



ENVIRONMENTAL IMPACT ASSESSMENT PROCESS FINAL BASIC ASSESSMENT REPORT

PROPOSED HOUSING DEVELOPMENT IN POSTMASBURG
NORTHERN CAPE PROVINCE
DEA REFERENCE NUMBER:
14/12/16/3/3/1/991

FINAL BASIC ASSESSMENT REPORT
FOR SUBMISSION TO DEA
28 OCTOBER 2013

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environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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File Reference Number:

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **1 September 2012**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

PROJECT DETAILS

Title	:	Final Basic Assessment Report: Proposed Housing Development In Postmasburg, Northern Cape Province
DEA Reference Number	:	14/12/16/3/3/1/991
Applicant/Client	:	Transnet SOC Limited
Authors	:	Savannah Environmental Ravisha Ajodhapersadh Jo-Anne Thomas Gabriele Wood
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Report Status	:	Final Basic Assessment Report for submission to DEA
Submission Date	:	28 October 2013

When used as a reference this report should be cited as: Savannah Environmental (2013) Final Basic Assessment Report: Proposed Housing Development in Postmasburg, Northern Cape Province

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PURPOSE OF THE FINAL BASIC ASSESSMENT REPORT

Due to the need for accommodation of staff in the Postmasburg area, Transnet SOC Limited ("Transnet") is proposing a housing development in Postmasburg. The site identified for the housing development is situated on Transnet-owned land, which is located on the outskirts of the town of Postmasburg. The site falls within the Tsantsabane Local Municipality and greater Siyanda District Municipality (now referred to as the ZF Mgcawu District Municipality) in the Northern Cape Province. Environmental authorisation from the National Department of Environmental Affairs (DEA) is required for the proposed housing development, in terms of the National Environmental Management Act 107 of 1998 and EIA Regulations of June 2010, as amended. This application is supported by a Basic Assessment process. Savannah Environmental has been appointed by Transnet to undertake the required Basic Assessment process. The nature and extent of Transnet's proposed housing development and potential impact associated with the housing development is considered in detail in this final Basic Assessment (BA) Report.

The Draft Basic Assessment Report was available for public review for a 40 day period from **11 September 2013 –21 October 2013** at the following locations:

- » The Postmasburg Public Library
- » Tsantsabane Local Municipality's Offices in Postmasburg
- » The report was also available for download on www.savannahsa.com

Comments could be made as written submission via fax, post or e-mail. I&APs were also informed on the Final Basic Assessment Report has been prepared and submitted to DEA, and is available for public review on www.savannahSA.com/projects and comments on or copies of the Final Basic Assessment Report could be requested, if desired or required by I&APs.

A Public Open Day & Public meeting was held as follows:

Date: 09 October 2013

Time : Open House: 15h00 – 17h00 and Public Meeting: 17h30 – 19h30

Venue: 13 Springbok Street, Postmasburg, Northern Cape

The release of a draft Basic Assessment Report provided stakeholders and the public with an opportunity to raise any issues through the EIA process regarding the project. This final Basic Assessment Report has incorporated all issues and responses raised during the public participation process prior to submission to the National Department of Environmental Affairs (DEA). The Final Basic Assessment Report aims to provide sufficient information regarding the potential impacts and the acceptability of these impacts in order for the Competent Authority (DEA) to make an informed decision regarding the proposed project.

SUMMARY AND OVERVIEW OF THE PROPOSED PROJECT

1.1. The Need and Desirability for the Project

The goal of the housing development project is to provide adequate housing to Transnet employees near the train station in Postmasburg. In addition, an expansion in infrastructure and rolling stock (locomotives and wagons) requires additional staff, who will also require housing facilities. The need for accommodation of Transnet staff in Postmasburg is linked to the appropriateness of the town of Postmasburg as a location in relation to planned upgrades of Transnet's rail network. Postmasburg is centrally located between two of Transnet's main rail corridors namely: The Iron Ore Line (Sishen - Saldanha) and Manganese Line (Hotazel – Port Elizabeth and Ngqura), which means that staff housed at the proposed development site will quite easily be able to service both corridors. Both iron ore and manganese are vital commodities and contribute substantially to the South African economy. The economic activity and growth of the Postmasburg area has resulted in a need for more housing within the town. Many of Transnet employees currently live in Postmasburg. Transnet has realised that there is a need for their employees to be accommodated in Postmasburg. The proposed housing development by Transnet is therefore socially desirable and seen as a project which will benefit society. Therefore the housing development project in the Postmasburg area is considered to be technically and socially desirable by Transnet.

1.2. Location of the Proposed Housing Development

The proposed residential development will be constructed in the town of Postmasburg in the Northern Cape Province of South Africa. The site falls within Ward 6 of the Tsantsabane Local Municipality. The residential development will be situated to the south of the Postmasburg train station. The site is bounded on the north and west by the train station and on the east by existing roads, namely 1st and 4th Avenue respectively. The site for Transnet's proposed housing development is planned on the following plots of land in Postmasburg (Refer to the Locality Map in Figure 1):

- » Portion of the Remainder of ERF 1
- » Remainder of ERF 3604
- » ERF 3666 (Portion of ERF 3604)
- » Erf 3618 (Portion of ERF 3604)
- » ERF 3665 (Portion of ERF 3604)
- » Remainder of ERF 1249 (Portion of ERF 1),
- » ERF 3664 (Portion of ERF 3604)
- » Remainder of ERF 763 (Portion of ERF 1)

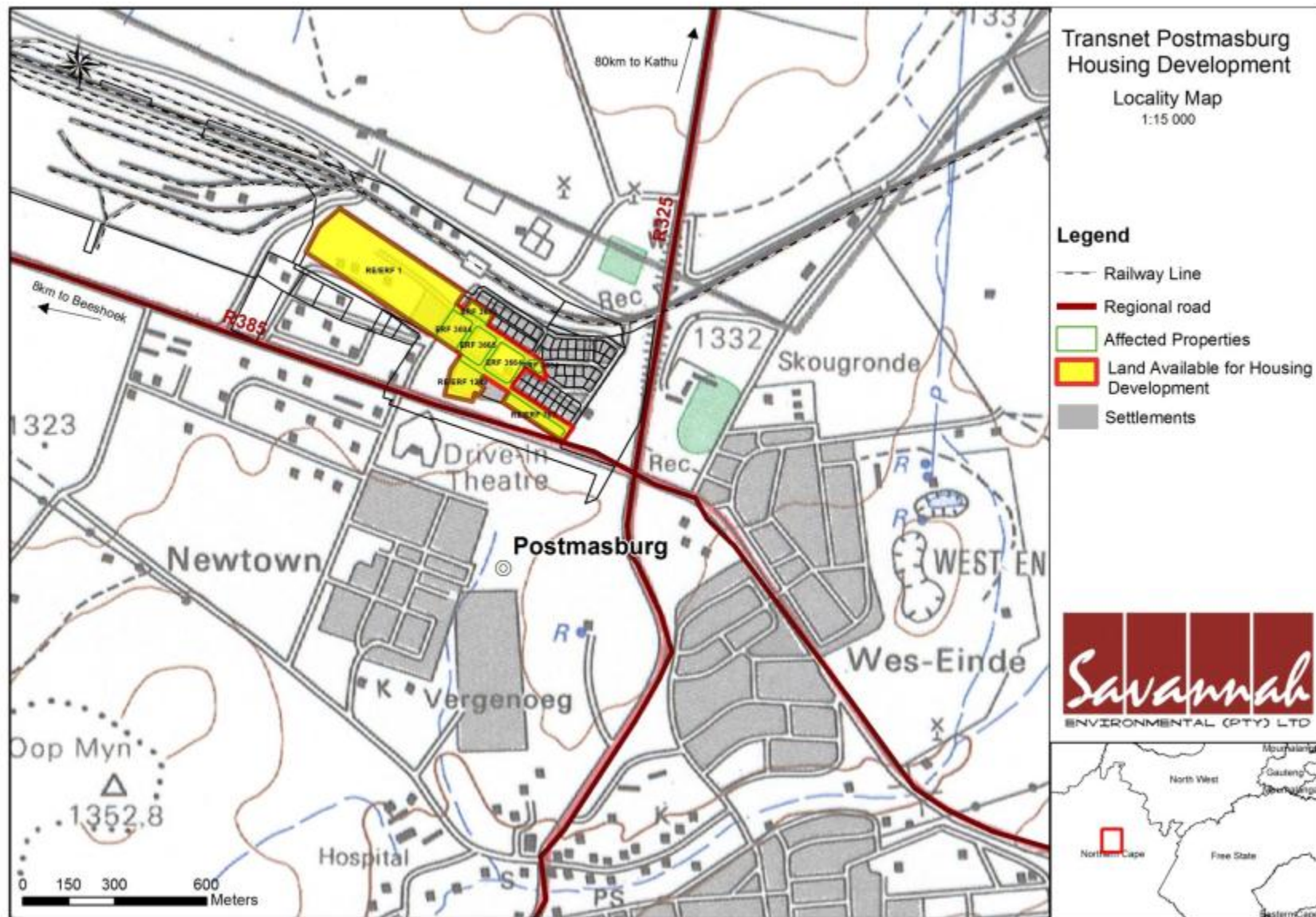


Figure 1: Locality Map showing the Proposed Site for Transnet's Housing Development Project in Postmasburg, Northern Cape Province

1.3. Associated Infrastructure

A realistic estimate of 185 housing units could be accommodated on the land available to Transnet. The footprint for the housing development is up to 16 hectares in extent. Infrastructure typically associated with such a development includes, inter-alia:

- » Up to 185 housing units (two and three bedroom units);
- » New access roads (internal and each house) and upgrade of existing access roads;
- » Carports;
- » Fencing;
- » Elevated water tanks;
- » A water tower and pump station;
- » Electrical infrastructure and cabling;
- » Water Supply pipes;
- » Storm Water Pipes; and
- » Sewerage reticulation system (sewage Pipes).

A typical design showing the type of houses that are being proposed for the housing development is shown in Figure 2. Each ERF will be fenced-off for security purposes.

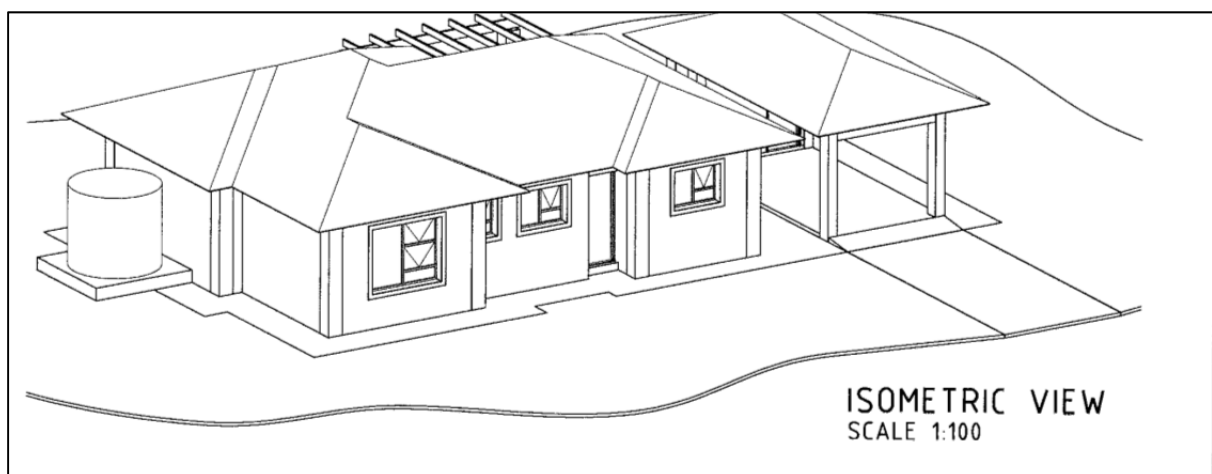


Figure 2: Typical design showing the type of houses that are being proposed by Transnet

A more detailed description of the housing development is provided under Section A of this report (Project Description).

1.4. Basic Assessment Process

In terms of the EIA Regulations of June 2010 published in terms of Section 24(5) of the National Environmental Management Act (NEMA, Act No. 107 of 1998), Transnet requires authorisation from the National Department of Environmental Affairs (DEA) (in

consultation with the Northern Cape Department of Environmental and Nature Conservation (DENC)), for the construction and operation of the proposed housing development. In terms of sections 24 and 24D of NEMA, as read with the EIA Regulations of GNR 543, GNR 544 and GNR546 (as amended), an Environmental Basic Assessment (a simplified environmental impact assessment) process is required to be undertaken for the project. The project has been registered with the DEA under the following reference number: 14/12/16/3/3/1/991.

In order to obtain authorisation for the proposed housing development project in Postmasburg, comprehensive, independent environmental studies must be undertaken in accordance with the EIA Regulations of June 2010 (as amended). Transnet has appointed Savannah Environmental, as the independent environmental consultants, to undertake the required Basic Assessment to identify and assess all the potential environmental impacts associated with the proposed project, conduct a public participation process and to determine appropriate mitigation and management measures for inclusion in an Environmental Management Programme (EMPr) for the project.

The nature and extent of all components of the proposed housing development and associated infrastructure are explored in more detail in this Basic Assessment Report. This report has been compiled in accordance with the requirements of the EIA Regulations of June 2010 and includes details of the activity description; the site, area and property description; the public participation process; the impact assessment; and the recommendations of the Environmental Assessment Practitioner.

1.5. Details of Environmental Assessment Practitioner and Expertise to conduct the Basic Assessment

Savannah Environmental has been appointed as the independent environmental consultant to undertake the Environmental Assessment to identify and assess the potential environmental impacts associated with the proposed housing development and associated infrastructure. Neither Savannah Environmental nor any of its specialist sub-consultants on this project are subsidiaries of or are affiliated to Transnet. Furthermore, Savannah Environmental does not have any interests in secondary developments that may arise out of the authorisation of the proposed housing development.

Savannah Environmental is a specialist environmental consulting company providing holistic environmental management services, including environmental impact assessments and planning to ensure compliance and evaluate the risk of development; and the development and implementation of environmental management tools. Savannah Environmental benefits from the pooled resources, diverse skills and experience in the environmental field held by its team.

The Savannah Environmental team has considerable experience in environmental impact assessments and environmental management, and have been actively involved in undertaking environmental studies, for a wide variety of projects throughout South Africa, including large infrastructural projects and energy generation projects.

Jo-Anne Thomas is a registered Professional Natural Scientist (in the practice of environmental science) with the South African Council for Natural Scientific Professions. She has gained extensive knowledge and experience on potential environmental impacts associated with electricity generation and transmission projects through her involvement in related EIA processes over the past fourteen (14) years. She has successfully managed and undertaken EIA processes for infrastructure development projects throughout South Africa. She is supported by Ravisha Ajodhapersadh (the principal author of this report), Sheila Muniongo and Gabrielle Wood from Savannah Environmental. Curricula vitae for the Savannah Environmental project team consultants are included in Appendix A. In order to adequately identify and assess potential environmental impacts as well as evaluate alternatives, Savannah Environmental has appointed specialist consultants to conduct specialist studies, as required including:

- » A noise study by Acoustic Specialist Morné De Jager
- » A traffic impact statement by Traffic Engineer Dave Kellock.
- » A social impact assessment by Tony Barbour.

The curricula vitae for the EIA Team are included in **Appendix H**.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

Transnet-owned (vacant) land is proposed to be utilised and developed for residential use within the town of Postmasburg (an urban area). The housing development will occupy an area of up to 16 hectares therefore the following listed activity is being applied for environmental authorisation from DEA in terms of Listing Notice 1 (GNR 544) of the EIA Regulations of June 2010:

*Activity 23: The transformation of undeveloped, vacant or derelict land to –
(i) residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares*

Infrastructure Required:

Infrastructure expected to be associated with the housing development includes, inter-alia:

- » Up to 185 housing units (two and three bedroom units);
- » New access roads (internal and to the facility) and upgrade of existing access roads;
- » Carports;
- » Fencing;
- » Elevated water tanks;
- » A water tower and pump station;
- » Electrical infrastructure and cabling;
- » Water Supply pipes;
- » Storm Water Pipes; and
- » Sewerage reticulation system (sewage Pipes).

A recreational facility (the details of which are currently being determined) will also be developed. The details are provided in Table 1.1 below and have been sourced from the Preliminary design work and reports undertaken by Hatch Goba.

Table 1.1: Details of the Design Criteria for the Houses And Associated Infrastructure
(sourced from design reports by Hatch Goba (2013)¹

Infrastructure	Dimensions/ Details/ Specifications
Up to 185 housing units	<ul style="list-style-type: none"> » Normal foundations in accordance with those deemed-to-satisfy rules of SANS 10400 have been allowed at this stage. » Two and three bedroom units to be constructed. » A layout plan and detailed designs are attached to Appendix A. » House stand sizes between 350 m² and 450 m². » Floor area per house between 100 m² to 135 m². » Clay bricks will be used. » Foundation walls to comprise of face brick wall, insulated cavity and internal wall of an approved stock brick. » The external skin will be face brick. » Ordinary Portland cement (SABS 471) to be used. Other types of cement may only be used with permission of the manufacturer of the masonry unit. » Ready-mixed mortar may be used. » Waterproofing of houses will be undertaken. » Cement tile roofs. » Outside area to include some concrete paved areas. » Fire hose reels and fire extinguishers will be installed. » Mesh fence complete with wire
New access roads (to the development and internal roads to each house) and upgrade of existing access roads.	<ul style="list-style-type: none"> » Design of the Internal Access Roads is included in Appendix A. » ~14 internal access roads between clusters of houses are required. » Internal Access road surface will be 80 mm or 60 mm concrete interlocking block paving. » Internal access roads will have 2 lanes and will be up to 7.4m wide. » Road signs will be included. If required, special consideration is to be given to speed limit signs, intersections, pedestrian crossings and taxi and bus stops. » Two main entrances into the housing development is proposed and the existing

¹ Hatch Goba, TFR Postmasburg Housing Study, Architectural and Structural Technical Specifications (April 2013)

Hatch Goba, TFR Postmasburg Housing Study, Civil Infrastructure and Design Criteria (May 2013)

Hatch Goba, TFR Postmasburg Housing Study, Electrical Design Basis & Criteria (June 2013)

	roads which will be upgraded include: <ul style="list-style-type: none"> o Stasie Street/R385 intersection o 8th Avenue/R385 intersection
Carports	Each house will have a car port for parking vehicle/s.
Fencing	<ul style="list-style-type: none"> » Perimeter fencing will be a 1.8 m high diamond mesh fence. » Fencing around the stands and the playing field will be 1.2 m high diamond mesh fence.
A water tower and pump station	<ul style="list-style-type: none"> » Water pressure in the Postmasburg area is relatively low and therefore an elevated water tank will be installed to increase the water pressure. » An elevated steel sectional Braithwaite water tank will be constructed in the open space outside the entrance to the west of Postmasburg Station. The reservoir will have a footprint of 9m x 9m and will be 4m in height. The tank will be installed on a steel frame to elevate the tank 10 m above the ground level. The tank will have storage capacity of 500 kilolitres and incorporate 1.5 days storage which will supply the housing development only. » A booster pump will be installed on the new water supply pipeline to pump the water into the elevated reservoir. » A new potable water reticulation network will be installed to service the 185 new houses within the development. » The total water storage capacity required = 633 000 litres. » The following assumptions were made to determine the volume of potable water required for the development: <ul style="list-style-type: none"> o 250 dwellings @ 750 litres/day = 187500 litres/day o Total daily requirement = 201 000 litres o 72 hours storage = 3.0 x 201000 = 603000 litres o A further 30000 litres of water storage is required for fire fighting. Based on low-risk group 2 classification, whereby 500 litres/min for 1 hour is required and only one hydrant will be used at any one time to fight a fire.
Electrical infrastructure and cabling	<ul style="list-style-type: none"> » Bulk power supply will be sourced from the Tsantsabane Local Municipality (TLM). » The battery limit between the project and TLM will be at the TLM supplied medium voltage circuit breaker terminals (11 kV).

	<ul style="list-style-type: none"> » Electrical infrastructure includes: <ul style="list-style-type: none"> o An electrical supply point at each house o Street lighting o An electrical supply points. o 11 kV overhead lines. » Street lighting will be in accordance with SANS 10389-1:2003 vehicle driveways – light traffic = 5 lux.
Water Supply pipes and infrastructure	<ul style="list-style-type: none"> » No existing water reticulation was identified and the lack of existing reticulation information is considered to be a design constraint. » Copper water supply pipes to be installed. » Pipe diameter - 75 mm OD (minimum) internally, 250 mm diameter main supply from existing municipal pipeline. » Prepaid water meters to be installed to each unit according to local authority's specifications. » Potable water will be supplied via a uPVC water line connected to the existing water supply on the south eastern side of the development. The existing pipe diameter is unknown and it is assumed that the new supply pipeline will be a 250 diameter pipe.
Storm Water Pipes	<ul style="list-style-type: none"> » The stormwater runoff in the area is sheet flow and there are no formal drains to divert runoff water. » All stormwater from the Postmasburg Station and the proposed development area drains towards a low lying area south of the development. » Stormwater runoff in the railway station will be collected in earth drains on the eastern side of the development and diverted around the site into existing drainage paths. » Stormwater within the development will be channelled into the roads. The roads will be designed to ensure that all stormwater is contained and discharged into earth v-drains on the western side of the development. The v-drains' depth and width will vary according to the volume and velocity of the stormwater. The drain will discharge into existing drains or daylight into open areas. » There are no significant drainage paths within the area and all runoff is sheet flow. » No stormwater pipes were identified on site, but it has been assumed that there

<p>Sewerage reticulation system (sewage Pipes).</p>	<p>are culverts crossing the existing road at the intersection to the south of the site.</p> <ul style="list-style-type: none"> » Minimum pipe internal diameter 100 mm. » Main sewer pipe 110 mm uPVC pipe, laid with fall to direction as determined on site or as noted on technical drawings. » Pipes to be buried a minimum of 450 mm underneath natural ground level. » The minimum internal diameters of the manhole chambers to be 1000 mm. » The current sewerage system will have the capacity to process the sewage inflow from the new development. A daily inflow of 3.5 litre/sec from the development has been calculated.
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The development of the housing units are described according to its life-cycle i.e.:

- » Planning Phase
- » Construction Phase:
- » Operation Phase
- » Decommissioning Phase (not applicable at this stage)

» **Planning Phase:**

Prior to development of the residential units in Postmasburg, Transnet is currently in process of obtaining the following approvals/ permits/ documents necessary for the project:

- o Engineering Design
- o Environmental Authorisation
- o Re-zoning of the Land (from "transportation" to "residential") and Approval of the building plans by the Local Municipality
- o Way leaves will be obtained before constructing near or over any existing services.

» **Construction Phase:**

Construction of the housing development is expected to take place over a 16 month period and will include the following:

- o Development of a temporary Contractors Camp & Laydown area (1 hectare in extent)
- o Earthworks:

Earthworks will include clearing of vegetation, levelling of surfaces, excavation for the drains, road box cuts, terrace and the levelling of the playing fields and the fill to the north western corner of the development site. Excavated material to be properly stockpiled and re-used where necessary. / disposed of at a suitable disposal facility as per standard Transnet waste management practices. Imported material is to be sourced from the existing borrow pit (on condition

that the borrow pit has the necessary approvals in place) located approximately 3 km west of the town of Postmasburg. From the generally flat nature of the site it is anticipated that cuts and fills will be low, i.e. of the order 1-2 metres.

- o Terracing:

Terracing will be required for the north-western area of the development. Terracing will require fill material to raise the localised low spot and slope the entire area towards the proposed road for drainage purposes. Topsoil removal up to 150 mm below natural ground level is to be removed to a topsoil stockpile. In-situ material is to be compacted. Fill material is to be placed in 150 mm thick layers and compacted to final terrace level. Topsoil to be replaced and evenly spread across the terrace

- o Trenching and backfilling:

Trenches will be excavated to a depth to achieve at least 600 mm of cover to soffit of the pipe. Minimum depth for small diameter pipes to be 1000 mm and minimum width of trench to be 750 mm. Trenches to be backfilled with bedding sand before pipes are placed in trenches.

- o Landscaping:

Landscaping will be required on the sidewalks after service trenches have been backfilled.

- o Site Rehabilitation:

All construction work areas will be re-instated and construction waste and equipment removed, prior to hand-over to Transnet. The area will be rehabilitated/re-vegetated.

» **Operation Phase:**

The housing units are planned to be ready for occupation in 2017. During the operational phase, the houses will be maintained by the Transnet employees / home owners. Limited activities will include waste management and maintenance of buildings as and when required. Refuse bins will be placed in the designated areas for collection by the Local Municipality.

» **Decommissioning Phase:**

The housing development is not intended to be decommissioned. The lifespan of the houses can extend indefinitely to service Transnet employees. The intention is for Transnet staff take over ownership of the houses.

b) Listed Activities

Provide a detailed description of the listed activities associated with the project as applied for.

Transnet-owned (vacant) land is proposed to be utilised and development for residential use within the town of Postmasburg (an urban area). The housing development will occupy an area of up to 16 hectares and therefore the following listed activity is being

applied for environmental authorisation from DEA in terms of Listing Notice 1 of GNR 544:

*Activity 23: The transformation of undeveloped, vacant or derelict land to –
(i) residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares*

1. FEASIBLE AND REASONABLE ALTERNATIVES

“**alternatives**”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Regulation 22(2) (h) of GN R.543. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report, the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1		
Description:	Lat (DDMMSS)	Long (DDMMSS)
<p>A site alternative refers to the identification of more than one potential site which may be suitable for the establishment of a proposed development. However, Transnet propose to develop the houses on land it already owns, in close proximity to the Railway Station, such that employees can commute to and from the railway station. This specific site has been selected based on the following preferences:</p> <ul style="list-style-type: none"> » The need for accommodation of Transnet staff in Postmasburg is linked to the appropriateness of the town of Postmasburg as a location in relation to planned upgrades of Transnet's rail network. Postmasburg is centrally located between two of Transnet's main rail corridors namely: The Iron Ore Line (Sishen - Saldanha) and Manganese Line (Hotazel – Port Elizabeth and Ngqura), which means that staff housed at the proposed development site will quite easily be able to service both corridors. Both iron ore and manganese are vital commodities and contribute substantially to the South African economy. » The land is owned by Transnet and zoned for transportation. Use of this land parcel eradicates the need to acquire another piece of land through which Transnet will only further increase its spatial and ecological footprint. <p>Therefore the housing development project in the Postmasburg area is considered to be technically and socially desirable and no site alternatives exist or have been assessed in this report for the project.</p> <p>A more detailed motivation on the process of determining the land-use for this piece of land is contained in Appendix J1.</p>	28°18'47.61"S	23° 3'39.83"E
<p>Alternative 2</p> <p>Description:</p>	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S2

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A.

b) Layout alternatives

Layout / design alternatives were considered by Transnet's technical team. The technically preferred option was put forward and has been assessed in this report. No additional layout / design alternatives have been assessed within this Basic Assessment as the placement of the houses and associated infrastructure will be required to be in line with technical requirements.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives

No feasible alternative technologies exist for the proposed housing development.

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

None

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

e) No-go alternative

This is the option of Transnet not constructing the houses in Postmasburg. This option is assessed as the "no go alternative" in this Basic Assessment Report.

Paragraphs 3 – 13 below should be completed for each alternative.

2. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative	Size of the activity:	
Alternative A1 ² (preferred activity alternative by the developer):		160 000m ²
Alternative A2 (alternative activity alternative by the developer)		m ²
Alternative A3 (if any)		m ²

Or, for linear activities:

² "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative:

Alternative A1

Alternative A2

Alternative A3

Length of the activity:

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur)

Alternative:

Alternative A1 (preferred alternative)

Alternative A2

Alternative A3

Size of servitude:

	m
	m

3. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

YES	
	m

Describe the type of access road planned:

The site can be directly accessed from two points

- » Stasie Street/R385 intersection
- » 8th Avenue/R385 intersection

These intersections are also planned to be the two main entrances into the housing development and will be upgraded. Internal access roads (14) between clusters of houses are required. The designs of the internal access roads are included in Appendix A. Internal access road surface will be 80 mm or 60 mm concrete interlocking block paving. The internal access roads will have 2 lanes and will be up to 7.4m wide. Road signs will be installed as required. If required, special consideration will be given to speed limit signage, intersections, pedestrian crossings and taxi and bus stops.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

Designs for the internal access roads are included in **Appendix A**

4. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 km, a smaller scale e.g. 1:250 000 can

be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

A locality map has been included as part of this report as Appendix A.

5. LAYOUT/ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

A layout plan has been included as part of this report as Appendix A.
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6. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

The site does not occur within any of the following features:

- » watercourses;
- » the 1:100 year flood line;
- » ridges;
- » cultural and historical features;
- » areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- » critical biodiversity areas.

Therefore, no environmental sensitivity map applies to this site.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Site photographs have been included as part of this report as **Appendix B**.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and

must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

A facility illustration has been included as part of this report as **Appendix C**.

9. ACTIVITY MOTIVATION

Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?		NO	Please explain
The current zoning of the land for the residential development (owned by Transnet) is "transportation". The land for the housing development will require rezoning to residential use- as an extension of the residential area for the town of Postmasburg. Rezoning of the land to residential use is in process of being applied for to the Tsantsabane Local Municipality.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		Please explain
The Northern Cape Province Spatial Development Framework (NC PSDF) makes reference to the need for housing within the Province. The Northern Cape province faces a housing backlog. According to the Community Survey (2007), the district with the highest housing need is Pixley ka Seme, followed by Siyanda (now referred to as the ZF Mgcawu District Municipality), and then Frances Baard. Therefore, there is a need for development of houses within the region to cater for the population. Transnet's housing development will cater for Transnet employees, who are part of the demographic profile of the Northern Cape, and therefore the housing development will be in line with the need for housing as identified in the Northern Cape PSDF.			
(b) Urban edge / Edge of Built environment for the area	YES		Please explain
The site falls within the urban edge for the town of Postmasburg and will not result in an increase in the urban edge of the town.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).		NO	Please explain
<u>Tsantsabane Local Municipality's IDP:</u> The Tsantsabane Local Municipality's IDP identifies six key performance areas (KPAs) that are in line with KPAs identified by National Government. Of these, the following are relevant to the proposed housing development: » KPA 1: Service Delivery » KPA 2: Local Economic Development			

With reference to KPA 1, Service Delivery, the IDP identifies a lack of sufficient housing as a key challenge facing the municipality. With regard to KPA 2, Local Economic Development, the IDP notes that the local economy has huge potential for growth and development in line with the growth and development plan of national government.

The key issues contained in the IDP that are relevant to the proposed Transnet housing project include:

- » Infrastructure Development. Due to the increase in the population of Postmasburg, the capacity and level of current services are limited.
- » Housing: There is a shortage of housing in Postmasburg.
- » Provision of sport and recreation facilities and services.

Considering the shortage of houses in Postmasburg, Transnet's proposed housing development will contribute to solving the housing challenges faced by the Tsantsabane Local Municipality. Therefore the proposed housing development will not compromise the Tsantsabane Local Municipality's IDP in any way, and will in fact be supportive of the IDP.

Tsantsabane Local Municipality's SDF:

The SDF makes reference to the importance of railways (Section 5.2.2). The section states that the railway lines are mainly used by the mining sector as export facilities and the main line currently runs from Sishen through Sishen South to Saldanha Bay for export purposes. A rail network exists between Beeshoek and Sishen Mine alongside the R325 and a link will be constructed to a siding at the Beeshoek Mine from the Sishen South Project which is 14km to the south (Kumba Sishen South Project). The following railway stations are situated within the local municipality along the railway network:

- » Postmasburg Station;
- » Tsantsabane Station;
- » Groenwater Station;
- » Lohatlha Station;
- » Glosam Station;
- » Blinkklip Station.

Therefore, spatially, Transnet's railway network is a characterising component of the spatial setup of the municipality. Map 23 contained in the SDF provides an overview of the current and future land uses identified for Postmasburg. In terms of the site identified for the proposed Transnet housing development, the eastern most section of the site (the area adjacent to the offices of the Traffic Department) is identified as residential. The western section of the site is identified as suitable for the development of a park. The area to the south of the site is identified as a mixed use area, while the area to the west as industry. The Transnet-owned housing site is therefore identified

in the SDF as suitable for residential development. Therefore the proposed housing development will not compromise the Tsantsabane Local Municipality's SDF.		
(d) Approved Structure Plan of the Municipality	YES	Please explain
In terms of Section 36(1) of the Northern Cape Planning and Development Act (1998) the Tsantsabane Local Municipality has a policy called Scheme Regulations (2009) for land use control. The general objective of these regulations and accompanying zoning scheme is to determine the rights of use of all land within the boundaries of the area, and for control over the execution of these rights and the utilization of this land. The design of the houses will be in line with the Tsantsabane Local Municipality's Scheme Regulations (2009)		
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	Please explain
The Siyanda District Municipality (now known as ZF Mgcawu District Municipality) has compiled an Environmental Management Framework (EMF) (www.siyanda-dm.co.za), in which environmental concerns and conservation priorities within the municipality are listed and mapped. According to the EMF, the town of Postmasburg has been categorised and mapped as Zone 0 (Figure 3) in the EMF Environmental Sensitivity Index, indicating the site and town of Postmasburg as a low environmental sensitivity rating (as it is an urban area). In terms of the Conservation Planning, the site falls outside existing or proposed conservation areas or conservation priority areas (in terms of vegetation) within the Siyanda District Municipality (now referred to as the ZF Mgcawu District Municipality) (Figure 4). Therefore, based on the EMF, the proposed housing development in Postmasburg does not compromise the integrity of the existing environmental management priorities within the Siyanda District Municipality (now referred to as the ZF Mgcawu District Municipality).		

SIYANDA ENVIRONMENTAL MANAGEMENT FRAMEWORK – EMF REPORT

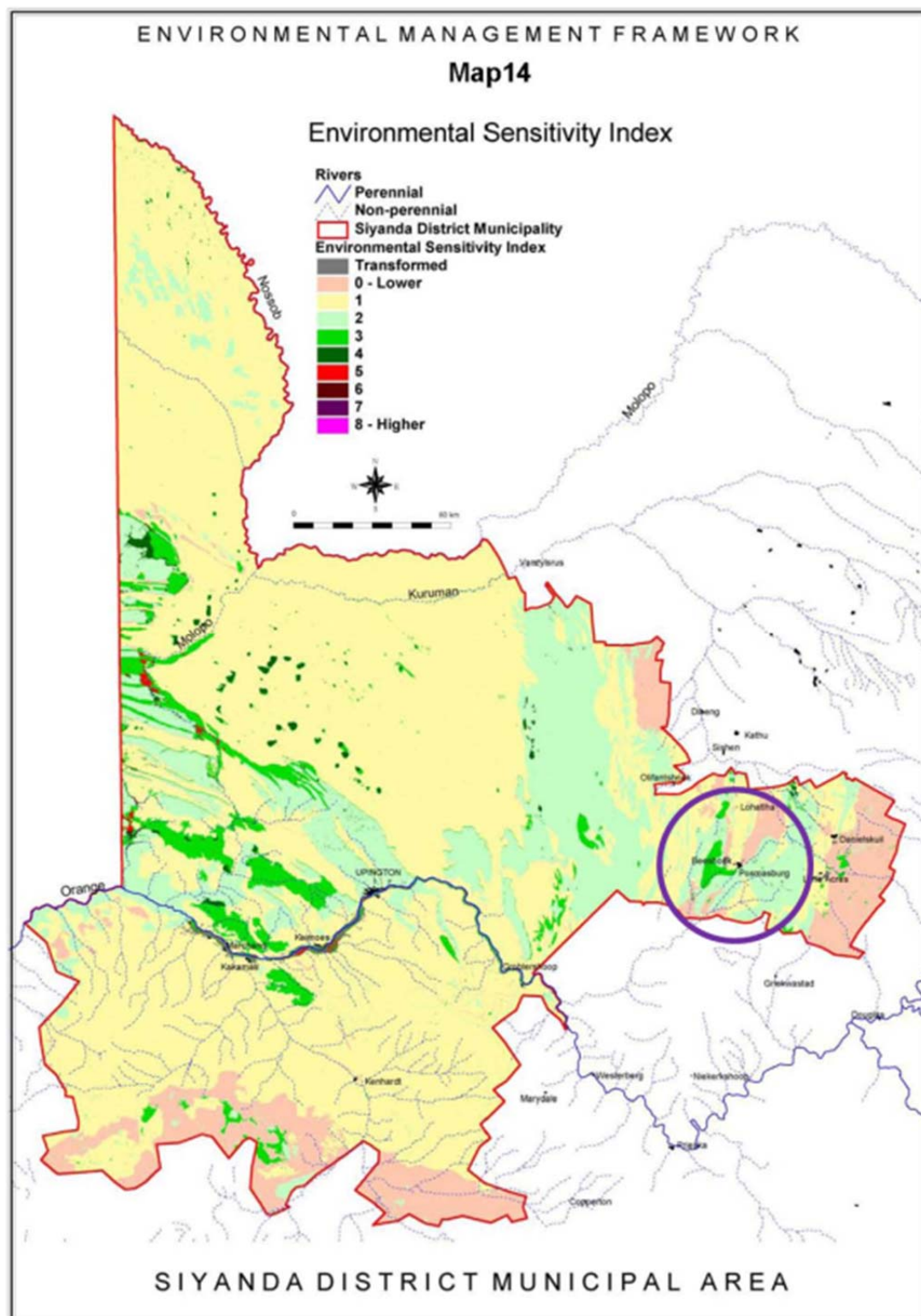


Figure 4: Extract from the Siyanda EMF: Environmental Sensitivity Index Map, indicating the site and town of Postmasburg as having a low environment sensitivity rating

SIYANDA ENVIRONMENTAL MANAGEMENT FRAMEWORK – EMF REPORT

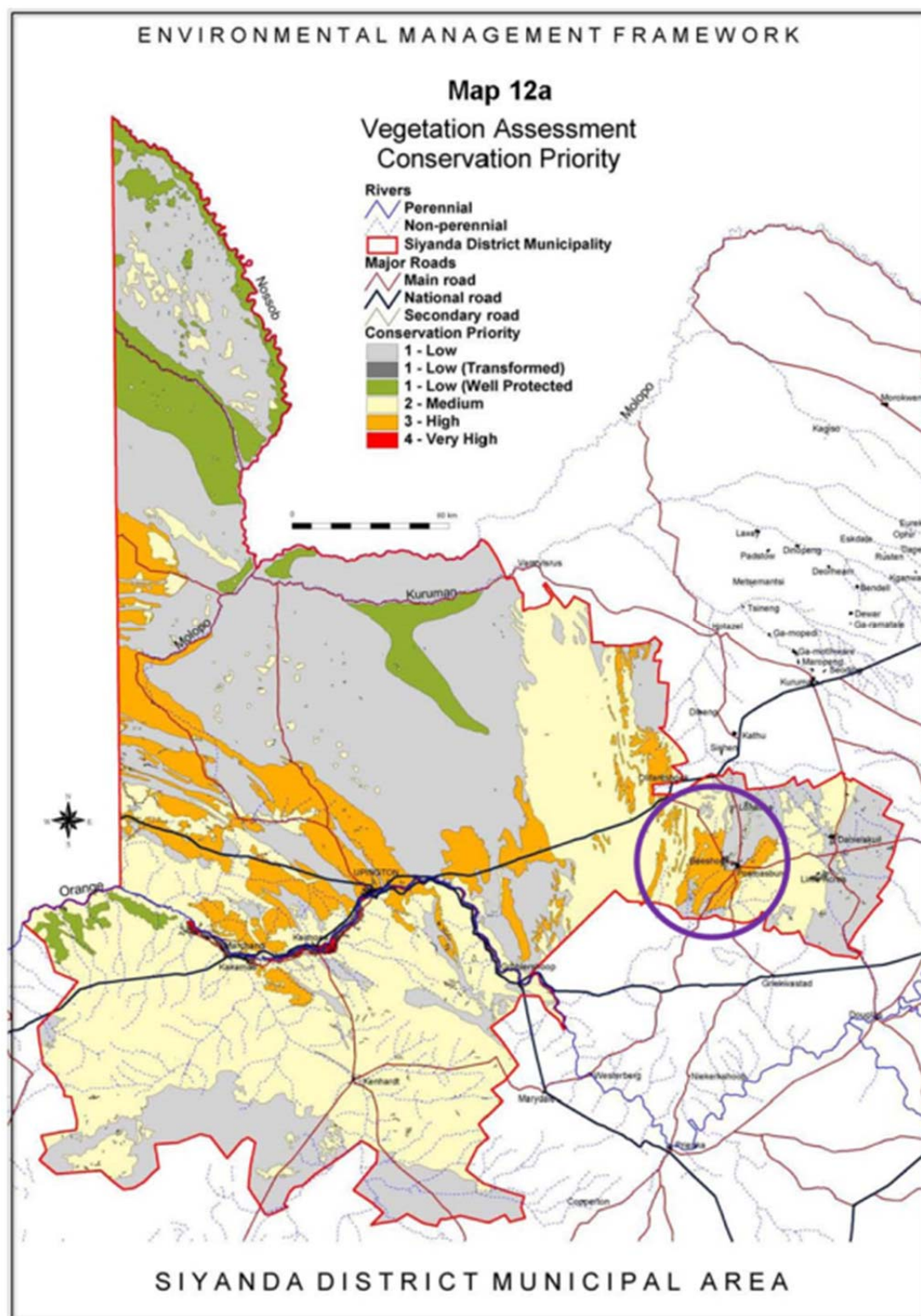


Figure 5: Extract from the Siyanda EMF: Vegetation Assessment: Conservation Priority Map, indicating the site and town of Postmasburg having a low conservation priority

(f) Any other Plans (e.g. Guide Plan)		NO	Please explain
None applicable.			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES		Please explain
<p>Considering the shortage of houses in Postmasburg, Transnet's proposed housing development will contribute to solving the housing challenges faced by the Tsantsabane Local Municipality. Therefore the proposed housing development will not compromise the Tsantsabane Local Municipality's IDP in any way, and will in fact be supportive of the IDP.</p> <p>The Transnet-owned housing site, with the exception of the area identified as a park, has been identified in the Tsantsabane Local Municipality's SDF as suitable for residential development. Therefore the proposed housing development will not compromise the Tsantsabane Local Municipality's SDF.</p>			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES		Please explain
<p>There is a need for formal housing in Postmasburg, due to the manganese and iron-ore mining industry in this region and associated rail transportation requirements for these two commodities. There is a growing local economy and number of people within the town; therefore there is a shortage of houses and accommodation, which needs to be addressed. In this regard, Transnet proposed to develop houses on their land for their employees and business which is related to the transport of the minerals via rail from source (the mine) to transport exchange points (such as ports) at a local, regional and national level. Therefore, the proposed housing development is appropriate and strategically important for Transnet, specifically.</p>			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix J.)	YES		Please explain
<p>Transnet is in discussion with the Tsantsabane Local Municipality to formulate a service agreement between the two parties for provision of services for water, sewage, waste</p>			

management and electricity. This is to be confirmed and obtained by Transnet and feedback from the Local Municipality will be included in the Final Basic Assessment Report.		
6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix J.)	NO	Please explain
Transnet is in discussion with the Tsansabane Local Municipality in preparation of a rezoning application for the land for the housing development. The requirement for services and the ability of the municipality to supply these will form part of this process. Feedback from the Local Municipality will be included in the Final Basic Assessment Report.		
7. Is this project part of a national programme to address an issue of national concern or importance?	NO	Please explain
Not applicable.		
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES	Please explain
The current site for the housing development is currently not utilised for any purpose and belongs to Transnet. The site is located in an urban area, in the town of Postmasburg (residential area). The land is currently zoned as transportation, as an extension of the Postmasburg Railway Station. The land is currently vacant and not used for any purpose. The land-use to the east of the site is residential. As discussed previously, the proposed housing development will fit into the current planning for the town of Postmasburg. All these factors favour the proposed land-use (residential) at this site.		
9. Is the development the best practicable environmental option for this land/site?	YES	Please explain
The land is currently vacant and not used for any purpose. The land-use to the east of the site is residential, and therefore the proposed housing development will fit into the land use within the local area. In addition, the project is in line with the current planning for the town of Postmasburg and this favours the proposed land-use (residential). Considering, the social needs for accommodation in Postmasburg (and specifically by Transnet) and the transformed / urban nature of the surrounding area, the housing development is the best practicable environmental option for this land/site.		
10. Will the benefits of the proposed land use/development outweigh the negative impacts	YES	Please explain

of it?			
The site for the proposed housing development is not pristine and is located in an urban area. Any negative environmental impacts caused during development of the project can be managed to acceptable levels. Development of houses will benefit Transnet employees (who are part of the community (who live, dwell and work in the region)). Therefore the social benefits of providing housing to Transnet staff will outweigh the negative environmental impacts (as assessed and explored in this report).			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		NO	Please explain
The land-use to the east of the site is residential, and therefore the proposed housing development will fit into the land use within the local area. In addition, the project is in line with the current planning for the town of Postmasburg and this favours the proposed land-use (residential).			
12. Will any person's rights be negatively affected by the proposed activity/ies?		NO	Please explain
The site for the housing development is vacant and belongs to Transnet.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		NO	Please explain
The site is located within the urban area for the town of Postmasburg and will not impact on the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES		Please explain
The housing development proposed by Transnet will contribute to achieving the objectives of both SIP 3 and 5 by ensuring the availability of human resources to service the manganese and iron ore corridors			
15. What will the benefits be to society in general and to the local communities?	Please explain		
<ul style="list-style-type: none"> » Transnet employees will benefit from proper formal housing. » The local municipality will benefit via the service level agreement and monetary contributions of Transnet into the municipality. » In general, temporary jobs will be created during the construction phase as well as a need for procurement of raw materials that can be sourced locally. This has a general economic benefit to the local community and local economy. 			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
The goal of the housing development project is to provide adequate housing to Transnet employees near the train station in Postmasburg. In addition, an expansion in infrastructure and rolling stock (locomotives and wagons) requires additional staff, who will also require housing facilities. The need for accommodation of Transnet staff in Postmasburg is linked to the appropriateness of the town of Postmasburg as a location in relation to planned upgrades of Transnet's rail network. Postmasburg is			

centrally located between two of Transnet's main rail corridors namely: The Iron Ore Line (Sishen - Saldanha) and Manganese Line (Hotazel – Port Elizabeth and Ngqura), which means that staff housed at the proposed development site will quite easily be able to service both corridors. Both iron ore and manganese are vital commodities and contribute substantially to the South African economy. Therefore the housing development project in the Postmasburg area is considered to be technically and socially desirable.

17.How does the project fit into the National Development Plan for 2030?

Please explain

The National Development Plan (NDP) 2030 aims to eliminate poverty and reduce inequality by 2030. The NDP refers to the Commission's Diagnostic Report, released in June 2011, which outlines South Africa's achievements and shortcomings since 1994. While the achievement of the objectives of the National Development Plan requires progress on a broad front, the plan identifies three priorities, namely:

- » Raising employment through faster economic growth
- » Improving the quality of education, skills development and innovation;
- » Building the capability of the State to play a developmental, transformative role.

The third priority can be viewed as relevant to the proposed Transnet housing development given Transnet's role as a parastatal organisation. The NDP also refers to the need to and importance of improving infrastructure. Infrastructure is not just essential for faster economic growth and higher employment. It also promotes inclusive growth, providing citizens with the means to improve their own lives and boost their incomes. Infrastructure is essential to development. The NDP also notes that the upgrading of the iron ore railway line to Saldanha be prioritised as infrastructure investments by government. The proposed Transnet housing project is linked to the up-grading of the railway line.

The NDP also highlights the need to reverse the spatial effects of apartheid, noting that a larger proportion of the population should live closer to places of work. In addition, strong measures should be taken to prevent further development of housing in marginal areas. The proposed location of the Transnet housing development addresses these issues, by providing housing for Transnet workers in close proximity to their place of work, namely the railway station, while at the same time ensuring that the development is not located in a marginal area of Postmasburg.

18.Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of Integrated Environmental Management have been taken into account in the development of the project by means of identifying, predicting and evaluating the actual and potential impacts on the environment (the basic assessment process). The risks, consequences, alternatives as well as options for mitigation of

activities have also been considered with a view to minimise negative impacts, maximise benefits and promote compliance with the principles of environmental management.

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

The principles of NEMA have been considered in this assessment through compliance with the requirements of the relevant legislation in undertaking the assessment of potential impacts, as well as through the implementation of the principle of sustainable development where appropriate mitigation measures have been recommended for impacts which cannot be avoided. In addition, the successful implementation and appropriate management of this proposed project will aid in achieving the principle of minimisation of pollution and environmental degradation.

This process has been undertaken in a transparent manner and all efforts have been made to involve interested and affected parties, stakeholders and relevant Organs of State such that an informed decision regarding the project can be made by the Regulating Authority.

The principles of environmental management as set out in section 2 of NEMA states that:

- » Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably;
- » Development must be sustainable socially (people), environmentally (planet) and economically (prosperity); and
- » Sustainable development requires the consideration of all the relevant factors.

These principles have been taken into account for this Basic Assessment report by means of identifying, predicting and evaluating the actual and potential impacts on the environment. The risks, consequences, alternatives as well as options for mitigation of activities have also been considered with a view to minimise negative impacts, maximise benefits, and promote compliance with the principles of environmental management.

10.APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable. Refer to **Table 1.1** below.

Table 1.1: Applicable Legislation, Policies and/or Guidelines

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
National Legislation			
National Environmental Management Act (Act No 107 of 1998)	<p>The Environmental Impact Assessment Regulations have been promulgated in terms of Chapter 5 of the Act. Listed activities which may not commence without an environmental authorisation are identified within these Regulations.</p> <p>In terms of S24(1) of NEMA, the potential impact on the environment associated with these listed activities must be assessed and reported on to the competent authority charged by NEMA with granting of the relevant environmental authorisation.</p> <p>In terms of GN R543, R544, R545 and R546 of 18 June 2010, a Basic Assessment Process is required to be undertaken for the proposed project.</p>	<p>Department of Environmental Affairs – competent authority</p> <p>Department of Environmental and Nature Conservation (DENC)- commenting authority</p>	The listed activities triggered by the proposed housing development have been identified and assessed in the Basic Assessment Process being undertaken. This Basic Assessment Report is required to be submitted to the competent authority in support of the application for authorisation.
National Environmental Management Act (Act No 107 of 1998)	<p>In terms of the Duty of Care Provision in S28(1) the project proponent must ensure that reasonable measures are taken throughout the life cycle of this project to ensure that any pollution or degradation of the environment associated with this project is avoided, stopped or minimised.</p> <p>In terms of NEMA, it has become the legal duty of a project proponent to consider a project holistically, and to consider the cumulative effect of a variety of impacts.</p>	Department of Environmental Affairs	While no permitting or licensing requirements arise directly by virtue of the proposed project, this section has found application during the Basic Assessment Process through the consideration of potential impacts (cumulative, direct, and indirect). It will

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
			continue to apply throughout the life cycle of the project.
Environment Conservation Act (Act No 73 of 1989)	National Noise Control Regulations (GN R154 dated 10 January 1992)	Department of Environmental Affairs Department of Environmental and Nature Conservation (DENC) Local Authorities	Noise impacts are expected to be associated with the construction phase of the project and are not likely to present a significant intrusion to the local community. Therefore is no requirement for a noise permit in terms of the legislation. On-site activities should be limited to 6:00am - 6:00pm, Monday – Saturday (excluding public holidays). Should activities need to be undertaken outside of these times, the surrounding communities will need to be notified and appropriate approval will be obtained from DEA and the Local Municipality.
National Water Act (Act No 36 of 1998)	Water uses under S21 of the Act must be licensed, unless such water use falls into one of the categories listed in S22 of the Act or falls under the general authorisation (and then registration of the water use is required). Consumptive water uses may include the taking of water from a water resource - Sections 21a and b. Non-consumptive water uses may include impeding or diverting of flow in a water course - Section 21c; and altering of bed, banks or characteristics of a watercourse -	Department of Water Affairs Provincial Department of Water Affairs	» A water use license (WUL) is required to be obtained if wetlands or drainage lines are impacted on, or if infrastructure lies within 500m of such features. Note that there are no water resources within

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
	Section 21i.		500m of the site. » Should water be abstracted from ground water/ a borehole on site for use within the development, a water use license may be required. Note that water is intended to be sourced from the Local Municipality.
Minerals and Petroleum Resources Development Act (Act No 28 of 2002)	Where a mineral in question is to be mined a mining permit or mining right may be required (e.g. materials from a borrow pit) in accordance with the provisions of the Act. Requirements for Environmental Management Programmes and Environmental Management Plans are set out in S39 of the Act.	Department of Mineral Resources	As no borrow pits are expected to be required for the construction of the housing development, no mining permit or right is required to be obtained.
National Environmental Management: Air Quality Act (Act No 39 of 2004)	Measures in respect of dust control (S32) – no regulations promulgated yet. Measures to control noise (S34) - no regulations promulgated yet, however there are draft standards published for public comment.	Department of Environmental Affairs	No permitting or licensing requirements arise from this legislation. The Act provides that an air quality officer may require any person to submit an atmospheric impact report if there is reasonable suspicion that the person has failed to comply with the Act.
National Heritage Resources Act (Act No 25 of 1999)	» Stipulates assessment criteria and categories of heritage resources according to their significance (S7). » Provides for the protection of all archaeological and paleontological sites, and meteorites (S35). » Provides for the conservation and care of cemeteries and	South African Heritage Resources Agency and Ngwao Bošwa ya Kapa Bokone (the Northern Cape Heritage Authority)	It is unlikely that any significant impacts on heritage resources will result from the construction of the proposed housing development as the

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
	<p>graves by SAHRA where this is not the responsibility of any other authority (S36).</p> <ul style="list-style-type: none"> » Lists activities which require developers any person who intends to undertake to notify the responsible heritage resources authority and furnish it with details regarding the location, nature, and extent of the proposed development (S38). » Requires the compilation of a Conservation Management Plan as well as a permit from SAHRA for the presentation of archaeological sites as part of tourism attraction (S44). 		<p>area has already been highly impacted.</p> <p>SAHRA Archaeology, Palaeontology & Meteorites (APM) Unit had no objection to the proposed development on the condition that if any evidence of archaeological sites or remains (e.g., remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during development activities, SAHRA APM Unit (Katie Smuts/Colette Scheermeyer 021 462 4502) must be alerted immediately, and a professional archaeologist and/or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance a Phase 2 rescue operation</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
			might be necessary.
National Environmental Management: Biodiversity Act (Act No 10 of 2004)	<ul style="list-style-type: none"> » Provides for the MEC/Minister to identify any process or activity in such a listed ecosystem as a threatening process (S53) » A list of threatened and protected species has been published in terms of S 56(1) - Government Gazette 29657. » Three government notices have been published, i.e. GN R 150 (Commencement of Threatened and Protected Species Regulations, 2007), GN R 151 (Lists of critically endangered, vulnerable and protected species) and GN R 152 (Threatened or Protected Species Regulations). » Provides for listing threatened or protected ecosystems, in one of four categories: critically endangered (CR), endangered (EN), and vulnerable (VU) or protected. The first national list of threatened terrestrial ecosystems has been gazetted, together with supporting information on the listing process including the purpose and rationale for listing ecosystems, the criteria used to identify listed ecosystems, the implications of listing ecosystems, and summary statistics and national maps of listed ecosystems (National Environmental Management: Biodiversity Act: National list of ecosystems that are threatened and in need of protection, (G 34809, GN 1002), 9 December 2011). » This Act also regulates alien and invader species. » Under this Act, a permit would be required for any activity which is of a nature that may negatively impact on the survival of a listed protected species. 	Department of Environmental Affairs	As the applicant will not carry out any restricted activity, as is defined in S1 of the Act, no permit is required to be obtained in this regard. The site is located in an urban area with bare soil and no natural, intact vegetation. No listed species or species of conservation concern were found on the site.
Conservation of Agricultural Resources Act (Act No 43 of 1983)	<ul style="list-style-type: none"> » Prohibition of the spreading of weeds (S5) » Classification of categories of weeds & invader plants (Regulation 15 of GN R1048) & restrictions in terms of where these species may occur. » Requirement & methods to implement control measures for 	Department of Agriculture	This Act will find application throughout the life cycle of the project. In this regard, soil erosion prevention and soil conservation strategies must

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
	alien and invasive plant species (Regulation 15E of GN R1048).		be developed and implemented. In addition, a weed control and management plan must be implemented. No permit is required for these activities.
National Forests Act (Act No. 84 of 1998)	According to this act, the Minister has declared a tree, group of trees, woodland or a species of trees as protected. The prohibitions provide that 'no person may cut, damage, disturb, destroy or remove any protected tree, or collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a licence granted by the Minister'.	National Department of Forestry	There are no known protected trees on the site therefore no permit is required.
National Veld and Forest Fire Act (Act 101 of 1998)	In terms of S12 the applicant must ensure that the firebreak is wide and long enough to have a reasonable chance of preventing the fire from spreading, not causing erosion, and is reasonably free of inflammable material. In terms of S17, the applicant must have such equipment, protective clothing, and trained personnel for extinguishing fires.	Department of Agriculture, Forestry and Fisheries (DAFF)	While no permitting or licensing requirements arise from this legislation, this Act will find application during the construction and operational phase of the project related to the use of firebreaks.
Hazardous Substances Act (Act No 15 of 1973)	This Act regulates the control of substances that may cause injury, or ill health, or death due to their toxic, corrosive, irritant, strongly sensitising or inflammable nature or the generation of pressure thereby in certain instances and for the control of certain electronic products. To provide for the rating of such substances or products in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, modification, disposal or dumping of such substances and products. Group I and II: Any substance or mixture of a substance that	Department of Health	It is necessary to identify and list all the Group I, II, III, and IV hazardous substances that may be on the site and in what operational context they are used, stored or handled. If applicable, a license is required to be obtained from the Department of Health.

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
	<p>might by reason of its toxic, corrosive etc., nature or because it generates pressure through decomposition, heat or other means, cause extreme risk of injury etc., can be declared as Group I or Group II substance</p> <p>Group IV: any electronic product; and</p> <p>Group V: any radioactive material.</p> <p>The use, conveyance, or storage of any hazardous substance (such as distillate fuel) is prohibited without an appropriate license being in force.</p>		
Subdivision of Agricultural Land Act (Act No 70 of 1970)	Details land subdivision requirements and procedures. Applies for subdivision of all agricultural land in the province	Department of Agriculture	No subdivision of agricultural land proposed as the site is not located on agricultural land.
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)	<p>The Minister may by notice in the <i>Gazette</i> publish a list of waste management activities that have, or are likely to have, a detrimental effect on the environment.</p> <p>The Minister may amend the list by –</p> <ul style="list-style-type: none"> » Adding other waste management activities to the list. » Removing waste management activities from the list. » Making other changes to the particulars on the list. <p>In terms of the Regulations published in terms of this Act (GN 718), A Basic Assessment or Environmental Impact Assessment is required to be undertaken for identified listed activities.</p> <p>Any person who stores waste must at least take steps, unless otherwise provided by this Act, to ensure that:</p> <ul style="list-style-type: none"> » The containers in which any waste is stored, are intact and not corroded or in » Any other way rendered unfit for the safe storage of waste. » Adequate measures are taken to prevent accidental 	<p>National Department of Water and Environmental Affairs</p> <p>DENC</p>	<p>As no waste disposal site is to be associated with the proposed project, no permit is required in this regard.</p> <p>Waste handling, storage and disposal during construction and operation is required to be undertaken in accordance with the requirements of the Act, as detailed in the EMPr.</p> <p>The volumes of waste to be generated on the site during construction and operation of the facility will not require a waste management license (provided these remain below the prescribed thresholds – i.e. 100m³ of general waste</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
	<p>spillage or leaking.</p> <ul style="list-style-type: none"> » The waste cannot be blown away. » Nuisances such as odour, visual impacts and breeding of vectors do not arise; and » Pollution of the environment and harm to health are prevented. 		and 35m ³ of hazardous waste).
National Road Traffic Act (Act No 93 of 1996)	<ul style="list-style-type: none"> » The technical recommendations for highways (TRH 11): "Draft Guidelines for Granting of Exemption Permits for the Conveyance of Abnormal Loads and for other Events on Public Roads" outline the rules and conditions which apply to the transport of abnormal loads and vehicles on public roads and the detailed procedures to be followed in applying for exemption permits are described and discussed. » Legal axle load limits and the restrictions imposed on abnormally heavy loads are discussed in relation to the damaging effect on road pavements, bridges, and culverts. » The general conditions, limitations, and escort requirements for abnormally dimensioned loads and vehicles are also discussed and reference is made to speed restrictions, power/mass ratio, mass distribution, and general operating conditions for abnormal loads and vehicles. Provision is also made for the granting of permits for all other exemptions from the requirements of the National Road Traffic Act and the relevant Regulations. 	<ul style="list-style-type: none"> » South African National Roads Agency Limited (national roads) » Provincial Department of Transport 	<p>An abnormal load/vehicle permit may be required to transport the various components to site for construction. Route clearances and permits will be required for any vehicles carrying abnormally heavy or abnormally dimensioned loads.</p> <p>Transport vehicles exceeding the dimensional limitations (length) of 22m.</p> <p>Depending on the trailer configuration and height when loaded, some of the components may not meet specified dimensional limitations (height and width).</p>
Promotion of Access to Information Act (Act No 2 of 2000)	All requests for access to information held by state or private body are provided for in the Act under S11.	Department of Environmental Affairs	No permitting or licensing requirements.
Promotion of Administrative Justice Act (Act No 3 of 2000)	<p>In terms of S3 the government is required to act lawfully and take procedurally fair, reasonable, and rational decisions.</p> <p>Interested and affected parties have a right to be heard.</p>	Department of Environmental Affairs	No permitting or licensing requirements.

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
South African National Building Regulations	South Africa's National Building Regulations were originally produced as a set of functional guidelines for anybody building any type of structure.	The Department of Trade & Industry.	<p>All buildings will be single-storied load bearing building structures which will be constructed in compliance with the criteria set out in the National Building Regulations SANS 10400 and, where applicable, SANS 204.</p> <p>All buildings work will comply with South African, as well as the local Building Regulations, SABS Code of Practice, local by-laws and all SHE requirements. This is including, but not limited to, SANS 10400-XA – Energy usage in buildings</p>
Provincial Legislation			
Northern Cape Nature Conservation Act, Act No. 9 of 2009	<p>This Act provides for the sustainable utilisation of wild animals, aquatic biota and plants; provides for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora; provides for offences and penalties for contravention of the Act; provides for the appointment of nature conservators to implement the provisions of the Act; and provides for the issuing of permits and other authorisations. Amongst other regulations, the following may apply to the current project:</p> <ul style="list-style-type: none"> » Boundary fences may not be altered in such a way as to prevent wild animals from freely moving onto or off of a property; » Aquatic habitats may not be destroyed or damaged; » The owner of land upon which an invasive species is found 	Provincial Department of Environmental Affairs	<p>A permit is required for any activities which involve species listed under Schedule 1 or 2. A permit would also be required to destroy or translocate any nationally or provincially listed species from the site. A single integrated permit, which covers all of these permitting requirements as well as meets ToPS regulations, is used.</p> <p>No provincially or national</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
	<p>(plant or animal) must take the necessary steps to eradicate or destroy such species.</p> <p>» The Act provides lists of protected species for the Province.</p>		protected species occur on the site, as it located in a disturbed, urban area containing bare soil and limited vegetation.
Northern Cape Planning and Development Act (Act 7 of 1998)	Provides for the overall framework and administrative structures for planning throughout the Northern Cape.	Relevant Municipality Local	A land development applicant who wishes to establish a land development area must comply with procedures set out in the Act.
Local Legislation/ Policies / Guidelines			
Siyanda District Municipality Environmental Management Framework	The Environmental Management Framework (EMF) deals with environmental concerns and conservation priorities within the municipality. According to the EMF, the town of Postmasburg has been categorised and mapped as Zone 0 (Figure 3) in the EMF Environmental Sensitivity Index, indicating the site and town of Postmasburg as a low environment sensitivity rating (as it is urban area). In terms of the Conservation Planning, the site falls outside existing/ proposed conservation areas or conservation priority areas (in terms of vegetation) within the Siyanda District Municipality (Figure 4). Therefore, based on the EMF, the proposed housing development in Postmasburg does not compromise the integrity of the existing environmental management priorities within the Siyanda District Municipality.	Siyanda District Municipality (now referred to as the ZF Mgcawu District Municipality).	None, guideline/ environmental management document.
Tsantsabane Local Municipality: Scheme Regulations Of 2009	<p>The Tsantsabane Local Municipality: Scheme Regulations Of 2009 was promulgated in terms of Sect. 36(1) of the Northern Cape Planning and Development Act (1998).</p> <p>This document provides regulations, process and requirements for land use control within the municipality. The Council's zoning scheme consists of the following components:</p>	Tsantsabane Municipality Local	» Rezoning for the housing development to be applied for from the municipality, in line with these regulations.

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
	<p>a) the scheme regulations; b) the zoning map(s), c) the zoning register, and d) Procedure and requirements for applications.</p> <p>An application for rezoning will be required for the housing development, due to change in the land-use from "transportation" to "residential".</p> <p>Restrictions apply, based on the category of residential development (Residential zone I – V). Land Uses Restrictions include for a Residential zone II re as follows:</p> <ul style="list-style-type: none"> » Density: at most 30 units per gross hectare or a 4: 1 ratio with regard to the surrounding density of residential units, whichever allows the lowest number of units, provided that a group site does not exceed 3 hectares and provided that three sites intended for group housing may not be adjacent to each other. In specific cases (that is, where group housing sites were originally planned as such and open spaces and/or streets are supplied in a suitable manner and do not have to be included in the subdivision of the site) not more than 40 units per gross hectare. » Height: at most 8m above the natural ground level directly beneath any particular point or portion of the building (also see the definition of group housing and also clause 4.16) » Building lines: the street building line may be zero, but if necessary for safe traffic movements or for other reasons like aesthetics and character of the development in the area, a street building line of 2m may be imposed. The street building line with regard to the garage is 5m, or alternatively the design should be such that any motor vehicle can be safely parked on the property, outside the street reserve when the garage door is closed. Except as 		

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
	<p>may be necessary for service mains, the building line with regard to the rear boundary and side boundaries can also be zero. However, where this zone borders another zone (Open space zone excluded), a building line of 2m shall apply with regard to the rear and side boundaries.</p> <ul style="list-style-type: none"> » Parking: at least 2 parking bays per group house. Both parking bays may be provided on the group erf, or a portion of the requirement for the project may be provided communally or the entire requirement may be provided in the form of communal parking, provided that at least 50% of the parking bays shall be covered. » Street widths: for a private or public street at least 10m reserve, but 8m wide in cases of a cul-de-sac which does not serve more than 14 group houses. » Communal open space: at least 80m² per residential unit. These open spaces exclude streets, private outdoor space and communal service areas. This requirement shall fall away if Council is of the opinion that sufficient open space is available. » Private outdoor space: at least 40% of the gross floor area of the relevant unit in a form of which the sides do not exceed a ratio of 2.5:1. » Design: the purpose reflected in the definition of group housing (as included in the definition) should be followed and implemented very closely. » Advertisement and publicity: All boards, signs and other forms of advertising and publicity must comply with Council's advertising policy. 		
Tsantsabane Local Municipality: Spatial Development Framework	The Spatial Development Framework (SDF) supports the Municipality's Vision as indicated in the IDP document and is intended to promote an urban and rural development that will spatially suitable within the municipality.	Tsantsabane Local Municipality	None, generally applicable, to guide spatial developments in the municipality.

Legislation	Applicable Requirements	Relevant Authority	Compliance Requirements
Tsantsabane Local Municipality: Integrated Development Programme	<p>The Tsantsabane Local Municipality's IDP identifies six key performance areas (KPAs) that are line with KPAs identified by National Government. Of these the following are relevant to the proposed housing development:</p> <ul style="list-style-type: none"> » KPA 1: Service Delivery » KPA 2: Local Economic Development 	Tsantsabane Local Municipality	None; generally applicable, to guide plans, policies and programmes based on the development needs within the municipality.

Various South African National Standards have been considered in the planning and design of the project including:

- » SANS 10100: The structural use of concrete
- » SANS 10160: The general procedures and loadings to be adopted in the design of buildings
- » SANS 10161: The design of foundations for buildings
- » SANS 10163: The structural use of timber
- » SANS 10164: The structural use of masonry
- » SANS 1491: Portland cement
- » SANS 10400: The application of the national building regulations
- » SANS 204: South African National Standard – Energy efficiency in buildings
- » ISO 9001: Quality management systems: Requirements

11.WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES

If YES, what estimated quantity will be produced per month?

~60 tonnes
during the
construction
phase

How will the construction solid waste be disposed of (describe)?

The solid waste will be disposed of at a waste disposal facility by a suitably qualified contractor.

Where will the construction solid waste be disposed of (describe)?

The solid waste will be disposed of at the closest registered waste/ landfill facility.

Will the activity produce solid waste during its operational phase?

YES

If YES, what estimated quantity will be produced per month?

60m³ per
month

How will the solid waste be disposed of (describe)?

Solid waste / household waste (domestic waste) from each household will be collected and disposed of by the local municipality.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

Postmasburg Landfill Site

Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

NO

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility?

NO

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

NO

If YES, what estimated quantity will be produced per month?

m³

Will the activity produce any effluent that will be treated and/or disposed of on site?

NO

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

NO

If YES, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Not applicable.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

	NO

If YES, is it controlled by any legislation of any sphere of government?

If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the emissions in terms of type and concentration:

Minor dust may occur during the construction of the houses and associated infrastructure, but will not exceed acceptable limits.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

	NO
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

	NO

If YES, is it controlled by any legislation of any sphere of government?

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the noise in terms of type and level:

Noise may be generated by vehicle movement during construction, but would not exceed acceptable limits. The addition of houses into the area will not change the existing noise levels significantly.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

YES	NO
YES	NO

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

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13.ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

The proposed houses have been designed according to the SANS 204 - Energy efficiency guidelines, i.e. for insulated cavity walls, roof insulation, maximum 15% glazing, north orientation, etc. The rooms that are used most (main bedrooms and lounge, classrooms and offices) and the major areas of glazing have been designed to be placed on the northern side of the building (as much as is possible) to allow solar heat to penetrate the glazing during winter months.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

None.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section?

NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

**Property
description/ph
ysical address:**

Province	Northern Cape Province
District Municipality	Siyanda District Municipality (now referred to as the ZF Mgcau District Municipality)
Local Municipality	Tsansabane Local Municipality
Ward Number(s)	6
Farm name and number	<ul style="list-style-type: none"> » Portion of the Remainder of ERF 1 » Remainder of ERF 3604 » ERF 3666 (Portion of ERF 3604) » Erf 3618 (Portion of ERF 3604) » ERF 3665 (Portion of ERF 3604) » Remainder of ERF 1249 (Portion of ERF 1), » ERF 3664 (Portion of ERF 3604) » Remainder of ERF 763 (Portion of ERF 1)
Portion number	As above
SG Codes	C03100030000000100000 C03100030000360400000 C03100030000366600000 C03100030000361800000 C03100030000366500000 C03100030000124900000 C03100030000366400000 C03100030000076300000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Transportation

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

YES

The site for the housing development will be rezoned to a residential land-use.

A. SITE Alternative S1 (Preferred Option)

A1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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A2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>		<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>

A3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	NO	YES NO	YES NO
Dolomite, sinkhole or doline areas	YES	YES NO	YES NO
Seasonally wet soils (often close to water bodies)	NO	YES NO	YES NO
Unstable rocky slopes or steep slopes with loose soil	NO	YES NO	YES NO
Dispersive soils (soils that dissolve in water)	NO	YES NO	YES NO
Soils with high clay content (clay fraction more than 40%)	NO	YES NO	YES NO
Any other unstable soil or geological feature	NO	YES NO	YES NO
An area sensitive to erosion	NO	YES NO	YES NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

Note on Dolomite, sinkhole or doline areas:

Regarding the occurrence of dolomite, sinkhole or doline areas: a preliminary geotechnical investigation was undertaken for the site by Spence Jones (Pty) Ltd to establish the engineering properties of the underlying ground, to recommend civil engineering and foundation solutions, and to advise regarding NHBRC site classifications. The site is underlain by dolomitic terrain. The investigation into the dolomitic stability has been completed. The consulting engineer (MSJ) has recommended that a geophysics gravity survey and follow up percussion drilling be done before the dolomitic area designation can be determined in accordance with NHBRC recommendations. . The trial pits and DCP results have however shown the ground conditions to be competent, the site is already in use for housing, and light, single storey housing units are planned. Thus normal foundations in accordance with the deemed-to-satisfy rules of SANS 10400 have been allowed for at this stage. This will be confirmed with the results of the dolomitic survey before drawings are issued for construction.

Description of the underlying geology of the site

A map showing the underlying geology of the site is provided in Figure 5. The geological map of the general area within which the site occurs indicates that the site is underlain by a mantle of colluvium overlying residual calcrete soils and residual dolomite which in turn is overlying hardpan calcrete and dolomite of the Campbell Rand Formation, Ghaap Group. In some of the trial pits the upper colluvial layer is absent and the residual soil extends from surface. Fill was only found in TP8 from 0.0 to 0.35 metres below ground level. In summary the following generalised ground conditions can be expected (depth to base of layer):

- » 0.0-0.15m: Loose silty SAND with gravel. Colluvium.
- » 0.15-1.45m: Loose to very dense silty sand with gravel or silty sandy gravel. residual calcrete/residual dolomite.
- » +1.45m: Hardpan calcrete/soft rock dolomite.

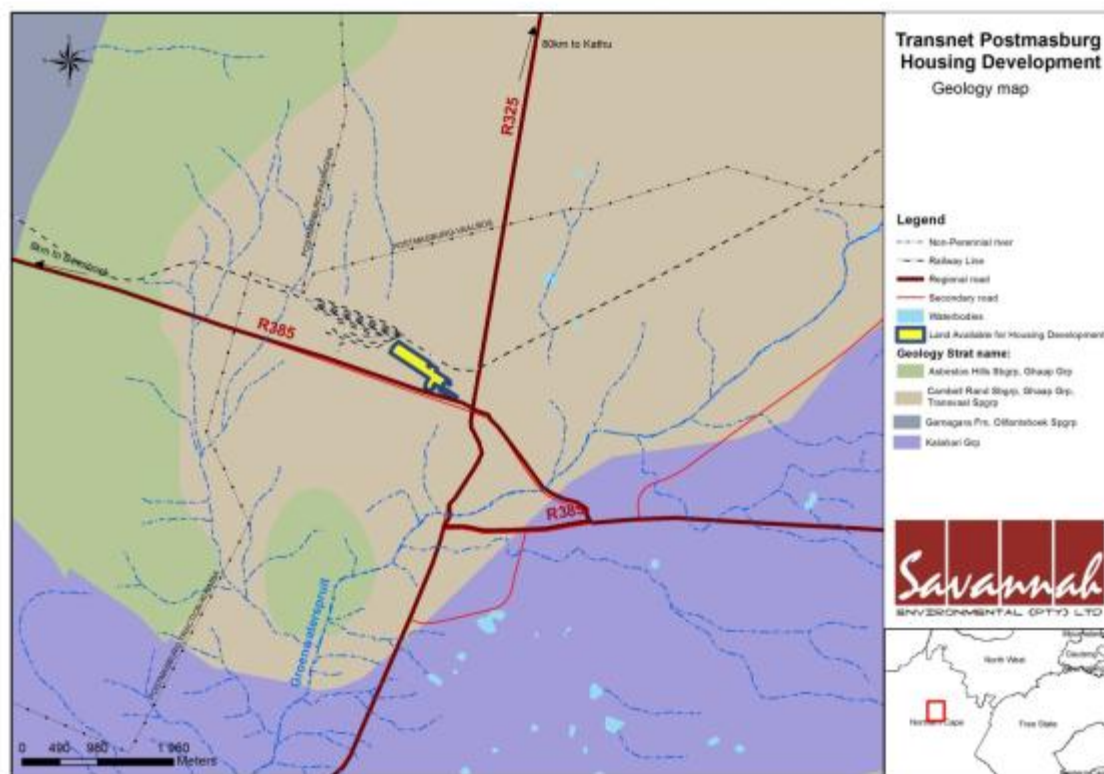


Figure 5: Map showing the underlying geology of the site and surrounding area

Soils

A soil type map for the site is shown in Figure 6. The soil type for the site is defined as AG111 soil type (shallow soils with underlain by hard or weathering rock). Figure 7 indicates a shallow excavation on the site, which indicates the soil profile of the site, characterised by slightly moist greyish brown loose intact silty fine grained sand.

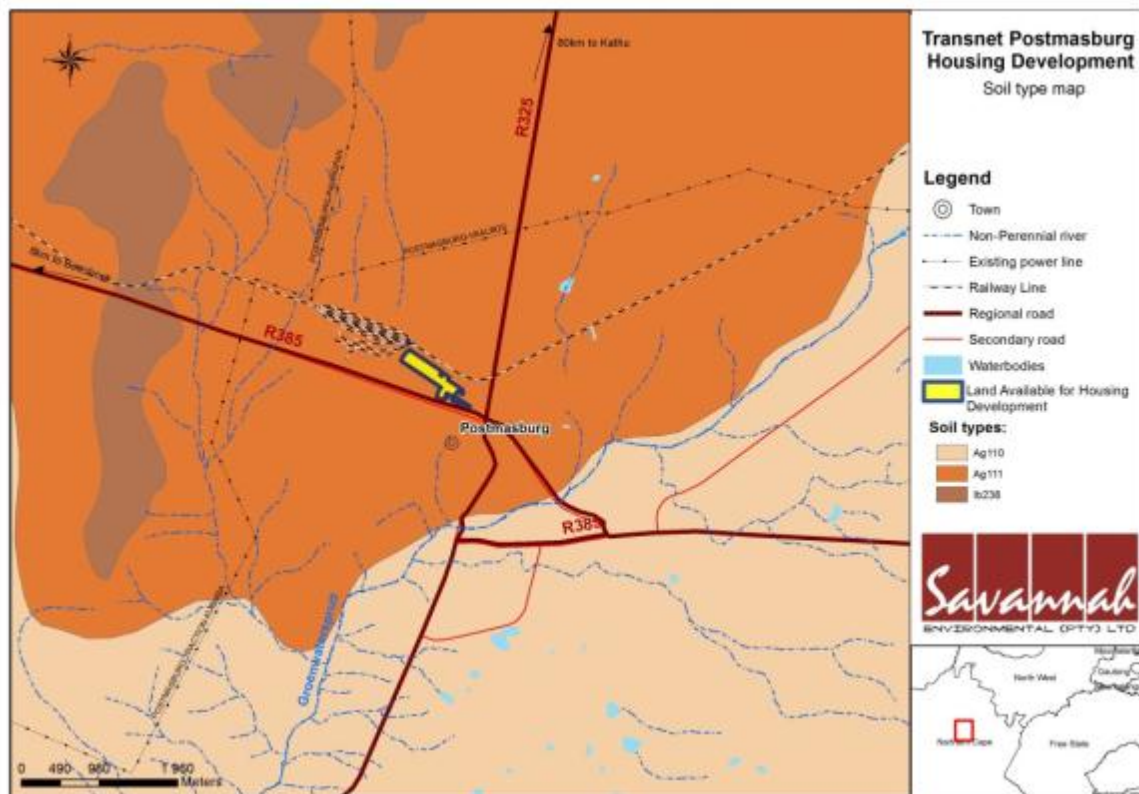


Figure 6: Soil types map



Figure 7: Picture of a shallow excavation taken on the site, which shows the soil profile

A4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

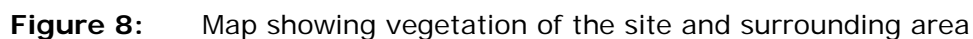
Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an "E" is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

The site for the proposed housing development is located in an urban area within the town of Postmasburg. The site is not in a pristine state and is currently vacant land, with bare, exposed soils in most areas and scattered alien vegetation. The ground cover comprises of bare soils due to the area being historically used for houses in some parts (with old foundations present in some areas). The vegetation and trees that do occur on the site comprises of alien species including:

- » *Eucalyptus globulus* (Blue Gums Trees);
- » *Prosopis glandulosa* (commonly called Prosopis or Mesquite Trees);
- » *Schinus molle* (Pepper tree),
- » *Opuntia ficus-indica* (Prickly pear); and
- » *Grevillea robusta* (Australian silky oak).

The site falls within the Savannah biome. Originally, the site would have been characterised by Kuruman Thornveld vegetation (Refer to Figure 8). No intact, significant areas containing Thornveld vegetation worth conserving were identified on the site. The site currently comprised of vacant land, with bare, exposed soils, grasses and scattered alien vegetation.



Indicate the surface water present on and or adjacent to the site and alternative sites.

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

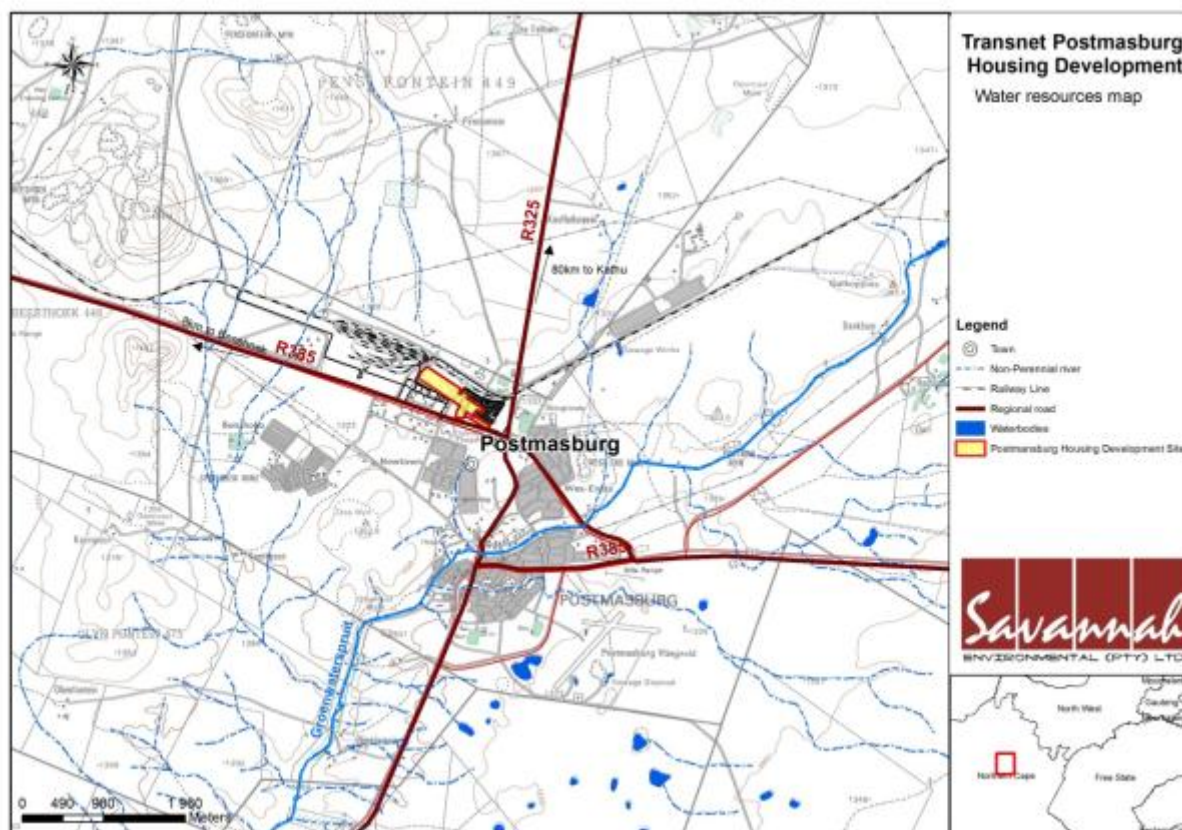


Figure 9: Map showing vegetation of the site and surrounding area

A6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture (Sheep Farming)
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial ^{AN}	Train station or shunting yard^N	Mountain, koppie or ridge
Heavy industrial ^{AN}	Railway line^N	Museum
Power station	Major road (4 lanes or more) ^N	Historical building
Office/consulting room	Airport ^N	Protected Area

Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Agriculture

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity?

The Postmasburg Train station or shunting yard and associated railway siding and railway lines are located on the north-western side of the proposed housing development. The housing development will not impact on the operations of the Postmasburg Train station and associated infrastructure. The Postmasburg Train station and associated infrastructure will not significantly impact on the housing development.

If any of the boxes marked with an "AN" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)		NO
Core area of a protected area?		NO
Buffer area of a protected area?		NO
Planned expansion area of an existing protected area?		NO
Existing offset area associated with a previous Environmental Authorisation?		NO
Buffer area of the SKA?		NO

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

A7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:		NO

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

Will any building or structure older than 60 years be affected in any way?

NO

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

NO

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

SAHRA was consulted at the start of the Basic assessment process and requested to inform the developer if any heritage studies will be required. SAHRA confirmed that no Heritage or Palaeontological Impact Assessment is required for this project. SAHRA advised that it is unlikely that any significant impacts on heritage resources will result from the construction of the proposed housing development as the area has already been highly impacted. SAHRA Archaeology, Palaeontology & Meteorites (APM) Unit had no objection to the proposed development on the condition that if any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during development activities, SAHRA APM Unit (Katie Smuts/Colette Scheermeyer 021 462 4502) must be alerted immediately, and a professional archaeologist and/or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance a Phase 2 rescue operation might be necessary.

D. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

The site is situated within the Tsantsabane Local Municipality, which forms part of the greater Siyanda District Municipality (now referred to as the ZF Mgcawu District Municipality). The 2001 Census data indicates that out of a total labour force of 10 811 in 2001, ~ 59 % (6 344) were employed, 41% (4 467) were unemployed. The most important economic sectors in the Tsantsabane Local Municipality in terms of employment were Community/Social/ Personal (25%), Wholesale and Retail (13%), Private Households (12%), Mining and Quarrying (11%) and Agriculture/Forestry and Fishing (8%). Employment in the government sector therefore represents the most important source of employment in the municipality.

The Tsantsabane Annual Report (2009/2010) indicates that the official unemployment rate within the municipality is ~23%, which is lower than the national (35%) and provincial (29%) unemployment rates. The Tsantsabane Annual Report (2009/2010) also notes that the mining sector was the largest employer (36% of formal sector employment), followed by Commercial Services sector (20%), and the Agricultural sector (12%). These figures differ from the Census data contained in the Tsantsabane IDP. However, it should be noted that the IDP data is based on the 2001 Census data and this data may have been updated. The informal sector provides jobs for approximately 900 people (Tsantsabane Annual Report, 2009/2010).

The 2011 Census data indicates that the unemployment rate in both the district and local municipality decreased for the ten year period between 2001 and 2011. The unemployment rate decreased by 7.% within the Tsantsabane Local Municipality.

Economic profile of local municipality:

In terms of economic importance, the Northern Cape's share of the country's Gross Domestic Product (GDP) in 2002 was 2%, the lowest contribution of the nine provinces. However, although the Northern Cape Province has the smallest economy of the nine provinces, Gross Domestic Product of the Region (GDPR) per capita is higher than the national average. In terms of economic activities, the economy of Northern Cape is heavily dependent on the primary sectors of the economy, which in 2002 made up 31.0% of GDPR. The largest sector is mining which has declined in contribution to the GDPR from 25.8% in 1996 to 23.7% in 2002. Agriculture, on the other hand, increased in its contribution from 6.2% to 7.3%. Large scale irrigation agriculture operations are based along the Gariep, Harts and Vaal rivers. The NCP economy is the limited amount of processing of the primary commodity output in mining and agriculture that takes place in the Northern Cape. This is reflected in the fact that manufacturing contributes only 4.2% towards GDPR. All the industries in the secondary sector have decreased in their contribution to the GDPR, with electricity and water sector showing the greatest decrease of 0.7% and the construction industry making the lowest contribution of 1.9% to the GDPR of the Northern Cape. At the same time the contribution to regional GDPR by industries in the tertiary sector increased, with the exception of the wholesale and retail industry, which decreased by

1.1%.

In terms of household income, 12% of all households within the Tsantsabane Local Municipality (TLM) had no income while a further 26% earned less than R 800 per month (R 800 per month is recognised as the poverty line). Based on this information 38 % of all households in the TLM earned less than R 800 per month. Household income levels in the TLM are therefore low. The IDP also notes that a large number of households are dependent upon government grants as their sole source of income. The buying power of the average household in the municipal area is extremely low, which would inevitably impact on the ability to pay for services etc. (Tsantsabane IDP, 2005).

Level of education:

In terms of education levels, the 2001 Census data indicated that ~ 24% of the population had no schooling and or had not completed primary school. Seventeen percent of the population had completed secondary school, while only 9% has completed Grade 12 and only 2% had gone on to achieve a higher qualification. The education levels in the TLM are therefore low, which could impact negatively on the local employment creation opportunities associated with the proposed housing development, in the event that skilled labour is required. The Tsantsabane IDP notes that the majority of the population are only qualified to perform unskilled or semi-unskilled work.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	~R317 – R320 million
What is the expected yearly income that will be generated by or as a result of the activity?	N/A
Will the activity contribute to service infrastructure?	YES
Is the activity a public amenity?	YES
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	55-60
What is the expected value of the employment opportunities during the development and construction phase?	Unknown
What percentage of this will accrue to previously disadvantaged individuals?	Unknown
How many permanent new employment opportunities will be created during the operational phase of the activity?	Nil
What is the expected current value of the employment opportunities during the first 10 years?	N/A

What percentage of this will accrue to previously disadvantaged individuals?	N/A
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E. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

- a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

No Fine-Scale Conservation Planning/CBA mapping has been conducted for the area. There are no protected areas in Tsantsabane Local Municipality. There are no Ramsar sites within the Tsantsabane Municipality

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	N/A

- b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0%	N/A
Near Natural (includes areas	0%	N/A

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
with low to moderate level of alien invasive plants)		
Degraded (includes areas heavily invaded by alien plants)	30%	Alien vegetation is present on the site.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	70%	Urban area, surrounded by roads, houses, buildings

c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems					
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)		Estuary		Coastline	
	Endangered						
	Vulnerable						
	Least Threatened						
			NO		NO		NO

The site falls within the Kimberley Thornveld vegetation type which is classified as Least Threatened with 82.3% of the original extent still intact, however only 2% is formally conserved.

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

Vegetation:

The site for the proposed housing development is located in an urban area within the

town of Postmasburg. The vegetation map (Mucina & Rutherford 2006) for the study area is depicted in Figure 8. The site falls within the Savannah biome. Originally, the site would have been characterised by Kuruman Thornveld vegetation (Refer to **Figure 8**). Approximately 19.05% of Tsantsabane Local Municipality is comprised of this vegetation type.

The Kuruman Thornveld vegetation type is classified as Least Threatened. According to Mucina and Rutherford (2006), the Kuruman Thornveld vegetation type can generally be associated with flat, rocky plains, as well as some gentle sloping hills. In its undisturbed state, the Kuruman Thornveld vegetation type is characterised by a well-developed, closed shrub layer and a well-developed open trees (Mucina & Rutherford, 2006). Other important plant species occurring in this vegetation type include: *Acacia mellifera* subsp. *detinens*, *Boscia albitrunca*, *Grewia flava*, *Lycium hirsutum*, *Tarchonanthus camphoratus*, *Gymnosporia buxifo/ia*, *Acacia hebeclada* subsp. *hebeclada*, *Monechma divaricatum*, *Gnidia polycephala*, *Helichrysum zeyheri*, *Hermannia comosa*, *Pentzia calcarea*, *Plinthus sericeus*, *Ejephantorrhiza elephantina*, *Aristida meridiona/is*, *A. stipitata* subsp. *stipitata*, *Eragrostis lehmanniana*, *E. echinochloidea*, *Melinis repens*, *Dicoma schinzii*, *Gisekia africana*, *Harpagophytum procumbens* subsp. *procumbens*, *Indigofera daleoides*, *Limeum fenestratum*, *Nol/etia ciliaris*, *Seddera capensis*, *Tripteris aghif/ana* and *Vahlia capensis* subsp. *vulgaris* (Mucina & Rutherford, 2006).

No significant areas containing undisturbed vegetation worth conserving were identified on the site for the proposed housing development. No protected plant or animal species were identified on the site. The site currently comprises of a combination of bare, exposed soils, patches of disturbed grasses and scattered alien vegetation.

The vegetation on the site is heavily disturbed and not in a pristine state. Most of the site comprises of bare soils due to the area being historically used for houses in some parts (with old foundations present in some areas) – as shown in **Figure 10-12**. The vegetation and trees that are scattered on the site comprises of alien species including:

- » *Eucalyptus globulus* (Blue Gums Trees);
- » *Prosopis glandulosa* (commonly called Prosopis or Mesquite Trees);
- » *Schinus molle* (Pepper tree),
- » *Opuntia ficus-indica* (Prickly pear); and
- » *Grevillea robusta* (Australian silky oak).

The site is flat and there are no drainage lines or other aquatic features present within 500m of the site. Overall, the site is not considered highly sensitive in terms of vegetation and biodiversity.



Figure 10: Photo of the site near 5th Street illustrating the vegetation and alien species that occur on the site for the proposed housing development.



Figure 11: Photo of the western part of the site near the railway station illustrating the areas of bare soils that occur on the site for the proposed housing development.



Figure 12: Photo of the site near 7th Avenue illustrating the occurrence of a Category 1 Alien invasive: *Prosopis glandulosa* (commonly called Prosopis or Mesquite tree) which occurs on the site for the proposed housing development.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Postmasburg Register and Die Ghaap	
Date published	Notification of Basic Assessment - Postmasburg Register (19 August 2013) and Die Ghaap (16 August 2013) Notification of draft Basic Assessment report for public review and public open day and meetings - Postmasburg Register (16 September 2013) and Die Ghaap (13 August 2013)	
Site notice position	Latitude	Longitude
Intersection of Stasie Street & 4 th Avenue	28°18'49.10"S	23° 3'38.82"E
Intersection of R385 and 8 th Avenue	28°19'1.41"S	23° 3'53.82"E
Date placed	05 August 2013	

Include proof of the placement of the relevant advertisements and notices. See Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 54(2)(e) and 54(7) of GN R.543.

<p>The public consultation process has included the following tasks:</p> <ul style="list-style-type: none"> » Placement of site notices on site and in public places within the town of Postmasburg. » Publishing of newspaper adverts which advertised the proposed project and availability of the draft Basic Assessment report for public review and announced the public open day and public meeting. » Distribution of a background information document (BID) and notification letters to identified I&APs and organs of state. » Providing written notice to neighbouring landowners. » Consultation through one-on-one consultation sessions, focus group meetings, interviews and via telephone.

Key stakeholders (other than organs of state) identified in terms of Regulation 54(2) (b) of GN R.543:

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Mr Jacques Coetzee	Postmasburg Chamber of Commerce	053-313-3901 jacques@umbrellagroup.co.za
Ms Marianne Coetzee	Postmasburg High School	053-313-0646 marianne18@vodamail.co.za
Ms Mpho Constance Mashila	Ward Councillor: Ward 2	053-313-7300
Lt. Col. N Klaasen	South African Police Service (SAPS)	053-313-9301 klaasenn@saps.org.za

A list of key stakeholders is included as Appendix E5.

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

All comments received during the review period of the draft Basic Assessment Report and meetings held, as well as responses provided has been captured and recorded within the Comments and Response Report and is attached to Appendix E.

Summary of main issues raised by I&APs	Summary of response from EAP
1. The roads in Stasie need to be upgraded. The gravel roads cause a lot of dust which is a health hazard.	Transnet and the Municipality are working on proposals in this regard. These proposals would need to also be approved internally within Transnet.
2. Request for local contractors to be utilised and that the community liaison officer must come from the Stasie community where the housing development is proposed	Transnet is committed to employing members of the local community on this project. This will form part of the tender requirements for the construction of the project.
3. The proposed development will negatively impact the Traffic Department as the portion of land	Transnet will work in close cooperation with the Municipality and Traffic Department and collectively come up with

currently used for parking by visitors will no longer be available.	an appropriate solution.
4. The development will put additional pressure on the municipal infrastructure (water, sewage and electricity).	Transnet is in process of working with the local municipality regarding service agreements and social development proposals.
5. Street lighting in the Stasie area is not good.	This issue will be discussed with the Tsantsabane Municipality and collectively an appropriate solution will be agreed to and implemented.
6. The community requests that the Community Liaison Officer (CLO) be sourced from Stasie community.	Transnet will take this request into consideration. This request has also been included in the EMPr for the construction phase.

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

All comments and meetings held during the review period of the draft Basic Assessment Report as well as responses provided has been captured and recorded within the Comments and Response Report which is attached to Appendix E.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Department of Human Settlements	Nokuthula Mbeje	012-421-1486	012-421-1486	Nokuthula.mbeje@dhs.gov.za	SJ du Plooy Building, 9 Cecil Sussman Road, Kimberley 8301
Department of Water Affairs	Ms JC Van Rooyen	012-336-7488		vanrooyenjc@dwa.gov.za	185 Schoeman Street, Pretoria, 0001
Department of Water Affairs (Northern Cape)	Mr A Abrahams	082-883-6741	053-831-4534	abrahamsa@dwa.gov.za	Private Bag X6101 Kimberly 8300
Northern Cape Department of Co-	A Phete	053-830-9422		aphete@ncpg.gov.za	JS du Plooy Building 9 Cecil

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
operative Governance, Human Settlements & Traditional Affairs					Sussman Road, Kimberley 8301
Northern Cape Department of Environment and Nature Conservation	Mr J Mutyorauta	053-807-7431		jmutyorauta@ncpg.gov.za	Private Bag X6010 Kimberley 8300
Northern Cape Department of Environment and Nature Conservation	Mr Denver van Heerden	053-807-7305	053-807-7367	-	Private Bag X6010 Kimberley 8300
Northern Cape Department of Roads and Public Works	Kholikile Nogwili	053-838-2109	086-617-6108	lucindavanwyk@ncpg.gov.za	PO Box 3132 Squarehill Park, Kimberly 8300
Northern Cape Provincial Heritage Resources Authority	Andrew Timothy	053-831-2537	053-833-1435	Ratha.timothy@gmail.com	PO Box 1930 Kimberley 8300
South African Heritage Resources Agency	Mariagrazia Galimberti	021-462-4502	021-462-4509	mgalimberti@sahra.org.za	PO Box 4637 Cape Town 8000
South African National Roads Agency	Rene de Kock	021-957-4607	021-957-4607	dekockr@nra.co.za	Private Bag X19 Cape Town 7536
Tsantsabane Local Municipality	Isaacs Obakeng	053-313-7300	053-313-1602	obakengisaacs@gmail.com	PO Box 5 Postmasburg 8420
Tsantsabane Local Municipality	Mathapelo Mathetsa	053-313-7300	053-313-1602	led@tsantsabane.gov.za	PO Box 5 Postmasburg 8420
Tsantsabane Local Municipality	Mpho Constance Mashilishili Ward 5	053-313-7300	053-313-1602		PO Box 5 Postmasburg 8420
ZF Mgcawu District Municipality	Eric Ngxanga	054-337-2800		jmp@bodr.gov.za	PO Box 6039 Upington 8800

Include proof that the Authorities and Organs of State received written notification of the proposed activities. See **Appendix E4**.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs is included as Appendix E5. Copies of any correspondence and minutes of any meetings are included in Appendix E6.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

Note that a complete impact assessment in terms of Regulation 22(2)(i) of GN R.543 is included in under Appendix F. This section of the Basic Assessment report provides a concise summary of the details impact assessment contained in Appendix F.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES:

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Alternative 1: (Technically preferred site)

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
Alternative 1 (Technically Preferred Alternative)			
Loss of vegetation and biodiversity due to construction activities.	Direct Impacts: The construction of the housing development will result in loss of vegetation (majority of which is alien vegetation). No significant areas containing undisturbed vegetation worth conserving were identified on the site for the proposed housing development. No protected plant or animal species were identified on the site. The site is currently comprises of a combination of bare, exposed soils, patches of disturbed grasses and scattered alien vegetation.	Medium	<ul style="list-style-type: none"> » An appropriate alien species management plan must be developed and implemented for the site, prior to construction. » Alien vegetation that occurs on the development footprint to be removed from the site, prior to construction, and monitored during and after the construction phase. » No collection of plants or plant parts to be allowed by construction personnel. » During construction, prohibit vegetation disturbance outside the development footprint. » Should the contractor encounter any plant or animal species which they are uncertain/ concerned about, an environmental specialist to be consulted in this regard. » Once construction is complete, all construction work areas will be re-instated and construction waste and equipment removed, prior to hand-over to Transnet. » During landscaping, lawns and outside areas of each house to be vegetated using indigenous plant/ tree and/grass species. » Planting of indigenous trees along the boundaries of the development and in open spaces (such as any recreational facilities) is
	Indirect impacts: None	-	

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
	<p>Cumulative impacts:</p> <p>The addition of the proposed housing development within a growing and existing residential area has the potential to result in cumulative negative impacts on the vegetation in the area. Considering that Postmasburg is an urban area and the site falls within the urban edge, the cumulative negative impacts on vegetation will be low.</p>	Low	<p>recommended to provide ecosystem services and to act as natural wind breaks.</p> <ul style="list-style-type: none"> » Consider addition of vegetated open spaces between clusters of houses, to benefit from the habitat and ecosystem services which plants provide. » Prohibit the burning of fires during construction. Fires may be allowed within fire-safe demarcated areas, if required. » If the construction camp or lay down area must be lit at night for security purposes, this should be done with low-UV type lights (such as most LEDs), which do not attract insects. » All hazardous materials should be stored in the appropriate manner to prevent contamination of the site. Any accidental chemical, fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill. » Construction site should be properly demarcated and no unauthorized persons should be allowed onto the site. » All construction vehicles should adhere to a low speed limit to prevent collisions with any animal species.
Environmental degradation in the long term, due to the use of the land and houses by residents.	<p>Direct impacts:</p> <p>Should the open areas and infrastructure such as sewage pipelines and waste within and linked to each household not be maintained, potential contamination and environmental degradation could occur.</p>	Low	<ul style="list-style-type: none"> » No herbicides should be used and if vegetation clearing needs to take place, this should be done by hand. » Maintain open spaces and gardens and prune trees. » Waste to be managed appropriately and in line with legislative requirements. It is noted that the local municipality will be responsible for collection and disposal of domestic waste.
	<p>Indirect impacts: None</p>	-	

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
	<p>Cumulative impacts:</p> <p>The addition of the proposed housing development within a growing and existing residential area has the potential to cause cumulative environmental degradation within the urban area. Considering that Postmasburg is an urban area and the site falls within the urban edge, the cumulative negative impacts on the environmental will be low.</p>	Low	
Soil erosion/ soil loss	<p>Direct</p> <p>Soil erosion during and after the construction phase due to decreased vegetation cover and increased water run-off from hard surfaces.</p>	High	<ul style="list-style-type: none"> » Care must be taken with the ground cover during and after construction on the site. If it is not possible to retain a good plant cover during construction, technologies should be employed to keep the soil covered by other means, i.e. straw, mulch, erosion control mats, etc., until a healthy plant cover is again established. Care should also be taken to control and contain storm water run-off. » A stormwater management plan to control and manage water from the roads and the housing infrastructure to be compiled by the appointed contractor before the onset of construction » Grading of the site is required after construction to ensure free flow of runoff and to prevent ponding of water. » Adhere to the specification outlined in the geotechnical report/ survey. » Implement measures to effectively contain and allow settling prior to

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
			its discharge of any stormwater arising at the construction site. » Construction of anti-erosion berms on access roads. » Ensuring that stockpiles are well managed (such as covering stock piles) to minimise erosion thereof/ soil loss. » Rip compacted soil to promote re-vegetation. » Rehabilitate the construction site by establishing it with indigenous grasses and trees. » Re-vegetation of the site must be undertaken after decommissioning.
	Indirect impact: None	-	-
	Cumulative Impacts: Soil Loss	Low	» Implement erosion management measures.
Contamination and degradation of the soil due to spillages of oil, petrol, diesel and other contaminants used by vehicles and equipment on the site or stored on the site (during construction).	Direct Soil contamination	Medium	» Construction vehicles and equipment must be serviced regularly and maintained in a good running condition. » Drip trays to be placed under construction vehicles when parked for extended periods. Drip trays must be emptied and maintained on a regular basis. » Spill kits must be kept at appropriate locations on-site during construction.
	Indirect impact: None	-	
	Cumulative Impacts: Limited, with the necessary mitigation in place	-	
Construction activities and material stockpiling can lead to the generation of dust.	Direct impact: Social nuisances and impact on air quality caused by dust generation from construction activities.	Medium	» Apply dust control measures, such as spraying water on surfaces / use of products such as dustex, during the construction phase and under windy conditions / when dust problems arise. » The use of vegetation cover (plants, grasses/ trees) is a good way to protect the soils and reduce bare soils being carried by wind and causing dust. » Planting of vegetation / grasses to be undertaken immediately after
	Indirect impact: None	-	

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
	Cumulative impact: Low, with the necessary mitigation in place	Low	<p>construction where soil has been exposed.</p> <ul style="list-style-type: none"> » Minimisation of the surface area exposed to wind erosion during construction. » Maintenance of vehicles and other driven machinery. » Prevention of burning of cleared vegetation and wastes/refuse.
Construction (excavations and vegetation clearing) may cause loss/ find of heritage resources.	Direct impact: The potential damage or loss of below and above ground heritage sites/remains/ fossils due to the construction activities.	Low-Unlikely	<ul style="list-style-type: none"> » If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during development activities, SAHRA APM Unit (Katie Smuts/Colette Scheermeyer 021 462 4502) must be alerted immediately, and a professional archaeologist and/or paleontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or paleontological significance a Phase 2 rescue operation might be necessary » If concentrations of archaeological materials are exposed then all work must stop in that area for an archaeologist to investigate. » If any human remains or any other concentrations of archaeological heritage material are exposed during construction, all work must cease in that area and it must be reported immediately to the nearest museum/archaeologist or the Northern Cape Heritage Authority and the South African Police Services. » A systematic and professional investigation can be undertaken for all finds. Sufficient time should be allowed to investigate and to remove/collect such material. Recommendations will follow from the investigation.
	Indirect impact: None	-	
	Cumulative impacts: None	-	

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
Positive social and economic impacts during the construction and operational phase.	Direct Employment and business opportunities during the construction phase will occur.	Medium (Positive)	Employment <ul style="list-style-type: none"> » Where reasonable and practical, the contractors appointed by the proponent should appoint local contractors and implement a 'locals first' policy, especially for semi and low-skilled job categories. However, due to the low skills levels in the area, the majority of skilled posts are likely to be filled by people from outside the area. » Where feasible, efforts should be made to employ local contractors that are compliant with Black Economic Empowerment (BEE) criteria. » Before the construction phase commences the proponent and its contractors should meet with representatives from the TLM to establish the existence of a skills database for the area. If such a database exists it should be made available to the contractors appointed for the construction phase. » The local authorities, community representatives, and organisations on the interested and affected party database should be informed of the final decision regarding the project and the potential job opportunities for locals and the employment procedures that the proponent intends following for the construction phase. » Where feasible, training and skills development programmes for locals should be initiated prior to the initiation of the construction phase. » The recruitment selection process should seek to promote gender equality and the employment of women wherever possible. Business <ul style="list-style-type: none"> » The proponent should seek to develop a database of local companies, specifically BEE companies, which qualify as potential service providers (e.g. construction companies, catering companies, waste
	Indirect Business opportunities during the construction phase will occur. The potential opportunities for the local service sector would be linked to accommodation, catering, cleaning, transport and security, etc. associated with the construction workers on the site. This will create opportunities for local catering, cleaning, laundry, security etc. companies.	Medium (Positive)	
	Cumulative Opportunity to up-grade and improve skills levels in the area.	Low (Positive)	

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
			collection companies, security companies etc.) prior to the commencement of the tender process for construction contractors. These companies should be notified of the tender process and invited to bid for project-related work; » Transnet to identify strategies aimed at maximising the potential benefits associated with the project.
Nuisances and social threats associated construction activities	Direct The short-term social nuisances impacts associated with the construction activities include noise, dust and safety and security related impacts. These impacts are linked to be linked to movement of construction vehicles, specifically large trucks, the operation of machinery, such as cement mixers, compressors, hammering, etc. An increase in the number of people in one area is also associated with an increase in crime. These activities have the potential to impact on the local residents living in the area, specifically those	Medium	» If possible, the Community Liaison Officer (CLO) to be sourced from Stasie community. » Construction working hours should be confined to between 06h00 and 18h00. However, should the need arises to extend these working hours, it must be done in accordance with the requirements of the Department of Labour. » Construction activities over weekends should only be permitted between 08h00 and 13h00 on Saturdays. » No construction related activities should be permitted on Sundays and Public Holidays. » The contractor must ensure that all damage caused to local roads by the construction related activities, including heavy vehicles, is repaired before the completion of the construction phase. The costs associated with the repair must be borne by the contractor; » Dust suppression measures must be implemented for heavy vehicles such as wetting of gravel roads on a regular basis and ensuring that vehicles used to transport sand and building materials are fitted with tarpaulins or covers. » All vehicles must be road-worthy and drivers must be suitably qualified, made aware of the potential road safety issues, and need for strict speed limits. » Ensure safe and secure public transport access points.

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
	located adjacent to the site.		<ul style="list-style-type: none"> » Display of "danger" warning signs and "no public access" signs at all potential access roads and paths. » Prevention of access to any excavation areas. » Locking or locking away of any dangerous plant, equipment, material or substance when not supervised or in use. » Where possible, the movement of construction workers should be confined to the work site to avoid any potential for impact from this variable in proximate residential areas. » Continue and extend any current HIV/AIDS awareness and support programmes to the construction work-force for this development. » Construction waste to be managed on a daily basis and disposed of correctly and in line with legislative requirements.
	Indirect Impacts: None	-	
	Cumulative Impacts: None	-	
Supply of houses resulting in creation of accommodation facilities of Transnet employees.	Direct The proposed housing project partially addresses the critical shortage of housing in Postmasburg. In doing so it represents a positive social benefit for the Transnet employees who will be accommodated in the houses to be built.	Medium (Positive)	<ul style="list-style-type: none"> » The housing development to be constructed in line with the relevant legislation/ standards such as the Building Regulations.
	Indirect Impacts: None	-	
	Cumulative Impacts: Creation of accommodation for Transnet employees removes pressure that would	Low	

Activity	Impact summary	Significance (without mitigation)	Proposed mitigation
	have potentially been created if no accommodation had been provided. Therefore this represents a positive cumulative impact for the local housing market.		
Visual and Aesthetic impacts due to the housing development.	Direct Disturbance of the environment during the construction phase would lead to temporary landscape scarring and negative visual impacts; although it is expected to be rectified once the construction phase has been completed	Medium	<ul style="list-style-type: none"> » Keep disturbed areas to a minimum. » No clearing of land to take place outside the demarcated footprint. » Landscaping features can be used to ensure the project blends into the existing residential area. Indigenous trees and vegetation to be planted to improve the aesthetics of the development site. » Utilise existing roads and tracks to the extent possible.
	Indirect Impacts: None	N/A	
	Cumulative Impacts: There are other housing developments in Postmasburg and adjacent to the site. Considering the need for housing in the area, the visual impacts will be of a medium significance.	Medium	

No-Go Alternative:

No-Go Option

The No-Go Option (the option to not develop the houses) will result in no negative environmental impacts occurring on the biophysical environment (i.e. biodiversity and/soils) at the identified site, nor any positive social and economic impacts on Transnet employees and the local economy. There is a clear need for provision of housing in the Postmasburg area due to mining activities and associated railway network in the areas. The “no-go option” will limit the potential for other growth and development projects in the area. Socio-economic problems such as homelessness, overcrowding in homes and establishments of informal settlements will continue. The negative impacts of the no-go option are expected to outweigh the identified negative impacts associated with the proposed housing development. Furthermore, considering that the land is currently vacant and not utilised for any productive outcomes, the no-go option is not preferred. .

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative 1

Due to the need for accommodation of staff in the Postmasburg area, Transnet SOC Limited ("Transnet") is proposing a housing development in Postmasburg. The site identified for the housing development is situated on Transnet-owned land, which is located on the outskirts of the town of Postmasburg. Approximately 185 housing units could be accommodated on the land available to Transnet. The footprint for the housing development is up to 16 hectares in extent.

The proposed housing development is not located in an environmentally sensitive area from a biophysical and socio-economic perspective as the development occurs in a disturbed area and transformed environment. The site for the proposed housing development is located in an urban area within the town of Postmasburg. The site is not in a pristine state and currently vacant land, with bare, exposed soils in most areas and scattered alien vegetation.

The implementation of adequate mitigation measures would reduce all potential negative environmental and social impacts to a low significance. The following conclusions have been made:

» Ecology

The proposed development will be undertaken within a disturbed environment. The site is flat and there are no drainage lines or other aquatic features present on or within 500m of the site. No flora or fauna species of conservation concern occur on the site. No wildlife or game occur on the site. Due to the resultant lack of biodiversity, and habitats, few animals are expected to be found in the area to be developed. Overall, the site is not considered highly sensitive in terms of flora, fauna and biodiversity. The impact on the biophysical environment will be low.

» Soils

The ground cover on the site comprises of bare soils due to the area being historically used for houses in some parts (with old foundations present in some areas). This makes the site susceptible to erosion by wind or water. The development footprint will be cleared of vegetation, which can result in bare areas which can trigger soil erosion and soil loss. Soil contamination may also occur. With the implementation of soil erosion management measures, the construction

and operation of the houses and associated infrastructure is likely to have a medium impact on soils.

- » Socio-economic
 - Negative social nuisances or impacts can be expected (such as noise, dust, disturbances and traffic during construction activities). These nuisances require appropriate management. These impacts are rated as having a low significance.
 - Positive social and economic impacts can materialise during the construction and operational phases, specifically relating to the provision of appropriate housing and job creation. This impact is rated as being of medium-high significance.
- » The following impacts are unlikely to occur as a result of the project:
 - Impacts on heritage resources/ sites including graves and fossils.
 - Impacts on topography.
 - Impacts on underlying geology.

Mitigation measures to ameliorate all identified impacts during the construction, operational and decommissioning phases have been discussed in this report and are prescribed in detail in the Draft Environmental Management Programme (EMPr) attached as **Appendix G** of this report.

Alternative B: N/A

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Alternative C: N/A

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No-go alternative (compulsory)

The No-Go Option (the option to not develop the houses) will result in no negative environmental impacts occurring on the biophysical environment (i.e. biodiversity and/soils) at the identified site, nor any positive social and economic impacts on Transnet employees and the local economy. There is a clear need for provision of housing in the Postmasburg area due to mining activities and associated railway network in the areas. The "no-go option" will limit the potential for other growth and development projects in the area. Socio-economic problems such as homelessness, overcrowding in homes and establishments of informal settlements will continue. The negative impacts of the no-go option are expected to outweigh the identified negative impacts associated with the proposed housing development. Furthermore, considering that the land is currently vacant and not utilised for any productive outcomes, the no-go option is not preferred.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

The following conclusions are made:

- » The housing development is proposed on a brown field's site (owned by Transnet), which has been impacted by previous residential use.
- » The land is currently vacant and not being used for any productive purpose.
- » In terms of biophysical attributes, the proposed site consists of a disturbed environment and as such is not considered to be an environmentally sensitive area.
- » Implementation of adequate mitigation measures proposed in this report and the EMPr can reduce all potential impacts to a low significance and acceptable levels.

Subject to implementation of the proposed mitigation measures, as described in the report and the conditions below, it is recommended that the proposed housing development be authorised. The following mitigation and management measures should be implemented:

General Conditions:

- » The design of the housing development to consider addition of vegetated open spaces between clusters of houses, to benefit from the habitat and ecosystem services which plants provide.
- » The housing development to be constructed in line with South African National Building Regulations.
- » The environmental specifications outlined in this report and the draft EMPr (Appendix G) must be included in construction contracts and must be implemented.
- » An appropriate alien plant species management plan must be developed and implemented for the project site.
- » A geophysics gravity survey follow up percussion drilling is recommended before the dolomitic area designation can be determined in accordance with National Home Builder Registration Council's recommendations.
- » The use of normal foundations in accordance with the deemed-to-satisfy rules of

SANS 10400 must be confirmed with the results of the dolomitic survey before drawings are issued for construction.

- » Local contractors should be provided an opportunity to be included in a list of possible local suppliers and service providers for the construction phase of the project.
- » Social benefits in terms of training, skills development and the use of local labour should thus be aspired to. These skills can be transferable to other employment sectors and would result in further sustainable benefits.
- » The Local Municipality and community representatives and neighbouring property owners should be kept informed of the progress, decisions taken with regards to the development and construction schedules.

Conditions relevant to Construction:

- » The EMPr should form part of the contract with the Contractor appointed to construct the proposed project, and must be used to ensure compliance with environmental specifications and management measures. The implementation of this EMPr for all life cycle phases of the proposed project is considered key in achieving the appropriate environmental management standards as detailed in this report.
- » Public safety must be considered during planning and construction site layout and management.
- » Neighbouring Property land owners and residents must be informed prior to the commencement of construction activities.
- » An independent Environmental Control Officer (ECO) should be appointed to monitor compliance with the specifications of the EMPr at regular intervals during the construction period.
- » If possible, the Community Liaison Officer (CLO) to be sourced from Stasie community.
- » Existing tracks/roads should be used as far as possible, and construction activities should be limited to the authorised site and development footprint.
- » During construction, unnecessary disturbance to land should be strictly controlled and the footprint of the impact should be kept to a minimum.
- » Disturbed areas should be rehabilitated as soon as possible once construction is complete in an area.
- » All declared alien plants must be identified and managed in accordance with the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983), the implementation of a monitoring programme in this regard is recommended.
- » Transnet should obtain all necessary permits prior to the commencement of construction, including rezoning of the land.
- » Re-vegetation of the site must be undertaken after decommissioning of the houses and after removal of temporary infrastructure such as lay-down areas and the construction office. Gardens, lawns and outside areas for each house and communal spaces to be vegetated using indigenous plant/ tree and/grass species.

- » If any evidence of archaeological sites or remains, unmarked human burials, fossils or other categories of heritage resources are found during development activities, SAHRA APM Unit must be alerted immediately, and a professional archaeologist and/or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance a Phase 2 rescue operation might be necessary.
- » If any human remains or any other concentrations of archaeological heritage material are exposed during construction, all work must cease and it must be reported immediately to the nearest museum/archaeologist or the Northern Cape Heritage Authority.

Operation Phase:

The mitigation and management measures previously listed in this Basic Assessment Report relating specifically to the operational phase should be implemented in order to minimise potential environmental impacts. The following mitigation measures should also be implemented:

- » Maintenance of erosion control measures.
- » Development and implementation of a storm water management plan.
- » On-going maintenance of the infrastructure.
- » On-going monitoring of the development sites to detect and restrict the spread of alien plant species.

Decommissioning

- » Should the houses be decommissioned, an appropriate rehabilitation plan must be developed and implemented for the site, prior to decommissioning.

Is an EMPr attached?

YES

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

NAME OF EAP

SIGNATURE OF EAP

DATE

SECTION F: APPENDICES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information