Petrophile striata*, *Daviesia decurrens*, *Daviesia longifolia*, *Pericalymma ellipticum*, *Grevillea bipinnatifida* and *Allocasuarina humilis*. Influence of G3 – 23HDc in understorey.

J: Open woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Conospermum stoechadis*, *Patersonia rudis* and *Baeckea camphorosmae*.

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L-27Y: Open woodland of *Eucalyptus patens* with some *Eucalyptus wandoo*. Other indicator species – *Xanthorrhoea preissii*, *Macrozamia riedlei*, *Trymalium ledifolium*, *Acacia saligna* and *Hakea prostrata*.

M-11W1: Open woodland of *Eucalyptus wandoo*. Other indicator species – *Trymalium ledifolium*, *Macrozamia riedlei* and *Hakea lissocarpha*.

MG-11W1/23HDc: Open woodland of *Eucalyptus wandoo* with dense layer of low shrub species. Other indicator species – *Trymalium ledifolium*, *Macrozamia riedlei*, *Pericalymma ellipticum*, *Hypocalymma angustifolium*, *Grevillea bipinnatifida*, *Allocasuarina humilis* and *Hakea lissocarpha*. Influence of G3-23HDc in understory.

O: Open forest to woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Daviesia decurrens*, *Daviesia preissii* and *Bossiaea ornata*.

P-19JLc: Open forest of *Eucalyptus marginata* – *Allocasuarina fraseriana* with a admixtures of *Corymbia calophylla* and *Banksia grandis*. Other indicator species – *Lasiopetalum cardiophyllum*, *Lasiopetalum floribundum*, *Lechenaultia bioloba* and *Ptilotus drummondii* var. *drummondii*.

PW: Open forest of *Eucalyptus marginata* – *Allocasuarina fraseriana* with admixtures of *Corymbia calophylla* and *Banksia grandis*. Other indicator species – *Lasiopetalum cardiophyllum*, *Lechenaultia biloba* and *Hypocalymma angustifolium*.

R: Open woodland of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Trymalium ledifolium*, *Phyllanthus calycinus* and *Hypocalymma angustifolium*.

S-19JBg: Open forest of *Eucalyptus marginata* – *Corymbia calophylla* with admixtures of *Allocasuarina fraseriana*, *Banksia grandis* and *Persoonia longifolia*. Other indicator species – *Acacia celastrifolia*, *Hovea chorizemifolia*, *Daviesia preissii*, *Leucopogon capitellatus* and *Styphelia tenuiflora*.

SP-19JBg/19JLc: Open forest of *Eucalyptus marginata* – *Corymbia calophylla* and *Allocasuarina fraseriana* with admixtures of *Banksia grandis*. Other indicator species – *Lasiopetalum cardiophyllum*, *Acacia celastrifolia*, *Styphelia tenuiflora*, *Daviesia decurrens* and *Trymalium ledifolium*.

ST-19JSd: Open forest of *Eucalyptus marginata* – *Corymbia calophylla* with admixtures of *Allocasuarina fraseriana*, *Persoonia longifolia* and *Banksia grandis*. Other indicator species – *Stylidium dichotomum*, *Acacia urophylla*, *Acacia celastrifolia*, *Leucopogon verticillatus*, *Clematis pubescens* and *Leucopogon capitellatus*.

SW: Open forest of *Eucalyptus marginata* – *Corymbia calophylla* with moisture indicators including *Hypocalymma angustifolium* and *Baeckea camphorosmae*. Other indicator species – *Acacia celastrifolia*, *Hovea chorizemifolia*, *Daviesia preissii*, *Leucopogon capitellatus* and *Styphelia tenuiflora*.

W: Open forest of *Corymbia calophylla* – *Eucalyptus marginata* – *Eucalyptus patens*. Other indicator species – *Hakea lissocarpha*, *Hypocalymma angustifolium*, *Acacia extensa* and *Synaphea petiolaris*.

Y-11W2: Open woodland of *Eucalyptus wandoo*. Other indicator species – *Gompholobium marginatum*, *Acacia nervosa*, *Baeckea camphorosmae*, *Hypocalymma angustifolium*, *Macrozamia riedlei*, *Phyllanthus calycinus* and *Gastrolobium calycinum*.

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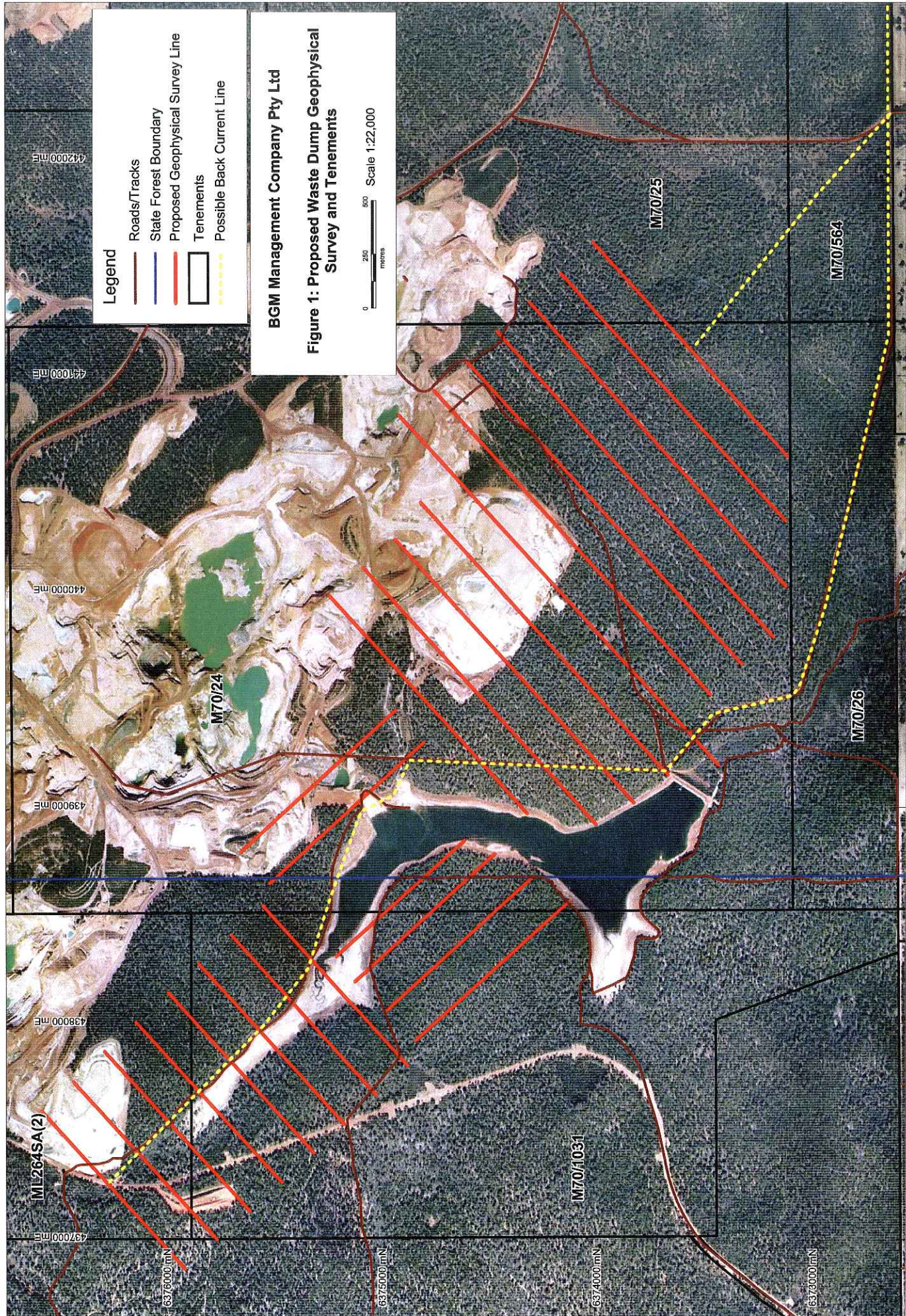
BGM Clearing (Purpose) Permit Geophysics Proposal Proposed Waste Dump 2006

Proposal

YG – 11W2/23HDc: Open woodland of *Eucalyptus wandoo* with dense layer of low shrub species. Other indicator species – *Gompholobium marginatum*, *Acacia nervosa*, *Baeckea camphorosmae*, *Hypocalymma angustifolium*, *Macrozamia riedlei*, *Pericalymma ellipticum*, *Grevillea bipinnatifida*, *Allocasuarina humilis*, *Phyllanthus calycinus* and *Gastrolobium calycinum*. Influence of G3 – 23HDc in understorey.

Z – 19JMr: Open forest of *Eucalyptus marginata* – *Corymbia calophylla*. Other indicator species – *Macrozamia riedlei*, *Xanthorrhoea preissii*, *Hakea lissocarpa* and *Phyllanthus calycinus*.

Document	Rev.	Author	Revision Date	Page
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Legend

- Roads/Tracks
- State Forest Boundary
- Proposed Geophysical Survey Line
- Tenements
- Possible Back Current Line

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Figure 1: Proposed Waste Dump Geophysical Survey and Tenements

0 250 500 meters
Scale 1:22,000

442000 mE
441000 mE
440000 mE
439000 mE
438000 mE
437000 mE

6376000 mN
6375000 mN
6374000 mN
6373000 mN

ML264SA(2)

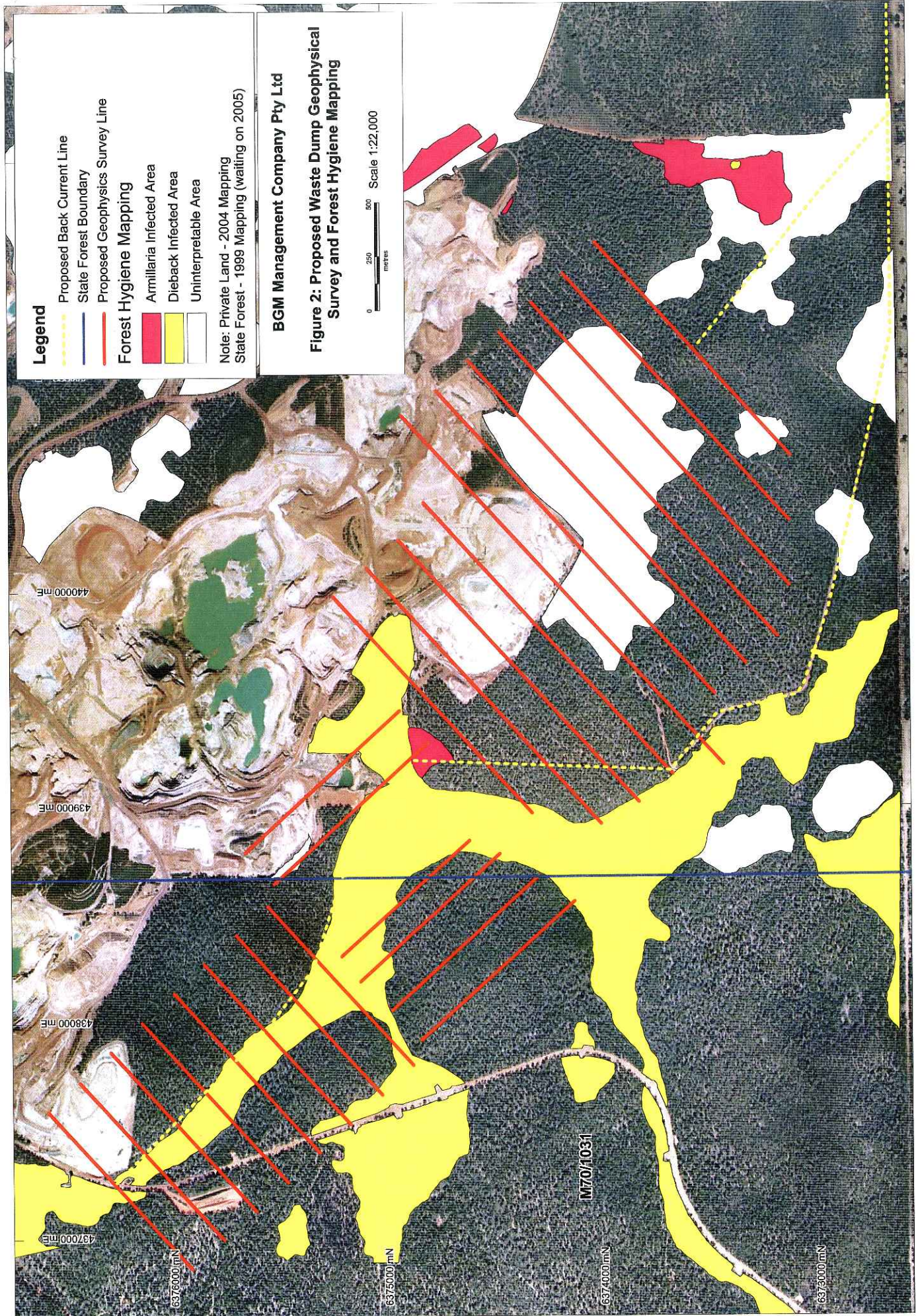
M70/24

M70/25

M70/564

M70/26

M70/1051



Legend

- Proposed Back Current Line
 - State Forest Boundary
 - Proposed Geophysics Survey Line
- Forest Hygiene Mapping**
- Armillaria Infected Area
 - Dieback Infected Area
 - Uninterpretable Area

Note: Private Land - 2004 Mapping
 State Forest - 1999 Mapping (waiting on 2005)

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Figure 2: Proposed Waste Dump Geophysical Survey and Forest Hygiene Mapping

0 250 500 metres
 Scale 1:22,000

440000 mE

439000 mE

438000 mE

437000 mE

6376000 mN

6375000 mN

6374000 mN

6373000 mN

M70/1031



Legend

- - - Possible Back Current Line
- State Forest Boundary
- Proposed Geophysical Survey Line
- CAR Informal Reserve

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Figure 3: Proposed Waste Dump Geophysical Survey and CAR Informal Reserve

0 250 500 metres Scale 1:22,000

M70/1031

442000 mE

441000 mE

440000 mE

439000 mE

438000 mE

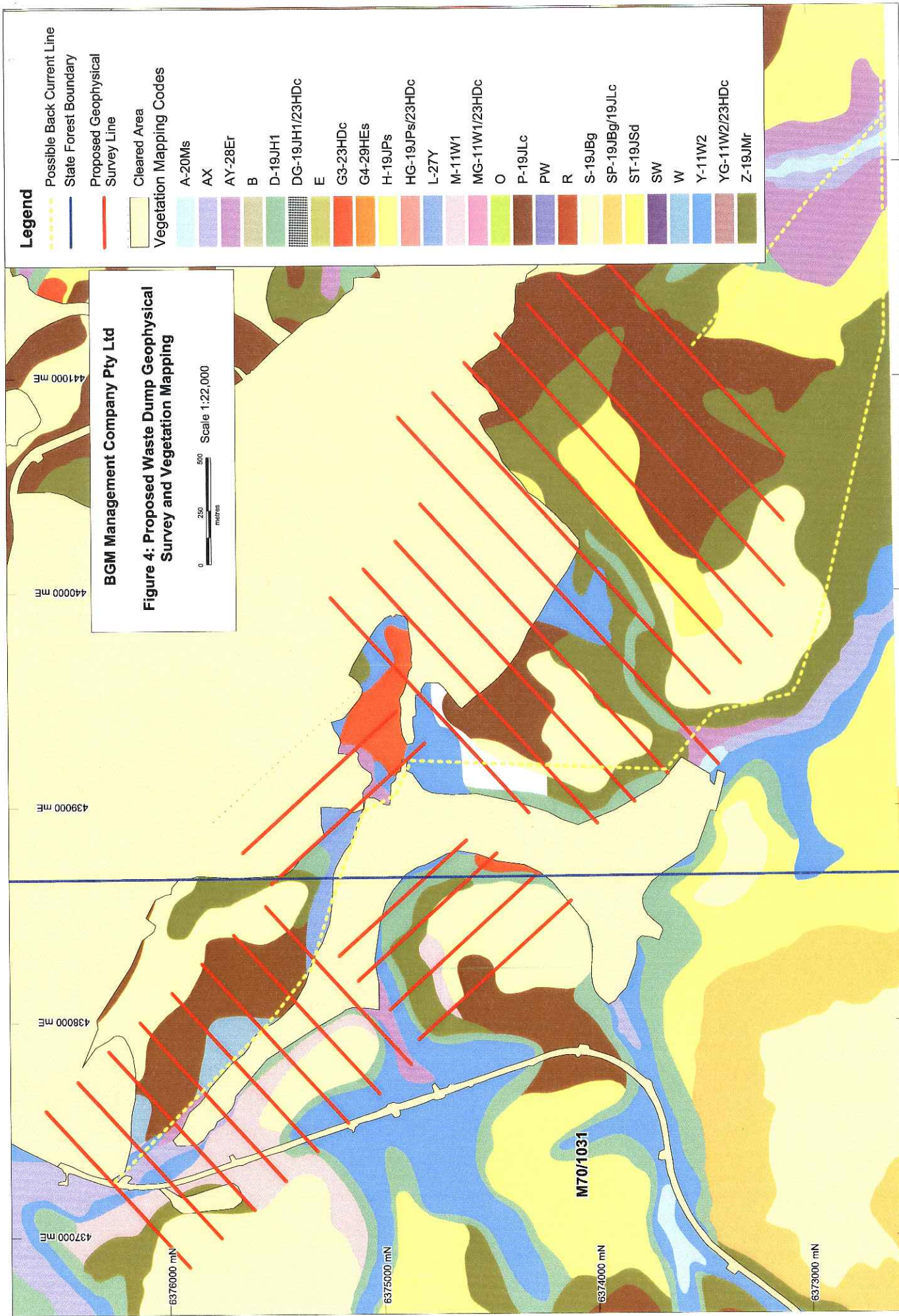
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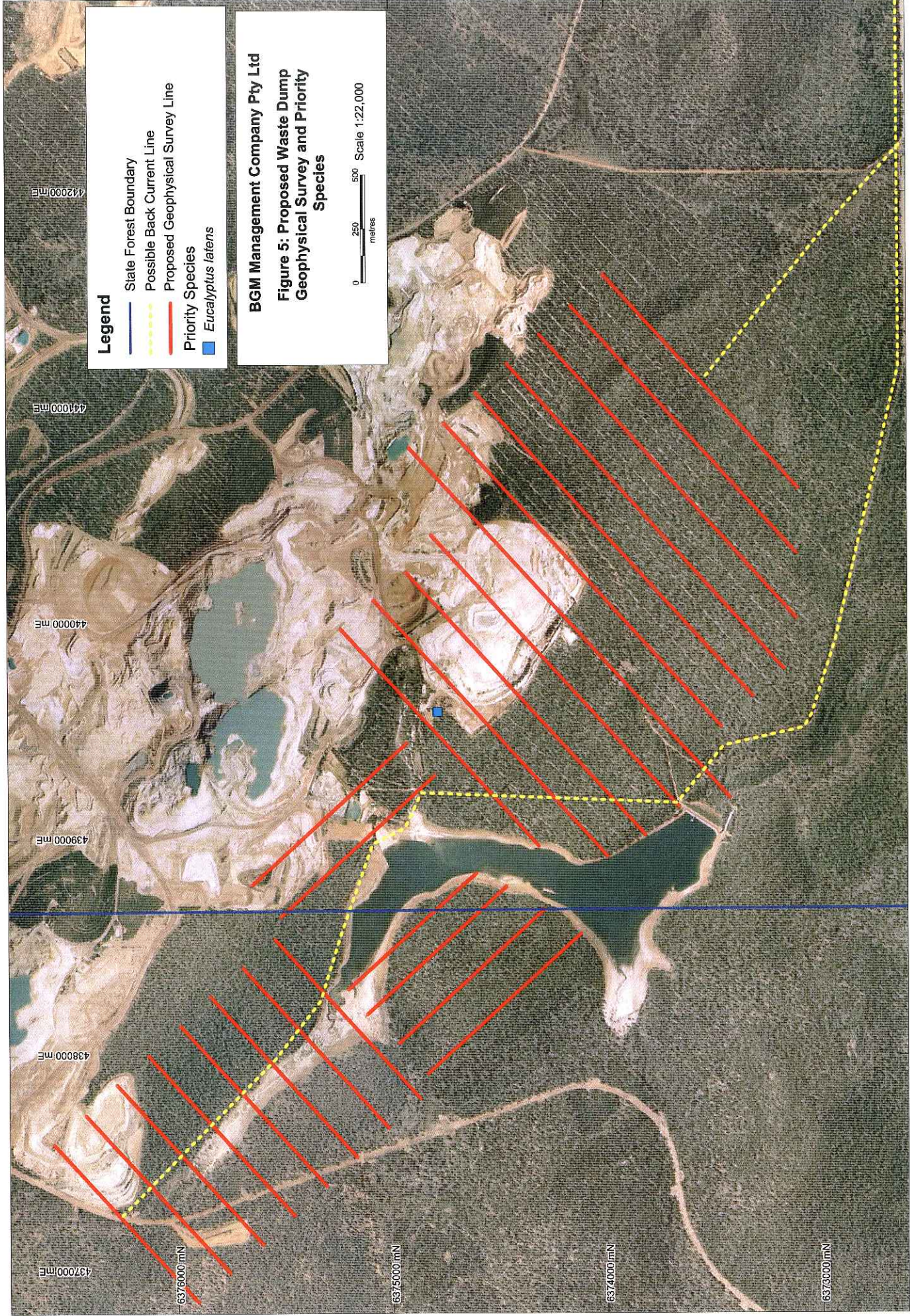
6376000 mN

6375000 mN

6374000 mN

6373000 mN





Legend

- State Forest Boundary
- - - Possible Back Current Line
- - - Proposed Geophysical Survey Line
- Priority Species
- *Eucalyptus latens*

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Figure 5: Proposed Waste Dump
Geophysical Survey and Priority
Species

0 250 500 Scale 1:22,000
metres

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441000 mE

440000 mE

439000 mE

438000 mE

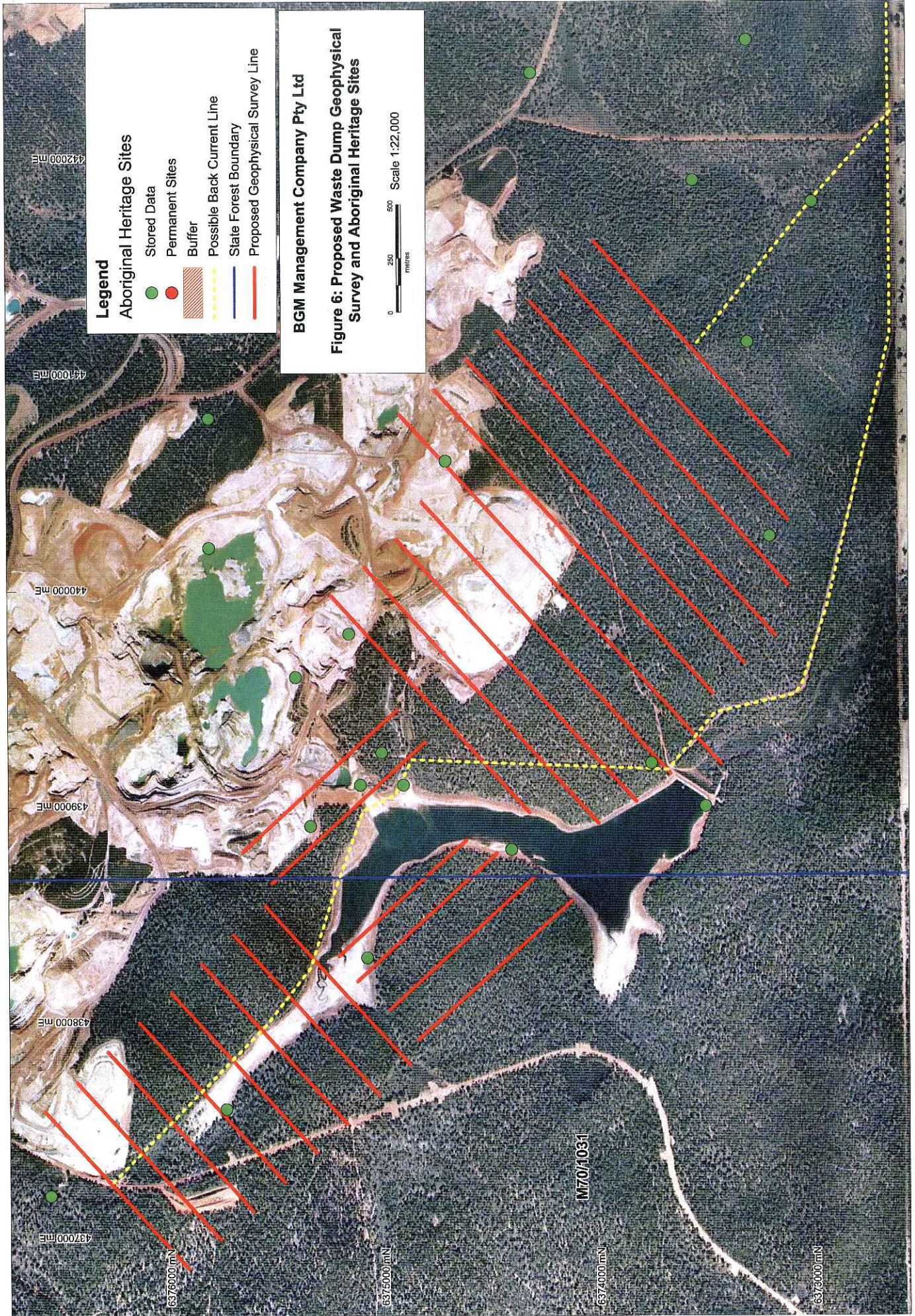
437000 mE

6376000 mN

6375000 mN

6374000 mN

6373000 mN



- Legend**
- Aboriginal Heritage Sites**
- Stored Data (Green circle)
 - Permanent Sites (Red circle)
 - Buffer (Hatched area)
 - Possible Back Current Line (Yellow dashed line)
 - State Forest Boundary (Blue line)
 - Proposed Geophysical Survey Line (Red line)

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Figure 6: Proposed Waste Dump Geophysical Survey and Aboriginal Heritage Sites

0 250 500 metres Scale 1:22,000

M70/K031

437000 mE 438000 mE 439000 mE 440000 mE 441000 mE 442000 mE

6376000 mN 6376000 mN 6374000 mN 6378000 mN

