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TRANSNET

The Assistant Director
Department: Environment
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Dear Ms Sekepane

RE: ENVIRONMENTAL MANAGEMENT PLAN FOR THE ESTABLISHMENT OF THE HEUNINGNESKLOOF BORROW PIT ON PORTIONS OF THE FARMS HONIG NEST KLOOF 123 AND WITKOP LAAGTE 124 IN THE PIXLEY KA SEME DISTRICT MUNICIPALITY NORTHERN CAPE

This letter serves to introduce an Environmental Management Plan (EMP) with various appendices for the proposed establishment of the **Heuningneskloof Borrow Pit**.

Five hard copies and **one** electronic copy of this submission are enclosed as requested in our meeting on 29 October 2012 at the DMR's offices in Kimberley.

Background

Transnet SOC Limited (Transnet) requires borrow material for various civil and structural activities as part of the Ngqura 16 Mtpa Manganese Rail Expansion Project. The project comprises of the upgrading and extension of the rail infrastructure and associated infrastructure at various locations between Hotazel in the Northern Cape and the Port of Ngqura in the Eastern Cape. The Department: Environmental Affairs issued environmental authorisations for the project in November 2009 (Reference 12/12/20/1241)

Structure of this EMP Submission

This EMP is specific to the **Heuningneskloof Borrow Pit**, which is required for earthworks material for the formation subsidence repair of the lines between the Modderrivier and Heuningneskloof crossing stations.

Government Notice R762 (GN R762), in terms of Section 106(1) of the MPRDA, exempts any organ of state (such as Transnet) from applying for rights and/or permits required for the development of borrow pits and other mining activities (therefore exempt from sections 16,20, 22 and 27 of the said Act). However, in terms of Section 106(2), organs of state must submit an EMP for approval by the Minister in terms of Section 39(4). Section 39(3) sets out the minimum required information that must be contained in such an EMP, including baseline information regarding the affected environment, an assessment of the potential impacts of the proposed activity, as well as measures to mitigate and rehabilitate the potential impacts.

This EMP has been undertaken in accordance with the requirements of the Regulations promulgated in terms of the Minerals and Petroleum Resources Development Act of 2002.
The structure of the EMP is as follows:

The structure of the EMP is as follows:

- Letter of Introduction (this letter)
- EMP for the Heuningneskloof borrow pit
    - Appendix A:
        - Appendix A1: Copy of Government Notice No. R. 762 (Exemption of Organs of State From Certain Provisions of the Mineral and Petroleum Resources Development Act, 2002)
        - Appendix A2: Correspondence with the DMR office in Kimberley
        - Appendix A3: Transnet SOC Limited Certificate of Incorporation
    - Appendix B: Heuningneskloof borrow pit layout, locality plans, maps, and photos
    - Appendix C: Final EIA Report and Public participation documentation (2009)
    - Appendix D: DEA Environmental Authorisation (2009 EIA)
    - Appendix E: Specialists reports
        - Appendix E1: Air Quality
        - Appendix E2: Heritage Impact Assessment
        - Appendix E3: Social Impact Assessment
        - Appendix E4: Terrestrial Ecology Assessment
    - Appendix F: Transnet control documents
        - Appendix F1: SES
        - Appendix F2: CEMP
        - Appendix F3: Method Statement for the Belmont borrow pit
        - Appendix F4: HMP
    - Appendix G: Title deeds for Honig Nest Kloof 123 (Ptn 9) and Witkop Laagte 124 (Ptn 1 and Ptn 4)
    - Appendix H: Additional public participation documentation (directly affected landowners) including letters of consent
    - Appendix I: Undertaking to provide financial provision and Confirmation of Rehabilitation cost allocation

Your consideration of the information in this submission would be appreciated. Please do not hesitate to contact us should you wish to discuss any of the information or if you require additional information.

Yours sincerely,

Mr. R. Basson
Project Director

Date : 2013/03/25

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.

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

ITEM	COMPANY CONTACT DETAILS
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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 Heuningneskloof borrow pit on portions of the Farms Honig Nest Kloof 123 (Ptn 9) and Witkop Laagte (Ptn 1 and Ptn 4). Transnet have an approved Environmental Impact Assessment/Environmental Management Plan (EIA/EMP) for the Proposed Upgrade of the Transnet Railway Line between Hotazel and the Port of Ngqura in July 2009 (See Appendix D for the DEAT Record of Decision). The borrow pits have been briefly addressed in EIA/EMP which has been appended to this EMP (Appendix C).

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 Heuningneskloof borrow pit is located on the Farm Honig Nest Kloof 123 (Ptn 9) and Witkop Laagte 124 (Ptn 1 and Ptn 4) adjacent to the existing Kimberley to De Aar railway line. A large section of this borrow pit is located within the boundaries of an existing borrow pit area (previously used for obtaining formation repair material) within the Transnet rail reserve. The area is regarded as highly disturbed. 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 Final EIA report (Appendix C).

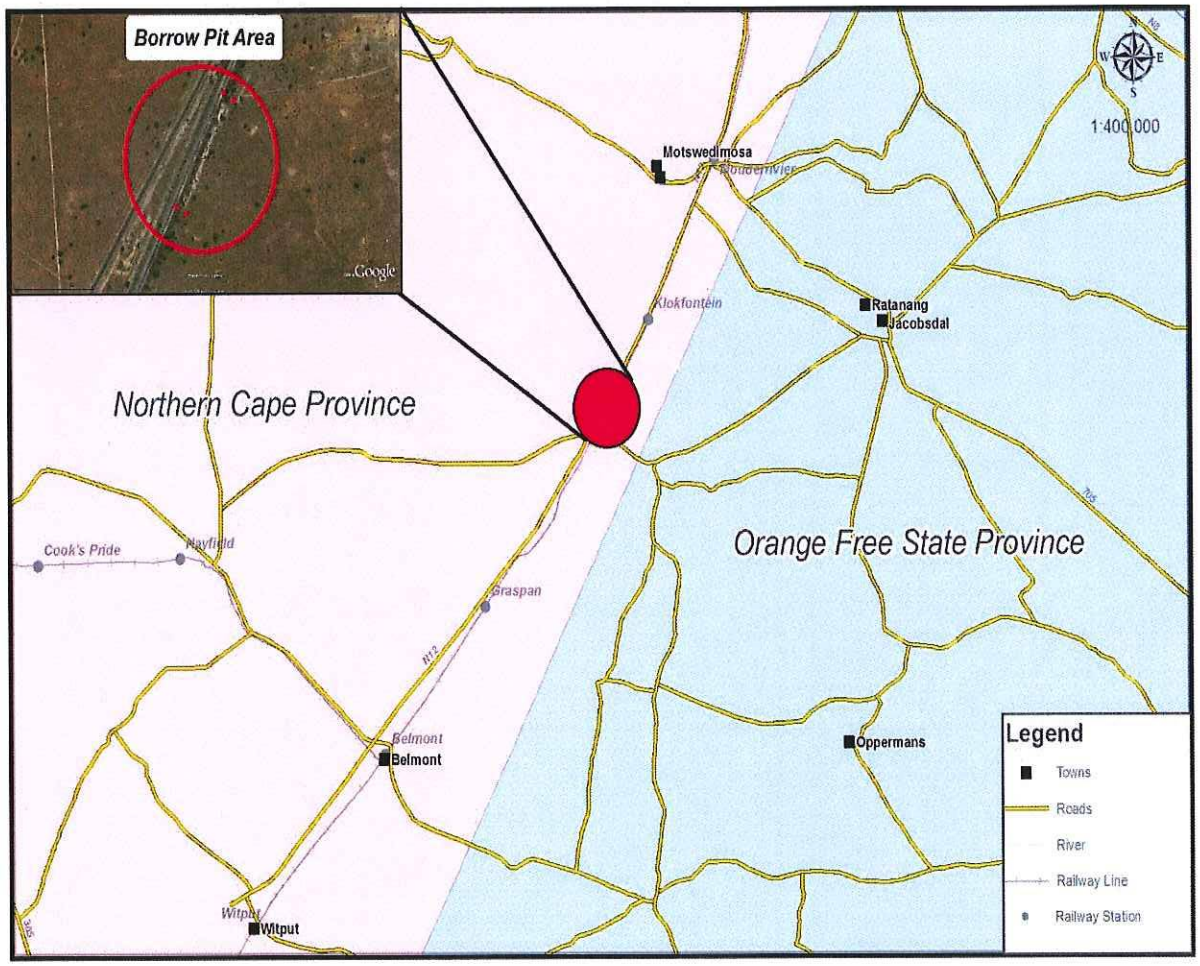

Figure 1: Locality map of the Heuningneskloof borrow pit

The biophysical environment

Geology and Topography

The topography of the project area is largely dominated by the semi arid Karoo basin.

The altitude at the borrow pit site is approximately 1200 meters above sea level. To the west of the borrow pit area, the gradient rises to an altitude of approximately 1210 meters above sea level and to the east, the gradient reduces gradually towards a valley. The topography of the immediate vicinity of the borrow pit site is flat. The borrow pit area is located on geology of the Ecca Group Shales.

Surface and Groundwater

The river systems encountered along the railway line include the Riet River, the Orange River and the Hondeblafspruit. The shortest distance from the Riet River and Orange River to the borrow pit is 40 km and 25 km respectively. The groundwater vulnerability has been classified as low to moderate (based on the Aquifer Classification Map of South Africa (1998)) and groundwater sensitivity classified as low (Figure 2) in the project area.

Flora

The vegetation in the borrow pit area is dominated by the Kimberley Thornveld which has an ecological status of least threatened[1] in terms of the National Spatial Biodiversity Assessment (NSBA) (See Sensitivity Map in Appendix B). This vegetation type consists of often slightly irregular plains with a well developed tree layer consisting of *Acacia erioloba*, *Acacia tortilis*, *Acacia karroo*, and *Boscia albitrunca*. It also has a well developed shrub layer with occasional dense stands of *Tarchonanthus camphorates* and *Acacia mellifera*. *Acacia erioloba and Boscia albitrunca* are both protected tree species (*Acacia erioloba* is protected in terms of section 12 of the National Forests Act, 1998 (Act No. 84 of 1998) and *Boscia albitrunca* is provincially protected). 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).

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[1] The NSBA has four categories for rating of ecosystem status. In decreasing order of severity, these are: Critically Endangered, Endangered, Vulnerable and Least Threatened.

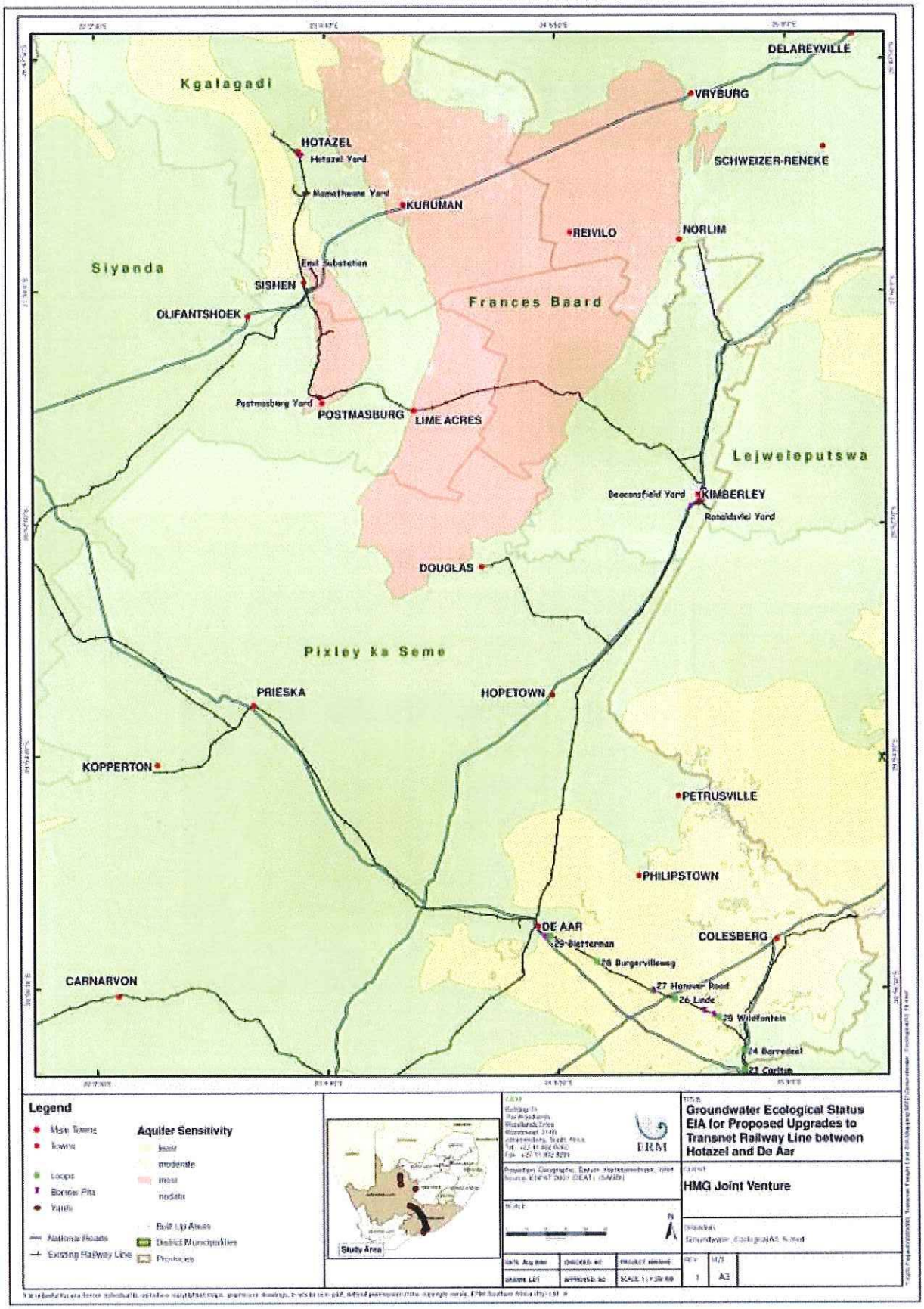


Figure 2: Groundwater Sensitivity map from Hotazel to De Aar (Final EIA, 2009, Appendix C)

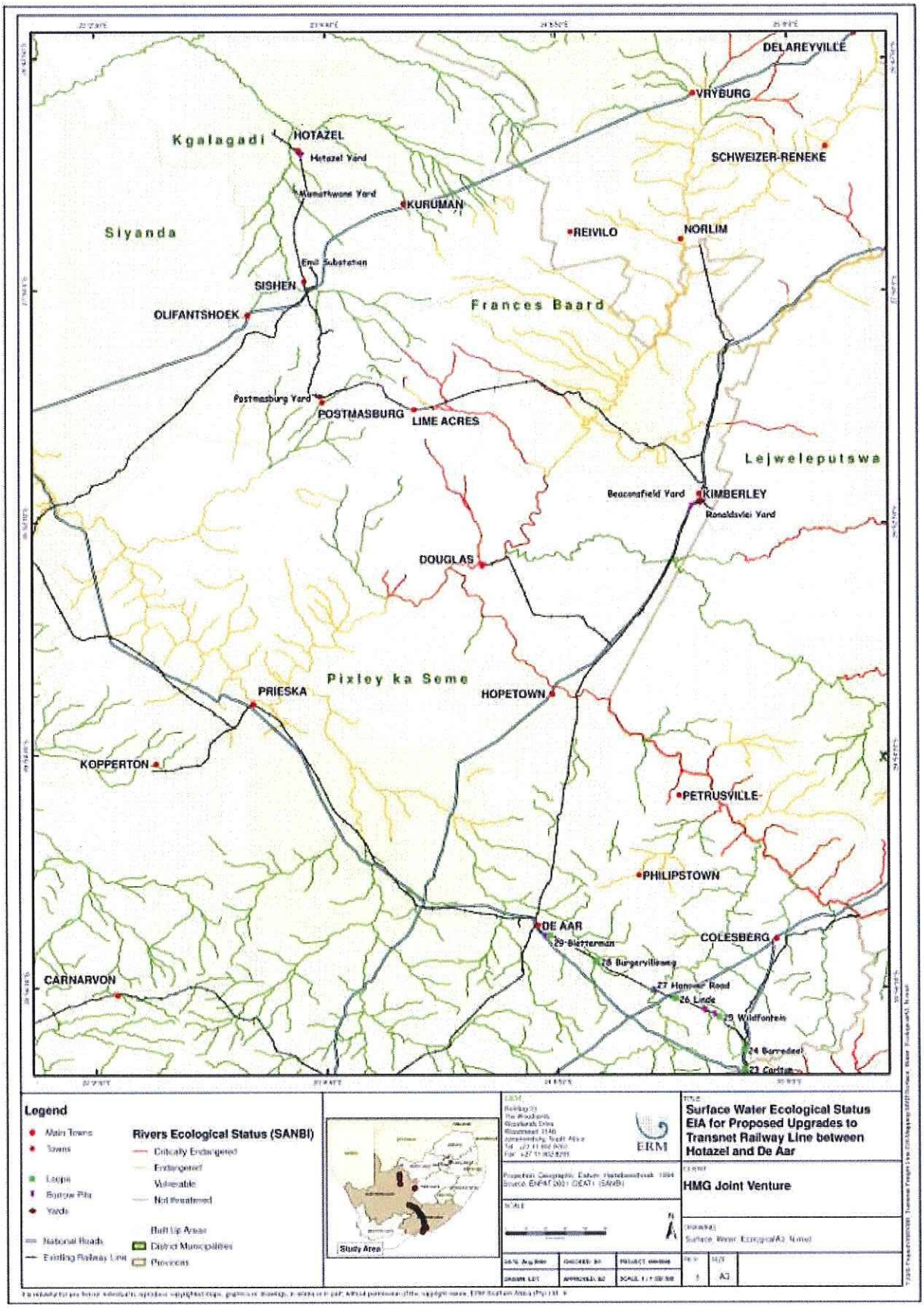


Figure 3: River ecological status of the area from Hotazel to De Aar. (Final EIA, 2009, Appendix C)

Fauna

A number of avifauna and mammal species were identified within the project area. It can be expected that small mammals including various rodent species, heptofaunal species and macro invertebrates utilise the borrow pit site. According to the specialist ecology study compiled as part of the EIA, the site is not considered to have high faunal activity or to have suitable habitat for protected invertebrate species.

The Socio-economic environment

The proposed borrow pit area is located in the Pixley Ka-Seme District Municipality in the Northern Cape. This district is predominantly rural in nature and is sparsely populated. Approximately 58 percent of the population are below the age of 30 years. According to Stats SA (2011), the majority of the population are classified as Coloured (62 percent), 27 percent are Black and 10 percent are White. The majority (78 percent) of the population speak Afrikaans as a first language.

The key economic sectors are agriculture, community services, trade/tourism, construction and private households. This District has the largest wool producing area in the country and has a long history of sheep farming. There is a growing trend towards game farming, resulting in further job losses in the agricultural sector.

More than 75 percent of the households have access to electricity and the level of water service provision is high with 97 percent of all households in the District having access to water services. In terms of housing, 83 percent live in formal housing, 11 percent in informal housing and only 2 percent in traditional housing.

The information above refers to the surrounding areas, however, it is important to note that the borrow pit will be located mainly within the Transnet rail reserve and on portions of the farms Honig Nest Kloof and Witkop Laagte. The immediate surroundings are agricultural in nature.

The Cultural/Heritage environment

The heritage impact assessment undertaken as part of the EIA did not identify any significant heritage resources within the development footprint area. However, it should be noted that the Heuningneskloof area is part of a South African War cultural landscape and potentially, artefacts related to this time period could be exposed during the borrow pit operations. Historical railway station buildings and rock art engraving sites occur within one to five kilometres of the borrow pit location. Figure 4 below indicates the closest site of heritage importance to the borrow pit. These will not be affected by the development of the proposed borrow pit however, it is possible that heritage objects may be uncovered during earthmoving activities. A heritage management plan is available (Appendix

F4) that provides guidance in terms of the steps that should be taken if heritage objects are uncovered during the borrow pit's operation.

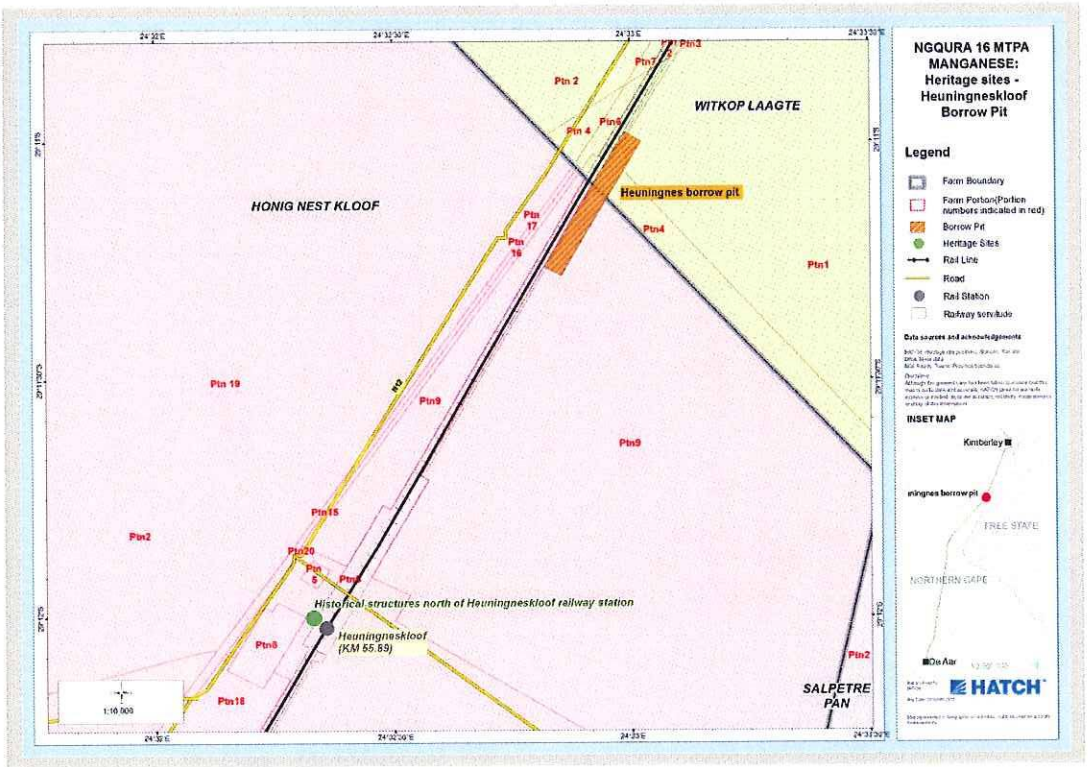


Figure 4: Heritage sites located in the vicinity of the Heuningneskloof borrow pit area

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

The area within which the existing Heuningneskloof borrow pit is situated is severely disturbed and is situated within the existing rail reserve. Extensions of this borrow pit onto portions of the farms Honig Nest Kloof and Witkop Laagte may sterilise potential agricultural land. There are no protected areas within a 5 km radius of the site. The vegetation in the borrow pit area is dominated by the Kimberley Thornveld which has an ecological status of least threatened (Figure 5).

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

A higher resolution of the map below has also been included in Appendix B.

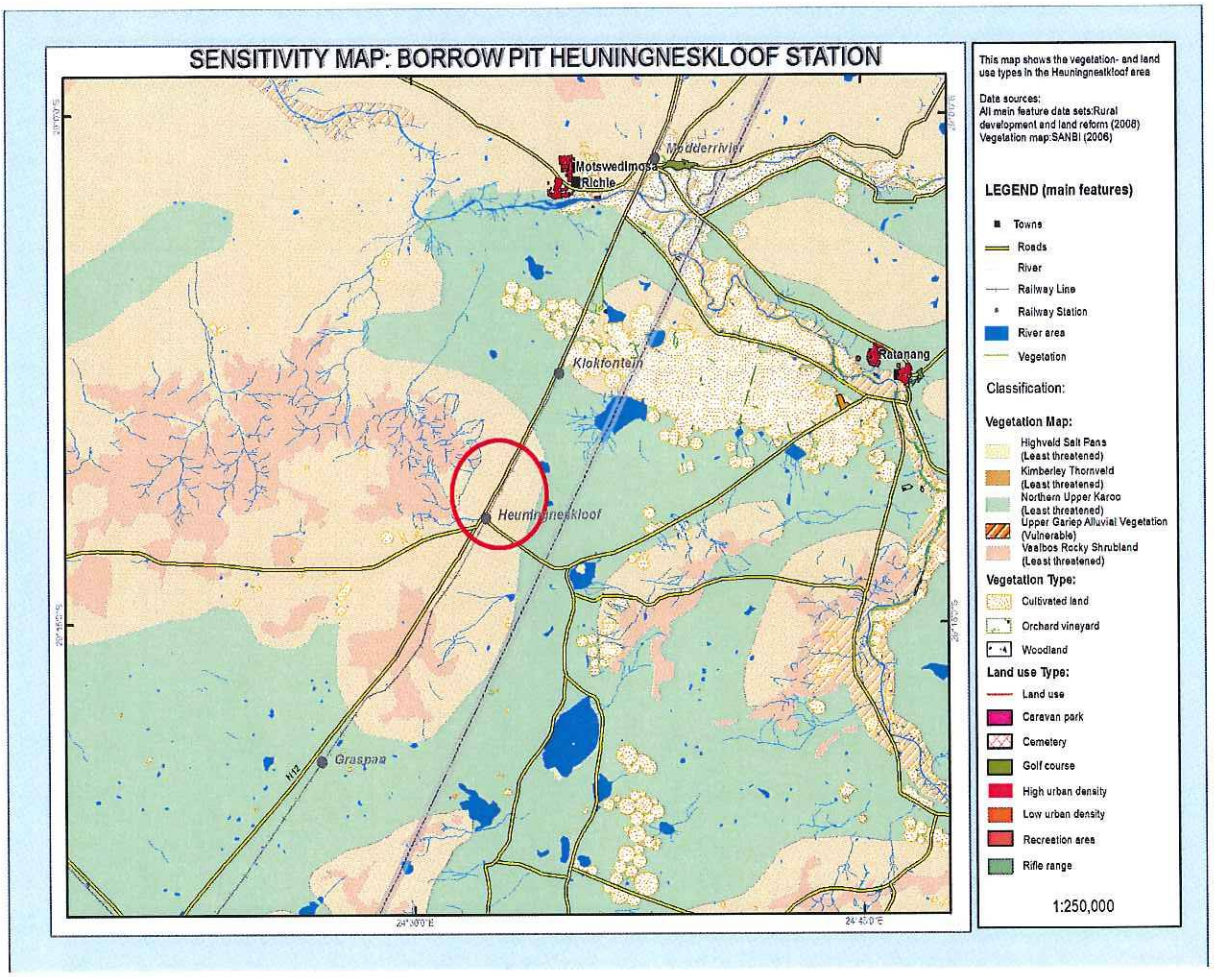


Figure 5: Sensitivity map of the area in and around the Heuningneskloof borrow pit.

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 EIA conducted in 2009 (Appendix C). Borrow pits in general have been discussed in this assessment and the public were made aware during the EIA process that the project would require several borrow pits along the length of the railway line. The general landscape was included in the EIA process and therefore communities and affected parties along the length of the rail line had the opportunity to provide input into the classification of the surrounding environment.

The existing Heuningneskloof borrow pit area is located mainly on Transnet land and is within the rail reserve, however, the extensions to this affect portions of the farms Honig Nest Kloof (Ptn 9) and Witkop Laagte (Ptn 1 and Ptn 4). Portion 9 of the Farm Honig Nest Kloof is owned by Mr Heinrich Mulke whereas Portions 1 and 4 of the farm Witkop Laagte are owned by two trusts namely the Palmietfontein Trust and the Wiaan van der Linde Familietrust respectively. The owners of these portions were contacted and details of these discussions together with the consent forms are included in Appendix H. Discussions between Transnet and the Landowner will take place regarding compensation for the required land but these discussions will be held as a separate event, outside of the requirements for this EMP submission.

A Stakeholder Engagement Plan (SEP) is currently being prepared for the Kimberley to De Aar section of the railway line. As part of the preparation of this plan, all indirectly affected landowners (See Figure 6 for farm portions adjacent to the borrow pit site) will also be consulted with regarding the excavation of the Heuningneskloof borrow pit.

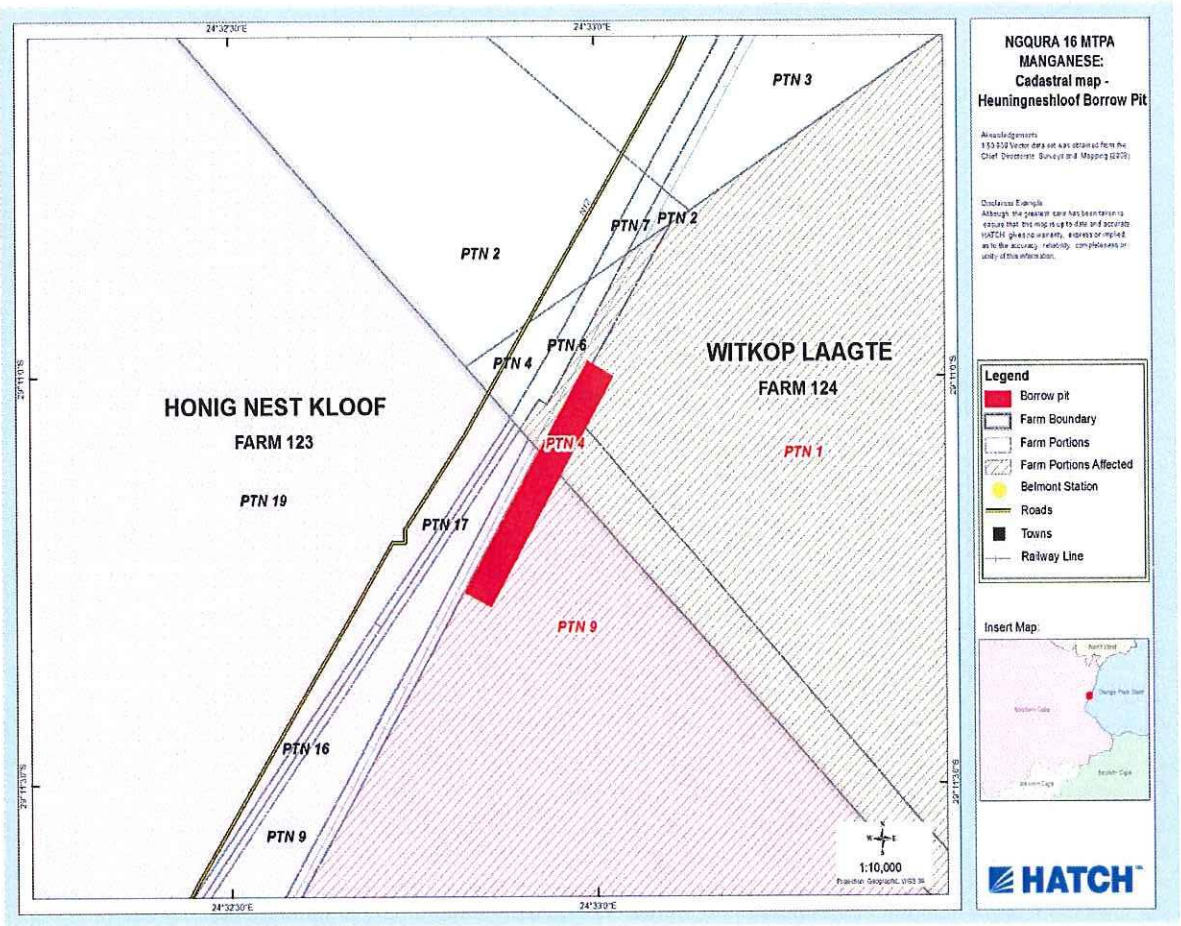


Figure 6: Farm portions adjacent to the Heuningneskloof borrow pit site.

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 borrow pit will be used to source weathered dolomite which is required for earthworks material for the formation subsidence repair of the lines between the Modderrivier and Heuningneskloof crossing stations. The main equipment that will be used to achieve this will be a 22 ton excavator, backactor and 10m^3 tipper.
The main activities involved in the re-commissioning and further excavation of the Heuningneskloof borrow pit include:

- Staking out of the borrow pit area prior to vegetation clearing following which, the vegetation would be cleared from the site (See Appendix B for the layout of the borrow pit 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 rail access road which runs adjacent to the railway line within the Transnet rail reserve.
- 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 4 ha (including the original borrow pit area of 1.5 ha)
- Maximum depth (in meters): 5m
- Anticipated volume (in cubic meters): 156 000 m^3

The site layout plan for the Heuningneskloof borrow pit has been included in Appendix B.

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 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 revegetated with suitable indigenous grass species.

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

It is not anticipated that the re-commissioning 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 normal borrow pit scenarios have been highlighted in the table below together with an explanation of why they are not applicable in this case.
In addition to this, the activities listed in the table below are listed in terms of GN R544 and GN R546 as per the new NEMA EIA Regulations updated in 2010. They are an update to the activities which were approved in terms of the previous NEMA Regulations (GN R386 and GN R387) in November 2009. A complete list of the approved activities can be found in the Environmental Authorisation (previously known as the Record of Decision) in Appendix D.

Potential Triggered Activity No. And description	Relevance
GN R544	
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. 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.
GN R546	
4. Construction of a road wider than 4 m with a reserve less than 13.5 m... (a) Northern Cape (ii) All areas outside urban areas	Not relevant. A gravel access road already exists. This will be used for transport of the borrow material from the pit to the section of the line where it is needed. No lengthening or widening of this road is anticipated.
10. 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 30 but not exceeding 80 cubic metres... (a) Northern Cape (ii) Outside all urban areas	Not relevant. 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 30 cubic meters. This activity will also not take place within or near any protected area or within 100 m of a watercourse.
13. The clearance of an area of 1 hectare or more of vegetation	Not relevant. The existing borrow pit area has been significantly disturbed

where 75% or more of the vegetation cover constitutes indigenous vegetation... (c) Northern Cape (ii) All areas outside urban areas	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.

2.2 Identification of potential impacts
(Refer to the guideline)

As mentioned in section 2.1.4 above, the re-commissioning and further development of the Heuningneskloof 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 construction, operation, decommissioning and closure.

The impacts associated with the rail and associated infrastructure for which the borrow pit is required, as well as the impacts of the borrow pits themselves (Section 7.14 of the Final Environmental Impact Report) were assessed through an Environmental Impact Asessment (EIA), conducted in terms of Chapter 5 of the National Environmental Management Act 107 of 1998 between 2008-2009 (See Appendix C).

2.2.1 Potential impacts per activity and listed activities.

The table below highlights the potential impacts which may occur per activity for each of the phases of the borrow pit's existence:

Phase	Activity	Impact	Impact Description
Construction	Clearing of vegetation	Loss of vegetation communities (negative impact)	Vegetation clearing within the borrow pit footprint area may lead to the loss of vegetation communities.
		Loss of faunal diversity and richness (negative impact).	Clearing of vegetation in the borrow pit may directly affect faunal habitat. Indirect loss of diversity and species richness is associated with habitat loss.

		Dust nuisance (negative impact).	The generation of dust through site clearance and earthworks could pose a nuisance to social receptors in proximity to the borrow pit site.
		Soil erosion (negative impact).	Soil erosion may occur as a result of vegetation clearing within the rail reserve where the borrow pit is located.
		Noise disturbance (negative impact).	Noise disturbance could result from the use of machinery during vegetation clearing.
		Removal of declared invader and weed species (Positive impact)	During vegetation clearing within the borrow pit area alien invasive and weed species will be removed.
		Contamination of soil and groundwater resources (negative impact)	Contamination of soil and groundwater due to potential major fuel spillage from construction machinery.
	Stockpiling of topsoil	Soil erosion (negative impact).	Soil erosion may occur if the topsoil stockpiles are not shaped and re-vegetated appropriately.
		Contamination of soil and groundwater resources (negative impact)	Contamination of soil and groundwater due to potential fuel spillage from machinery used to stockpile the topsoil.
		Dust nuisance (negative impact).	The generation of dust During stockpiling could pose a nuisance to social receptors in proximity to the borrow pit site.
		Noise disturbance (negative impact).	Noise disturbance could result from the use of machinery during stockpiling.
Operation	**Excavation of borrow**	Dust nuisance (negative	The generation of dust through the excavation of the

	material	impact).	borrow material and transport on the gravel road could pose a nuisance to social receptors in proximity to the borrow pit site.
		Noise disturbance (negative impact).	Noise disturbance could result from the use of machinery during excavation.
		Contamination of soil and groundwater resources (negative impact)	Contamination of soil and groundwater due to potential fuel spillage from excavation machinery and haul vehicles.
Decommissioning and closure	Rehabilitation	Spread or colonisation of invasive alien species and weed taxa (negative impact)	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 (negative impact).	The generation of dust through spreading of the topsoil during rehabilitation.
		Contamination of soil and groundwater resources (negative impact)	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
Incremental noise from a number of separate developments	Both the activities taking place on the railway line between Kimberley and De Aar (re-electrification of the line) and the excavation of the borrow pit 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 EIA did not identify any significant cultural features at the borrow pit location however, the potential impacts 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 assessment has been included in Appendix E2.

Phase	Activity	Impact	Impact Description
Construction	Clearing of vegetation	Loss of or disturbance to archaeological, palaeontological or cultural sites (negative impact).	Construction activities may result in the disturbance, damage or destruction of sites of medium to high cultural significance (as defined in the National Heritage Resource Act 25 of 1999) or sites of palaeontological importance. In addition to this, the Kimberley to De Aar section of the line is part of a cultural landscape. Any type of development (including borrow pits) can have an impact on the cultural sense of place.

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

This is not applicable as the borrow pit is situated more than 150 meters from the nearest built structure (fence, house). The closest sensitive receptor is approximately 50 km away.

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 Environmental Impact Assessment for the Proposed Upgrade of the Transnet Railway Line between Hotazel and the Port of Ngqura in July 2009 (See Appendix C 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 EIA process.

The existing Heuningneskloof borrow pit area is located mainly on Transnet land and is within the rail reserve, however, the extensions to this affect portions of the farms Honig Nest Kloof (Ptn 9) and Witkop Laagte (Ptn 1 and Ptn 4). Portion 9 of the Farm Honig Nest Kloof is owned by Mr Heinrich Mulke whereas Portions 1 and 4 of the farm Witkop Laagte are owned by two trusts namely the Palmietfontein Trust and the Wiaan van der Linde Familietrust respectively. The owners of these portions were contacted and details of these discussions together with the consent forms are included in Appendix C.

2.2.6 Confirmation of specialist report appended.

(Refer to guideline)

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

- Air Quality Report: Appendix E1
- Phase I Heritage Impact Assessment– Kimberley to De Aar: Appendix E2
- Social Impact Assessment Report: Appendix E3
- Terrestrial Ecology Report: Appendix E4

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 Final Impact Assessment Report (Appendix C) and is shown below:

E4 IMPACT ASSESSMENT METHODOLOGY AND POTENTIAL IMPACTS

The purpose of impact assessment and mitigation is to identify and evaluate the significance of potential positive and negative impacts on identified receptors and resources according to defined assessment criteria; to develop and describe measures that will be taken to avoid, minimise, mitigate/ compensate for any potential adverse effects; and to seek opportunities to enhance potential benefits; and to report the significance of the residual impacts that remain following mitigation/compensation and/ or optimisation/ enhancement.

An impact is essentially any change (whether positive or negative) to a resource or receptor brought about by the presence of the project component or by the execution of a project related activity. There are a number of ways that impacts may be described and quantified.

Broadly, impacts can be described as positive or negative, direct, indirect or cumulative. The impacts are then assessed in terms of their significance. There is no statutory definition of '*significance*' and its determination is, therefore, somewhat subjective. However, it is generally accepted that significance is a function of the **magnitude** of the impact and the **likelihood** of the impact occurring.

The following matrix (*Table E4.1*) can be used to determine the impact significance.

Table E4.1 *Example of significance rating matrix*

SIGNIFICANCE RATING					
	LIKELIHOOD	**Negligible**	**Low**	**Medium**	**High**
MAGNITUDE	**Negligible**	**Negligible**	**Negligible**	**Minor**	**Minor**
	Low	**Negligible**	**Negligible**	**Minor**	**Minor**
	Medium	**Negligible**	**Minor**	**Moderate**	**Moderate**
	High	**Minor**	**Moderate**	**Major**	**Major**

In *Table E4.2*, the various definitions for significance of an impact are given.

Table E4.2 *Significance definitions*

Impact significance	Definition
Major impact	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. A goal of the EIA process is to get to a position where the Project does not have any major residual negative impacts (especially not those endured into the long term or extending over a large area) and major positive impacts are enhanced as far as possible. For some aspects, however, there may be major residual negative impacts after all practicable mitigation options have been

	exhausted (i.e. ALARP has been applied). (e.g. visual impact of a development). It is then the function of regulators and stakeholders to weigh such negative impacts against the positive impacts in coming to a decision on the Project
Moderate impact	An impact of moderate significance is one within accepted limits and standards. The emphasis for moderate impacts is on demonstrating that the negative impact has been reduced to a level that is as low, or positive impact enhanced as far as reasonably practicable (ALARP). This does not necessarily mean that 'moderate' negative impacts have to be reduced to 'minor' impacts, but that moderate impacts are being managed effectively and efficiently. In the same way, moderate positive impacts may not be able to be enhanced to have major positive impact
Minor impact	An impact of minor significance is one where an effect will be experienced, but the impact magnitude is small (with and without mitigation) and, for negative impacts, well within accepted standards, and/or the receptor is of low sensitivity/value.
Negligible impact	Negligible impact (or insignificant impact) is where a resource or receptor (including people) will not be affected in any way by a particular activity, or the predicted effect is deemed to be 'negligible' or 'imperceptible' or is indistinguishable from natural background variations.

Table 4.3 ***Colour scale for significance ratings***

Negative ratings	Positive ratings
Negligible	Negligible
Minor	Minor
Moderate	Moderate
Major	Major

For a more in-depth description of the impact assessment methodology see *Chapter 3* of the EIR

E4.1.1 *Potential Construction Phase Impacts*

Table E4.3 summarises all the potential biophysical and socio-economic negative and positive impacts assessed for the construction phase of the Project. For a more detailed description of the impacts and relevant mitigation measures see *Chapter 7* of the EIR.

Table E4.4 ***Summary of potential impacts associated with the construction phase (pre – mitigation)***

Project component	Impact significance	Impact description
Loops	1 major negative impact	Spread/colonisation of invasive alien species and weed taxa
	5 moderate negative impacts	Loss of vegetation communities. Loss of faunal diversity and richness. Loss of protected invertebrate species. Disturbance to riparian zone.

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	**Loss of vegetation communities (negative impact):** Vegetation clearing within the borrow pit area may lead to the loss of vegetation communities.	Minor	The area to be impacted on has a small footprint and is already severely 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.
		Loss of faunal diversity and richness (negative impact): Clearing of vegetation in the borrow pit may directly affect faunal habitat. Indirect loss of diversity and species richness is associated with habitat loss.	Minor	The area to be impacted on has a small footprint and is already severely disturbed. Vegetation communities 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. As a result of this, the potential habitat which this vegetation could provide would be minimal. Therefore clearing

				of this land would have a minor impact on habitat loss.
		Dust nuisance (negative impact): The generation of dust through site clearance and earthworks could pose a nuisance to social receptors in proximity to the borrow pit site.	Moderate	Due to the dry climate in the Northern Cape, substantial dust could be generated during the excavation activities. This dust could be blown onto the adjacent properties or irritate receptors thereby deeming this a moderate impact. However, the nearest social receptor to the borrow pit is approximately 50 km away.
		Soil erosion (negative impact): Soil erosion may occur as a result of vegetation clearing within the rail reserve where the borrow pit is located.	Minor	The area to be cleared has a minor footprint and is already severely degraded. Additional clearing is unlikely to cause significant soil erosion as all soil and material which will be cleared will be stockpiled correctly.
		Noise disturbance (negative	Moderate	Due to the topography of the land

		impact): Noise disturbance could result from the use of machinery during vegetation clearing.		(generally flat), the noise generated by the excavation machinery could carry and impact on the nearest receptor which is approximately 50 km away.
		Removal of Declared invader and weed species (Positive impact): During vegetation clearing within the borrow pit area alien invasive and weed species will be removed.	Moderate	This is a moderate positive impact because any invader and weed species which have not been cleared as part of Transnet's maintenance of the railway servitude will be removed from the land during the construction phase of the borrow pit's operation.
		Loss of or disturbance to archaeological, paleontological or cultural sites (negative impact): Construction activities may result in the disturbance, damage or destruction of sites of medium to high cultural significance (as defined in the NHRA) or sites of paleontological importance. In addition to this, the Kimberley to De Aar section of the line is part of a cultural landscape. Any type	Moderate	Heuningneskloof is part of a South African War cultural landscape and potentially, artefacts related to this time period could be exposed during the borrow pit operations.

		of development (including borrow pits) can have an impact on the cultural sense of place.		
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from construction machinery.	Moderate	Fuel spillage during refuelling and oil spills from poorly maintained machinery can seep into the newly exposed 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.
	Stockpiling of topsoil	**Soil erosion (negative impact):** Soil erosion may occur if the topsoil stockpiles are not shaped and re-vegetated appropriately.	Moderate	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.
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential	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 is can be managed effectively

		fuel spillage from machinery used to stockpile the topsoil.		and efficiently to minimise or prevent the impact on the contamination of soil and groundwater.
		Dust nuisance (negative impact): The generation of dust During stockpiling could pose a nuisance to social receptors in proximity to the borrow pit site.	Moderate	Due to the dry climate in the Northern Cape, substantial dust could be generated during the excavation activities. This dust could be blown onto the adjacent properties or irritate receptors thereby deeming this a moderate impact. However, the nearest social receptor to the borrow pit is approximately 50 km away.
		Noise disturbance (negative impact): Noise disturbance could result from the use of machinery during stockpiling.	Moderate	Due to the topography of the land (generally flat), the noise generated by the excavation machinery could carry and impact on the nearest receptor which is approximately 50 km away.
Operation	**Excavation of borrow material**	**Dust nuisance (negative impact):** The generation of dust through the excavation of the borrow material and transport on the gravel road could pose a nuisance to social receptors in proximity to the borrow pit site.	Moderate	Due to the dry climate in the Northern Cape, substantial dust could be generated during the excavation activities. This dust could be blown onto the adjacent properties or irritate receptors thereby deeming this a moderate impact. However, the nearest social

				receptor to the borrow pit is approximately 50 km away.
		Noise disturbance (negative impact): Noise disturbance could result from the use of machinery during excavation.	Moderate	Due to the topography of the land (generally flat), the noise generated by the excavation machinery could carry and impact on the nearest receptor which is approximately 50 km away.
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from excavation machinery and haul vehicles.	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 is can be managed effectively and efficiently to minimise or prevent the impact on the contamination of soil and groundwater.
Decommissioning and closure	**Rehabilitation**	Spread or colonisation of invasive alien species and weed taxa (negative impact): 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.
		Dust nuisance (negative	Moderate	Due to the dry climate in the

		impact): The generation of dust through spreading of the topsoil during rehabilitation.		Northern Cape, substantial dust could be generated during the rehabilitation activities. This dust could be blown onto the adjacent properties or irritate receptors thereby deeming this a moderate impact. However, the nearest social receptor to the borrow pit is approximately 50 km away.
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from machinery used for rehabilitation.	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 is can be managed effectively and efficiently to minimise or prevent the impact on the contamination of soil and groundwater.

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
Incremental noise from a number of separate developments	Both the activities taking place on the railway line between Kimberley and De Aar (re-electrification of the line) and the excavation of the borrow pit will generate noise which together would result in an increased noise impact.	Moderate
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.	Moderate

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 **Final EIA** (Appendix C), **Transnet's Standard Environmental Specification** (Appendix F1) and **Transnet's Construction Environmental Management Plan** (Appendix F2) as well as the **Heritage Management Plan** (Appendix F4):

Phase	Activities	Impact	Mitigation/Management
Construction	Clearing of vegetation Stockpiling of topsoil	**Loss of vegetation communities (negative impact):** Vegetation clearing within the borrow pit area may lead to the loss of vegetation communities.	- The footprint of the vegetation removal will be limited to that absolutely necessary for the operation - The available topsoil will be appropriately stockpiled (in mounds not exceeding 2m in height) and reused in the rehabilitation process to facilitate regrowth of the vegetation after the operation is complete.
		Loss of faunal diversity and richness (negative impact): Clearing of vegetation in the borrow pit may directly affect faunal habitat. Indirect loss of diversity and species richness is associated with habitat	- 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.

		loss.	
		Dust nuisance (negative impact): The generation of dust through site clearance and earthworks could pose a nuisance to social receptors in proximity to the borrow pit site.	- The movement of vehicles and machinery will be restricted to the authorised access roads and vehicle's will be limited to travel at speeds not exceeding 20 km/h - Dust suppression with soil stabilisers and additional measures will be used if dust becomes a nuisance. - Construction and operations personnel will be trained to report excessive dust conditions so that these can be managed quickly and effectively.
		Soil erosion (negative impact): Soil erosion may occur as a result of vegetation clearing within	- The footprint of the vegetation removal will be limited to that absolutely necessary for the operation. Rehabilitation will

		the rail reserve where the borrow pit is located.	commence soonest after the completion of the activities.
		Noise disturbance (negative impact): Noise disturbance could result from the use of machinery during vegetation clearing.	– Operations will be limited to daylight hours – 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 bafflers) is up to date prior to accessing the site.
		Removal of declared invader and weed species (Positive impact): During vegetation clearing within the borrow pit area alien invasive and weed species will be removed.	– Monitoring of the vegetation growth in the borrow pit area will be undertaken by the EO. This will allow for identification of invader and weed species growth and prompt an early reaction to this.
		Loss of or disturbance to archaeological,	– If an artefact on site is uncovered during the operations, all work will be

		paleontological or cultural sites (negative impact): Construction activities may result in the disturbance, damage or destruction of sites of medium to high cultural significance (as defined in the NHRA) or sites of paleontological importance.	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 F4).
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from construction machinery.	- 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 - Servicing of vehicles will take place off-site - Dip trays will be placed whenever vehicles are refuelled, serviced and at night when vehicles are not in use. - 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 to using is up to date prior to accessing the site.

			- Any spillage will be immediately attended to, reported and recorded. - A spill response kit will be available on site at all times and contractors employees will be trained in the use of the kit.
Operation	**Excavation of borrow material**	**Dust nuisance (negative impact):** The generation of dust through the excavation of the borrow material and transport on the gravel road could pose a nuisance to social receptors in proximity to the borrow pit site.	- The movement of vehicles and machinery will be restricted to the authorised access roads and vehicle's will be limited to travel at speeds not exceeding 20 km/h - Dust suppression with soil stabilisers and additional measures will be used if dust becomes a nuisance. - Construction and operations personnel will be trained to report excessive dust conditions so that these can be managed quickly and effectively.
		Noise disturbance (negative impact): Noise disturbance could result from the use of machinery during excavation.	- Operations will be limited to daylight hours - 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.
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from excavation machinery and haul vehicles.	– Limited quantities of fuel and oils will be stored on site. Storage will be done within contained areas to prevent soil and water contamination. All fuelling facilities will be placed in bunded areas. – Servicing of vehicles will take place off-site where possible – Dip trays will be placed whenever vehicles are refuelled, serviced and at night when vehicles are not in use. – 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 to using is up to date prior to accessing the site. – Any spillage will be immediately attended to, reported and recorded. – A spill response kit will be available on site at all times and contractors employees will be trained in the use of

			the kit.
Decommissioning and closure	Rehabilitation	**Spread or colonisation of invasive alien species and weed taxa (negative impact):** Patches of disturbed soil can be vulnerable to colonisation by weeds which can prohibit natural succession of the local indigenous vegetation during rehabilitation.	- 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. - Invaders will be removed at least on a monthly basis.
		Dust nuisance (negative impact): The generation of dust through spreading of the topsoil during rehabilitation.	- Dust suppression with soil stabilisers and additional measures to control dust. - Construction and operations personnel will be trained to report excessive dust conditions so that these can be managed quickly and effectively.
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due	- 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 to using is up to date

		to potential fuel spillage from machinery used for rehabilitation.	prior to accessing the site. - Any spillage will be immediately attended to, reported and recorded. - A spill response kit will be available on site at all times and contractors employees will be trained in the use of the kit.

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	**Loss of vegetation communities (negative impact):** Vegetation clearing within the borrow pit area may lead to the loss of vegetation communities.	Negligible
		Loss of faunal diversity and richness (negative impact): Clearing of vegetation in the borrow pit may directly affect faunal habitat. Indirect loss of diversity and species richness is associated with habitat loss.	Minor
		Dust nuisance (negative impact): The generation of dust through site clearance and earthworks could pose a nuisance to social receptors in proximity to the borrow pit site.	Negligible
		Soil erosion (negative impact): Soil erosion may occur as a result of vegetation clearing within the rail reserve where the borrow pit is located.	Negligible
		Noise disturbance (negative impact): Noise disturbance could result from the use of machinery during vegetation clearing.	Minor
		Removal of declared invader and weed species (Positive impact): During vegetation clearing	Negligible

		within the borrow pit area alien invasive and weed species will be removed.	
		Loss of or disturbance to archaeological, paleontological or cultural sites (negative impact): Construction activities may result in the disturbance, damage or destruction of sites of medium to high cultural significance (as defined in the NHRA) or sites of paleontological importance. In addition to this, the Kimberley to De Aar section of the line is part of a cultural landscape. Any type of development (including borrow pits) can have an impact on the cultural sense of place.	Minor
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from construction machinery.	Minor
	Stockpiling of topsoil	**Soil erosion (negative impact):** Soil erosion may occur if the topsoil stockpiles are not shaped and re-vegetated appropriately.	Minor
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from machinery used to stockpile the topsoil.	Minor
		Dust nuisance (negative	Minor

		impact): The generation of dust During stockpiling could pose a nuisance to social receptors in proximity to the borrow pit site.	
		Noise disturbance (negative impact): Noise disturbance could result from the use of machinery during stockpiling.	Minor
Operation	**Excavation of borrow material**	**Dust nuisance (negative impact):** The generation of dust through the excavation of the borrow material and transport on the gravel road could pose a nuisance to social receptors in proximity to the borrow pit site.	Minor
		Noise disturbance (negative impact): Noise disturbance could result from the use of machinery during excavation.	Minor
		Contamination of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from excavation machinery and haul vehicles.	Minor
Decommissioning and closure	**Rehabilitation**	Spread or colonisation of invasive alien species and weed taxa (negative impact): Patches of disturbed soil can be vulnerable to colonisation by weeds which can prohibit natural succession of the local indigenous vegetation during rehabilitation.	Minor
		Dust nuisance (negative impact): The generation of dust through spreading of the topsoil during rehabilitation.	Minor
		Contamination	Minor

		of soil and groundwater resources (negative impact): Contamination of soil and groundwater due to potential fuel spillage from machinery used for rehabilitation.	

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 below and has been included in Appendix B.

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 to the pit
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 the Final EIA (Appendix C), Transnet's Standard Environmental Specification (Appendix F1) and Transnet's Construction Environmental Management Plan (Appendix F2).

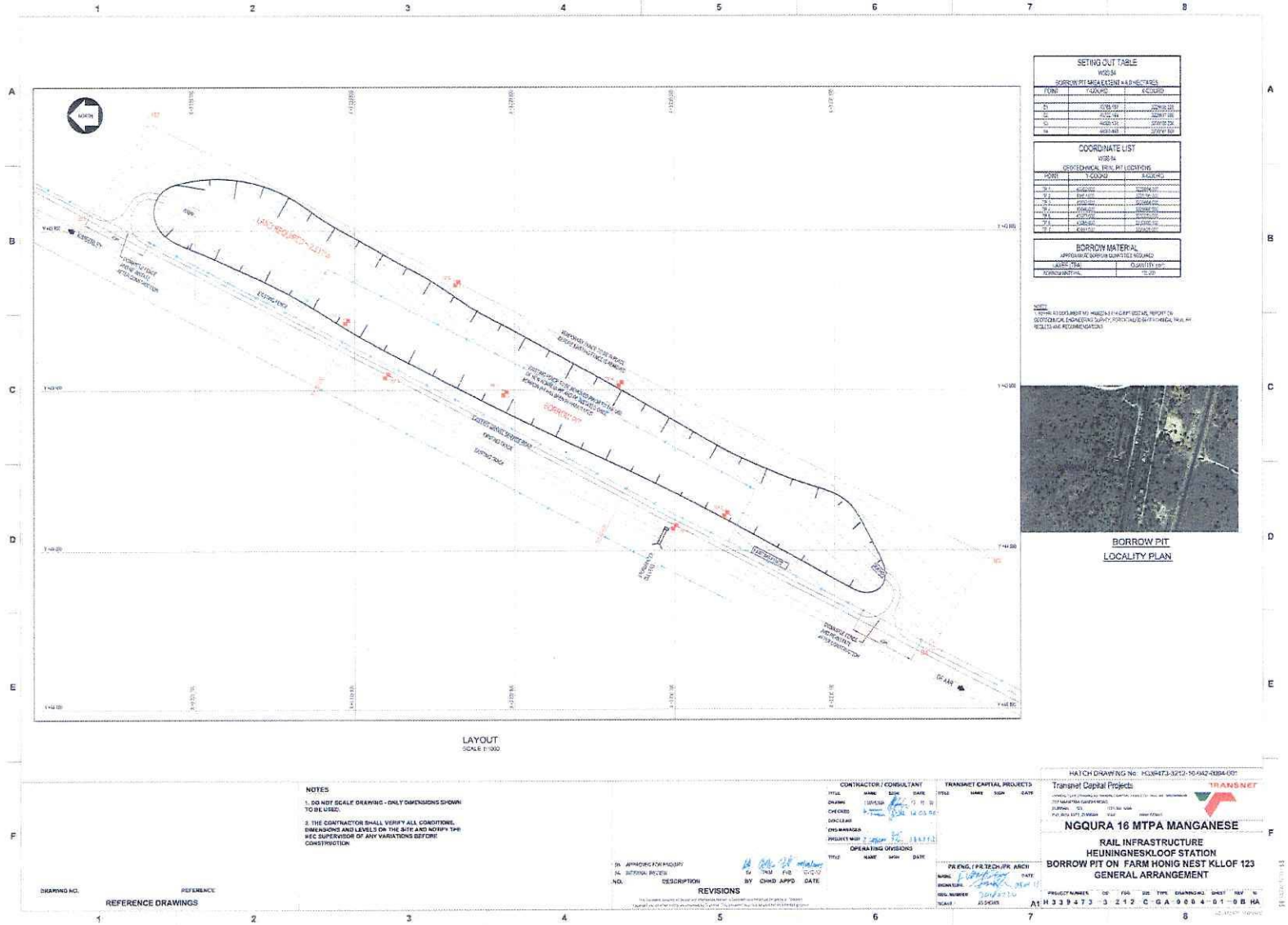


Figure 7: Heuningneskloof borrow pit layout

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 regulation54 (1) in respect of each of the phases referred to).

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: HEUNINGNESKLOOF BORROW PIT (TRANSNET LIMITED)

Location: Heuningneskloof, Northern Cape
Date: 05/03/2013

Risk Class: C
Area Sensitivity: Med

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication Factor	Weighting Factor 1	Amount (rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m^3		6.82	0.00	0.00	R -
2(A)	Demolition of steel buildings and structures	m^2		95.00	0.00	0.00	R -
2(B)	Demolition of reinforced concrete buildings and structures	m^2		140.00	0.00	0.00	R -
3	Rehabilitation of access roads	m^2	300	17.00	1.00	1.10	R 5 610.00
4(A)	Demolition and rehabilitation of electrified railway lines	m		165.00	0.00	0.00	R -
4(B)	Demolition and rehabilitation of non-electrified railway lines	m		90.00	0.00	0.00	R -
5	Demolition of housing and/or administration facilities	m^2		190.00	0.00	0.00	R -
6	Opencast rehabilitation including final voids and ramps	ha	4.0	96 700.00	0.52	1.10	R 221 249.60
7	Sealing of shafts, adits and inclines	m^3		51.00	0.00	0.00	R -
8(A)	Rehabilitation of overburden and spoils	ha		66 400.00	0.00	0.00	R -
8(B)	Rehabilitation of processing waste deposits and evaporation ponds (basic salt-producing waste)	ha		82 700.00	0.00	0.00	R -
8(C)	Rehabilitation of processing waste deposits and evaporation ponds (acidic, metal-rich waste)	ha		240 200.00	0.00	0.00	R -
9	Rehabilitation of subsided areas	ha		55 600.00	0.00	0.00	R -
10	General surface rehabilitation	ha	4.0	52 600.00	1.00	1.10	R 231 440.00
11	River diversions	ha		52 600.00	0.00	0.00	R -
12	Fencing	m		60.00	0.00	0.00	R -
13	Water management	ha		20 000.00	0.00	0.00	R -
14	2 to 3 years of maintenance and aftercare	ha	4.0	7 000.00	1.00	1.10	R 30 800.00
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 489 099.60
						Weighting Factor 2	1.05
						Subtotal 1	R 513 554.58
1	Preliminary and General	6.0% if Subtotal 1 > 100 000 000 12.0% if Subtotal 1 < 100 000 000					R 61 626.55
2	Contingency	10.0% of Subtotal 1					R 51 355.46
						SubTotal 2	R 626 536.59
						(Subtotal 1 plus sum of management and contingency)	
						Add Vat (14%)	R 87 715.12
						GRAND TOTAL	R 714 251.71
						(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 in Appendix I.

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 (negative impact)	CEMP (Appendix F2) and SES (Appendix F1) and HMP (Appendix F4)
	Loss of faunal diversity and richness (negative impact)	
	Dust nuisance (negative impact)	
	Soil erosion (negative impact)	
	Noise disturbance (negative impact)	
	Removal of declared invader and weed species (Positive impact)	
	Loss of or disturbance to archaeological, paleontological or cultural sites (negative impact)	
	Contamination of soil and groundwater resources (negative impact)	
Decommissioning and closure	Spread or colonisation of invasive alien species and	Vegetation monitoring plan as part of the

	weed taxa (negative impact): Patches of disturbed soil can be vulnerable to colonisation by weeds which can prohibit natural succession of the local indigenous vegetation during rehabilitation.	rehabilitation plan and SES (Appendix F1)
	Dust nuisance (negative impact)	SES (Appendix F1)
	Contamination of soil and groundwater resources (negative impact)	SES (Appendix F1)

5.2 Functional requirements for monitoring programmes.

Where relevant either a TCP or the Contractor's Environmental Officer (EO) will be required to implement the monitoring programmes for the construction, operation, decommissioning 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 F2) 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 Officer	Ensures the contractors compliance with the HMP, 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:

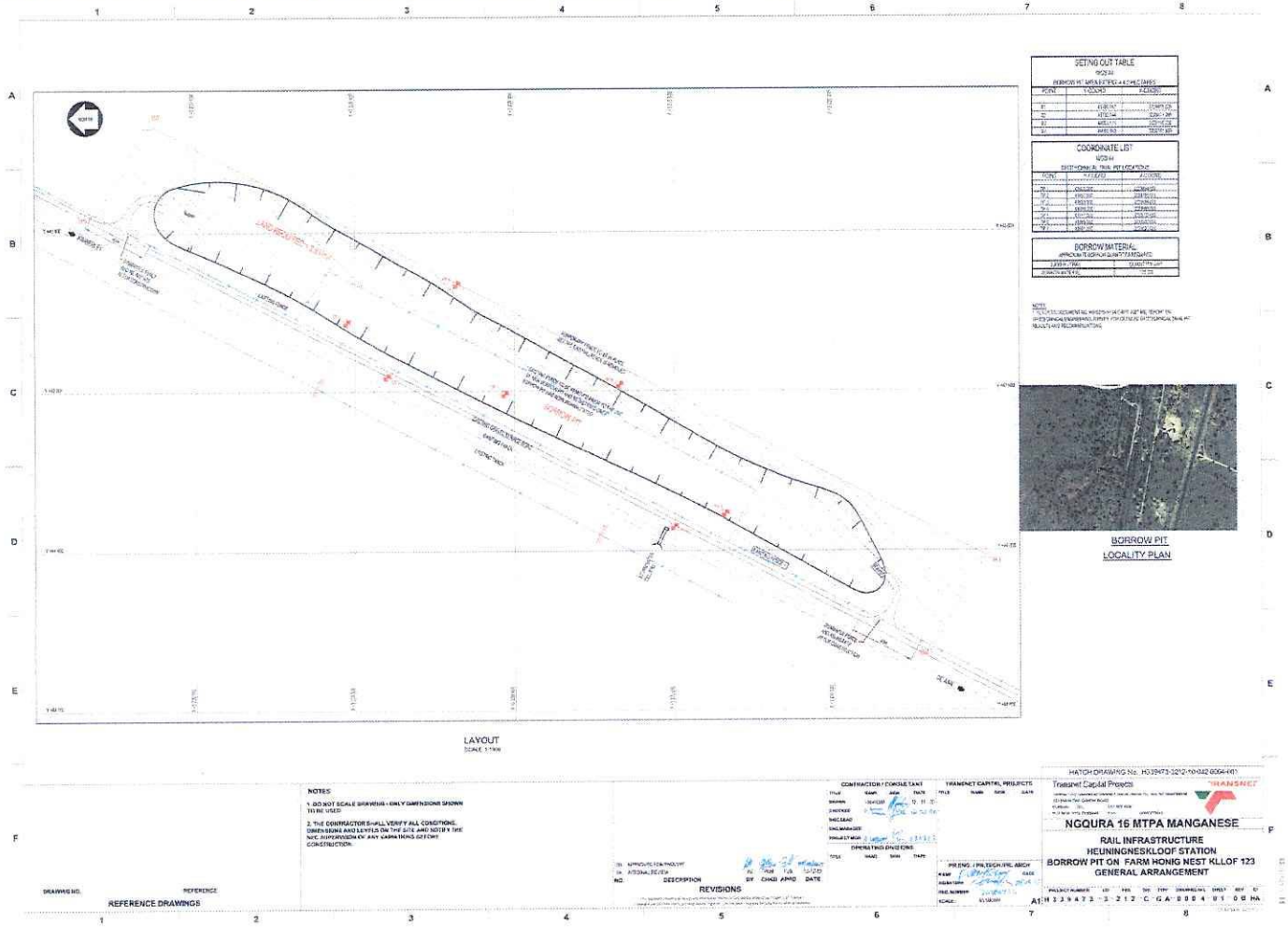
Construction: 12 months from the start of construction.
Vegetation monitoring (Post closure): Three years post closure

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. This is also included in Appendix B.



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 to the pit
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 Kimberley Thornveld 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).

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 Environmental Impact Assessment for the Proposed Upgrade of the Transnet Railway Line between Hotazel and the Port of Ngqura in July 2009 (See Appendix C 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 EIA process. The general landscape was included in the EIA 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 existing Heuningneskloof borrow pit area is located mainly on Transnet land and is within the rail reserve, however, the extensions to this affect portions of the farms Honig Nest Kloof (Ptn 9) and Witkop Laagte (Ptn 1 and Ptn 4). Portion 9 of the Farm Honig Nest Kloof is owned by Mr Heinrich Mulke whereas Portions 1 and 4 of the farm Witkop Laagte are owned by two trusts namely the Palmietfontein Trust and the Wiaan van der Linde Familietrust respectively. The owners of these portions were contacted and details of these discussions together with the consent forms are included in Appendix C.

In addition to this, A Stakeholder Engagement Plan (SEP) is currently being prepared for the Kimberley to De Aar section of the railway line. As part of the preparation of this plan, all indirectly affected landowners will be consulted with regarding the excavation of the Heuningneskloof borrow pit.

The CEMP (Appendix F2) was included in the EIA. The CEMP makes reference to closure and site cleanup.

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.

Heuningneskloof is characterised by old railway housing, low density scattered informal housing and farming areas. The landscape south of Heuningneskloof is mostly farm land with scattered lodges or guest houses. No community resides on the borrow pit land itself and the closest structure is located 50 km away. Informal settlers reside in Transnet housing but these houses are positioned closer to the station.

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

The community is not the landowner. The existing borrow pit together with the proposed expansion is located mainly on Transnet land and is within the rail reserve, however, the extensions to this affect portions of the farms Honig Nest Kloof (Ptn 9) and Witkop Laagte (Ptn 1 and Ptn 4). Portion 9 of the Farm Honig Nest Kloof is owned by Mr Heinrich Mulke whereas Portions 1 and 4 of the farm Witkop Laagte are owned by two trusts namely the Palmietfontein Trust and the Wiaan van der Linde Familietrust respectively.

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

The Department of Land Affairs were not consulted with as part of the 2009 EIA as there were no new borrow pit areas being explored. The Heuningneskloof borrow pit is an existing borrow pit which needs to be re commissioned.

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)

The borrow pit will be excavated on land owned by various parties namely, Transnet, Heinrich Mulke, the Palmietfontein Trust and the Wiaan van der Linde Familietrust. The title deeds are attached in Appendix G.

7.1.7 List the lawful occupiers of the land concerned

Honig Nest Kloof 123 - Mr Heinrich Mulke

Witkop Laagte 124 (Ptn 1) - Mr Charl Wilke

Witkop Laagte 124 (Ptn 4) - Mr Wiaan van der Linde

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 it is not anticipated that the borrow bit operations will have an effect on the socio-economic conditions of the people residing on adjacent and non-adjacent properties. Trading stores and communities are positioned on the opposite site of the railway reserve closer to the railway station area and are therefore unlikely to be impacted upon.

7.1.9 Name the Local Municipality

Siyancuma 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:

- Department of Environmental Affairs
- Department of Mineral Resources
- Department of Agriculture
- South African Heritage Resources Agency
- Ngwao Boswa Kapa Bokoni Heritage Northern Cape (this was done recently and not as part of the 2009 process)
- The South African National Roads Agency
- Pixley Ka Seme District Municipality
- Siyancuma 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 the Final EIA Report in Appendix C.

The owners of the portions of land affected by the Heuningneskloof borrow pit development were contacted and details of these discussions together with the consent forms are included in Appendix H.

7.2 The details of the engagement process.

A separate public participation process was not held for the borrow pits. These were incorporated into the public participation process for the project as a whole. A Stakeholder Engagement Plan (SEP) is currently being prepared for the Kimberley to De Aar section of the railway line. As part of the preparation of this plan, all indirectly affected landowners will be further consulted with regarding the borrow pit. In addition to this, landowners of the farm portions adjacent to the area on which the borrow pit is located, will be contacted and informed about the proposed activities in February 2013 (See Figure 6 for the farm portions adjacent to the borrow pit site).

The information below is an indication of what took place for the project as a whole in 2009.

7.2.1Description 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 EIA process as well as the various phases within this process
- A list of the possible issues which have been identified

The following activities were conducted as part of the public participation process to ensure that information regarding the proposed project was communicated to as many parties as possible:

- A Background Information Document (BID) was distributed to stakeholders in English, Afrikaans, isiXhosa and Setswana throughout the EIA process. The BID also invited potential stakeholders to register their interest in the Project.
- The Project was advertised in seven local newspapers and two regional newspapers between the end of July and September 2008. Advertisements were placed in English, Afrikaans and isiXhosa. These adverts informed the public of the Project and requested them to register as Interested and Affected Parties (I&APs) if they would like to participate in the EIA process. Respondents to the advert were included on the project database. The adverts also invited stakeholders to attend various public meetings.
- Site notices were placed at strategic locations (such as municipal offices, libraries and post offices) in 16 towns within or in proximity to the project area. The notices provided information about the Project, the contact details of the consultant and details of the public meetings.

- Eight public meetings were held at various locations within the project area. Each public meeting started with an open house exhibit for the attendees to view various posters and to interact with the project team on a one-on-one basis, followed by a formal public meeting including a more detailed presentation on the Project and then a question and answer session The meetings provided stakeholders with an opportunity to raise any issues or concerns regarding the Project proposal.

7.2.2List of which parties indentified in 7.1 above that were in fact consulted, and which were not consulted.

The parties consulted with included:

- Department of Environmental Affairs
- Department of Agriculture
- South African Heritage Resources Agency
- Ngwao Boswa Kapa Bokoni Heritage Northern Cape (this was done recently and not as part of the 2009 process)
- The South African National Roads Agency
- Pixley Ka Seme District Municipality
- Siyancuma Local Municipality

The parties not consulted with include:

- Department of Mineral Resources
- Department of Land Affairs

Consultation with the DMR was not relevant at the time when the Final EIA was being compiled due to the project not being mining related. Borrow pit permits were also not being applied for at the time. It is for this reason that the DMR have been contacted now and consulted with regarding the Heuningneskloof borrow pit (See Appendix A for communication with the DMR).

The Department of Land Affairs were not consulted with as part of the 2009 EIA as there were no new borrow pit areas being explored. The

Heuningneskloof borrow pit area is predominantly an existing borrow pit which needs to be re commissioned.

7.2.3List 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 Final EIA in Appendix C. 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:

- The existing local communities are poor, therefore the project must benefit the local communities.
- Unemployment levels are high in the Northern Cape therefore the project must create employment opportunities.
- Skills levels in the province are low therefore Transnet must invest in capacity building.
- Manganese dust and other dust will have an impact on human health.
- Increased rail traffic may lead to increased accidents.

Views on the current biophysical environment:

- The project may put strain on the already limited water resources in the area
- Endangered and indigenous plants may be lost during the clearing of vegetation.
- Increased train traffic may impact on birds breeding closer to the railway line.

Views on the cultural environment:

- There are a few heritage resources within the project area (See Figure 4 for the closest receptor). Permits are required for the alteration of structures older than 60 years and archaeological sites older than 100 years.

7.2.4List 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 Final EIA in Appendix C. Relevant views pertained to how the existing environment will be impacted on by the borrow pits include:

Views on the current socio economic environment:

- Generation of dust from the access roads will have an impact on human health.
- Transnet should be careful when buying privately owned land because there are some land restitution issues that need resolving in the province.

Views on the current biophysical environment:

- Endangered and indigenous plants may be lost during the clearing of vegetation.

Views on the cultural environment:

- There are a few heritage resources within the project area. Permits are required for the alteration of structures older than 60 years and archaeological sites older than 100 years. SAHRA has recently indicated that they require a Phase 1 Impact Assessment which is focused on the borrow pit areas. This has been included in Appendix E2.

7.2.5Other concerns raised by the aforesaid parties.

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

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

The minutes and records of the consultations and conversations have been included in the Annexes of the Final EIA Report in Appendix C.

7.2.7Information 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 Issues and Responses Report which has included as an annex to the Final EIA in Appendix C. 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 F1). 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 F2). All contractors will be required to adhere to the Method statement which has been developed for the Heuningneskloof borrow pit (See Appendix F3).

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)t.

Transnet's solution to the risk is to anticipate the risk and then compile a management guideline in order to prevent the risk from occurring. Various management guidelines have been included in the SES (Appendix F1) 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 F2) 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 entire 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: HEUNINGNESKLOOF BORROW PIT (TRANSNET LIMITED) — Location: Heuningnesskloof, Northern Cape — Date: 05/03/2013

Risk Class / Area Sensitivity: C / Med

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication Factor	Weighting Factor 1	Amount (rands)
3	Rehabilitation of access roads	m^2	300	17.00	1.00	1.10	R 5 610.00
6	Opencast rehabilitation including final voids and ramps	ha	4.0	96 700.00	0.52	1.10	R 221 249.60
10	General surface rehabilitation	ha	4.0	52 600.00	1.00	1.10	R 231 440.00
14	2 to 3 years of maintenance and aftercare	ha	4.0	7 000.00	1.00	1.10	R 30 800.00
						(Sum of items 1 to 15 above)	R 489 099.60
						Weighting Factor 2	1.05
						Subtotal 1	R 513 554.58
1	Preliminary and General	6.0% if Subtotal 1 > 100 000 000 12.0% if Subtotal 1 < 100 000 000					R 61 626.55
2	Contingency	10.0% of Subtotal 1					R 51 355.46
						SubTotal 2	R 626 536.59
						(Subtotal 1 plus sum of management and contingency)	
						Add Vat (14%)	R 87 715.12
						GRAND TOTAL	R 714 251.71
						(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 Appendix I.

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.

Full Names and Surname	Rudolph Johan Basson
Identity Number	571222 5117 082

-END-