

BACKGROUND INFORMATION DOCUMENT

GROOTEHOEK COAL MINING COMPANY (PTY) LTD

APPLICATION FOR A MINING RIGHT

LEPHALALE, LIMPOPO PROVINCE

JULY 2015



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PURPOSE OF THIS DOCUMENT

To provide Interested & Affected Parties (I&APs) with information on the proposed project, and the associated licensing process.

INVITATION TO A PUBLIC MEETING

Date: Wednesday, 12th August 2015

Time: 13:00 to 15:00 pm

Venue: Function Hall, Mogol Club, Cnr. Nelson Mandela and George Wells Street, Lephalale

(Please note that this meeting will be held in English)



INTRODUCTION:

Grootehoek Coal Mining Company's (Pty) ("GCMC") Ltd has submitted an application for a mining right in terms of the Minerals and Petroleum Resources Development Act, Act 28 of 2002 ("MPRDA") over two properties (Groothoek 504LQ and Eendracht 505LQ), to mine coal in various zones via opencast mining, to the Department of Mineral Resources (DMR).

This application for a mining right (MR) is also subject to an application for an Environmental Authorisation (EA) in terms of the National Environmental Management Act (NEMA), Act 107 of 1998. The EA will also be applied for through the DMR and will be completed by Cabanga Concepts as an independent Environmental Assessment Practitioner (EAP).

LOCALITY:

The properties of interest are located near the Eskom power stations (Matimba and Medupi) and Exxaro's Grootegeeluk Colliery. The centre of the site is located approximately 7.4km west of the town of Lephalale, in the Limpopo Province. The total extent of the mineral area is approximately 2067 hectares.

The project area falls within the Savanna Biome. No threatened or protected national ecosystems occur over the properties or surrounding areas. A formal protected area, the D'nyala Nature Reserve, is approximately 6.5km southeast of the proposed development boundary.

The site is characterised as largely natural with some scattered agricultural areas or areas disturbed by past agricultural activities and an area cleared for the equestrian club. A municipal waste dump is located on Groothoek 504LQ. The site is also traversed by largely gravel roads. The properties are utilised for game and stock farming.

The site is accessed via gravel roads off Nelson Mandela Drive from Lephalale. There is an existing coal siding and railway line west of site associated with the Grootegeeluk Colliery. Various power lines transect the area. The railway line transports coal to Gauteng and Richards Bay Coal Terminal (RBCT) for export.

The project is located within an area being developed as a coal mining and power generation centre.

Access to Land:

During the S&EIR process, it will be necessary for specialists to complete site visits to assess the current status of the environment. Please be aware that the team will contact you to arrange prior permission for access in this regard.

Should you be aware of any specific environmental, cultural or social aspects relevant to the site that could assist in completing a comprehensive understanding of the sensitive features on site, please do so in the attached questionnaire.



PROJECT DESCRIPTION:

The coal on the two farms is located within the coal-bearing Waterberg Basin which occurs in both the Vryheid and Grootegeluk Formations. The Grootegeluk and Vryheid Formations are divided into eleven (11) Zones. The coal zones are developed from approximately 30 m below surface to approximately 130 m below surface.

Approximately 12 million tons will be extracted per year from each of the two proposed opencast pits (West Pit and East Pit). West Pit mining will commence in the south and progress northwards; East Pit mining will commence in the north and progress southwards.

Opencast pit and strip mining will be conducted through truck-and-shovel, roll-over mining with successive cuts opened as old mined cuts are rehabilitated. No underground mining is relevant to this application at this stage. The area affected by the opencast will be 1250 ha.

Coal will be processed on site at a full beneficiation facility. This will include crushing, screening and washing of coal to attain different coal sizes and qualities as may be needed for the various markets.

Discard produced at the plant will be backfilled into the base of mined out pits. Slurry will report to the slurry ponds. Water recovered from the slurry dam, via floating penstocks, will be recycled to the existing pollution control dam or directly to the wash plant for reuse within the plant. The dried slurry will be incorporated into product that will be sold.

Coal will be transported off-site by a proposed railway loop siding constructed on site, which will connect to the existing railway network via a railway link.

Additional infrastructure will affect approximately 200 ha and 300 ha will be affected by material stockpiles. Additional infrastructure includes:

- Access and Haul Roads: Existing access roads will be upgraded and utilised as far as possible.
- Material Stockpiles: Topsoil and subsoil will be stockpiled separately and utilised to construct upslope clean water diversion berms to prevent surface water runoff from clean areas entering mine areas. Overburden will be stockpiled separately near to the final void for use in in-filling of the final void. Carbonaceous and non-carbonaceous overburden material will be stockpiled separately. Runoff from carbonaceous material stockpiles will be classified as mine water and will be diverted to in-pit sumps or on-site pollution control dams (PCDs)
- Mine Water Dams: Surface water management will take into account GN704 guidelines relating to water management on mines. Necessary exemptions from GNR704 will be applied for from Department of Water Affairs and Sanitation (DWS). In general the on-site surface water management will separate clean and dirty water runoff, prevent clean water runoff flowing onto the activity footprint and prevent dirty water runoff from leaving the activity area through containment in:
 - A PCD to contain runoff from the processing and coal stockpiling area and the carbonaceous overburden stockpiles at the West Pit.
 - A smaller PCD to contain runoff from the carbonaceous overburden stockpiles at the East Pit.
 - A compartmentalised slurry dam to recycle supernatant water and reclaim slurry for blending.



- It is also anticipated that a raw water dam (reservoir) will be required to supply the beneficiation plant which will source water from phase II of the Mokolo Crocodile West Augmentation Project (MCWAP II).
- Change House & Ablution facilities with sewage treatment plant.
- Administration block and offices.
- Weighbridge.
- Power Supply: will be obtained through the existing Eskom grid. Generators will be utilised to provide back-up power. Mining will be done with diesel driven equipment.
- Diesel Supply: Diesel will be stored and transferred from tanks established in appropriately sized and designed bunded area with controlled release valve to an oil trap.
- Magazine: for storing drill rods, drill bits and explosives.
- Laboratory and chemical Storage: for testing coal qualities and processing or blending requirements.
- Workshops & Wash Bays: will include concrete floors with appropriate drainage and / or bunding to direct all water to an oil trap to carry out repairs, services and cleaning of vehicles and equipment.
- Lighting masts: to provide lighting at times of poor visibility and during the night as the colliery will be a 24 hour facility.
- Security and Access: dangerous areas will be fenced off and the site will be patrolled on a 24hr basis.

LEGAL REQUIREMENTS & CONTEXT:

South African Law requires that the environmental and social impacts associated with mining activities be assessed to identify any potential negative and / or positive consequences as result thereof. Following which measures must be proposed to avoid or minimise these impacts.

As the application relates to mining activities, a full Scoping and Environmental Impact Report (S&EIR) will be required as well as an Environmental Management Plan (EMP) report.

The Scoping and EIA/EMP reports will be compiled in the format prescribed by the lead authority, being the DMR, in accordance with the NEMA. Furthermore, the application for the EA will be accompanied by an application for a Waste Management Licence (WML) in terms of the National Environmental Management: Waste Act (NEM: WA), Act 59 of 2008.

The following listed activities as per NEMA's EIA Regulations (GNR 983/GNR 984/GNR 985) are applicable to the application:

- **GNR983 Activity 9:** Bulk transportation of water and storm water in infrastructure exceeding 1000m (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more.
- **GNR983 Activity 10:** Bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes in infrastructure exceeding 1000m (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more.



- **GNR983 Activity 12:** Water management facilities / jetties / bridges / weirs / infrastructure more than 100m² within 32m of watercourse.
- **GNR983 Activity 13:** Dams with a combined capacity of 50,000m³ +.
- **GNR983 Activity 22:** The decommissioning of any activity requiring a closure certificate in terms of section 43 of the Mineral and Petroleum Resources Development Act or a prospecting right, mining right, mining permit, production right or exploration right, where the throughput of the activity has reduced by 90% or more over a period of 5 years.
- **GNR983 Activity 24:** Construction of roads wider than 8m.
- **GNR983 Activity 25:** Facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput of 2000 - 15000 m³ OR **GNR984 Activity 25:** Facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of 15000 cubic metres or more.
- **GNR983 Activity 28:** Any activity requiring a license in terms NEM:BA – removal of protected species.
- **GNR984 Activity 4:** Storage of dangerous goods of 500m³ +.
- **GNR984 Activity 6:** Facilities which require a license in terms of legislation governing release of emissions or pollution.
- **GNR984 Activity 12:** Railway lines and shunting yards.
- **GNR984 Activity 15:** The clearance of an area of 20 hectares or more of indigenous vegetation.
- **GNR984 Activity 17:** Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act.
- **GNR984 Activity 21:** Any activity associated with the primary processing of a mineral resource including winning, reduction, extraction, classifying, concentrating, crushing, screening and washing.
- **GNR985 Activity 2:** The development of reservoirs for bulk water supply with a capacity of more than 250 cubic metres in an area within 10km of a protected area.
- **GNR985 Activity 14:** Water management facilities / jetties / bridges / weirs / infrastructure more than 100m² within 32m of watercourse in an area within 10km of a protected area.
- **GNR985 Activity 18:** The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre in an area within 10km of a protected area.

Wetlands and buffer zones are not proposed to be affected mining, but river crossings may be required.

The following listed activities as per NEM:WA's Waste Activities Regulation (GNR921) are applicable to the application and also subject to a full S&EIR process:

- **Category A, Activity 14:** The decommissioning of a facility for a waste management activity listed in Category A or B of this Schedule.
- **Category B, Activity 1:** The storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage.
- **Category B, Activity 7:** The disposal of any quantity of hazardous waste to land.



- **Category B, Activity 9:** The disposal of inert waste to land in excess of 25 000 tons, excluding the disposal of such waste for the purposes of levelling and building which has been authorised by or under other legislation.
- **Category B, Activity 10:** The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).

An application will also be made to DWS for an integrated water use licence application (IWULA). This will be accompanied by an Integrated Water and Waste Management Plan (IWWMP). Furthermore mines must comply with GNR704, mine water management regulations, unless exemptions are obtained from DWS. The following water uses and exemption applications are anticipated as per Section 21 of the National Water Act (NWA), Act 36 of 1998:

- **21(a):** Abstraction through dewatering; borehole abstraction for potable use; abstraction from MCWAP II.
- **21(b):** MCWAPII water storage for process water.
- **21(c&i):** River crossing / infringement into buffer zones / mining within 500m of a wetland.
- **21(g):** Overburden stockpiles; Coal stockpiles; sewage lagoons; PCDs; slurry pond; and dust suppression.

The National Heritage Resources Act has been consulted, and a heritage impact assessment has been / will be completed in terms of the prescribed requirements as the proposed project has a linear activity associated with the railway link of more than 300m, affects more than 5 000m²; and requires re-zoning of a site of more than 1 000m².

S&EIR PROCESS:

The purpose of the S&EIR process is to inform the licensing authority in the decision-making process. As such the process will be approached in an integrated manner using input for Interested & Affected Parties in the area as well as the findings of desktop studies and site visits undertaken by the environmental professionals.



Preliminary Impact Assessment & Management Plan:

The following potential impacts and management measures have been identified at this first stage of the project:

Activities	Identified Impacts:	Proposed Management:
All infrastructure areas, development	Potential for pollution to the biophysical environment (surface water, groundwater,	<ul style="list-style-type: none"> • Keep operational areas as small as possible. • Storm water runoff management. • On-site dust suppression. • Safety through access control to site.



Activities	Identified Impacts:	Proposed Management:
footprints and associated activities.	fauna, flora & soils) through general mining and associated activities. Increased noise and dust levels.	<ul style="list-style-type: none"> • Maintaining operational noise levels through sound proofing and use of quieter equipment. • Servicing of equipment to reduce risk of leaks, excessive noise & emissions.
Opencast excavations	Potential for pollution to the biophysical environment. Potential damage to graves, archaeological and or cultural site. Lowering of groundwater levels.	<ul style="list-style-type: none"> • Preserve heritage sites until such time that permits are issued to destroy / relocate these. • Demarcate opencast mine areas and sensitive features (wetlands/heritage sites) as no-go zones. • Immediate successive rehabilitation through roll-over mining process as per the rehabilitation plan. • Mine water management through pit dewatering and pumping to in-pit sump. • Groundwater resource protection through proper mining procedure - remove all coal from pits , keep pits dry, seal major faults & placement and compaction of carbonaceous overburden and discard at the base of pits. • Ensure affected registered water users are compensated for any loss of water.
Topsoil & subsoil stripping & stockpiling. Overburden stockpiling.	Loss of soil and degradation of land capability. Land use will change to mining. Siltation. Visual impact.	<ul style="list-style-type: none"> • Proper soil handling and stockpiling as per soil utilisation guide to ensure protection of soil resources and in order to attain post-mining land capabilities after rehabilitation. • Material handling and stockpiling as per mine and rehabilitation plan. • Vegetate all bare soil. • Manage erosion, siltation and water flow velocity. • Surface preparation for carbonaceous material stockpiles to ensure drainage, diversion and containment of runoff.
Blasting	Noise dust and vibrations. Fly rock	<ul style="list-style-type: none"> • Reduce blasting impacts through responsible blasting techniques. • Follow blast alert and evacuation procedures.
RoM & product coal stockpiling	Dust and potential spontaneous combustion. Water quality impairment.	<ul style="list-style-type: none"> • Storm water runoff management. • Surface preparation for coal stockpiles to ensure drainage, diversion and containment of runoff. • Dust management through spraying. • Move coal on a first-in-first-out basis.
Coal loading and conveyance	Dust and potential spontaneous combustion. Water quality impairment. Possible infringement into wetland buffer zones.	<ul style="list-style-type: none"> • Necessary authorisations under the NWA will be applied for regarding any possible stream or wetland crossings and IWWMP implemented on site. • Handle coal on a first-in-first-out basis and no long term stockpiling to reduce risk of spontaneous combustion.
Access and	Coal spillage and coal	<ul style="list-style-type: none"> • Establish and maintain speed limits for safety



Activities	Identified Impacts:	Proposed Management:
hauling along roads	dust. Dust of gravel roads.	and to reduce dust generation off roads. <ul style="list-style-type: none"> • Clear all spilled material along roads and maintain road surfaces. • Maintain intersections to public roads with appropriate signs.
Crushing & screening & Processing Plant	Dust and potential spontaneous combustion. Water quality impairment.	<ul style="list-style-type: none"> • Handle coal on a first-in-first-out basis and no long term stockpiling to reduce risk of spontaneous combustion. • Ensure relevant covers over transfer points to reduce dust. • Storm water runoff management and dirty water runoff containment.
Water supply (potable & process)	Water wastage through irresponsible use	<ul style="list-style-type: none"> • Necessary authorisations under the NWA will be applied for and IWWMP implemented on site. • Water recycling and water saving initiatives will be implemented on site.
Water storage (dams / reservoirs / tanks)	Necessary to contain contaminated runoff. Potential risk to biophysical environment through spills.	<ul style="list-style-type: none"> • Necessary authorisations under the NWA will be applied for and IWWMP implemented on site. • Storm water runoff management will be implemented on site. • Pumps and pipelines that may be required for water transfer will be adequately sized.
Discard disposal (backfilling)	Potential for acid mine drainage (AMD)	<ul style="list-style-type: none"> • Necessary exemption authorisations under the NWA will be applied for and IWWMP implemented on site. • Discard backfilling will take place as per the approved EMP, placing discard at the base of pits below the upper coal zone level and compacted in thin layers.
Slurry dams	Necessary to contain slurry in order to reclaim and blend into product. Potential risk to biophysical environment through spills.	<ul style="list-style-type: none"> • Necessary authorisations under the NWA will be applied for and IWWMP implemented on site. • Slurry stockpile area will be managed as a coal stockpile area (see above).
Storm water runoff management features	Necessary to manage mine water in accordance with GNR704. Potential risk to biophysical environment through spills.	<ul style="list-style-type: none"> • Maintenance of berms and trenches and dams • Installation of flow dissipaters where diverted clean water enters drainage line. • Installation of silt traps before PCDs or areas with potential high silt laden water. • Adequately sizing structures for a 1:50 year storm event.
Water & slurry pipelines	Potential risk to biophysical environment through spills and leaks	<ul style="list-style-type: none"> • Pumps and pipelines that may be required for water or slurry transfer will be adequately sized and maintained. • Pipeline carrying contaminated water will be constructed over paddocked areas and will have several shut-off valves along its length to ensure quick shut-down in the event of burst pipeline.



Activities	Identified Impacts:	Proposed Management:
Lighting	Nuisance to surrounding land / road users. Hindrance to nocturnal animals.	<ul style="list-style-type: none"> • Ensure direction lighting is used. • Prioritise orange and yellow lighting.
Explosives magazine	Safety issues if explosives or poorly stored or secured.	<ul style="list-style-type: none"> • Access control and adequate warning signage. • Appropriately located away from residences and active working areas.
Waste generation & storage	Potential risk to biophysical environment through seepage of water from dumped waste.	<ul style="list-style-type: none"> • Waste separation on site through provision of separate refuse bins. • Construction/building waste will be removed by contractors. • Domestic waste will be locally collected for disposal at the municipal waste site. • Recycling will be done as far as possible with regards to paper, glass, tins/cans, plastics, batteries and computer equipment, and inflorescent lights. • Sewage treatment facility will be operated as per the SOP. • Used hydrocarbon waste will be collected in drums and stored within a bunded area, and collected and removed from site by a reputable contractor. • Old tyres, conveyor belts, scrap metal, old machinery will be collected and temporarily stored in the scrap / salvage yard for recycling. • Recyclable waste should not be stored on site for excessive periods to reduce risk of environmental contamination.
Stores, workshops & washbays	Potential risk to biophysical environment through hydrocarbon contamination.	<ul style="list-style-type: none"> • Workshops and washbays will be within contained areas or concrete bunded and sloped areas to contain all hydrocarbons spills. • Oil traps will be installed to separate oil and water.
Ablutions & change house with sewage treatment plant	Potential risk to biophysical environment and health risks through sewage leaks	<ul style="list-style-type: none"> • Facilities will be inspected regularly for any leaks which will be repaired immediately. • Sewage treatment facility will be operated as per the SOP. • Facilities will be cleaned at least after every shift to ensure clean and hygienic facilities for all staff.
Fuel storage	Potential risk to biophysical environment through hydrocarbon contamination.	<ul style="list-style-type: none"> • Communications network established to ensure incidences are reported immediately. • Hydrocarbon leakages or spills treated as per the emergency response plan. • Spill kits must be available on site and personnel trained on utilising these • Hydrocarbons will be stored in concrete bunded areas fitted with taps and oil traps.
Hard park	Potential risk to biophysical	<ul style="list-style-type: none"> • Area will be maintained and good housekeeping practices implemented.



Activities	Identified Impacts:	Proposed Management:
	environment through hydrocarbon contamination.	<ul style="list-style-type: none"> • Pans will be placed under all vehicles when parked over bare ground.
Rehabilitation	Overall improvement expected. Land capability of grazing will be restored but may on average be slightly lower grazing capability.	<ul style="list-style-type: none"> • Compile and implement the rehabilitation model and plan on site. • Proper soil handling and stockpiling as per soil utilisation guide to ensure protection of soil resources and in order to attain post-mining land capabilities post rehabilitation. • Backfilling will be done as per the rehabilitation plan and will be as follows discard & carbonaceous • Material compacted at base, non-carbonaceous overburden, subsoil and then topsoil. • Manage erosion, siltation and water flow velocity.

Impact Assessment & Mitigation:

Should you be aware of any additional impacts; or should you wish to propose an alternative management measure please do so in the attached questionnaire.

PUBLIC PARTICIPATION PROCESS (PPP) – Your Involvement:

You are hereby invited to participate freely and submit any questions or information you feel may contribute to the S&EIR process.

Public involvement is an essential component of the process. It addresses the right of Interested and Affected Parties (I&APs) to be informed of the proposed activities and to be involved in decisions that affect them. It also affords the environmental practitioner the opportunity to assess and address the issues and concerns raised by I&APs thus allowing us to assess all the potential impacts of the proposed project.

Kindly, complete the attached questionnaire and return this to us by Fax: (011) 794 6946, post or by e-mail: ian@cabangaenvironmental.co.za. Alternatively you can register on our company webpage www.cabangaenvironmental.co.za.

The purpose of this questionnaire is to register you as an I&AP and to highlight any environmental or socio-economic aspects or impacts you may be aware of / concerned about in order that these be sufficiently addressed in the Scoping and EIA/EMP report.

Invitation to comment:

It is envisaged at this stage that two public meetings will be scheduled during the course of the application. A Scoping Phase meeting has been scheduled (see front cover) to introduce the project and discuss the proposed way forward regarding the applications. An EIA/EMP Phase feedback meeting will be held to report back specialist findings, the final impacts



identified by specialists focussing on critical or sensitive impacts identified and the mitigation of these impacts. You will be notified by SMS/Fax/E-mail of the proposed time and location of the EIA/EMP Phase meeting, once you have registered as an I&AP.

You are hereby invited to attend the Scoping Phase Public Meeting:

Date: Wednesday, 12th August 2015

Time: 13:00 to 15:00 pm

Venue: Grootegeluk Conference Room, Mogol Club, Cnr. Nelson Mandela and George Wells Street, Lephalale

(Please note that this meeting will be held in English)

Please RSVP on or before the 05th August 2015

The Scoping report will be made available for public review and comment for a period of thirty (30) days from the **11th August – 09th September 2015**. The report will be available on www.cabangaenvironmental.co.za under the tab marked “Public Participation”; as well as at the following locations:

LOCATION:	CONTACT PERSON:	CONTACT DETAILS:
Lephalale Public Library	Ms Hazel Mashaba	Tel: (014) 762-1453
Marapong Community Library	Ms Sophonia Petja	Tel: (014) 748-3927
Cabanga Concepts	Mr Ian Troskie	Tel: (011) 794-7534

Contact Us

Please forward all questions and comments to the following address:

Ian Troskie: Cabanga Concepts, Environmental Professionals

Tel: 011 794 7534 / Fax: 011 7946946

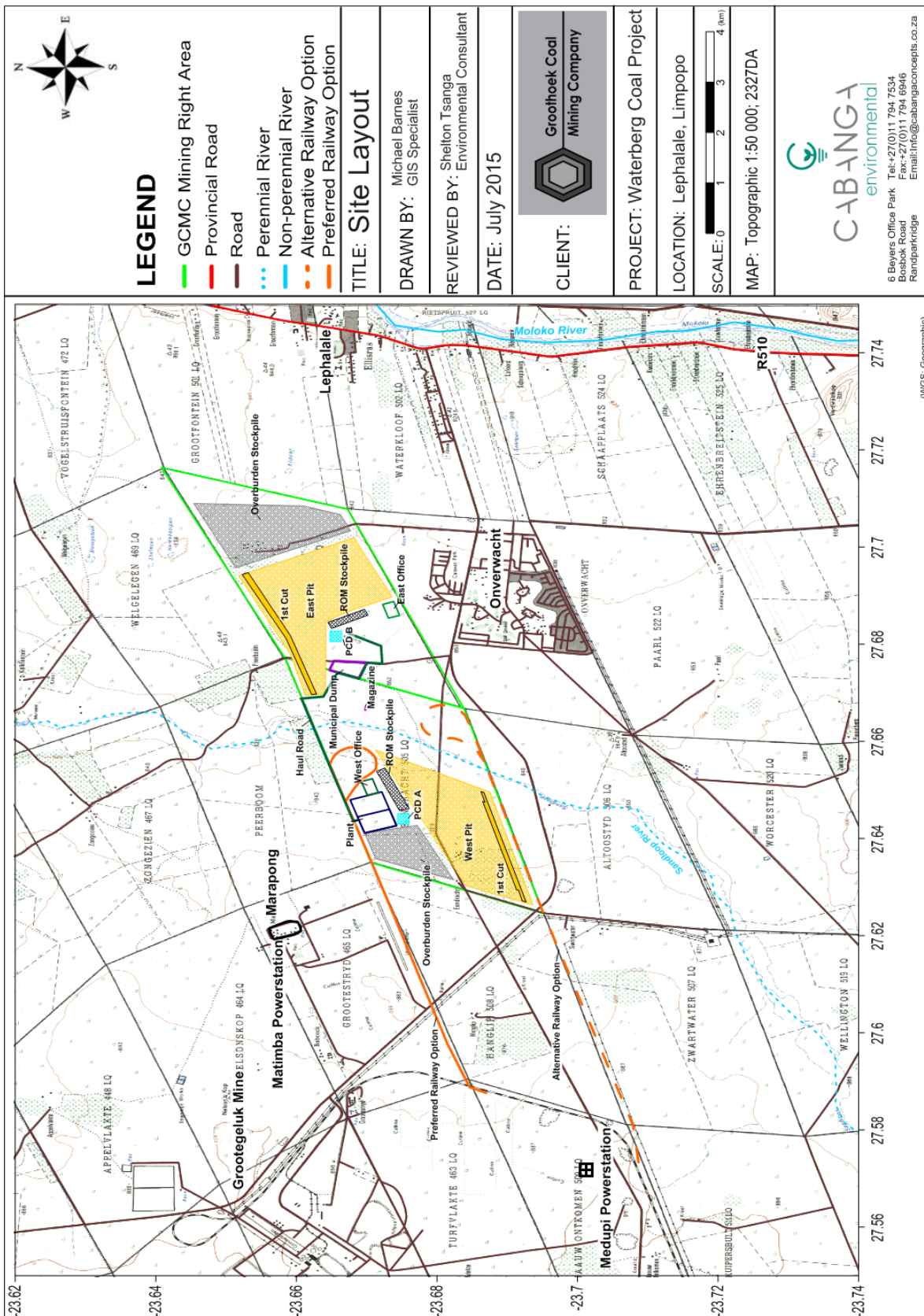
E-mail: ian@cabangaenvironmental.co.za

Postnet Suite 470, Private Bag X3, Northriding, 2162





Plan 1: Proposed Layout



PUBLIC PARTICIPATION QUESTIONNAIRE: GCMC MR Application

Please complete and return to Cabanga Concepts via e-mail: ian@cabangaenvironmental.co.za;

Fax: (011) 794 6946 or Postnet Suite 470, P/Bag X3, Northriding, 2162

Name:		Surname:	
Telephone No.:		Fax No.:	
Post:			
E-mail:			
How would you prefer to be contacted:	<input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/> Post <input type="checkbox"/> Telephone <input type="checkbox"/> SMS		
Are you an immediately affected or adjacent landowner or user? If no, what is your interest in the project? If yes, please indicate your farm / property name as well as details on the current land use.	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Do you have any vested interest in the approval or refusal of this project? If yes, please elaborate.	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Do you feel that the proposed activities will impact on you and / or your socio-economic conditions? How?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Are you aware of any sensitive areas that should be avoided (i.e. graves, cultural sites, endangered species, special environmental features or areas etc.)			
Are you aware of any additional impacts that may have been overlooked?			
Do you have any suggestions on how the proposed impacts as listed in the BID can be managed / remedied?			
Do you have any other questions or concerns regarding the project?			
Do you know of any other persons, organisations or parties that should be notified? Please provide contact details.	<input type="checkbox"/> Yes <input type="checkbox"/> No		