TSHIPI É NTLE MANGANESE MINING

PROPOSED TSHIPI BORWA MINE EMP AMENDMENT BACKGROUND INFORMATION DOCUMENT

JULY 2013

INTRODUCTION

Tshipi é Ntle Manganese Mining (Tshipi) (Previously known as Ntsimbintle Mining (Pty) Ltd) currently operates the developing Tshipi Borwa Mine located on the farms Mamatwan 331 and Moab 700, to the south of Hotazel in the John Taolo Gaetsewe District Municipality (previously known as the Kgalagadi District Municipality) in the Northern Cape Province. The project location is illustrated in Figure 1.

The mine currently holds an approval (NC/30/5/1/2/2/0206MR) from the Department of Minerals and Energy (currently known as the Department of Mineral Resources) and an approval (NC/KGA/KATHU/37/2008) issued by the Department of Tourism, Environment and Conservation (currently known as the Department of Environment and Nature Conservation).

Tshipi is proposing to amend its approved Environmental Impact Assessment (EIA) and Environmental Management Programme (EMP) to cater for changes to its approved infrastructure layout that have already taken place as well as proposed changes. Changes that have already taken place at the Tshipi Borwa Mine include:

- the relocation of the two waste rock dumps;
- the relocation of the offices, plant, workshops and related infrastructure;
- design and capacities change of the approved stormwater dams; and
- changes in the design of the railway siding.

Proposed changes to the approved infrastructure layout include:

- the establishment of an additional stormwater dam;
- the relocation of the low grade and fines stockpiles;
- the expansion of the existing sewage treatment plant;
- the expansion of the existing diesel storage facility;
- development of a joint mining and waste rock dump area on the boundary with Mamatwan mine; and
- the use of tailings material to back fill the open pit.

PURPOSE OF THIS DOCUMENT

This document has been prepared by SLR to inform you about:

* the proposed project;
* to provide information of the baseline environment;
* the environmental assessment process to be followed;
* possible environmental impacts; and
* how you can have input into the environmental authorisation process.

ENVIRONMENTAL AUTHORISATION PROCESS

Prior to the commencement of the proposed project an environmental assessment is required, including an application phase, scoping phase, and an EIA and EMP phase. The assessment will be conducted in terms of the Mineral and Petroleum Resources Development Act, 28 of 2002, and the National Environmental Management Act (NEMA), 107 of 1998. Both laws apply because the proposed project will be at a mine and they incorporate a number of listed/identified activities from NEMA Regulations R544 and R545. In addition to this, some of the project components will also require authorisation in terms of the National Water Act, 36 of 1998, the National Environmental Management: Waste Act 59 of 2008 and the National Environmental Management: Air Quality Act of 2004.

SLR Consulting (Africa) (Pty) Ltd (SLR), an independent firm of environmental consultants, has been appointed by Tshipi to manage the environmental assessment process.

YOUR ROLE

You have been identified as an interested and affected party (IAP) who may want to be informed about the proposed project and have input into the environmental process and reports. You will be given the opportunity to provide input at public meetings, and also to review and comment on the following reports:

* Scoping Report
* EIA/EMP amendment Report

All comments will be recorded and included in the applications to the relevant departments for decision-making.

HOW TO RESPOND

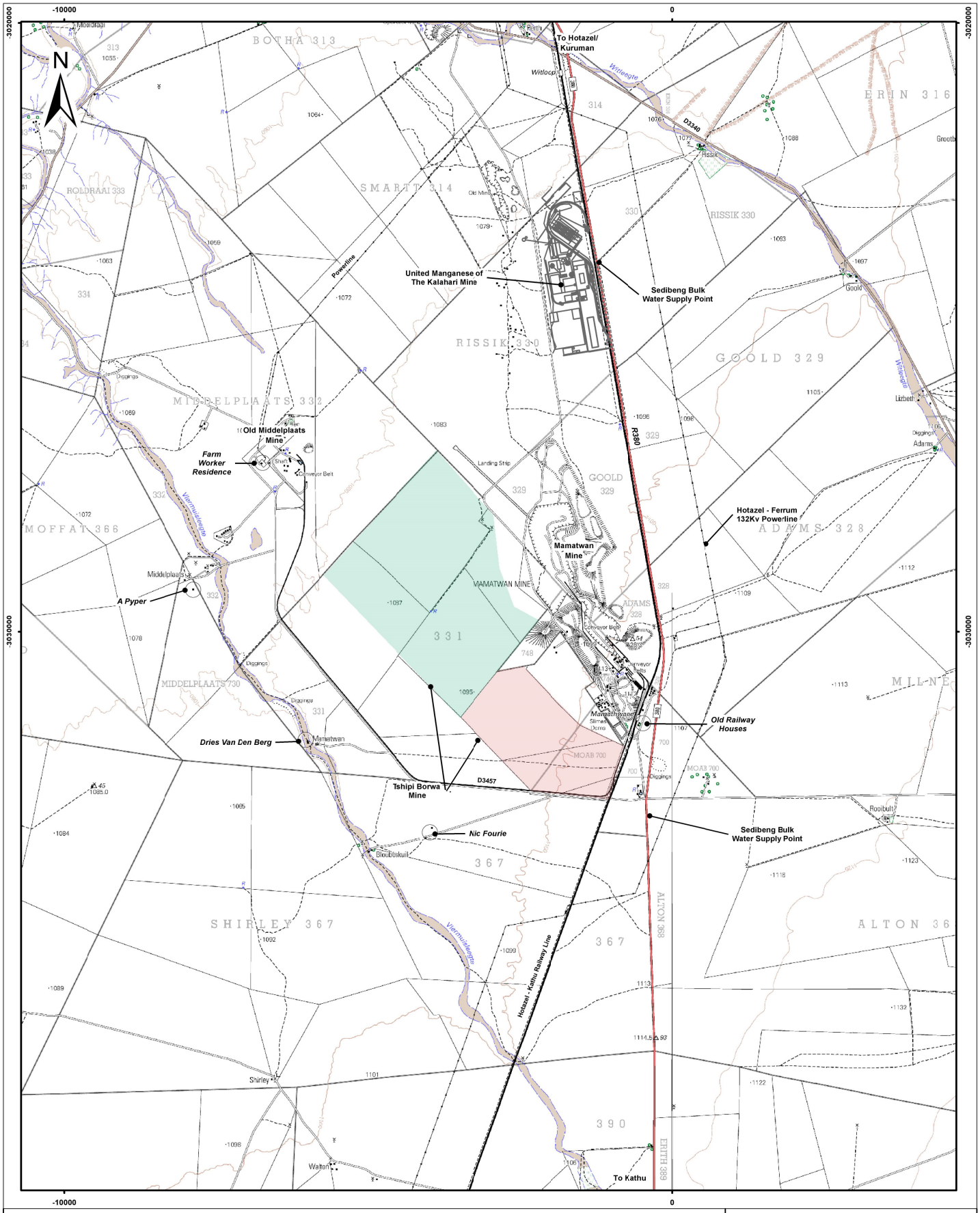
Responses to this document can be submitted by means of the attached comments sheet and/or through communication with the person listed below.

WHO TO CONTACT

Natasha Daly and/or Caitlin Pringle
(011) 467 0945 (Tel) or
(011) 467 0978 (Fax) or
ndaly@slrconsulting.com or
cpringle@slrconsulting.com

DMR reference number: (NC/30/5/1/2/2/0206MR)
DENC reference number: (NC/EIA/08/JTG/GAM/TSH 1/2013 / NCP/EIA/0000229/2013),
DEA (12/9/11/L1259/8)

Please ensure that all reference numbers are included on all correspondence.



Legend

- Mining Right and Surface Use Area
- Surface Use Area

0 1 000 2 000 Meters

Scale: 1:60 000 @ A3

Projection: Transverse Mercator
Datum: WGS1984, Lo23

TSHIPI

Figure 1

Local Setting

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710.20008.00008 | May 2013

PROJECT OVERVIEW – CHANGES TO INFRASTRUCTURE THAT HAVE TAKEN PLACE

Tshipi is proposing to amend its approved infrastructure layout to cater for changes that have already taken place. Further detail is provided below. Refer to Figure 2 for the approved infrastructure layout and Figure 3 for proposed infrastructure layout.

Relocation of the two waste rock dumps

As part of the approved EIA and EMP, two waste rock dumps were planned with a total area of approximately 215 ha and volume of 91.5 million m^3 (Figure 2). These waste rock dumps have been relocated and have a total area of 71 ha and a total volume of 28 million m^3. The current position of the waste rock dump is illustrated in Figure 3.

Relocation of the offices, plant, workshops and related infrastructure

Tshipi has relocated their offices, plant, workshop and related infrastructure. Refer to Figure 2 for the position of the offices, plant, workshops and related infrastructure as per the approved EIA and EMP. Refer to Figure 3 for the position of the relocated offices, plant, workshop and related infrastructure.

Design and capacities change of the approved stormwater dams

The approved EIA and EMP makes provision for the establishment of the following stormwater dams:

- a 10Ml stormwater dam for the collection of dirty water from the operational areas (mining workshop and primary crusher area);
- an 8Ml stormwater dam for the collection of dirty water from around the plant area; and
- a 6.3Ml settling dam that would receive dirty water from the pit dewatering and the various storm water dams described above (Figure 2).

These stormwater dams have been combined to form one 24.3Ml stormwater dam (Figure 3) which consists of numerous compartments. The stormwater dam is lined with an HDPE liner.

Change in the design of the railway siding

As part of the approved EIA and EMP a railway siding would be established adjacent to the R380 (Figure 2). The siding will incorporate a loop, which eliminates the need for shunting and will enable the transportation of product and some incoming materials by means of trains. The design of the railway siding has change and the length of the railway siding has been increased (Figure 3).

PROJECT OVERVIEW – PROPOSED CHANGES TO THE INFRASTRUCTURE LAYOUT

Tshipi is proposing to amend its approved infrastructure layout to cater for changes for proposed infrastructure changes. Further detail is provided below. Refer to Figure 2 for the approved infrastructure layout and Figure 3 for proposed infrastructure layout.

Establishment of an addition stormwater dam

Tshipi is proposing to establish an addition stormwater dam near the contracts area to collect dirty run-off water from the contractor's site (Figure 3). The stormwater dam has been designed for a capacity of 4Ml and will be lined with an HDPE liner.

Relocation of the low grade stockpiles

The approved EIA and EMP makes provision for two low grade stockpiles (Figure 2). Tshipi is proposing to establish one low grade stockpile. Refer to Figure 3 for the proposed position of the relocated low grade stockpile.

Relocation of the fines stockpiles

Tshipi is proposing to relocate the position of the approved fines stockpile (Figure 2). Refer to Figure 3 for the proposed position of the fines stockpile.

Expansion and design change of the sewage treatment plant

The approved EIA and EMP makes provision for an anaerobic digester sewage plant for the treatment of $60m^3$ of sewage per day. It is proposed that the design of the sewage treatment plant be changed to a sludge activated system and Tshipi is proposing to expand this plant for the treatment of $96m^3$ of sewage per day. The position is also proposed as a change (Refer to Figure 2 and 3).

Expansion of the diesel storage facilities

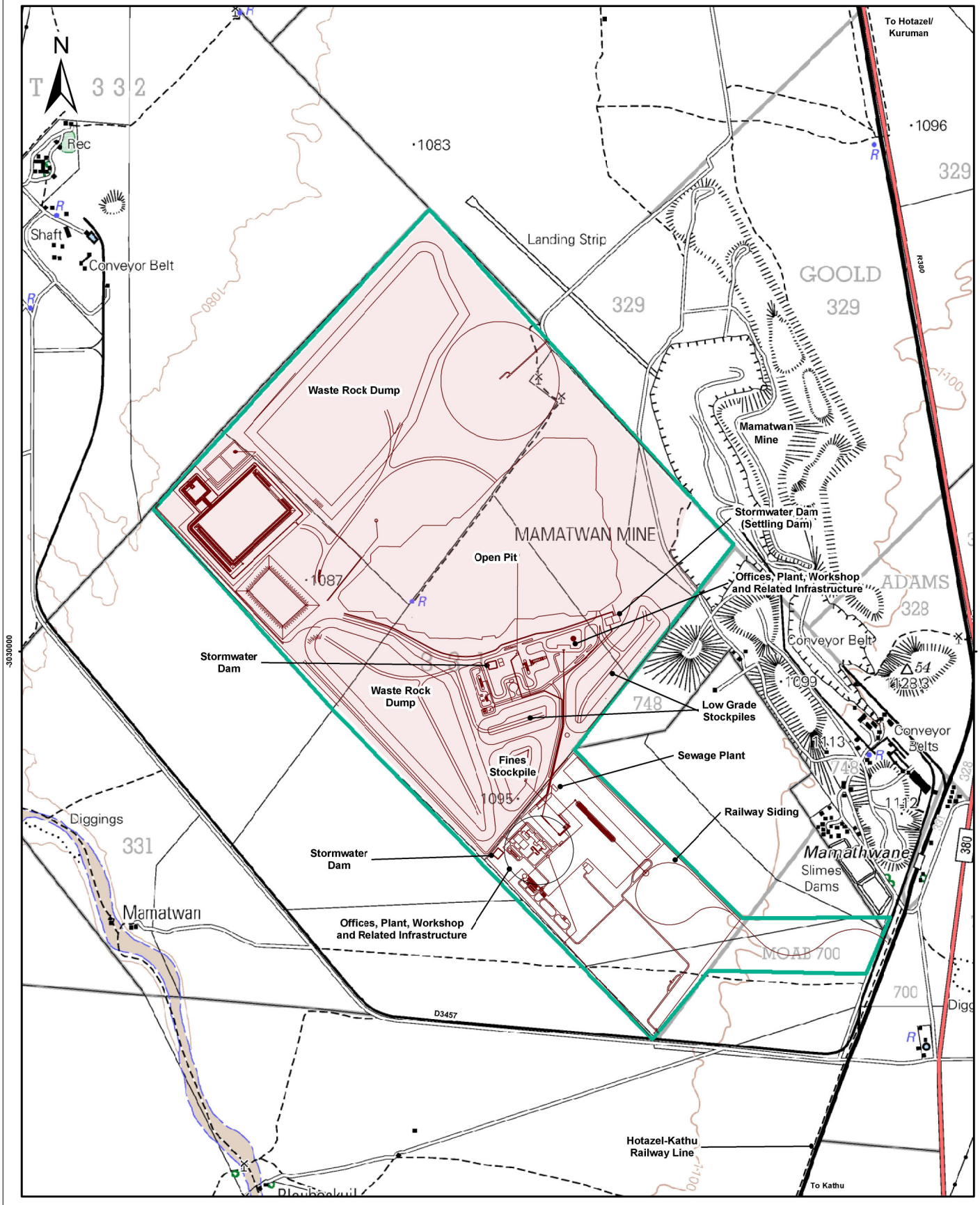
Tshipi currently has approval for the storage of $500m^3$ of diesel on site. Tshipi is proposing to expand their current diesel storage capacity by an additional $500m^3$.

Development of a joint mining venture

Tshipi is proposing to develop a joint mining and waste rock dump area on the boundary with the Mamatwan mine. The proposed Mamatwan joint development area is shown on Figure 3.

Use of tailings material to backfill the open pit

Tshipi is proposing to use a combination of tailings material, gravel, sand and waste rock (mainly calcrete) to backfill the open pit.



Legend

- Approved_Infrastructure
- Approved Mining Right Area
- Surface Use Area

0 500 1 000 Meters

Scale: 1:25 000 @ A3

Projection: Transverse Mercator

Datum: WGS1984, Lo23

TSHIPI

Figure 2

Approved Infrastructure Layout

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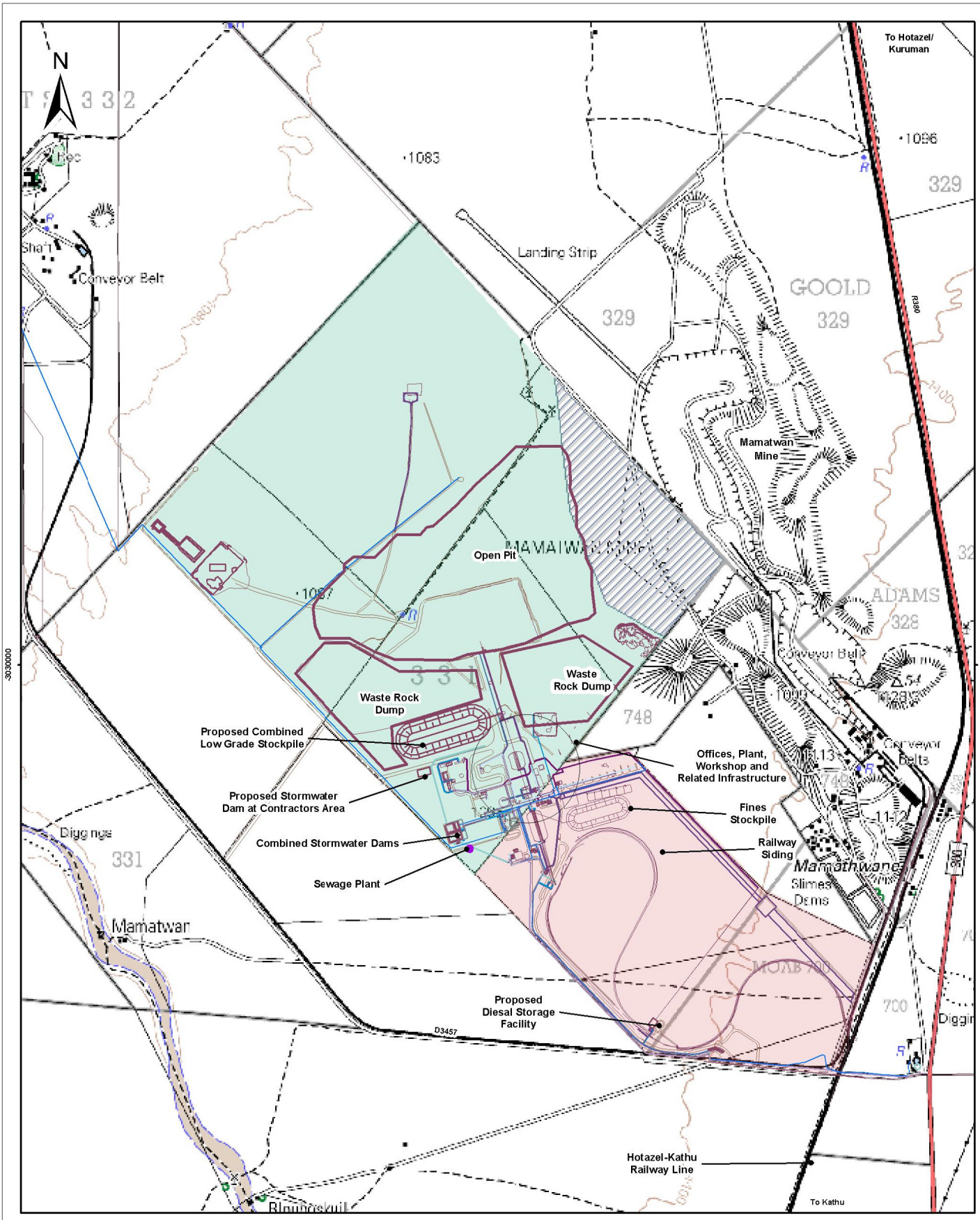

Legend

- Infrastructure
- Mining Right and Surface Use Area
- Surface Use Area
- Proposed Mamatwan Joint Development Area

0 500 1 000 Meters

Scale: 1:25 000 @ A3
Projection: Transverse Mercator
Datum: WGS1984, Lo23

TSHIPI

Figure 3

Proposed Infrastructure Layout

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STATUS OF THE EXISTING ENVIRONMENT

This section provides a basic description of the existing status of the environment.

Geology: The mine is located in the Kalahari Basin which is a manganese hotazel iron formation within the Kalahari Manganese Field. The Kalahari basis is approximately 56 km and has a width varying between 5 and 20 km. No significant faults, fractures or other lineaments occur on site.

Climate: The mine is located in the northern steppe climatic zone which is a semi-arid region characterised by seasonal rainfall (October to April), hot temperatures in summer, and cold temperatures in winter. Average annual precipitation ranges from 386 mm to 455 mm with rainfall generally in the form of thunderstorms. The prevailing wind direction is from the southeast with a high frequency of strong wind also occurring from the north and northwest.

Topography: The mine is located in a relatively flat area with a gentle slope towards the North West. The elevation on site varies from 1087 m to 1107 m above mean sea level (mamsl).

Soils and land capability: Soils types at the mine are homogeneous in terms of texture, structure, and soil depth. Soil types consists of deep (>1.5m) windblown sand of the Hutton soil form. Soils at the mine have a low cultivation potential due to the high infiltration rates associated with sandy soils.

Land use: Land uses surrounding the mine include a combination of livestock grazing, game farming, mining, railway and sparsely situated residences.

Animal life: Bird species likely to occur at the mine include, the Northern Black Korhaan, the Longbilled lark, the Grey hornbill, Chat Flycatcher and Clapper lark. Mammals that are likely to occur at the mine include Steenbok, Duiker, Suricate, White-tailed Mongoose, Molerat, and ground squirrels. The animal life population in general has been disturbed due to the existing Tshipi Borwa Mine activities and pre-mining activities such as farming, prospecting and surrounding mining activities. Red listed data species that are likely to occur on site include the Martial Eagle, Ludwigs Busted, Secretary Bird, Honey Badger and South African Hedgehog.

Plant life: The Tshipi Borwa Mine falls within the Kathu Bushveld and consists of three habitat/vegetation types. These habitat/vegetation types include the *Acacia haematoxylon* Savannah, Mixed *Acacia* Savannah and *Grevia Flava* Scrub. The *Acacia haematoxylon* Savannah and Mixed *Acacia* Savannah can be considered more sensitive habitat/vegetation types due protected tree species such as the *Acacia erioloba* (Camel thorn) and *Acacia haematoxylon* (Grey camel thorn) that occur within these habitat/vegetation types. No Red Data species are expected to occur at the mine.

Surface water: The mine is located within Quaternary Catchment D41K. The closest watercourses to the mine are the non-perennial Vlermuisleegte (±2km southwest), the non-perennial Witleegte (± 10km northeast), and the non-perennial Ga-Mogara (± 6 km west). Surface water in the area is may be used for livestock watering and limited domestic purposes. However, no reliable water use is possible from any of the watercourses (Gamogara, Witleegte, Vlermuisleegte Rivers) due to their non-perennial nature and related seasonal river flow. No wetlands occur on the mine site.

Groundwater: Two aquifers are present beneath the mine, namely a shallow aquifer comprising Kalahari sands and calcrete and a deeper fractured aquifer comprising Dwyka clay and Mooidraai dolomite formation. The average ground water level at the mine ranges from 20 m to 45m below ground level. Groundwater flows are in a west-north-west direction. The natural water quality in the area ranges from marginal quality to very poor water quality. The majority of the groundwater boreholes in the area are used to supply drinking water for cattle and in some instances supply water for domestic use.

Air quality: Apart from the current Tshipi Borwa Mine operations, various activities in the area have potential to contribute to the emission of pollutants. These pollutants include: fugitive dust from veld fires, wind erosion from open areas, dust generated by agricultural activities, vehicle tailpipe emissions, mining emissions, household fuel combustion, and rail-related fuel combustion.

Noise: The greater area is generally defined by rural features and is not subjected to elevated noise levels. Existing noise in the project area is mainly caused by surrounding farming activities, localised traffic, train movements, and mining operations. Previously (pre-mining) measured ambient noise levels vary from 39 dBA during the day to 33 dBA during the night.

Visual: The Tshipi Borwa Mine is located within the flat open plains of the Kalahari. The site is rural in nature in that it is sparsely populated with farmhouses scattered throughout the area. The existing mining operations and construction activities have already affected the sense of place and natural visual character of the area.

Heritage/cultural and palaeontological resources: No significant heritage resources or cultural materials have been found to occur at the Tshipi Borwa Mine.

Socio-economic: Isolated farm houses and farm worker residences are the closest settlements to the mine and are located within a 2km radius. The educational levels in the area are relatively low. There is a high level of unemployment with a dependency on subsistence agriculture, the public sector, seasonal workers and employment in the mining sector. Water provision and sanitation remains a challenge, mostly in the rural areas. There has been an increase in the number of households that were provided with electricity as a source of energy in the area. Mining and government services are the main economic sectors.

POTENTIAL ENVIRONMENTAL IMPACTS

The following preliminary list of potential impacts has been identified and will be investigated as part of the environmental assessment process.

Loss and sterilisation of mineral resources – The placement of infrastructure in close proximity to a mineable resource as well as the disposal of mineral resources as backfill in the open pit has the potential to result in the loss and sterilisation of mineral resources.

Safety – The proposed project has the potential to alter the topography and present infrastructure and excavations which may present potential safety risks for both people and animals.

Soil and land capability– The placement of infrastructure and mining activities has the potential to compromise soil resources through physical disturbance (erosion and compaction) and/or pollution. Loss of soil resources has a direct impact on the natural capability of the land.

Biodiversity – the placement of infrastructure and mining activities has the potential to disturb and/or destroy vegetation, habitat units and related ecosystem functionality, including the disturbance of protected species.

Surface water – The proposed project has the potential to alter surface drainage patterns through the placement of infrastructure and to pollute surface water resources through the nature of mining activities.

Groundwater – the proposed project has the potential to contaminate groundwater resources which could impact availability to other groundwater users.

Air – The proposed project has the potential to contribute additional air pollution.

Noise – The proposed project has the potential to cause noise pollution through the presence of mining infrastructure and activities.

Visual – the placement of infrastructure and mining activities has the potential to create visual impacts through topographical changes.

Heritage resources – the proposed project has the potential to damage heritage resources should there be any chance finds.

Land use – the proposed project has the potential to impact on surrounding land uses such as livestock grazing, game farming and sparsely situated residences.

Socio-economic – the proposed project has the potential to contribute towards positive and negative socio-economic impacts. Positive impacts include job creation and stimulation of local and regional economy. Negative socio-economic impacts such as the influx of job seekers linked to social pathologies.

ENVIRONMENTAL AUTHORISATION PROCESS

The environmental process provides information on the project and environment in which it is being undertaken; identifies, in consultation with interested and/or affected parties (IAPs), the potential negative as well as positive impacts of the project; and reports on management measures required to mitigate impacts to an acceptable level. The likely process steps and timeframes are provided below. IAPs and other stakeholders registered on the project's database will receive notification of information-sharing meetings and report review periods in advance.

STEPS IN THE AUTHORISATION PROCESS
PHASE I – Application phase (May to June 2013)
Submission of applications to DENC and DEA. Notify DMR of Tshipi's intention to amend the approved EMP.
PHASE II – Scoping process (May to August 2013)
Notify other regulatory authorities and IAPs of project and environmental assessment (via social scan, newspaper advertisements, site notices and this document) Scoping information-sharing meeting(s) with regulatory authorities (if required) and IAPs Compile scoping report and submit to DMR, IAPs and other authorities for review Public review of scoping report (40 days) Submit scoping report including IAP comments to DENC and DEA. Forward IAP comments to DMR
PHASE III – EIA and EMP (June 2013 to April 2014)
Complete specialist studies Compile EIA and EMP report and submit to DMR, IAPs and other authorities for review Compile water use license application and submit to the department of water affairs Compile air emission license application and submit to DENC Public review of EIA and EMP report (40 days) Submit EIA andEMP report including IAP comments to DENC and DEA. Forward IAP comments to DMR Circulate environmental authorisation decisions to IAPs registered on the project database and advertise in newspapers.

PARTIES INVOLVED IN THE ENVIRONMENTAL ASSESSMENT PROCESS

IAPs

- Surrounding landowners, land users and communities
- Surrounding mines and industries
- Non-governmental organisations and associations

REGULATORY AUTHORITIES

- National Department of Environment Affairs (DEA)
- Northern Cape Department of Water Affairs (DWA)
- Department of Environment and Nature Conservation (DENC)
- Department of Mineral Resources (DMR)
- South Africa Heritage Resource Agency (SAHRA)
- Department of Agriculture, Land Reform and Rural Development (DALRRD)
- Northern Cape Department of Roads and Public Works (DRPW)

LOCAL AUTHORITIES

- Joe Morolong Local Municipalities
- John Taolo Gaetsewe District Municipality

Please let us know if there are any additional parties that should be involved.

TSHIPI É NTLE MANGANESE MINING
PROPOSED TSHIPI BORWA MINE EMP AMENDMENT

BACKGROUND INFORMATION DOCUMENT
REGISTRATION AND RESPONSE FORM FOR INTERESTED AND AFFECTED PARTIES

DATE		**TIME**	
PARTICULARS OF THE INTERESTED AND AFFECTED PARTY			
NAME			
POSTAL ADDRESS			
		POSTAL CODE	
STREET ADDRESS			
		POSTAL CODE	
WORK/ DAY TELEPHONE NUMBER		**WORK/ DAY FAX NUMBER**	
CELL PHONE NUMBER		**E-MAIL ADDRESS**	

PLEASE IDENTIFY YOUR INTEREST IN THE PROPOSED PROJECT
PLEASE WRITE YOUR COMMENTS AND QUESTIONS HERE

Please return completed forms to:

Natasha Daly and/or Caitlin Pringle
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ndaly@slrconsulting.com or cpringle@slrconsulting.com