

## mineral resources

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Sub Directorate: Mine Environmental Management      Ref: NC30/5/1/3/2/5026 MP

The Director  
South African Heritage Resources Agency  
PO Box 4637  
CAPE TOWN  
8000

Case ID: 3625

Attention: Nonofho Ndobochani

**CONSULTATION IN TERMS OF SECTION 40 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002, (ACT 28 OF 2002) IN RESPECT OF AGGREGATE STONES FOR THE APPROVAL OF AN ENVIRONMENTAL MANAGEMENT PLAN FOR A BORROW PIT ON PORTION 1 OF FARM NO.299 SITUATED IN THE MAGISTERIAL DISTRICT OF KIMBERLEY, NORTHERN CAPE REGION.**

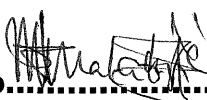
**APPLICANT: TRANSNET (SOC) LTD**

Attached herewith, please find a copy of an EMP received from the above-mentioned applicant, for your comments.

It would be appreciated if you could forward any comments or requirements your Department may have to this office and to the applicant before **17 October 2013** as required by the Act.

Consultation in this regard has also been initiated with other relevant State Departments. In an attempt to expedite the consultation process please contact **Mr Livhuwani Malatjie** of this office to make arrangements for a site inspection or for any other enquiries with regard to this application.

Your co-operation will be appreciated.

  
pp.....  
**ACTING REGIONAL MANAGER: MINERAL REGULATION  
NORTHERN CAPE REGION**



5026BP



## mineral resources

Department:  
Mineral Resources  
**REPUBLIC OF SOUTH AFRICA**

NAME OF APPLICANT: Transnet (SOC) Ltd

REFERENCE NUMBER:

### ENVIRONMENTAL MANAGEMENT PLAN

SUBMITTED

IN TERMS OF SECTION 39 AND OF REGULATION 52 OF THE  
MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT,

2002,

(ACT NO. 28 OF 2002) (the Act)

## **STANDARD DIRECTIVE**

Applicants for prospecting rights or mining permits, are herewith, in terms of the provisions of Section 29 (a) and in terms of section 39 (5) of the Mineral and Petroleum Resources Development Act, directed to submit an Environmental Management Plan strictly in accordance with the subject headings herein, and to compile the content according to all the sub items to the said subject headings referred to in the guideline published on the Departments website, within 60 days of notification by the Regional Manager of the acceptance of such application. This document comprises the standard format provided by the Department in terms of Regulation 52 (2), and the standard environmental management plan which was in use prior to the year 2011, will no longer be accepted.

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**IDENTIFICATION OF THE APPLICATION IN RESPECT OF WHICH THE ENVIRONMENTAL MANAGEMENT PLAN IS SUBMITTED.**

<b>ITEM</b>	<b>COMPANY CONTACT DETAILS</b>
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<b>ITEM</b>	<b>CONSULTANT CONTACT DETAILS (If applicable)</b>
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Transnet (SOC) Ltd (hereafter referred to as 'Transnet') is a Parastatal organisation and is deemed an "Organ of State" as stipulated in Government Notice R762 (25 June 2004) (See Appendix A). Based on this and discussions with the Department of Mineral Resources (DMR) in Kimberley, Transnet is therefore exempted from certain provisions of the Act (Sections 16, 20, 22 and 27) and will have to follow an abbreviated authorisation process for new/dormant borrow pits. This abbreviated process involves the completion of an Environmental Management Plan (EMP) (this document) for the Trewil 1 borrow pit located within Transnet's railway reserve on a Farm 299 (See Appendix 2 for the Title Deed). Transnet are currently undertaking an amendment process, a basic assessment process and an environmental process in terms of the National Environmental Management Act (NEMA) (Act 107 of 1998), as amended for the Proposed Upgrade of the Transnet Railway Line between Hotazel and the Port of Ngqura. The process of relevance to the Trewil 1 borrow pit is the Basic Assessment Process. The draft report has been appended to this EMP (Appendix B).

## **1 REGULATION 52 (2): Description of the environment likely to be affected by the proposed prospecting or mining operation**

### **1.1 The environment on site relative to the environment in the surrounding area**

The Trewil 1 borrow pit is located within Transnet's railway reserve on Farm 299 in close proximity to the Ariesfontein Station and adjacent to the existing manganese ore railway line which runs from Hotazel in the Northern Cape to the Port of Ngqura in the Eastern Cape (Figure 1). This is an existing borrow pit which needs to be re commissioned. The borrow pit is located within the Transnet rail reserve and will therefore not affect any privately owned land. A summary of the description of the environment in terms of the biophysical, social and cultural heritage aspects has been given below for this section of the railway line. More detail can be obtained from the basic assessment report (Appendix B) as well as the specialists reports (Appendix D) and the Trewil borrow pit site visit report (Appendix 1).

#### The Biophysical Environment

##### Geology, Topography and Palaeontology (Refer to Appendix 1 and Appendix D4 for additional detail)

The borrow pit site is located within the railway servitude. The area in and around the site has an elevation of 1447 mamsl, with a gently rolling to flat landscape terrain (plain landscape) dipping to the south. The site is underlain by Early Precambrian (2.6-2.5 billion year old) marine carbonate rocks of the Campbell Rand Subgroup (Ghaap Group, Transvaal Supergroup) that are known for their prolific fossil record of stromatolites, (i.e. laminated microbial reefs constructed by cyanobacteria, in some cases associated with well-preserved microfossils). The site is bounded to the north by the railway line and fenced to the south. The immediately adjacent property is private grazing property. Access to the site is from the east and west along the servitude.

##### Surface and Groundwater (Refer to Appendix 1 and Appendix D7 for additional detail)

The area in which the Trewil borrow pit is located is situated within the Ghaap Plateau Ecoregion as well as the Ghaap Plateau

Vaalbosveld vegetation unit within the C92A catchment (Figure 2). There are seasonal surface water bodies present in the vicinity of the railway line in this area.

Dried-out pans occur at approximately 1.4 km south of the railway line with the Klein Rietrivier located 6.5km south of the site. A single watercourse crossing is present within the Trewil section, a dry depression (pan) wetland (map label 19) is transected near the eastern end of the borrow pit (Figure 3). This arid pan is expected to only be cyclically inundated, with prolonged dry periods that can continue over more than one year. No distinct wetland indicators were recorded, apart from the terrain unit indicator. Six other depression - flat wetlands with similar properties were identified within a 500 m radius of the loop section.

#### Flora (Refer to Appendix D2 for additional detail)

The vegetation of the Trewil site consists of Ghaap Plateau Vaalbosveld which is 98.7% intact and classified as Least Threatened. The dominant species within the vegetation are Camphor Bush *Tarchnonthus camphoratus* and Karee *Searsia tridactyla*, while in some places towards the northern extent of the site Wild Olive *Olea europea* subsp *africana* is also common as can be seen in the right image below. The grass is very heavily grazed within the farmland and is generally low and open. Dominant grass species present are Red Grass *Themeda triandra*, Pangola Grass *Digitaria eriantha* and Lovegrass *Eragrostis lehmanianna*. The area likely to be affected by the development has been previously impacted and cleared of large woody species as there is a water pipeline which runs parallel to the railway line. As a result, few large woody species would be affected by the development. There is however a narrow strip of woody vegetation along the fence between the railway line and the adjacent cleared rangeland.

#### Fauna

No fauna species were identified within the borrow pit area during the field visit (See report in Appendix 1). Due to the extensive clearing of vegetation in this area, limited habitats are available for a variety of species. It can be expected that small mammals including various rodent species, herpetofaunal species and macro invertebrates utilise the borrow pit site.

#### Noise (Refer to Appendix D5 for additional detail)

The Trewil loop is located approximately 60 km east of Postmasburg town and 7.5 km south of the R31. The noise environment around this loop is typical of a rural area with low ambient noise levels. The existing sources of noise in the Trewil area arise from train traffic on the existing line as well as from the Trewil pump station. The closest receptors to noise is a small house south of the existing line however no schools or settlements are located in close proximity to the site.



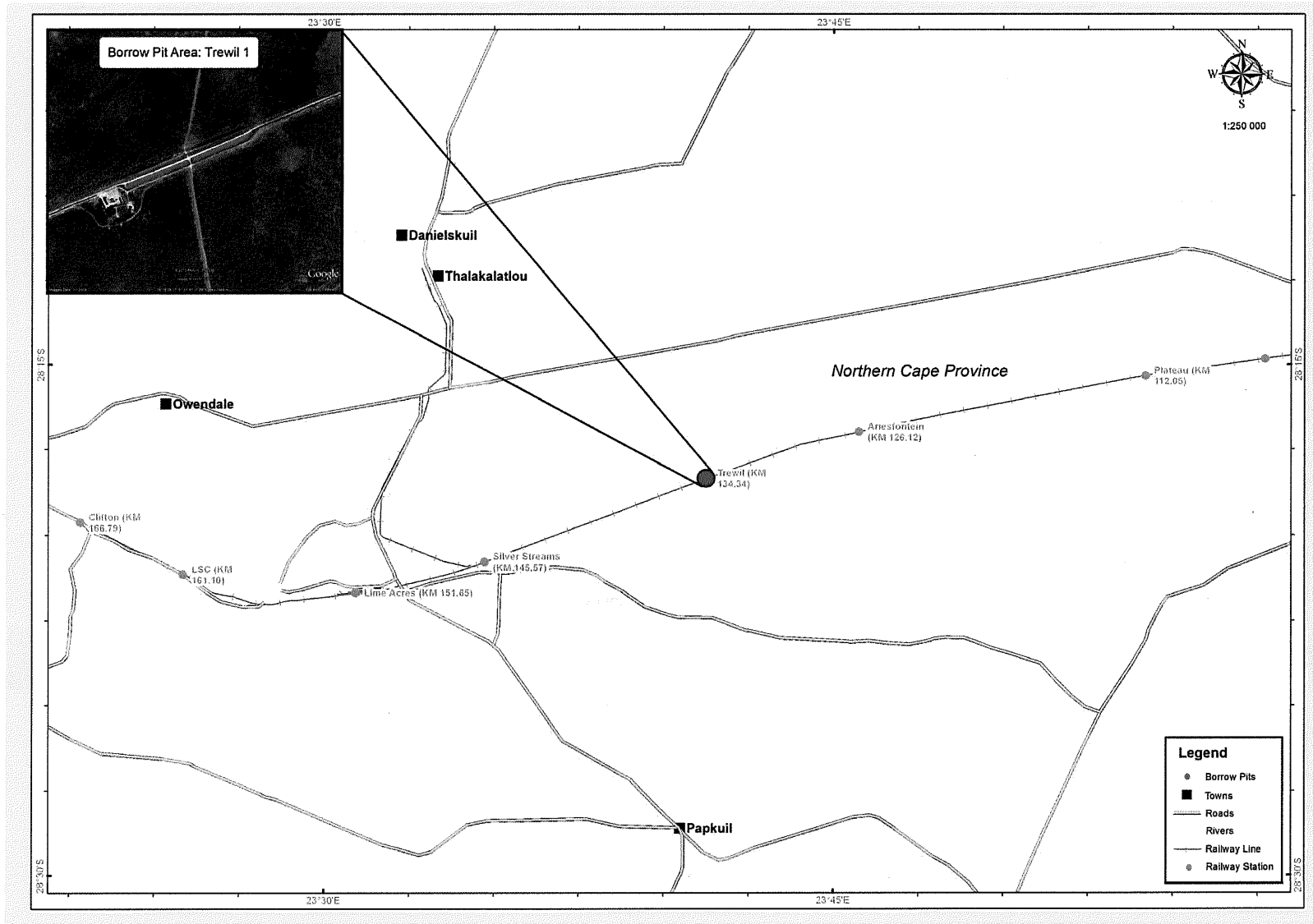


Figure 1: Locality map of the Trewil 1 borrow pit

Ambient Air Quality (Refer to Appendix D1 for additional detail)

The manganese freight line runs from the mines at Hotazel to the Port of Ngqura. It passes mostly through sparsely populated rural areas consisting of agricultural lands and natural vegetation. It also passes through a number of urban centres of varying sizes. Industrial activity in all of these is relatively limited consisting of small manufacturing concerns with limited emissions of pollutants to the atmosphere.

In un-electrified homes in residential areas along the route, wood and other fuels are burnt for cooking and space heating. In winter typically more fuel is burnt than in summer because of the colder temperatures. Pollutants associated with wood burning include CO, NO<sub>x</sub> and particulates. Vegetation burning for agricultural purposes and other forms of land management are also sources of gaseous and particulate pollutants.

In the urbanised centres along the freight route, ambient air quality is expected to be generally good and possibly only impacted on by emissions from sources such as small industrial boilers and motor vehicles. In residential areas that the freight line runs close to, where wood and other biomass fuels are used for heating and cooking, air quality may be poor. In the evenings and early mornings when fires are made, especially in winter air quality in these areas will be most impacted. Elsewhere along the route ambient air quality is expected to be very good.

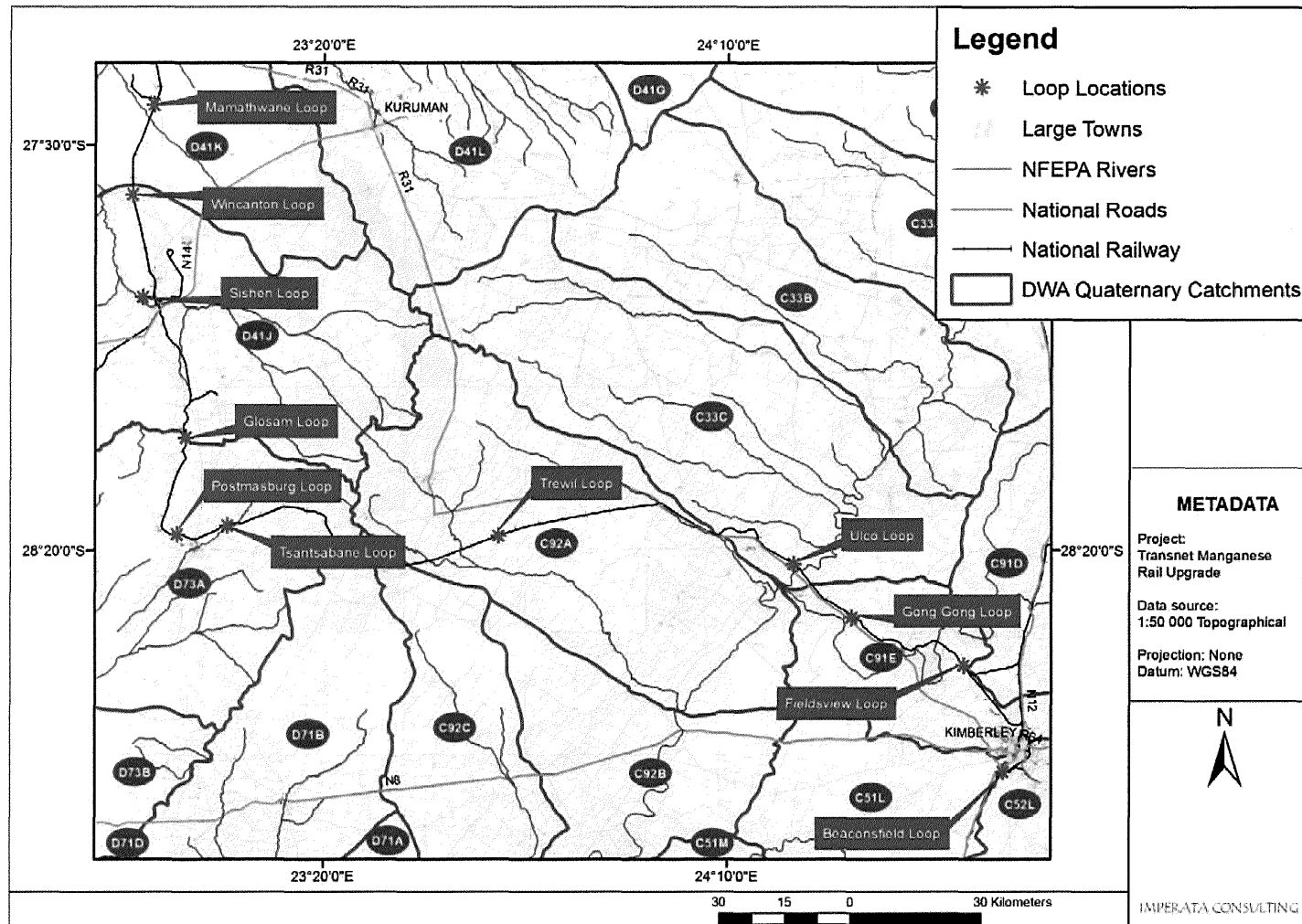


Figure 2: The eleven Area 1 study areas with their respective loop section and Quaternary Catchments. (Source DWA, NFEPA & Hatch)

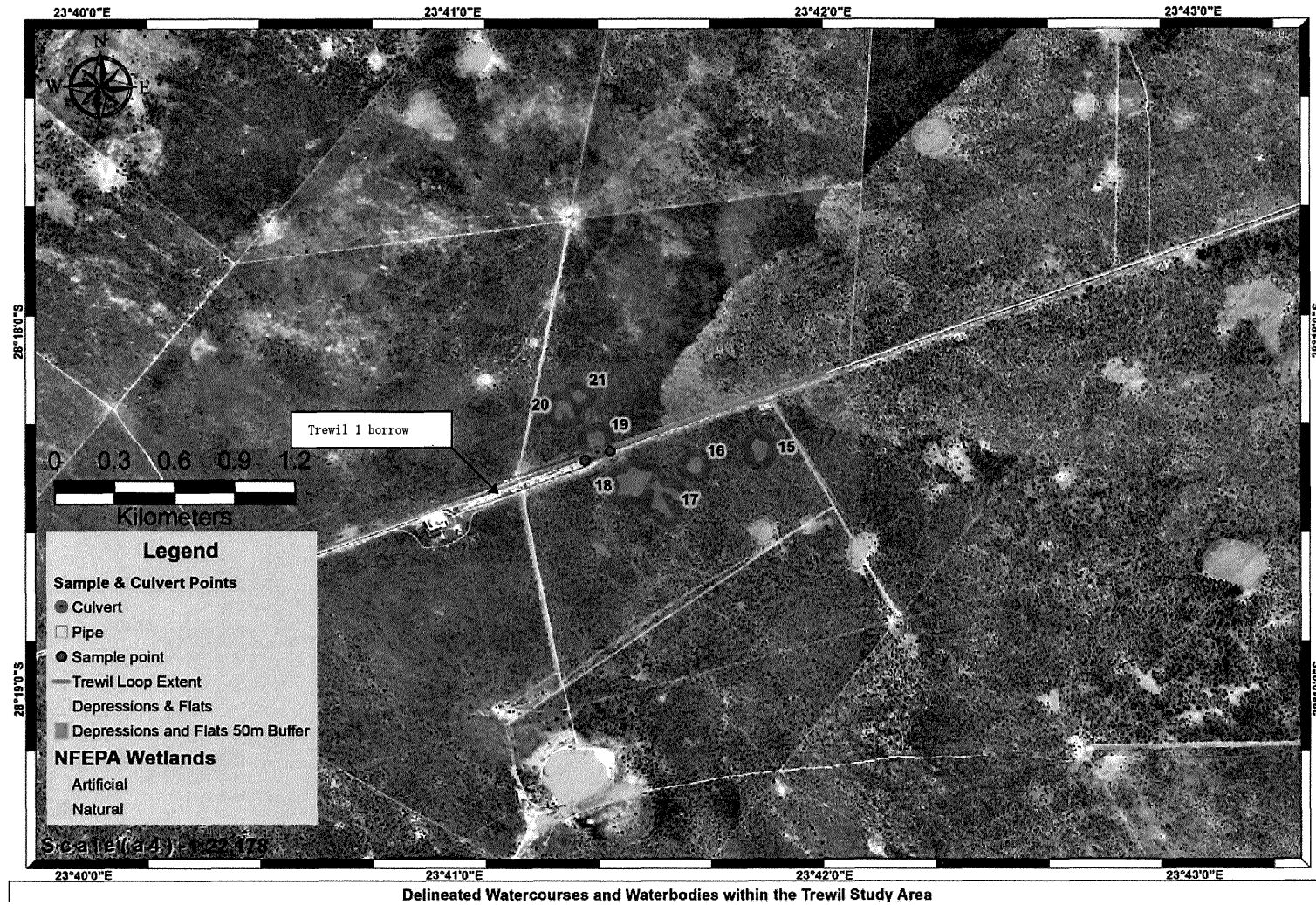


Figure 3: Delineated watercourses within the Trewil study area (Source: Watercourse Assessment Report Appendix D7)

The Socio-Economic Environment (Refer to Appendix D6 for additional detail)

The proposed borrow pit area is located in the Kgatelopele Local Municipality in the Northern Cape. According to a community survey conducted in 2007 for the local municipality, the majority of the population are classified as Coloured (46 percent), 38 percent are Black and 16 percent are White. The closest town to the Project site is Lime Acres (80km), which is a mining town. Within the Trewil area, there is one project affected farm (which is not affected by the proposed Trewil borrow pit). The following information was obtained from the socio-economic assessment about the farm adjacent to the Trewil borrow pit (Appendix D6):

The project affected farm is known as portion of portion 6 of Farm No 299.

- The farm is privately owned in a family trust.
- The land is currently used for livestock farming (sheep and cattle).
- There are six people who permanently reside on the farm (including the farm workers).
- Infrastructure on the farm consists of the farm house, worker's cottages, workshops, boreholes, fences and fenced off camps, and other buildings.

The Cultural/Heritage Environment (Refer to Appendix D3 for additional detail)

The Trewil borrow pit is an existing borrow pit which is located on Transnet owned land. The area is archaeologically disturbed as a result of vegetation clearing that has occurred in the past. Figure 2 below indicates the heritage sites located in the vicinity of the borrow pit. These will not be affected by the re-commissioning of the borrow pit however, it is possible that heritage objects may be uncovered during earthmoving activities. A heritage management plan is available (Appendix E2) that provides guidance in terms of the steps that should be taken if heritage objects are uncovered during the borrow pit's operation.

### **1.2 The specific environmental features on the site applied for which may require protection, remediation, management or avoidance**

The areas within the railway reserve are severely disturbed. The majority of the affected area has been impacted by previous clearing activities and there is very little remaining natural vegetation present within the study area that would be impacted by any development (10% Natural habitat remains). As a result of the clearing of the natural vegetation adjacent to the line for the Sedibeng Water Pipeline, the majority of vegetation that would be affected by the development is already in a semi-natural and degraded state, with only grasses, forbs and low shrubs present (70% degraded). The railway line, service road and other existing infrastructure has resulted in the loss and transformation of the natural vegetation (20% transformed). The Trewil borrow pit is located within the railway reserve and will therefore not have any further impacts on the remaining surrounding vegetation. There are no protected/conservation areas within a 5 km radius of the site. The vegetation in the borrow pit area is dominated by the Ghaap Plateau Vaalbosveld which is 98.7% intact and classified as Least Threatened (Figure 4).

### **1.3 Map showing the spatial locality of all environmental, cultural/heritage and current land use features identified on site**

The sensitivity map is shown in Figure 4.

### **1.4 Confirmation that the description of the environment has been compiled with the participation of the community, the landowner and interested and affected parties**

A public participation process was carried out as part of the Basic Assessment (BA) Process conducted in 2012/2013 (Appendix B). The borrow pits in general have been discussed in this assessment and the public were made aware during the process that the project would require several borrow pits along the length of the railway line. Since the Trewil borrow pit area is on Transnet land and is within the rail reserve, specific consultation with interested and affected parties was not applicable in this case however, landowners and informal farms of the farm portions adjacent to the area on which the borrow pit is located were consulted with as part of the BA public participation process (See Figure 5 for the farm portions adjacent to the borrow pit site). The general landscape was included in the BA process and therefore communities and

affected parties along the length of the railway line had the opportunity to provide input into the classification of the surrounding environment.

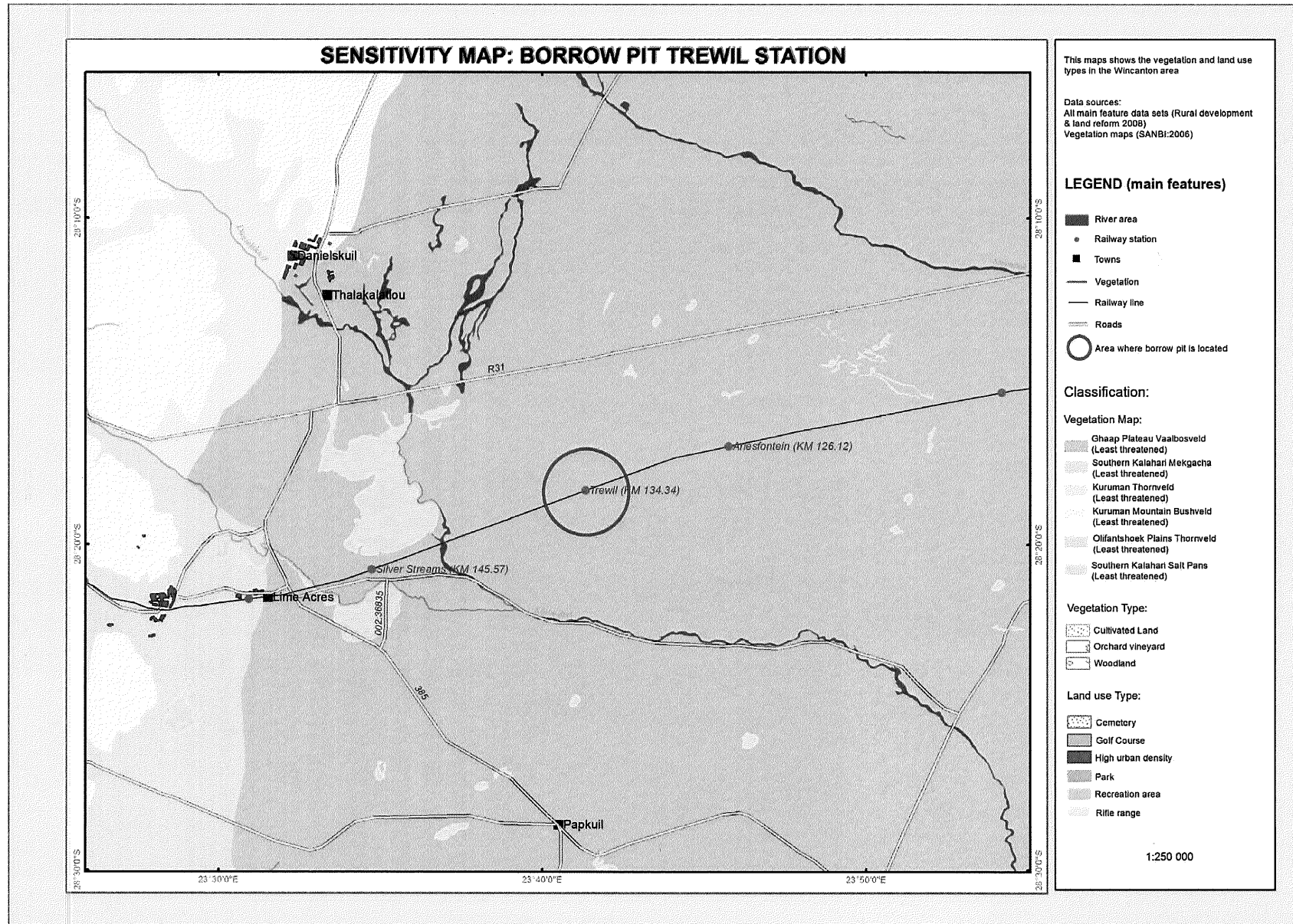


Figure 4: Sensitivity map of the area in and around the Trewil borrow pit



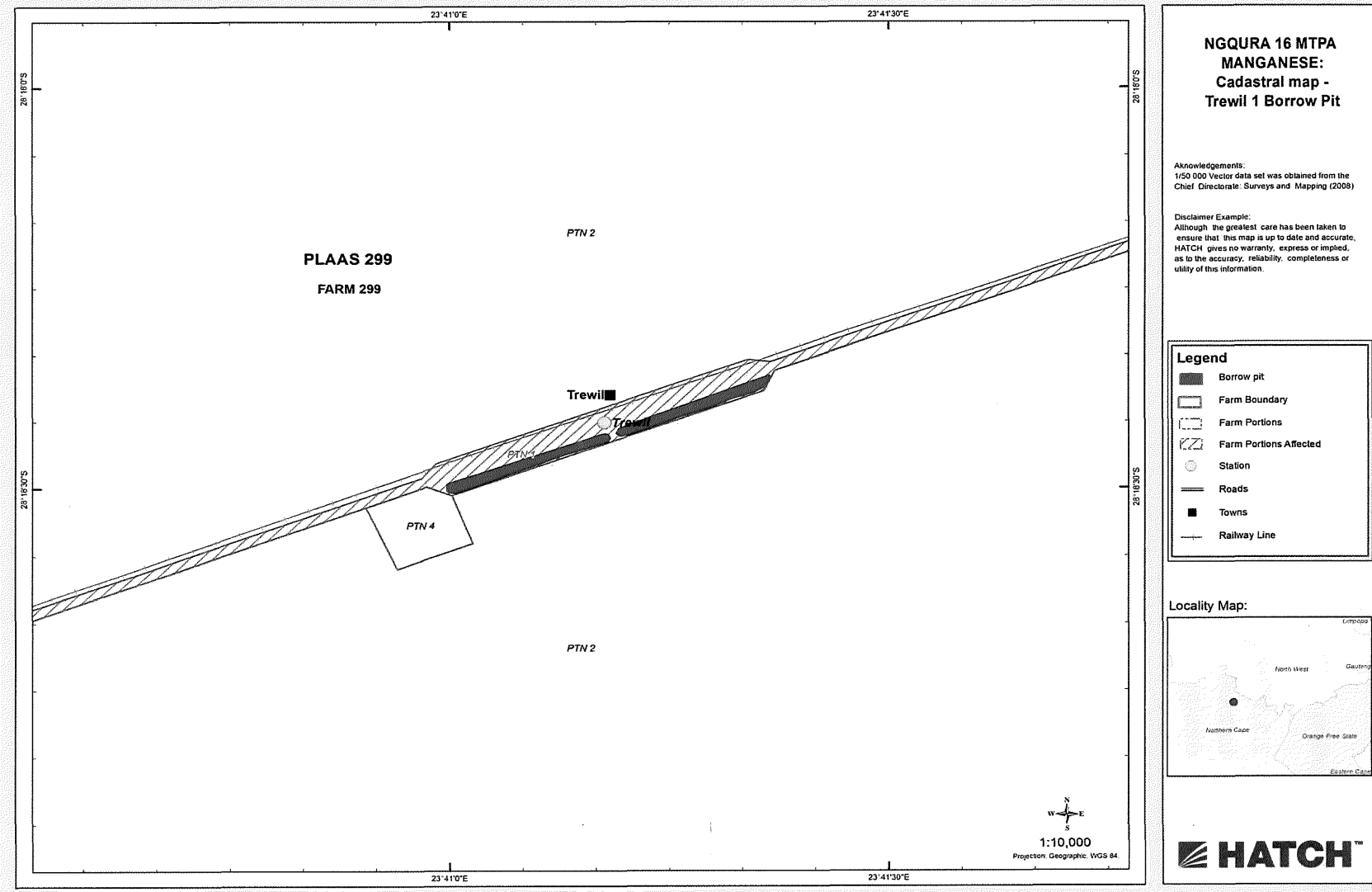


Figure 5: Farm portions adjacent to the Trewil borrow pit site

## **2 REGULATION 52 (2) (b): Assessment of the potential impacts of the proposed prospecting or mining operation on the environment, socio-economic conditions and cultural heritage**

### **2.1 Description of the proposed prospecting or mining operation**

#### **2.1.1 The main prospecting activities (e.g. access roads, topsoil storage sites and any other basic prospecting design features)**

The material from the borrow pit will be used for earthworks material for construction of railway formations, construction of level crossing ramps and use in the formation subsidence repair. The main equipment that will be used to achieve this will be a 22 ton excavator, a back actor and a 10m<sup>3</sup> tipper. The main activities involved in the re-commissioning of the Trewil 1 borrow pit include:

- Staking out of the borrow pit area prior to vegetation clearing following which, the vegetation would be cleared from the site.
- Topsoil, where possible, will be stripped to a depth of 200 mm and stockpiled separately from the other soil layers.
- Excavation of materials by ripping and loading with the excavator directly onto the haul vehicle. The material will be transported along the existing gravel road which runs adjacent to the railway line.
- Any material which is not suitable for borrow material will be stockpiled separately and used for in the rehabilitation of the site.

#### **2.1.2 Plan of the main activities with dimensions**

The borrow pit dimensions are as follows:

- Footprint (in hectares): Estimated at 0.8 ha
- Maximum depth (in meters): 5 m
- Anticipated volume (in cubic meters): 24 000 m<sup>3</sup>

The borrow pit layout plan is shown in Figure 7.

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#### **2.1.3 Description of construction, operational, and decommissioning phases**

The main phases associated with borrow pit development include construction, operation, rehabilitation and closure. A brief description of each one of these phases is given below:

#### Construction:

The borrow pit area will be staked out prior to vegetation clearing after which, the vegetation will be cleared from the site. Where topsoil is present, this will be stripped to a depth of 200 mm and stockpiled separately in piles.

#### Operation:

The borrow pit material will be excavated by means of ripping and loading with an excavator and then stockpiled before being loaded onto haul vehicles. The material will be transported along the existing gravel access road which runs adjacent to the railway line within the Transnet rail reserve.

#### Rehabilitation and Closure:

The objective of this phase is to restore the disturbed area as closely as possible to its original state through rehabilitation. The material which cannot be used for the repair of the rail track formation will be used in the reshaping of the site during rehabilitation. Drainage outputs would also be provided to ensure that there are no water pools within the borrow pit excavations. The stockpiled topsoil will be spread evenly over the disturbed area to a depth of 100 mm where possible. The borrow pit sites would then be re-vegetated with suitable indigenous grass species.

### **2.1.4 Listed activities (in terms of the NEMA EIA regulations)**

Various listed activities (some of which are included in the table below) have been applied for as part of the Basic Assessment application process (see Appendix B) for the project as a whole.

It is not anticipated that development of this borrow pit will trigger any activities in terms of NEMA however, in order to satisfy this section of the EMP, a

list of potential listed activities which could be triggered for other borrow pit scenarios have been highlighted in the table below together with an explanation of why they are not applicable in this case.

Potential Triggered Activity No. And description	Relevance
<b>GN R544</b>	
11. The construction of infrastructure or structures covering 50 square meters or more within 32 meters of a watercourse.	Not relevant. No infrastructure will be constructed as part of the borrow pit excavation.
13. The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres.	Not relevant. This activity is not relevant to the borrow pit. The contractor will provide temporary tanks on stands with a capacity of 2 cubic meters each for storage of diesel at the site in a bunded area. The combined capacity of these temporary tanks will not exceed 80 cubic meters.
19. Any activity which requires a prospecting right or renewal thereof in terms of section 16 and 18 respectively of the Mineral and Petroleum Resources Development Act 2002 (Act No. 28 of 2002).	Not relevant. Transnet is an Organ of State and therefore, in terms of GN R762, is exempted from these activities for borrow pits.
20. Any activity requiring a mining permit in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) or renewal thereof.	Not relevant. Transnet is an Organ of State and therefore, in terms of GN R762, is exempted from these activities.
23ii. The transformation of undeveloped land to industrial use, outside an urban area bigger than 1 hectare.	Not relevant. The borrow pit will be re commissioned and will be developed within the existing footprint which is not zoned for open space or

	conservation.
24: The transformation of land bigger than 1000 square meters in size to industrial land where such land was zoned open space or conservation.	Not relevant. The proposed borrow pit will be developed within the existing railway servitude which is not zoned for open space or conservation.
53: The expansion of railway lines, stations or shunting yards where there will be an increased development footprint excluding: <ul style="list-style-type: none"> <li>(i) Railway lines, shunting yards and railway stations in industrial complexes or zones;</li> <li>(ii) Underground railway lines in mines;</li> <li>(iii) Additional railway lines within the reserve of an existing railway line.</li> </ul>	Not relevant. The activity is not relevant to the borrow pit development. In addition to this, the development of the borrow pit footprint will be within the existing borrow pit footprint.
<b>GN R546</b>	
4. Construction of a road wider than 4 m with a reserve less than 13.5 m. <ul style="list-style-type: none"> <li>(a) Northern Cape;</li> <li>(ii) All areas outside urban areas.</li> </ul>	Not relevant. An access road already exists. This will be used for transport of the borrow material from the pit to the section of the railway line where it is needed. No lengthening or widening of this road is anticipated to be required.
12. The clearance of an area of 300 square meters or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation. <p>a) Within any critically endangered or endangered ecosystem listed in terms of section 52 of NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial</p>	Not relevant. The existing borrow pit area has been significantly disturbed and would not require substantial clearing of indigenous vegetation. In addition to this, there are no protected areas within a 5 km radius of the site.

Biodiversity Assessment 2004; b) Within critical biodiversity areas identified in bioregional plans.	
13. The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetation cover constitutes indigenous vegetation.  (c) Northern Cape; (ii) All areas outside urban areas.	Not relevant. The existing borrow pit area has been significantly disturbed and would not require substantial clearing of indigenous vegetation as most of this has already been cleared within the railway reserve. In addition to this, there are no protected areas within a 5 km radius of the site.

## 2.2 Identification of potential impacts

(Refer to the guideline)

As mentioned in section 2.1.4 above, the re commissioning of the Trewil 1 borrow pit is not likely to trigger any activities in terms of NEMA. Sections 2.2.1 to 2.2.4 below have therefore been completed to only consider the impacts relating to the main activities (identified in section 2.1.1 above) revolving around the borrow pit during the construction, operation, rehabilitation and closure phases.

The impacts associated with the borrow pit development were assessed through the Basic Assessment (BA), conducted in terms of the National Environmental Management Act 107 of 1998 as amended (See Appendix B).

### 2.2.1 Potential impacts per activity and listed activities

The impacts identified to be associated with the excavation of the borrow pits are dust, noise, loss of vegetation, archaeological and faunal impacts. The table below highlights the potential impacts which may occur per activity for each of the phases of the borrow pit's development:

Phase	Borrow pit activity	Impact	Impact Description
Construction	Clearing of	Impact on	Some loss of

	vegetation.	vegetation and protected plant species	vegetation is an inevitable consequence of the borrow pit development.
		Alien plant invasion risk	The disturbance created during construction will leave the disturbed areas vulnerable to alien plant invasion.
		Loss of faunal diversity and richness	Clearing of vegetation will result in some habitat loss for species likely to occur in the borrow pit area. In addition to this, sensitive and shy fauna would move away from the area during construction activities. Some slow moving species would not be able to avoid the construction activities and might be killed.
		Dust nuisance	The generation of dust through site clearance and earthworks could pose a nuisance to receptors in proximity to the borrow pit.
		Soil erosion	Increased erosion risk would result from soil disturbance and the loss of plant cover within the cleared and disturbed areas.
		Noise disturbance	Noise disturbance could result from the use of machinery during vegetation clearing.
		Contamination	Contamination of soil

		of soil and groundwater resources	and groundwater due to potential major fuel spillage from construction machinery.
		Paleontological fossil disturbance	Excavation of the borrow pit could result in the disturbance of fossils and microfossils.
	Stockpiling of topsoil.	Soil erosion	Soil erosion (predominately by wind erosion) may occur if the topsoil stockpiles are not shaped and re-vegetated appropriately.
		Dust nuisance	The generation of dust during stockpiling could pose a nuisance to social receptors in proximity to the borrow pit site.
		Noise disturbance	Noise disturbance could result from the use of machinery during stockpiling.
		Contamination of soil and groundwater resources	Contamination of soil and groundwater due to potential fuel spillage from machinery used to stockpile the topsoil.
Operation	Excavation of borrow material.	Dust nuisance	The generation of dust through the excavation of the borrow material and transport on the access road could pose a nuisance to social receptors in proximity to the borrow pit site.
		Noise disturbance	Noise disturbance could result from the use of machinery



			during excavation.
		Contamination of soil and groundwater resources	Contamination of soil and groundwater due to potential fuel spillage from excavation machinery and haul vehicles.
Rehabilitation and closure	Rehabilitation	Alien plant invasion risk	Patches of disturbed soil can be vulnerable to colonisation by weeds which can prohibit natural succession of the local indigenous vegetation during rehabilitation.
		Dust nuisance	The generation of dust through spreading of the topsoil during rehabilitation.
		Contamination of soil and groundwater resources	Contamination of soil and groundwater due to potential fuel spillage from machinery used for rehabilitation.

### 2.2.2 Potential cumulative impacts

The following potential cumulative impacts have been identified:

Cumulative impact	Impact Description
Habitat loss and faunal disturbance.	Due to the number of borrow pits envisaged along the length of the railway line, there will be some cumulative impact in terms of habitat loss and faunal disturbance. However, since the extent of the development is limited, this would not be significant.
Cumulative transformation of the area.	Due to the number of borrow pits envisaged along the length of the

	railway line, there will be some cumulative impact in terms of the transformation of the area. However, since the extent of the development is limited, this would not be significant.
Incremental noise from a number of separate developments.	Both the activities taking place on the railway line between Hotazel and Ngqura (upgrade of the line) and the excavation of the borrow pits will generate noise which together would result in an increased noise impact.
Combined effect of the individual impacts on surrounding receptors.	The noise, dust and visual impacts from the borrow pit activities will collectively have a greater impact on surrounding receptors than they would in isolation.

### 2.2.3 Potential impact on heritage resources

The heritage impact assessment undertaken as part of the BA process did not identify any significant cultural or archaeological features at the borrow pit site however, the potential impacts (generated by further excavation of borrow pit) on heritage resources have been highlighted in the table below. The impacts (if any) are likely to be confined to the construction phase only. A Phase 1 Heritage Impact Assessment (HIA) has been included in Appendix D3.

Phase	Activity	Impact	Impact Description
Construction	Clearing of vegetation.	Loss of or disturbance to archaeological or cultural sites.	Construction activities may result in the disturbance, damage or destruction of sites of cultural or archaeological significance (as defined in the National Heritage Resource Act 25 of 1999).

#### **2.2.4 Potential impacts on communities, individuals or competing land uses in close proximity**

No sensitive receptors (communities, individuals) occur in close proximity to the Trewil 1 borrow pit. In addition to this, the borrow pit will be excavated within the existing railway reserve and will therefore have no impact on competing land uses.

#### **2.2.5 Confirmation that the list of potential impacts has been compiled with the participation of the landowner and interested and affected parties**

A public participation process was carried out as part of the BA process conducted in 2012 (Appendix B). Borrow pits in general have been discussed in this assessment as well as in the public information documents (BIDs, presentations etc) and the public were made aware during the BA process that the project would require several borrow pits along the length of the railway line. Since the Trewil borrow pit area is on Transnet land and is within the rail reserve, specific consultation with interested and affected parties was not applicable in this case however, landowners of the farm portions adjacent to the area on which the borrow pit is located, were contacted and informed about the proposed activities as part of the BA consultation process (See Figure 5 for the farm portions adjacent to the borrow pit site). The general landscape was included in the BA process and therefore communities and affected parties along the length of the railway line had the opportunity to provide input into the classification of the surrounding environment. The issues and concerns of the interested and affected parties have been captured in the Comments and Responses report which has been appended to the BA report in Appendix B.

#### **2.2.6 Confirmation of specialist report appended** (Refer to guideline)

The following relevant specialist reports, which are in line with the baseline information and proposed activities, have been included as appendices to this EMP:

- Ecological Specialist Study: Appendix D2
- Paleontological Specialist Study: Appendix D4

- Phase I Heritage Impact Assessment: Appendix D3
- Noise Specialist Study: Appendix D5
- Social Specialist Study: Appendix D6
- Air Quality Baseline: Appendix D1
- Watercourse Assessment: Appendix D7

### **3 REGULATION 52 (2) (c): Summary of the assessment of the significance of the potential impacts and the proposed mitigation measures to minimise adverse impacts**

#### **3.1 Assessment of the significance of the potential impacts**

##### **3.1.1 Criteria of assigning significance to potential impacts**

The impact assessment methodology for assigning significance to potential impacts was included in the Basic Assessment Report (Appendix B) and is shown below:

##### ***METHODOLOGY USED FOR ASSESSING IMPACTS***

The assessment methodology employed for this project was developed by Environmental Resources Management (ERM) and is in line with Department of Environmental Affairs (DEA) requirements.

The impact assessment for the proposed project commenced with a site investigation. The site investigation was carried out by ERM in order to better understand the site setting and the affected biophysical and social context and identify any sensitive receptors. During the site investigation key personnel that would be involved in the proposed installation were interviewed.

The adequate assessment and evaluation of the potential impacts and benefits that will be associated with the proposed project necessitates the development of a scientific methodology that will reduce the subjectivity involved in making such evaluations. A clearly defined methodology (described below) was used in order to accurately determine the significance of the predicted impacts on, or benefit to, the surrounding natural and/or social environment. The proposed project was considered in the context of the area.

Mitigation was incorporated into the project design in order to avoid or reduce negative impacts and enhance positive impacts. For the identified significant impacts in the construction and operational phases, the project team worked with the client in identifying suitable and practical mitigation measures. A description of these mitigation measures is included within the Environmental Management Programme (EMPr) (Appendix G).

##### ***DETERMINATION OF IMPACT SIGNIFICANCE***

*Significance*

example, where information is insufficient to assess the impact. Degree of confidence is expressed as low, medium or high.

### Significance Criteria

<b>Magnitude – the degree of change brought about in the environment</b>	
<b>Extent</b>	<p><b>On-site</b> – impacts that are limited to the Site Area only.</p> <p><b>Local</b> – impacts that affect an area in a radius of 20 km around the development area.</p> <p><b>Regional</b> – impacts that affect regionally important environmental resources or are experienced at a regional scale as determined by administrative boundaries, habitat type/ ecosystems.</p> <p><b>National</b> – impacts that affect nationally important environmental resources or affect an area that is nationally important/ or have macro-economic consequences.</p>
<b>Duration</b>	<p><b>Temporary</b> – impacts are predicted to be of short duration and intermittent/occasional.</p> <p><b>Short-term</b> – impacts that are predicted to last only for the duration of the construction period.</p> <p><b>Long-term</b> – impacts that will continue for the life of the project, but ceases when the project stops operating.</p> <p><b>Long term</b> – impacts that cause a permanent change in the affected receptor or resource (e.g. removal or destruction of ecological habitat) that endures substantially beyond the project lifetime.</p>
<b>Intensity <sup>(1)</sup></b>	<p><b>BIOPHYSICAL ENVIRONMENT:</b> <i>Intensity can be considered in terms of the sensitivity of the biodiversity receptor (ie habitats, species or communities).</i></p> <p><b>Negligible</b> – the impact on the environment is not detectable.</p> <p><b>Low</b> – the impact affects the environment in such a way that natural functions and processes are not affected.</p> <p><b>Medium</b> – where the affected environment is altered but natural functions and processes continue, albeit in a modified way.</p> <p><b>High</b> – where natural functions or processes are altered to the extent that it will temporarily or permanently cease.</p> <p><b>SOCIO-ECONOMIC ENVIRONMENT:</b> <i>Intensity can be considered in terms of the ability of project affected people/communities to adapt to changes brought about by the project.</i></p>

*Significance Rating Matrix*

		SIGNIFICANCE		
		LIKELIHOOD		
		Unlikely	Likely	Definite
MAGNITUDE	Negligible	Negligible	Negligible	Minor
	Low	Negligible	Minor	Minor
	Medium	Minor	Moderate	Moderate
	High	Moderate	Major	Major

The following are descriptions of the overall post-mitigation significance ratings:

**Negligible:** Insignificant or no residual impacts.

**Minor:** An impact of minor significance is one where an effect will be experienced, but the impact magnitude is sufficiently small and well within accepted standards, and/or the receptor is of low sensitivity/value.

**Moderate:** An impact of moderate significance is one within accepted limits and standards. The emphasis for moderate impacts is on demonstrating that the impact has been reduced to a level that is as low as reasonably practicable (ALARP). This does not necessarily mean that "moderate" impacts have to be reduced to "minor" impacts, but that medium impacts are being managed effectively and efficiently.

**Major:** An impact of major significance is one where an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued/sensitive resource/receptors.

The impact assessment methodology for assigning significance to potential heritage impacts was included in the Heritage Impact Assessment Report (Appendix D3) and is shown below:

The determination of archaeological and historical significance ratings depend on the type, density and context of the cultural landscape. For example if one hand axe is discovered at a site with no archaeological context, it is of low significance. If a hand axe is discovered at an area listed as a site of national, provincial or local significance, the finding is of high to medium importance. Research has been undertaken to determine the best option to provide an explainable significance table. Natal Museum has provided significant data in terms of a proposed methodology to rate heritage resources of significance (Whitelaw G, 1997). In addition to this a table was developed to assess archaeological and historical sites of significance at the areas where borrow pits will be excavated.

Class	Characteristic	Group 1	Group 2	Group 3
1	Context	Historical structures out of context and poorly preserved. Scattered historical objects in vicinity of the ruins and surrounding landscape. No oral history available. Scattered stone tools noted on the surface.	Limited context. Historical structures in acceptable condition. Medium concentration of historical objects in vicinity of the ruins and surrounding landscape. Limited oral history available. Medium density stone tools have been identified on the surface.	Well defined context. Historical structures well preserved. High concentration of historical objects in vicinity of the ruins and surrounding area. Significant oral history available. High density stone tools have been identified on the surface.

2	Rarity of historical or archaeological Items	Absent	Present	Highly visible
3	Need for future investigation	Absent	Present	Highly visible
4	Potential for future public display	Low	Medium	High
5	Visual value	Low	Medium	High
6	Need for a heritage management plan	Low	Medium	High
7	Need for monitoring	Low	Medium	High



### 3.1.2 Potential impact of each main activity in each phase, and corresponding significance assessment

The potential impacts of each main activity associated with the various phases of the borrow pit's development have been assessed in accordance with the methodology above. The results of the significance assessment have been included in the impact table below:

Phase	Activity	Impact	Significance Rating	Explanation of Significance Rating
Construction	Clearing of vegetation	<p><b>Impact on vegetation and protected plant species:</b> Some loss of vegetation is an inevitable consequence of the borrow pit development.</p>	Minor	<p>The area to be impacted on is an existing borrow pit and has already been disturbed. Vegetation communities situated on the borrow pit land, if any, are minimal and are unlikely to be of the same composition (which is also poor) as those in undisturbed areas. Therefore clearing of this land would have a minor impact on vegetation communities.</p>

		<p><b>Alien plant invasion risk:</b> The disturbance created during construction will leave the disturbed areas vulnerable to alien plant invasion.</p>	Negligible	<p>Once vegetation clearing has occurred, the borrow pit will be excavated continuously until it is closed and rehabilitated. This continual use will prevent any alien plants from invading the disturbed area.</p>
		<p><b>Loss of faunal diversity and richness:</b> Clearing of vegetation will result in some habitat loss for species likely to occur in the borrow pit area. In addition to this, sensitive and shy fauna would move away from the area during construction activities. Some slow moving species would not be able to avoid the construction activities and might be killed.</p>	Minor	<p>The area to be impacted on is an existing borrow pit and has already been disturbed. Some habitat loss for the faunal species is likely to occur but given the scale of the development relative to the distribution extent of these species, it would not be of a high significance.</p>

		<p><b>Dust nuisance:</b> The generation of dust through site clearance and earthworks could pose a nuisance to social receptors in proximity to the borrow pit site.</p>	Minor	The area to be disturbed is situated within the railway reserve and is not in close proximity to any sensitive receptors. Any dust generated by the activities would therefore have a minor to negligible impact on potential social receptors.
		<p><b>Soil erosion:</b> Increased erosion risk would result from soil disturbance and the loss of plant cover within the cleared and disturbed area.</p>	Minor	The area to be cleared has already been disturbed. Additional clearing is unlikely to cause significant soil erosion as all soil and material which will be cleared will be stockpiled correctly.
		<p><b>Noise disturbance:</b> Noise disturbance could result from the use of machinery during vegetation clearing.</p>	Minor	The area to be disturbed is situated within the railway reserve and is not in close proximity to any sensitive receptors.
		<p><b>Paleontological fossil disturbance:</b> Excavation of the borrow pit could result in the disturbance of</p>	Moderate	This area is underlain by Early Precambrian marine carbonate rocks of the Campbell Rand Subgroup that are known for their prolific

		fossils and microfossils.		fossil record of stromatolites and well-preserved microfossils. These are of moderate paleontological sensitivity.
		<p><b>Loss of or disturbance to archaeological or cultural sites:</b> Construction activities may result in the disturbance, damage or destruction of sites of cultural significance or sites of archaeological importance.</p>	Minor	The area has been disturbed by previous borrow pit excavation activities. However, materials of archaeological or cultural value may be exposed during the re commissioning of the borrow pit.
		<p><b>Contamination of soil and groundwater resources:</b> Contamination of soil and groundwater due to potential fuel spillage from construction machinery.</p>	Moderate	Fuel spillage as a result of oil spills from poorly maintained machinery can seep into the newly exposed ground and eventually into the groundwater. This impact is moderate as it can be managed effectively and efficiently to minimise or prevent the impact on the contamination of soil and

				groundwater.
	Stockpiling of topsoil	<p><b>Soil erosion:</b> Soil erosion (predominately by wind erosion) may occur if the topsoil stockpiles are not shaped and re-vegetated appropriately.</p>	Minor	Newly stockpiled topsoil is vulnerable to erosion by flash floods and winds. Although the likelihood is low, this will impact on the amount of topsoil which will be available for rehabilitation if this is not managed correctly.
		<p><b>Contamination of soil and groundwater resources:</b> Contamination of soil and groundwater due to potential fuel spillage from excavation machinery and haul vehicles.</p>	Moderate	Fuel spillage as a result of oil spills from poorly maintained machinery can seep into the newly exposed ground and eventually into the groundwater. This impact is moderate as it can be managed effectively and efficiently to minimise or prevent the impact on the contamination of soil and groundwater.
		<p><b>Dust nuisance:</b> The generation of dust During stockpiling could pose a nuisance to social receptors in</p>	Minor	The area to be disturbed is situated within the railway reserve and is not in close proximity to any sensitive receptors. Any dust

		proximity to the borrow pit site.		generated by the activities would therefore have a minor to negligible impact on potential social receptors.
		<b>Noise disturbance:</b> Noise disturbance could result from the use of machinery during stockpiling.	Minor	The area to be disturbed is situated within the railway reserve and is not in close proximity to any sensitive receptors.
Operation	Excavation of borrow material	<b>Dust nuisance:</b> The generation of dust through the excavation of the borrow material and transport on the access road could pose a nuisance to social receptors in proximity to the borrow pit site.	Minor	The area to be disturbed is situated within the railway reserve and is not in close proximity to any sensitive receptors. Any dust generated by the activities would therefore have a minor to negligible impact on potential social receptors.
		<b>Noise disturbance:</b> Noise disturbance could result from the use of machinery during excavation.	Minor	The area to be disturbed is situated within the railway reserve and is not in close proximity to any sensitive receptors.
		<b>Contamination of soil and groundwater resources:</b> Contamination of soil	Moderate	Fuel spillage as a result of oil spills from poorly maintained machinery can seep into the newly exposed

		and groundwater due to potential fuel spillage from machinery used for excavation.		ground and eventually into the groundwater. This impact is moderate as it is can be managed effectively and efficiently to minimise or prevent the impact on the contamination of soil and groundwater.
Rehabilitation and closure	Rehabilitation	<b>Alien plant invasion risk:</b> Patches of disturbed soil can be vulnerable to colonisation by weeds which can prohibit natural succession of the local indigenous vegetation during rehabilitation.	Minor	The area which is to be disturbed will be used continuously. Therefore, there will not be sufficient time for weeds and other plants to colonise the area.
		<b>Dust nuisance:</b> The generation of dust through spreading of the topsoil during rehabilitation.	Minor	The area to be disturbed is situated within the railway reserve and is not in close proximity to any sensitive receptors.
		<b>Contamination of soil and groundwater resources:</b> Contamination of soil	Moderate	Fuel spillage as a result of oil spills from poorly maintained machinery can seep into the newly exposed

		and groundwater due to potential fuel spillage from machinery used for rehabilitation.		ground and eventually into the groundwater. This impact is moderate as it is can be managed effectively and efficiently to minimise or prevent the impact on the contamination of soil and groundwater.
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### 3.1.3 Assessment of potential cumulative impacts

The potential impacts of the possible cumulative impacts identified in Section 2.2.2 above have been assessed in accordance with the methodology in section 3.1.1. The results of the significance assessment have been included in the impact table below:

Cumulative Impact	Impact Description	Significance Rating
Habitat loss and faunal disturbance	Due to the number of borrow pits envisaged along the length of the railway line, there will be some cumulative impact in terms of habitat loss and faunal disturbance. However, since the extent of the development is limited, this would not be significant.	Minor
Cumulative transformation of the area	Due to the number of borrow pits envisaged along the length of the railway line, there will be some cumulative impact in terms of the transformation of the area. However, since the extent of the development is limited, this would not be significant.	Minor
Incremental noise from a number of separate developments	Both the activities taking place on the railway line between Hotazel and Ngqura (upgrade of the line) and the excavation of the borrow pits will generate noise which together would result in an increased noise impact.	Moderate
Combined effect of	The noise, dust and	Moderate

the individual impacts on surrounding receptors	visual impacts from the borrow pit activities will collectively have a greater impact on surrounding receptors than they would in isolation.	
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## **3.2 Proposed mitigation measures to minimise adverse impacts**

### **3.2.1 List of actions, activities, or processes that have sufficiently significant impacts to require mitigation**

According to the definitions for significance ratings in section 3.1.1, any activity with anything greater than and including a significance rating of 'Minor' should require mitigation. Based on this, the activities requiring mitigation for each phase are:

- 1) Construction:
  - Clearing of vegetation
  - Stockpiling of topsoil
- 2) Operation:
  - Excavation of borrow material
- 3) Decommissioning and closure:
  - Rehabilitation

### 3.2.2 Concomitant list of appropriate technical or management options

(Chosen to modify, remedy, control or stop any action, activity, or process which will cause significant impacts on the environment, socio-economic conditions and historical and cultural aspects as identified. Attach detail of each technical or management option as appendices)

The table below includes the activity as well as the significant impacts associated with it as well as how it will be mitigated or managed. This information has been sourced from the environmental management plan in the Basic Assessment (Appendix B), Transnet's Standard Environmental Specification (Appendix E3) and Transnet's Construction Environmental Management Plan (Appendix E1) as well as the Heritage Management Plan (Appendix E2):

Phase	Activities	Impact	Mitigation/Management
Construction	Clearing of vegetation	Loss of vegetation communities: Some loss of vegetation is an inevitable consequence of the borrow pit development.	- The footprint of the vegetation removal will be limited to that absolutely necessary for the excavation of the borrow material. - The available topsoil will be appropriately stockpiled (in mounds not exceeding 2m in height) and reused in the rehabilitation process to facilitate re growth of the vegetation after the operation is complete.
	Stockpiling of topsoil	Loss of faunal diversity and richness: Clearing of vegetation will result in some habitat loss for species likely to occur	- The footprint of the vegetation removal will be limited to that absolutely necessary for the operation. The footprint of the area to be lost is already minimal. - Construction vehicles will be restricted

	<p>in the borrow pit area. In addition to this, sensitive and shy fauna would move away from the area during construction activities. Some slow moving species would not be able to avoid the construction activities and might be killed.</p>	<p>to operate during daylight hours only. This will increase the likelihood that faunal species will be seen and avoided by the machine operators.</p>
	<p><b>Dust nuisance:</b> The generation of dust through site clearance and earthworks could pose a nuisance to social receptors in proximity to the borrow pit site.</p>	<ul style="list-style-type: none"> <li>- The movement of vehicles and machinery will be restricted to the authorised access roads and vehicles will be limited to travel at speeds not exceeding 20 km/h.</li> <li>- Dust suppression with environmentally friendly soil stabilisers and additional measures will be used if dust becomes a nuisance.</li> <li>- Construction and operations personnel will be trained to report excessive dust conditions so that these can be managed quickly and effectively.</li> </ul>
	<p><b>Soil erosion:</b> Increased erosion risk</p>	<ul style="list-style-type: none"> <li>- The footprint of the vegetation removal will be limited to that absolutely</li> </ul>

		would result from soil disturbance and the loss of plant cover within the cleared and disturbed area.	necessary for the operation. Rehabilitation will commence soonest after the completion of the activities.
		<b>Noise disturbance:</b> Noise disturbance could result from the use of machinery during vegetation clearing.	<ul style="list-style-type: none"> <li>- Operations will be limited to daylight hours</li> <li>- Vehicles will be maintained in accordance with the manufacturer's specifications to reduce the noise impacts from the equipment. The Contractor to demonstrate that the maintenance record of the vehicles he/she intends to use (including noise reduction measures such as exhaust silencers) is up to date prior to accessing the site.</li> </ul>
		<b>Paleontological fossil disturbance:</b> Excavation of the borrow pit could result in the disturbance of fossils and microfossils.	- If a fossil is uncovered during the borrow pit excavation, all work will be stopped immediately and the EO will be informed of the discovery. The EO will contact SAHRA and work will only recommence once clearance has been given in writing by the palaeontologist. The procedures as specified in the HMP will be followed (Appendix E2).
		<b>Loss of or disturbance to archaeological or</b>	- If an artefact on site is uncovered during the operations, all work will be

		<p><b>cultural sites:</b> Construction activities may result in the disturbance, damage or destruction of sites of cultural significance or sites of archaeological importance.</p>	<p>stopped immediately and the EO as well as the professional archaeologist will be informed of the discovery. SAHRA will be contacted and work will only recommence once clearance has been given in writing by the archaeologist. The procedures as specified in the HMP will be followed (Appendix E2).</p>
		<p><b>Contamination of soil and groundwater resources:</b> Contamination of soil and groundwater due to potential fuel spillage from excavation machinery and haul vehicles.</p>	<ul style="list-style-type: none"> <li>- Limited quantities of fuel and oils will be stored on site. Storage will be done within adequately bunded areas to prevent soil and water contamination.</li> <li>- Servicing and refuelling of vehicles will take place only at designated servicing or refuelling locations.</li> <li>- Vehicles will be maintained in accordance with the manufacturer's specifications. The Contractor will be required to demonstrate that the maintenance record of the vehicles he/she intends using is up to date prior to accessing the site.</li> <li>- Any spillage will be immediately attended to, reported and recorded.</li> <li>- A spill response kit will be available on site at all times and contractors' employees will be trained in the use of</li> </ul>

			the kit.
Operation	Excavation of borrow material	<b>Dust nuisance:</b> The generation of dust through the excavation of the borrow material and transport on the access road could pose a nuisance to social receptors in proximity to the borrow pit site.	<ul style="list-style-type: none"> <li>- The movement of vehicles and machinery will be restricted to the authorised access roads and vehicles will be limited to travel at speeds not exceeding 20 km/h</li> <li>- Dust suppression with environmentally friendly soil stabilisers and additional measures will be used if dust becomes a nuisance.</li> <li>- Construction and operations personnel will be trained to report excessive dust conditions so that these can be managed quickly and effectively.</li> </ul>
		<b>Noise disturbance:</b> Noise disturbance could result from the use of machinery during excavation.	<ul style="list-style-type: none"> <li>- Operations will be limited to daylight hours</li> <li>- Vehicles will be maintained in accordance with the manufacturer's specifications to reduce the noise impacts from the equipment. The Contractor will be required to demonstrate that the maintenance record of the vehicles he/she intends to use (including noise reduction measures such as exhaust silencers) is up to date prior to accessing the site.</li> </ul>
		<b>Contamination of soil and groundwater resources:</b>	<ul style="list-style-type: none"> <li>- Limited quantities of fuel and oils will be stored on site. Storage will be done within adequately banded areas to prevent</li> </ul>



		Contamination of soil and groundwater due to potential fuel spillage from machinery used for excavation.	<p>soil and water contamination</p> <ul style="list-style-type: none"> <li>- Servicing and refuelling of vehicles will take place only at designated servicing or refuelling locations.</li> <li>- Vehicles will be maintained in accordance with the manufacturer's specifications. The Contractor will be required to demonstrate that the maintenance record of the vehicles he/she intends using is up to date prior to accessing the site.</li> <li>- Any spillage will be immediately attended to, reported and recorded.</li> <li>- A spill response kit will be available on site at all times and contractors' employees will be trained in the use of the kit.</li> </ul>
Rehabilitation and closure	Rehabilitation	<b>Alien plant invasion risk:</b> Patches of disturbed soil can be vulnerable to colonisation by weeds which can prohibit natural succession of the local indigenous vegetation during rehabilitation.	<ul style="list-style-type: none"> <li>- Regular monitoring of vegetation growth especially on the topsoil stockpile and areas surrounding the access roads and proposed borrow site will be undertaken by the EO.</li> <li>- Procedures for the prevention of the establishment and spread of alien invasive species will be included in the rehabilitation plan which will be submitted to the EO for approval six weeks before completion.</li> </ul>

		<p><b>Dust nuisance:</b> The generation of dust through spreading of the topsoil during rehabilitation.</p>	<ul style="list-style-type: none"> <li>- Dust suppression with environmentally friendly soil stabilisers and additional measures will be used if dust becomes a nuisance.</li> <li>- Rehabilitation personnel will be trained to report excessive dust conditions so that these can be managed quickly and effectively.</li> </ul>
		<p><b>Contamination of soil and groundwater resources:</b> Contamination of soil and groundwater due to potential fuel spillage from machinery used for rehabilitation.</p>	<ul style="list-style-type: none"> <li>- Vehicles will be maintained in accordance with the manufacturer's specifications. The Contractor will be required to demonstrate that the maintenance record of the vehicles he/she intends using is up to date prior to accessing the site.</li> <li>- Any spillage will be immediately attended to, reported and recorded.</li> <li>- A spill response kit will be available on site at all times and contractors' employees will be trained in the use of the kit.</li> </ul>

### 3.2.3 Review the significance of the identified impacts

(After bringing the proposed mitigation measures into consideration).

The significance of the identified impacts post-mitigation has been included in the table below:

Phase	Activity	Impact	Significance Rating
Construction	Clearing of vegetation	<b>Loss of vegetation communities:</b> Some loss of vegetation is an inevitable consequence of the borrow pit development.	Minor
		<b>Loss of faunal diversity and richness:</b> Clearing of vegetation will result in some habitat loss for species likely to occur in the borrow pit area. In addition to this, sensitive and shy fauna would move away from the area during construction activities. Some slow moving species would not be able to avoid the construction activities and might be killed.	Minor
		<b>Dust nuisance:</b> The generation of dust through site clearance and earthworks could pose a nuisance to social receptors in proximity to the borrow pit site.	Negligible
		<b>Soil erosion:</b> Increased erosion risk would result from soil disturbance and the loss of plant cover	Negligible

		within the cleared and disturbed area.	
		<b>Noise disturbance:</b> Noise disturbance could result from the use of machinery during vegetation clearing.	Negligible
		<b>Paleontological fossil disturbance:</b> Excavation of the borrow pit could result in the disturbance of fossils and microfossils.	Minor
		<b>Loss of or disturbance to archaeological or cultural sites:</b> Construction activities may result in the disturbance, damage or destruction of sites of cultural significance or sites of archaeological importance.	Negligible
		<b>Contamination of soil and groundwater resources:</b> Contamination of soil and groundwater due to potential fuel spillage from construction machinery.	Minor
	Stockpiling of topsoil	<b>Soil erosion:</b> Soil erosion (predominately by wind erosion) may occur if the topsoil stockpiles are not shaped and re-vegetated appropriately.	Minor
		<b>Contamination of soil and groundwater</b>	Minor

		<p><b>resources:</b> Contamination of soil and groundwater due to potential fuel spillage from excavation machinery and haul vehicles.</p>	
		<p><b>Dust nuisance:</b> The generation of dust During stockpiling could pose a nuisance to social receptors in proximity to the borrow pit site.</p>	Negligible
		<p><b>Noise disturbance:</b> Noise disturbance could result from the use of machinery during stockpiling.</p>	Negligible
Operation	Excavation of borrow material	<p><b>Dust nuisance:</b> The generation of dust through the excavation of the borrow material and transport on the access road could pose a nuisance to social receptors in proximity to the borrow pit site.</p>	Negligible
		<p><b>Noise disturbance:</b> Noise disturbance could result from the use of machinery during excavation.</p>	Negligible
		<p><b>Contamination of soil and groundwater resources:</b> Contamination of soil and groundwater due to potential fuel spillage from machinery used for excavation.</p>	Minor
Rehabilitation and closure	Rehabilitation	<p><b>Alien plant invasion risk:</b> Patches of disturbed soil can be vulnerable to</p>	Negligible

		colonisation by weeds which can prohibit natural succession of the local indigenous vegetation during rehabilitation.	
		<b>Dust nuisance:</b> The generation of dust through spreading of the topsoil during rehabilitation.	Negligible
		<b>Contamination of soil and groundwater resources:</b> Contamination of soil and groundwater due to potential fuel spillage from machinery used for rehabilitation.	Minor

**4 REGULATION 52 (2) (d): Financial provision, the applicant is required to-**

**4.1 Plans for quantum calculation purposes**

(Show the location and aerial extent of the aforesaid main mining actions, activities, or processes, for each of the construction operational and closure phases of the operation).

This plan is shown in Figure 7.

#### **4.2 Alignment of rehabilitation with the closure objectives**

(Describe and ensure that the rehabilitation plan is compatible with the closure objectives determined in accordance with the baseline study as prescribed).

The closure objectives for the borrow pits include:

- 1) Rehabilitation of access roads.
- 2) Rehabilitation of the pit including final voids and ramps.
- 3) General surface rehabilitation (laying and spreading of topsoil and reseeding).
- 4) Maintenance and aftercare of the rehabilitated area.

Costing for the closure objectives has been provided in Section 4.3 below and these objectives are in line with the rehabilitation plan as discussed in Transnet's Standard Environmental Specification (Appendix E3) and Transnet's Construction Environmental Management Plan (Appendix E1).

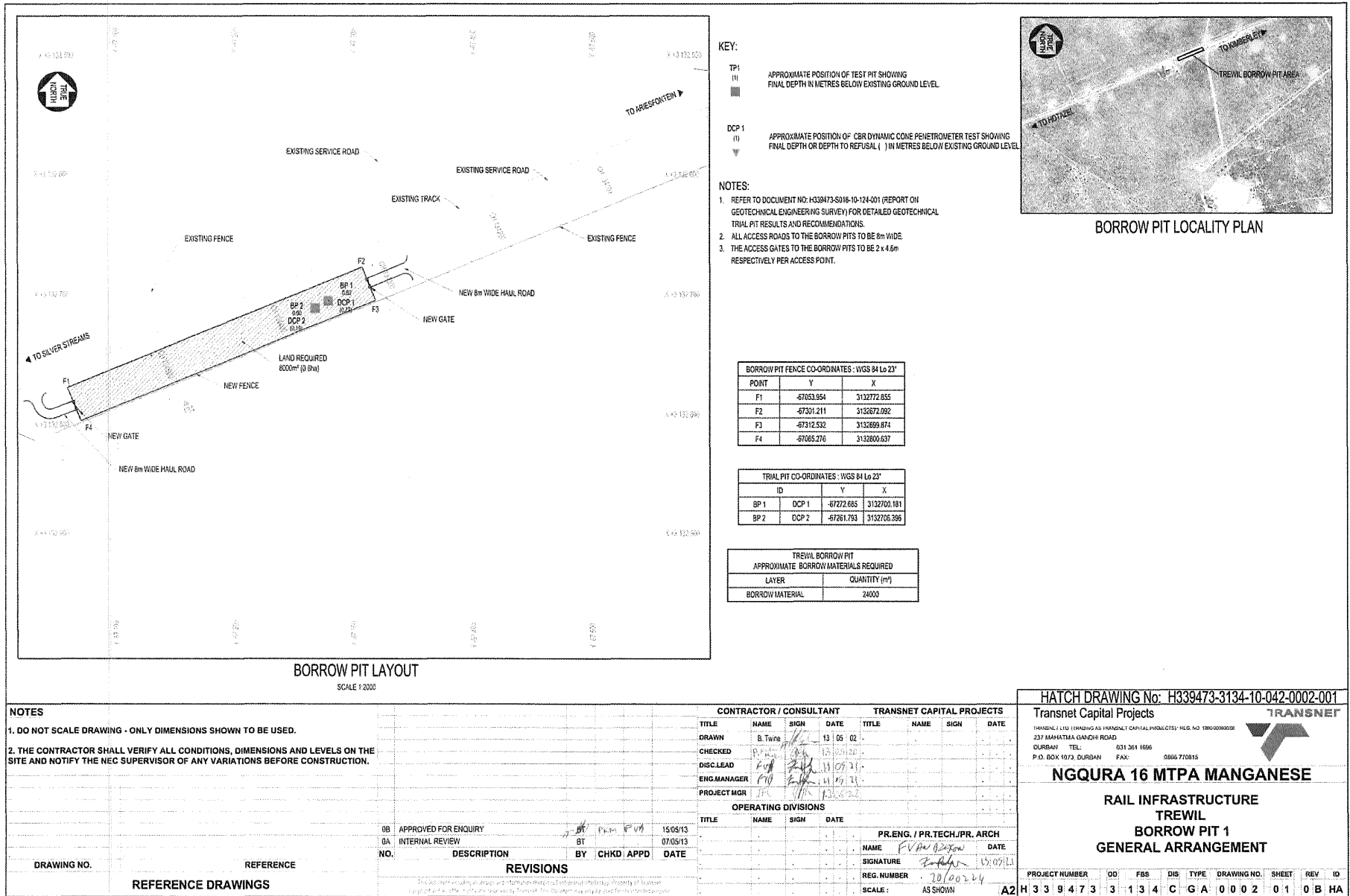


Figure 7: Trewil borrow pit layout



### 4.3 Quantum calculations

(Provide a calculation of the quantum of the financial provision required to manage and rehabilitate the environment, in accordance with the guideline prescribed in terms of regulation 54 (1) in respect of each of the phases referred to).

## Trewil Borrow Pit 1

As part of the license application for the opening of a borrow pit, an evaluation of the Quantum of closure-related financial provision has to be carried out. The Department of Minerals and Energy (DME) must be provided with sufficient financial provision to cover the environmental liability for rehabilitation and closure requirements of mining operations, at that specific time.

The calculation of the Quantum is based on the *Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision provided By a Mine, Jan 2005*.

### Calculation of Quantum for Trewil Borrow Pit 1

The procedure adopted below is the procedure recommended by the *Guideline Document*, for the procedure to determine the quantum for financial provision.

#### Step 1 – Determine mineral being mined

According to the geotechnical investigations (refer to document H339473-S018-10-124-0001), the anticipated materials to be found in the location of the proposed borrow pit, is residual calcrete.

#### Step 2A – Determine primary risk class

Class C (Low Risk), from Table B.13 in the *Guideline Document*.

#### Step 2B – Revise primary risk class based on saleable products

Not Applicable

#### Step 3 – Sensitivity of mine are

Biophysical	Social	Economic
Medium	Low	Low

#### Step 4.1 – Determine level of information available

Extensive - Option 3: Follow rules-based approach and proceed to step 4.2

#### Step 4.2 – Identify closure components

It should be noted that the Guidelines have been written to mainly focus on mining related activities, and the opening of a borrow pit mainly relates to the quarrying of certain materials, to be used for the earthworks construction. Therefore, when identifying the relevant closure components required for rehabilitation and closure of this borrow pit, not all of the components set-out by the Guidelines are relevant.

The table below gives the list of components as set-out by the guidelines, and the relevant closure/rehabilitation components are highlighted in blue.

1	Dismantling of processing plant and related structures (including overland conveyors and power lines)	No
2 (A)	Demolition of steel buildings and structures	No
2(B)	Demolition of reinforced concrete buildings and structures	No
3	Rehabilitation of access roads	Yes
4 (A)	Demolition and rehabilitation of electrified railway lines	No
4 (A)	Demolition and rehabilitation of non-electrified railway lines	No
5	Demolition of housing and/or administration facilities	No
6	Opencast rehabilitation including final voids and ramps	Yes
7	Sealing of shafts adits and inclines	No

8 (A)	Rehabilitation of overburden and spoils	No
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	No
	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	
9	Rehabilitation of subsided areas	No
10	General surface rehabilitation	Yes
11	River diversions	No
12	Fencing	Yes
13	Water management	No
14	2 to 3 years of maintenance and aftercare	Yes
15 (A)	Specialist study	No
15 (B)	Specialist study	No

**Step 4.3 – Identify unit rates for closure components**

Master rates as received from DMR

**Step 4.4 – Identify and apply waiting factors**

Weighting Factor 1 - 1,00 (Nature of Terrain = Flat)

Weighting Factor 2 - 1,05 (proximity to urban area = Peri-urban [as per guidelines])

**Step 4.5 – Identify areas of disturbance**

Quantities were calculated based on the Borrow pit drawing.

**Step 4.6 – Identify closure costs from specialist studies**

No specialist studies required.

**Step 4.7 – Calculate closure costs**

Refer to calculation of quantum.

The table below is a calculation of the quantum of the financial provision required to manage and rehabilitate the environment:

CALCULATION OF THE QUANTUM								
Mine: TREWIL BORROW PIT 1 (TRANSNET LIMITED)				Location: Trewil, Northern Cape Date: 05/03/2013				
	Risk Class Area Sensitivity		C Med					
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication Factor	D Weighting Factor 1	E=A*B*C*D Amount (rands)	
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m <sup>3</sup>		10.87	0.00	0.00	R -	
2(A)	Demolition of steel buildings and structures	m <sup>2</sup>		151.42	0.00	0.00	R -	
2(B)	Demolition of reinforced concrete buildings and structures	m <sup>2</sup>		223.14	0.00	0.00	R -	
3	Rehabilitation of access roads	m <sup>2</sup>	656	27.10	1.00	1.00	R 17 777.60	
4(A)	Demolition and rehabilitation of electrified railway lines	m		262.98	0.00	0.00	R -	
4(B)	Demolition and rehabilitation of non-electrified railway lines	m		143.45	0.00	0.00	R -	
5	Demolition of housing and/or administration facilities	m <sup>2</sup>		302.83	0.00	0.00	R -	
6	Opencast rehabilitation including final voids and ramps	ha	0.80	158 747.30	0.52	1.00	R 66 038.88	
7	Sealing of shafts, adits and inclines	m <sup>3</sup>		81.29	0.00	0.00	R -	
8(A)	Rehabilitation of overburden and spoils	ha		105 831.50	0.00	0.00	R -	
8(B)	Rehabilitation of processing waste deposits and evaporation ponds (basic salt-producing waste)	ha		131 811.20	0.00	0.00	R -	
8(C)	Rehabilitation of processing waste deposits and evaporation ponds (acidic, metal-rich waste)	ha		382 842.30	0.00	0.00	R -	
9	Rehabilitation of subsided areas	ha		88 617.95	0.00	0.00	R -	
10	General surface rehabilitation	ha	0.80	83 836.41	1.00	1.00	R 67 069.13	
11	River diversions	ha		83 836.41	0.00	0.00	R -	
12	Fencing	m	592	95.63	1.00	1.00	R 56 612.96	
13	Water management	ha		31 876.96	0.00	0.00	R -	
14	2 to 3 years of maintenance and aftercare	ha	0.80	11 156.92	1.00	1.00	R 8 925.54	
15A	Specialist study	Sum		0.00	0.00	0.00	R -	
15B	Specialist studies (soil remediation)	ha		0.00	0.00	0.00	R -	
(Sum of items 1 to 15 above)							R 216 424.10	
Weighting Factor 2							1.05	
Subtotal 1							R 227 245.31	
1	Preliminary and General	6.0% if Subtotal 1 > 100 000 000 12.0% if Subtotal 1 < 100 000 000					R	27 269.44
2	Contingency	10.0% of Subtotal 1					R	22 724.53
SubTotal 2							R 277 239.27	
(Subtotal 1 plus sum of management and contingency)								
Add Vat (14%)							R 38 813.50	
GRAND TOTAL							R 316 052.77	
(Subtotal 2 plus VAT)								

#### 4.4 Undertaking to provide financial provision

(Indicate that the required amount will be provided should the right be granted).

The undertaking to provide financial provision is attached below:



---

#### UNDERTAKING TO PROVIDE FINANCIAL PROVISION

**Trewil Borrow Pit on Farm 299, south of the existing Hotazel to Ngqura railway line and west of the Trewil Station**

Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant. On behalf of the applicant, I agree to undertake and provide the financial resources for a sum of **R 316 052.77** intended for the rehabilitation of the area affected by the Trewil Borrow Pit operations at the time when this operation ceases.

Full Name and Surname: Velile Sikhosana

Identity Number: 7410175430085

Date: 14.08.2013

Signature: 

## 5 REGULATION 52 (2) (e): Planned monitoring and performance assessment of the environmental management plan

### 5.1 List of identified impacts requiring monitoring programmes

The main impacts requiring monitoring programmes will occur during the construction phase and the rehabilitation and closure phase. The impacts and the associated monitoring plans have been tabulated below:

Phase	Impact	Management/Monitoring Plan
Construction	Loss of vegetation communities	CEMP (Appendix E1) and SES (Appendix E3) and HMP (Appendix E2.)
	Loss of faunal diversity and richness	
	Dust nuisance	
	Soil erosion	
	Noise disturbance	
	Paleontological fossil disturbance	
	Loss of or disturbance to archaeological or cultural sites	
	Contamination of soil and groundwater resources	
Rehabilitation and closure	Alien plant invasion risk	Vegetation monitoring plan as part of the rehabilitation plan (to be developed at closure) and SES (Appendix E3).
	Dust nuisance	SES (Appendix E3).
	Contamination of soil and groundwater resources	SES (Appendix E3).

### 5.2 Functional requirements for monitoring programmes

Where relevant either a Transnet Capital Projects (TCP) or the Contractor's Environmental Officer (EO) will be required to implement the monitoring programmes for the construction, operation, rehabilitation and closure phases.

An allowance has been made in the Calculation of the Quantum (Section 4.3 of this document) for the rehabilitation monitoring plan to implemented for three years after the borrow pit has been rehabilitated.

### 5.3 Roles and responsibilities for the execution of monitoring programmes.

The roles and responsibilities for execution of the monitoring programmes are detailed in the CEMP (Appendix E1) and explained briefly below:

Role	Responsibility
Transnet Capital Projects Environmental Manager	Approval of monitoring programmes and environmental training and awareness programmes.
Transnet Capital Projects Environmental Officer	Ensures that all environmental monitoring programmes are carried out in accordance to protocols and schedules.
Contractor's Environmental Control Officer	Ensures the contractors compliance with the CEMP and SES.
Environmental Auditor	An environmental auditor will be appointed to ensure, among other things, that the monitoring plans have been implemented correctly.

### 5.4 Committed time frames for monitoring and reporting.

The committed times frames for monitoring and reporting during the construction and post closure phases are:

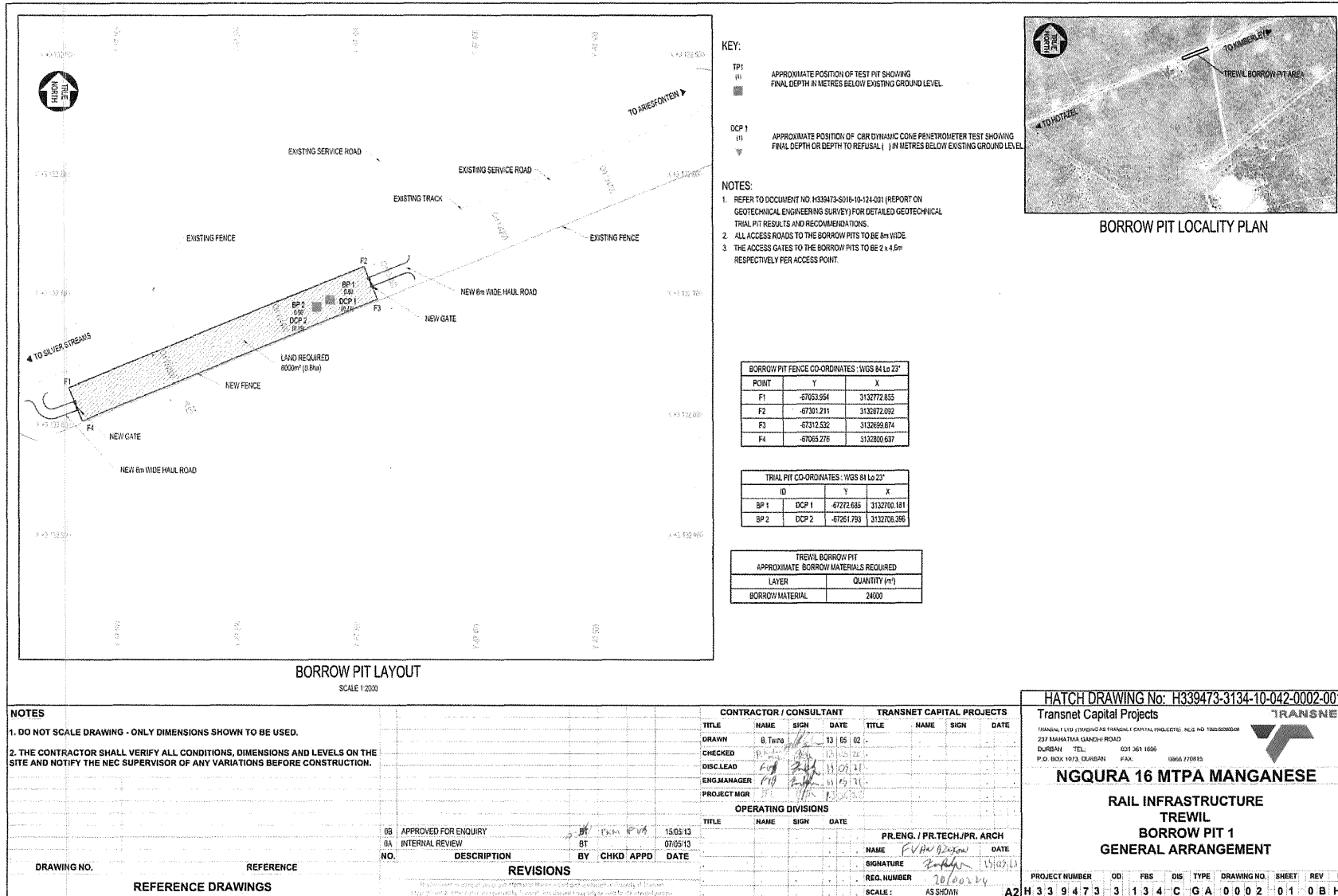
- **Construction:** 12 months from the start of construction.
- **Vegetation monitoring (Post closure):** Three years post closure
- **Heritage monitoring:** Duration of the construction phase and throughout rehabilitation.

**6 REGULATION 52 (2) (f): Closure and environmental objectives**

**6.1 Rehabilitation plan**

(Show the areas and aerial extent of the main prospecting activities, including the anticipated prospected area at the time of closure).

The area to be affected is shown in the plan below.





## **6.2 Closure objectives and their extent of alignment to the pre-mining environment**

The closure objectives for the borrow pits include:

- 1) Rehabilitation of access roads.
- 2) Rehabilitation of the pit including final voids and ramps.
- 3) General surface rehabilitation (laying and spreading of topsoil and reseeding).
- 4) Maintenance and aftercare of the rehabilitated area.

The vegetation in the borrow pit area is dominated by the Ghaap Plateau Vaalbosveld which has an ecological status of least threatened in terms of the National Spatial Biodiversity Assessment (NSBA). The area in and around the proposed borrow pit is of low ecological importance. The area is degraded and highly disturbed/transformed with little ecological function and generally very poor in species diversity (most species are exotic or weeds). Rehabilitation of this area will in most likelihood, restore it to a better state than that at pre-construction.

## **6.3 Confirmation of consultation**

(Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties).

A public participation process was carried out as part of the Basic Assessment Process for the proposed expansion of the Transnet Manganese Ore Export Railway Line between Hotazel and the Port of Ngqura (See Appendix B for a copy of this report). Borrow pits in general have been discussed in this assessment as well as in the public information documents (BIDs etc) and the public were made aware that the project would require several borrow pits along the length of the line as part of the process. The CEMP and SES (Appendix E) were discussed in the BA report. The CEMP and SES make reference to closure and site cleanup.

The Trewil borrow pit area is on Transnet land and is within the rail reserve. Transnet are therefore the landowner and by default have agreed to the closure objectives (See Undertaking to provide financial provision in Section 4.4). Specific consultation with interested and affected parties was therefore not applicable in this case, however, landowners of the farm portions adjacent to the area on which the borrow pit is located, were consulted with as part of the public participation process conducted for the BA. The general landscape was included

in the BA process and therefore communities and affected parties along the length of the railway line had the opportunity to provide input into the classification of the surrounding environment.

## **7 REGULATION 52 (2) (g): Record of the public participation and the results thereof.**

### **7.1 Identification of interested and affected parties**

#### **7.1.1 Name the community or communities identified, or explain why no such community was identified**

No community resides on the borrow pit land itself as this is within the railway reserve and the land is owned by Transnet.

#### **7.1.2 Specifically state whether or not the Community is also the landowner**

The Community is not the landowner; the applicant (Transnet) is the landowner.

#### **7.1.3 State whether or not the Department of Land Affairs have been identified as an interested and affected party**

As part of the Public Participation process, the Northern Cape Provincial Department of Agriculture and Land Affairs were identified as an interested and affected party and were consulted with specifically.

#### **7.1.4 State specifically whether or not a land claim is involved**

No land claims are involved.

#### **7.1.5 Name the Traditional Authority identified**

No Traditional Authorities exist in this specific area.

#### **7.1.6 List the Landowners identified by the applicant (Traditional and Title Deed owners)**

Transnet is both the owner and the applicant in this case. The title deed is attached in Appendix 2.

#### **7.1.7 List the lawful occupiers of the land concerned**

Transnet owns the land on which the borrow pit is situated. There are no occupants on the land where the borrow pit is situated.

#### **7.1.8 Explain whether or not other persons (including on adjacent and non-adjacent properties) socio-economic conditions will be directly affected by the proposed prospecting or mining operation and if not, explain why not**

The directly impacted area is farm land. Due to the small scale of this operation and the fact that it is confined to the railway servitude, it is not anticipated that the borrow pit operations will have an effect on the socio-economic conditions of the people residing on adjacent and non-adjacent properties.

#### **7.1.9 Name the Local Municipality**

Kgatelopele Municipality.

#### **7.1.10 Name the relevant Governmental Departments, agencies and institutions responsible for the various aspects of the environment and for infrastructure which may be affected by the proposed project. The relevant authorities which would be affected by the borrow pit's development include:**

- National Department of Environmental Affairs
- Provincial Government of Environmental Affairs & Nature Conservation
- Northern Cape Department of Mineral Resources
- South African Heritage Resources Agency (SAHRA)
- Ngwao Boswa Kapa Bokoni (Northern Cape Provincial Heritage Resources Agency)
- National Department of Agriculture, Forestry and Fisheries
- Northern Cape Provincial Department of Agriculture and Land Affairs

- Provincial Government of Agriculture, Land Reforms and Rural Development
- National Government Department of Roads and Transport
- Siyanda District Municipality
- Kgatelopele Local Municipality

**7.1.11 Submit evidence that the landowner or lawful occupier of the land in question, and any other interested and affected parties including those listed above, were notified**

All public documentation, including letters from the relevant Authorities, interested and affected parties proving that they were notified about the project has been appended to this EMP (See Appendix 3 and B).

**7.2 The details of the engagement process**

**7.2.1 Description of the information provided to the community, landowners, and interested and affected parties**

The information provided included:

- A description of the proposed project activities
- The project location
- A description of the BA process as well as the various phases within this process
- A description of the borrow pits required as part of the project

The following activities were conducted as part of the public participation process. These have been split up according to the project as a whole as well as those specific to the borrow pit development. Public participation activities for the Basic Assessment process included:

- Distribution of proposed project announcement letter and Background Information Document (BID)
- Placing of adverts
- Putting up of site notices
- Identification of stakeholders
- Consultation with relevant stakeholders

All public participation documentation relevant to the Basic Assessment process has been included in Appendix B. Since the area affected by the proposed borrow pit development is Transnet owned land, specific consultation with the landowners in this case was not

relevant. The public participation process specific to the Trewil borrow pit development has been tabulated below:

Public participation specific to the borrow pit development		
Activity	Details	Reference
Field visit to the Trewil borrow pit	Field visit during 1-15 April 2013 to obtain information, consult with affected landowners and put up site notices specifically for the borrow pits. Field trip reports were compiled for each borrow pit site.	Appendix 1 Field trip report
Placing of site notices	Site notices were placed at each borrow pit location during the field visit.	Appendix 3 Site notice

### **7.2.2 List of which parties identified in 7.1 above that were in fact consulted, and which were not consulted**

All of the parties identified in 7.1 were consulted with as part of the Basic Assessment Process which was conducted for the Project:

- National Department of Environmental Affairs
- Provincial Government of Environmental Affairs & Nature Conservation
- Northern Cape Department of Mineral Resources
- South African Heritage Resources Agency (SAHRA)
- Ngwao Boswa Kapa Bokoni (Northern Cape Provincial Heritage Resources Agency)
- National Department of Agriculture, Forestry and Fisheries
- Northern Cape Provincial Department of Agriculture and Land Affairs

- Provincial Government of Agriculture, Land Reforms and Rural Development
- National Government Department of Roads and Transport
- Siyanda District Municipality
- Kgatelopele Local Municipality

### **7.2.3 List of views raised by consulted parties regarding the existing cultural, socio-economic or biophysical environment**

Comments raised by the various parties have been included as an annex to the Draft BA in Appendix B. These views are once again, based on the project as a whole and not specifically on the borrow pits. A summarised list of the views has been listed below:

#### Views on the current Socio-Economic Environment:

- Air quality issues including but not limited to the release of asbestos, and health issues related to dust generation.
- Socio-economic issues including but not limited to potential housing relocations; job opportunities for local communities, disabled people and women; opportunities and benefits for local businesses and communities; creation of a skills database and skills development; increased crime and stock theft; safety issues at level crossings; train collisions with live stock and people; housing for construction workers; locking of gates by construction crews; land ownership; purchasing of land from Transnet; transfer of land ownership from Transnet to the municipality at Rosmead; the use of decommissioned material; the proposed use of land reserved for other projects; public participation; the development of housing specifically at Postmasburg; illegal mining specifically at Gong Gong; the development of a social and labour plan; transportation of commodities other than manganese ore; assessment of HIV/AIDS; and project description related issues (including timeframes, public participation)
- Noise and vibration issues including but not limited to the number of trains that will pass the Groenwater Community and vibration damage to houses at Rosmead.
- Visual issues including but not limited to the creation of light pollution.



Views on the current Biophysical Environment:

- Vegetation issues including but not limited to veld fires.
- Faunal issues including but not limited to small animals being trapped within fencing; the use of jackal proof fencing, and the potential impact on Shamwari Game Reserve.
- Agricultural issues including but not limited to the impacts on existing irrigation activities and impacts on land with high agricultural potential.

**7.2.4 List of views raised by consulted parties on how their existing cultural, socio-economic or biophysical environment potentially will be impacted on by the proposed prospecting or mining operation**

Comments raised by the various parties have been included as an annex to the Draft BA in Appendix B and Appendix 3. Relevant views pertained to how the existing environment will be impacted on by the borrow pits include:

Views on the current Socio-Economic Environment:

- General issues including but not limited to queries around the type of materials that would be required out of the borrow pits and the inclusion of the borrow pits in the EMP

Views on the current Biophysical Environment:

- No views on the current biophysical environment were received.

Views on the Cultural Environment:

- No views on the current cultural environment were received.

**7.2.5 Other concerns raised by the aforesaid parties**

No other concerns pertaining specifically to borrow pits were raised by the aforesaid parties.

**7.2.6 Confirmation that minutes and records of the consultations are appended**

The minutes and records of the consultations have been included in the Annexes of the BA Report in Appendix B.

---

### **7.2.7 Information regarding objections received**

No objections were received for this project.

### **7.3 The manner in which the issues raised were addressed**

All responses to the issues raised by the various parties have been addressed in the Comments and Responses Report which has included as an annex to the Draft BA in Appendix B and Appendix 3. All issues raised in e-mails and phone calls have also been captured in this report and addressed here.

## **8 SECTION 39 (3) (c ) of the Act: Environmental awareness plan**

### **8.1 Employee communication process**

(Describe how the applicant intends to inform his or her employees of any environmental risk which may result from their work).

This will be achieved through Environmental Awareness Training presented in section 4.13 of the SES document (Appendix E3). In addition to this, all site personnel should be given a copy of the SES which describes the minimum standards for environmental management to which they must comply. The SES must be read in conjunction with the CEMP (Appendix E1). All contractors will be required to adhere to the Method statement which has been developed for the Trewil borrow pit (See Appendix E4).

### **8.2 Description of solutions to risks**

(Describe the manner in which the risk must be dealt with in order to avoid pollution or degradation of the environment).

Transnet's solution is to anticipate the risk and then compile a management guideline in order to minimise the risk from occurring. Various management guidelines have been included in the SES (Appendix E3) including those for:

- Waste management
- Refuelling
- Dust management
- Storm water management
- Noise management
- Protection of heritage resources

If however, and environmental incident does occur, the CEMP (in Appendix E1) details how these incidences are categorised and how they are dealt with in order to prevent further damage to the environment. These procedures are managed through the

construction manager who is assisted by the environmental manager and environmental officer.

### **8.3 Environmental awareness training.**

(Describe the general environmental awareness training and training on dealing with emergency situations and remediation measures for such emergencies).

Before the commencement of any work on site through an induction process, the Contractor's site management staff shall attend an environmental awareness-training course presented by TCP's Environmental Officer (EO). Training of the appropriate personnel will help ensure that all environmental regulations and requirements are followed and are defined in the relevant Method Statement to be prepared by the Contractor. The training should be conducted, as far as it is possible, in the employees' language of choice and shall include as a minimum:

- Explanation of how to protect the environment from the effects of construction by making the personnel aware of the sensitive environmental resources.
- Employees' roles and responsibilities, including emergency preparedness.
- Explanation of the mitigation measures that must be implemented when carrying out their activities.
- Training of personnel to recognise potential environmental problems, (i.e. spills), and communicate the problem to the correct person for solution.

All individuals on the Project site will need to have a minimum awareness of environmental requirements and responsibilities. However, not all need to have the same degree of awareness. The required degree of knowledge is greatest for personnel in the Safety, Health and Environmental Sections and the least for manual personnel. Environmental issues that occur on site will be included in toolbox talks. The Contractor shall keep a record of all the environmental related training of the personnel.

## **9 SECTION 39 (4) (a) (iii) of the Act: Capacity to rehabilitate and manage negative impacts on the environment**

### **9.1 The annual amount required to manage and rehabilitate the environment**

(Provide a detailed explanation as to how the amount was derived)

Due to the nature and scale of this activity (constant use of the borrow pit area), rehabilitation does not take place on an annual basis but rather once the activity is completed. The amount which has been calculated is the amount which has been

committed to the effective rehabilitation of the borrow pit area at a time where it is no longer needed.

The table below shows the various activities which will be required as part of the borrow pit's rehabilitation. The amounts for each activity have been calculated separately:

CALCULATION OF THE QUANTUM								
Mine: TREWIL BORROW PIT 1 (TRANSNET LIMITED)				Location: Trewil, Northern Cape Date: 05/03/2013				
Risk Class Area Sensitivity			C Med					
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication Factor	D Weighting Factor 1	E=A*B*C*D Amount (rand)	
3	Rehabilitation of access roads	m <sup>2</sup>	656	27.10	1.00	1.00	R 17 777.60	
6	Opencast rehabilitation including final voids and ramps	ha	0.80	158 747.30	0.52	1.00	R 66 038.88	
10	General surface rehabilitation	ha	0.80	83 836.41	1.00	1.00	R 67 069.13	
12	Fencing	m	592	95.63	1.00	1.00	R 56 612.96	
14	2 to 3 years of maintenance and aftercare	ha	0.80	11 156.92	1.00	1.00	R 8 925.54	
(Sum of items 1 to 15 above)							R 216 424.10	
Weighting Factor 2							1.05	
Subtotal 1							R 227 245.31	
1	Preliminary and General	6.0% if Subtotal 1 > 100 000 000 12.0% if Subtotal 1 < 100 000 000					R	27 269.44
2	Contingency	10.0% of Subtotal 1					R	22 724.53
SubTotal 2							R 277 239.27	
(Subtotal 1 plus sum of management and contingency)								
Add Vat (14%)							R 38 813.50	
GRAND TOTAL							R 316 052.77	
(Subtotal 2 plus VAT)								

## 9.2 Confirmation that the stated amount correctly reflected in the Prospecting Work Programme as required

(Specifically confirm that the stated amount has been adequately provided for in the corresponding budget reflected in the Prospecting Work Programme as required in Accordance with Regulation 7 (1) (j) (ii)).

This has been included in section 9.1 above.

**10 REGULATION 52 (2) (h): Undertaking to execute the environmental management plan**

Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant in terms of the resolution submitted with the application, and confirm that the above report comprises EIA and EMP compiled in accordance with the guideline on the Departments official website and the directive in terms of sections 29 and 39 (5) in that regard, and the applicant undertakes to execute the Environmental management plan as proposed.

<b>Full Names and Surname</b>	Velle Sikhosana
<b>Identity Number</b>	7410175430085

-END-



APPENDIX 1

SITE VISIT REPORT



## Field Report for Ngqura 16 Mtpa Manganese: Borrow Pits

**Date:** 5 April 2013

**Borrow pit:** Trewil West (1) (Existing borrow pit)

**Coordinates from the centre of the borrow pit:**

	Degrees (DD)	Minutes (MM)	Seconds (SS.ss)		Degrees (DD)	Minutes (MM)	Seconds (SS.ss)
<b>E</b>	23	41	09.71	<b>S</b>	28	18	26.59

### Environmental Aspects

#### Site description of the area surrounding the borrow pit:

Elevation of 1,447 mamsl, with a gently rolling to flat landscape terrain, dipping gently to the south. Shallow to moderate profile, with coarse pale yellow soils and a moderate to low clay content. Typical soil depths of 250-450 mm. Exposed outcrop of Karoo sedimentary sequence and evaporative precipitates and conglomerates. Evidence of moderate to highly erosive conditions through loss of topsoils etc., within a relatively immature sequence, containing matrix hosted sediments and coarse to very coarse gravels.

#### Fauna and flora species and biodiversity observed in and around the borrow pit:

Small animal spoor was noted. Shrub (heights less than 3 m forming a dense coverage) and grassland vegetation, indicative of the region. Evidence of disturbance to the vegetation growth by human activities (i.e. historical borrow pit associated with railway and road construction. General species diversity is moderate, with evidence of firewood harvesting and invasive species encroachment in the disturbed areas.

#### Water sources or prominent drainage line/features observed in and around the borrow pit (rivers, wetlands, boreholes etc):

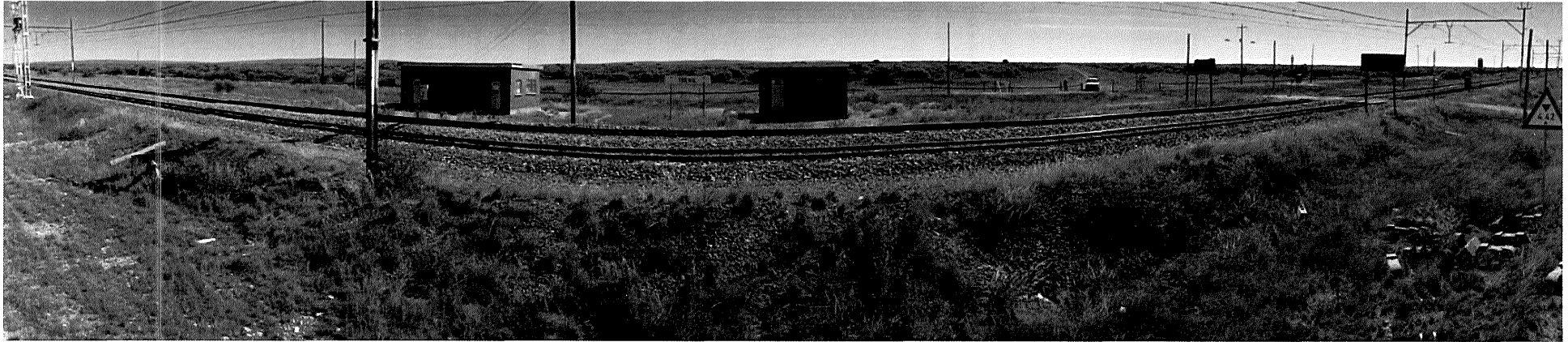
The general drainage pattern is north-east to south-west. No watercourses or drainage lines were noted in and around the site.

#### Issues to consider in and around the borrow pit:

The rail line is located north of the site; should blasting be used, fly-rock may cause damage.

**180° panoramic photos of the borrow pit (encompassing eight compass directions):**

***NORTH facing – from centre of site***



***SOUTH facing – from centre of site***



## Social Aspects

### General description of the social environment surrounding the borrow pit:

The site is bordered by farm land and by the rail line to the north and fenced to the south (existing borrow pit still present). No schools or settlements were noted at the proposed borrow pit area.

### Description of the land use(s) on the farm on which the borrow pit is located (game farming/ tourism/ agriculture etc.):

The proposed land use of the area is mainly farm land and railway activities. The immediately adjacent property is private grazing property. Access is from the east and west along the servitude.

### Details on the lawful occupiers of the land on which the borrow pit is located:

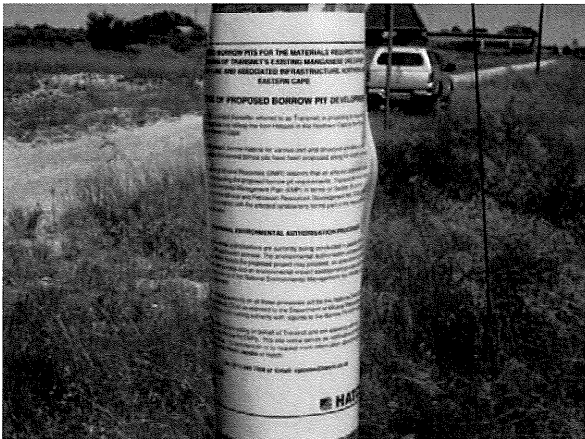
Transnet owns the affected land portion(s).

## Stakeholder Engagement and Site Visit

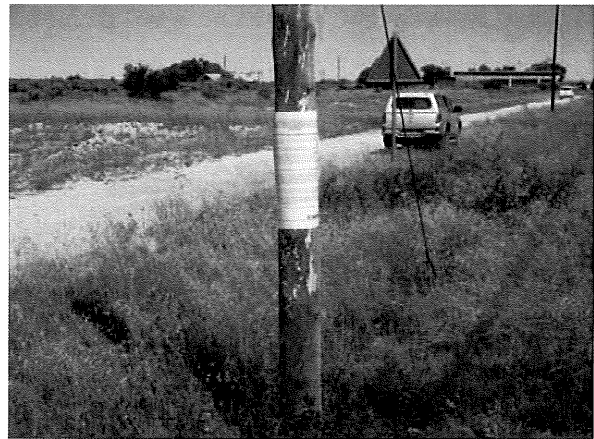
Y    N

Has the borrow pit EMP process been explained to the affected landowner?	X	
Has the BID been distributed to the landowner?	X	
Was the letter of consent signed by the landowner?	N/A	
Have detailed minutes from the discussion with the landowner been recorded?	N/A	
Have contact details (phone number and e-mail address) of the landowner been obtained?	N/A	
Have the site notices been placed?	X	

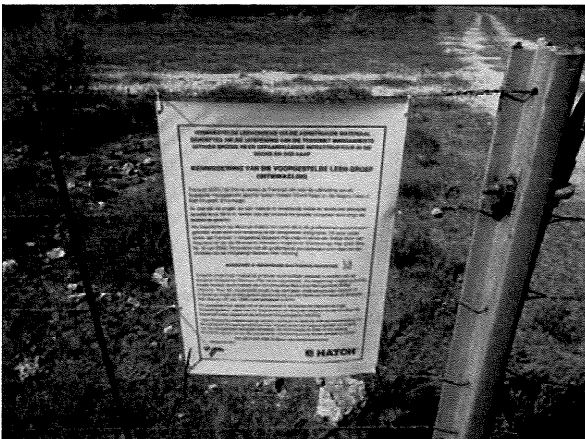
**AFRIKAANS SITE NOTICE – ZOOMED IN**



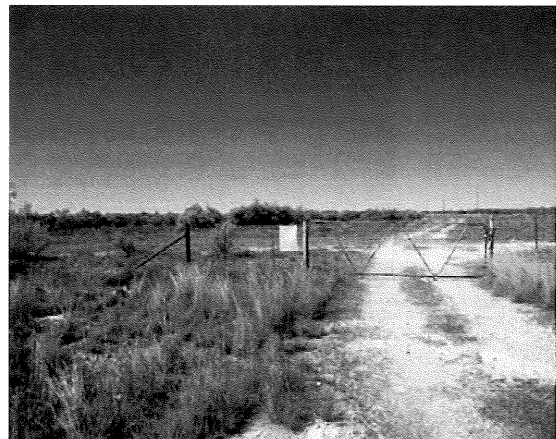
**AFRIKAANS SITE NOTICE – ZOOMED OUT**



**ENGLISH SITE NOTICE – ZOOMED IN**



**ENGLISH SITE NOTICE – ZOOMED OUT**



## Archaeology and Cultural Heritage Aspects

**General description of the area surrounding the borrow pit from a cultural heritage perspective:**

No heritage resources of significance were identified at the borrow pit area.

**Description of artefacts/ graves/ materials found at or near the borrow pit site (indicate whether these have been disturbed or not):**

n/a

## Photos of Interest



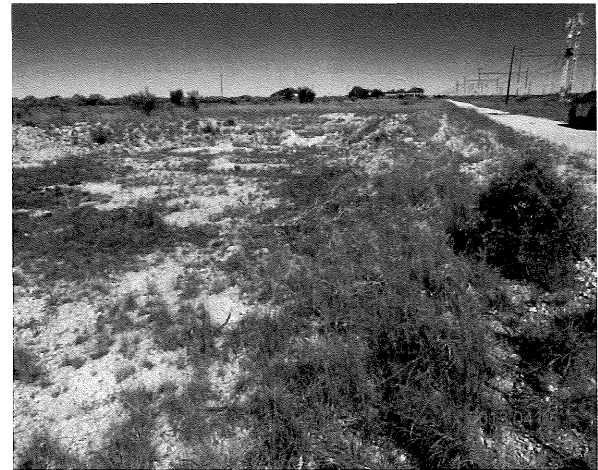
Contemporary housing located next to the rail. line



The area is already disturbed due to the rail line.



The surrounding area and farm access road.

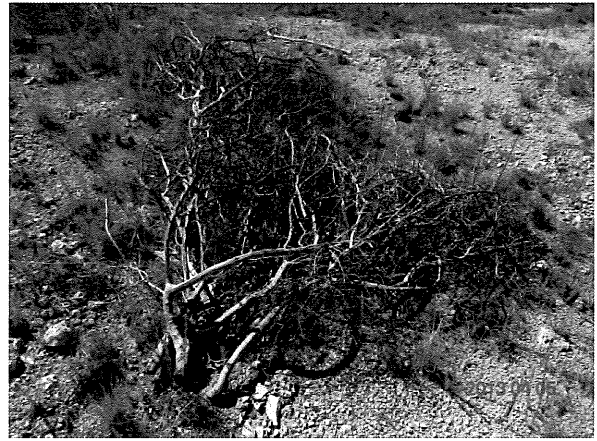


Existing borrow pit area, now used as dumping site.





Typical rock from the area.



Evidence of firewood collection.



Example of invasive (primary) vegetation in disturbed areas.



APPENDIX 2

TITLE DEED



# Deeds Office Property

PLAAS 299, 299, 1 (KIMBERLEY)

## GENERAL INFORMATION

Deeds Office KIMBERLEY  
 Date Requested 2013/05/24 09:45  
 Information Source DEEDS OFFICE  
 Reference -

## PROPERTY INFORMATION

Property Type FARM  
 Farm Name PLAAS 299  
 Farm Number 299  
 Portion Number 1  
 Local Authority NOT AVAILABLE  
 Registration Division BARKLY WES RD  
 Province NORTHERN CAPE  
 Diagram Deed T800/1948  
 Extent 20.8863M  
 Previous Description -  
 LPI Code C00700000000029900001

## OWNER INFORMATION

Owner 1 of 1  
 Person Type COMPANY  
 Name TRANSNET LTD  
 Registration Number 199000090006  
 Title Deed T800/1948  
 Registration Date 1948/12/22  
 Purchase Price (R) -  
 Purchase Date -  
 Share  
 Microfilm Reference  
 Multiple Properties NO  
 Multiple Owners NO

## ENDORSEMENTS (1)

#	Document	Description	Institution	Amount (R)	Microfilm
1	BC373/1990	VARIOUS	-	UNKNOWN	-

## HISTORIC DOCUMENTS

No documents to display

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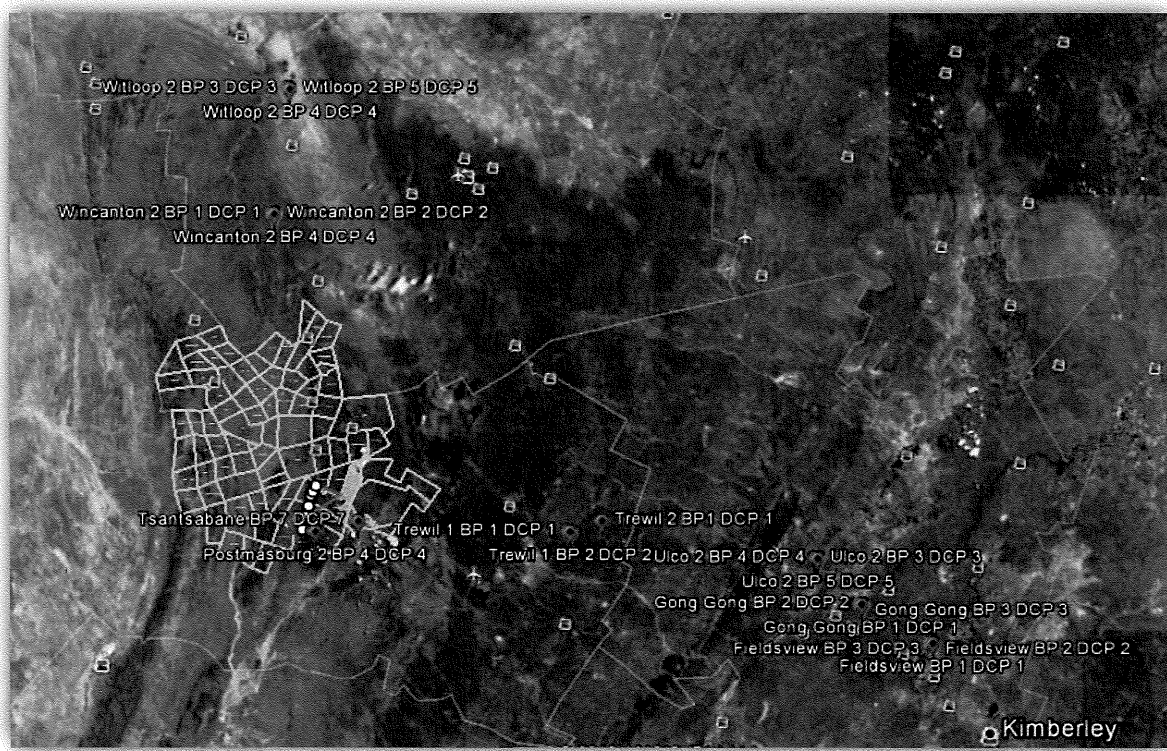
APPENDIX 3

BORROW PIT SPECIFIC PUBLIC PARTICIPATION  
DOCUMENTATION



# Transnet Capital Projects Ngqura 16 Mtpa Manganese Project

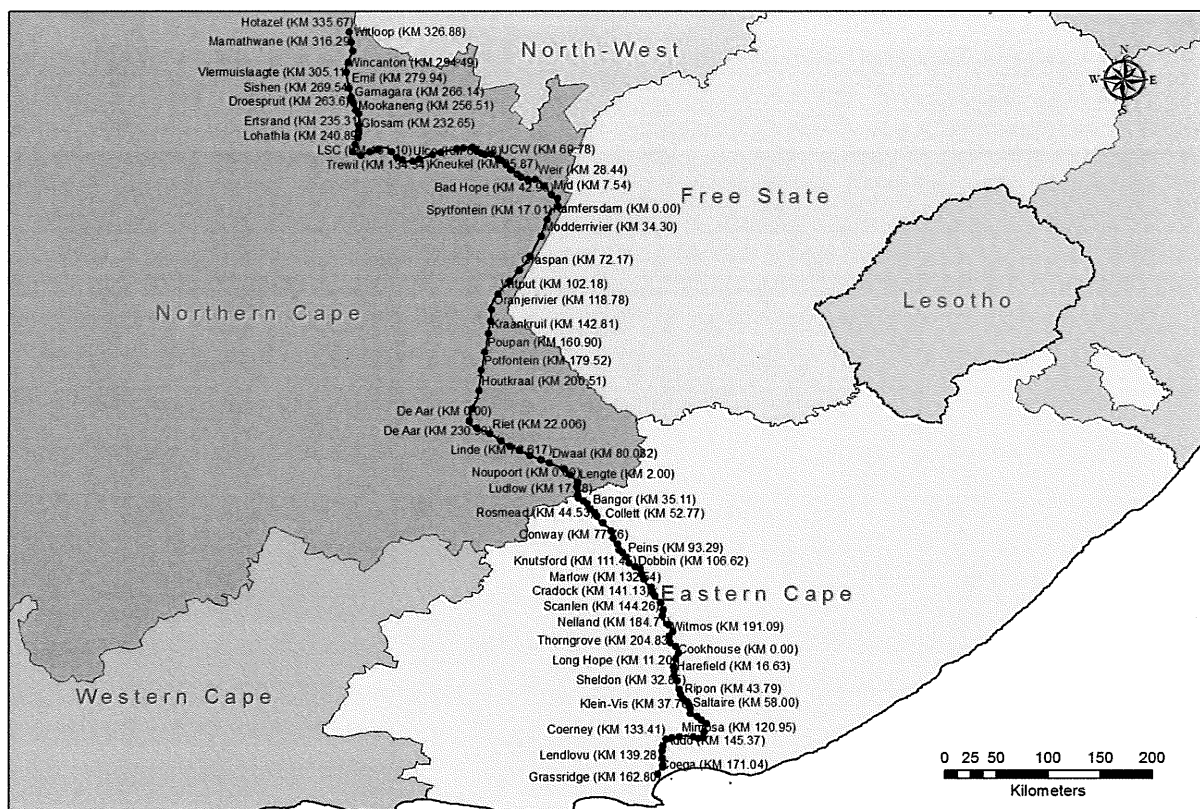
## Background Information Document for the Borrow Pits required from Hotazel to Kimberley



## Project background

Transnet (SOC) Limited (hereafter referred to as Transnet) is proposing to expand the existing manganese ore railway line from Hotazel in the Northern Cape to the Port of Ngqura in the Eastern Cape (Figure 1). The growing demand for manganese ore has resulted in the need to expand the capacity of the export corridor to 16 million tons per annum (Mtpa). The proposed expansion includes the following:

- Extension of several existing rail loops in the Northern and Eastern Cape;
- The installation of two new rail loops in the Northern Cape; and
- The construction of a new compilation yard near Hotazel in the Northern Cape.



**Figure 1: Railway line route from Hotazel in the Northern Cape to Coega in the Eastern Cape**

As part of this project, borrow material for various civil and structural activities is required. Several borrow pit sites have been identified along the length of the line but for the purposes of this document, only the borrow pits required for the Hotazel to Kimberley section of the railway line will be discussed.



## The Hotazel to Kimberley borrow pits

### Background

Twelve borrow pits will be required for the Hotazel to Kimberley section of the railway line and specific details of these have been included in the table below:

<b>Borrow pit</b>	<b>Status</b>	<b>Farm name</b>	<b>Land Owner</b>
Witloop borrow pit 1	Existing borrow pit to be re-commissioned	Smartt 314	Privately owned
Witloop borrow pit 2	Existing borrow pit to be re-commissioned	Smartt 314	Privately owned
Wincanton borrow pit 1	New borrow pit	Wincanton 472	Owned by Transnet
Wincanton borrow pit 2	New borrow pit	Wincanton 472	Owned by Transnet
Wincanton borrow pit 3	Existing borrow pit to be re-commissioned	Wincanton 472	Privately owned
Postmasburg borrow pit 1	New borrow pit	Postmasburg Town	Privately owned
Postmasburg borrow pit 2	New borrow pit	Postmasburg Town	Privately owned
Tsantsabane borrow pit	New borrow pit	Vaalpoort	Owned by Transnet
Trewil borrow pit	Existing borrow pit to be re-commissioned	Plaas 299	Owned by Transnet
Ulco borrow pit 1	Existing borrow pit to be re-commissioned	Likatlong 317	Privately owned
Ulco borrow pit 2	New borrow pit	Likatlong 317	Privately owned
Gong Gong borrow pit	Existing borrow pit to be re-commissioned	Gong Gong 371	Owned by Transnet
Fieldsview borrow pit	Existing borrow pit to be re-commissioned	Nooitgedacht 66	Privately owned

Locality maps of the proposed borrow pits are shown in figures 2 to 9. These maps also indicate the relevant farm portions which will be affected by the proposed borrow pit development.

## **Phases of the borrow pit's development**

The main phases associated with borrow pit development include construction, operation, rehabilitation and closure. A brief description of each one of these phases is given below

### Construction:

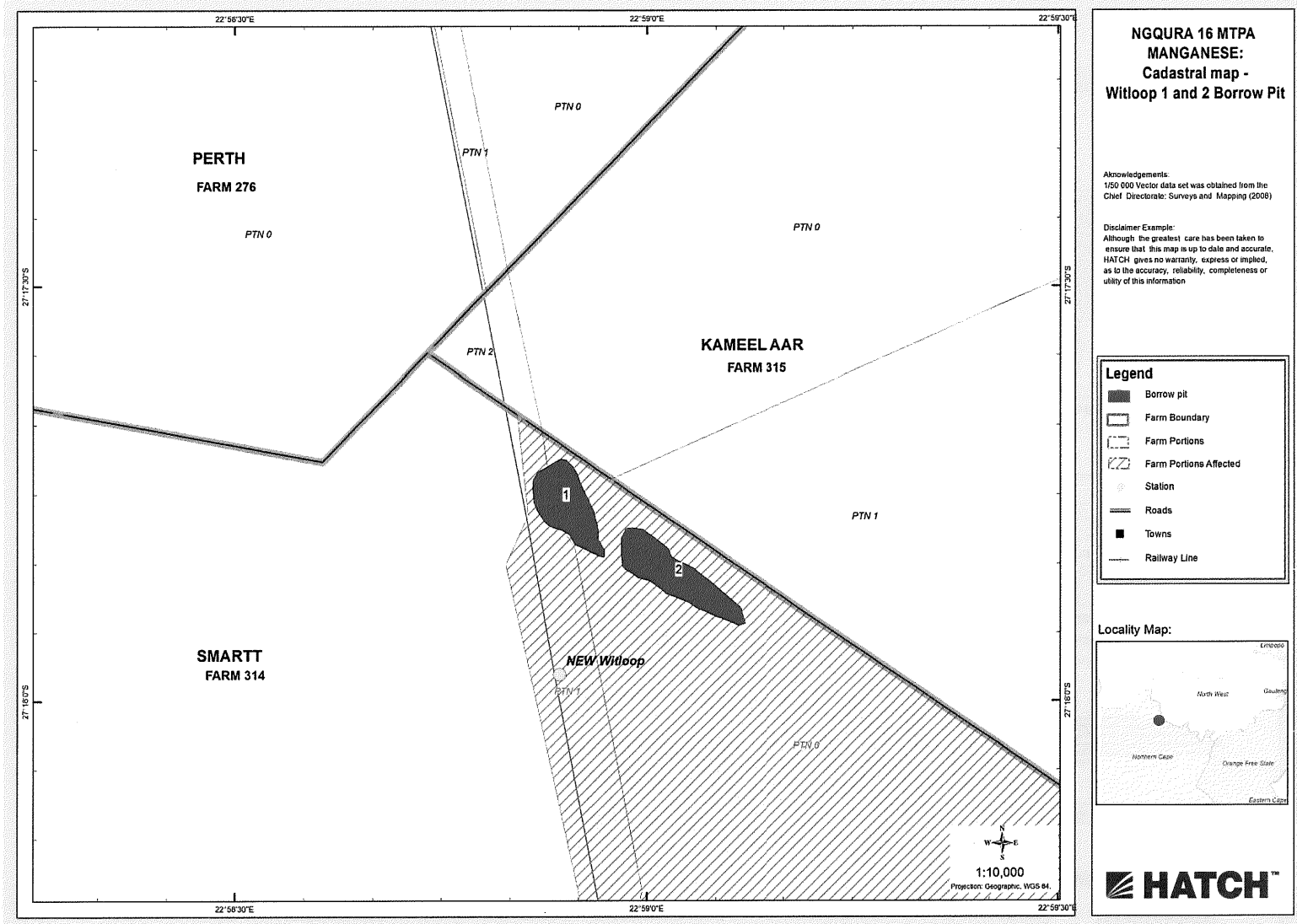
The borrow pit area will be staked out prior to vegetation clearing after which, the vegetation will be cleared from the site. Where topsoil is present, this will be stripped to a depth of 200 mm and stockpiled separately in piles.

### Operation:

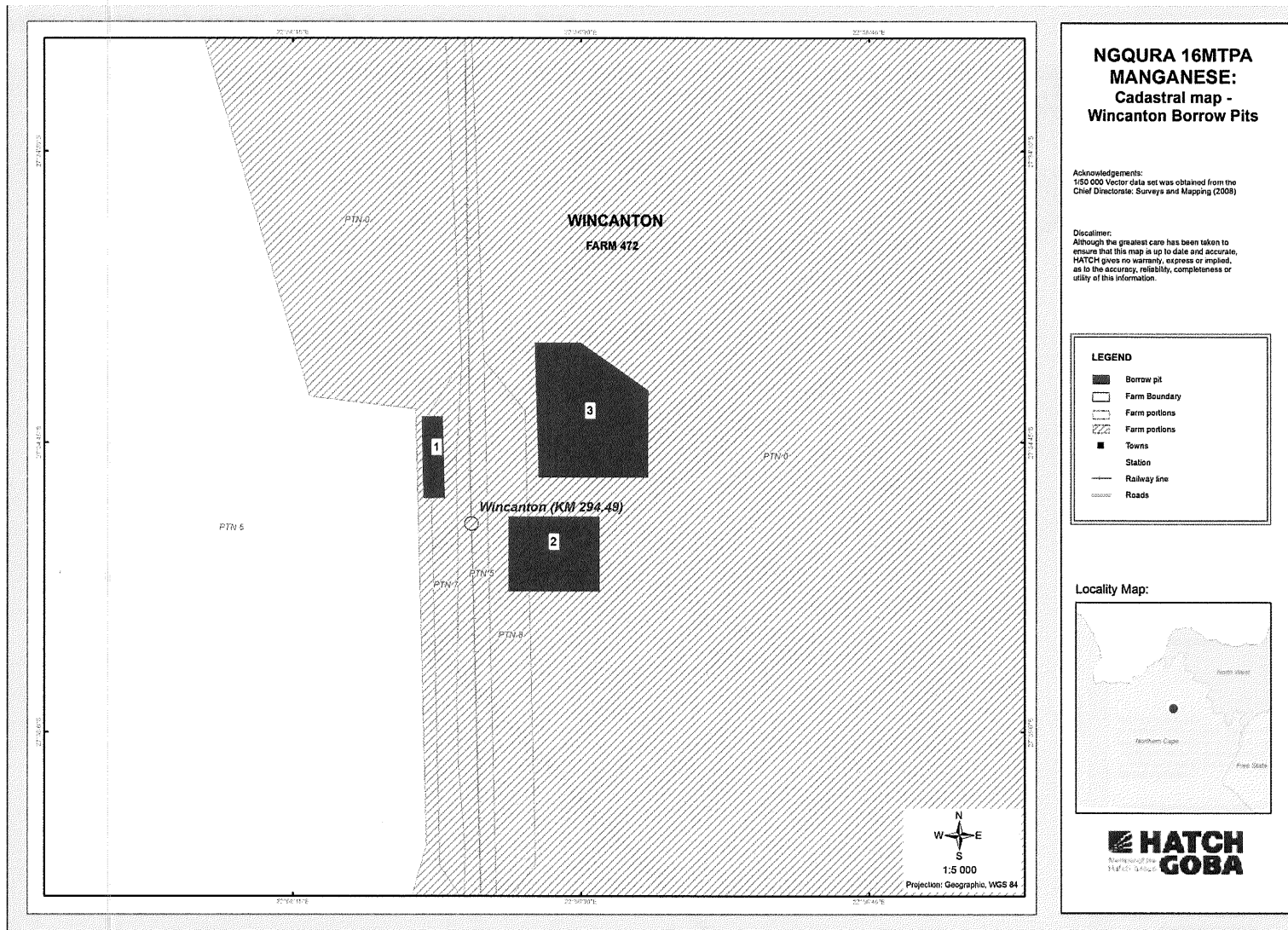
The borrow pit material will be excavated by means of ripping and loading with an excavator and then stockpiled before being loaded onto haul vehicles. The material will be transported along the existing gravel access road which runs adjacent to the railway line within the Transnet rail reserve.

### Rehabilitation and Closure:

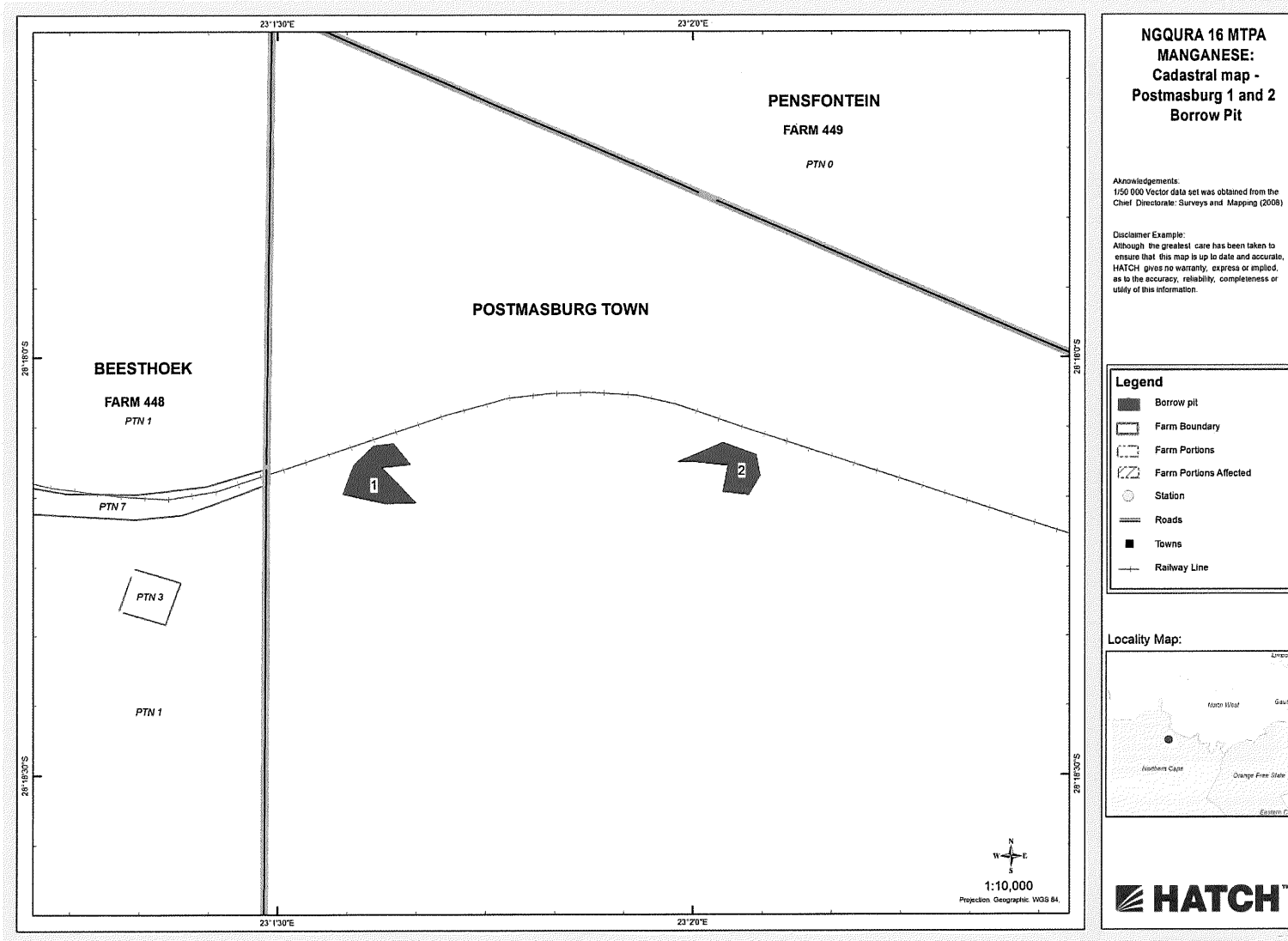
The objective of this phase is to restore the disturbed area as closely as possible to its original state through rehabilitation. The material which cannot be used for the repair of the rail track formation will be used in the reshaping of the site during rehabilitation. Drainage outputs would also be provided to ensure that no water pools within the borrow pit excavations. The stockpiled topsoil will be spread evenly over the disturbed area to a depth of 100 mm where possible. The borrow pit sites would then be re-vegetated with suitable indigenous grass species.



**Figure 2: Locality of the Witloop 1 and 2 borrow pits**



**Figure 3: Locality of the Wincanton 1, 2 and 3 borrow pits**



**Figure 4: Locality of the Postmasburg 1 and 2 borrow pits**

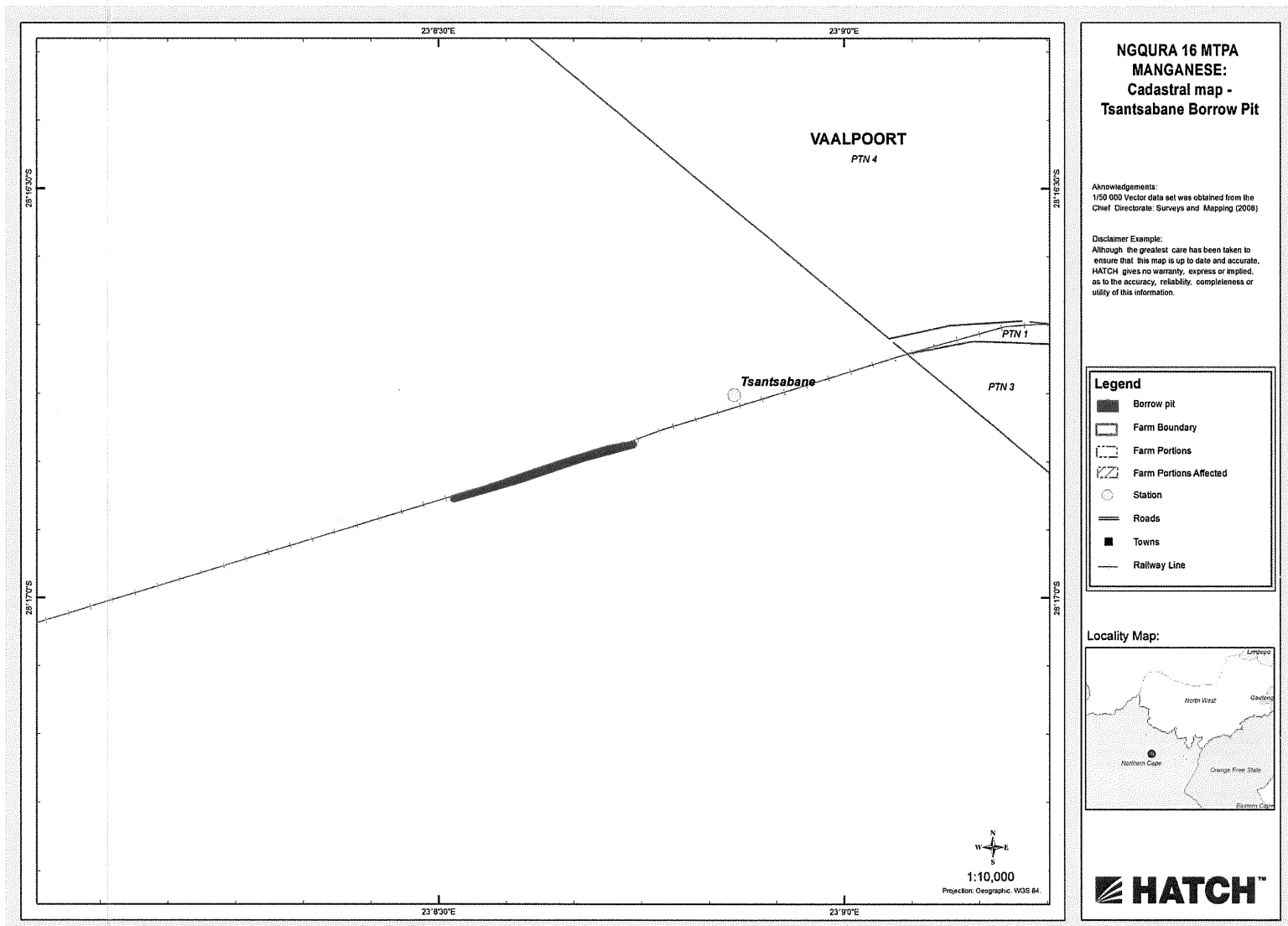
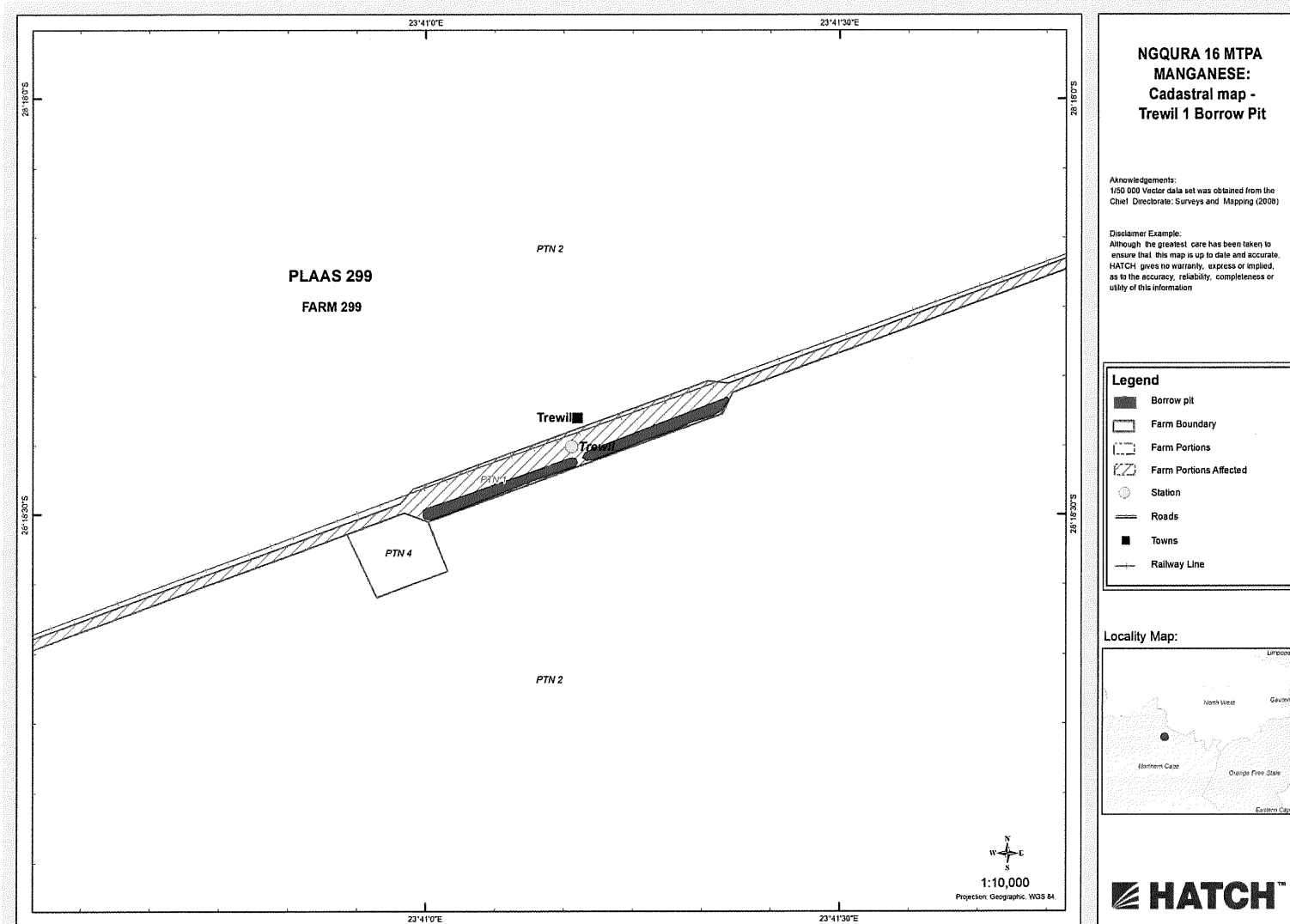
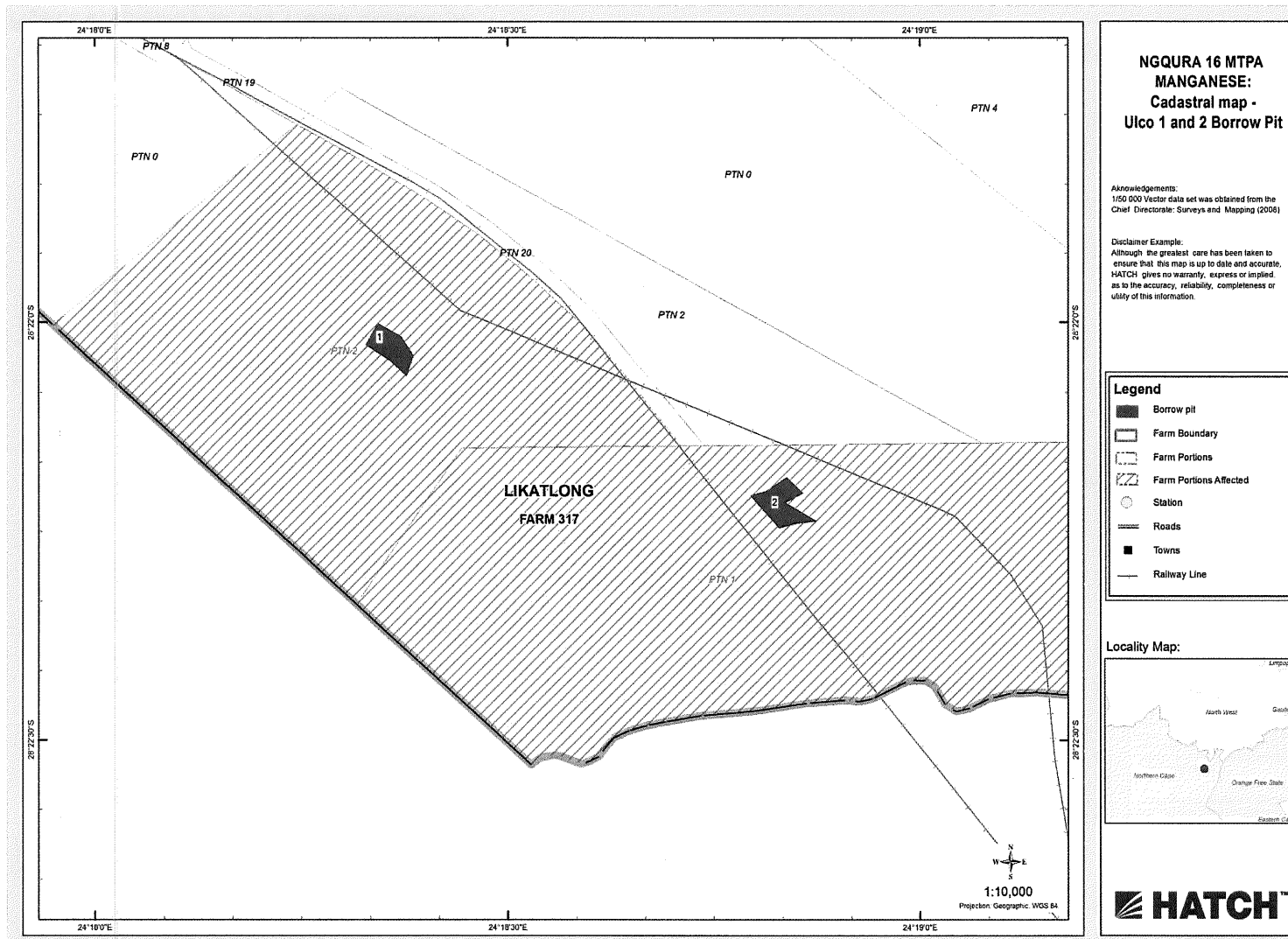


Figure 5: Locality of the Tsantsabane borrow pit

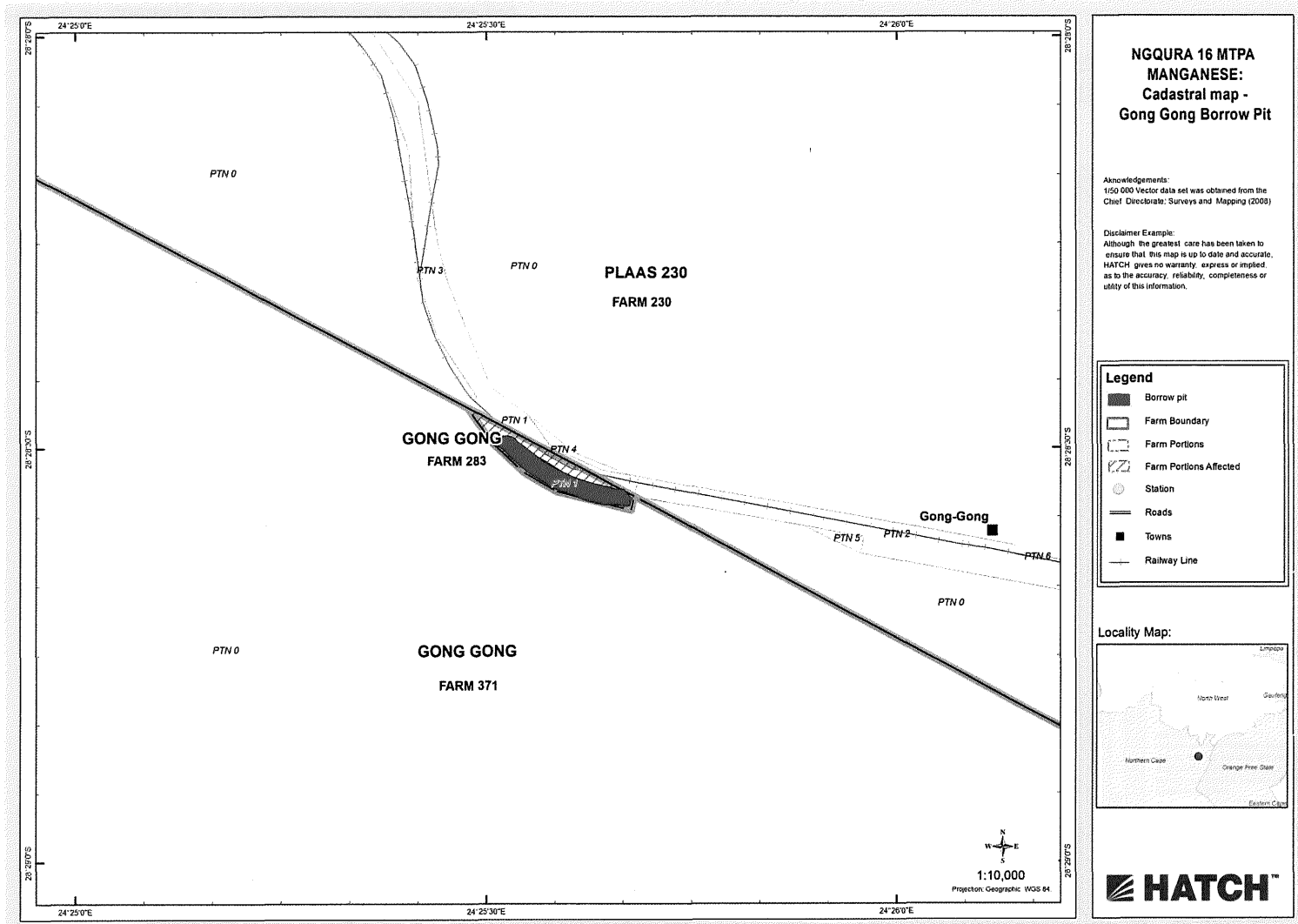


**Figure 6: Locality of the Trewil borrow pit**



**Figure 7: Locality of the Ulco 1 and 2 borrow pits**





**Figure 8: Locality of the Gong Gong borrow pit**

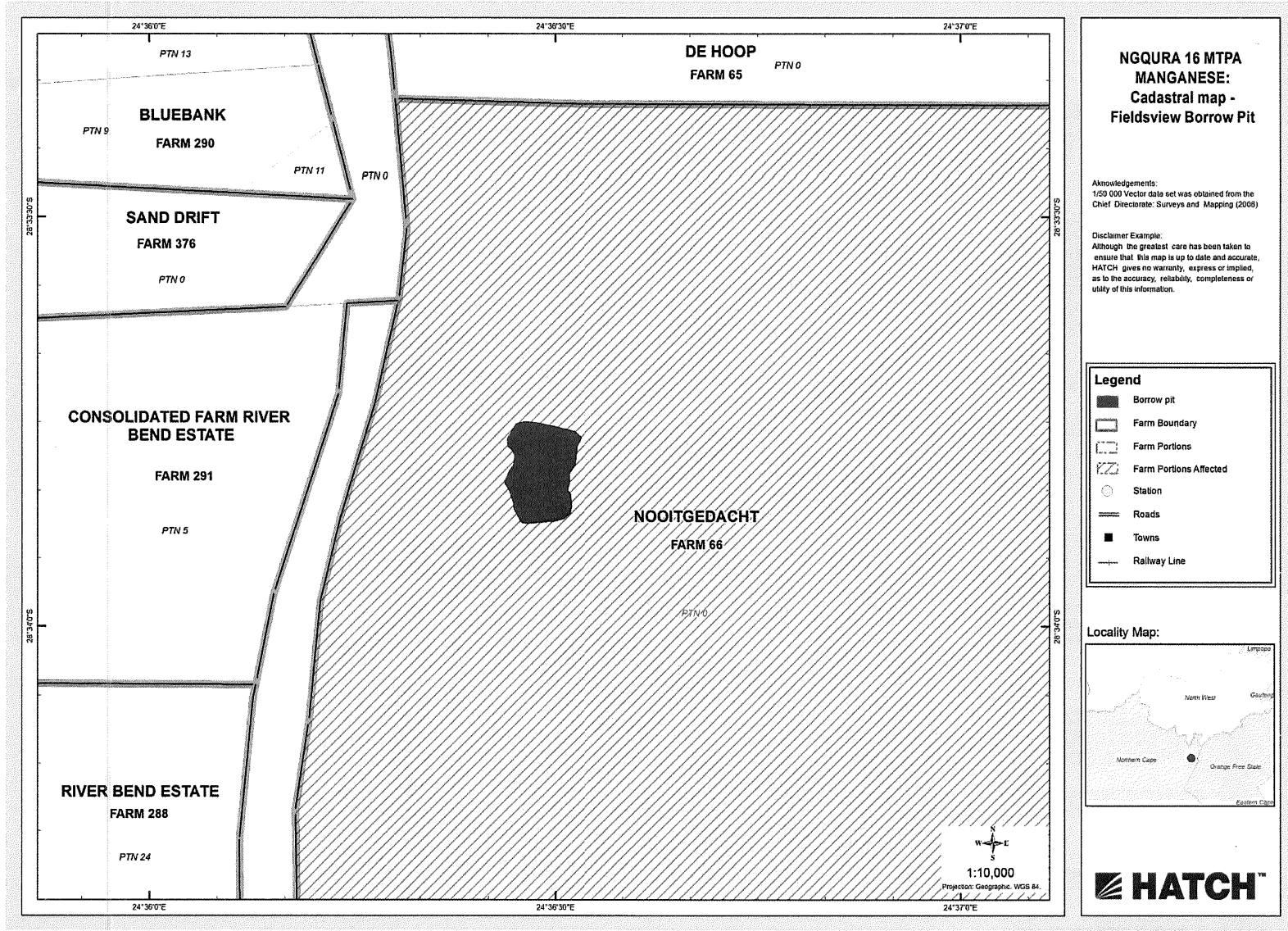


Figure 9: Locality of the Fieldsview borrow pit

## **The borrow pit approval process**

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### **Environmental Management Plan (EMP)**

The Department of Mineral Resources (DMR) is the authorising authority for borrow pit applications. As part of the authorisation process, Transnet is required to submit an Environmental Management Plan which includes information on the activities associated with the borrow pit's excavation to the point when it is rehabilitated at the end of its life. The EMP details impacts and mitigation measures for each borrow pit activity and also includes a committed amount which will be assigned for the rehabilitation of the borrow pit.

This document is available upon request.

### **Supporting Documentation**

Various documents are required as part of the EMP submission to the DMR. These include but are not limited to the following:

- An Environmental Impact Assessment (EIA) Report which was conducted for the area affected
- Various specialist's investigations conducted for the affected area as part of the EIA (this includes a impact assessment on potential heritage resources for the borrow pit area)
- Title deeds of the affected land portions
- Proof of engagement with the affect landowners
- A signed letter of consent from the affect landowners

In terms of the letter of consent, this is simply for the landowner to acknowledge that they have been informed and have no objection to the intention for Transnet to make use of their land.

No work will commence on the affected Landowner's property prior to the signing of a formal agreement between Transnet and the Landowner. This agreement will include details on compensation for the affected land portions.

### **The Public participation Process**

As part of the EMP documentation, the DMR requires that the affected landowners are contacted and consulted with regarding the proposed activities for the borrow pits. This document forms part of the information which will be relayed to the Landowner regarding Transnet's intentions. In addition to this, a meeting will be set up with each Landowner to discuss and minute any issues or reservations which the Landowner may have regarding the proposed borrow pit development. A comments form has been attached to this document for any additional comments which the Landowner may want to include following the meeting. These issues will be included in the EMP submission to the authorities.

**COMMENT SHEET**

**March 2013**

**Should you have any additional concerns, queries, comments or suggestions regarding the proposed borrow pit, please note them below and return this comment sheet to Anita Bron of Hatch (Email: [ABron@hatch.co.za](mailto:ABron@hatch.co.za))**

<b>Title and Name:</b>			
<b>Organisation:</b>			
<b>Telephone:</b>		<b>Fax:</b>	
<b>Cellphone:</b>		<b>Email:</b>	
<b>Postal Address:</b>			

<b>Comments:</b>

---

***Name***

***Signature***

***Date***

***Thank you for your valuable contribution***

**PROPOSED BORROW PITS FOR THE MATERIALS REQUIRED FOR THE  
EXPANSION OF TRANSNET'S EXISTING MANGANESE ORE EXPORT  
RAILWAY LINE AND ASSOCIATED INFRASTRUCTURE, NORTHERN AND  
EASTERN CAPE**

**NOTICE OF PROPOSED BORROW PIT DEVELOPMENT**

Transnet (SOC) Limited (hereafter referred to as Transnet) is proposing to expand the existing manganese ore railway line from Hotazel in the Northern Cape to the Port of Ngqura in the Eastern Cape.

As part of this project, borrow material for various civil and structural activities is required. It is for this reason that several borrow pits have been proposed along the length of the line.

The Department of Mineral Resources (DMR) requires that all affected landowners are consulted with regarding the proposed borrow pit requirements. Transnet are required to submit an Environmental Management Plan (EMP) in terms of Section 39 and of Regulation 52 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002). Consultation with the affected landowners forms part of the requirements of the EMP submission.

**ADDITIONAL ENVIRONMENTAL AUTHORISATION PROCESSES**



Several environmental authorisations are currently being conducted in parallel with the Borrow Pit EMP submission process. The environmental authorisation process is being carried out by ERM. Before the proposed project may proceed, an amendment process, a basic assessment process and an environmental impact assessment process also need to be undertaken in terms of the National Environmental Management Act (NEMA) (Act 107 of 1998), as amended.

The decision-making authority on all these processes will be the National Department of Environmental Affairs (DEA) as opposed to the Department of Mineral Resources (DMR) who will be the decision-making authority with regards to the Borrow Pit EMP submission.

Hatch Africa (Pty) Ltd are acting on behalf of Transnet and are assisting with the preparation of the Borrow Pit EMPs. This site notice serves as notification of the proposed Borrow Pit activities. To comment on or to request more information about the proposed development contact **Evert Jacobs** of Hatch:

**Tel: (011) 844 1508 or Email: [ejacobs@hatch.co.za](mailto:ejacobs@hatch.co.za)**

**TRANSNET**





**VOORGESTELDE LEENGROEWE VIR DIE KONSTRUKSIE MATERIAAL  
BEHOEFTES VIR DIE UITBREIDING VAN DIE TRANSNET MANGAANERTS  
UITVOER SPOORLYN EN GEPAARDGAANDE INFRASTRUKTUUR IN DIE  
NOORD EN OOS KAAP**

**KENNISGEWING VAN DIE VOORGESTELDE LEEN-GROEF  
ONTWIKKELING**

Transnet (SOC) Ltd (hierna verwys as Transnet) stel voor die uitbreiding van die bestaande managaanerts spoorlyn tussen Hotazel (Noord Kaap) en die Nqgura Hawe in Port Elizabeth (Oos Kaap).

As deel van die projek, sal leen material vir verskillende siviele en strukturele aktiwiteite benodig word. Dit is vir hierdie rede dat verskeie leengroewe voorgestel word langs die bestaande spoorlyn.

Die Departement van Minerale Hulpbronne vereis dat al die geaffekteerde grondeienaars gekontak moet word met verwysing na die voorgestelde leengroewe. Dit word verder vereis dat Transnet 'n Omgewings Bestuurs Plan indien in terme van Artikel 39 en van Regulasie 52 van die Minerale en Petroleum Hulpbronne Ontwikkelings Wet, 2002 (Wet No. 28 van 2002). Konsultasie met die geaffekteerde grondeienaars vorm deel van die vereistes van die Omgewings Bestuurs Plan indiening.

**ADDISIONELE OMGEWINGS MAGTIGINGS PROSESSE**



Verskeie omgewings magtigings prosesse word huidiglik uitgevoer in parallel met die leengroef Omgewings Bestuurs Plan indiening prosesse. Die omgewings magtiging proses (impak studies) word huidiglik deur Environmental Resources Management (ERM) uitgevoer. Voor die voorgestelde projek mag voort gaan, moet aangepaste, basiese en omgewings impak studies gedoen word in terme van die Nasionale Omgewings Bestuurs Wet (Wet no 107 van 1998), soos aangepas in 2010.

Die besluitnemings gesag van al die prosesse is die Nasionale Departement van Omgewingsake in plaas van die Departement van Minerale Hulpbronne wat die slegs die besluit sal maak nagaande die leengroef Omgewingsplan indiening.

Hatch Africa (Pty) Beperk tree op namens Transnet, en staan by met die voorbereiding van die leengroef Omgewings Bestuurs Plan. Hierdie terrein kennisgewings dien as inligting van die voorgestelde leengroef aktiwiteite. Om kommentaar te lewer of om verdere informasie aan te vra oor die voorgestelde ontwikkeling kontak **Evert Jacobs** by Hatch:

**Tel: (011) 844 1508 of Epos: [ejacobs@hatch.co.za](mailto:ejacobs@hatch.co.za)**

**TRANSNET**










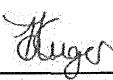
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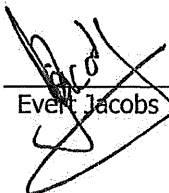
Transnet Capital Projects  
Ngqura 16 Mtpa Manganese Manganese Rail  
Borrow Pits Stakeholder Engagement Comments and Responses Report  
25 July 2013

## Transnet Capital Projects Ngqura 16 Mtpa Manganese Rail

### Borrow Pits Stakeholder Engagement Comments and Responses Report

Prepared by:  25/7/2013  
Elize Becker Date

Reviewed by:  25/7/2013  
Tammy Kruger Date

Approved by:  25/7/2013  
Eben Jacobs Date



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**Annexure**  
 Stakeholder Database



## **1. Introduction**

As part of the Ngqura 16 Mtpa Manganese railway upgrade, various borrow pit sites were proposed for commissioning or recommissioning at strategic positions alongside the existing railway line. In the Northern Cape, most of the proposed borrow pit sites are located on Transnet property and are a combination of new and existing borrow pits to be recommissioned. In the Eastern Cape all the borrow pits are situated on private land and are existing (refer to Table 1).

Meetings were scheduled with the landowners (i.e. where the borrow pits are located on privately owned land) and site notices were placed at all the proposed borrow pit areas. The private landowners were provided with an explanation regarding the environmental process and the need for signed consent.

This document provides a summary of the approach to the stakeholder engagement; the type of stakeholders that were liaised with; concerns that were raised and the response provided.

## **2. Purpose of the Concerns and Responses Report**

The purpose of developing a Concerns and Responses Report is to summarise the concerns and/or comments raised by the stakeholders regarding the development of the proposed borrow pits. These comments are used to identify possible issues / risks that need to be assessed and to identify management / mitigation measures to be implemented during construction.

## **3. Methodology**

A field schedule plan was prepared to cross reference where the proposed borrow pits are located and which stakeholders would be affected (Refer to Table 1). Each affected landowner was contacted telephonically and a meeting arranged.

### **3.1 Background Information Documents and Consent Forms**

Background information documents (BID), consent forms and site notices were prepared. The BID documents provided a summary of the proposed development and included maps that displayed the location of each borrow pit site. Two consent forms were given to the landowner for signature. The one document requested permission for the borrow pit to be commissioned / recommissioned and the second form pertained to the removal of archaeological artefacts from the property if discovered during commissioning / recommissioning of the borrow pit.

## **4. Type of Stakeholders**

The type of stakeholders, other than Transnet, were inclusive of private landowners and local municipalities. Table 1 provides a summary of the stakeholders that were liaised with for the proposed borrow pit sites. Transnet will be required to negotiate with land owners where the borrow pits are located on privately owned land.

## **5. Comments and Responses**

The main concerns received from the stakeholders were related to security, maintenance of fences, stock theft, dust and traffic during commissioning / recommissioning. The responses provided to the landowners aimed at explaining the borrow pit application process and what the landowners' rights were in said process.



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In most cases the private landowners signed the consent forms immediately, except for the landowner at the Fieldsview borrow pit who requested time to read through the documents. The Local Municipalities (the landowners for the Drennan and Knutsford borrow pits) also requested time to study the documents, before they asked the Municipal Managers to sign as the authorised signatory.

## 6. List of Borrow Pits

**Table 1: List of proposed borrow pits to be commissioned or recommissioned**

Borrow Pit Names	Status (new borrow pit to be commissioned or existing borrow pit to be recommissioned)	Farm Portions	Land Owner
Witloop 1	Existing	Farm No.314 of Smartt, Portion 0 and 1	Transnet
Witloop 2	Existing	Farm No.314 of Smartt, Portion 0	BHP Bilton
Wincanton 1	New	Farm No.472 of Wincanton, Portion 7	Transnet
Wincanton 2	New	Farm No.472 of Wincanton, Portion 8	Transnet
Wincanton 3	Existing	Farm No. 472 of Wincanton, Portion 0	Private
Postmasburg 1	New	Postmasburg Town	Tsantsabane Local Municipality
Postmasburg 2	New	Postmasburg Town	Tsantsabane Local Municipality
Trewil 1	Existing	Farm No. 299, Portion 1	Transnet
Ulco 1	Existing This borrow pit will no longer be required for the project	Farm No. 317 of Likatlong, Portion 2	Private
Ulco 2	New This borrow pit will no longer be required for the project	Farm No. 317 of Likatlong, Portion 1	Private
Fieldsview	Existing This borrow pit will no longer be required for the project	Farm No. 66 of Nooitgedacht, Portion 0	Private

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Borrow Pit Names	Status (new borrow pit to be commissioned or existing borrow pit to be recommissioned)	Farm Portions	Land Owner
Burgervilleweg	Existing	Farm No. 39 of Riet Fountain, Portion 1	Private
Linde	Existing	Farm No. 29 of Dwaalfontein, Portion 0	Private
Rosmead	Existing	Farm No. 119 of Leuwe Fontyn, Portion 2	Private
Tafelberg	Existing This borrow pit will no longer be required for the project	Farm No. 176 of Tafelberg, Portion 2	Private
Knutsford	Existing	Farm No. 66 of Het Fortuin, Portion 0	Inxuba Yethemba Local Municipality
Drennan	Existing	Farm No. 66 of Het Fortuin, Portion 0	Inxuba Yethemba Local Municipality
Thorngrove	Existing This borrow pit will no longer be required for the project	Farm No. 550 of Waaiplaats, Portion 0	Blue Crane Local Municipality
Cookhouse-Golden Valley	Existing	Farm No. 121 of Jagersdrift, Portion 4	Private
Golden Valley	Existing	Farm No. 340 of Altona, Portion 0	Private
Ripon-Kommadagga	Existing	Farm No. 259 of Driefontein, Portion 0	Private
Barkley Bridge	Existing	Farm No. 202 of Steins Valley, Portion 0	Private
Coega Compilation Yard 1	Existing	Farm No. 643 of Tankatara, Portion 0	Private
Coega Compilation Yard 2	Existing	Farm No. 643 of Tankatara, Portion 0	Private



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**Table 2: Comments and Responses**

Borrow Pit	Stakeholder	Type	Comments	Responses
Witloop 1	Transnet	Landowner	No concerns were raised.	
Witloop 2	BHP Billiton - Mr. David Mamphita	Landowner	Await feedback.	Mr. Mamphita will be liaised with further.
Wincanton 1 and 2	Transnet	Landowner	No concerns were raised.	
Wincanton 3	Mr. Dries Bester	Landowner	Mr. Bester does not live on the farm, however Mr. Mattheebos does.  The main concerns included safety, security and whether compensation will be paid.  A solar facility is proposed on a section of this property. A concern was raised by the solar farm developers, that dust may have a negative effect on the solar facility equipment.	Mr. Bester and Mr. Mattheebos were informed that new borrow pits would be commissioned at Wincanton Station and that they would be notified in advance when the activities would commence.  They were informed that measures would be implemented to manage / mitigate the identified issues and that a grievance procedure would be put in place to report any concerns.
Postmasburg	Tsantsabane Local Municipality - Mr. Jacques Majit	Municipal Representative / Landowner	No concerns were raised.	Mr. Majit was informed that they would be communicated with on a regular basis regarding the timeline associated with the commissioning of the new borrow pits at Postmasburg town.
Tsantsabane	Transnet	Landowner	No concerns were raised	
Trewil	Transnet	Landowner	No concerns were raised	
Gong Gong	Transnet	Landowner	No concerns were raised	
Ulco	Mr. Naude Greyling	Landowner	The main concerns included security, stock theft, fencing, and Transnet legacy concerns.	Mr. Greyling was informed that measures would be implemented to manage / mitigate the



			Mr. Greyling had a concern regarding construction workers entering his property; the placement of animal traps; fences not being well maintained or being cut; and vehicles entering his property without permission.	identified issues and that a grievance procedure would be put in place to report any concerns.
Fieldsview	Mr. Mike Hall	Landowner	The main concerns included the increase in construction vehicles; traffic related safety and dust generation; and stock theft.  Mr. Hall had a concern that the borrow pit proposed for recommissioning was not located closer to the railway line as this would result in an increase of construction traffic between the railway line and his farm.	Mr. Hall was informed that measures would be implemented to manage / mitigate the identified issues and that a grievance procedure would be put in place to report any concerns.
Burgervilleweg	Mr. Willem Retief	Landowner	The main concern included the use of groundwater which would have a negative impact on his farming activities.	Mr. Retief was advised that no boreholes will be placed on his property which could affect his groundwater levels.
Linde	Mr. Naude Greyling	Landowner	Mr. Greyling requested that Hennie Engela or Danna Moolman be contacted to provide information regarding the proposed solar facility.  The main concern pertained to the potential negative impacts of the borrow pit on a proposed solar facility development on his property. The facility is proposed in close vicinity to an existing Eskom substation and the Linde Railway Station.  Mr Greyling proposed that Transnet provide him with a new crossing at the Eskom substation since this would allow him easier access to the	Mr. Naude was informed that the information regarding the solar facility would be communicated to Transnet for consideration. However the proposed borrow pit is at least one kilometre from the solar facility and therefore should not have any impact.  The request for a crossing was also forwarded to Transnet for review and decision making.



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			cattle enclosures.	
Linde	Mr. Hennie Engela	Lead Engineer for Linde Solar Park	Mr. Engela provided a layout displaying where the development would take place and if this was in conflict with the railway line or borrow pit development. Mr. Engela was concerned that the railway reserve expansion at the Eskom substation may impact on a proposed solar facility development located on the farm.	Mr. Engela was advised that the commissioning of the borrow pit should not have an impact on the solar farm, but that this would be discussed with Transnet.
Linde	Ms. Danna Moolman / Linde Solar Park	Stakeholder	No concerns were raised.	
Rosmead	Mr. JC Louw	Landowner	The main concerns included security, stock theft, and fencing related issues.	Mr. Louw was informed that measures would be implemented to manage / mitigate the identified issues. He was further informed that a grievance procedure would be put in place to report any concerns.
Tafelberg	Mr. Kingwill	Landowner	The main concerns included security and stock theft.	Mr. Kingwill was informed that measures would be implemented to manage / mitigate the identified issues. He was further informed that a grievance procedure would be put in place to report any concerns.
Cookhouse	Mr. Mark Schulpfort	Landowner	The property belongs to a trust. Mr. Schulpfort is one of the trustees. The main concerns included security, and stock theft.  Mr Schulpfort also raised the use of alternative sites.	Mr. Schulpfort was informed that measures would be implemented to manage / mitigate the identified issues. He was further informed that a grievance procedure would be put in place to report any concerns.

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Golden Valley	Mr. Alwyn Raubenheimer	Landowner	The main concern included the issue of compensation.	Mr Raubenheimer was informed that Transnet would liaise with him regarding compensation.
Ripon	Mr. Jimmy Truter	Landowner	<p>The main concerns included security, stock theft, stakeholder liaison, and the use of alternative sites.</p> <p>Mr. Truter mentioned that various developments had been proposed on his property in the past and he was not comfortable with the manner in which these processes were handled. One of his main concerns was the fact that representatives from various companies visited him on his farm, but never returned. A lack of communication resulted in him not understanding what the purpose of all these visits were.</p>	<p>Mr. Truter was informed that regular communication would occur before and during the recommissioning of the borrow pit commissioning.</p> <p>The environmental process was explained in detail.</p> <p>Mr. Truter was informed that measures would be implemented to manage / mitigate the identified issues. He was further informed that a grievance procedure would be put in place to report any concerns.</p>
Barkley Bridge	Mr. Stefaans Meiring	Landowner	The main concern included the rehabilitation of the site.	Mr. Meiring was informed that as part of the borrow pit application process, the applicant must be able to show the ability to rehabilitate the site.
Tankatara	Mr. Peter Lake	Landowner	<p>The main concerns included site access where construction teams have accessed his property at night, and the cutting of fences.</p> <p>Mr. Lake also mentioned that various historical water wells and grave sites were scattered on his property. The graves are located between the PPC haul road to the dumpsite of the station and the existing railway line.</p>	Mr. Lake was informed that measures would be implemented to manage / mitigate the identified issues. He was further informed that a grievance procedure would be put in place to report any concerns.
Knutsford / Drennan	Inxuba Yethemba Local Municipality - Mr.	Landowner	The Municipality agreed that the existing borrow pits may be used. Awaiting signed consent form	Mr. Salman was informed that the municipality would be kept up to date regarding the borrow pit



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	Salman		<p>from Inxuba Yethemba Local Municipality.</p> <p>No concerns were raised however Mr. Salman indicated that the Municipal Manager had to sign the consent forms.</p> <p>Ms. Zola James, Local Economic Development Officer indicated that at the latest council meeting the use of the borrow pits were discussed and no concerns were raised.</p>	<p>environmental application and the proposed timeline in terms of the commissioning of the borrow pits. Representatives of Tsantsabane and Inxuba Yethemba Local Municipalities were visited at their offices and arranged that the consent forms were delivered to the MMs for signature. The MMs were contactable afterwards via telephone or email. Both local municipalities agreed in principle to sign the consent forms.</p>
Knutsford / Drennan	Mr. Gojiyasi	Landowner	No concerns were raised.	Mr. Gojiyasi was advised of the environmental application process which was explained in detail.
Thorngrove	Blue Crane Local Municipality	Landowner	This borrow pit will no longer be required for the project	No responses
Coega	Dr. Paul Martin / ECO Coega IDZ	Stakeholder	The main concern include the use of existing borrow pits and why more were not being used.	Dr. Martin was advised that in fact most of the borrow pits to be used were existing.
Chris Hani District Municipality (CHDM)	Mr. Robert Walton / Eastern Cape Government Assistant Director: Technical Services Road Section	Stakeholder	<p>Mr. Walton requested maps to determine if any overlaps occur with CHDM's existing borrow pits. The main concern pertained to the use of existing borrow pits that have been used by the CHDM for the past 20 years in repairing and maintaining gravel roads network and that borrow pits have old user rights.</p> <p>They are concerned that an overlap may occur between the borrow pits used by the district municipality and those proposed to be recommissioned.</p>	<p>The list of existing borrow pits used by the CHDM was requested to identify any overlaps between the borrow pits used by CHDM and the ones proposed for recommissioning. No further correspondence has been received from the stakeholder.</p>

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Afri-Coast Engineers	Duncan Palmer	Stakeholder	The main concern included blasting at the borrow pit and the potential impact on sensitive equipment at a proposed solar facility on the adjacent property (Portion 1 of the Farm Hetfontuin 66).	No blasting is proposed for the recommissioning of the borrow pit.
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## **7. Summary**

The main issues and concerns raised by the directly affected landowners included stock theft, safety, security during commissioning, impact on solar facility developments, rehabilitation of borrow pits and entrance to private property.

## **Stakeholder Database**





Type	Stakeholder	Farm/Area
Landowner	Transnet	Witloop 1
Landowner	BHP Biliton/David Mamphita	Witloop 2
Landowner	Transnet	Wincanton 1
Landowner	Transnet	Wincanton 2
Landowner	Dries Bester	Wincanton 3
Landowner	Tsantsabane Local Municipality	Postmasburg
Landowner	Transnet	Tsantsabane
Landowner	Transnet	Trewil
Landowner	Transnet	Gong Gong
Landowner	Naude Greyling	Ulco 1
Landowner	Naude Greyling	Ulco 2
Landowner	Mike Hall	Fieldsview / Nooitgedacht
Landowner	Willem Retief	Burgervilleweg / De Bad
Landowner	Naude	Linde
Landowner	J.C. Louw	Rosmead / Leeuwe Fonteijn 119
Landowner	Kingwill	Tafelberg / Farm No. 176
Landowner	Mark Schulpfort	Cookhouse/Jagers Drift 121
Landowner	Aaalwyn Raubenheimer	Golden Valley 3
Landowner	Jimmy Truter	Ripon / Driefontein
Landowner	Stefaans Meiring	Barkley Bridge
Landowner	Peter Lake	Tankatara
Landowner	Inxuba Yethemba Local Municipality	Knutsford / Drennan
Landowner	Blue Crane Local Municipality	Thorngrove
Solar Farm Developer	Hennie Engela/Lead Engineering	Linde
Solar Farm Developer	Danna Moolman	Linde
ECO Coega IDZ	Dr. Paul Martin/ECO Coega IDZ	Coega
Municipal Officer	Mr. Gojyasi	Knutsford / Drennan
Municipal Officer	Robert Walton / Eastern Cape Government : Technical Services Road Section	Chris Hani District Municipality
Local economic development officer	Zola James	Knutsford / Drennan
Solar Farm Developer	Duncan Palmer/Afri-Coast Engineers	Knutsford
Solar Farm Developer	Madelein De Waal	Wincanton 3
Solar Farm Engineers	VentuSA Energy/David Peinke (Engineering Manager)	Wincanton 3

