



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

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Date: 01 March 2011

From: Mine Environmental Management Enquiries: Mr. Bradley Nethononda

Check if report was undertaken

Registered Mail

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

Dear Sir/Madam

CONSULTATION IN TERMS OF SECTION 43 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002, (ACT 28 OF 2002) IN RESPECT OF A CLOSURE APPLICATION FOR A BORROW PIT AT LOOP 8 ON THE SISHEN SALDANHA ORELIN SITUATED ON THE REMAINDER OF THE FARMS AAN DE KAREE DOORNPAN AND SOUS 226 IN THE ADMINISTRATIVE DISTRICT OF CALVINIA, NORTHERN CAPE REGION.

APPLICANT: TRANSNET (PTY) LIMITED

Attached herewith, please find a copy of a **Closure Application** 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 **01st May 2011** 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. Bradley Nethononda** of this office to make arrangements for a site inspection or for any other enquiries with regard to this application.

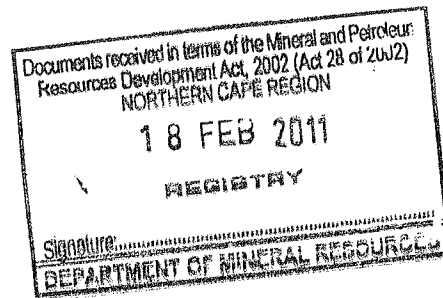
Your co-operation will be appreciated.

Bradley Nethononda
pp.....
**REGIONAL MANAGER: MINERAL REGULATION
NORTHERN CAPE REGION**



1 February 2011

**Department of Mineral Resources
Private Bag X6093
Kimberley
8300**



Reference Number: 30/5/1/3/3/2/1/642 EM Northern Cape

Dear Sir/Madam

Re: Closure of the Borrow Pit at Loop 8 on the Sishen-Saldanha Oreline, situated on the remainder of the farms Aan de Karee Doornpan 213 and Sous 226, in the Calvinia District.

The mining permit granted to Transnet on the remainder of the farms Aan de Karee Doornpan 213 and Sous 226 under the reference number: 30/5/1/3/3/2/1/642 has reference.

In line with the guidance provided by the Department of Mineral Resources (DMR) and section 57 of the Mineral and Petroleum Resources Development Act, Act No. 28 of 2002, regarding an application for a closure certificate, a report incorporating the following documents is hereby submitted to the Department in support of a closure certificate for the borrow pit on the farm Aan de Karee Doornpan 213:

- o Environmental Risk Report (Section 3);
- o Closure Plan (Section 4);
- o Final Performance Assessment Report (Section 5);
- o Confirmation from the relevant landowner that the site is question has been addressed to his/her satisfaction and has been closed for further use by Transnet (Annexure 1); and
- o An application for a closure certificate in terms of section 43(4) of the Minerals and Petroleum Resources Development Act, Act 28 of 2002 (Annexure 2).

The borrow pit on the remainder of the farm Sous 226 was not utilised by Transnet for construction purposes as an adequate supply of borrow material was obtained from the borrow pit on the farm Aan de Karee Doornpan 213. Attempts were made to contact the relevant representative of the Rona Rupert Trust and obtain written confirmation regarding the above, however, these were unsuccessful.

Transnet Limited
Registration Number
1990/000900/06

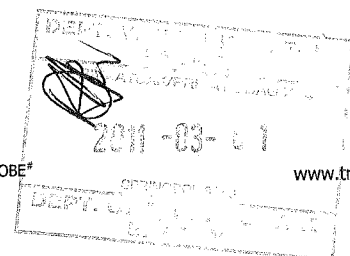
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Directors: Prof GK Everingham (Acting Chairman) CF Wells* (Acting Group Chief Executive) NBP Gcaba MJ Hankinson Dr ND Haste OBE*
PG Joubert NNA Matyuzza MP Moyo NR Ntshingila KC Ramon A Singh* (Acting Chief Financial Officer)
*Executive *British

Group Company Secretary: ANC Ceiba

H500000-TEM-0060-ZA01 Rev 01



www.transnet.net



Yours Faithfully,

A handwritten signature in black ink, appearing to read "Dave Bush". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Dave Bush
Project Director – Orelane Rail
Transnet Capital Projects



Joint Venture

Note: If hardcopy, check electronic system for latest revision

Transnet Capital Projects

Oreline Loop Extension Project

Borrow Pit Closure Report - Loop 8

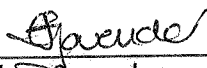


January 2011

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Transnet Capital Projects Oreline Loop Extension Project

Borrow Pit Closure Report - Loop 8

Prepared by:	<u></u>	<u>2/2/2011</u>
	Indran Govender	Date
Reviewed by:	<u></u>	<u>2/2/2011</u>
	Greg Marsh	Date
Approved by:	<u></u>	<u>9/2/2011</u>
	Dave Bush	Date

Distribution List

M. Clark – HMG JV
N. Searle – HMG JV



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 Orelina Loop Extension Project
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1. Introduction

As part of Transnet's upgrade of the Sishen-Saldanha rail line, each of the nineteen passing loops along the 861km route was extended by approximately 1.4km. An Environmental Impact Assessment (EIA) for this rail line upgrade was undertaken and the upgrade was authorised by the Department of Environmental Affairs and Tourism (DEAT) on the 24 April 2006. (DEAT reference 12/12/20/702). At Loop 8 on the Sishen Saldanha iron-ore rail line, Transnet utilised an existing borrow pit to provide suitable materials for the earthworks required for the upgrade. Approximately 10 000 m³ of borrow material was obtained from the existing borrow pit on the Remainder of the farm Aan de Karee Doornpan 213.

This report has been prepared under guidance of the Department of Minerals Resources (DMR) and according to section 57 of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002) regarding an application for closure certificate.

The following requirements for closure are addressed within this report:

- Application for closure certificate Form (Annexure 2);
- Environmental Risk Report (Section 3);
- Closure Plan (Section 4); and
- Final Performance Assessment Report (Section 5).
- Application to transfer environmental liabilities and responsibilities

2. Background

2.1 Formation Material

Borrow pits are typically used by Transnet Limited (Transnet) for construction and rehabilitation of the rail track formations at various locations on the Sishen Saldanha Oreline.

The formation of a rail line refers to the layers of material upon which the rail track sleepers and track are placed. The layers of formation material must meet specific strength and dry density requirements to ensure stability of the rail track.

Non-commercial borrow pits are typically used for the material which comprises the bottom-most layer of the formation profile. Commercial quarries are generally used to obtain the overlying layers as these layers require material which has been processed (through for example crushing and screening activities) in order to meet the more stringent strength and density specifications required.

The non-commercial borrow pits are selected based on a number of factors, the most important of which being the following:



- The type of material available. The material must have certain minimum strength and density properties;
- The borrow pit must be in relatively close proximity to the track requiring rehabilitation to ensure that the cost of transportation of the material is not excessive;
- The ability to safely remove the required material and successfully rehabilitate the borrow pit. This factor is related to the depth at which the suitable material can be found, the topography of the surrounding area and convenient access to the site; and
- Where the land is privately-owned, agreement from the landowner to remove the material.

2.2 Loop 8 Borrow Pit

An existing borrow pit was utilised by Transnet for the purpose of obtaining suitable material for formation construction on the Remainder of the farm Aan de Karee Doornpan 213. A mining permit for the borrow pits on the above-mentioned farm and the remainder of the farm Sous 226 was granted under Reference:30/5/1/3/3/2/1/642. The borrow pit on the remainder of the farm Sous 226 was not utilised by Transnet for construction purposes as an adequate supply of borrow material was obtained from the borrow pit on the farm Aan de Karee Doornpan 213.

The Loop 8 borrow pit on the Remainder of the farm Aan de Karee Doornpan 213 had a surface area of not more than 1.5 ha and was mined within a period of 2 years. The establishment and rehabilitation of the borrow pit area involved the following main activities:

- Construction of a temporary access road to the borrow pit. The access road was less than 4 m in width and involved the placement and levelling of a suitable gravel material (generally the same material used for the formation rehabilitation) on the existing access track surface to allow for access to the borrow pit of machinery like excavators, bulldozers and tipper trucks;
- Removal of the topsoil and stockpiling of this material at the high ground side of the borrow pit area;
- Construction of berms and/or trenches for erosion control where this was necessary;
- Removal of the material needed for the formation rehabilitation; and
- Rehabilitation of the borrow pit area and the access road in accordance with the standard requirements of the Department: Minerals and Energy. This included activities such as shaping of the borrow pit area, backfilling of stockpiled topsoil, ripping of the access road and hydroseeding of the impacted areas, if required.



3. Environmental Risk Report

3.1 Purpose

In accordance with Regulation 60 of the Minerals and Petroleum Resources Development Act Regulations¹ this section of the Closure Report refers to the findings of a screening level environmental risk assessment. The purpose of the risk assessment was to identify possible risks of the rehabilitated borrow pit on the environment and *vice-versa* in order to determine the significance of the risk and thus the need for further rehabilitation, maintenance or monitoring in the future.

3.2 Methodology

The objective of the assessment of environmental risks is to identify and assess the significance of risks that may arise as a result of the project. Although there are various methods in use, the general process of assessing the environmental risks encompasses the following four activities:

- Identification of potential risks/impacts;
- Prediction of the intensity (consequence) and probability (likelihood) of potentially significant impacts;
- Identification of mitigation measures that could be implemented to reduce the severity or significance of the impacts of the activity; and
- Evaluation of the significance of the impact after the mitigation measures have been implemented i.e. the significance of the residual impact.

The criteria used in the assessment are summarised in **Table 1** and **Table 2**.

3.3 Environmental Risk Assessment

A site visit was undertaken to the site on 23 November 2010 in order to identify and assess the relevant environmental risks. **Table 3** summarises the findings of the screening level environmental risk assessment. It is evident from the table that all risks are considered to be insignificant without the need for further mitigation measures, monitoring or rehabilitation. Site Photographs in **Annexure 4** provide a visual basis for some of the conclusions reached in the risk assessment.

¹ Government Gazette of 23 April 2003

Table 1: Criteria for assigning intensity and probability to environmental risks

Criteria	Rating Scales
Intensity (the severity of the impact)	<ul style="list-style-type: none"> • Low - where the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected • Medium - where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected • High - where natural, cultural or social functions and processes are altered to the extent that it will temporarily or permanently cease; and valued, important, sensitive or vulnerable systems or communities are substantially affected
Probability (the likelihood of the impact occurring)	<ul style="list-style-type: none"> • Improbable – where the possibility of the impact occurring is very low • Probable – where there is a good possibility (<50% chance) that the impact will occur • Highly probable – where it is most likely (50-90% chance) that the impact will occur • Definite – where the impact will occur regardless of any prevention measures (>90% chance of occurring)

Table 2: Criteria for assigning a significance rating

Significance Rating	Intensity x Probability
Potentially Significant	<ul style="list-style-type: none"> • High x Definite • High x Highly Probable • High x Probable • Medium x Definite
Uncertain Risk	<ul style="list-style-type: none"> • High x Improbable • Medium x Highly Probable • Medium x Probable
Insignificant Risk	<ul style="list-style-type: none"> • Medium x Improbable • Low x Definite • Low x Probable • Low x Improbable • Low x Highly Probable



Table 3: Significance of Environmental Risks of the Loop 8 Borrow Pit

	INTENSITY	PROBABILITY	SIGNIFICANCE
<p>Potential environmental risks</p>			
<p>Loss of grazing due to vegetation disturbance. The borrow pit area has been allowed to revegetate naturally and exhibits good vegetative cover. This risk is thus considered to be insignificant.</p>	<p>Low</p>	<p>Improbable</p>	<p>Insignificant</p>
<p>Hydrocarbon contamination of soil and water resources as a result of spillages. No evidence of hydrocarbon contamination was evident on the site. The risk is accordingly assigned as insignificant.</p>	<p>Low</p>	<p>Improbable</p>	<p>Insignificant</p>
<p>Aesthetics/ Visual. The depression caused by the removal of material from the borrow pit area could detract from the visual beauty of the area. The shaping of the borrow pit area and the good vegetative growth result in the site blending in with the general viewshed from the main access road past the site. This risk is thus considered to be insignificant.</p>	<p>Low</p>	<p>Improbable</p>	<p>Insignificant</p>
<p>Proliferation of Invasive Species. No invasive species were noted on the site at the site visit on 23 November 2010. As a result of the minimal soil disturbance of the areas where mining took place and rehabilitation thereof, the extent of the areas under consideration and the absence of any significant invasive species in these areas currently suggest that this is an insignificant risk.</p>	<p>Low</p>	<p>Highly Probable</p>	<p>Insignificant</p>



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Potential environmental risks	INTENSITY	PROBABILITY	SIGNIFICANCE
<p>Erosion.</p> <p>There is a risk that the borrow pit area facilitates erosion. The good vegetative cover and small berms on the site are likely to prevent any erosion from occurring. This risk is thus considered to be insignificant.</p>	Low	Improbable	Insignificant
<p>Ponding of water.</p> <p>Borrow pit depression often result in ponding of water, which can have an influence on the hydrology of an area as well as representing a safety risk. No evidence of ponding is evident on the site and there appears to be sufficient gradient for natural run-off of water from within the area. This risk is accordingly considered to be insignificant.</p>	Low	Improbable	Insignificant
<p>Safety.</p> <p>The slopes of the rehabilitated borrow pit area could prove to be unstable and collapse, resulting in a safety risk. The gradient of the slope is however considered to be suitable and there is good vegetative growth on the face of the slope. This risk is thus considered to be insignificant.</p>	Low	Improbable	Insignificant

4. Closure Plan

4.1 Closure Objectives

The closure objectives for the mining operation were to return the land as close as possible to its pre-mining condition, ensure that no residue of equipment, housing, and/or waste of any kind remained on the site and ensure that the land could still be used for the same purpose it was used before the mining took place.

4.2 Layout Plan

A plan indicating the layout of the borrow pit area is provided in **Annexure 3**.

4.3 Regulatory Closure Requirements

The regulatory requirements for closure of the mining operation are reflected in the Minerals and Petroleum Resources Development Regulations². These requirements are summarised in section F5 of the EMP. No other closure requirements have been specified for the site.

4.4 Environmental Risk Report

The Environmental Risk Report in **section 3** above indicates that all environmental risks are regarded as insignificant without the need for any further assessment or management.

4.5 Progressive Rehabilitation

No progressive rehabilitation was followed for the borrow pit as the size of the area did not lend itself to this rehabilitation method. The entire site was rehabilitated once all required material had been removed.

4.6 Decommissioning and Mitigation Methods

Decommissioning activities associated with the mining operation included backfilling of stockpiled topsoil, ripping of the access road and natural revegetation of all disturbed areas. All plant, waste and equipment were then removed from the site.

No latent or residual impacts were identified for the post-rehabilitation environment and thus no further mitigation methods were proposed.

4.7 Long-Term Management and Maintenance

Based on the condition of the post-rehabilitation environment and the screening-level risk assessment, long-term management and maintenance is not required for the site.

4.8 Financial Provision for Monitoring, Maintenance and Post Closure Management

No financial provision is proposed for ongoing monitoring, maintenance and post closure management as there are no ongoing environmental risks relevant to the mining operation which require financial provision.

² Government Gazette of 23 April 2003

4.9 Final and Future Land Use

In accordance with the closure objectives, the final and future land use on the site is the same as it was before the mining operation commenced, namely grazing. The borrow pit area had an unavoidable impact to the natural topography of the area but this has satisfactorily rehabilitated through shaping and establishment of suitable vegetation. Accordingly, a sketch plan of the site indicating the proposed future land use is not considered to be necessary.

4.10 Consultation with Interested and Affected Parties

Other than the landowner, no formal consultation with interested and affected parties, took place during the closure process.

5. Final Performance Assessment Report

5.1 Compliance with Legislation

Based on the site visit undertaken on 23 November 2010, the mining operation has been conducted in accordance with the requirements of the relevant legislation including the approved EMP.

5.2 Adherence to Closure Objectives

The closure objectives identified in **section 4.1** have all been met in that the following has been achieved:

- The site has been returned, as close as possible, to its pre-mining state. As noted earlier, the unavoidable change to the natural topography has been satisfactorily mitigated through shaping and establishment of vegetation;
- No residue of equipment, housing, and/or waste of any kind from the mining operations remains on site; and
- The areas where mining was undertaken can still be used safely and appropriately for the pre-mining land use namely, grazing.

5.3 Residual and Latent Impacts

There are no residual or latent impacts which require ongoing monitoring, maintenance or rehabilitation.

6. Conclusion

The mining operation undertaken by Transnet Limited on the Remainder of the farm Aan de Karee Doornpan 213 in terms of permit reference no: 30/5/1/3/3/2/1/642 has been satisfactorily rehabilitated. The site is not considered to be unsafe or unsightly. There is good vegetative growth of indigenous grass species and the area of operations blends in with the surrounding environment. No further consequences or impacts to the environment are envisaged as a result of the mining operations.



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The findings of this report suggest that the closure requirements of the Minerals and Petroleum Resources Development Act, 2002 and the regulations promulgated thereunder have been complied with.



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Annexure 1: Landowner Confirmation Letter

22 November 2010

**Department of Mineral Resources
Private Bag X6093
Kimberley
8300**

Reference: 30/5/1/3/3/2/1/642 EM Northern Cape

Dear Sir/Madam

**Re: Closure of the Borrow Pit at Loop 8 on the Sishen -Saldanha Orelane,
situated on the remainder of the farm Aan de Karee Doornpan 213, in the
Calvinia District.**

I, Mrs HH Lintveld, hereby acknowledge that rehabilitation of the borrow pit/s on my farm, the remainder of the farm Aan de Karee Doornpan 213, in the Calvinia District, was completed to my satisfaction and in compliance with the Environmental Management Programme approved by the Department.

With my signature on this document, the borrow pit was closed for further use by Transnet as from March 2008.

Property owner's signature:


.....

ID Number:

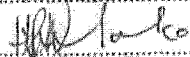
580805 5120 082.....

Date:

02 Jan 2011
.....

Witness 1:

Name : R.H. NDAKALAKO.....

Signature : 
.....

Witness 2:

Name :

Signature :



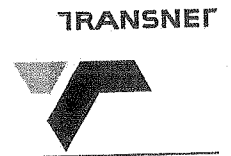
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Annexure 2: Application for Closure Form

6 Reason for application:

Lapsing
Abandonment
Cancellation

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Cessation
Relinquishment
Rehabilitation

<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>

7 Details of the relevant land, area or operation or offshore licence block pertaining to the application for closure.

TRANSDNET UTILISED AN EXISTING BORROW PIT AT LOOP 8 FOR LOOP EXPANSION ACTIVITIES. APPROX. 10000 m³ OF GRAVEL WAS OBTAINED FROM AAN DE KAREE DOORNPAN. UPON COMPLETION THE PIT WAS REHABILITATED AND CLOSED. SOUS 226 WAS NOT UTILISED.

8 Application for the transfer of environmental liabilities and responsibilities. If relevant, a separate submission must be appended to the application.

9 The following documents must accompany the application:

A closure plan contemplated in regulation 62.

A final performance assessment on the environmental management programme or environmental management plan, as the case may be.

An application form in the form of Form O contained in Annexure II, to transfer environmental liabilities and responsibilities to a competent person, if applicable.

A copy of an environmental risk report contemplated in regulation 60.

SIGNED AT
ON THE

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								2	0	1	1							


SIGNATURE OF THE APPLICANT



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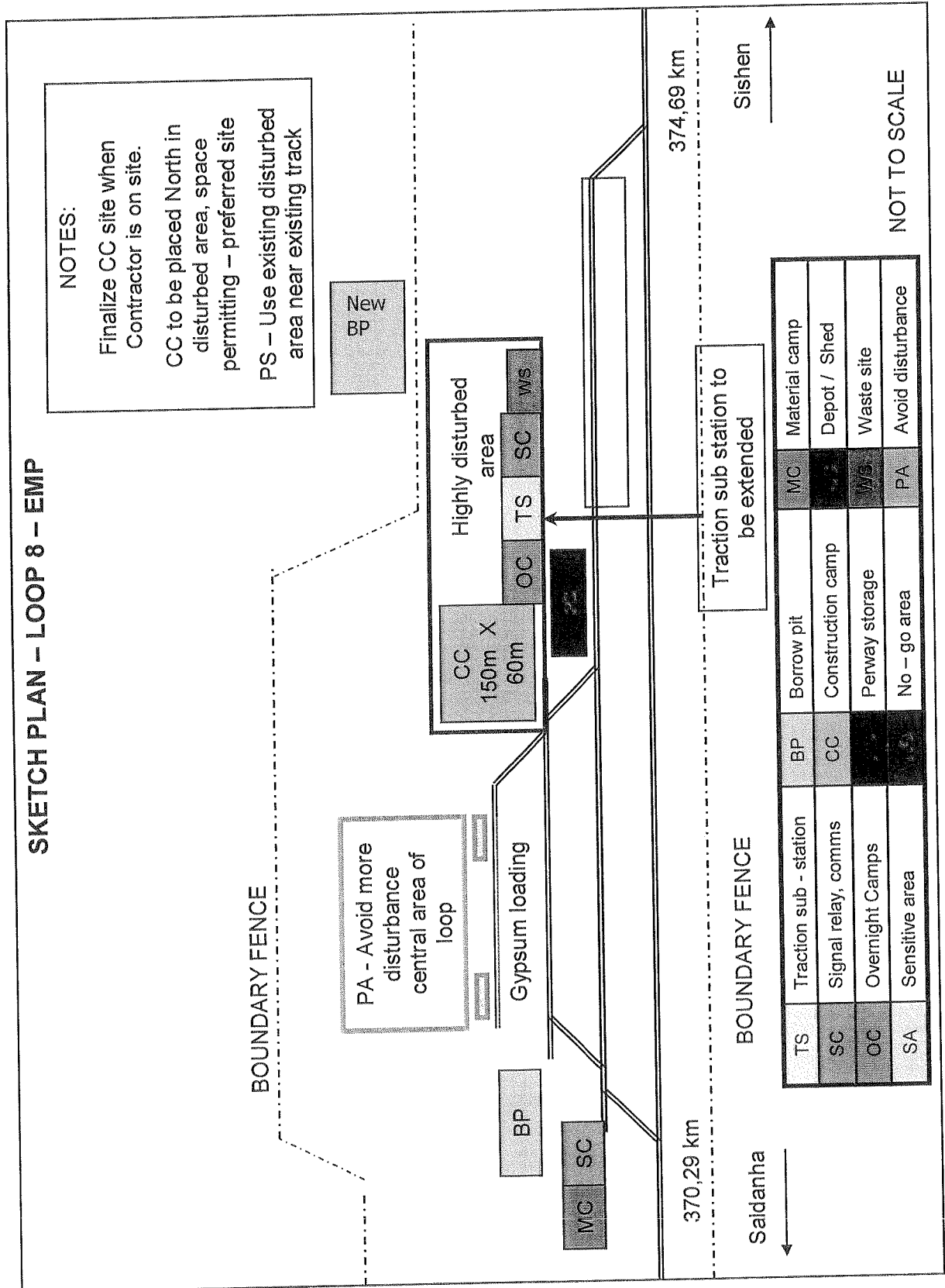
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Annexure 3: Layout Plan





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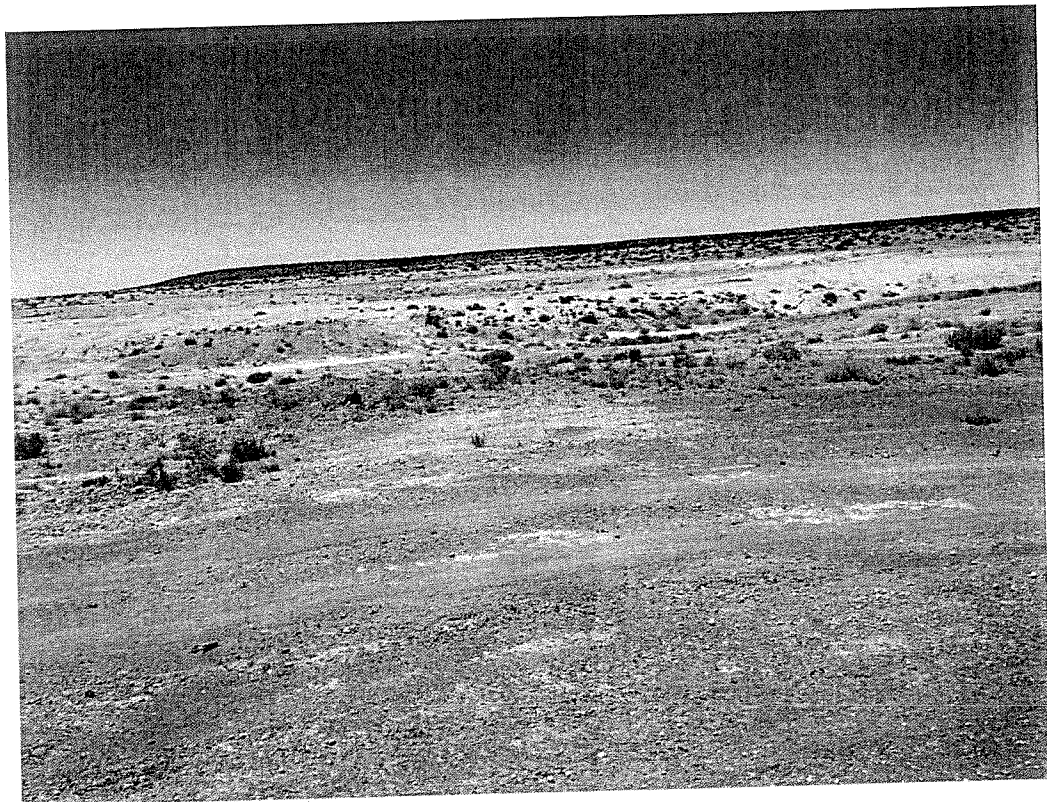
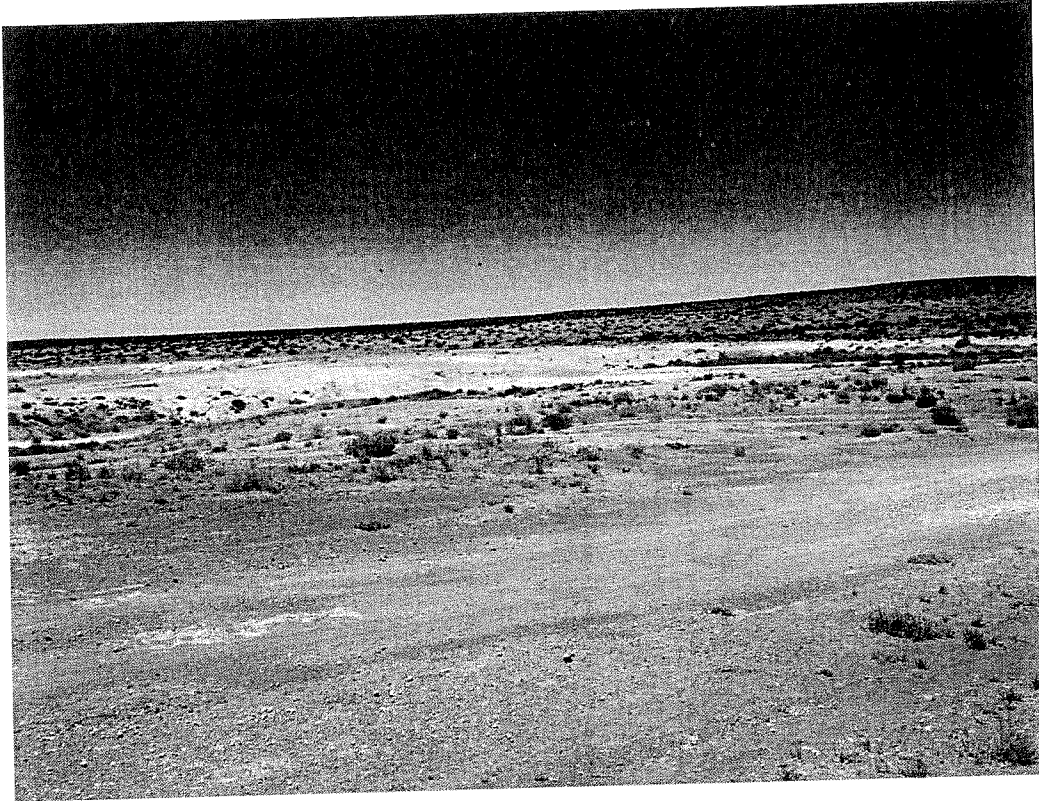


Annexure 4: Site Photographs



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