FINAL BASIC ASSESSMENT REPORT

FOR

THE PROPOSED CONSTRUCTION OF A TELECOMMUNICATION MAST FOR MTN (PTY) LTD ROOIHUISKRAAL 3 (ON PORTION 57 OF THE FARM DOORNRANDJE NO 386 JR)

Ref No: 002/17-18/E0074

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Definitions

Activity (Development)	An action either planned or existing that may result in environmental impacts through pollution or resource use. For the purpose of this report, the terms 'activity' and 'development' are freely interchanged.

Alternatives	Different means of meeting the general purpose and requirements of the activity, which may include site or location alternatives; alternatives to the type of activity being undertaken; the design or layout of the activity; the technology to be used in the activity and the operational aspects of the activity.
Applicant	The project proponent or developer responsible for submitting an environmental application to the relevant environmental authority for environmental authorisation.
Biodiversity	The diversity of animals, plants and other organisms found within and between ecosystems, habitats, and the ecological complexes.
Construction	The building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.
Cumulative impact	The impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
Decommissioning	The demolition of a building, facility, structure or infrastructure.
Derelict land	means abandoned land or property where the lawful/legal land use right has not been exercised during the preceding ten year period (Regulation R982 of NEMA, 1998 (Act No. 107 of 1998));
Direct Impact	Impacts that are caused directly by the activity and generally occur at the same time and at the same place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally quantifiable.
Ecosystem	A dynamic system of plant, animal (including humans) and micro-organism communities and their non-living physical environment interacting as a functional unit. The basic structural unit of the biosphere, ecosystems are characterised by interdependent interaction between the component species and their physical surroundings. Each ecosystem occupies a space in which macro-scale conditions and interactions are relatively homogenous
Environment	In terms of the National Environmental Management Act (NEMA) (No 107 of 1998)(as amended), "Environment" means the surroundings within which humans exist and that are made up of: a) the land, water and atmosphere of the earth; b) micro-organisms, plants and animal life; c) any part or combination of (i) of (ii) and the interrelationships among and between them; and d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.
Environmental Assessment	The generic term for all forms of environmental assessment for projects, plans, programmes or policies and includes methodologies or tools such as environmental impact assessments, strategic environmental assessments and risk assessments.
Environmental Authorisation	An authorisation issued by the competent authority in respect of a listed activity, or an activity which takes place within a sensitive environment.]
Environmental Assessment Practitioner (EAP)	The individual responsible for planning, management and coordination of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instrument introduced through the EIA Regulations.
Environmental Management	Ensuring that environmental concerns are included in all stages of development, so that development is sustainable and does not exceed the carrying capacity of the environment.
Environmental Management Programme (EMPr)	A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative environmental impacts are implemented during the life cycle of a project. This EMPr focuses on the construction phase, operation (maintenance) phase and decommissioning phase of the proposed project.
Environmental Impact	Change to the environment (biophysical, social and/ or economic),

	whether adverse or beneficial, wholly or partially, resulting from an organisation's activities, products or services.
Environmental Issue	A concern raised by a stakeholder, interested or affected parties about an existing or perceived environmental impact of an activity.
Fatal Flaw	Issue or conflict (real or perceived) that could result in developments being rejected or stopped. In the context of an environmental impact assessment a fatal flaw can be termed as an environmental issue that cannot be mitigated by any means
General Waste	Household water, construction rubble, garden waste and certain dry industrial and commercial waste, which does not pose an immediate threat to man or the environment.
Groundwater	Water in the ground that is in the zone of saturation from which wells, springs, and groundwater run-off are supplied.
Hazardous Waste	Waste that may cause ill health or increase mortality in humans, flora and fauna.
Hydrology	The science encompassing the behaviour of water as it occurs in the atmosphere, on the surface of the ground, and underground.
important areas	Sites that are important for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Indirect Impacts	Indirect or induced changes that may occur as a result of the activity. These types if impacts include all of the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
Integrated Environmental Management	A philosophy that prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development and decision making process. The IEM philosophy (and principles) is interpreted as applying to the planning, assessment, implementation and management of any proposal (project, plan, programme or policy) or activity - at local, national and international level – that has a potentially significant effect on the environment. Implementation of this philosophy relies on the selection and application of appropriate tools for a particular proposal or activity. These may include environmental assessment tools (such as strategic environmental assessment and risk assessment), environmental management tools (such as monitoring, auditing and reporting) and decision-making tools (such as multi-criteria decision support systems or advisory councils).
Interested and Affected Party (I&AP)	Any person, group of persons or organisation interested in or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.
Irreplaceable areas	Sites, which are essential in meeting targets set for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Mitigate	The implementation of practical measures designed to avoid, reduce or remedy adverse impacts or enhance beneficial impacts of an action.
No-Go Option	In this instance the proposed activity would not take place, and the resulting environmental effects from taking no action are compared with the effects of permitting the proposed activity to go forward.
Public Participation Process	A process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters.
Rehabilitation	A measure aimed at reinstating an ecosystem to its original function and state (or as close as possible to its original function and state) following activities that have disrupted those functions.
Sensitive Environments	Any environment identified as being sensitive to the impacts of the development.
Significance	Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. magnitude, intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgements and science-based criteria (i.e. biophysical, social and economic).

Stakeholder Engagement	The process of engagement between stakeholders (the proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities.
Sustainable Development	Development which meets the needs of current generations without hindering future generations from meeting their own needs.
undeveloped	means that no facilities, structures or infrastructure have been effected upon the land or property during the preceding 10 years.
Urban areas	means areas situated within the urban edge (as defined or adopted by the competent authority), or in instances where no urban edge or boundary has been defined of adopted, it refers to areas situated within the edge of built-up areas (Regulation R984 of NEMA,1998 (Act No. 107 of 1998));
Vacant	Means not occupied for the purpose of its lawful land use during the preceding ten year period.
Virgin soil	means land not cultivated for the preceding 10 years. (Regulation R984 of NEMA,1998 (Act No. 107 of 1998);
Watercourse	Means (a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, pan, lake or dam into which, or from which, water flows; and any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse as defined in the National Water Act, 1998 (Act No. 36 of 1998) and a reference to a watercourse includes, where relevant, its bed and banks. (Regulation R983 of NEMA, 1998 (ACT NO. 107 OF 1998).;
Wetland	Means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil. (Regulation 983 of NEMA, 1998 (ACT NO. 107 OF 1998).

Abbreviations

AIA	Archaeological Impact Assessment
BAR	Basic Assessment Report
BID	Background Information Document
BSc	Bachelor of Science
CC	Close Corporation
C- Plan	Gauteng Conservation Plan Version 3
CTMM	City of Tshwane Metropolitan Municipality
DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation
GDARD	Gauteng Department of Agriculture and Rural Development
GPEMF	Gauteng Provincial Environmental Management Framework
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EMM	Ekurhuleni Metropolitan Municipality
Ha	Hectares
HIA	Heritage Impact Assessment
I & AP's	Interested and Affected Parties
IDP's	Integrated Development Plans
Km	Kilometres
LDO	Land Development Objectives
m	Meters
NEMA	National Environmental Management Act
NGO's	Non-Governmental Organisations
OHSA	Occupational Health and Safety Act

PES	Present Ecological State
PPE	Personal Protective Equipment
PPP	Public Participation Process
Pr.Sci.Nat	Professional Natural Scientist
(Pty) Ltd	Proprietary Limited
PHRA-G	Provincial Heritage Resources Authority – Gauteng
SAHRA	South African Heritage Resources Agency
SAPS	South African Police Service
WRC	Water Research Commission

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. 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.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. 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 application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the of the Environmental Affairs Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the of the Environmental Affairs Branch
Ground floor Diamond Building
11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

Extension of time received to submit the Final BAR

Is a closure plan applicable for this application and has it been included in this report? **NO**

if not, state reasons for not including the closure plan.

The activity applied for does not relate to the decommissioning of an activity

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity? **YES**

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person? **YES**

If no, state reasons for not attaching the list.

Please refer to appendix I

Have State Departments including the competent authority commented? **Yes**

If no, why?

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

MTN MAST: ROOIHUISKRAAL 3

Select the appropriate box

The application is for an upgrade of an existing development		The application is for a new development	X	Other, specify	

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES ■

If yes, describe the legislation and the Competent Authority administering such legislation

Application for cellular masts in the City of Tshwane is done in terms of Clause 14(11) of the Tshwane Town Planning Scheme, 2008, (Revised 2014), read with Section 16(3) of the City of Tshwane Land Use Management By-Law, 2016, subject to Clause 15 and Schedule 25. Clause 15 and Schedule 25 is the advertisement and application process. Public participation entails registered letters as well as site notice placement.

The followings is required for approval if applicable:

- **Application with normal documentation (Memo/Land Use Maps/Zoning Maps etc)**
- **CAA Approval**
- **EIA/GDARD Approval/Non listing letter**
- **Bondholders Consent if necessary**
- **Gautrans comments / Approval (BLR or Section 7)**
- **Internal Comments (City of Tshwane Departments)**
- **External comments when requested (ESKOM/Agriculture & Fisheries/Township Board)**
- **Removal of restrictive conditions in title deed if applicable**
- **Hearing if objections were received**

After approval, Building plans in terms of the National Building Regulation Act can be approved. The followings is required for approval if applicable:

- **Internal Circulation**
- **Building Line Relaxation if applicable.**
- **SANS/Engineers**

Civil Aviation Approval in terms of Aviation Act (74 of 1962)

If yes, have you applied for the authorisation(s)?	**YES**	~~NO~~
If yes, have you received approval(s)? (attach in appropriate appendix)	~~YES~~	**NO**

2. 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:

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998

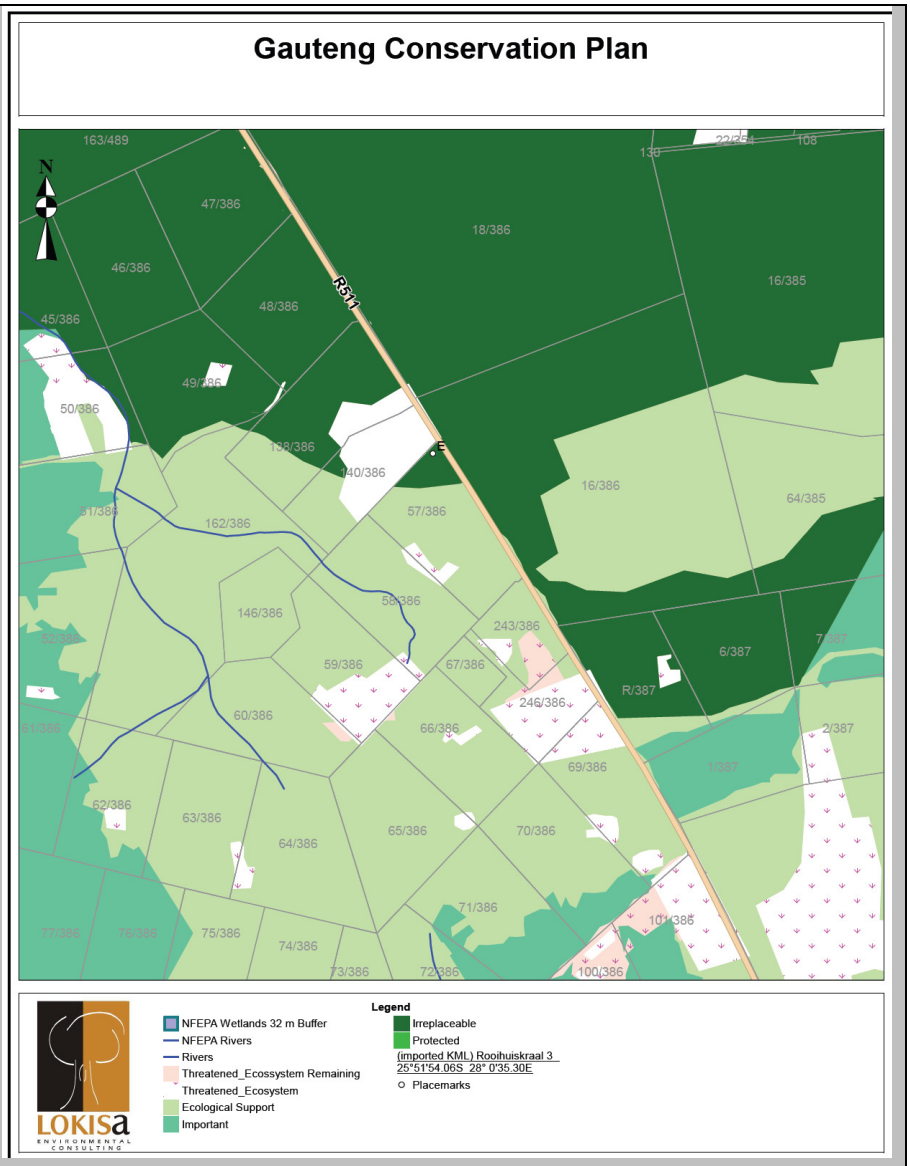
City of Tshwane By-Laws	**CTMM**	**-**
City of Tshwane Integrated Development Plan	**CTMM**	**2011-2016**
Conservation of Agricultural Resources Act (Act 43 of 1983)	**Department of Agriculture Forestry and Fisheries**	**1983**
Gauteng Conservation Plan (C-Plan Version 3.3)	**GDARD**	**2011**
Gauteng Environmental Management Framework	**GDARD**	**2015**
Gauteng Spatial Development Framework	**Provincial**	**2011**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**1998**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017. **Activity listed under GN R983:** **Activity 3- The Development of masts or towers of any material or type used for telecommunication broadcasting or radio transmission purposes where the mast or tower: (a) to be placed on a site not previously used for this purpose; and (b) will exceed 15m in height –** **But excluding attachments to existing buildings and masts on rooftops.** **(c) Gauteng** **(iv) Sites identified as a Critical Biodiversity Areas or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;** **(v) Sites identified within threatened ecosystems listed in terms of the National Environmental Management Act: Biodiversity Act (Act No. 10 of 2004);** **(vi) Sensitive areas identified in an environmental management framework adopted by relevant environmental authority.**	**National Department of Environmental Affairs and GDARD**	**2014**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**27 November 1998**
Aviation Act (Act No. 74 of 1962)	**Civil Aviation**	**21 July 1962**
South Africa's Constitution, 1996 (Act 108 of 1996), including the Bill of Rights (Chapter 2, Section 24)	**National Government**	**1996**
NEMA EIA Regulations, 2014 (Government Notice Nos. 982, 983, 984 and 985)	**National Department of**	**2014**

	Environmental Affairs and GDARD	
Model Noise Regulations published under the Environment Conservation Act, 1989 (Act 73 of 1989)	**National Government**	**1989**
Health Act, 1977 (Act 63 of 1977)	**National Government**	**1977**
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993) (OHSA) as amended in July 2001, including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**National Government**	**2001**
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)	**National Department of Environmental Affairs and GDARD**	**2008**
The National Heritage Resources Act, 1999 (Act No 25 of 1999) as amended, particularly Chapter II, Section 38	**SAHRA**	**1999**
The National Water Act, 1998 (Act No. 36 of 1998)	**Department of Water Affairs**	**1998**
Water Services Act (Act No. 108 of 1997)	**Department of Water Affairs**	**1997**
Standards Act (30 of 1992) National Government 1992		
National Building Regulations and Building Standards Act (No 103 of 1977)	**National Government**	
Municipal Structures Act (Act 117 of 1998)	**Local Municipality**	**1998**
Municipal Systems Act (Act 32 of 2000)	**Local Municipality**	**2000**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**27 November 1998**

Description of compliance with the relevant legislation, policy or guideline:

Legislation, policy of guideline	Description of compliance
City of Tshwane By-Laws	**The proposed development will be constructed to comply with the City of Tshwane By-Laws**
City of Tshwane Integrated Development Plan 2016/21	**One of the proposed programme areas for the City of Tshwane Integrated Development Plan for 2016/21 is Programme 1: ICT** **The purpose of this programme is to facilitate the use of ICT to improve living experience of the citizen and to facilitate for transitioning towards ICT enabled service provision.** **Access to the digital landscape will improve the quality of service provision but also creating an environment for the residents of the city to access numerous opportunities which exist in the social and economic environment.** **Therefore better telecommunication service in the area will add into the achievement of what is proposed in programme 1.**
Conservation of	**The proposed development will ensure that no agricultural**

Agricultural Resources Act (Act 43 of 1983)	**resources are impacted.**
Gauteng Conservation Plan (C-Plan Version 3.3)	**Gauteng Conservation Plan (C-Plan Version 3.3)** **GDARD's (Gauteng Department of Agriculture and Rural Development) C-Plan (Gauteng Conservation Plan Version 3.3) was used to determine the sensitivities of the site and is provided below in Figure 1.** **Conservation planning was started in Gauteng in the year 2000 and the aim was to revise the C-Plan at least every 5 years. C-Plan Version 1 was produced in 2001 and was followed by version 2 in 2005. Version 2 was refined in 2007 and was named Version 2.1. The small size of the province made it feasible to conduct an extensive biodiversity survey, named BGAP, which aimed to provide the information on spatial occurrence of biodiversity necessary for rigorous conservation planning. C-Plan 3 represents priority areas for biodiversity conservation in the Gauteng province.** **C-Plan 3 is based on the systematic conservation protocol developed by Margules & Pressey (2000) and is based on the principles of complementarity, efficiency, defensibility and flexibility, irreplaceability, retention, persistence and accountability. Systematic conservation planning is an iterative process.** **Knowledge of the distribution of biodiversity, the status of species, approaches for dealing with aspects such as climate change, methods of data analysis, and the nature of threats to biodiversity within a planning region are constantly changing, especially in the Gauteng province which is developing at an extremely rapid rate. This requires that the conservation plan be treated as a living document with periodic review and updates.** **An extract of the sensitivities that could affect the site in terms of the C-Plan is provided below for ease of reference.**

	 **Figure 1: C-Plan of the site** **In terms of the C-Plan the site falls within an "Irreplaceable" area.**
Gauteng Environmental Management Framework	**Gauteng Environmental Management Framework** **The guiding objectives that emerged during the course of the developed of the GEMF are:** • **To facilitate the optimal use of current industrial, mining land and other suitable derelict land for the development of non-polluting industrial and large commercial developments.** • **To protect Critical Biodiversity Areas (CBAs as defined in C-Plan 3.3) within urban and rural environments.** • **To ensure the proper integration of Ecological Support Areas (ESAs as defined in C-Plan 3.3) into rural land use change and development.** • **To use ESAs as defined in municipal bioregional plans in spatial planning of urban open space corridors and links within urban areas.**

- **To focus on the sustainability of development through the implementation of initiatives such as:**
  - **Energy efficiency programmes, plans and designs;**
  - **Waste minimisation, reuse and recycling;**
  - **Green infrastructure in urban areas; and**
  - **Sustainable Drainage Systems (SuDS).**

The Environmental Management Zones (EMZ) were derived from the desired state, the environmental sensitivity as well the unique control areas as identified in sections 1, 2 and 3. The EMZs were also presented to the Gauteng Planning Forum 6 where it was generally accepted as a suitable contribution to facilitate appropriate development in Gauteng. The EMZs also took the Gauteng Growth and Management Perspective, 2014, into account and is therefore aligned to the general development policy for Gauteng.

Five EMZs were identified and overlaying those a further six Special Management Areas were identified where specific planning and policy measures are necessary to achieve the development objective of those areas.

The site falls in Zone 3 – High Rural Control Zone

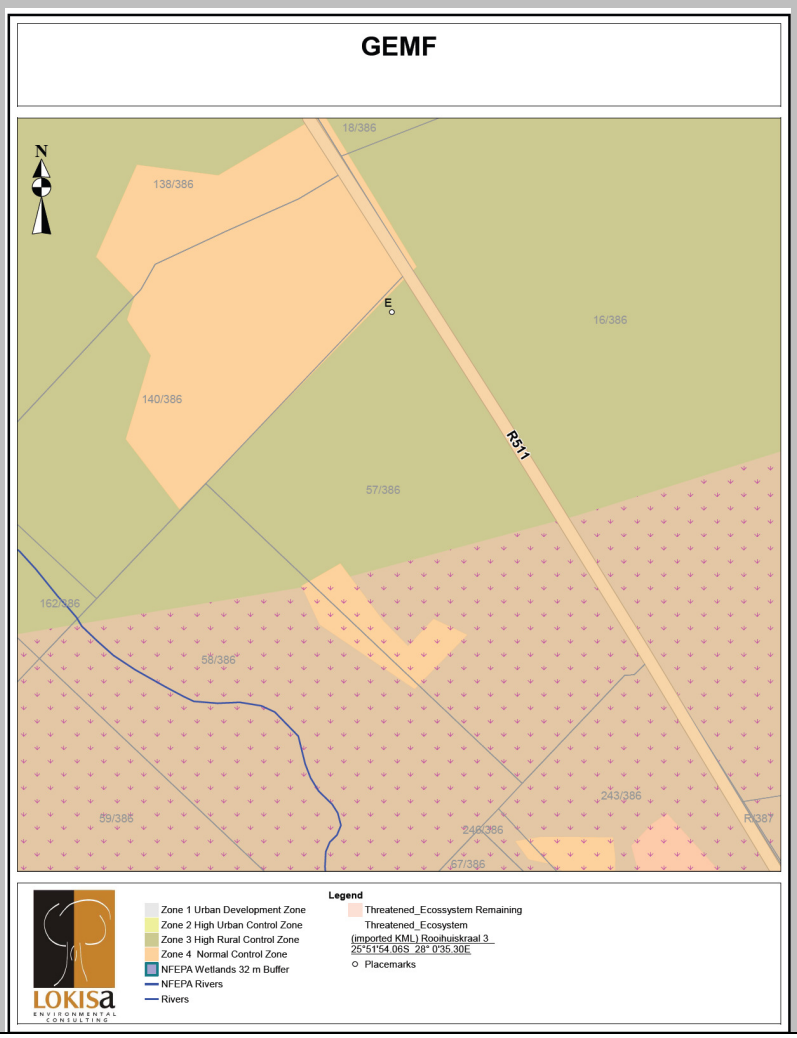


	Figure 2: Gauteng Environmental Management Plan **In terms of the GEMP Zone 3 is sensitive to development activities and in several cases also have specific values that need to be protected. Conservation and related tourism and recreation activities should dominate development in this zone.**
Gauteng Spatial Development Framework, 2012	**The GSDF are in pursuit of planning for shared, equitable, sustainable and inclusive growth and development in the country. The Gauteng Provincial Government (GPG) seeks to:** • **provide a clear future provincial spatial structure that is robust to accommodate growth and sustainability;** • **specify a clear set of spatial objectives for municipalities to achieve in order to ensure realisation of the future provincial spatial structure;** • **propose a set of plans that municipalities have to prepare in their pursuit of these objectives;** • **provide a common language and set of shared planning constructs for municipalities to use in their planning processes and plans; and** • **enable and direct growth.** **The Gauteng City Region aims to develop as a significant emerging conurbation based on sustainable principles:** • **significantly reducing reliance on private mobility in favour of safe, convenient and affordable public transport and non-motorised transport;** • **significantly reducing present rates of non-renewable energy usage;** • **reducing the rates of energy expended in the manufacture of goods, the delivery of these goods to the market and the importation of goods;** • **integrating open space systems into the city region and providing sustainable ecosystems, urban agriculture and quality of life as a fundamental of the province's development patterns;** • **increasing the intensity of urban form and the complexity of mixed-use development with a view to restricting, as far as possible, the options to extend the present footprint of the province's urban spread; and** • **promoting a democratic urban order in terms of access to opportunity for all** **The proposed development of does not take place in contrast with any of the principles of the GSDF.**
National Environmental Management Act No. 107 of 1998 as amended.	**Numerous mitigation measures have been provided for the potential impacts that have been identified for the proposed development. This will ensure that the following principles as set out in Section 2 of NEMA are taken into account:** • **That the disturbance of ecosystems and loss of biodiversity are avoided, or, where they cannot be altogether avoided, minimised and remedied;**

	• **Pollution and degradation of the environment are avoided, or , where they cannot be altogether avoided are minimised and remedies;** • **That waste is avoided or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;** • **That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be avoided, is minimised and remedied.**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017.	**The EIA process, applicable to this application, is determined by the Environmental Impact Regulations published in Government Notice R982 in Government Gazette No 38282 of 4 December 2014 promulgated under Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and amended in 2017.** **The EIA regulations inter alia describe the procedure for EIA and provide a description of activities that would require authorisation through either 1) a Basic Assessment (in terms of Government Notices R983 and R985 of 2014) or 2) Scoping and Environmental Impact Assessment (in terms of Government Notice R984 of 2014).** **An application is submitted in terms of Chapter 4 of the EIA Regulations as the proposed development triggers activities that require a Basic Assessment.**
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	**The objectives of this Act are-** **Within the framework of the National Environmental Management Act, to provide for –** **(i) the management and conservation biological diversity of within the Republic and of the components of such biological diversity;** **(ii) the use of indigenous biological resources in a sustainable manner and** **(ii) the fair and equitable sharing among stakeholders of benefits arising from bioprospecting involving indigenous biological resources.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)	**The objective of this act is to protect health, well-being, and the environment by providing measures for-** • **Minimising consumption of natural resources;** • **Avoiding and minimising the generation of waste;** • **Reducing, reusing, recycling and recovering waste;** • **Treating and safely disposing of waste as last resort;** • **Preventing pollution and ecological degradation;** • **Securing ecologically sustainable development while promoting justifiable economic and social development.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Heritage Resources Act (Act	**Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and, as**

25 of 1999)	**they are valuable, finite, non-renewable and irreplaceable, they must be carefully managed to ensure their survival.** **It is not expected that the proposed development will impact on any heritage resources however should any heritage resources be discovered a chance find procedure will be followed whereby** • **If during the duration of the project, any person employed by the developer, one of its subsidiaries, contractors and sub-contractors, or service provider, finds any artifact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.** • **It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area.** • **The senior on-site Manager will inform the EC of the chance find and its immediate impact on operations. The EC will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.**
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993) (OHSA) as amended in July 2001, Including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**The main objective of the Act is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected herewith.** **The proposed development site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) [OHSA] and the National Building Regulations**
Reconstruction and Development Programme (RDP)	**One of the six principles of the Reconstruction and development programme is meeting basic needs and building the infrastructure.** **The RDP integrates growth, development, reconstruction, redistribution and reconciliation into a unified programme. The key link is an infrastructural programme that will provide access to modern and effective services such as electricity, water, telecommunications, transport, health, education and training for all our people.** **The proposed development does not contrast with one of the six principles of the RDP.**
Tshwane Metropolitan Spatial Framework	**The vision of the City of Tshwane is to become the Africa Capital City of Excellence. Seven strategic objectives have been identified in order to respond to the vision in their Metropolitan Spatial Framework:** • **Provide basic services, roads and stormwater** • **Economic growth and development and job creation**

	• **Sustainable communities with clean, healthy and safe environment and integrated social services** • **Foster participatory democracy and Batho Pele** • **Promote sound governance** • **Ensure financial sustainability** • **Organisational development and transformation** **The proposed development does not contrast with vision of the metropolitan Spatial Framework mentioned above.**

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the 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.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

Note: 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.

Please describe the process followed to reach (decide on) the list of alternatives below

The area where the activity is proposed is experiencing challenges with their cellular network, therefore the applicant saw an opportunity to provide assistance by the provision of a cellular structure that is to accompany more than 1 service provider.

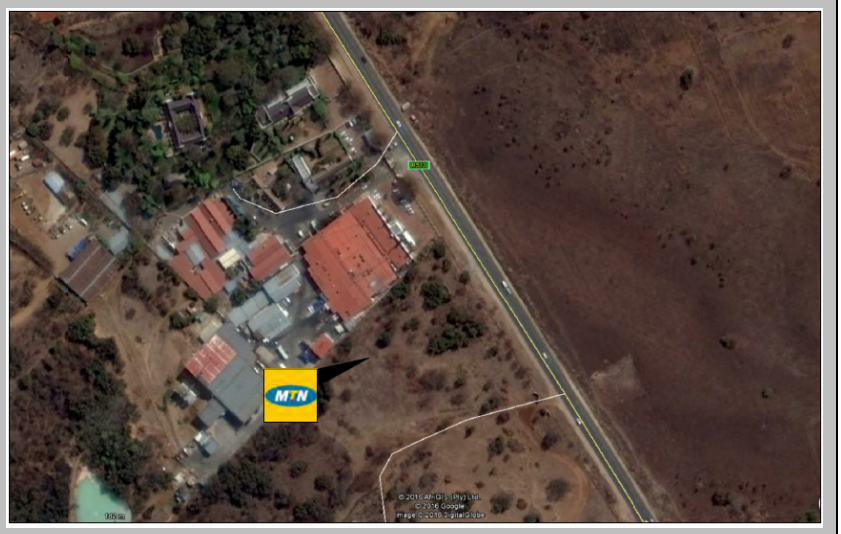
The search for a suitable site starts with the identification of the need for improved cellular coverage in an area. The Radio Planners indicate the optimal position and sites within a 100m of this position is investigated. According to CTMM the placement of cellular towers on residential properties are to be avoided and this places a restriction of suitable sites for consideration.

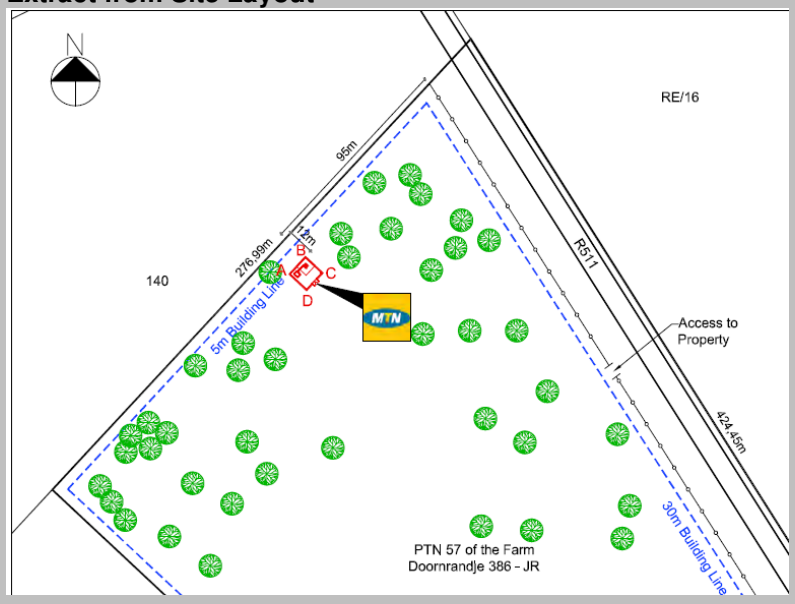
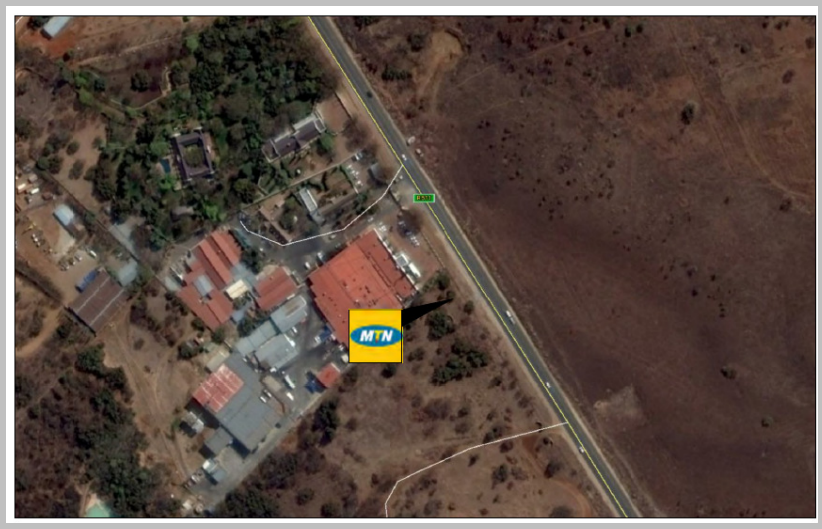
A team investigates all possible positions within the 100m radius and approach land owners in order to lease a portion of their land for the structure.

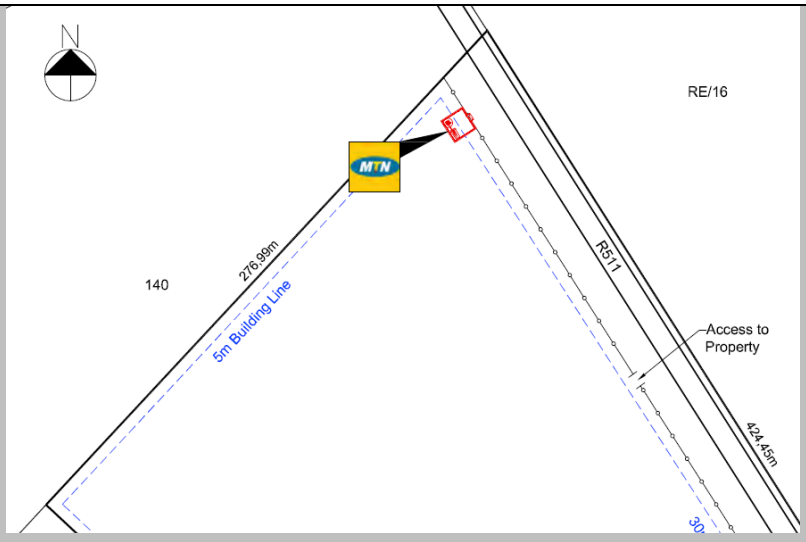
Several options were investigated and a lease agreement was reached.

The original preferred position (hereunder labeled Current) was located south of the boundary fence and west of the road but as a result of the input from the Ecologist an alternative site has been identified that is now the preferred site. The preferred site is not deemed sensitive by the Ecologist and is located 95m from the site boundary and the R511.

Provide a description of the alternatives considered

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	**Description**
1 (Preferred Alternative)	**36m Monopole Mast**	**The construction of a 36m Monopole mast in a 10m x 10m footprint and 11m x 11m plinth to be situated directly west of the R511 road and 1.1 km south west of Gerhardsville (Please refer to Appendix A: Site plans)** **Figure 3: Preferred Alternative Position Google Earth View** (25°51'56.24"S 28° 0'33.19"E) 

		Extract from Site Layout 
2	**36m Monopole Mast**	**The construction of a 36m Monopole mast in a 10m x 10m footprint and 11m x 11m plinth to be situated directly west of the R511 road and 1.1 km south west of Gerhardsville (Please refer to Appendix A: Site plans)** **Figure 4: Alternative 1 Position (25°51'54.06"S 28°0'35.30"E)**  **Extract from Site Layout**

		
3	**None**	

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	20 ha (5ha)
Alternatives:	
Alternative 1 (if any)	**0.0121ha / 121m²**
Alternative 2 (if any)	**0.0121ha / 121m²**
	Ha/ m²

or, for linear activities:

	Length of the activity:
Proposed activity	
Alternatives:	
Alternative 1 (if any)	**N/A**
Alternative 2 (if any)	**N/A**
	m/km

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

	Size of the site/servitude:
Proposed activity	**0.0121ha / 121m²**
Alternatives:	
Alternative 1 (if any)	**0.0121ha / 121m²**
Alternative 2 (if any)	
	Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	**YES**
If NO, what is the distance over which a new access road will be built	m

Describe the type of access road planned:

Access route will be as per the recommendation of the Ecological Report.

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	**YES**
If NO, what is the distance over which a new access road will be built	m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?	~~YES~~	~~NO~~
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated **1** Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
  - A4 size for activities with development footprint of 10sqm to 5 hectares;
  - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
  - A2 size for activities with development footprint of >20 hectares to 50 hectares);
  - A1 size for activities with development footprint of >50 hectares);

- The following should serve as a guide for scale issues on the layout plan:
  - A0 = 1: 500
  - A1 = 1: 1000
  - A2 = 1: 2000
  - A3 = 1: 4000
  - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

Refer to Appendix A for the Site Plans

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

Refer to Appendix A for the Site Plans

7. SITE PHOTOGRAPHS

Colour photographs from the center 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 the appropriate Appendix**.** It should be supplemented with additional photographs of relevant features on the site, where applicable.

Refer to Appendix B for the Photographs

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 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 to be attached in the appropriate Appendix.

Please refer to the facility illustration attached as Appendix C

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Instructions for completion of Section B for linear activities

1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
2) Indicate on a plan(s) the different environments identified
3) Complete Section B for each of the above areas identified
4) Attach to this form in a chronological order
5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route | **0** | times

Instructions for completion of Section B for location/route alternatives

1) For each location/route alternative identified the entire Section B needs to be completed
2) Each alterative location/route needs to be clearly indicated at the top of the next page
3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives | **1** | times (complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route | **0** | (complete only when appropriate for above)

Section B – Location/route Alternative No. | **0** | (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	**Portion 57 of the Farm Doornrandje No 386 – JR**

2. ACTIVITY POSITION

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 decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.865622°	**28.009219°**

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity	°	°
• Middle point of the activity	°	°
• End point of the activity	°	°

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached ☐

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 1	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 2																					
etc.																					

3. 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~~

4. LOCATION IN LANDSCAPE

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

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/ridge~~	~~Valley~~	**Plain**	~~Undulating plain/low hills~~	~~River front~~

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

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

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

c) are any caves located within a 300m radius of the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? ~~YES~~ **NO**

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 80	**Natural veld with scattered aliens % = 20**	~~Natural veld with heavy alien infestation % = 20~~	~~Veld dominated by alien species % =~~	~~Landscaped (vegetation) % =~~
~~Sport field % =~~	~~Cultivated land % =~~	~~Paved surface (hard landscaping) % =~~	~~Building or other structure % =~~	~~Bare soil % =~~

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site	YES	**NO**

If YES, specify and explain:

An ecological Assessment was conducted by Themeda Eco Consulting for the proposed development site and the study concluded the following:

According to the GDARD C-Plan the site falls into a Critical Biodiversity Area: Irreplaceable Area. The vegetation is classified under as Carletonville Dolomite Grassland (Mucina and Rutherford 2006). The study site does not fall under the National list of threatened Ecosystems, although it is located between two threatened ecosystems to the north and south.

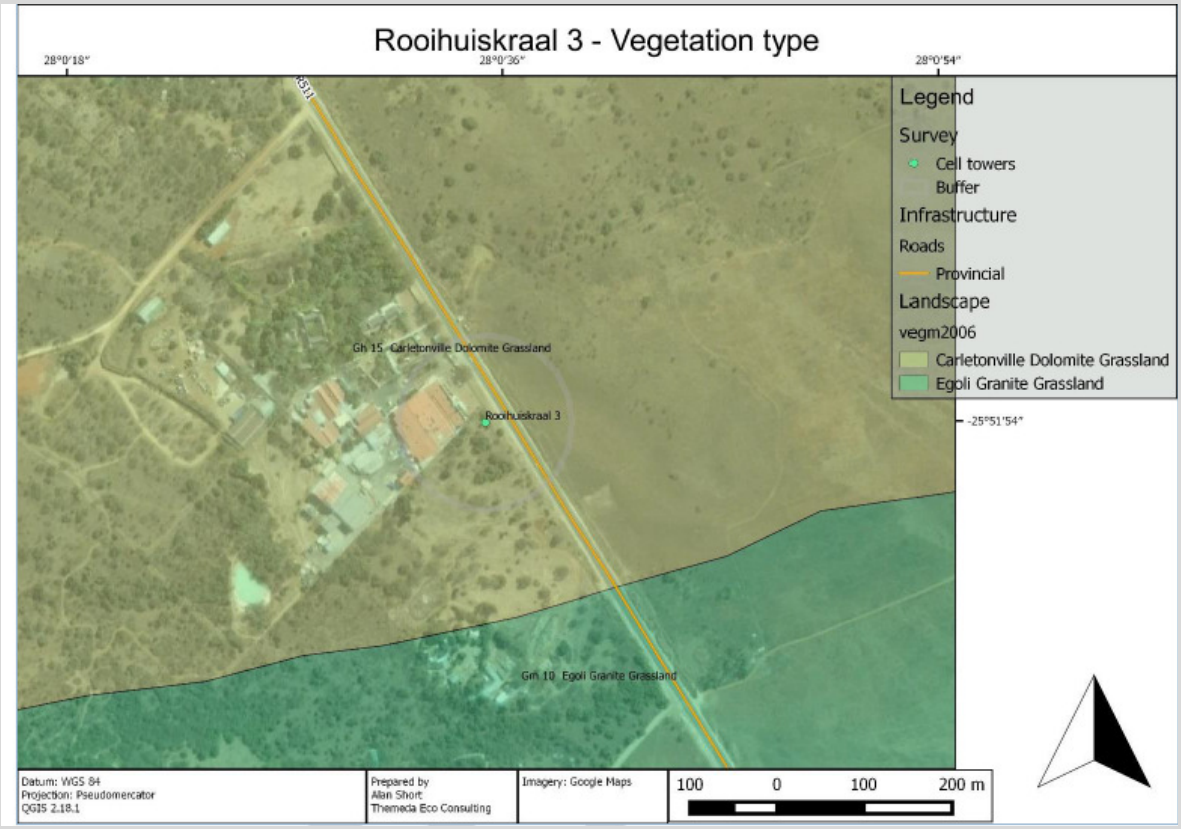


Figure 5: Vegetation type of the study area

The site is in reasonably good ecological condition with relatively high species diversity. Several alien invasive species were recorded including *Melia azedarach,*

Lantana camara, and Verbena bonariensis.

Only one potential species of conservation concern was recorded, a *Cheilanthes deltoidea subsp. Deltoidea.* This species has two subspecies, one of which is velnerable and the other least concern.

Figure 6: Conservation value of the study area

***Cheilanthes spp.* are provincially protected as class *Filicinae.* The location of the species observes was S 25° 51' 57.4" E 28° 0' 36.3"**

The footprint of the mast is small and although the sensitivity of the environment was estimated as medium, the mast will have little impact on the vegetation or habitats provided that the mitigation recommendations are followed to minimise impact.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	**YES**	~~NO~~

If YES, specify and explain:

The site falls in the Hennopsvallei Conservancy and the Witwatersberg Pretoria Mountain Bushveld (GP 10).

Geographical location
Pretoria west including Centurion (2528CC). Ecosystem delineated by the Witwatersberg ridge system and associated koppies, rivers and drainage lines.

Description
Key biodiversity features include Red or Orange Listed plants, for example, Melolobium subspicatum, Delosperma gautengense, Holothrix randii; Red or Orange Listed mammals, for example, Schreiber's Long-fingered Bat; Red or Orange Listed birds, for example White-backed Night-Heron and African Finfoot; Red or Orange Listed reptiles for example the Striped Harlequin Snake; Red or

Orange Listed or priority invertebrates, for example Pretoria Lesser Baboon Spider, Purse Web Trapdoor Spider, Front-eyed Trapdoor Spider, Gunning's Rock Scorpion, Golden Starburst Baboon Spider, and Stobbia's Fruit Chafer; and five vegetation including the Andesite Mountain Bushveld, Carletonville Dolomite Grassland, Gauteng Shale Mountain Bushveld, Marikana Thornveld and Rand Highveld Grassland. The Apies River, Hennops River, Moganwe, Swartbooispruit, Walkerspruit, Waterkloofspruit, and unnamed wetlands are also key features of the ecosystem.

Approximately 2%, of the ecosystem is protected in the Groenkloof Nature Reserve.

However the site is situated on the northern portion of the site, adjacent to the northern boundary and a road to the east. The site falls south of a commercial use. Please refer to the Site Plan below.

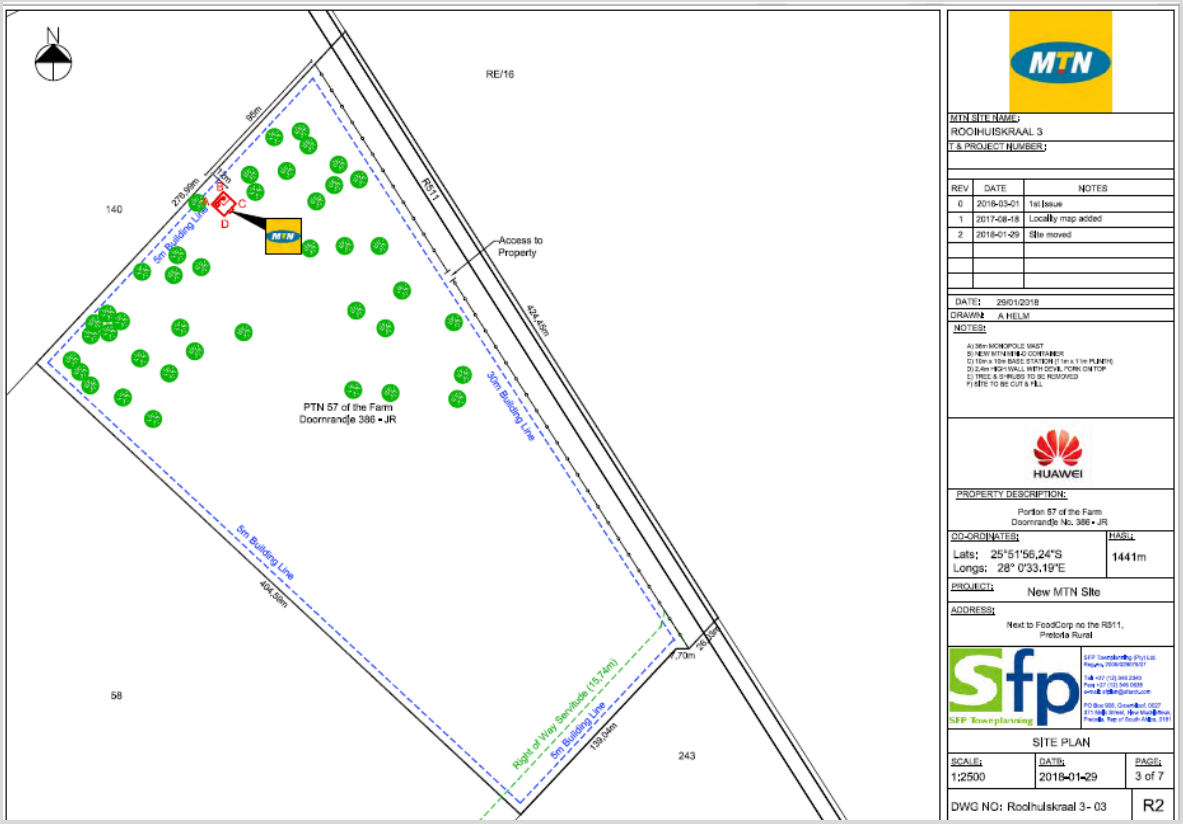


Figure 7: Site Plan

Are there any special or sensitive habitats or other natural features present on the site?	~~YES~~	**NO**

If YES, specify and explain:

No rivers or wetlands are mapped on or within 200m of the site, and no signs of wetland vegetation were observed during the survey.

Was a specialist consulted to assist with completing this section	~~YES~~	**NO**

If yes complete specialist details

Name of the specialist:	**Alan Short of Themeda Eco Consulting**		
Qualification(s) of the specialist:	**SACNASP registered scientists (Ecologist) Reg No. 400098/14**		
Postal address:	**29 Cruden Bay Road, Greenside Johannesburg**		
Postal code:	**2193**		
Telephone:		Cell:	**alan@themedaEco.co.za**
E-mail:	**alan@themedaEco.co.za**	Fax:	

Are any further specialist studies recommended by the specialist?	~~YES~~	**X NO**
If YES, specify:		
If YES, is such a report(s) attached?	~~YES~~	**NO**
If YES list the specialist reports attached below		

Signature of specialist: _____ Date:

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	**2. River, stream, wetland**	~~3. Nature conservation area~~	~~4. Public open space~~	~~5. Koppie or ridge~~
~~6. Dam or reservoir~~	**7. Agricultural**	**8. Low density residential**	~~9. Medium to high density residential~~	~~10. Informal residential~~
~~11. Old age home~~	~~12. Retail~~	~~13. Offices~~	**14. Commercial & warehousing**	~~15. Light industrial~~
~~16. Heavy industrial[AN]~~	~~17. Hospitality facility~~	~~18. Church~~	~~19. Education facilities~~	~~20. Sport facilities~~
~~21. Golf course/polo fields~~	~~22. Airport[N]~~	~~23. Train station or shunting yard[N]~~	~~24. Railway line[N]~~	~~25. Major road (4 lanes or more)[N]~~
~~26. Sewage treatment plant[A]~~	~~27. Landfill or waste treatment site[A]~~	~~28. Historical building~~	~~29. Graveyard~~	~~30. Archeological site~~
~~31. Open cast mine~~	~~32. Underground mine~~	~~33.Spoil heap or slimes dam[A]~~	~~34. Small Holdings~~	
Other land uses (describe):				

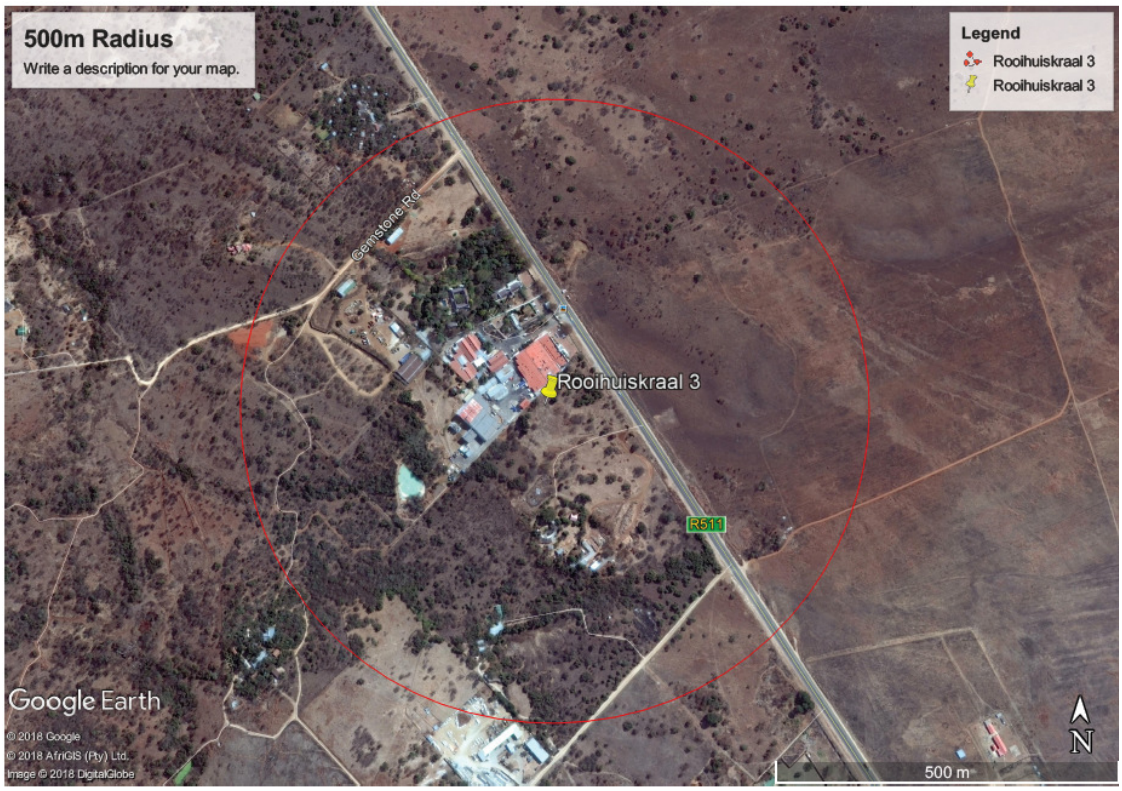


Figure 8: 500m radius Preferred Alternative

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

7	7	7	7	7
14	14	7	7	7,2
7	14		1,7	1,7
7	7	1,7	1,7	1,7
7	7	1,14	7	7

WEST **EAST** = **Site**

SOUTH

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "[A]" and with an "[N]" respectively.

Have specialist reports been attached	YES	**NO**
If yes indicate the type of reports below		

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

Centurion (previously known as Verwoerdburg) is an affluent area with 236,580 (2011 Census) inhabitants in Gauteng Province of South Africa, located between Pretoria and Midrand (Johannesburg). Formerly an independent municipality, with its own town council, it forms part of the City of Tshwane Metropolitan Municipality since 2000. Its heart is located at the intersection of the N1 and N14 freeways. The R21 also passes through Centurion.

The area is approximately 236,580 (394.88 km^2) (152.46 sq mi) in extent and has a population of 236,580 600/km^2 (1,600/sq mi). The population is represented by Black African (29.3%), White (59.0%), Indian or Asian (8.4%) and Coloured (2.3%). The most spoken language in the area is Afrikaans (49.4%).

Sources:
https://en.wikipedia.org/wiki/Centurion

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-
(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	~~YES~~	**NO**

1. PROPERTY DESCRIPTION – ALTERNATIVE 1

Property description: (Including Physical Address and Farm name, portion etc.)	**Portion 57 of the Farm Doornrandje No 386 – JR**

2. ACTIVITY POSITION

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 decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.865017°	**28.009806°**

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity	°	°
• Middle point of the activity	°	°
• End point of the activity	°	°

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached ☐

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 1	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 2																					
etc.																					

3. 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~~

4. LOCATION IN LANDSCAPE

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

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/ridge~~	~~Valley~~	**Plain**	~~Undulating plain/low hills~~	~~River front~~

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

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

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

c) are any caves located within a 300m radius of the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? | ~~YES~~ | **NO**

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 80	**Natural veld with scattered aliens % = 20**	~~Natural veld with heavy alien infestation % = 20~~	~~Veld dominated by alien species % =~~	~~Landscaped (vegetation) % =~~
~~Sport field % =~~	~~Cultivated land % =~~	~~Paved surface (hard landscaping) % =~~	~~Building or other structure % =~~	~~Bare soil % =~~

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site | **YES** | ~~NO~~

If YES, specify and explain:

An ecological Assessment was conducted by Themeda Eco Consulting for the proposed development site and the study concluded the following:

According to the GDARD C-Plan the site falls into a Critical Biodiversity Area: Irreplaceable Area. The vegetation is classified under as Carletonville Dolomite Grassland (Mucina and Rutherford 2006). The study site does not fall under the National list of threatened Ecosystems, although it is located between two threatened ecosystems to the north and south.

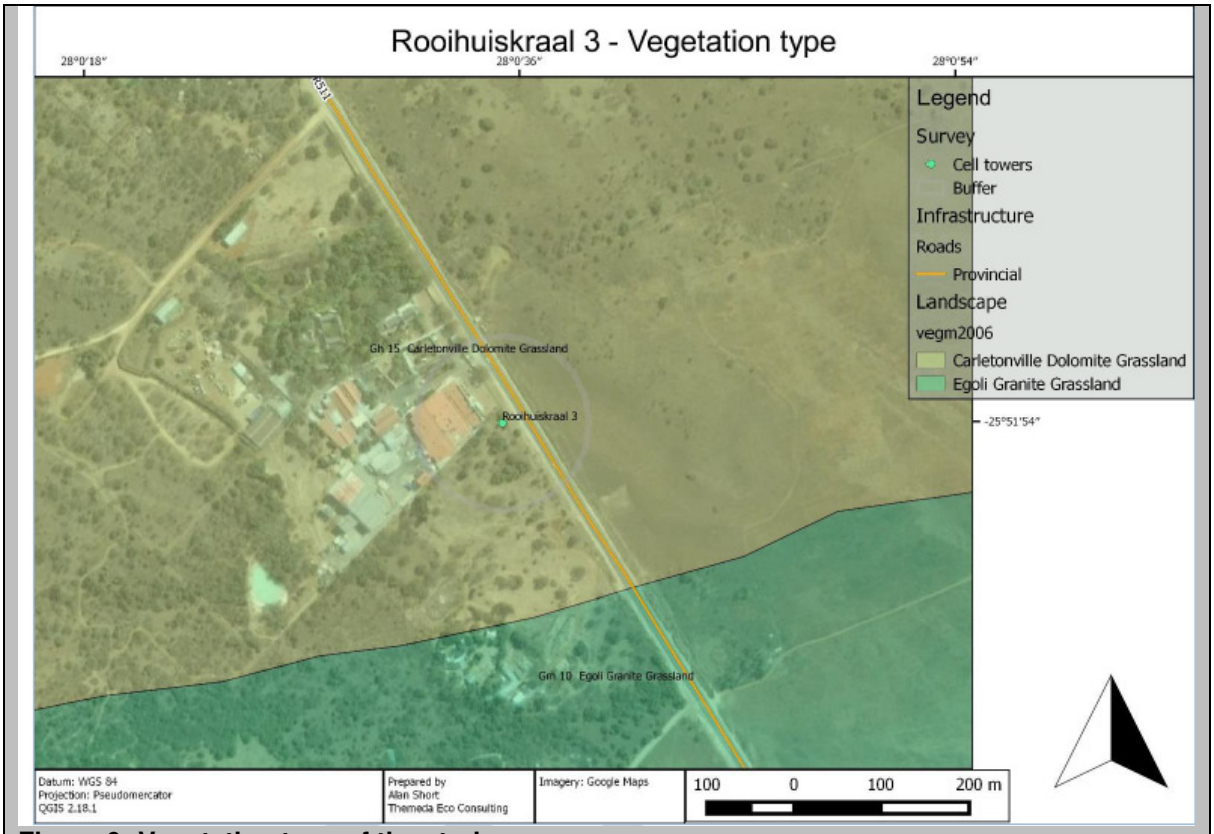


Figure 9: Vegetation type of the study area

The site is in reasonably good ecological condition with relatively high species diversity. Several alien invasive species were recorded including *Melia azedarach, Lantana camara, and Verbena bonariensis.*

Only one potential species of conservation concern was recorded, a *Cheilanthes deltoidea subsp. Deltoidea.* This species has two subspecies, one of which is velnerable and the other least concern.

Figure 10: Conservation value of the study area

Cheilanthes spp. **are provincially protected as class** ***Filicinae.*** **The location of the species observes was S 25° 51' 57.4" E 28° 0' 36.3"**

The footprint of the mast is small and although the sensitivity of the environment was estimated as medium, the mast will have little impact on the vegetation or habitats provided that the mitigation recommendations are followed to minimise impact.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	**YES**	~~NO~~

If YES, specify and explain:

The site falls in the Hennopsvallei Conservancy and the Witwatersberg Pretoria Mountain Bushveld (GP 10).

Geographical location
Pretoria west including Centurion (2528CC). Ecosystem delineated by the Witwatersberg ridge system and associated koppies, rivers and drainage lines.

Description
Key biodiversity features include Red or Orange Listed plants, for example, Melolobium subspicatum, Delosperma gautengense, Holothrix randii; Red or Orange Listed mammals, for example, Schreiber's Long-fingered Bat; Red or Orange Listed birds, for example White-backed Night-Heron and African Finfoot; Red or Orange Listed reptiles for example the Striped Harlequin Snake; Red or Orange Listed or priority invertebrates, for example Pretoria Lesser Baboon Spider, Purse Web Trapdoor Spider, Front-eyed Trapdoor Spider, Gunning's Rock Scorpion, Golden Starburst Baboon Spider, and Stobbia's Fruit Chafer; and five vegetation including the Andesite Mountain Bushveld, Carletonville Dolomite Grassland, Gauteng Shale Mountain Bushveld, Marikana Thornveld and Rand Highveld Grassland. The Apies River, Hennops River, Moganwe, Swartbooispruit, Walkerspruit, Waterkloofspruit, and unnamed wetlands are also key features of the ecosystem.

Approximately 2%, of the ecosystem is protected in the Groenkloof Nature Reserve.

However the site is situated on the northern portion of the site, adjacent to the northern boundary and a road to the east. The site falls south of a commercial use. Please refer to the Site Plan below and photo of the site.

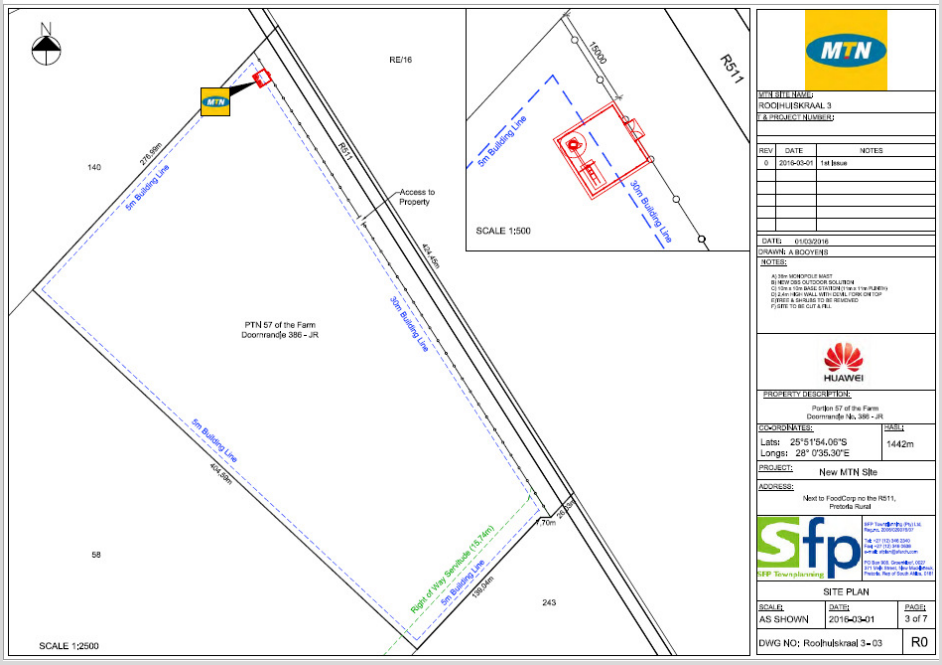


Figure 11: Site Plan

Figure 12: Photo of the site looking north

Are there any special or sensitive habitats or other natural features present on the site?

~~YES~~	**NO**

If YES, specify and explain:

No rivers or wetlands are mapped on or within 200m of the site, and no signs of wetland vegetation were observed during the survey.

Was a specialist consulted to assist with completing this section

YES	~~NO~~

If yes complete specialist details
Name of the specialist: **Alan Short of Themeda Eco Consulting**

Qualification(s) of the specialist:	**SACNASP registered scientists (Ecologist) Reg No. 400098/14**		
Postal address:	**29 Cruden Bay Road, Greenside Johannesburg**		
Postal code:	**2193**		
Telephone:		Cell:	**072 372 9099**
E-mail:	**alan@themedaEco.co.za**	Fax:	

Are any further specialist studies recommended by the specialist?	~~YES~~	**X NO**
If YES, specify:		
If YES, is such a report(s) attached?	~~YES~~	**NO**
If YES list the specialist reports attached below		

Signature of specialist: _____ Date: _____

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	**2. River, stream, wetland**	~~3. Nature conservation area~~	~~4. Public open space~~	~~5. Koppie or ridge~~
~~6. Dam or reservoir~~	**7. Agricultural**	**8. Low density residential**	~~9. Medium to high density residential~~	~~10. Informal residential~~
~~11. Old age home~~	~~12. Retail~~	~~13. Offices~~	**14. Commercial & warehousing**	~~15. Light industrial~~
~~16. Heavy industrial[AN]~~	~~17. Hospitality facility~~	~~18. Church~~	~~19. Education facilities~~	~~20. Sport facilities~~
~~21. Golf course/polo fields~~	~~22. Airport[N]~~	~~23. Train station or shunting yard[N]~~	~~24. Railway line[N]~~	~~25. Major road (4 lanes or more)[N]~~
~~26. Sewage treatment plant[A]~~	~~27. Landfill or waste treatment site[A]~~	~~28. Historical building~~	~~29. Graveyard~~	~~30. Archeological site~~
~~31. Open cast mine~~	~~32. Underground mine~~	~~33.Spoil heap or slimes dam[A]~~	~~34. Small Holdings~~	
Other land uses (describe):				

Figure 13: 500m radius Alternative 1

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

7	7	7	7	7
14	14	7	7	7,2
7	14		1,7	1,7
7	7	1,7	1,7	1,7
7	7	1,14	7	7

WEST **EAST** = **Site**

SOUTH

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "A" and with an "N" respectively.

Have specialist reports been attached	YES	**NO**
If yes indicate the type of reports below		

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

Centurion (previously known as Verwoerdburg) is an affluent area with 236,580 (2011 Census) inhabitants in Gauteng Province of South Africa, located between Pretoria and Midrand (Johannesburg). Formerly an independent municipality, with its own town council, it forms part of the City of Tshwane Metropolitan Municipality since 2000. Its heart is located at the intersection of the N1 and N14 freeways. The R21 also passes through Centurion.

The area is approximately 236,580 (394.88 km^2) (152.46 sq mi) in extent and has a population of 236,580 600/km^2 (1,600/sq mi). The population is represented by Black African (29.3%), White (59.0%), Indian or Asian (8.4%) and Coloured (2.3%). The most spoken language in the area is Afrikaans (49.4%).

Sources:
https://en.wikipedia.org/wiki/Centurion

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-
(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	~~YES~~	**NO**

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?	**YES** ~~NO~~
If yes, has any comments been received from the local authority?	**YES** ~~NO~~

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

Comments from City of Tshwane Metropolitan Municipality – 24 July 2017

1. **The flora and fauna study should be conducted in order to determine the absence or level of specie abundance on the proposed development site. The assessment must indicate all potential impacts of the proposed development and appropriate measures.**
2. b) The applicant must ensure that:
   - All structures are fenced or walled to limit public access to it. If the base station is secured building, sufficient precaution must be made to prevent access to the antenna support structure. Access to the area must be strictly controlled through a locked gate.
   - If the structure will be co-used to put up lights for security purposes, written consent of surrounding land users must be obtained. Lights must be screened in such a way as to prevent light pollution.
   - The applicant must ensure that the structure has an on-going maintenance schedule to keep it visually attractive.
   - Lighting of structures must be shield away from adjacent properties to prevent light pollution.
   - The applicant must take all reasonable steps to ensure that the telecommunications structure and equipment's do not cause a noise nuisance.

   c) Please note that according to the Telecommunication Mast Management guidelines for the City of Tshwane it is suggested that antennas and masts may be disguised with elements such as a signage, lightning and place name boards.

   d) The proposed development has potential visual impacts to the avifaunal biodiversity and human however associated visual impact study is not included. **The Department thus request that a visual impact study addressing the potential impacts should be compiled and included in the Final Basic Assessment report.**

   e) The proposed activity must be constructed according to the finalised and approved EMP. The EMP should include all the above recommendations. The approved finalised EMP is a legally binding document. An Environmental Control Officer (ECO) should be appointed for the proposed construction phase of the development to enforce the approved EMP. The appointed ECO details should be included within the EMP.

Comments from Gauteng Department of Agriculture and Rural Development – 03 August 2017

C. Alternatives

The DBAR did cover alternatives excluding No-Go option. Please note that the final report must also cover a no-go option. Comparatives assessment of alternatives must also include the following:

- Location of activity components on the site in relation to the surrounding land uses and adjacent roads infrastructure and services (if there are any).
- Alternatives must also be assessed in relation to other technology alternatives such as energy.

D. Significant rating of impacts

Identification of impacts and significant rating provided on the draft were noted however they must to reliable conclusion that the mitigation measures identified will reduce impacts to an acceptable le

E. Locality map and layout plans or facility illustrations

- The scale of locality map must be at least 1:50 000. The scale must be indicated on the map;
- The locality map and **all** other maps are in colour.
- Locality map must show property boundaries and numbers within 100m of the site, and for and/or piggery, locality map must show properties within 500m and prevailing or predominar direction.
- For gentle slopes the 1m contour intervals must be indicated on the plan and whenever the s the site exceeds 1:10, the 500mm contours must be indicated on the plan.
- Areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Locality map must show exact position of development site or sites;
- Locality map shows and identifies (if possible) public and access roads; and
- The current land use as well as the land use zoning of each of the properties adjoining the sites.

The layout plan

- The layout plan must be printed in colour and **overlaid with the composite sensitivity map**.
- Layout plan must be of acceptable paper size and scale, e.g. A4 size for activities with develop footprint of 10sqm to 5 hectares.
- layout plan scales should be guided by the following:
  - A0 = 1: 500.
  - A1 = 1: 1000.
  - A2 = 1: 2000.
  - A3 = 1: 4000.
  - A4 = 1: 8000 (±10 000).
- Servitudes indicating the purpose of the servitude.
- Sensitive environmental elements on and within 100m of the site or sites (including the rele buffers as prescribed by the competent authority) including (but not limited thereto).

F. EMPr

EMPr must be attached on the final report and must be practical, site specific and easily enforceab

G. Public participation process

All organs of state which have jurisdiction in respect of the proposed activity, this include Tshwane Metropolitan Municipality Open Space Management Section must consulted ar comments be included on the final report.

Please refer to Appendix E; Apendix 7 for the comments on the Draft BAR

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least **thirty (30) calendar days** before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders? **YES** ~~NO~~

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Registration as an Interested and Affected Party.

If "NO" briefly explain why no comments have been received

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report

Appendix 9 – Copy of the register of I&APs

Public Participation was conducted according to the following steps:

- **An advert was placed in the local newspaper of the Pretoria News on 06 April 2017**
- **Notice boards were placed on site on 06 April 2017,**
- **Notices were hand delivered to adjacent property owners,**
- **Registered letters were sent to neighbouring property owners, and**
- **Faxes and emails were sent to the stakeholders including the ward councillor of the area.**

Please Refer to Appendix E: Public Participation, for the proof of the Public Participation undertaken

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
4) Each alterative needs to be clearly indicated in the box below
5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives **0** times (complete only when appropriate)

Section D Alternative No. **0** (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? **YES** ~~NO~~

If yes, what estimated quantity will be produced per month? **100m^3**

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

The following policy on waste management is to be followed:

- **Provision will be made for adequate containers so as to handle all the garbage and litter generated on site;**
- **The contractor is responsible for any damage caused by any garbage and/or toxic material. Waste will be regularly removed to a licensed dumping site;**

No dangerous or toxic materials may be dumped at a site, which is not licensed for dangerous or toxic materials. If this is the case, provision will be made for the safe storage and subsequent collection and removal to a properly licensed site.

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

Construction waste will be used for fill as far as possible. Any excess material will be removed to a landfill site.

Will the activity produce solid waste during its operational phase? ~~YES~~ **NO**

If yes, what estimated quantity will be produced per month? `m^3

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

No solid waste will be generated during the operational phase. Maintenance of the structure will take place yearly but waste generated will be removed from site by the Contractor and disposed of at a licensed facility.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity? ~~YES~~ **NO**

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

Note: 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, 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 relevant legislation?	~~YES~~	**NO**

If yes, inform the competent authority and request a change to an application for scoping and EIA.

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

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

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	~~YES~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?	~~YES~~	~~NO~~

Will the activity produce any effluent that will be treated and/or disposed of on site?	~~Yes~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3

If yes describe the nature of the effluent and how it will be disposed.

Note that if effluent is to be treated or disposed on site 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?	~~YES~~	**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:

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	~~YES~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	~~YES~~	~~NO~~

Will the activity produce any effluent that will be treated and/or disposed of on site?	~~YES~~	**NO**

If yes describe how it will be treated and disposed off.

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	~~YES~~	**NO**
If yes, is it controlled by any legislation of any sphere of government?	~~YES~~	**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.
If no, describe the emissions in terms of type and concentration:

No gaseous emissions apart from dust and smoke during construction phase are expected.

2. WATER USE

Indicate the source(s) of water that will be used for the activity

~~municipal~~	~~Directly from water board~~	~~groundwater~~	~~river, stream, dam or lake~~	~~other~~	**The activity will not use water**

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: liters

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs?	~~YES~~	**NO**

If yes, list the permits required

If yes, have you applied for the water use permit(s)?	YES	NO
If yes, have you received approval(s)? (attached in appropriate appendix)	YES	NO

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

Eskom

If power supply is not available, where will power be sourced from?

4. ENERGY EFFICIENCY

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

MTN are conducting ongoing research to ensure that all cellular equipment within the network operates at optimal energy efficiently.

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

MTN has conducted testing on equipment with solar panels and wind turbines. The research on alternative power supply is ongoing within MTN, but has been problematic in the past. This is due to the site and CAA light requiring constant, uninterrupted power. This is of course not possible with the two aforementioned alternative power sources.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, 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 as well as the impacts of not implementing the activity (Section 24(4)(b)(i).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

Comment	Entity	Date
• Registered as an I&AP	Pierre Du Toit Jacobs Well Village NPC	18 April 2017

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)
(A full response must be provided in the Comments and Response Report that must be attached to this report):

Response to comments from the City of Tshwane Municipality on the Draft BAR

- **The specialist study has been conducted. Please refer to Appendix G for the report.**
- **The fence is a palisade fence that surrounds the cellular base station.**
  The Site will have a spotlight directly on the site that can be switched on and off while maintenance is done. Light placed in such way to not be directed towards the R511 road.

  Maintenance on such mast will be every 4-6 week for approximate half an hour.

  Spotlight will be directed on the site away from the R511 Road. Spotlight Light will be switched on while maintenance is done.

  Generator will only be used when site is without power for longer than 8 hours. Silent Generators will be used.
- **Telecommunication mast is supported by council within rural areas. Mast will be painted green to blend in with surrounding environment.**
- **The mast is situated a fair distance from the road and it is not expected that it will cause an adverse negative visual impact to the surrounding area as the surrounding area is undeveloped in nature.**
- **The EMPr has been attached. Please refer to Appendix H**

Response to comments from the Gauteng Department of Agriculture and Rural Development on the Draft BAR

- **The Basic Assessment Report has been amended.**
- **The Basic Assessment Report has been amended.**
- **1:10 000 Locality map, property boundary, location of MTN site, contours attached.**
  Drawing attached and indicates public and access roads.

  Zoning and land use Map attached.
- **Layout plan for Site on attached drawings. Site layout is both on 1:500 and 1:2500 (Cannot go smaller scale due to size of the MTN site).**

  Servitude indicated as right of way indicated on drawings.

- **EMPr attached.**
- **Comments received from CTMM included in Final BAR**

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

Table 1: Methodology

Rating	Definition of Rating	Score
A. Extent – ***the area in which the impact will be expected***		
None		**0**
Local	**Confined to project or study area or part thereof (eg. site)**	**1**
Regional	The region, which may be defined in various ways, eg. Cadastral, catchment, **topographic**	**2**
(Inter) national	**Nationally or beyond**	**3**
B. Intensity – ***the magnitude or size of the impact***		
None		**0**
Low	**Natural and/or social functions and processes are negligibly altered**	**1**
Medium	**Natural and/or social functions and processes continue albeit in a modified way**	**2**
High	**Natural and/or social functions or processes are severely altered**	**3**
C. Duration – ***the time frame for which the impact will be experienced***		
None		**0**
Short term	**Up to 2 years**	**1**
Medium term	**2 – 15 years**	**2**
Long Term	**More than 15 years**	**3**

The combined score of these three criteria corresponds to a Consequence Rating, as set out in Table below:

Table 2: Method used to determine the Consequence Score

Combined score (A+B+C)	0 - 2	3 - 4	5	6	7	8-9
Consequence Rating	Not **significant**	**Very low**	**Low**	**Medium**	**High**	**Very high**

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications indicated in table below:

Table 3: Probability Classification

Probability of impact – the likelihood of the impact occurring	
Improbable	**< 40% chance of occurring**
Possible	**40% - 70% chance of occurring**
Probable	**> 70% - 90% chance of occurring**
Definite	**> 90% chance of occurring**

The overall significance of impacts is determined by considering consequence and probability using the rating system indicated in table below:

Table 4: Impact Significance Ratings

Significance Rating	Consequence		Probability
Insignificant	**Very low**	**&**	**Improbable**
	Very low	**&**	**Possible**
Very Low	**Very low**	**&**	**Probable**
	Very low	**&**	**Definite**
	Low	**&**	**Improbable**
	Low	**&**	**Possible**
Low	**Low**	**&**	**Probable**
	Low	**&**	**Definite**
	Medium	**&**	**Improbable**
	Medium	**&**	**Possible**
Medium	**Medium**	**&**	**Probable**
	Medium	**&**	**Definite**
	High	**&**	**Improbable**
	High	**&**	**Possible**
High	**High**	**&**	**Probable**
	High	**&**	**Definite**
	Very high	**&**	**Improbable**
	Very high	**&**	**Possible**
Very High	**Very high**	**&**	**Probable**
	Very high	**&**	**Definite**

In conclusion the impacts are also considered in terms of their status (positive or negative impact) and the confidence in the ascribed impact significance rating. The prescribed system for considering impacts status and confidence (in assessment) is indicated in table below.

Table 5: Impact status and confidence classification

Status of Impact	
Indication of where the impact is adverse (negative) or beneficial (positive)	**+ ve (positive – a 'benefit')**
	- ve (negative – a 'cost')
	Neutral
Confidence of assessment	
The degree of confidence in predictions based on available information, EAP's **judgement and/or specialist knowledge**	**Low**
	Medium
	High

The impact significance rating should be considered by GDARD in their decision-making process based on the implications of ratings ascribed below:

- Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity / development;
- Very low: the potential impact should not have any meaningful influence on the decision regarding the proposed activity / development;
- Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity / development;
- Medium: the potential impact should influence the decision regarding the proposed activity / development;
- High: the potential impact will affect the decision regarding the proposed activity / development;
- Very high: The proposed activity should only be approved under special circumstances.

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Table 6: Impact assessment - Construction phase

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
1. ISSUE: AIR QUALITY								
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	**Local (1)**	**Short term (1)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Definite = Very low**	**-ve**	**High**
2. ISSUE VISUAL IMPACTS								
2.1 Visual Impacts due to clearance of site, cut and fill	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very low (4)**	**Probable**	**Very low & Probable = Very low**	**-ve**	**High**
3. ISSUE GEOLOGY AND SOILS								
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Local (1)**	**Medium term (2)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Probable = Very low**	**-ve**	**High**
3.2 Soil pollution	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**High**
3.3 Disturbance of surface geology for development foundations	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**Med**
4. ISSUE FAUNA AND FLORA								
4.1 Degradation, destruction of habitats/ ecosystem	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
4.2 Impacts on fauna and flora Disruption of nutrient flow dynamics; Introduction of chemicals into the ground and surface water through leaching; Habitat fragmentation Changes to abiotic environmental conditions; Changes to disturbance regimes e.g. decreased or increased incidences of fire; Changes to successional processes; effects on	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
pollinators; And increased invasion by plants and animals not endemic to the area.								
5. ISSUE HYDROLOGY								
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	**Regional (2)**	**Medium (2)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Medium& Probable = Medium**	**-ve**	**High**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE								
6.1 Noise/ vibration	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
7.1 Safety and Security	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
7.2 Job opportunities	**Regional (2)**	**High (3)**	**Medium term (2)**	**High (7)**	**Definite**	**High & Definite = High**	**+ ve**	**Medium**
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
of time.								
8. ISSUE HISTORICAL ENVIRONMENT								
8.1 Destruction of cultural / heritage sites	**None**	**None**	**None**	**Not significant (0)**	**Improbable**	**Not significant & improbable = insignificant**	**-ve**	**Medium**
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE								
9.1 Waste	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Low & Definite = Low**	**-ve**	**High**

Alternative 1

Table 7: Impact assessment-Construction phase

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
1. ISSUE: AIR QUALITY								
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	**Local (1)**	**Short term (1)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Definite = Very low**	**-ve**	**High**
2. ISSUE VISUAL IMPACTS								
2.1 Visual Impacts due to clearance of site, cut and fill	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very low (4)**	**Probable**	**Very low & Probable = Very low**	**-ve**	**High**
3. ISSUE GEOLOGY AND SOILS								
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Local (1)**	**Medium term (2)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Probable = Very low**	**-ve**	**High**
3.2 Soil pollution	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**High**
3.3 Disturbance of surface geology for development foundations	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**Med**
4. ISSUE FAUNA AND FLORA								
4.1 Degradation, destruction of habitats/ ecosystem	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Definite**	**Medium & Definite = Medium**	**-ve**	**High**
4.2 Impacts on fauna and flora Disruption of nutrient flow dynamics; Introduction of chemicals into	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Definite**	**Medium& Definite = Medium**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
the ground and surface water through leaching; Habitat fragmentation Changes to abiotic environmental conditions; Changes to disturbance regimes e.g. decreased or increased incidences of fire; Changes to successional processes; effects on pollinators; And increased invasion by plants and animals not endemic to the area.								
5. ISSUE HYDROLOGY								
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	**Regional (2)**	**Medium (2)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Medium& Probable = Medium**	**-ve**	**High**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE								
6.1 Noise/ vibration	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
7.1 Safety and Security	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
7.2 Job opportunities	**Regional (2)**	**High (3)**	**Medium term (2)**	**High (7)**	**Definite**	**High & Definite = High**	**+ ve**	**Medium**
7.3 Visual impact Site clearing and removal	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.								
8. ISSUE HISTORICAL ENVIRONMENT								
8.1 Destruction of cultural / heritage sites	**None**	**None**	**None**	**Not significant (0)**	**Improbable**	**Not significant & improbable = insignificant**	**-ve**	**Medium**
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE								
9.1 Waste	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Low & Definite = Low**	**-ve**	**High**

Table 8: Impact assessment - Operational phase
Proposal

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	status	Confidence
1. ISSUE: FAUNA AND FLORA								
1.1 Alien invasion	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & probable = Medium**	**-ve**	**Medium**
2. ISSUE: HYDROLOGY								
2.1 Erosion of adjacent areas	**Regional (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & probable = Medium**	**-ve**	**Medium**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
3. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
3.1 Safety and Security	**Local (1)**	**Low (1)**	**Long term (3)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
4. ISSUE: TRAFFIC								
4.1 Structure might impact on air traffic if it does not have day night markings	**Regional (2)**	**Medium (2)**	**Long term (3)**	**High**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Alternative 1 ***(REPEAT THIS TABLE FOR EACH ALTERNATIVE)***				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
The impacts of alternative 1 are similar to that of the proposal.				

No Go				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
None				

Proposal

Table 9: Significance Rating - Construction phase

Preferred Option construction phase

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: AIR QUALITY				
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	Very Low	• Dust generation should be kept to a minimum. • Dust must be suppressed on construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent. • Speed limits must be	Very Low	Negative impact to the ambient air quality of the area.

		implemented in all areas, including public roads and private property to limit the levels of dust pollution. • It is recommended that the clearing of vegetation from the site should be selective and done just before construction so as to minimise erosion and dust. • Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided. • All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials. • No burning of refuse or vegetation is permitted.		
2. ISSUE VISUAL IMPACTS				
2.1 Visual Impacts due to clearance of site, cut and fill.	Very Low	• Site development to be limited to footprint and access road.	Very Low	
3. ISSUE GEOLOGY AND SOILS				
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	• Strip topsoil prior to any construction activities. • Reuse topsoil to rehabilitate disturbed areas. • Topsoil must be kept separate from overburden and must not be used for building purposes or maintenance or access roads. • Appropriate erosion and storm water management structures must be installed around the construction site.	Very Low	
3.2 Soil pollution	Low	• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution. • Ensure appropriate handling of hazardous substances • Remediate polluted soil. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes.	Very Low	

		• Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded. • All excavations and foundations must be inspected regularly		
3.3 Disturbance of surface geology for development foundations	Low	• Site development to be limited to footprint and access road	Very low	
4. ISSUE FAUNA AND FLORA				
4.1 Degradation, destruction of habitats/ ecosystem	Very low	• Minimise construction footprints prior to commencement of construction and control all edge effects of construction activities (proliferation of alien vegetation, disturbance of soils, dumping of construction waste). • Existing roads should be utilized wherever possible to provide access to construction area. • Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities. • Clearly demarcate areas to be cleared and ensure that vegetation clearing only occurs within the demarcated areas • Ensure that erosion management and sediment controls are strictly implemented from the beginning of the site clearing activities. Follow either access route 1 or access route 2 as per the ecological report in order to reach the site, use the shortest practical route, following disturbed vegetation where feasible.	Very Low	
4.2 Impacts on fauna and flora	Very Low	• The contractor must ensure that no fauna species are disturbed, trapped, hunted or killed during the construction phase. • The illegal hunting or capture of wildlife will not be tolerated. Such matters will be handed over to the relevant authorities for prosecution. • Disturbance to birds, animals and reptiles and their habitats should be prevented at all times. • All Declared Weeds and invaders must be removed • Ensure that the construction footprint is adequately revegetated after completing construction. • Avoid bush clumps, geophytes and rock outcrops both in the construction footprint and the access route. • Areas that are not part of the site development plan should be marked as no go zones. • Construction should be limited to daylight hours. • Construction personnel should	Very Low	

		be informed of the Animal Protection Act No. 71 of 1962 and encouraged not to harm any wildlife; and • Construction personnel should undergo awareness training regarding fauna assemblages and the correct procedures to follow should fauna be found within the site. They should be encouraged not to harm any wildlife. They should also be informed of any policies and procedures applicable for fauna and flora.		
5. ISSUE HYDROLOGY				
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	Medium	• Storm water measures to be implemented prior to construction taking place on site: • All measures should be implemented during the construction of earthworks (terraces and roadways) to ensure that disturbed soil is not transported into any water course or system where storm water is to flow. Building rubble and other products that can cause contamination must be managed according to best practice and monitored by the site's environmental control officer (ECO).	Low	
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE				
6.1 Noise/ vibration	Low	• Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise. • No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. • Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays. • Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance. • Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.	Very Low	
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
7.1 Safety and Security	Low	• Signs should be erected on all entrance gates to the site camp indicating that no temporary	Very Low	

		jobs are available, thereby limiting opportunistic labourers and crime. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured (including toilets). • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are undertaken on or near public roads. • Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues. • All construction workers shall be issued with ID badges and clearly identifiable uniforms. • Access to fuel and other equipment stores is to be strictly controlled. • Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at		

		prominent locations around the construction site and the construction crew camps at all times. • The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. • The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. • Washing and toilet facilities shall be provided on site and in the Contractors camp. • Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided. • The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately. • The chemical toilets must be emptied on a regular basis. • The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site. • HIV AIDS awareness and education should be undertaken by all Contractor staff.		
7.2 Job opportunities	High	• Make use of local labour • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations. • Provide skills training for construction workers.	Medium	
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.	Low	• Phased, rather than indiscriminate clearing of the site to be undertaken.	Very Low	
8. ISSUE HISTORICAL ENVIRONMENT				
8.1 Destruction of cultural / heritage sites	Insignificant	• Ensure that construction staff members are aware that heritage resources could be unearthed and the scientific importance of such finds. • Ensure that heritage objects	Insignificant	

		are not to be moved or destroyed without the necessary permits from the South African Heritage Resources Agency (SAHRA) in place.		
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE				
9.1 Waste	Medium	• Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. • No burning of waste. • Waste will be collected and removed off-site to a registered waste site. • Remove all construction material and detritus after construction is complete.	Low	

Alternative 1

Table 10: Significance Rating-Construction phase

Alternative 1 construction phase

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: AIR QUALITY				
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	Very Low	• Dust generation should be kept to a minimum. • Dust must be suppressed on construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent. • Speed limits must be implemented in all areas, including public roads and private property to limit the levels of dust pollution. • It is recommended that the clearing of vegetation from the site should be selective and done just before construction so as to minimise erosion and dust. • Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided. • All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials. • No burning of refuse or vegetation is permitted.	Very Low	Negative impact to the ambient air quality of the area.
2. ISSUE VISUAL IMPACTS				
2.1 Visual Impacts due to clearance of site, cut and fill.	Very Low	• Site development to be limited to footprint and access road.	Very Low	
3. ISSUE GEOLOGY AND SOILS				
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	• Strip topsoil prior to any construction activities. • Reuse topsoil to rehabilitate disturbed areas. • Topsoil must be kept separate from overburden and must not be used for building purposes or maintenance or access	Very Low	

		roads. • Appropriate erosion and storm water management structures must be installed around the construction site.		
3.2 Soil pollution	Low	• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution. • Ensure appropriate handling of hazardous substances • Remediate polluted soil. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes. • Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded. • All excavations and foundations must be inspected regularly	Very Low	
3.3 Disturbance of surface geology for development foundations	Low	• Site development to be limited to footprint and access road	Very low	
4. ISSUE FAUNA AND FLORA				
4.1 Degradation, destruction of habitats/ ecosystem	Medium	• Minimise construction footprints prior to commencement of construction and control all edge effects of construction activities (proliferation of alien vegetation, disturbance of soils, dumping of construction waste). • Existing roads should be utilized wherever possible to provide access to construction area. • Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities. • Clearly demarcate areas to be cleared and ensure that vegetation clearing only occurs within the demarcated areas • Ensure that erosion management and sediment	Low	

		controls are strictly implemented from the beginning of the site clearing activities		
4.2 Impacts on fauna and flora	Medium	• The contractor must ensure that no fauna species are disturbed, trapped, hunted or killed during the construction phase. • The illegal hunting or capture of wildlife will not be tolerated. Such matters will be handed over to the relevant authorities for prosecution. • Disturbance to birds, animals and reptiles and their habitats should be prevented at all times. • All Declared Weeds and invaders must be removed • Rehabilitation with indigenous species. • Mark the plant and any other plants observed on or near the site and protect the marked plants from damage from construction activities. • Should any protected plant be located on the site of the activity, obtain permission from GDARD to relocate the plants. • Ensure that contractors do not remove any herbaceous plants and ferns from around the immediate environment of the construction footprint, other than known weeds or common grasses and shrubs.	Low	
5. ISSUE HYDROLOGY				
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	Medium	• Storm water measures to be implemented prior to construction taking place on site: • All measures should be implemented during the construction of earthworks (terraces and roadways) to ensure that disturbed soil is not transported into any water course or system where storm water is to flow. Building rubble and other products that can cause contamination must be managed according to best practice and monitored by the site's environmental control officer (ECO).	Low	
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE				
6.1 Noise/ vibration	Low	• Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise. • No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. • Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between	Very Low	

		7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays. • Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance. • Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.		
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
7.1 Safety and Security	Low	• Signs should be erected on all entrance gates to the site camp indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured (including toilets). • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are undertaken on or near public roads. • Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues. • All construction workers shall be issued with ID badges and clearly identifiable uniforms. • Access to fuel and other equipment stores is to be strictly controlled.	Very Low	

		• Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at prominent locations around the construction site and the construction crew camps at all times. • The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. • The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. • Washing and toilet facilities shall be provided on site and in the Contractors camp. • Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided. • The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately. • The chemical toilets must be emptied on a regular basis. • The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site. • HIV AIDS awareness and education should be undertaken by all Contractor staff.		
7.2 Job opportunities	High	• Make use of local labour • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to	Medium	

		prevent unrealistic expectations. • Provide skills training for construction workers.		
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.	Low	• Phased, rather than indiscriminate clearing of the site to be undertaken.	Very Low	
8. ISSUE HISTORICAL ENVIRONMENT				
8.1 Destruction of cultural / heritage sites	Insignificant	• Ensure that construction staff members are aware that heritage resources could be unearthed and the scientific importance of such finds. • Ensure that heritage objects are not to be moved or destroyed without the necessary permits from the South African Heritage Resources Agency (SAHRA) in place.	Insignificant	
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE				
9.1 Waste	Medium	• Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. • No burning of waste. • Waste will be collected and removed off-site to a registered waste site.	Low	

Table 11: Significance rating for the Operational phase
Proposal and Alternative 1

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: FAUNA AND FLORA				
1.1 Alien invasion	Medium	• Site to be kept neat and weed free. • Access to the site only through clearly demarcated access routes. • The footprint of damage to vegetation must be limited to the footprint of the activity and the immediate access route. • No permanent vegetation removal should be conducted. • Removal of any plants should require evaluation of the ECO and permission from relevant authority.	Low	Infestation of adjacent vacant areas
2. ISSUE: HYDROLOGY				
2.1 Erosion of adjacent areas	Medium	• Erosion and storm water from site to be checked regularly. • Should erosion take place the storm water situation to be rectified	Low	
SOCIO- ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				

3. ISSUE: SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
3.1 Safety and Security	Low	• Site to be secured. • Regular checkup on fencing	Very low	
4. ISSUE: TRAFFIC				
4.1 Structure might impact on air traffic if it does not have day night markings	High	• Mast to have Markings	Medium	

Alternative 1 ***(REPEAT THIS TABLE FOR EACH ALTERNATIVE)***				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
The impacts of alternative 1 are similar to that of the proposal.				

No Go				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
None				

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

Ecological Assessment – Portion 57 of Doornrandje 386, Rooihuiskraal 3. Please refer to Appendix G for the Specialist Report.

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

No impact assessment can be completely certain of the exact nature and extent of the various impacts that would result from a given development activity. However, this assessment strives to limit any uncertainties by optimising the collection of base data, and by following a rigorous impact assessment methodology.

3. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact and mitigation not being implemented**
Waste (Rubble)	**High**	**Rehabilitation plan**	**Medium**	**Risk of disturbance of adjacent vacant area**
Visual	**Medium**	**Rehabilitation plan**	**Low**	**Visual impact on adjacent area**
Dust	**High**	**Rehabilitation plan**	**Medium**	
Noise	**High**	**Rehabilitation plan**	**Medium**	**Disturbance to sense of place**

				of area
Sense of place	**Low**	**Rehabilitation plan**	**Low**	

Alternative 1

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
The impacts are similar to that of the proposal.				

Alternative 2

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
None				

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

None

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

The cost for decommissioning a cellular structure is in the range of R1mil and this includes the rehabilitation of the affected area.

Post closure management includes 6 monthly monitoring of the regrowth of vegetation and erosion control for a period of 2 years.

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

1. **Disturbance of the site might lead to alien plant infestation.**
2. **Visual impact of the mast. The proposed type of structure, the colour and the position must be compatible with the surrounding land uses.**
3. **There is a socio-economic need for an effective and efficient telecommunication network in the area for economic and safety purposes. Therefore the proposed project will accommodate the interests of the applicant, community and economy**

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal 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.

Proposal

As a necessary part of infrastructure and a business service, this development is bound to have a positive effect on the surrounding area in terms of communication, and it will provide a needed service to the immediate area

From a purely biophysical perspective the area impacted on by the mast is relatively small especially due to the fact that the site will be accessed from an existing road. Also, the area to the west of the site has been impacted upon by some form of dumping. Besides the vegetation occurring in the area being endangered, there are no sensitive habitats such as water bodies present on site or in close proximity to the site.

The biophysical impact of the development will be limited in a regional context, and will be more than offset by the social benefits for the immediate urban development. The proposal can therefore proceed from an environmental perspective.

The construction phase has the greatest impact on the environment even with mitigation. The negative impacts associated with the construction phase include:

- **Soil and Ground Water pollution**
- **Increased run off of water**
- **Visual Intrusion & Light Pollution**
- **Destruction of Flora & Fauna**
- **Noise Pollution**
- **Atmosphere pollution and odours resulting from dust and construction equipment**
- **Safety & Security on the site**
- **Spread of Alien Vegetation**

The construction phase will be associated with positive socio-economic impacts in terms of job creation. A number of mitigation measures to reduce or improve these impacts have been identified and are presented in the tables above. A key environmental imperative of the construction phase would be to prevent soil, air, water and noise pollution and erosion on the site.

The negative impacts relating to the operational phase include the following:

- **Due to the disturbance of the site alien plants will be able to establish and could become a problem by infesting neighbouring land.**

The primary positive impacts relate to the improved communications network in the area.

The construction phase will be of short duration and operational phase will have limited environmental impacts if constructed according to the conditions outlined in this report and if managed according to the EMPr.

Alternative 1

The impacts of Alternative 1 relate to the impact on the *Cheilanthes deltoidea* that is considered sensitive

Alternative 2

None

No-go (compulsory)

If the no-go option were to be followed it will have an impact on the nearby community that is experiencing problems with their cellular network. It might only shift the development activity to a different location, where there could be

a greater loss of sensitive features. The no-go alternative will entail leaving the site in its present vacant state.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The proposal is preferred. The impacts of the proposed development have been summarised under paragraph 5.

For alternative:

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

1. The preferred option will have a minimal visual impact on the area.
2. The character of the area and the surrounding land uses can accommodate the preferred option.
3. The property owner agreed to the proposed position
4. The preferred option will have a minimal impact on the protected plant referred to in the ecological report when compared to Alternative 1

7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

One of the strategic objectives of the Tshwane Metropolitan Spatial Development Framework is Economic growth and development and job creation.

The proposed development will create job opportunities thus positively influencing Economic growth and development.

8. RECOMMENDATION OF THE 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 as bound by professional ethical standards and the code of conduct of EAPASA).

YES	~~NO~~

If "NO", indicate the aspects that require further assessment 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 proposed activity is not anticipated to have significant environmental impacts.

The following recommendations should be implemented in order to ensure that potential impacts associated with the establishment and operation of the site are minimised:

- **Any areas disturbed during construction and operation must be rehabilitated.**
- **The structures are to be removed when the structure is ceased to be used for telecommunications purposes and the site rehabilitated.**
- **Construction to take place during working hours.**

- **Trampling and disturbance associated with construction should be limited to within 5m (five metres) of the footprint of the site.**
- **On completion of the project all litter and construction debris shall be immediately removed from the site.**
- **Adherence to the Ecological report.**

9. THE NEEDS AND DESIREBILITY OF THE PROPOSED DEVELOPMENT
(as per notice 792 of 2012, or the updated version of this guideline)

Need and desirability of the proposed development

Cellular telecommunication technology is an integral part of modern daily life and licensed cellular telecommunication service operators have an obligation in terms of their license agreements, as stipulated by national government, to provide the services throughout South Africa within the allocated bandwidth spectrum. The cellular telecommunication user base is still increasing (quantitative growth) and users must be enabled to choose the services rendered by any of the licensed operators anywhere in South Africa (choice and availability). The expansion of service types and content (content & technology growth) furthermore requires continuous equipment and network fine-tuning, upgrades and expansion. The user base also expects a continuous quality service to be provided and therefore network capacity and capabilities are under constant review to maintain or improve quality coverage (qualitative growth).

Due to the rural setting of the area, there is poor network connectivity. Therefore it has become essential to provide a new cellular base station in the area. Furthermore the cellular base station is proposed to accommodate six service providers thus ensuring that the residents of the area have a wide variety of service providers to choose from.

The benefits that the activity will have for society in general are:
- **Better cellphone Network/ signal coverage and Cellular Communication**
- **Security**
- **Socio-economic development**
- **Improved medical response**

The benefits that the activity will have for the local communities where the activity will be located are:
- **Better cell phone Network/ signal coverage and Cellular Communication**
- **Security**
- **Socio-economic development**
- **Improved medical response**

The motivation and benefits to society in general above apply to the local community directly.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)

Medium term (2-15 years)

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

(must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPr attached	**YES**

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s) – *(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)*

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
- All relevant sections of the form have been completed.

FINAL BASIC ASSESSMENT REPORT

FOR

THE PROPOSED CONSTRUCTION OF A TELECOMMUNICATION MAST FOR MTN (PTY) LTD ROOIHUISKRAAL 3 (ON PORTION 57 OF THE FARM DOORNRANDJE NO 386 JR)

Ref No: 002/17-18/E0074

PREPARED FOR:
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Date: January 2018

Enq: Elaine Minnaar/Emanuel Maluleke

CONTENTS

Appendix A: Site plan(s)
Appendix B: Photographs
Appendix C: Facility illustration(s)

List of Figures

List of Tables

Definitions

Activity (Development)	An action either planned or existing that may result in environmental impacts through pollution or resource use. For the purpose of this report, the terms 'activity' and 'development' are freely interchanged.

Alternatives	Different means of meeting the general purpose and requirements of the activity, which may include site or location alternatives; alternatives to the type of activity being undertaken; the design or layout of the activity; the technology to be used in the activity and the operational aspects of the activity.
Applicant	The project proponent or developer responsible for submitting an environmental application to the relevant environmental authority for environmental authorisation.
Biodiversity	The diversity of animals, plants and other organisms found within and between ecosystems, habitats, and the ecological complexes.
Construction	The building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.
Cumulative impact	The impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
Decommissioning	The demolition of a building, facility, structure or infrastructure.
Derelict land	means abandoned land or property where the lawful/legal land use right has not been exercised during the preceding ten year period (Regulation R982 of NEMA, 1998 (Act No. 107 of 1998));
Direct Impact	Impacts that are caused directly by the activity and generally occur at the same time and at the same place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally quantifiable.
Ecosystem	A dynamic system of plant, animal (including humans) and micro-organism communities and their non-living physical environment interacting as a functional unit. The basic structural unit of the biosphere, ecosystems are characterised by interdependent interaction between the component species and their physical surroundings. Each ecosystem occupies a space in which macro-scale conditions and interactions are relatively homogenous
Environment	In terms of the National Environmental Management Act (NEMA) (No 107 of 1998)(as amended), "Environment" means the surroundings within which humans exist and that are made up of: a) the land, water and atmosphere of the earth; b) micro-organisms, plants and animal life; c) any part or combination of (i) of (ii) and the interrelationships among and between them; and d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.
Environmental Assessment	The generic term for all forms of environmental assessment for projects, plans, programmes or policies and includes methodologies or tools such as environmental impact assessments, strategic environmental assessments and risk assessments.
Environmental Authorisation	An authorisation issued by the competent authority in respect of a listed activity, or an activity which takes place within a sensitive environment.]
Environmental Assessment Practitioner (EAP)	The individual responsible for planning, management and coordination of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instrument introduced through the EIA Regulations.
Environmental Management	Ensuring that environmental concerns are included in all stages of development, so that development is sustainable and does not exceed the carrying capacity of the environment.
Environmental Management Programme (EMPr)	A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative environmental impacts are implemented during the life cycle of a project. This EMPr focuses on the construction phase, operation (maintenance) phase and decommissioning phase of the proposed project.
Environmental Impact	Change to the environment (biophysical, social and/ or economic),

	whether adverse or beneficial, wholly or partially, resulting from an organisation's activities, products or services.
Environmental Issue	A concern raised by a stakeholder, interested or affected parties about an existing or perceived environmental impact of an activity.
Fatal Flaw	Issue or conflict (real or perceived) that could result in developments being rejected or stopped. In the context of an environmental impact assessment a fatal flaw can be termed as an environmental issue that cannot be mitigated by any means
General Waste	Household water, construction rubble, garden waste and certain dry industrial and commercial waste, which does not pose an immediate threat to man or the environment.
Groundwater	Water in the ground that is in the zone of saturation from which wells, springs, and groundwater run-off are supplied.
Hazardous Waste	Waste that may cause ill health or increase mortality in humans, flora and fauna.
Hydrology	The science encompassing the behaviour of water as it occurs in the atmosphere, on the surface of the ground, and underground.
important areas	Sites that are important for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Indirect Impacts	Indirect or induced changes that may occur as a result of the activity. These types if impacts include all of the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
Integrated Environmental Management	A philosophy that prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development and decision making process. The IEM philosophy (and principles) is interpreted as applying to the planning, assessment, implementation and management of any proposal (project, plan, programme or policy) or activity - at local, national and international level – that has a potentially significant effect on the environment. Implementation of this philosophy relies on the selection and application of appropriate tools for a particular proposal or activity. These may include environmental assessment tools (such as strategic environmental assessment and risk assessment), environmental management tools (such as monitoring, auditing and reporting) and decision-making tools (such as multi-criteria decision support systems or advisory councils).
Interested and Affected Party (I&AP)	Any person, group of persons or organisation interested in or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.
Irreplaceable areas	Sites, which are essential in meeting targets set for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Mitigate	The implementation of practical measures designed to avoid, reduce or remedy adverse impacts or enhance beneficial impacts of an action.
No-Go Option	In this instance the proposed activity would not take place, and the resulting environmental effects from taking no action are compared with the effects of permitting the proposed activity to go forward.
Public Participation Process	A process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters.
Rehabilitation	A measure aimed at reinstating an ecosystem to its original function and state (or as close as possible to its original function and state) following activities that have disrupted those functions.
Sensitive Environments	Any environment identified as being sensitive to the impacts of the development.
Significance	Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. magnitude, intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgements and science-based criteria (i.e. biophysical, social and economic).

Stakeholder Engagement	The process of engagement between stakeholders (the proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities.
Sustainable Development	Development which meets the needs of current generations without hindering future generations from meeting their own needs.
undeveloped	means that no facilities, structures or infrastructure have been effected upon the land or property during the preceding 10 years.
Urban areas	means areas situated within the urban edge (as defined or adopted by the competent authority), or in instances where no urban edge or boundary has been defined of adopted, it refers to areas situated within the edge of built-up areas (Regulation R984 of NEMA,1998 (Act No. 107 of 1998));
Vacant	Means not occupied for the purpose of its lawful land use during the preceding ten year period.
Virgin soil	means land not cultivated for the preceding 10 years. (Regulation R984 of NEMA,1998 (Act No. 107 of 1998);
Watercourse	Means (a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, pan, lake or dam into which, or from which, water flows; and any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse as defined in the National Water Act, 1998 (Act No. 36 of 1998) and a reference to a watercourse includes, where relevant, its bed and banks. (Regulation R983 of NEMA, 1998 (ACT NO. 107 OF 1998).;
Wetland	Means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil. (Regulation 983 of NEMA, 1998 (ACT NO. 107 OF 1998).

Abbreviations

AIA	Archaeological Impact Assessment
BAR	Basic Assessment Report
BID	Background Information Document
BSc	Bachelor of Science
CC	Close Corporation
C- Plan	Gauteng Conservation Plan Version 3
CTMM	City of Tshwane Metropolitan Municipality
DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation
GDARD	Gauteng Department of Agriculture and Rural Development
GPEMF	Gauteng Provincial Environmental Management Framework
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EMM	Ekurhuleni Metropolitan Municipality
Ha	Hectares
HIA	Heritage Impact Assessment
I & AP's	Interested and Affected Parties
IDP's	Integrated Development Plans
Km	Kilometres
LDO	Land Development Objectives
m	Meters
NEMA	National Environmental Management Act
NGO's	Non-Governmental Organisations
OHSA	Occupational Health and Safety Act

PES	Present Ecological State
PPE	Personal Protective Equipment
PPP	Public Participation Process
Pr.Sci.Nat	Professional Natural Scientist
(Pty) Ltd	Proprietary Limited
PHRA-G	Provincial Heritage Resources Authority – Gauteng
SAHRA	South African Heritage Resources Agency
SAPS	South African Police Service
WRC	Water Research Commission

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. 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.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. 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 application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the of the Environmental Affairs Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the of the Environmental Affairs Branch
Ground floor Diamond Building
11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

Extension of time received to submit the Final BAR

Is a closure plan applicable for this application and has it been included in this report? **NO**

if not, state reasons for not including the closure plan.

The activity applied for does not relate to the decommissioning of an activity

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity? **YES**

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person? **YES**

If no, state reasons for not attaching the list.

Please refer to appendix I

Have State Departments including the competent authority commented? **Yes**

If no, why?

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

MTN MAST: ROOIHUISKRAAL 3

Select the appropriate box

The application is for an upgrade of an existing development		The application is for a new development	X	Other, specify	

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES ■

If yes, describe the legislation and the Competent Authority administering such legislation

Application for cellular masts in the City of Tshwane is done in terms of Clause 14(11) of the Tshwane Town Planning Scheme, 2008, (Revised 2014), read with Section 16(3) of the City of Tshwane Land Use Management By-Law, 2016, subject to Clause 15 and Schedule 25. Clause 15 and Schedule 25 is the advertisement and application process. Public participation entails registered letters as well as site notice placement.

The followings is required for approval if applicable:

- **Application with normal documentation (Memo/Land Use Maps/Zoning Maps etc)**
- **CAA Approval**
- **EIA/GDARD Approval/Non listing letter**
- **Bondholders Consent if necessary**
- **Gautrans comments / Approval (BLR or Section 7)**
- **Internal Comments (City of Tshwane Departments)**
- **External comments when requested (ESKOM/Agriculture & Fisheries/Township Board)**
- **Removal of restrictive conditions in title deed if applicable**
- **Hearing if objections were received**

After approval, Building plans in terms of the National Building Regulation Act can be approved. The followings is required for approval if applicable:

- **Internal Circulation**
- **Building Line Relaxation if applicable.**
- **SANS/Engineers**

Civil Aviation Approval in terms of Aviation Act (74 of 1962)

If yes, have you applied for the authorisation(s)?	**YES**	~~NO~~
If yes, have you received approval(s)? (attach in appropriate appendix)	~~YES~~	**NO**

2. 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:

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998

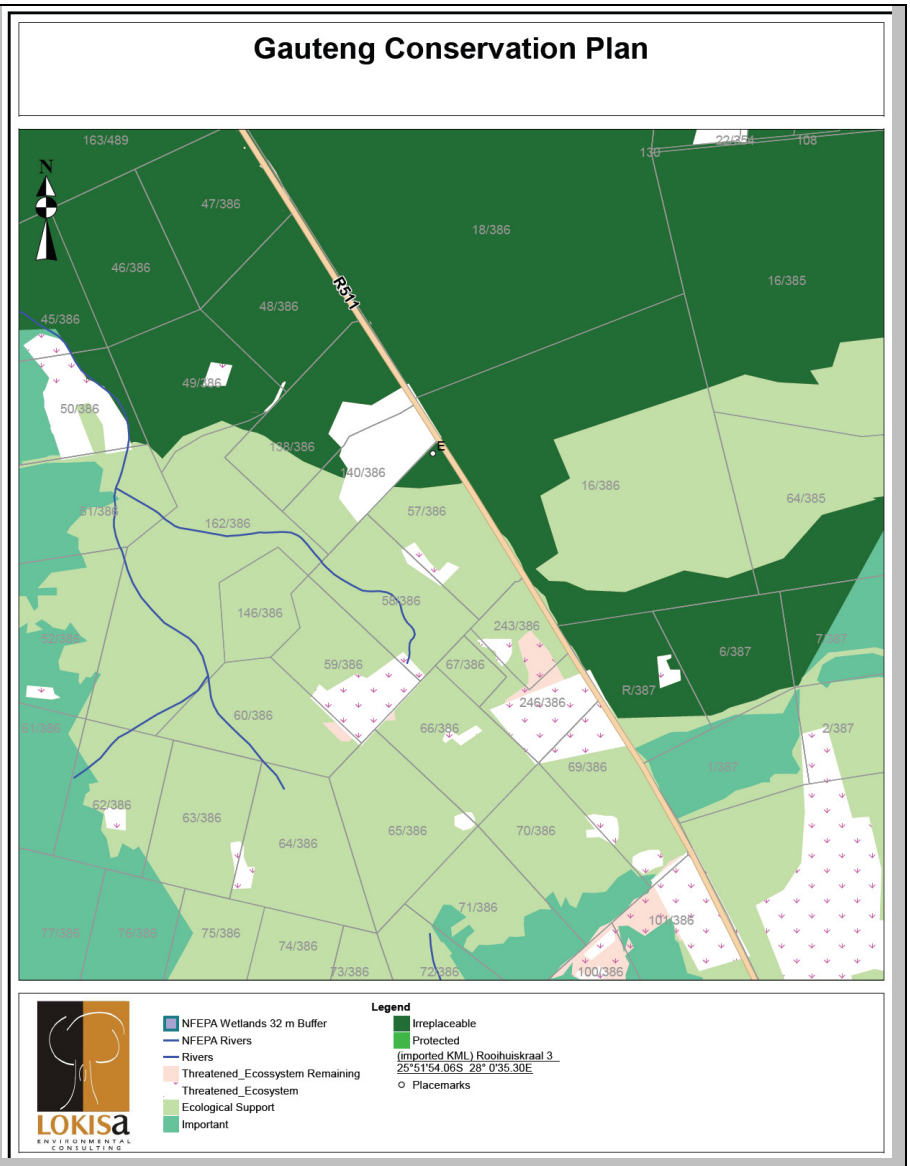
City of Tshwane By-Laws	**CTMM**	**-**
City of Tshwane Integrated Development Plan	**CTMM**	**2011-2016**
Conservation of Agricultural Resources Act (Act 43 of 1983)	**Department of Agriculture Forestry and Fisheries**	**1983**
Gauteng Conservation Plan (C-Plan Version 3.3)	**GDARD**	**2011**
Gauteng Environmental Management Framework	**GDARD**	**2015**
Gauteng Spatial Development Framework	**Provincial**	**2011**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**1998**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017. **Activity listed under GN R983:** **Activity 3- The Development of masts or towers of any material or type used for telecommunication broadcasting or radio transmission purposes where the mast or tower: (a) to be placed on a site not previously used for this purpose; and (b) will exceed 15m in height –** **But excluding attachments to existing buildings and masts on rooftops.** **(c) Gauteng** **(iv) Sites identified as a Critical Biodiversity Areas or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;** **(v) Sites identified within threatened ecosystems listed in terms of the National Environmental Management Act: Biodiversity Act (Act No. 10 of 2004);** **(vi) Sensitive areas identified in an environmental management framework adopted by relevant environmental authority.**	**National Department of Environmental Affairs and GDARD**	**2014**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**27 November 1998**
Aviation Act (Act No. 74 of 1962)	**Civil Aviation**	**21 July 1962**
South Africa's Constitution, 1996 (Act 108 of 1996), including the Bill of Rights (Chapter 2, Section 24)	**National Government**	**1996**
NEMA EIA Regulations, 2014 (Government Notice Nos. 982, 983, 984 and 985)	**National Department of**	**2014**

	Environmental Affairs and GDARD	
Model Noise Regulations published under the Environment Conservation Act, 1989 (Act 73 of 1989)	**National Government**	**1989**
Health Act, 1977 (Act 63 of 1977)	**National Government**	**1977**
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993) (OHSA) as amended in July 2001, including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**National Government**	**2001**
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)	**National Department of Environmental Affairs and GDARD**	**2008**
The National Heritage Resources Act, 1999 (Act No 25 of 1999) as amended, particularly Chapter II, Section 38	**SAHRA**	**1999**
The National Water Act, 1998 (Act No. 36 of 1998)	**Department of Water Affairs**	**1998**
Water Services Act (Act No. 108 of 1997)	**Department of Water Affairs**	**1997**
Standards Act (30 of 1992) National Government 1992		
National Building Regulations and Building Standards Act (No 103 of 1977)	**National Government**	
Municipal Structures Act (Act 117 of 1998)	**Local Municipality**	**1998**
Municipal Systems Act (Act 32 of 2000)	**Local Municipality**	**2000**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**27 November 1998**

Description of compliance with the relevant legislation, policy or guideline:

Legislation, policy of guideline	Description of compliance
City of Tshwane By-Laws	**The proposed development will be constructed to comply with the City of Tshwane By-Laws**
City of Tshwane Integrated Development Plan 2016/21	**One of the proposed programme areas for the City of Tshwane Integrated Development Plan for 2016/21 is Programme 1: ICT** **The purpose of this programme is to facilitate the use of ICT to improve living experience of the citizen and to facilitate for transitioning towards ICT enabled service provision.** **Access to the digital landscape will improve the quality of service provision but also creating an environment for the residents of the city to access numerous opportunities which exist in the social and economic environment.** **Therefore better telecommunication service in the area will add into the achievement of what is proposed in programme 1.**
Conservation of	**The proposed development will ensure that no agricultural**

Agricultural Resources Act (Act 43 of 1983)	**resources are impacted.**
Gauteng Conservation Plan (C-Plan Version 3.3)	**Gauteng Conservation Plan (C-Plan Version 3.3)** **GDARD's (Gauteng Department of Agriculture and Rural Development) C-Plan (Gauteng Conservation Plan Version 3.3) was used to determine the sensitivities of the site and is provided below in Figure 1.** **Conservation planning was started in Gauteng in the year 2000 and the aim was to revise the C-Plan at least every 5 years. C-Plan Version 1 was produced in 2001 and was followed by version 2 in 2005. Version 2 was refined in 2007 and was named Version 2.1. The small size of the province made it feasible to conduct an extensive biodiversity survey, named BGAP, which aimed to provide the information on spatial occurrence of biodiversity necessary for rigorous conservation planning. C-Plan 3 represents priority areas for biodiversity conservation in the Gauteng province.** **C-Plan 3 is based on the systematic conservation protocol developed by Margules & Pressey (2000) and is based on the principles of complementarity, efficiency, defensibility and flexibility, irreplaceability, retention, persistence and accountability. Systematic conservation planning is an iterative process.** **Knowledge of the distribution of biodiversity, the status of species, approaches for dealing with aspects such as climate change, methods of data analysis, and the nature of threats to biodiversity within a planning region are constantly changing, especially in the Gauteng province which is developing at an extremely rapid rate. This requires that the conservation plan be treated as a living document with periodic review and updates.** **An extract of the sensitivities that could affect the site in terms of the C-Plan is provided below for ease of reference.**

	 **Figure 1: C-Plan of the site** **In terms of the C-Plan the site falls within an "Irreplaceable" area.**
Gauteng Environmental Management Framework	**Gauteng Environmental Management Framework** **The guiding objectives that emerged during the course of the developed of the GEMF are:** • **To facilitate the optimal use of current industrial, mining land and other suitable derelict land for the development of non-polluting industrial and large commercial developments.** • **To protect Critical Biodiversity Areas (CBAs as defined in C-Plan 3.3) within urban and rural environments.** • **To ensure the proper integration of Ecological Support Areas (ESAs as defined in C-Plan 3.3) into rural land use change and development.** • **To use ESAs as defined in municipal bioregional plans in spatial planning of urban open space corridors and links within urban areas.**

- **To focus on the sustainability of development through the implementation of initiatives such as:**
  - **Energy efficiency programmes, plans and designs;**
  - **Waste minimisation, reuse and recycling;**
  - **Green infrastructure in urban areas; and**
  - **Sustainable Drainage Systems (SuDS).**

The Environmental Management Zones (EMZ) were derived from the desired state, the environmental sensitivity as well the unique control areas as identified in sections 1, 2 and 3. The EMZs were also presented to the Gauteng Planning Forum 6 where it was generally accepted as a suitable contribution to facilitate appropriate development in Gauteng. The EMZs also took the Gauteng Growth and Management Perspective, 2014, into account and is therefore aligned to the general development policy for Gauteng.

Five EMZs were identified and overlaying those a further six Special Management Areas were identified where specific planning and policy measures are necessary to achieve the development objective of those areas.

The site falls in Zone 3 – High Rural Control Zone

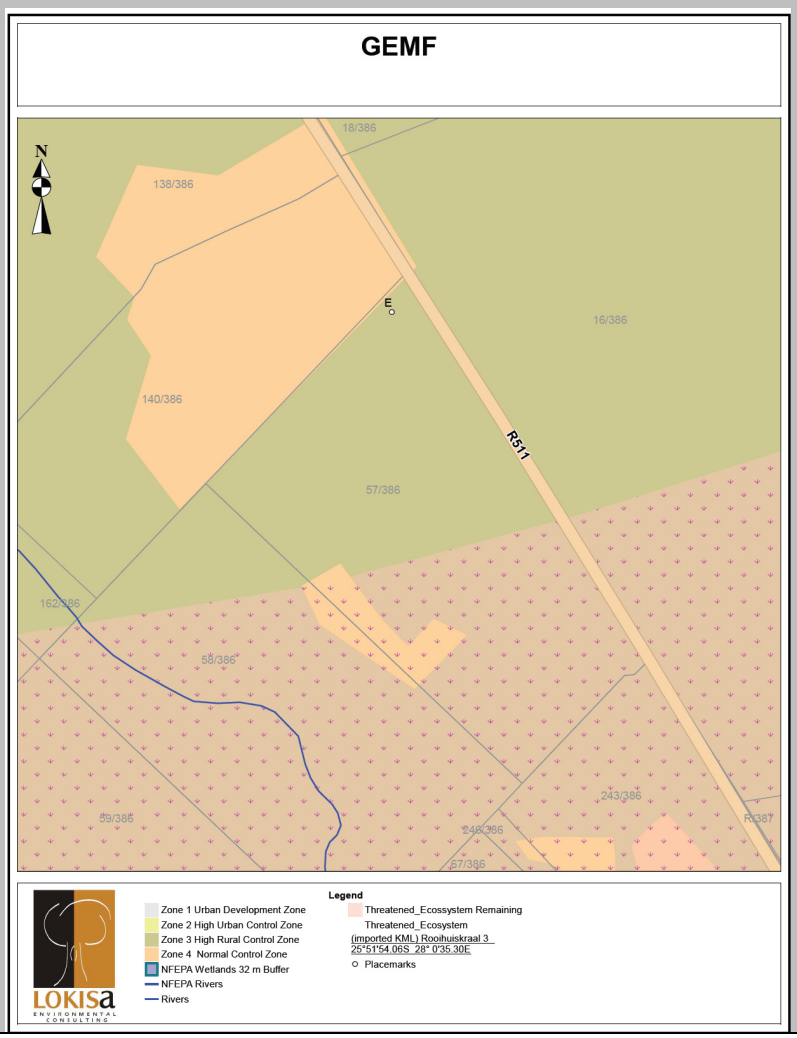


	Figure 2: Gauteng Environmental Management Plan **In terms of the GEMP Zone 3 is sensitive to development activities and in several cases also have specific values that need to be protected. Conservation and related tourism and recreation activities should dominate development in this zone.**
Gauteng Spatial Development Framework, 2012	**The GSDF are in pursuit of planning for shared, equitable, sustainable and inclusive growth and development in the country. The Gauteng Provincial Government (GPG) seeks to:** • **provide a clear future provincial spatial structure that is robust to accommodate growth and sustainability;** • **specify a clear set of spatial objectives for municipalities to achieve in order to ensure realisation of the future provincial spatial structure;** • **propose a set of plans that municipalities have to prepare in their pursuit of these objectives;** • **provide a common language and set of shared planning constructs for municipalities to use in their planning processes and plans; and** • **enable and direct growth.** **The Gauteng City Region aims to develop as a significant emerging conurbation based on sustainable principles:** • **significantly reducing reliance on private mobility in favour of safe, convenient and affordable public transport and non-motorised transport;** • **significantly reducing present rates of non-renewable energy usage;** • **reducing the rates of energy expended in the manufacture of goods, the delivery of these goods to the market and the importation of goods;** • **integrating open space systems into the city region and providing sustainable ecosystems, urban agriculture and quality of life as a fundamental of the province's development patterns;** • **increasing the intensity of urban form and the complexity of mixed-use development with a view to restricting, as far as possible, the options to extend the present footprint of the province's urban spread; and** • **promoting a democratic urban order in terms of access to opportunity for all** **The proposed development of does not take place in contrast with any of the principles of the GSDF.**
National Environmental Management Act No. 107 of 1998 as amended.	**Numerous mitigation measures have been provided for the potential impacts that have been identified for the proposed development. This will ensure that the following principles as set out in Section 2 of NEMA are taken into account:** • **That the disturbance of ecosystems and loss of biodiversity are avoided, or, where they cannot be altogether avoided, minimised and remedied;**

	• **Pollution and degradation of the environment are avoided, or , where they cannot be altogether avoided are minimised and remedies;** • **That waste is avoided or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;** • **That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be avoided, is minimised and remedied.**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017.	**The EIA process, applicable to this application, is determined by the Environmental Impact Regulations published in Government Notice R982 in Government Gazette No 38282 of 4 December 2014 promulgated under Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and amended in 2017.** **The EIA regulations inter alia describe the procedure for EIA and provide a description of activities that would require authorisation through either 1) a Basic Assessment (in terms of Government Notices R983 and R985 of 2014) or 2) Scoping and Environmental Impact Assessment (in terms of Government Notice R984 of 2014).** **An application is submitted in terms of Chapter 4 of the EIA Regulations as the proposed development triggers activities that require a Basic Assessment.**
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	**The objectives of this Act are-** **Within the framework of the National Environmental Management Act, to provide for –** **(i) the management and conservation biological diversity of within the Republic and of the components of such biological diversity;** **(ii) the use of indigenous biological resources in a sustainable manner and** **(ii) the fair and equitable sharing among stakeholders of benefits arising from bioprospecting involving indigenous biological resources.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)	**The objective of this act is to protect health, well-being, and the environment by providing measures for-** • **Minimising consumption of natural resources;** • **Avoiding and minimising the generation of waste;** • **Reducing, reusing, recycling and recovering waste;** • **Treating and safely disposing of waste as last resort;** • **Preventing pollution and ecological degradation;** • **Securing ecologically sustainable development while promoting justifiable economic and social development.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Heritage Resources Act (Act	**Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and, as**

25 of 1999)	**they are valuable, finite, non-renewable and irreplaceable, they must be carefully managed to ensure their survival.** **It is not expected that the proposed development will impact on any heritage resources however should any heritage resources be discovered a chance find procedure will be followed whereby** • **If during the duration of the project, any person employed by the developer, one of its subsidiaries, contractors and sub-contractors, or service provider, finds any artifact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.** • **It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area.** • **The senior on-site Manager will inform the EC of the chance find and its immediate impact on operations. The EC will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.**
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993) (OHSA) as amended in July 2001, Including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**The main objective of the Act is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected herewith.** **The proposed development site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) [OHSA] and the National Building Regulations**
Reconstruction and Development Programme (RDP)	**One of the six principles of the Reconstruction and development programme is meeting basic needs and building the infrastructure.** **The RDP integrates growth, development, reconstruction, redistribution and reconciliation into a unified programme. The key link is an infrastructural programme that will provide access to modern and effective services such as electricity, water, telecommunications, transport, health, education and training for all our people.** **The proposed development does not contrast with one of the six principles of the RDP.**
Tshwane Metropolitan Spatial Framework	**The vision of the City of Tshwane is to become the Africa Capital City of Excellence. Seven strategic objectives have been identified in order to respond to the vision in their Metropolitan Spatial Framework:** • **Provide basic services, roads and stormwater** • **Economic growth and development and job creation**

	• **Sustainable communities with clean, healthy and safe environment and integrated social services** • **Foster participatory democracy and Batho Pele** • **Promote sound governance** • **Ensure financial sustainability** • **Organisational development and transformation** **The proposed development does not contrast with vision of the metropolitan Spatial Framework mentioned above.**

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the 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.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

Note: 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.

Please describe the process followed to reach (decide on) the list of alternatives below

The area where the activity is proposed is experiencing challenges with their cellular network, therefore the applicant saw an opportunity to provide assistance by the provision of a cellular structure that is to accompany more than 1 service provider.

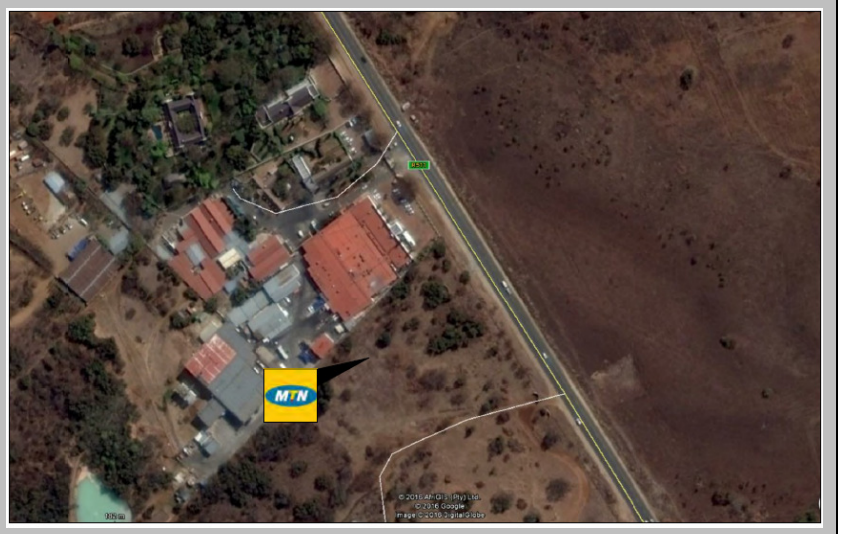
The search for a suitable site starts with the identification of the need for improved cellular coverage in an area. The Radio Planners indicate the optimal position and sites within a 100m of this position is investigated. According to CTMM the placement of cellular towers on residential properties are to be avoided and this places a restriction of suitable sites for consideration.

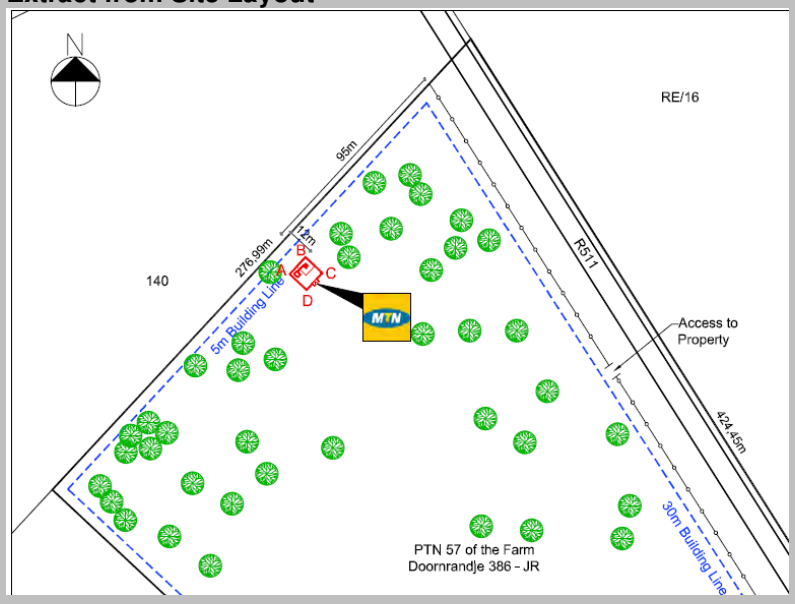
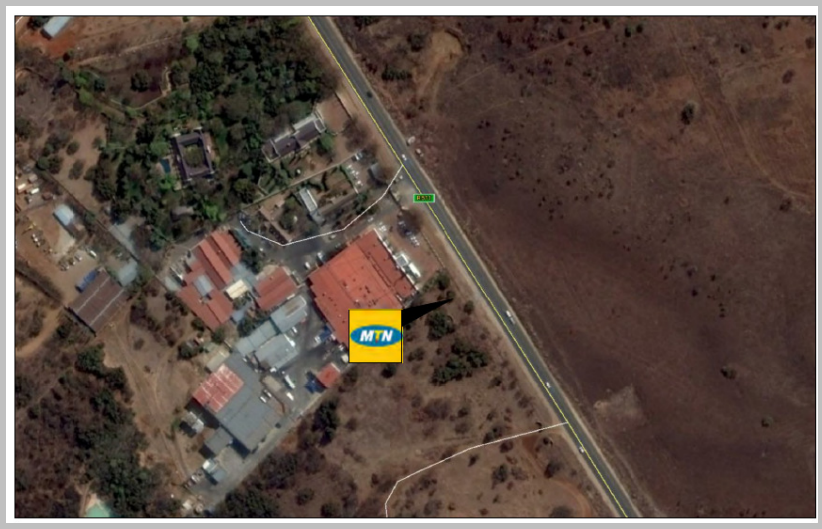
A team investigates all possible positions within the 100m radius and approach land owners in order to lease a portion of their land for the structure.

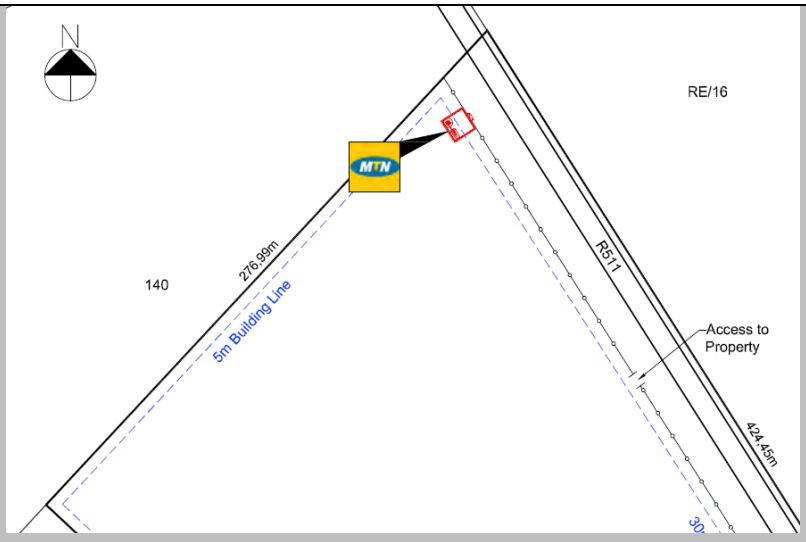
Several options were investigated and a lease agreement was reached.

The original preferred position (hereunder labeled Current) was located south of the boundary fence and west of the road but as a result of the input from the Ecologist an alternative site has been identified that is now the preferred site. The preferred site is not deemed sensitive by the Ecologist and is located 95m from the site boundary and the R511.

Provide a description of the alternatives considered

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	**Description**
1 (Preferred Alternative)	**36m Monopole Mast**	**The construction of a 36m Monopole mast in a 10m x 10m footprint and 11m x 11m plinth to be situated directly west of the R511 road and 1.1 km south west of Gerhardsville (Please refer to Appendix A: Site plans)** **Figure 3: Preferred Alternative Position Google Earth View** (25°51'56.24"S 28° 0'33.19"E) 

		Extract from Site Layout 
2	**36m Monopole Mast**	**The construction of a 36m Monopole mast in a 10m x 10m footprint and 11m x 11m plinth to be situated directly west of the R511 road and 1.1 km south west of Gerhardsville (Please refer to Appendix A: Site plans)** **Figure 4: Alternative 1 Position (25°51'54.06"S 28°0'35.30"E)**  **Extract from Site Layout**

		
3	**None**	

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	20 ha (5ha)
Alternatives:	
Alternative 1 (if any)	**0.0121ha / 121m²**
Alternative 2 (if any)	**0.0121ha / 121m²**
	Ha/ m²

or, for linear activities:

	Length of the activity:
Proposed activity	
Alternatives:	
Alternative 1 (if any)	**N/A**
Alternative 2 (if any)	**N/A**
	m/km

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

	Size of the site/servitude:
Proposed activity	**0.0121ha / 121m²**
Alternatives:	
Alternative 1 (if any)	**0.0121ha / 121m²**
Alternative 2 (if any)	
	Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	**YES**
If NO, what is the distance over which a new access road will be built	m

Describe the type of access road planned:

Access route will be as per the recommendation of the Ecological Report.

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	**YES**
If NO, what is the distance over which a new access road will be built	m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?	~~YES~~	~~NO~~
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated **1** Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
  - A4 size for activities with development footprint of 10sqm to 5 hectares;
  - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
  - A2 size for activities with development footprint of >20 hectares to 50 hectares);
  - A1 size for activities with development footprint of >50 hectares);

- The following should serve as a guide for scale issues on the layout plan:
  - A0 = 1: 500
  - A1 = 1: 1000
  - A2 = 1: 2000
  - A3 = 1: 4000
  - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

Refer to Appendix A for the Site Plans

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

Refer to Appendix A for the Site Plans

7. SITE PHOTOGRAPHS

Colour photographs from the center 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 the appropriate Appendix**.** It should be supplemented with additional photographs of relevant features on the site, where applicable.

Refer to Appendix B for the Photographs

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 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 to be attached in the appropriate Appendix.

Please refer to the facility illustration attached as Appendix C

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Instructions for completion of Section B for linear activities

1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
2) Indicate on a plan(s) the different environments identified
3) Complete Section B for each of the above areas identified
4) Attach to this form in a chronological order
5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route | **0** | times

Instructions for completion of Section B for location/route alternatives

1) For each location/route alternative identified the entire Section B needs to be completed
2) Each alterative location/route needs to be clearly indicated at the top of the next page
3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives | **1** | times (complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route | **0** | (complete only when appropriate for above)

Section B – Location/route Alternative No. | **0** | (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	**Portion 57 of the Farm Doornrandje No 386 – JR**

2. ACTIVITY POSITION

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 decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.865622°	**28.009219°**

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity	°	°
• Middle point of the activity	°	°
• End point of the activity	°	°

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached ☐

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 1	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 2																					
etc.																					

3. 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~~

4. LOCATION IN LANDSCAPE

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

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/ridge~~	~~Valley~~	**Plain**	~~Undulating plain/low hills~~	~~River front~~

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

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

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

c) are any caves located within a 300m radius of the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? ~~YES~~ **NO**

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 80	**Natural veld with scattered aliens % = 20**	~~Natural veld with heavy alien infestation % = 20~~	~~Veld dominated by alien species % =~~	~~Landscaped (vegetation) % =~~
~~Sport field % =~~	~~Cultivated land % =~~	~~Paved surface (hard landscaping) % =~~	~~Building or other structure % =~~	~~Bare soil % =~~

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site	YES	**NO**

If YES, specify and explain:

An ecological Assessment was conducted by Themeda Eco Consulting for the proposed development site and the study concluded the following:

According to the GDARD C-Plan the site falls into a Critical Biodiversity Area: Irreplaceable Area. The vegetation is classified under as Carletonville Dolomite Grassland (Mucina and Rutherford 2006). The study site does not fall under the National list of threatened Ecosystems, although it is located between two threatened ecosystems to the north and south.

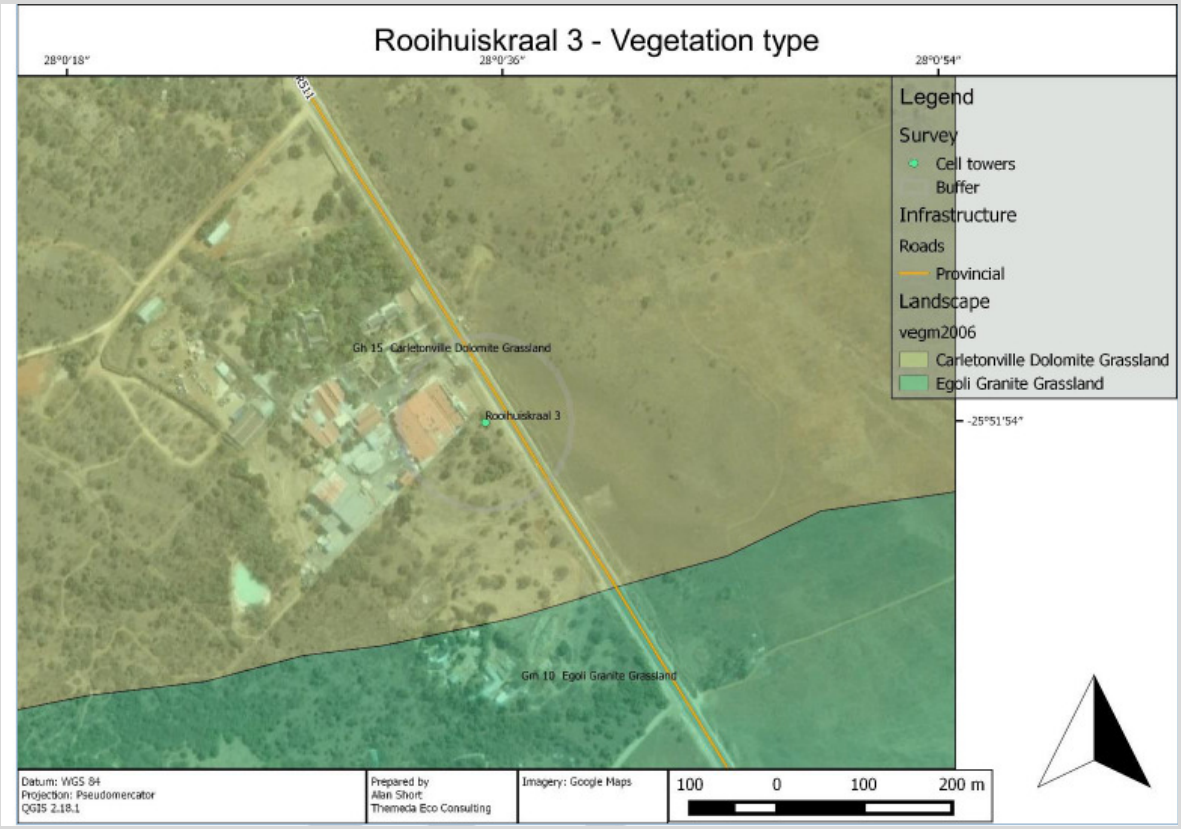


Figure 5: Vegetation type of the study area

The site is in reasonably good ecological condition with relatively high species diversity. Several alien invasive species were recorded including *Melia azedarach,*

Lantana camara, and Verbena bonariensis.

Only one potential species of conservation concern was recorded, a *Cheilanthes deltoidea subsp. Deltoidea.* This species has two subspecies, one of which is velnerable and the other least concern.

Figure 6: Conservation value of the study area

***Cheilanthes spp.* are provincially protected as class *Filicinae.* The location of the species observes was S 25° 51' 57.4" E 28° 0' 36.3"**

The footprint of the mast is small and although the sensitivity of the environment was estimated as medium, the mast will have little impact on the vegetation or habitats provided that the mitigation recommendations are followed to minimise impact.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	**YES**	~~NO~~

If YES, specify and explain:

The site falls in the Hennopsvallei Conservancy and the Witwatersberg Pretoria Mountain Bushveld (GP 10).

Geographical location
Pretoria west including Centurion (2528CC). Ecosystem delineated by the Witwatersberg ridge system and associated koppies, rivers and drainage lines.

Description
Key biodiversity features include Red or Orange Listed plants, for example, Melolobium subspicatum, Delosperma gautengense, Holothrix randii; Red or Orange Listed mammals, for example, Schreiber's Long-fingered Bat; Red or Orange Listed birds, for example White-backed Night-Heron and African Finfoot; Red or Orange Listed reptiles for example the Striped Harlequin Snake; Red or

Orange Listed or priority invertebrates, for example Pretoria Lesser Baboon Spider, Purse Web Trapdoor Spider, Front-eyed Trapdoor Spider, Gunning's Rock Scorpion, Golden Starburst Baboon Spider, and Stobbia's Fruit Chafer; and five vegetation including the Andesite Mountain Bushveld, Carletonville Dolomite Grassland, Gauteng Shale Mountain Bushveld, Marikana Thornveld and Rand Highveld Grassland. The Apies River, Hennops River, Moganwe, Swartbooispruit, Walkerspruit, Waterkloofspruit, and unnamed wetlands are also key features of the ecosystem.

Approximately 2%, of the ecosystem is protected in the Groenkloof Nature Reserve.

However the site is situated on the northern portion of the site, adjacent to the northern boundary and a road to the east. The site falls south of a commercial use. Please refer to the Site Plan below.

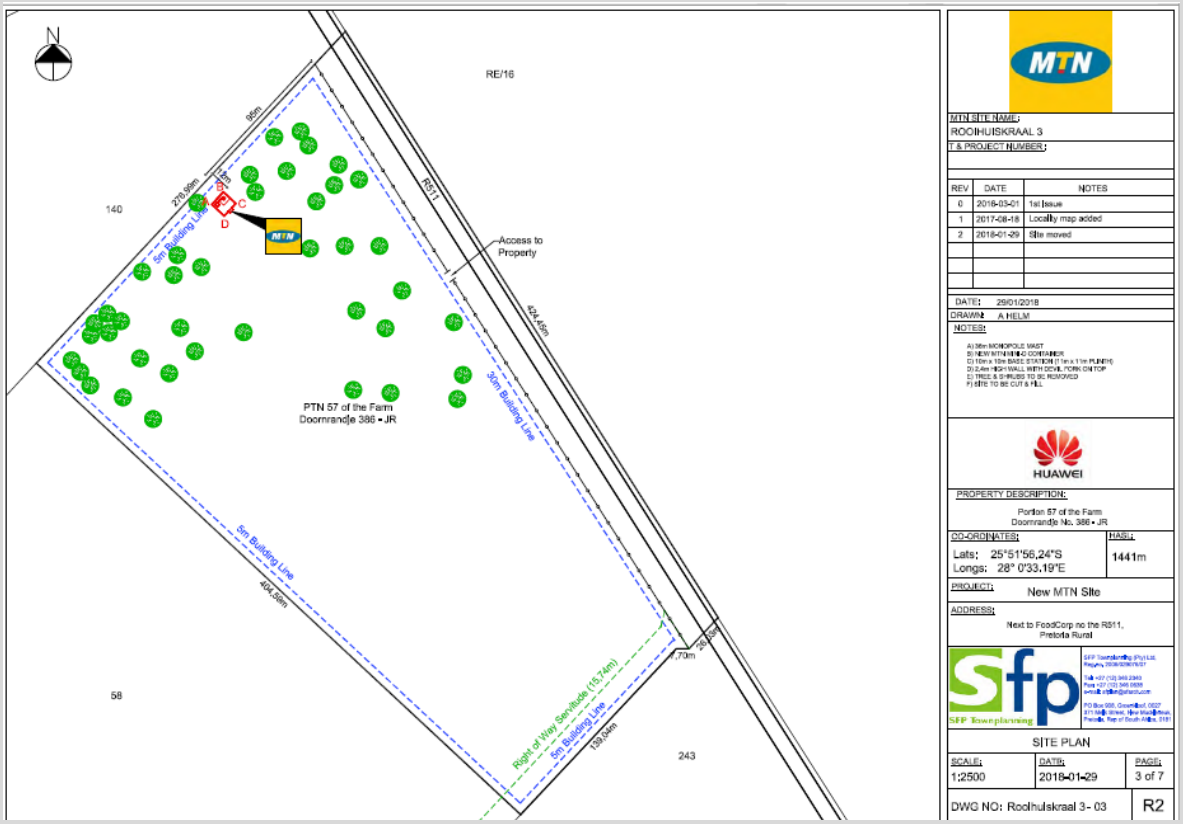


Figure 7: Site Plan

Are there any special or sensitive habitats or other natural features present on the site?	~~YES~~	**NO**

If YES, specify and explain:

No rivers or wetlands are mapped on or within 200m of the site, and no signs of wetland vegetation were observed during the survey.

Was a specialist consulted to assist with completing this section	~~YES~~	**NO**

If yes complete specialist details

Name of the specialist:	**Alan Short of Themeda Eco Consulting**		
Qualification(s) of the specialist:	**SACNASP registered scientists (Ecologist) Reg No. 400098/14**		
Postal address:	**29 Cruden Bay Road, Greenside Johannesburg**		
Postal code:	**2193**		
Telephone:		Cell:	**alan@themedaEco.co.za**
E-mail:	**alan@themedaEco.co.za**	Fax:	

Are any further specialist studies recommended by the specialist?	~~YES~~	**X NO**
If YES, specify:		
If YES, is such a report(s) attached?	~~YES~~	**NO**
If YES list the specialist reports attached below		

Signature of specialist: _____ Date:

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	**2. River, stream, wetland**	~~3. Nature conservation area~~	~~4. Public open space~~	~~5. Koppie or ridge~~
~~6. Dam or reservoir~~	**7. Agricultural**	**8. Low density residential**	~~9. Medium to high density residential~~	~~10. Informal residential~~
~~11. Old age home~~	~~12. Retail~~	~~13. Offices~~	**14. Commercial & warehousing**	~~15. Light industrial~~
~~16. Heavy industrial[AN]~~	~~17. Hospitality facility~~	~~18. Church~~	~~19. Education facilities~~	~~20. Sport facilities~~
~~21. Golf course/polo fields~~	~~22. Airport[N]~~	~~23. Train station or shunting yard[N]~~	~~24. Railway line[N]~~	~~25. Major road (4 lanes or more)[N]~~
~~26. Sewage treatment plant[A]~~	~~27. Landfill or waste treatment site[A]~~	~~28. Historical building~~	~~29. Graveyard~~	~~30. Archeological site~~
~~31. Open cast mine~~	~~32. Underground mine~~	~~33.Spoil heap or slimes dam[A]~~	~~34. Small Holdings~~	
Other land uses (describe):				

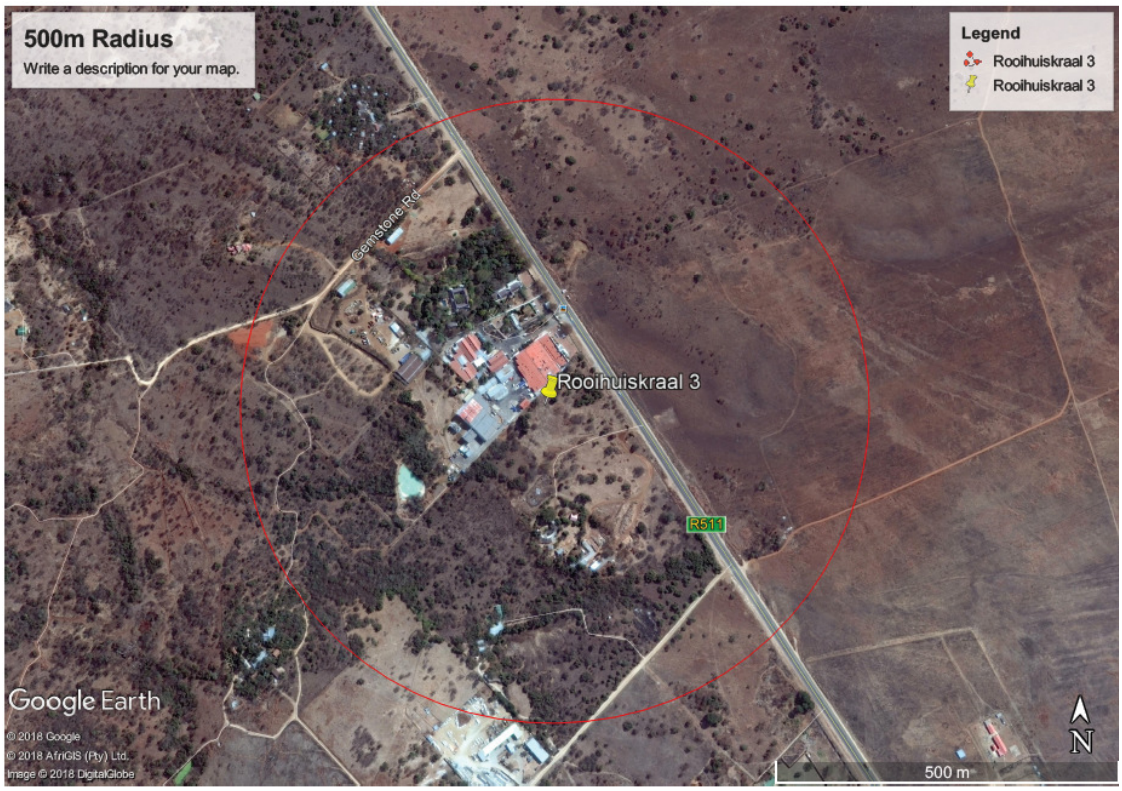


Figure 8: 500m radius Preferred Alternative

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

7	7	7	7	7
14	14	7	7	7,2
7	14		1,7	1,7
7	7	1,7	1,7	1,7
7	7	1,14	7	7

WEST **EAST** = **Site**

SOUTH

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "[A]" and with an "[N]" respectively.

Have specialist reports been attached	YES	**NO**
If yes indicate the type of reports below		

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

Centurion (previously known as Verwoerdburg) is an affluent area with 236,580 (2011 Census) inhabitants in Gauteng Province of South Africa, located between Pretoria and Midrand (Johannesburg). Formerly an independent municipality, with its own town council, it forms part of the City of Tshwane Metropolitan Municipality since 2000. Its heart is located at the intersection of the N1 and N14 freeways. The R21 also passes through Centurion.

The area is approximately 236,580 (394.88 km^2) (152.46 sq mi) in extent and has a population of 236,580 600/km^2 (1,600/sq mi). The population is represented by Black African (29.3%), White (59.0%), Indian or Asian (8.4%) and Coloured (2.3%). The most spoken language in the area is Afrikaans (49.4%).

Sources:
https://en.wikipedia.org/wiki/Centurion

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-
(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	~~YES~~	**NO**

1. PROPERTY DESCRIPTION – ALTERNATIVE 1

Property description: (Including Physical Address and Farm name, portion etc.)	**Portion 57 of the Farm Doornrandje No 386 – JR**

2. ACTIVITY POSITION

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 decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.865017°	**28.009806°**

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity	°	°
• Middle point of the activity	°	°
• End point of the activity	°	°

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached ☐

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 1	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 2																					
etc.																					

3. 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~~

4. LOCATION IN LANDSCAPE

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

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/ridge~~	~~Valley~~	**Plain**	~~Undulating plain/low hills~~	~~River front~~

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

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

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

c) are any caves located within a 300m radius of the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? | ~~YES~~ | **NO**

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 80	**Natural veld with scattered aliens % = 20**	~~Natural veld with heavy alien infestation % = 20~~	~~Veld dominated by alien species % =~~	~~Landscaped (vegetation) % =~~
~~Sport field % =~~	~~Cultivated land % =~~	~~Paved surface (hard landscaping) % =~~	~~Building or other structure % =~~	~~Bare soil % =~~

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site | **YES** | ~~NO~~

If YES, specify and explain:

An ecological Assessment was conducted by Themeda Eco Consulting for the proposed development site and the study concluded the following:

According to the GDARD C-Plan the site falls into a Critical Biodiversity Area: Irreplaceable Area. The vegetation is classified under as Carletonville Dolomite Grassland (Mucina and Rutherford 2006). The study site does not fall under the National list of threatened Ecosystems, although it is located between two threatened ecosystems to the north and south.

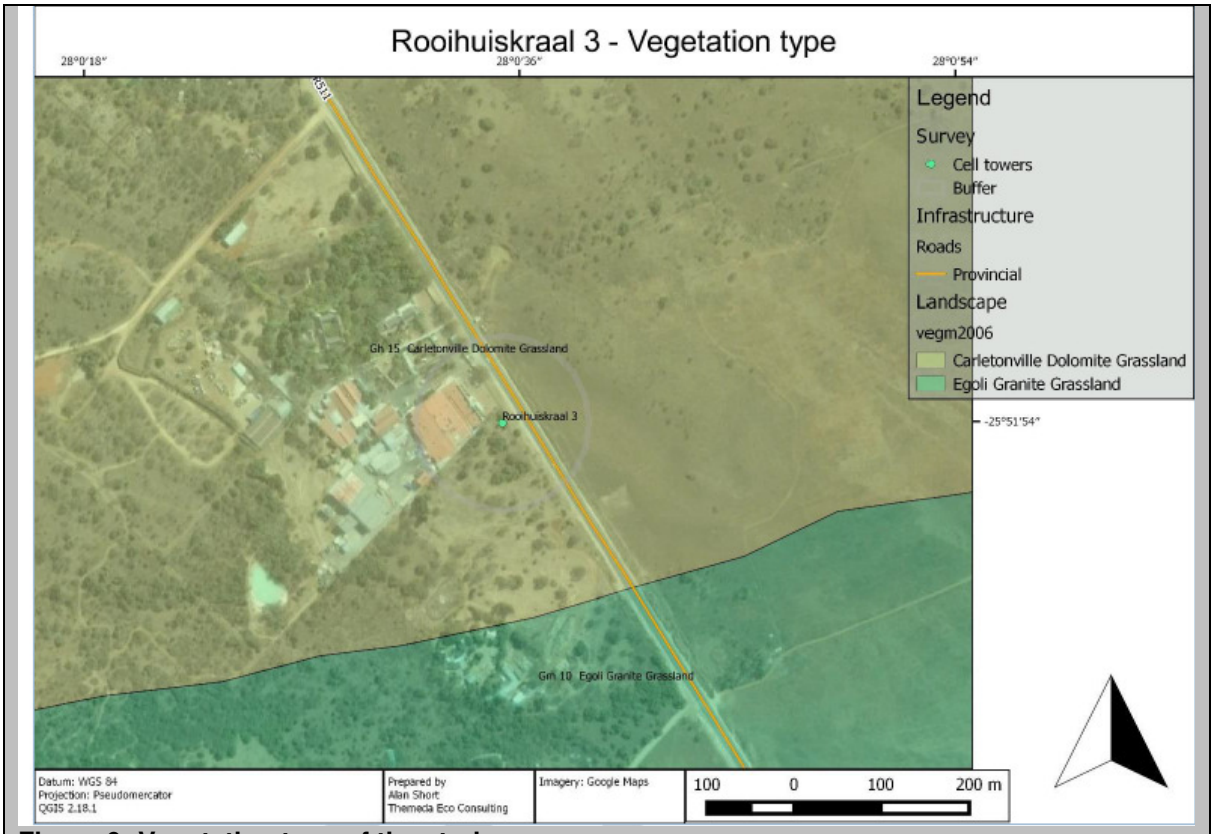


Figure 9: Vegetation type of the study area

The site is in reasonably good ecological condition with relatively high species diversity. Several alien invasive species were recorded including *Melia azedarach, Lantana camara, and Verbena bonariensis.*

Only one potential species of conservation concern was recorded, a *Cheilanthes deltoidea subsp. Deltoidea.* This species has two subspecies, one of which is velnerable and the other least concern.

Figure 10: Conservation value of the study area

Cheilanthes spp. **are provincially protected as class** ***Filicinae.*** **The location of the species observes was S 25° 51' 57.4" E 28° 0' 36.3"**

The footprint of the mast is small and although the sensitivity of the environment was estimated as medium, the mast will have little impact on the vegetation or habitats provided that the mitigation recommendations are followed to minimise impact.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	**YES**	~~NO~~

If YES, specify and explain:

The site falls in the Hennopsvallei Conservancy and the Witwatersberg Pretoria Mountain Bushveld (GP 10).

Geographical location
Pretoria west including Centurion (2528CC). Ecosystem delineated by the Witwatersberg ridge system and associated koppies, rivers and drainage lines.

Description
Key biodiversity features include Red or Orange Listed plants, for example, Melolobium subspicatum, Delosperma gautengense, Holothrix randii; Red or Orange Listed mammals, for example, Schreiber's Long-fingered Bat; Red or Orange Listed birds, for example White-backed Night-Heron and African Finfoot; Red or Orange Listed reptiles for example the Striped Harlequin Snake; Red or Orange Listed or priority invertebrates, for example Pretoria Lesser Baboon Spider, Purse Web Trapdoor Spider, Front-eyed Trapdoor Spider, Gunning's Rock Scorpion, Golden Starburst Baboon Spider, and Stobbia's Fruit Chafer; and five vegetation including the Andesite Mountain Bushveld, Carletonville Dolomite Grassland, Gauteng Shale Mountain Bushveld, Marikana Thornveld and Rand Highveld Grassland. The Apies River, Hennops River, Moganwe, Swartbooispruit, Walkerspruit, Waterkloofspruit, and unnamed wetlands are also key features of the ecosystem.

Approximately 2%, of the ecosystem is protected in the Groenkloof Nature Reserve.

However the site is situated on the northern portion of the site, adjacent to the northern boundary and a road to the east. The site falls south of a commercial use. Please refer to the Site Plan below and photo of the site.

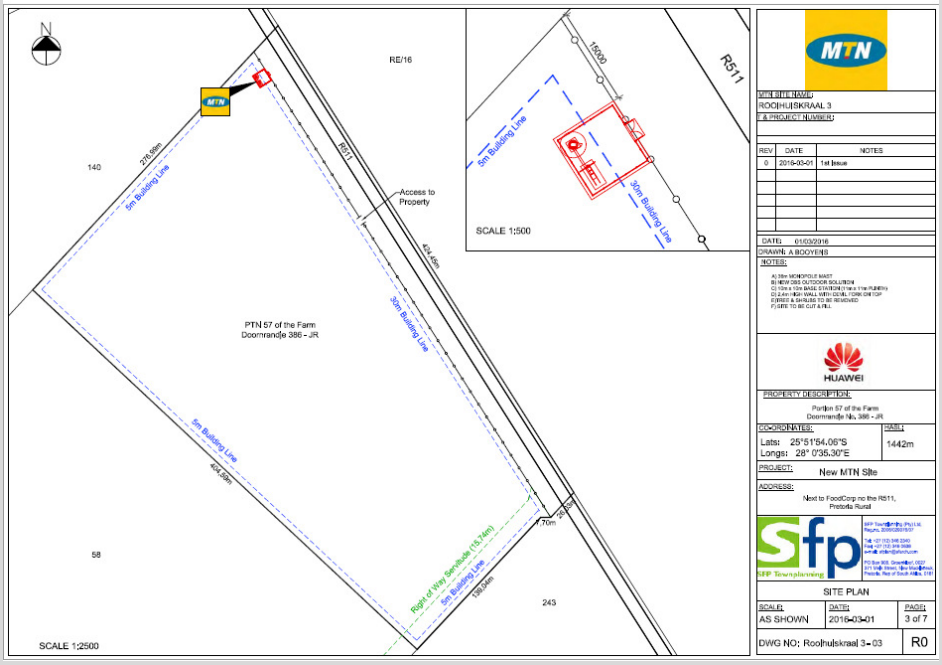


Figure 11: Site Plan

Figure 12: Photo of the site looking north

Are there any special or sensitive habitats or other natural features present on the site?

~~YES~~	**NO**

If YES, specify and explain:

No rivers or wetlands are mapped on or within 200m of the site, and no signs of wetland vegetation were observed during the survey.

Was a specialist consulted to assist with completing this section

YES	~~NO~~

If yes complete specialist details
Name of the specialist: **Alan Short of Themeda Eco Consulting**

Qualification(s) of the specialist:	**SACNASP registered scientists (Ecologist) Reg No. 400098/14**		
Postal address:	**29 Cruden Bay Road, Greenside Johannesburg**		
Postal code:	**2193**		
Telephone:		Cell:	**072 372 9099**
E-mail:	**alan@themedaEco.co.za**	Fax:	

Are any further specialist studies recommended by the specialist?	~~YES~~	**X NO**
If YES, specify:		
If YES, is such a report(s) attached?	~~YES~~	**NO**
If YES list the specialist reports attached below		

Signature of specialist: _____ Date: _____

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	**2. River, stream, wetland**	~~3. Nature conservation area~~	~~4. Public open space~~	~~5. Koppie or ridge~~
~~6. Dam or reservoir~~	**7. Agricultural**	**8. Low density residential**	~~9. Medium to high density residential~~	~~10. Informal residential~~
~~11. Old age home~~	~~12. Retail~~	~~13. Offices~~	**14. Commercial & warehousing**	~~15. Light industrial~~
~~16. Heavy industrial[AN]~~	~~17. Hospitality facility~~	~~18. Church~~	~~19. Education facilities~~	~~20. Sport facilities~~
~~21. Golf course/polo fields~~	~~22. Airport[N]~~	~~23. Train station or shunting yard[N]~~	~~24. Railway line[N]~~	~~25. Major road (4 lanes or more)[N]~~
~~26. Sewage treatment plant[A]~~	~~27. Landfill or waste treatment site[A]~~	~~28. Historical building~~	~~29. Graveyard~~	~~30. Archeological site~~
~~31. Open cast mine~~	~~32. Underground mine~~	~~33.Spoil heap or slimes dam[A]~~	~~34. Small Holdings~~	
Other land uses (describe):				

Figure 13: 500m radius Alternative 1

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

7	7	7	7	7
14	14	7	7	7,2
7	14		1,7	1,7
7	7	1,7	1,7	1,7
7	7	1,14	7	7

WEST **EAST** = **Site**

SOUTH

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "A" and with an "N" respectively.

Have specialist reports been attached	YES	**NO**
If yes indicate the type of reports below		

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

Centurion (previously known as Verwoerdburg) is an affluent area with 236,580 (2011 Census) inhabitants in Gauteng Province of South Africa, located between Pretoria and Midrand (Johannesburg). Formerly an independent municipality, with its own town council, it forms part of the City of Tshwane Metropolitan Municipality since 2000. Its heart is located at the intersection of the N1 and N14 freeways. The R21 also passes through Centurion.

The area is approximately 236,580 (394.88 km^2) (152.46 sq mi) in extent and has a population of 236,580 600/km^2 (1,600/sq mi). The population is represented by Black African (29.3%), White (59.0%), Indian or Asian (8.4%) and Coloured (2.3%). The most spoken language in the area is Afrikaans (49.4%).

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Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

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(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	~~YES~~	**NO**

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?	**YES** ~~NO~~
If yes, has any comments been received from the local authority?	**YES** ~~NO~~

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

Comments from City of Tshwane Metropolitan Municipality – 24 July 2017

1. **The flora and fauna study should be conducted in order to determine the absence or level of specie abundance on the proposed development site. The assessment must indicate all potential impacts of the proposed development and appropriate measures.**
2. b) The applicant must ensure that:
   - All structures are fenced or walled to limit public access to it. If the base station is secured building, sufficient precaution must be made to prevent access to the antenna support structure. Access to the area must be strictly controlled through a locked gate.
   - If the structure will be co-used to put up lights for security purposes, written consent of surrounding land users must be obtained. Lights must be screened in such a way as to prevent light pollution.
   - The applicant must ensure that the structure has an on-going maintenance schedule to keep it visually attractive.
   - Lighting of structures must be shield away from adjacent properties to prevent light pollution.
   - The applicant must take all reasonable steps to ensure that the telecommunications structure and equipment's do not cause a noise nuisance.

   c) Please note that according to the Telecommunication Mast Management guidelines for the City of Tshwane it is suggested that antennas and masts may be disguised with elements such as a signage, lightning and place name boards.

   d) The proposed development has potential visual impacts to the avifaunal biodiversity and human however associated visual impact study is not included. **The Department thus request that a visual impact study addressing the potential impacts should be compiled and included in the Final Basic Assessment report.**

   e) The proposed activity must be constructed according to the finalised and approved EMP. The EMP should include all the above recommendations. The approved finalised EMP is a legally binding document. An Environmental Control Officer (ECO) should be appointed for the proposed construction phase of the development to enforce the approved EMP. The appointed ECO details should be included within the EMP.

Comments from Gauteng Department of Agriculture and Rural Development – 03 August 2017

C. Alternatives

The DBAR did cover alternatives excluding No-Go option. Please note that the final report must also cover a no-go option. Comparatives assessment of alternatives must also include the following:

- Location of activity components on the site in relation to the surrounding land uses and adjacent roads infrastructure and services (if there are any).
- Alternatives must also be assessed in relation to other technology alternatives such as energy.

D. Significant rating of impacts

Identification of impacts and significant rating provided on the draft were noted however they must to reliable conclusion that the mitigation measures identified will reduce impacts to an acceptable le

E. Locality map and layout plans or facility illustrations

- The scale of locality map must be at least 1:50 000. The scale must be indicated on the map;
- The locality map and **all** other maps are in colour.
- Locality map must show property boundaries and numbers within 100m of the site, and for and/or piggery, locality map must show properties within 500m and prevailing or predominar direction.
- For gentle slopes the 1m contour intervals must be indicated on the plan and whenever the s the site exceeds 1:10, the 500mm contours must be indicated on the plan.
- Areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Locality map must show exact position of development site or sites;
- Locality map shows and identifies (if possible) public and access roads; and
- The current land use as well as the land use zoning of each of the properties adjoining the sites.

The layout plan

- The layout plan must be printed in colour and **overlaid with the composite sensitivity map**.
- Layout plan must be of acceptable paper size and scale, e.g. A4 size for activities with develop footprint of 10sqm to 5 hectares.
- layout plan scales should be guided by the following:
  - A0 = 1: 500.
  - A1 = 1: 1000.
  - A2 = 1: 2000.
  - A3 = 1: 4000.
  - A4 = 1: 8000 (±10 000).
- Servitudes indicating the purpose of the servitude.
- Sensitive environmental elements on and within 100m of the site or sites (including the rele buffers as prescribed by the competent authority) including (but not limited thereto).

F. EMPr

EMPr must be attached on the final report and must be practical, site specific and easily enforceab

G. Public participation process

All organs of state which have jurisdiction in respect of the proposed activity, this include Tshwane Metropolitan Municipality Open Space Management Section must consulted ar comments be included on the final report.

Please refer to Appendix E; Apendix 7 for the comments on the Draft BAR

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least **thirty (30) calendar days** before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders? **YES** ~~NO~~

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Registration as an Interested and Affected Party.

If "NO" briefly explain why no comments have been received

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report

Appendix 9 – Copy of the register of I&APs

Public Participation was conducted according to the following steps:

- **An advert was placed in the local newspaper of the Pretoria News on 06 April 2017**
- **Notice boards were placed on site on 06 April 2017,**
- **Notices were hand delivered to adjacent property owners,**
- **Registered letters were sent to neighbouring property owners, and**
- **Faxes and emails were sent to the stakeholders including the ward councillor of the area.**

Please Refer to Appendix E: Public Participation, for the proof of the Public Participation undertaken

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
4) Each alterative needs to be clearly indicated in the box below
5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives **0** times (complete only when appropriate)

Section D Alternative No. **0** (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? **YES** ~~NO~~

If yes, what estimated quantity will be produced per month? **100m^3**

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

The following policy on waste management is to be followed:

- **Provision will be made for adequate containers so as to handle all the garbage and litter generated on site;**
- **The contractor is responsible for any damage caused by any garbage and/or toxic material. Waste will be regularly removed to a licensed dumping site;**

No dangerous or toxic materials may be dumped at a site, which is not licensed for dangerous or toxic materials. If this is the case, provision will be made for the safe storage and subsequent collection and removal to a properly licensed site.

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

Construction waste will be used for fill as far as possible. Any excess material will be removed to a landfill site.

Will the activity produce solid waste during its operational phase? ~~YES~~ **NO**

If yes, what estimated quantity will be produced per month? `m^3

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

No solid waste will be generated during the operational phase. Maintenance of the structure will take place yearly but waste generated will be removed from site by the Contractor and disposed of at a licensed facility.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity? ~~YES~~ **NO**

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

Note: 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, 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 relevant legislation?	~~YES~~	**NO**

If yes, inform the competent authority and request a change to an application for scoping and EIA.

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

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

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	~~YES~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?	~~YES~~	~~NO~~

Will the activity produce any effluent that will be treated and/or disposed of on site?	~~Yes~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3

If yes describe the nature of the effluent and how it will be disposed.

Note that if effluent is to be treated or disposed on site 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?	~~YES~~	**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:

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	~~YES~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	~~YES~~	~~NO~~

Will the activity produce any effluent that will be treated and/or disposed of on site?	~~YES~~	**NO**

If yes describe how it will be treated and disposed off.

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	~~YES~~	**NO**
If yes, is it controlled by any legislation of any sphere of government?	~~YES~~	**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.
If no, describe the emissions in terms of type and concentration:

No gaseous emissions apart from dust and smoke during construction phase are expected.

2. WATER USE

Indicate the source(s) of water that will be used for the activity

~~municipal~~	~~Directly from water board~~	~~groundwater~~	~~river, stream, dam or lake~~	~~other~~	**The activity will not use water**

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: liters

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs?	~~YES~~	**NO**

If yes, list the permits required

If yes, have you applied for the water use permit(s)?	YES	NO
If yes, have you received approval(s)? (attached in appropriate appendix)	YES	NO

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

Eskom

If power supply is not available, where will power be sourced from?

4. ENERGY EFFICIENCY

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

MTN are conducting ongoing research to ensure that all cellular equipment within the network operates at optimal energy efficiently.

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

MTN has conducted testing on equipment with solar panels and wind turbines. The research on alternative power supply is ongoing within MTN, but has been problematic in the past. This is due to the site and CAA light requiring constant, uninterrupted power. This is of course not possible with the two aforementioned alternative power sources.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, 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 as well as the impacts of not implementing the activity (Section 24(4)(b)(i).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

Comment	Entity	Date
• Registered as an I&AP	Pierre Du Toit Jacobs Well Village NPC	18 April 2017

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)
(A full response must be provided in the Comments and Response Report that must be attached to this report):

Response to comments from the City of Tshwane Municipality on the Draft BAR

- **The specialist study has been conducted. Please refer to Appendix G for the report.**
- **The fence is a palisade fence that surrounds the cellular base station.**
  The Site will have a spotlight directly on the site that can be switched on and off while maintenance is done. Light placed in such way to not be directed towards the R511 road.

  Maintenance on such mast will be every 4-6 week for approximate half an hour.

  Spotlight will be directed on the site away from the R511 Road. Spotlight Light will be switched on while maintenance is done.

  Generator will only be used when site is without power for longer than 8 hours. Silent Generators will be used.
- **Telecommunication mast is supported by council within rural areas. Mast will be painted green to blend in with surrounding environment.**
- **The mast is situated a fair distance from the road and it is not expected that it will cause an adverse negative visual impact to the surrounding area as the surrounding area is undeveloped in nature.**
- **The EMPr has been attached. Please refer to Appendix H**

Response to comments from the Gauteng Department of Agriculture and Rural Development on the Draft BAR

- **The Basic Assessment Report has been amended.**
- **The Basic Assessment Report has been amended.**
- **1:10 000 Locality map, property boundary, location of MTN site, contours attached.**
  Drawing attached and indicates public and access roads.

  Zoning and land use Map attached.
- **Layout plan for Site on attached drawings. Site layout is both on 1:500 and 1:2500 (Cannot go smaller scale due to size of the MTN site).**

  Servitude indicated as right of way indicated on drawings.

- **EMPr attached.**
- **Comments received from CTMM included in Final BAR**

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

Table 1: Methodology

Rating	Definition of Rating	Score
A. Extent – ***the area in which the impact will be expected***		
None		**0**
Local	**Confined to project or study area or part thereof (eg. site)**	**1**
Regional	The region, which may be defined in various ways, eg. Cadastral, catchment, **topographic**	**2**
(Inter) national	**Nationally or beyond**	**3**
B. Intensity – ***the magnitude or size of the impact***		
None		**0**
Low	**Natural and/or social functions and processes are negligibly altered**	**1**
Medium	**Natural and/or social functions and processes continue albeit in a modified way**	**2**
High	**Natural and/or social functions or processes are severely altered**	**3**
C. Duration – ***the time frame for which the impact will be experienced***		
None		**0**
Short term	**Up to 2 years**	**1**
Medium term	**2 – 15 years**	**2**
Long Term	**More than 15 years**	**3**

The combined score of these three criteria corresponds to a Consequence Rating, as set out in Table below:

Table 2: Method used to determine the Consequence Score

Combined score (A+B+C)	0 - 2	3 - 4	5	6	7	8-9
Consequence Rating	Not **significant**	**Very low**	**Low**	**Medium**	**High**	**Very high**

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications indicated in table below:

Table 3: Probability Classification

Probability of impact – the likelihood of the impact occurring	
Improbable	**< 40% chance of occurring**
Possible	**40% - 70% chance of occurring**
Probable	**> 70% - 90% chance of occurring**
Definite	**> 90% chance of occurring**

The overall significance of impacts is determined by considering consequence and probability using the rating system indicated in table below:

Table 4: Impact Significance Ratings

Significance Rating	Consequence		Probability
Insignificant	**Very low**	**&**	**Improbable**
	Very low	**&**	**Possible**
Very Low	**Very low**	**&**	**Probable**
	Very low	**&**	**Definite**
	Low	**&**	**Improbable**
	Low	**&**	**Possible**
Low	**Low**	**&**	**Probable**
	Low	**&**	**Definite**
	Medium	**&**	**Improbable**
	Medium	**&**	**Possible**
Medium	**Medium**	**&**	**Probable**
	Medium	**&**	**Definite**
	High	**&**	**Improbable**
	High	**&**	**Possible**
High	**High**	**&**	**Probable**
	High	**&**	**Definite**
	Very high	**&**	**Improbable**
	Very high	**&**	**Possible**
Very High	**Very high**	**&**	**Probable**
	Very high	**&**	**Definite**

In conclusion the impacts are also considered in terms of their status (positive or negative impact) and the confidence in the ascribed impact significance rating. The prescribed system for considering impacts status and confidence (in assessment) is indicated in table below.

Table 5: Impact status and confidence classification

Status of Impact	
Indication of where the impact is adverse (negative) or beneficial (positive)	**+ ve (positive – a 'benefit')**
	- ve (negative – a 'cost')
	Neutral
Confidence of assessment	
The degree of confidence in predictions based on available information, EAP's **judgement and/or specialist knowledge**	**Low**
	Medium
	High

The impact significance rating should be considered by GDARD in their decision-making process based on the implications of ratings ascribed below:

- Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity / development;
- Very low: the potential impact should not have any meaningful influence on the decision regarding the proposed activity / development;
- Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity / development;
- Medium: the potential impact should influence the decision regarding the proposed activity / development;
- High: the potential impact will affect the decision regarding the proposed activity / development;
- Very high: The proposed activity should only be approved under special circumstances.

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Table 6: Impact assessment - Construction phase

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
1. ISSUE: AIR QUALITY								
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	**Local (1)**	**Short term (1)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Definite = Very low**	**-ve**	**High**
2. ISSUE VISUAL IMPACTS								
2.1 Visual Impacts due to clearance of site, cut and fill	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very low (4)**	**Probable**	**Very low & Probable = Very low**	**-ve**	**High**
3. ISSUE GEOLOGY AND SOILS								
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Local (1)**	**Medium term (2)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Probable = Very low**	**-ve**	**High**
3.2 Soil pollution	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**High**
3.3 Disturbance of surface geology for development foundations	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**Med**
4. ISSUE FAUNA AND FLORA								
4.1 Degradation, destruction of habitats/ ecosystem	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
4.2 Impacts on fauna and flora Disruption of nutrient flow dynamics; Introduction of chemicals into the ground and surface water through leaching; Habitat fragmentation Changes to abiotic environmental conditions; Changes to disturbance regimes e.g. decreased or increased incidences of fire; Changes to successional processes; effects on	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
pollinators; And increased invasion by plants and animals not endemic to the area.								
5. ISSUE HYDROLOGY								
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	**Regional (2)**	**Medium (2)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Medium& Probable = Medium**	**-ve**	**High**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE								
6.1 Noise/ vibration	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
7.1 Safety and Security	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
7.2 Job opportunities	**Regional (2)**	**High (3)**	**Medium term (2)**	**High (7)**	**Definite**	**High & Definite = High**	**+ ve**	**Medium**
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
of time.								
8. ISSUE HISTORICAL ENVIRONMENT								
8.1 Destruction of cultural / heritage sites	**None**	**None**	**None**	**Not significant (0)**	**Improbable**	**Not significant & improbable = insignificant**	**-ve**	**Medium**
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE								
9.1 Waste	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Low & Definite = Low**	**-ve**	**High**

Alternative 1

Table 7: Impact assessment-Construction phase

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
1. ISSUE: AIR QUALITY								
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	**Local (1)**	**Short term (1)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Definite = Very low**	**-ve**	**High**
2. ISSUE VISUAL IMPACTS								
2.1 Visual Impacts due to clearance of site, cut and fill	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very low (4)**	**Probable**	**Very low & Probable = Very low**	**-ve**	**High**
3. ISSUE GEOLOGY AND SOILS								
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Local (1)**	**Medium term (2)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Probable = Very low**	**-ve**	**High**
3.2 Soil pollution	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**High**
3.3 Disturbance of surface geology for development foundations	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**Med**
4. ISSUE FAUNA AND FLORA								
4.1 Degradation, destruction of habitats/ ecosystem	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Definite**	**Medium & Definite = Medium**	**-ve**	**High**
4.2 Impacts on fauna and flora Disruption of nutrient flow dynamics; Introduction of chemicals into	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Definite**	**Medium& Definite = Medium**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
the ground and surface water through leaching; Habitat fragmentation Changes to abiotic environmental conditions; Changes to disturbance regimes e.g. decreased or increased incidences of fire; Changes to successional processes; effects on pollinators; And increased invasion by plants and animals not endemic to the area.								
5. ISSUE HYDROLOGY								
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	**Regional (2)**	**Medium (2)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Medium& Probable = Medium**	**-ve**	**High**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE								
6.1 Noise/ vibration	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
7.1 Safety and Security	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
7.2 Job opportunities	**Regional (2)**	**High (3)**	**Medium term (2)**	**High (7)**	**Definite**	**High & Definite = High**	**+ ve**	**Medium**
7.3 Visual impact Site clearing and removal	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.								
8. ISSUE HISTORICAL ENVIRONMENT								
8.1 Destruction of cultural / heritage sites	**None**	**None**	**None**	**Not significant (0)**	**Improbable**	**Not significant & improbable = insignificant**	**-ve**	**Medium**
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE								
9.1 Waste	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Low & Definite = Low**	**-ve**	**High**

Table 8: Impact assessment - Operational phase
Proposal

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	status	Confidence
1. ISSUE: FAUNA AND FLORA								
1.1 Alien invasion	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & probable = Medium**	**-ve**	**Medium**
2. ISSUE: HYDROLOGY								
2.1 Erosion of adjacent areas	**Regional (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & probable = Medium**	**-ve**	**Medium**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
3. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
3.1 Safety and Security	**Local (1)**	**Low (1)**	**Long term (3)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
4. ISSUE: TRAFFIC								
4.1 Structure might impact on air traffic if it does not have day night markings	**Regional (2)**	**Medium (2)**	**Long term (3)**	**High**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Alternative 1 ***(REPEAT THIS TABLE FOR EACH ALTERNATIVE)***				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
The impacts of alternative 1 are similar to that of the proposal.				

No Go				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
None				

Proposal

Table 9: Significance Rating - Construction phase

Preferred Option construction phase

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: AIR QUALITY				
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	Very Low	• Dust generation should be kept to a minimum. • Dust must be suppressed on construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent. • Speed limits must be	Very Low	Negative impact to the ambient air quality of the area.

		implemented in all areas, including public roads and private property to limit the levels of dust pollution. • It is recommended that the clearing of vegetation from the site should be selective and done just before construction so as to minimise erosion and dust. • Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided. • All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials. • No burning of refuse or vegetation is permitted.		
2. ISSUE VISUAL IMPACTS				
2.1 Visual Impacts due to clearance of site, cut and fill.	Very Low	• Site development to be limited to footprint and access road.	Very Low	
3. ISSUE GEOLOGY AND SOILS				
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	• Strip topsoil prior to any construction activities. • Reuse topsoil to rehabilitate disturbed areas. • Topsoil must be kept separate from overburden and must not be used for building purposes or maintenance or access roads. • Appropriate erosion and storm water management structures must be installed around the construction site.	Very Low	
3.2 Soil pollution	Low	• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution. • Ensure appropriate handling of hazardous substances • Remediate polluted soil. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes.	Very Low	

		• Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded. • All excavations and foundations must be inspected regularly		
3.3 Disturbance of surface geology for development foundations	Low	• Site development to be limited to footprint and access road	Very low	
4. ISSUE FAUNA AND FLORA				
4.1 Degradation, destruction of habitats/ ecosystem	Very low	• Minimise construction footprints prior to commencement of construction and control all edge effects of construction activities (proliferation of alien vegetation, disturbance of soils, dumping of construction waste). • Existing roads should be utilized wherever possible to provide access to construction area. • Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities. • Clearly demarcate areas to be cleared and ensure that vegetation clearing only occurs within the demarcated areas • Ensure that erosion management and sediment controls are strictly implemented from the beginning of the site clearing activities. Follow either access route 1 or access route 2 as per the ecological report in order to reach the site, use the shortest practical route, following disturbed vegetation where feasible.	Very Low	
4.2 Impacts on fauna and flora	Very Low	• The contractor must ensure that no fauna species are disturbed, trapped, hunted or killed during the construction phase. • The illegal hunting or capture of wildlife will not be tolerated. Such matters will be handed over to the relevant authorities for prosecution. • Disturbance to birds, animals and reptiles and their habitats should be prevented at all times. • All Declared Weeds and invaders must be removed • Ensure that the construction footprint is adequately revegetated after completing construction. • Avoid bush clumps, geophytes and rock outcrops both in the construction footprint and the access route. • Areas that are not part of the site development plan should be marked as no go zones. • Construction should be limited to daylight hours. • Construction personnel should	Very Low	

		be informed of the Animal Protection Act No. 71 of 1962 and encouraged not to harm any wildlife; and • Construction personnel should undergo awareness training regarding fauna assemblages and the correct procedures to follow should fauna be found within the site. They should be encouraged not to harm any wildlife. They should also be informed of any policies and procedures applicable for fauna and flora.		
5. ISSUE HYDROLOGY				
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	Medium	• Storm water measures to be implemented prior to construction taking place on site: • All measures should be implemented during the construction of earthworks (terraces and roadways) to ensure that disturbed soil is not transported into any water course or system where storm water is to flow. Building rubble and other products that can cause contamination must be managed according to best practice and monitored by the site's environmental control officer (ECO).	Low	
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE				
6.1 Noise/ vibration	Low	• Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise. • No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. • Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays. • Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance. • Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.	Very Low	
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
7.1 Safety and Security	Low	• Signs should be erected on all entrance gates to the site camp indicating that no temporary	Very Low	

		jobs are available, thereby limiting opportunistic labourers and crime. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured (including toilets). • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are undertaken on or near public roads. • Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues. • All construction workers shall be issued with ID badges and clearly identifiable uniforms. • Access to fuel and other equipment stores is to be strictly controlled. • Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at		

		prominent locations around the construction site and the construction crew camps at all times. • The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. • The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. • Washing and toilet facilities shall be provided on site and in the Contractors camp. • Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided. • The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately. • The chemical toilets must be emptied on a regular basis. • The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site. • HIV AIDS awareness and education should be undertaken by all Contractor staff.		
7.2 Job opportunities	High	• Make use of local labour • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations. • Provide skills training for construction workers.	Medium	
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.	Low	• Phased, rather than indiscriminate clearing of the site to be undertaken.	Very Low	
8. ISSUE HISTORICAL ENVIRONMENT				
8.1 Destruction of cultural / heritage sites	Insignificant	• Ensure that construction staff members are aware that heritage resources could be unearthed and the scientific importance of such finds. • Ensure that heritage objects	Insignificant	

		are not to be moved or destroyed without the necessary permits from the South African Heritage Resources Agency (SAHRA) in place.		
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE				
9.1 Waste	Medium	• Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. • No burning of waste. • Waste will be collected and removed off-site to a registered waste site. • Remove all construction material and detritus after construction is complete.	Low	

Alternative 1

Table 10: Significance Rating-Construction phase

Alternative 1 construction phase

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: AIR QUALITY				
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	Very Low	• Dust generation should be kept to a minimum. • Dust must be suppressed on construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent. • Speed limits must be implemented in all areas, including public roads and private property to limit the levels of dust pollution. • It is recommended that the clearing of vegetation from the site should be selective and done just before construction so as to minimise erosion and dust. • Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided. • All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials. • No burning of refuse or vegetation is permitted.	Very Low	Negative impact to the ambient air quality of the area.
2. ISSUE VISUAL IMPACTS				
2.1 Visual Impacts due to clearance of site, cut and fill.	Very Low	• Site development to be limited to footprint and access road.	Very Low	
3. ISSUE GEOLOGY AND SOILS				
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	• Strip topsoil prior to any construction activities. • Reuse topsoil to rehabilitate disturbed areas. • Topsoil must be kept separate from overburden and must not be used for building purposes or maintenance or access	Very Low	

		roads. • Appropriate erosion and storm water management structures must be installed around the construction site.		
3.2 Soil pollution	Low	• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution. • Ensure appropriate handling of hazardous substances • Remediate polluted soil. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes. • Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded. • All excavations and foundations must be inspected regularly	Very Low	
3.3 Disturbance of surface geology for development foundations	Low	• Site development to be limited to footprint and access road	Very low	
4. ISSUE FAUNA AND FLORA				
4.1 Degradation, destruction of habitats/ ecosystem	Medium	• Minimise construction footprints prior to commencement of construction and control all edge effects of construction activities (proliferation of alien vegetation, disturbance of soils, dumping of construction waste). • Existing roads should be utilized wherever possible to provide access to construction area. • Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities. • Clearly demarcate areas to be cleared and ensure that vegetation clearing only occurs within the demarcated areas • Ensure that erosion management and sediment	Low	

		controls are strictly implemented from the beginning of the site clearing activities		
4.2 Impacts on fauna and flora	Medium	• The contractor must ensure that no fauna species are disturbed, trapped, hunted or killed during the construction phase. • The illegal hunting or capture of wildlife will not be tolerated. Such matters will be handed over to the relevant authorities for prosecution. • Disturbance to birds, animals and reptiles and their habitats should be prevented at all times. • All Declared Weeds and invaders must be removed • Rehabilitation with indigenous species. • Mark the plant and any other plants observed on or near the site and protect the marked plants from damage from construction activities. • Should any protected plant be located on the site of the activity, obtain permission from GDARD to relocate the plants. • Ensure that contractors do not remove any herbaceous plants and ferns from around the immediate environment of the construction footprint, other than known weeds or common grasses and shrubs.	Low	
5. ISSUE HYDROLOGY				
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	Medium	• Storm water measures to be implemented prior to construction taking place on site: • All measures should be implemented during the construction of earthworks (terraces and roadways) to ensure that disturbed soil is not transported into any water course or system where storm water is to flow. Building rubble and other products that can cause contamination must be managed according to best practice and monitored by the site's environmental control officer (ECO).	Low	
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE				
6.1 Noise/ vibration	Low	• Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise. • No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. • Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between	Very Low	

		7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays. • Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance. • Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.		
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
7.1 Safety and Security	Low	• Signs should be erected on all entrance gates to the site camp indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured (including toilets). • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are undertaken on or near public roads. • Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues. • All construction workers shall be issued with ID badges and clearly identifiable uniforms. • Access to fuel and other equipment stores is to be strictly controlled.	Very Low	

		• Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at prominent locations around the construction site and the construction crew camps at all times. • The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. • The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. • Washing and toilet facilities shall be provided on site and in the Contractors camp. • Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided. • The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately. • The chemical toilets must be emptied on a regular basis. • The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site. • HIV AIDS awareness and education should be undertaken by all Contractor staff.		
7.2 Job opportunities	High	• Make use of local labour • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to	Medium	

		prevent unrealistic expectations. • Provide skills training for construction workers.		
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.	Low	• Phased, rather than indiscriminate clearing of the site to be undertaken.	Very Low	
8. ISSUE HISTORICAL ENVIRONMENT				
8.1 Destruction of cultural / heritage sites	Insignificant	• Ensure that construction staff members are aware that heritage resources could be unearthed and the scientific importance of such finds. • Ensure that heritage objects are not to be moved or destroyed without the necessary permits from the South African Heritage Resources Agency (SAHRA) in place.	Insignificant	
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE				
9.1 Waste	Medium	• Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. • No burning of waste. • Waste will be collected and removed off-site to a registered waste site.	Low	

Table 11: Significance rating for the Operational phase
Proposal and Alternative 1

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: FAUNA AND FLORA				
1.1 Alien invasion	Medium	• Site to be kept neat and weed free. • Access to the site only through clearly demarcated access routes. • The footprint of damage to vegetation must be limited to the footprint of the activity and the immediate access route. • No permanent vegetation removal should be conducted. • Removal of any plants should require evaluation of the ECO and permission from relevant authority.	Low	Infestation of adjacent vacant areas
2. ISSUE: HYDROLOGY				
2.1 Erosion of adjacent areas	Medium	• Erosion and storm water from site to be checked regularly. • Should erosion take place the storm water situation to be rectified	Low	
SOCIO- ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				

3. ISSUE: SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
3.1 Safety and Security	Low	• Site to be secured. • Regular checkup on fencing	Very low	
4. ISSUE: TRAFFIC				
4.1 Structure might impact on air traffic if it does not have day night markings	High	• Mast to have Markings	Medium	

Alternative 1 ***(REPEAT THIS TABLE FOR EACH ALTERNATIVE)***				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
The impacts of alternative 1 are similar to that of the proposal.				

No Go				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
None				

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

Ecological Assessment – Portion 57 of Doornrandje 386, Rooihuiskraal 3. Please refer to Appendix G for the Specialist Report.

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

No impact assessment can be completely certain of the exact nature and extent of the various impacts that would result from a given development activity. However, this assessment strives to limit any uncertainties by optimising the collection of base data, and by following a rigorous impact assessment methodology.

3. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact and mitigation not being implemented**
Waste (Rubble)	**High**	**Rehabilitation plan**	**Medium**	**Risk of disturbance of adjacent vacant area**
Visual	**Medium**	**Rehabilitation plan**	**Low**	**Visual impact on adjacent area**
Dust	**High**	**Rehabilitation plan**	**Medium**	
Noise	**High**	**Rehabilitation plan**	**Medium**	**Disturbance to sense of place**

				of area
Sense of place	**Low**	**Rehabilitation plan**	**Low**	

Alternative 1

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
The impacts are similar to that of the proposal.				

Alternative 2

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
None				

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

None

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

The cost for decommissioning a cellular structure is in the range of R1mil and this includes the rehabilitation of the affected area.

Post closure management includes 6 monthly monitoring of the regrowth of vegetation and erosion control for a period of 2 years.

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

1. **Disturbance of the site might lead to alien plant infestation.**
2. **Visual impact of the mast. The proposed type of structure, the colour and the position must be compatible with the surrounding land uses.**
3. **There is a socio-economic need for an effective and efficient telecommunication network in the area for economic and safety purposes. Therefore the proposed project will accommodate the interests of the applicant, community and economy**

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal 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.

Proposal

As a necessary part of infrastructure and a business service, this development is bound to have a positive effect on the surrounding area in terms of communication, and it will provide a needed service to the immediate area

From a purely biophysical perspective the area impacted on by the mast is relatively small especially due to the fact that the site will be accessed from an existing road. Also, the area to the west of the site has been impacted upon by some form of dumping. Besides the vegetation occurring in the area being endangered, there are no sensitive habitats such as water bodies present on site or in close proximity to the site.

The biophysical impact of the development will be limited in a regional context, and will be more than offset by the social benefits for the immediate urban development. The proposal can therefore proceed from an environmental perspective.

The construction phase has the greatest impact on the environment even with mitigation. The negative impacts associated with the construction phase include:

- **Soil and Ground Water pollution**
- **Increased run off of water**
- **Visual Intrusion & Light Pollution**
- **Destruction of Flora & Fauna**
- **Noise Pollution**
- **Atmosphere pollution and odours resulting from dust and construction equipment**
- **Safety & Security on the site**
- **Spread of Alien Vegetation**

The construction phase will be associated with positive socio-economic impacts in terms of job creation. A number of mitigation measures to reduce or improve these impacts have been identified and are presented in the tables above. A key environmental imperative of the construction phase would be to prevent soil, air, water and noise pollution and erosion on the site.

The negative impacts relating to the operational phase include the following:

- **Due to the disturbance of the site alien plants will be able to establish and could become a problem by infesting neighbouring land.**

The primary positive impacts relate to the improved communications network in the area.

The construction phase will be of short duration and operational phase will have limited environmental impacts if constructed according to the conditions outlined in this report and if managed according to the EMPr.

Alternative 1

The impacts of Alternative 1 relate to the impact on the *Cheilanthes deltoidea* that is considered sensitive

Alternative 2

None

No-go (compulsory)

If the no-go option were to be followed it will have an impact on the nearby community that is experiencing problems with their cellular network. It might only shift the development activity to a different location, where there could be

a greater loss of sensitive features. The no-go alternative will entail leaving the site in its present vacant state.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The proposal is preferred. The impacts of the proposed development have been summarised under paragraph 5.

For alternative:

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

1. The preferred option will have a minimal visual impact on the area.
2. The character of the area and the surrounding land uses can accommodate the preferred option.
3. The property owner agreed to the proposed position
4. The preferred option will have a minimal impact on the protected plant referred to in the ecological report when compared to Alternative 1

7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

One of the strategic objectives of the Tshwane Metropolitan Spatial Development Framework is Economic growth and development and job creation.

The proposed development will create job opportunities thus positively influencing Economic growth and development.

8. RECOMMENDATION OF THE 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 as bound by professional ethical standards and the code of conduct of EAPASA).

YES	~~NO~~

If "NO", indicate the aspects that require further assessment 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 proposed activity is not anticipated to have significant environmental impacts.

The following recommendations should be implemented in order to ensure that potential impacts associated with the establishment and operation of the site are minimised:

- **Any areas disturbed during construction and operation must be rehabilitated.**
- **The structures are to be removed when the structure is ceased to be used for telecommunications purposes and the site rehabilitated.**
- **Construction to take place during working hours.**

- **Trampling and disturbance associated with construction should be limited to within 5m (five metres) of the footprint of the site.**
- **On completion of the project all litter and construction debris shall be immediately removed from the site.**
- **Adherence to the Ecological report.**

9. THE NEEDS AND DESIREBILITY OF THE PROPOSED DEVELOPMENT
(as per notice 792 of 2012, or the updated version of this guideline)

Need and desirability of the proposed development

Cellular telecommunication technology is an integral part of modern daily life and licensed cellular telecommunication service operators have an obligation in terms of their license agreements, as stipulated by national government, to provide the services throughout South Africa within the allocated bandwidth spectrum. The cellular telecommunication user base is still increasing (quantitative growth) and users must be enabled to choose the services rendered by any of the licensed operators anywhere in South Africa (choice and availability). The expansion of service types and content (content & technology growth) furthermore requires continuous equipment and network fine-tuning, upgrades and expansion. The user base also expects a continuous quality service to be provided and therefore network capacity and capabilities are under constant review to maintain or improve quality coverage (qualitative growth).

Due to the rural setting of the area, there is poor network connectivity. Therefore it has become essential to provide a new cellular base station in the area. Furthermore the cellular base station is proposed to accommodate six service providers thus ensuring that the residents of the area have a wide variety of service providers to choose from.

The benefits that the activity will have for society in general are:
- **Better cellphone Network/ signal coverage and Cellular Communication**
- **Security**
- **Socio-economic development**
- **Improved medical response**

The benefits that the activity will have for the local communities where the activity will be located are:
- **Better cell phone Network/ signal coverage and Cellular Communication**
- **Security**
- **Socio-economic development**
- **Improved medical response**

The motivation and benefits to society in general above apply to the local community directly.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)

Medium term (2-15 years)

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

(must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPr attached	**YES**

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s) – *(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)*

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
- All relevant sections of the form have been completed.

FINAL BASIC ASSESSMENT REPORT

FOR

THE PROPOSED CONSTRUCTION OF A TELECOMMUNICATION MAST FOR MTN (PTY) LTD ROOIHUISKRAAL 3 (ON PORTION 57 OF THE FARM DOORNRANDJE NO 386 JR)

Ref No: 002/17-18/E0074

PREPARED FOR:
MTN (Pty) Ltd
P O Box 908
Groenkloof
0027

Tel: 012 346 2340
Cell: 083 383 4137

COMPILED BY:
Lokisa Environmental Consulting CC
P O Box 219
Groenkloof
0027

Tel: 012 346 7655
Fax: 012 346 6074

Date: January 2018

Enq: Elaine Minnaar/Emanuel Maluleke

CONTENTS

Appendix A: Site plan(s)
Appendix B: Photographs
Appendix C: Facility illustration(s)

List of Figures

List of Tables

Definitions

Activity (Development)	An action either planned or existing that may result in environmental impacts through pollution or resource use. For the purpose of this report, the terms 'activity' and 'development' are freely interchanged.

Alternatives	Different means of meeting the general purpose and requirements of the activity, which may include site or location alternatives; alternatives to the type of activity being undertaken; the design or layout of the activity; the technology to be used in the activity and the operational aspects of the activity.
Applicant	The project proponent or developer responsible for submitting an environmental application to the relevant environmental authority for environmental authorisation.
Biodiversity	The diversity of animals, plants and other organisms found within and between ecosystems, habitats, and the ecological complexes.
Construction	The building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.
Cumulative impact	The impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
Decommissioning	The demolition of a building, facility, structure or infrastructure.
Derelict land	means abandoned land or property where the lawful/legal land use right has not been exercised during the preceding ten year period (Regulation R982 of NEMA, 1998 (Act No. 107 of 1998));
Direct Impact	Impacts that are caused directly by the activity and generally occur at the same time and at the same place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally quantifiable.
Ecosystem	A dynamic system of plant, animal (including humans) and micro-organism communities and their non-living physical environment interacting as a functional unit. The basic structural unit of the biosphere, ecosystems are characterised by interdependent interaction between the component species and their physical surroundings. Each ecosystem occupies a space in which macro-scale conditions and interactions are relatively homogenous
Environment	In terms of the National Environmental Management Act (NEMA) (No 107 of 1998)(as amended), "Environment" means the surroundings within which humans exist and that are made up of: a) the land, water and atmosphere of the earth; b) micro-organisms, plants and animal life; c) any part or combination of (i) of (ii) and the interrelationships among and between them; and d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.
Environmental Assessment	The generic term for all forms of environmental assessment for projects, plans, programmes or policies and includes methodologies or tools such as environmental impact assessments, strategic environmental assessments and risk assessments.
Environmental Authorisation	An authorisation issued by the competent authority in respect of a listed activity, or an activity which takes place within a sensitive environment.]
Environmental Assessment Practitioner (EAP)	The individual responsible for planning, management and coordination of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instrument introduced through the EIA Regulations.
Environmental Management	Ensuring that environmental concerns are included in all stages of development, so that development is sustainable and does not exceed the carrying capacity of the environment.
Environmental Management Programme (EMPr)	A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative environmental impacts are implemented during the life cycle of a project. This EMPr focuses on the construction phase, operation (maintenance) phase and decommissioning phase of the proposed project.
Environmental Impact	Change to the environment (biophysical, social and/ or economic),

	whether adverse or beneficial, wholly or partially, resulting from an organisation's activities, products or services.
Environmental Issue	A concern raised by a stakeholder, interested or affected parties about an existing or perceived environmental impact of an activity.
Fatal Flaw	Issue or conflict (real or perceived) that could result in developments being rejected or stopped. In the context of an environmental impact assessment a fatal flaw can be termed as an environmental issue that cannot be mitigated by any means
General Waste	Household water, construction rubble, garden waste and certain dry industrial and commercial waste, which does not pose an immediate threat to man or the environment.
Groundwater	Water in the ground that is in the zone of saturation from which wells, springs, and groundwater run-off are supplied.
Hazardous Waste	Waste that may cause ill health or increase mortality in humans, flora and fauna.
Hydrology	The science encompassing the behaviour of water as it occurs in the atmosphere, on the surface of the ground, and underground.
important areas	Sites that are important for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Indirect Impacts	Indirect or induced changes that may occur as a result of the activity. These types if impacts include all of the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
Integrated Environmental Management	A philosophy that prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development and decision making process. The IEM philosophy (and principles) is interpreted as applying to the planning, assessment, implementation and management of any proposal (project, plan, programme or policy) or activity - at local, national and international level – that has a potentially significant effect on the environment. Implementation of this philosophy relies on the selection and application of appropriate tools for a particular proposal or activity. These may include environmental assessment tools (such as strategic environmental assessment and risk assessment), environmental management tools (such as monitoring, auditing and reporting) and decision-making tools (such as multi-criteria decision support systems or advisory councils).
Interested and Affected Party (I&AP)	Any person, group of persons or organisation interested in or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.
Irreplaceable areas	Sites, which are essential in meeting targets set for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Mitigate	The implementation of practical measures designed to avoid, reduce or remedy adverse impacts or enhance beneficial impacts of an action.
No-Go Option	In this instance the proposed activity would not take place, and the resulting environmental effects from taking no action are compared with the effects of permitting the proposed activity to go forward.
Public Participation Process	A process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters.
Rehabilitation	A measure aimed at reinstating an ecosystem to its original function and state (or as close as possible to its original function and state) following activities that have disrupted those functions.
Sensitive Environments	Any environment identified as being sensitive to the impacts of the development.
Significance	Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. magnitude, intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgements and science-based criteria (i.e. biophysical, social and economic).

Stakeholder Engagement	The process of engagement between stakeholders (the proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities.
Sustainable Development	Development which meets the needs of current generations without hindering future generations from meeting their own needs.
undeveloped	means that no facilities, structures or infrastructure have been effected upon the land or property during the preceding 10 years.
Urban areas	means areas situated within the urban edge (as defined or adopted by the competent authority), or in instances where no urban edge or boundary has been defined of adopted, it refers to areas situated within the edge of built-up areas (Regulation R984 of NEMA,1998 (Act No. 107 of 1998));
Vacant	Means not occupied for the purpose of its lawful land use during the preceding ten year period.
Virgin soil	means land not cultivated for the preceding 10 years. (Regulation R984 of NEMA,1998 (Act No. 107 of 1998);
Watercourse	Means (a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, pan, lake or dam into which, or from which, water flows; and any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse as defined in the National Water Act, 1998 (Act No. 36 of 1998) and a reference to a watercourse includes, where relevant, its bed and banks. (Regulation R983 of NEMA, 1998 (ACT NO. 107 OF 1998).;
Wetland	Means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil. (Regulation 983 of NEMA, 1998 (ACT NO. 107 OF 1998).

Abbreviations

AIA	Archaeological Impact Assessment
BAR	Basic Assessment Report
BID	Background Information Document
BSc	Bachelor of Science
CC	Close Corporation
C- Plan	Gauteng Conservation Plan Version 3
CTMM	City of Tshwane Metropolitan Municipality
DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation
GDARD	Gauteng Department of Agriculture and Rural Development
GPEMF	Gauteng Provincial Environmental Management Framework
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EMM	Ekurhuleni Metropolitan Municipality
Ha	Hectares
HIA	Heritage Impact Assessment
I & AP's	Interested and Affected Parties
IDP's	Integrated Development Plans
Km	Kilometres
LDO	Land Development Objectives
m	Meters
NEMA	National Environmental Management Act
NGO's	Non-Governmental Organisations
OHSA	Occupational Health and Safety Act

PES	Present Ecological State
PPE	Personal Protective Equipment
PPP	Public Participation Process
Pr.Sci.Nat	Professional Natural Scientist
(Pty) Ltd	Proprietary Limited
PHRA-G	Provincial Heritage Resources Authority – Gauteng
SAHRA	South African Heritage Resources Agency
SAPS	South African Police Service
WRC	Water Research Commission

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. 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.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. 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 application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the of the Environmental Affairs Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the of the Environmental Affairs Branch
Ground floor Diamond Building
11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

Extension of time received to submit the Final BAR

Is a closure plan applicable for this application and has it been included in this report? **NO**

if not, state reasons for not including the closure plan.

The activity applied for does not relate to the decommissioning of an activity

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity? **YES**

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person? **YES**

If no, state reasons for not attaching the list.

Please refer to appendix I

Have State Departments including the competent authority commented? **Yes**

If no, why?

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

MTN MAST: ROOIHUISKRAAL 3

Select the appropriate box

The application is for an upgrade of an existing development		The application is for a new development	X	Other, specify	

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES ■

If yes, describe the legislation and the Competent Authority administering such legislation

Application for cellular masts in the City of Tshwane is done in terms of Clause 14(11) of the Tshwane Town Planning Scheme, 2008, (Revised 2014), read with Section 16(3) of the City of Tshwane Land Use Management By-Law, 2016, subject to Clause 15 and Schedule 25. Clause 15 and Schedule 25 is the advertisement and application process. Public participation entails registered letters as well as site notice placement.

The followings is required for approval if applicable:

- **Application with normal documentation (Memo/Land Use Maps/Zoning Maps etc)**
- **CAA Approval**
- **EIA/GDARD Approval/Non listing letter**
- **Bondholders Consent if necessary**
- **Gautrans comments / Approval (BLR or Section 7)**
- **Internal Comments (City of Tshwane Departments)**
- **External comments when requested (ESKOM/Agriculture & Fisheries/Township Board)**
- **Removal of restrictive conditions in title deed if applicable**
- **Hearing if objections were received**

After approval, Building plans in terms of the National Building Regulation Act can be approved. The followings is required for approval if applicable:

- **Internal Circulation**
- **Building Line Relaxation if applicable.**
- **SANS/Engineers**

Civil Aviation Approval in terms of Aviation Act (74 of 1962)

If yes, have you applied for the authorisation(s)?	**YES**	~~NO~~
If yes, have you received approval(s)? (attach in appropriate appendix)	~~YES~~	**NO**

2. 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:

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998

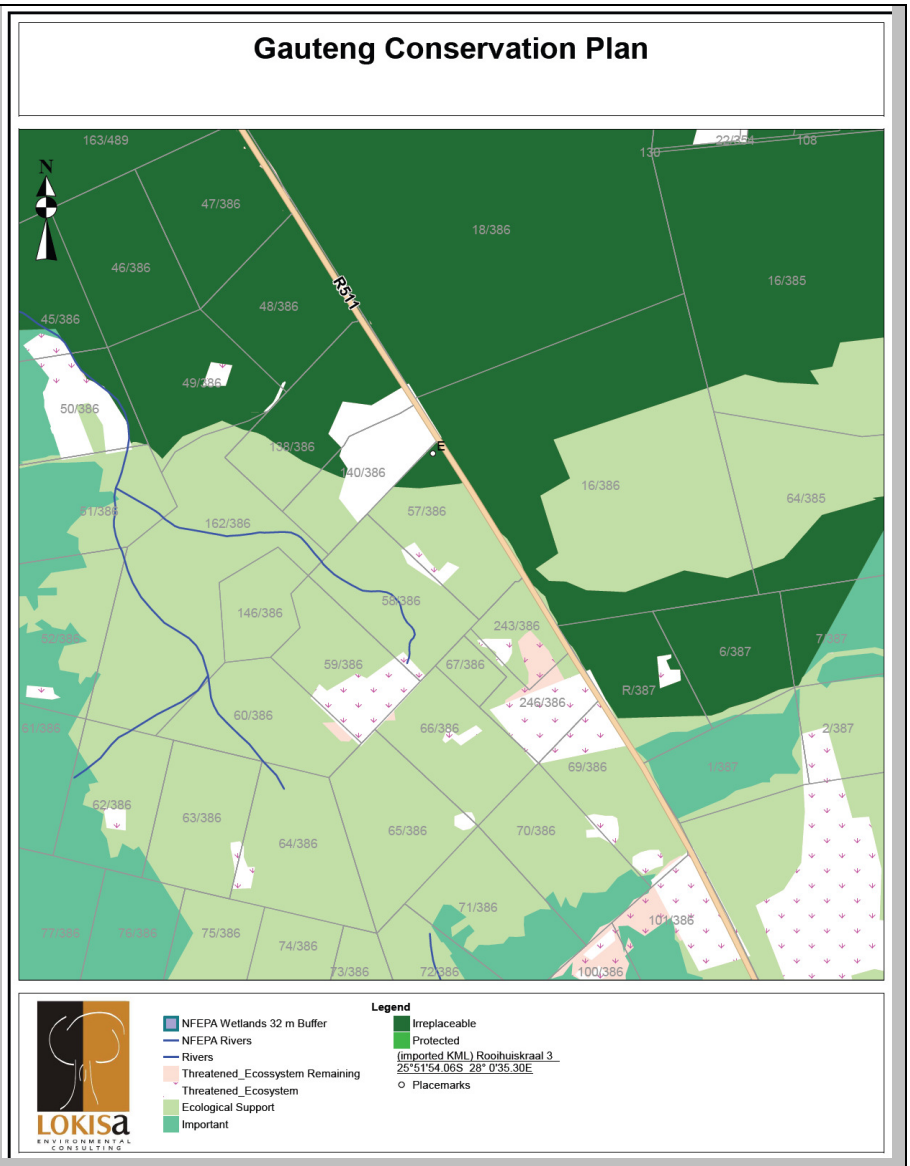
City of Tshwane By-Laws	**CTMM**	**-**
City of Tshwane Integrated Development Plan	**CTMM**	**2011-2016**
Conservation of Agricultural Resources Act (Act 43 of 1983)	**Department of Agriculture Forestry and Fisheries**	**1983**
Gauteng Conservation Plan (C-Plan Version 3.3)	**GDARD**	**2011**
Gauteng Environmental Management Framework	**GDARD**	**2015**
Gauteng Spatial Development Framework	**Provincial**	**2011**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**1998**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017. **Activity listed under GN R983:** **Activity 3- The Development of masts or towers of any material or type used for telecommunication broadcasting or radio transmission purposes where the mast or tower: (a) to be placed on a site not previously used for this purpose; and (b) will exceed 15m in height –** **But excluding attachments to existing buildings and masts on rooftops.** **(c) Gauteng** **(iv) Sites identified as a Critical Biodiversity Areas or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;** **(v) Sites identified within threatened ecosystems listed in terms of the National Environmental Management Act: Biodiversity Act (Act No. 10 of 2004);** **(vi) Sensitive areas identified in an environmental management framework adopted by relevant environmental authority.**	**National Department of Environmental Affairs and GDARD**	**2014**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**27 November 1998**
Aviation Act (Act No. 74 of 1962)	**Civil Aviation**	**21 July 1962**
South Africa's Constitution, 1996 (Act 108 of 1996), including the Bill of Rights (Chapter 2, Section 24)	**National Government**	**1996**
NEMA EIA Regulations, 2014 (Government Notice Nos. 982, 983, 984 and 985)	**National Department of**	**2014**

	Environmental Affairs and GDARD	
Model Noise Regulations published under the Environment Conservation Act, 1989 (Act 73 of 1989)	**National Government**	**1989**
Health Act, 1977 (Act 63 of 1977)	**National Government**	**1977**
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993) (OHSA) as amended in July 2001, including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**National Government**	**2001**
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)	**National Department of Environmental Affairs and GDARD**	**2008**
The National Heritage Resources Act, 1999 (Act No 25 of 1999) as amended, particularly Chapter II, Section 38	**SAHRA**	**1999**
The National Water Act, 1998 (Act No. 36 of 1998)	**Department of Water Affairs**	**1998**
Water Services Act (Act No. 108 of 1997)	**Department of Water Affairs**	**1997**
Standards Act (30 of 1992) National Government 1992		
National Building Regulations and Building Standards Act (No 103 of 1977)	**National Government**	
Municipal Structures Act (Act 117 of 1998)	**Local Municipality**	**1998**
Municipal Systems Act (Act 32 of 2000)	**Local Municipality**	**2000**
National Environmental Management Act No. 107 of 1998 as amended.	**National & Provincial**	**27 November 1998**

Description of compliance with the relevant legislation, policy or guideline:

Legislation, policy of guideline	Description of compliance
City of Tshwane By-Laws	**The proposed development will be constructed to comply with the City of Tshwane By-Laws**
City of Tshwane Integrated Development Plan 2016/21	**One of the proposed programme areas for the City of Tshwane Integrated Development Plan for 2016/21 is Programme 1: ICT** **The purpose of this programme is to facilitate the use of ICT to improve living experience of the citizen and to facilitate for transitioning towards ICT enabled service provision.** **Access to the digital landscape will improve the quality of service provision but also creating an environment for the residents of the city to access numerous opportunities which exist in the social and economic environment.** **Therefore better telecommunication service in the area will add into the achievement of what is proposed in programme 1.**
Conservation of	**The proposed development will ensure that no agricultural**

Agricultural Resources Act (Act 43 of 1983)	**resources are impacted.**
Gauteng Conservation Plan (C-Plan Version 3.3)	**Gauteng Conservation Plan (C-Plan Version 3.3)** **GDARD's (Gauteng Department of Agriculture and Rural Development) C-Plan (Gauteng Conservation Plan Version 3.3) was used to determine the sensitivities of the site and is provided below in Figure 1.** **Conservation planning was started in Gauteng in the year 2000 and the aim was to revise the C-Plan at least every 5 years. C-Plan Version 1 was produced in 2001 and was followed by version 2 in 2005. Version 2 was refined in 2007 and was named Version 2.1. The small size of the province made it feasible to conduct an extensive biodiversity survey, named BGAP, which aimed to provide the information on spatial occurrence of biodiversity necessary for rigorous conservation planning. C-Plan 3 represents priority areas for biodiversity conservation in the Gauteng province.** **C-Plan 3 is based on the systematic conservation protocol developed by Margules & Pressey (2000) and is based on the principles of complementarity, efficiency, defensibility and flexibility, irreplaceability, retention, persistence and accountability. Systematic conservation planning is an iterative process.** **Knowledge of the distribution of biodiversity, the status of species, approaches for dealing with aspects such as climate change, methods of data analysis, and the nature of threats to biodiversity within a planning region are constantly changing, especially in the Gauteng province which is developing at an extremely rapid rate. This requires that the conservation plan be treated as a living document with periodic review and updates.** **An extract of the sensitivities that could affect the site in terms of the C-Plan is provided below for ease of reference.**

	 **Figure 1: C-Plan of the site** **In terms of the C-Plan the site falls within an "Irreplaceable" area.**
Gauteng Environmental Management Framework	**Gauteng Environmental Management Framework** **The guiding objectives that emerged during the course of the developed of the GEMF are:** • **To facilitate the optimal use of current industrial, mining land and other suitable derelict land for the development of non-polluting industrial and large commercial developments.** • **To protect Critical Biodiversity Areas (CBAs as defined in C-Plan 3.3) within urban and rural environments.** • **To ensure the proper integration of Ecological Support Areas (ESAs as defined in C-Plan 3.3) into rural land use change and development.** • **To use ESAs as defined in municipal bioregional plans in spatial planning of urban open space corridors and links within urban areas.**

- **To focus on the sustainability of development through the implementation of initiatives such as:**
  - **Energy efficiency programmes, plans and designs;**
  - **Waste minimisation, reuse and recycling;**
  - **Green infrastructure in urban areas; and**
  - **Sustainable Drainage Systems (SuDS).**

The Environmental Management Zones (EMZ) were derived from the desired state, the environmental sensitivity as well the unique control areas as identified in sections 1, 2 and 3. The EMZs were also presented to the Gauteng Planning Forum 6 where it was generally accepted as a suitable contribution to facilitate appropriate development in Gauteng. The EMZs also took the Gauteng Growth and Management Perspective, 2014, into account and is therefore aligned to the general development policy for Gauteng.

Five EMZs were identified and overlaying those a further six Special Management Areas were identified where specific planning and policy measures are necessary to achieve the development objective of those areas.

The site falls in Zone 3 – High Rural Control Zone

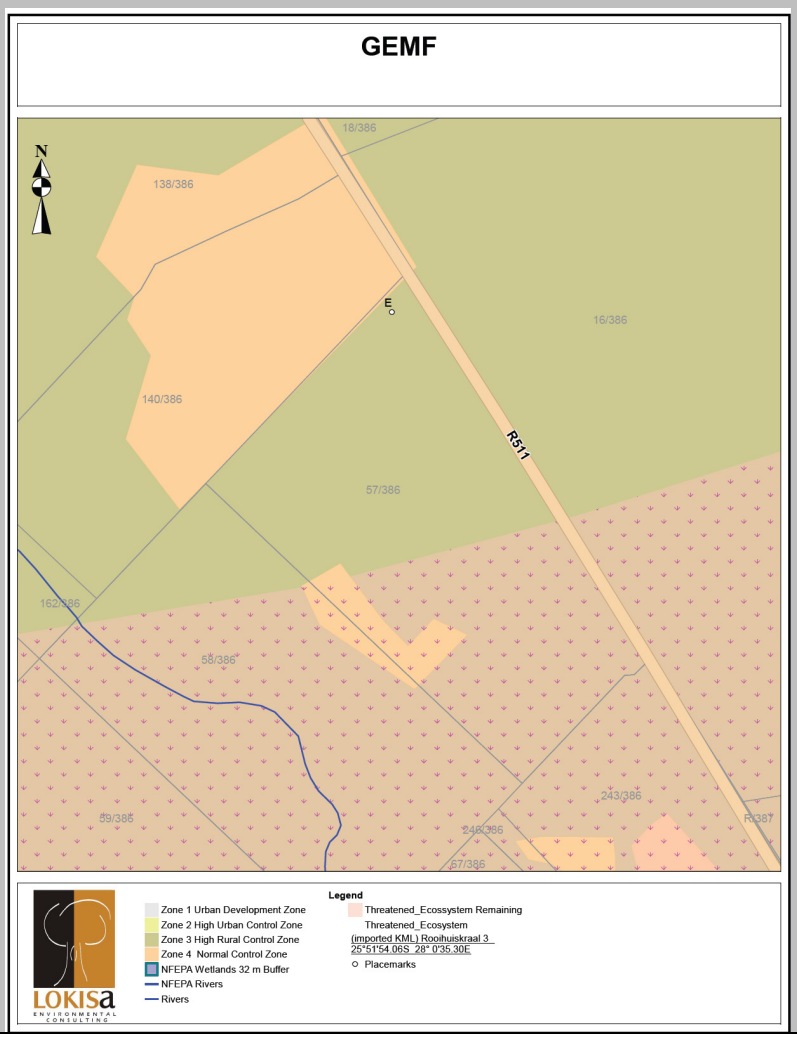


	Figure 2: Gauteng Environmental Management Plan **In terms of the GEMP Zone 3 is sensitive to development activities and in several cases also have specific values that need to be protected. Conservation and related tourism and recreation activities should dominate development in this zone.**
Gauteng Spatial Development Framework, 2012	**The GSDF are in pursuit of planning for shared, equitable, sustainable and inclusive growth and development in the country. The Gauteng Provincial Government (GPG) seeks to:** • **provide a clear future provincial spatial structure that is robust to accommodate growth and sustainability;** • **specify a clear set of spatial objectives for municipalities to achieve in order to ensure realisation of the future provincial spatial structure;** • **propose a set of plans that municipalities have to prepare in their pursuit of these objectives;** • **provide a common language and set of shared planning constructs for municipalities to use in their planning processes and plans; and** • **enable and direct growth.** **The Gauteng City Region aims to develop as a significant emerging conurbation based on sustainable principles:** • **significantly reducing reliance on private mobility in favour of safe, convenient and affordable public transport and non-motorised transport;** • **significantly reducing present rates of non-renewable energy usage;** • **reducing the rates of energy expended in the manufacture of goods, the delivery of these goods to the market and the importation of goods;** • **integrating open space systems into the city region and providing sustainable ecosystems, urban agriculture and quality of life as a fundamental of the province's development patterns;** • **increasing the intensity of urban form and the complexity of mixed-use development with a view to restricting, as far as possible, the options to extend the present footprint of the province's urban spread; and** • **promoting a democratic urban order in terms of access to opportunity for all** **The proposed development of does not take place in contrast with any of the principles of the GSDF.**
National Environmental Management Act No. 107 of 1998 as amended.	**Numerous mitigation measures have been provided for the potential impacts that have been identified for the proposed development. This will ensure that the following principles as set out in Section 2 of NEMA are taken into account:** • **That the disturbance of ecosystems and loss of biodiversity are avoided, or, where they cannot be altogether avoided, minimised and remedied;**

	• **Pollution and degradation of the environment are avoided, or , where they cannot be altogether avoided are minimised and remedies;** • **That waste is avoided or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;** • **That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be avoided, is minimised and remedied.**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017.	**The EIA process, applicable to this application, is determined by the Environmental Impact Regulations published in Government Notice R982 in Government Gazette No 38282 of 4 December 2014 promulgated under Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and amended in 2017.** **The EIA regulations inter alia describe the procedure for EIA and provide a description of activities that would require authorisation through either 1) a Basic Assessment (in terms of Government Notices R983 and R985 of 2014) or 2) Scoping and Environmental Impact Assessment (in terms of Government Notice R984 of 2014).** **An application is submitted in terms of Chapter 4 of the EIA Regulations as the proposed development triggers activities that require a Basic Assessment.**
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	**The objectives of this Act are-** **Within the framework of the National Environmental Management Act, to provide for –** **(i) the management and conservation biological diversity of within the Republic and of the components of such biological diversity;** **(ii) the use of indigenous biological resources in a sustainable manner and** **(ii) the fair and equitable sharing among stakeholders of benefits arising from bioprospecting involving indigenous biological resources.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)	**The objective of this act is to protect health, well-being, and the environment by providing measures for-** • **Minimising consumption of natural resources;** • **Avoiding and minimising the generation of waste;** • **Reducing, reusing, recycling and recovering waste;** • **Treating and safely disposing of waste as last resort;** • **Preventing pollution and ecological degradation;** • **Securing ecologically sustainable development while promoting justifiable economic and social development.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Heritage Resources Act (Act	**Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and, as**

25 of 1999)	**they are valuable, finite, non-renewable and irreplaceable, they must be carefully managed to ensure their survival.** **It is not expected that the proposed development will impact on any heritage resources however should any heritage resources be discovered a chance find procedure will be followed whereby** • **If during the duration of the project, any person employed by the developer, one of its subsidiaries, contractors and sub-contractors, or service provider, finds any artifact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.** • **It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area.** • **The senior on-site Manager will inform the EC of the chance find and its immediate impact on operations. The EC will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.**
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993) (OHSA) as amended in July 2001, Including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**The main objective of the Act is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected herewith.** **The proposed development site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) [OHSA] and the National Building Regulations**
Reconstruction and Development Programme (RDP)	**One of the six principles of the Reconstruction and development programme is meeting basic needs and building the infrastructure.** **The RDP integrates growth, development, reconstruction, redistribution and reconciliation into a unified programme. The key link is an infrastructural programme that will provide access to modern and effective services such as electricity, water, telecommunications, transport, health, education and training for all our people.** **The proposed development does not contrast with one of the six principles of the RDP.**
Tshwane Metropolitan Spatial Framework	**The vision of the City of Tshwane is to become the Africa Capital City of Excellence. Seven strategic objectives have been identified in order to respond to the vision in their Metropolitan Spatial Framework:** • **Provide basic services, roads and stormwater** • **Economic growth and development and job creation**

	• **Sustainable communities with clean, healthy and safe environment and integrated social services** • **Foster participatory democracy and Batho Pele** • **Promote sound governance** • **Ensure financial sustainability** • **Organisational development and transformation** **The proposed development does not contrast with vision of the metropolitan Spatial Framework mentioned above.**

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the 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.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

Note: 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.

Please describe the process followed to reach (decide on) the list of alternatives below

The area where the activity is proposed is experiencing challenges with their cellular network, therefore the applicant saw an opportunity to provide assistance by the provision of a cellular structure that is to accompany more than 1 service provider.

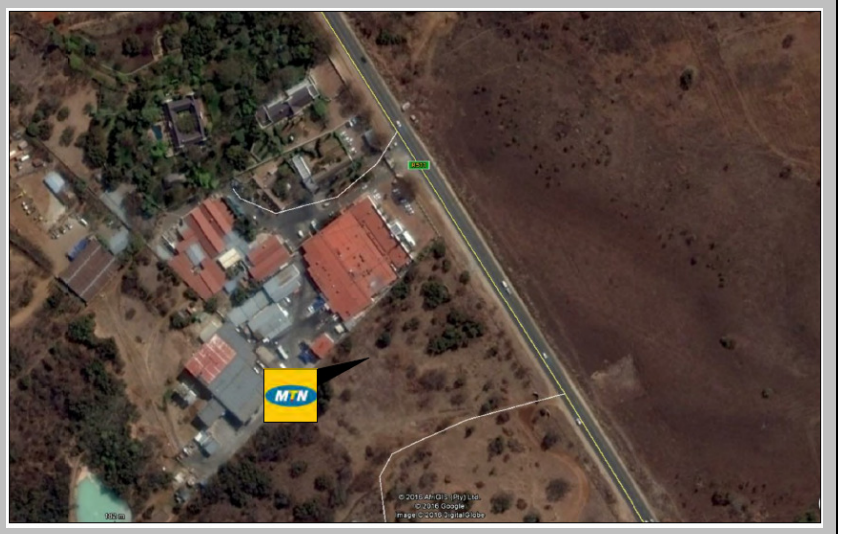
The search for a suitable site starts with the identification of the need for improved cellular coverage in an area. The Radio Planners indicate the optimal position and sites within a 100m of this position is investigated. According to CTMM the placement of cellular towers on residential properties are to be avoided and this places a restriction of suitable sites for consideration.

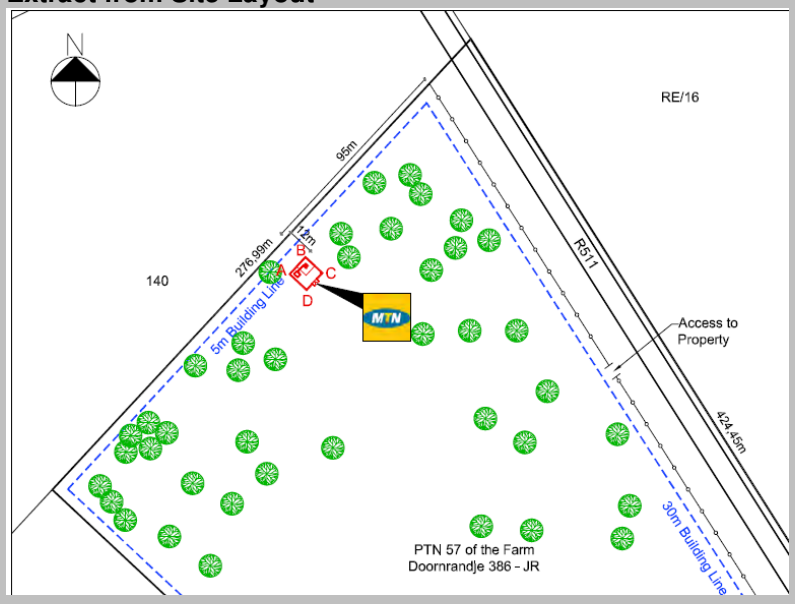
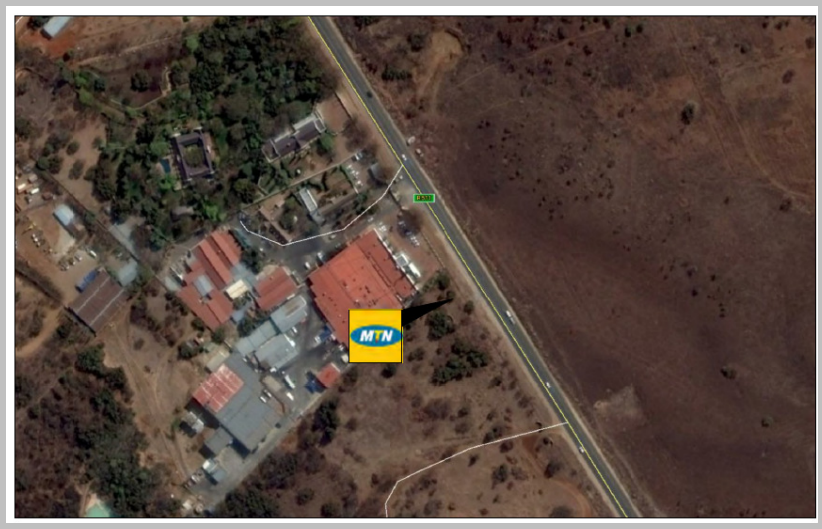
A team investigates all possible positions within the 100m radius and approach land owners in order to lease a portion of their land for the structure.

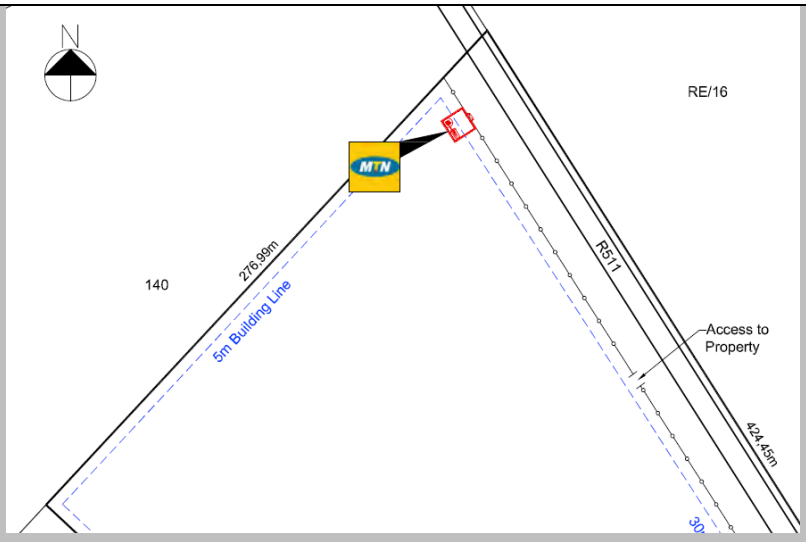
Several options were investigated and a lease agreement was reached.

The original preferred position (hereunder labeled Current) was located south of the boundary fence and west of the road but as a result of the input from the Ecologist an alternative site has been identified that is now the preferred site. The preferred site is not deemed sensitive by the Ecologist and is located 95m from the site boundary and the R511.

Provide a description of the alternatives considered

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	**Description**
1 (Preferred Alternative)	**36m Monopole Mast**	**The construction of a 36m Monopole mast in a 10m x 10m footprint and 11m x 11m plinth to be situated directly west of the R511 road and 1.1 km south west of Gerhardsville (Please refer to Appendix A: Site plans)** **Figure 3: Preferred Alternative Position Google Earth View** (25°51'56.24"S 28° 0'33.19"E) 

		Extract from Site Layout 
2	**36m Monopole Mast**	**The construction of a 36m Monopole mast in a 10m x 10m footprint and 11m x 11m plinth to be situated directly west of the R511 road and 1.1 km south west of Gerhardsville (Please refer to Appendix A: Site plans)** **Figure 4: Alternative 1 Position (25°51'54.06"S 28°0'35.30"E)**  **Extract from Site Layout**

		
3	**None**	

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	20 ha (5ha)
Alternatives:	
Alternative 1 (if any)	**0.0121ha / 121m²**
Alternative 2 (if any)	**0.0121ha / 121m²**
	Ha/ m²

or, for linear activities:

	Length of the activity:
Proposed activity	
Alternatives:	
Alternative 1 (if any)	**N/A**
Alternative 2 (if any)	**N/A**
	m/km

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

	Size of the site/servitude:
Proposed activity	**0.0121ha / 121m²**
Alternatives:	
Alternative 1 (if any)	**0.0121ha / 121m²**
Alternative 2 (if any)	
	Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	**YES**
If NO, what is the distance over which a new access road will be built	m

Describe the type of access road planned:

Access route will be as per the recommendation of the Ecological Report.

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	**YES**
If NO, what is the distance over which a new access road will be built	m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?	~~YES~~	~~NO~~
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated **1** Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
  - A4 size for activities with development footprint of 10sqm to 5 hectares;
  - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
  - A2 size for activities with development footprint of >20 hectares to 50 hectares);
  - A1 size for activities with development footprint of >50 hectares);

- The following should serve as a guide for scale issues on the layout plan:
  - A0 = 1: 500
  - A1 = 1: 1000
  - A2 = 1: 2000
  - A3 = 1: 4000
  - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

Refer to Appendix A for the Site Plans

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

Refer to Appendix A for the Site Plans

7. SITE PHOTOGRAPHS

Colour photographs from the center 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 the appropriate Appendix**.** It should be supplemented with additional photographs of relevant features on the site, where applicable.

Refer to Appendix B for the Photographs

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 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 to be attached in the appropriate Appendix.

Please refer to the facility illustration attached as Appendix C

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Instructions for completion of Section B for linear activities

1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
2) Indicate on a plan(s) the different environments identified
3) Complete Section B for each of the above areas identified
4) Attach to this form in a chronological order
5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route | **0** | times

Instructions for completion of Section B for location/route alternatives

1) For each location/route alternative identified the entire Section B needs to be completed
2) Each alterative location/route needs to be clearly indicated at the top of the next page
3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives | **1** | times (complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route | **0** | (complete only when appropriate for above)

Section B – Location/route Alternative No. | **0** | (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	**Portion 57 of the Farm Doornrandje No 386 – JR**

2. ACTIVITY POSITION

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 decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.865622°	**28.009219°**

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity	°	°
• Middle point of the activity	°	°
• End point of the activity	°	°

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached ☐

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 1	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 2																					
etc.																					

3. 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~~

4. LOCATION IN LANDSCAPE

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

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/ridge~~	~~Valley~~	**Plain**	~~Undulating plain/low hills~~	~~River front~~

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

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

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

c) are any caves located within a 300m radius of the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) ~~YES~~ **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? ~~YES~~ **NO**

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 80	**Natural veld with scattered aliens % = 20**	~~Natural veld with heavy alien infestation % = 20~~	~~Veld dominated by alien species % =~~	~~Landscaped (vegetation) % =~~
~~Sport field % =~~	~~Cultivated land % =~~	~~Paved surface (hard landscaping) % =~~	~~Building or other structure % =~~	~~Bare soil % =~~

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site	YES	**NO**

If YES, specify and explain:

An ecological Assessment was conducted by Themeda Eco Consulting for the proposed development site and the study concluded the following:

According to the GDARD C-Plan the site falls into a Critical Biodiversity Area: Irreplaceable Area. The vegetation is classified under as Carletonville Dolomite Grassland (Mucina and Rutherford 2006). The study site does not fall under the National list of threatened Ecosystems, although it is located between two threatened ecosystems to the north and south.

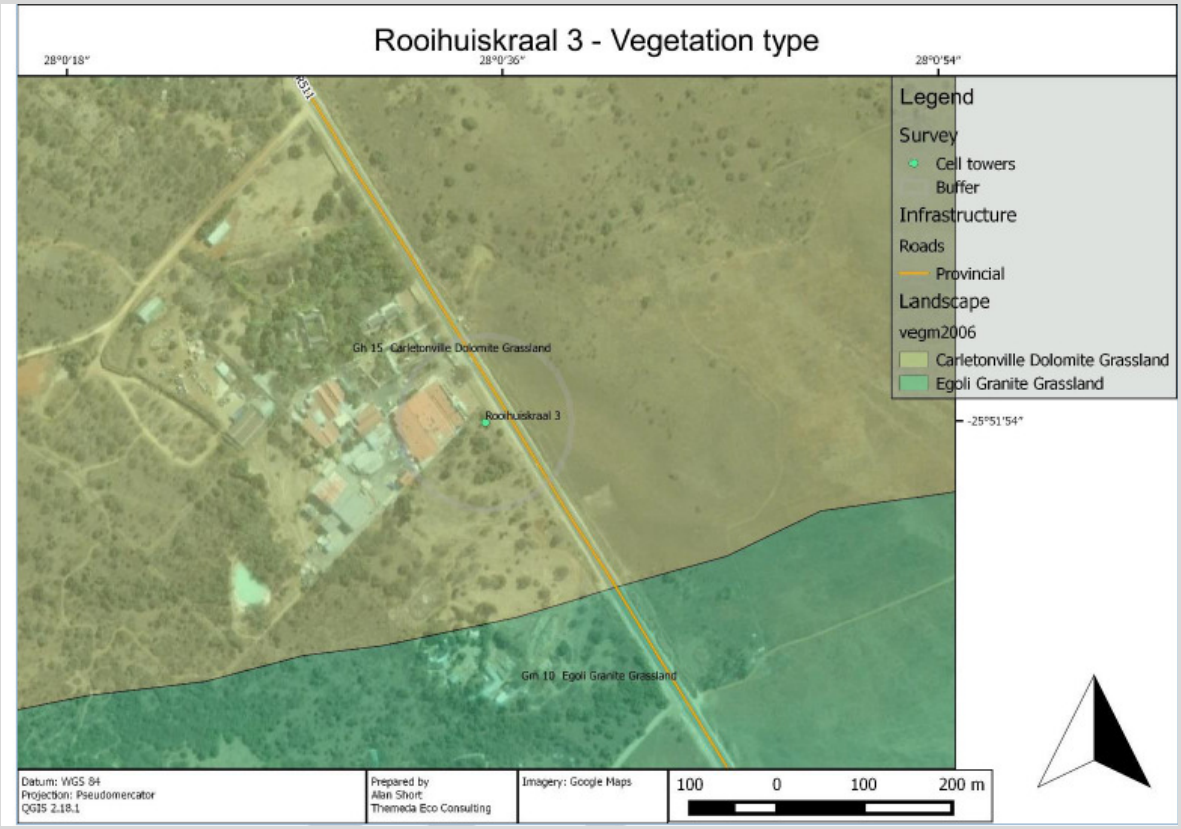


Figure 5: Vegetation type of the study area

The site is in reasonably good ecological condition with relatively high species diversity. Several alien invasive species were recorded including *Melia azedarach,*

Lantana camara, and Verbena bonariensis.

Only one potential species of conservation concern was recorded, a *Cheilanthes deltoidea subsp. Deltoidea.* This species has two subspecies, one of which is velnerable and the other least concern.

Figure 6: Conservation value of the study area

***Cheilanthes spp.* are provincially protected as class *Filicinae.* The location of the species observes was S 25° 51' 57.4" E 28° 0' 36.3"**

The footprint of the mast is small and although the sensitivity of the environment was estimated as medium, the mast will have little impact on the vegetation or habitats provided that the mitigation recommendations are followed to minimise impact.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	**YES**	~~NO~~

If YES, specify and explain:

The site falls in the Hennopsvallei Conservancy and the Witwatersberg Pretoria Mountain Bushveld (GP 10).

Geographical location
Pretoria west including Centurion (2528CC). Ecosystem delineated by the Witwatersberg ridge system and associated koppies, rivers and drainage lines.

Description
Key biodiversity features include Red or Orange Listed plants, for example, Melolobium subspicatum, Delosperma gautengense, Holothrix randii; Red or Orange Listed mammals, for example, Schreiber's Long-fingered Bat; Red or Orange Listed birds, for example White-backed Night-Heron and African Finfoot; Red or Orange Listed reptiles for example the Striped Harlequin Snake; Red or

Orange Listed or priority invertebrates, for example Pretoria Lesser Baboon Spider, Purse Web Trapdoor Spider, Front-eyed Trapdoor Spider, Gunning's Rock Scorpion, Golden Starburst Baboon Spider, and Stobbia's Fruit Chafer; and five vegetation including the Andesite Mountain Bushveld, Carletonville Dolomite Grassland, Gauteng Shale Mountain Bushveld, Marikana Thornveld and Rand Highveld Grassland. The Apies River, Hennops River, Moganwe, Swartbooispruit, Walkerspruit, Waterkloofspruit, and unnamed wetlands are also key features of the ecosystem.

Approximately 2%, of the ecosystem is protected in the Groenkloof Nature Reserve.

However the site is situated on the northern portion of the site, adjacent to the northern boundary and a road to the east. The site falls south of a commercial use. Please refer to the Site Plan below.

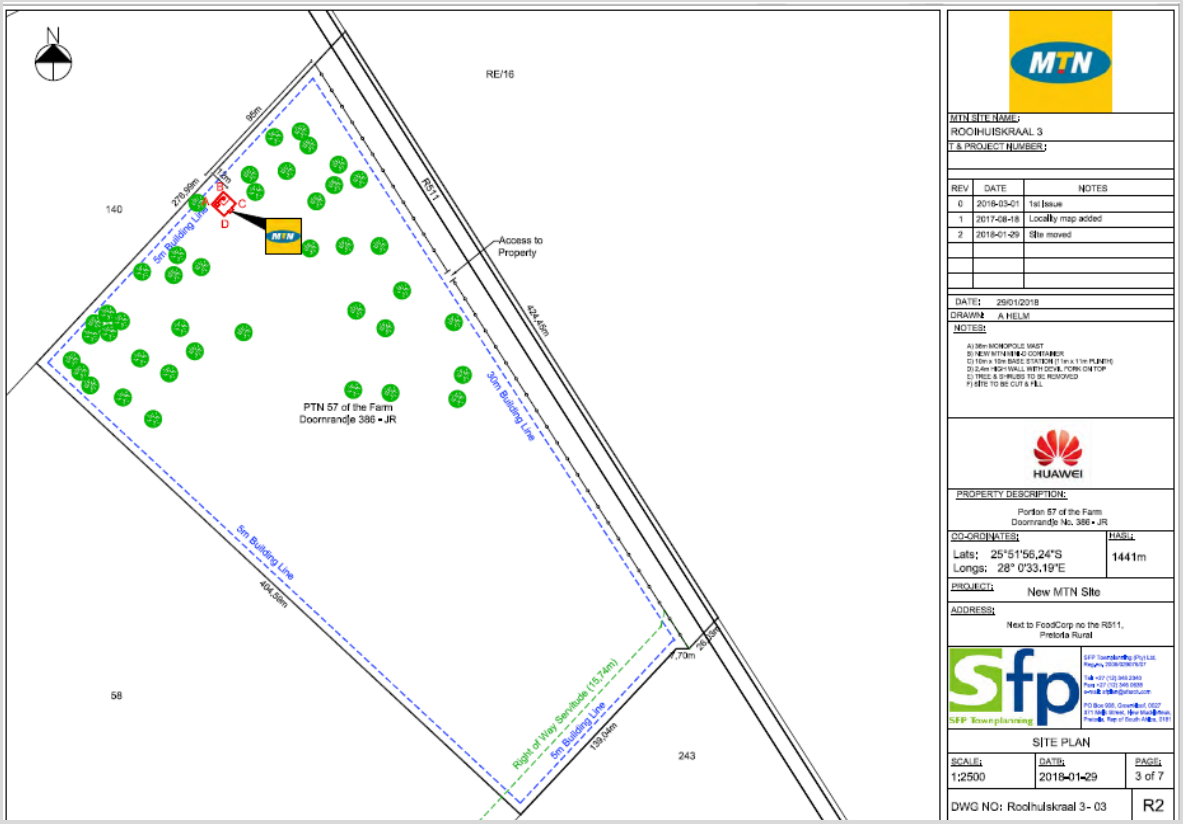


Figure 7: Site Plan

Are there any special or sensitive habitats or other natural features present on the site?	~~YES~~	**NO**

If YES, specify and explain:

No rivers or wetlands are mapped on or within 200m of the site, and no signs of wetland vegetation were observed during the survey.

Was a specialist consulted to assist with completing this section	~~YES~~	**NO**

If yes complete specialist details

Name of the specialist:	**Alan Short of Themeda Eco Consulting**		
Qualification(s) of the specialist:	**SACNASP registered scientists (Ecologist) Reg No. 400098/14**		
Postal address:	**29 Cruden Bay Road, Greenside Johannesburg**		
Postal code:	**2193**		
Telephone:		Cell:	**alan@themedaEco.co.za**
E-mail:	**alan@themedaEco.co.za**	Fax:	

Are any further specialist studies recommended by the specialist?	~~YES~~	**X NO**
If YES, specify:		
If YES, is such a report(s) attached?	~~YES~~	**NO**
If YES list the specialist reports attached below		

Signature of specialist: _____ Date:

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	**2. River, stream, wetland**	~~3. Nature conservation area~~	~~4. Public open space~~	~~5. Koppie or ridge~~
~~6. Dam or reservoir~~	**7. Agricultural**	**8. Low density residential**	~~9. Medium to high density residential~~	~~10. Informal residential~~
~~11. Old age home~~	~~12. Retail~~	~~13. Offices~~	**14. Commercial & warehousing**	~~15. Light industrial~~
~~16. Heavy industrial[AN]~~	~~17. Hospitality facility~~	~~18. Church~~	~~19. Education facilities~~	~~20. Sport facilities~~
~~21. Golf course/polo fields~~	~~22. Airport[N]~~	~~23. Train station or shunting yard[N]~~	~~24. Railway line[N]~~	~~25. Major road (4 lanes or more)[N]~~
~~26. Sewage treatment plant[A]~~	~~27. Landfill or waste treatment site[A]~~	~~28. Historical building~~	~~29. Graveyard~~	~~30. Archeological site~~
~~31. Open cast mine~~	~~32. Underground mine~~	~~33.Spoil heap or slimes dam[A]~~	~~34. Small Holdings~~	
Other land uses (describe):				

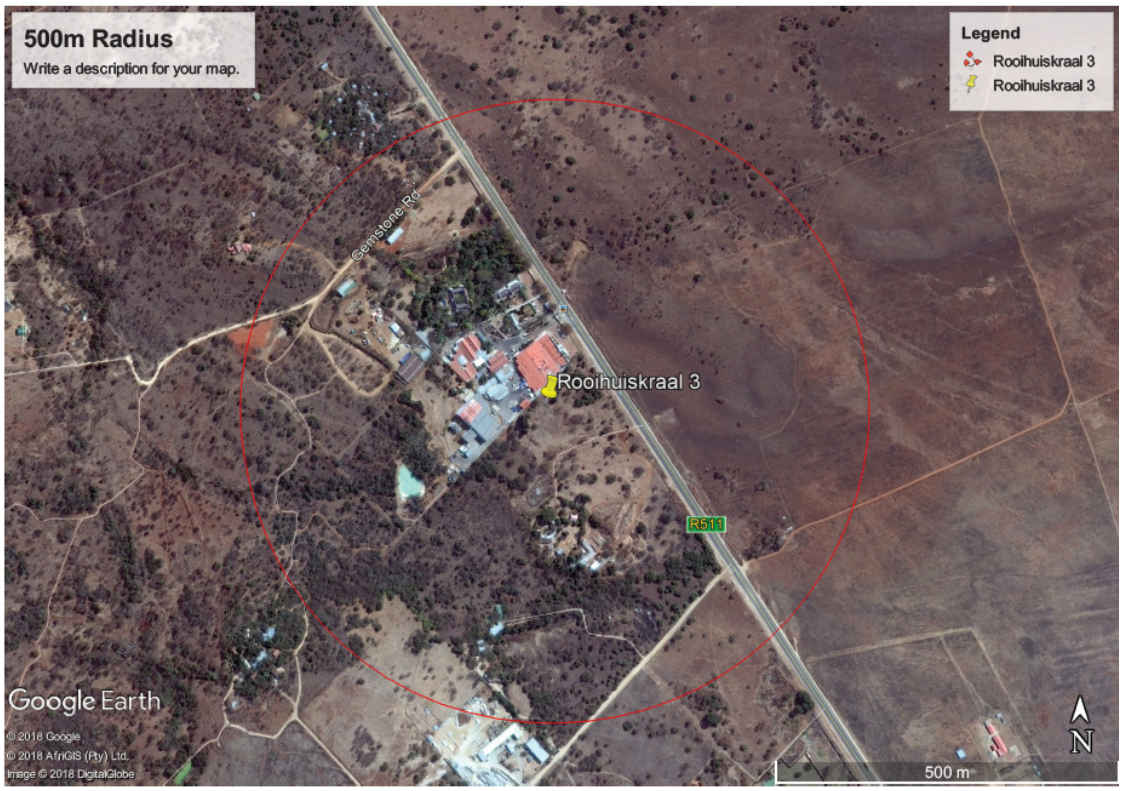


Figure 8: 500m radius Preferred Alternative

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

7	7	7	7	7
14	14	7	7	7,2
7	14		1,7	1,7
7	7	1,7	1,7	1,7
7	7	1,14	7	7

WEST **EAST** = **Site**

SOUTH

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "[A]" and with an "[N]" respectively.

Have specialist reports been attached	YES	**NO**
If yes indicate the type of reports below		

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

Centurion (previously known as Verwoerdburg) is an affluent area with 236,580 (2011 Census) inhabitants in Gauteng Province of South Africa, located between Pretoria and Midrand (Johannesburg). Formerly an independent municipality, with its own town council, it forms part of the City of Tshwane Metropolitan Municipality since 2000. Its heart is located at the intersection of the N1 and N14 freeways. The R21 also passes through Centurion.

The area is approximately 236,580 (394.88 km^2) (152.46 sq mi) in extent and has a population of 236,580 600/km^2 (1,600/sq mi). The population is represented by Black African (29.3%), White (59.0%), Indian or Asian (8.4%) and Coloured (2.3%). The most spoken language in the area is Afrikaans (49.4%).

Sources:
https://en.wikipedia.org/wiki/Centurion

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-
(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	~~YES~~	**NO**

1. PROPERTY DESCRIPTION – ALTERNATIVE 1

Property description: (Including Physical Address and Farm name, portion etc.)	**Portion 57 of the Farm Doornrandje No 386 – JR**

2. ACTIVITY POSITION

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 decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.865017°	**28.009806°**

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity	°	°
• Middle point of the activity	°	°
• End point of the activity	°	°

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached ☐

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 1	**T**	**0**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**6**	**0**	**0**	**0**	**5**	**7**
ALT. 2																					
etc.																					

3. 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~~

4. LOCATION IN LANDSCAPE

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

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/ridge~~	~~Valley~~	**Plain**	~~Undulating plain/low hills~~	~~River front~~

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

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

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

c) are any caves located within a 300m radius of the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) | ~~YES~~ | **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? | ~~YES~~ | **NO**

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 80	**Natural veld with scattered aliens % = 20**	~~Natural veld with heavy alien infestation % = 20~~	~~Veld dominated by alien species % =~~	~~Landscaped (vegetation) % =~~
~~Sport field % =~~	~~Cultivated land % =~~	~~Paved surface (hard landscaping) % =~~	~~Building or other structure % =~~	~~Bare soil % =~~

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site | **YES** | ~~NO~~

If YES, specify and explain:

An ecological Assessment was conducted by Themeda Eco Consulting for the proposed development site and the study concluded the following:

According to the GDARD C-Plan the site falls into a Critical Biodiversity Area: Irreplaceable Area. The vegetation is classified under as Carletonville Dolomite Grassland (Mucina and Rutherford 2006). The study site does not fall under the National list of threatened Ecosystems, although it is located between two threatened ecosystems to the north and south.

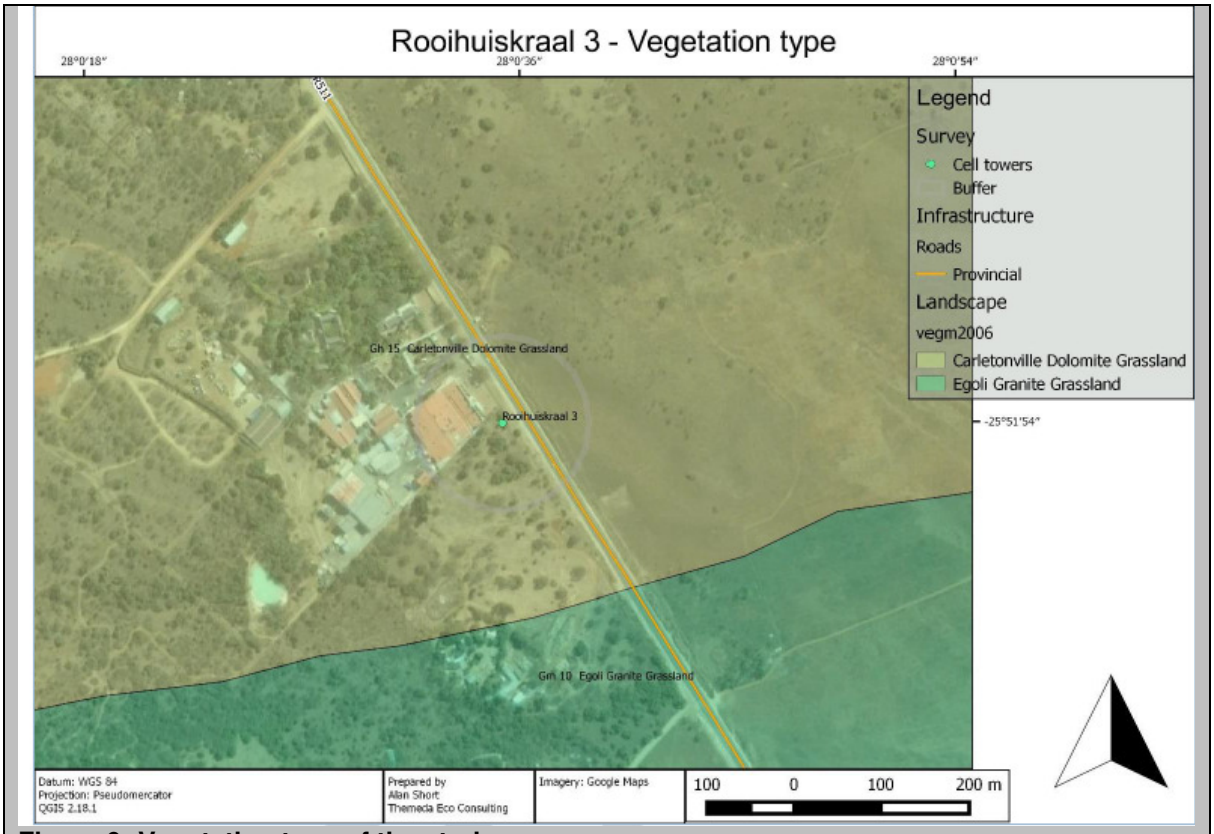


Figure 9: Vegetation type of the study area

The site is in reasonably good ecological condition with relatively high species diversity. Several alien invasive species were recorded including *Melia azedarach, Lantana camara, and Verbena bonariensis.*

Only one potential species of conservation concern was recorded, a *Cheilanthes deltoidea subsp. Deltoidea.* This species has two subspecies, one of which is velnerable and the other least concern.

Figure 10: Conservation value of the study area

Cheilanthes spp. **are provincially protected as class** ***Filicinae.*** **The location of the species observes was S 25° 51' 57.4" E 28° 0' 36.3"**

The footprint of the mast is small and although the sensitivity of the environment was estimated as medium, the mast will have little impact on the vegetation or habitats provided that the mitigation recommendations are followed to minimise impact.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	**YES**	~~NO~~

If YES, specify and explain:

The site falls in the Hennopsvallei Conservancy and the Witwatersberg Pretoria Mountain Bushveld (GP 10).

Geographical location
Pretoria west including Centurion (2528CC). Ecosystem delineated by the Witwatersberg ridge system and associated koppies, rivers and drainage lines.

Description
Key biodiversity features include Red or Orange Listed plants, for example, Melolobium subspicatum, Delosperma gautengense, Holothrix randii; Red or Orange Listed mammals, for example, Schreiber's Long-fingered Bat; Red or Orange Listed birds, for example White-backed Night-Heron and African Finfoot; Red or Orange Listed reptiles for example the Striped Harlequin Snake; Red or Orange Listed or priority invertebrates, for example Pretoria Lesser Baboon Spider, Purse Web Trapdoor Spider, Front-eyed Trapdoor Spider, Gunning's Rock Scorpion, Golden Starburst Baboon Spider, and Stobbia's Fruit Chafer; and five vegetation including the Andesite Mountain Bushveld, Carletonville Dolomite Grassland, Gauteng Shale Mountain Bushveld, Marikana Thornveld and Rand Highveld Grassland. The Apies River, Hennops River, Moganwe, Swartbooispruit, Walkerspruit, Waterkloofspruit, and unnamed wetlands are also key features of the ecosystem.

Approximately 2%, of the ecosystem is protected in the Groenkloof Nature Reserve.

However the site is situated on the northern portion of the site, adjacent to the northern boundary and a road to the east. The site falls south of a commercial use. Please refer to the Site Plan below and photo of the site.

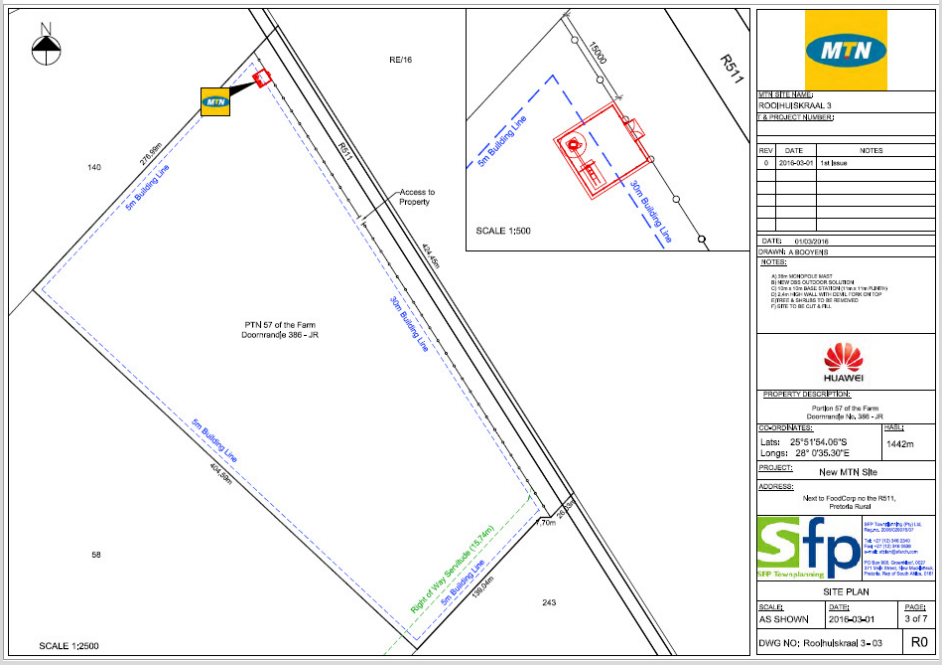


Figure 11: Site Plan

Figure 12: Photo of the site looking north

Are there any special or sensitive habitats or other natural features present on the site?

~~YES~~	**NO**

If YES, specify and explain:

No rivers or wetlands are mapped on or within 200m of the site, and no signs of wetland vegetation were observed during the survey.

Was a specialist consulted to assist with completing this section

YES	~~NO~~

If yes complete specialist details
Name of the specialist: **Alan Short of Themeda Eco Consulting**

Qualification(s) of the specialist:	**SACNASP registered scientists (Ecologist) Reg No. 400098/14**		
Postal address:	**29 Cruden Bay Road, Greenside Johannesburg**		
Postal code:	**2193**		
Telephone:		Cell:	**072 372 9099**
E-mail:	**alan@themedaEco.co.za**	Fax:	

Are any further specialist studies recommended by the specialist?	~~YES~~	**X NO**
If YES, specify:		
If YES, is such a report(s) attached?	~~YES~~	**NO**
If YES list the specialist reports attached below		

Signature of specialist: _____ Date: _____

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	**2. River, stream, wetland**	~~3. Nature conservation area~~	~~4. Public open space~~	~~5. Koppie or ridge~~
~~6. Dam or reservoir~~	**7. Agricultural**	**8. Low density residential**	~~9. Medium to high density residential~~	~~10. Informal residential~~
~~11. Old age home~~	~~12. Retail~~	~~13. Offices~~	**14. Commercial & warehousing**	~~15. Light industrial~~
~~16. Heavy industrial[AN]~~	~~17. Hospitality facility~~	~~18. Church~~	~~19. Education facilities~~	~~20. Sport facilities~~
~~21. Golf course/polo fields~~	~~22. Airport[N]~~	~~23. Train station or shunting yard[N]~~	~~24. Railway line[N]~~	~~25. Major road (4 lanes or more)[N]~~
~~26. Sewage treatment plant[A]~~	~~27. Landfill or waste treatment site[A]~~	~~28. Historical building~~	~~29. Graveyard~~	~~30. Archeological site~~
~~31. Open cast mine~~	~~32. Underground mine~~	~~33.Spoil heap or slimes dam[A]~~	~~34. Small Holdings~~	
Other land uses (describe):				

Figure 13: 500m radius Alternative 1

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

7	7	7	7	7
14	14	7	7	7,2
7	14		1,7	1,7
7	7	1,7	1,7	1,7
7	7	1,14	7	7

WEST **EAST** = **Site**

SOUTH

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "A" and with an "N" respectively.

Have specialist reports been attached	YES	**NO**
If yes indicate the type of reports below		

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If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	~~YES~~	**NO**

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?	**YES** ~~NO~~
If yes, has any comments been received from the local authority?	**YES** ~~NO~~

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

Comments from City of Tshwane Metropolitan Municipality – 24 July 2017

1. **The flora and fauna study should be conducted in order to determine the absence or level of specie abundance on the proposed development site. The assessment must indicate all potential impacts of the proposed development and appropriate measures.**
2. b) The applicant must ensure that:
   - All structures are fenced or walled to limit public access to it. If the base station is secured building, sufficient precaution must be made to prevent access to the antenna support structure. Access to the area must be strictly controlled through a locked gate.
   - If the structure will be co-used to put up lights for security purposes, written consent of surrounding land users must be obtained. Lights must be screened in such a way as to prevent light pollution.
   - The applicant must ensure that the structure has an on-going maintenance schedule to keep it visually attractive.
   - Lighting of structures must be shield away from adjacent properties to prevent light pollution.
   - The applicant must take all reasonable steps to ensure that the telecommunications structure and equipment's do not cause a noise nuisance.

   c) Please note that according to the Telecommunication Mast Management guidelines for the City of Tshwane it is suggested that antennas and masts may be disguised with elements such as a signage, lightning and place name boards.

   d) The proposed development has potential visual impacts to the avifaunal biodiversity and human however associated visual impact study is not included. **The Department thus request that a visual impact study addressing the potential impacts should be compiled and included in the Final Basic Assessment report.**

   e) The proposed activity must be constructed according to the finalised and approved EMP. The EMP should include all the above recommendations. The approved finalised EMP is a legally binding document. An Environmental Control Officer (ECO) should be appointed for the proposed construction phase of the development to enforce the approved EMP. The appointed ECO details should be included within the EMP.

Comments from Gauteng Department of Agriculture and Rural Development – 03 August 2017

C. Alternatives

The DBAR did cover alternatives excluding No-Go option. Please note that the final report must also cover a no-go option. Comparatives assessment of alternatives must also include the following:

- Location of activity components on the site in relation to the surrounding land uses and adjacent roads infrastructure and services (if there are any).
- Alternatives must also be assessed in relation to other technology alternatives such as energy.

D. Significant rating of impacts

Identification of impacts and significant rating provided on the draft were noted however they must to reliable conclusion that the mitigation measures identified will reduce impacts to an acceptable le

E. Locality map and layout plans or facility illustrations

- The scale of locality map must be at least 1:50 000. The scale must be indicated on the map;
- The locality map and **all** other maps are in colour.
- Locality map must show property boundaries and numbers within 100m of the site, and for and/or piggery, locality map must show properties within 500m and prevailing or predominar direction.
- For gentle slopes the 1m contour intervals must be indicated on the plan and whenever the s the site exceeds 1:10, the 500mm contours must be indicated on the plan.
- Areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Locality map must show exact position of development site or sites;
- Locality map shows and identifies (if possible) public and access roads; and
- The current land use as well as the land use zoning of each of the properties adjoining the sites.

The layout plan

- The layout plan must be printed in colour and **overlaid with the composite sensitivity map**.
- Layout plan must be of acceptable paper size and scale, e.g. A4 size for activities with develop footprint of 10sqm to 5 hectares.
- layout plan scales should be guided by the following:
  - A0 = 1: 500.
  - A1 = 1: 1000.
  - A2 = 1: 2000.
  - A3 = 1: 4000.
  - A4 = 1: 8000 (±10 000).
- Servitudes indicating the purpose of the servitude.
- Sensitive environmental elements on and within 100m of the site or sites (including the rele buffers as prescribed by the competent authority) including (but not limited thereto).

F. EMPr

EMPr must be attached on the final report and must be practical, site specific and easily enforceab

G. Public participation process

All organs of state which have jurisdiction in respect of the proposed activity, this include Tshwane Metropolitan Municipality Open Space Management Section must consulted ar comments be included on the final report.

Please refer to Appendix E; Apendix 7 for the comments on the Draft BAR

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least **thirty (30) calendar days** before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders? **YES** ~~NO~~

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Registration as an Interested and Affected Party.

If "NO" briefly explain why no comments have been received

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report

Appendix 9 – Copy of the register of I&APs

Public Participation was conducted according to the following steps:

- **An advert was placed in the local newspaper of the Pretoria News on 06 April 2017**
- **Notice boards were placed on site on 06 April 2017,**
- **Notices were hand delivered to adjacent property owners,**
- **Registered letters were sent to neighbouring property owners, and**
- **Faxes and emails were sent to the stakeholders including the ward councillor of the area.**

Please Refer to Appendix E: Public Participation, for the proof of the Public Participation undertaken

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
4) Each alterative needs to be clearly indicated in the box below
5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives **0** times (complete only when appropriate)

Section D Alternative No. **0** (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? **YES** ~~NO~~

If yes, what estimated quantity will be produced per month? **100m^3**

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

The following policy on waste management is to be followed:

- **Provision will be made for adequate containers so as to handle all the garbage and litter generated on site;**
- **The contractor is responsible for any damage caused by any garbage and/or toxic material. Waste will be regularly removed to a licensed dumping site;**

No dangerous or toxic materials may be dumped at a site, which is not licensed for dangerous or toxic materials. If this is the case, provision will be made for the safe storage and subsequent collection and removal to a properly licensed site.

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

Construction waste will be used for fill as far as possible. Any excess material will be removed to a landfill site.

Will the activity produce solid waste during its operational phase? ~~YES~~ **NO**

If yes, what estimated quantity will be produced per month? `m^3

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

No solid waste will be generated during the operational phase. Maintenance of the structure will take place yearly but waste generated will be removed from site by the Contractor and disposed of at a licensed facility.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity? ~~YES~~ **NO**

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

Note: 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, 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 relevant legislation?	~~YES~~	**NO**

If yes, inform the competent authority and request a change to an application for scoping and EIA.

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

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

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	~~YES~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?	~~YES~~	~~NO~~

Will the activity produce any effluent that will be treated and/or disposed of on site?	~~Yes~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3

If yes describe the nature of the effluent and how it will be disposed.

Note that if effluent is to be treated or disposed on site 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?	~~YES~~	**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:

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	~~YES~~	**NO**
If yes, what estimated quantity will be produced per month?		m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	~~YES~~	~~NO~~

Will the activity produce any effluent that will be treated and/or disposed of on site?	~~YES~~	**NO**

If yes describe how it will be treated and disposed off.

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	~~YES~~	**NO**
If yes, is it controlled by any legislation of any sphere of government?	~~YES~~	**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.
If no, describe the emissions in terms of type and concentration:

No gaseous emissions apart from dust and smoke during construction phase are expected.

2. WATER USE

Indicate the source(s) of water that will be used for the activity

~~municipal~~	~~Directly from water board~~	~~groundwater~~	~~river, stream, dam or lake~~	~~other~~	**The activity will not use water**

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: liters

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs?	~~YES~~	**NO**

If yes, list the permits required

If yes, have you applied for the water use permit(s)?	YES	NO
If yes, have you received approval(s)? (attached in appropriate appendix)	YES	NO

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

Eskom

If power supply is not available, where will power be sourced from?

4. ENERGY EFFICIENCY

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

MTN are conducting ongoing research to ensure that all cellular equipment within the network operates at optimal energy efficiently.

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

MTN has conducted testing on equipment with solar panels and wind turbines. The research on alternative power supply is ongoing within MTN, but has been problematic in the past. This is due to the site and CAA light requiring constant, uninterrupted power. This is of course not possible with the two aforementioned alternative power sources.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, 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 as well as the impacts of not implementing the activity (Section 24(4)(b)(i).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

Comment	Entity	Date
• Registered as an I&AP	Pierre Du Toit Jacobs Well Village NPC	18 April 2017

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)
(A full response must be provided in the Comments and Response Report that must be attached to this report):

Response to comments from the City of Tshwane Municipality on the Draft BAR

- **The specialist study has been conducted. Please refer to Appendix G for the report.**
- **The fence is a palisade fence that surrounds the cellular base station.**
  The Site will have a spotlight directly on the site that can be switched on and off while maintenance is done. Light placed in such way to not be directed towards the R511 road.

  Maintenance on such mast will be every 4-6 week for approximate half an hour.

  Spotlight will be directed on the site away from the R511 Road. Spotlight Light will be switched on while maintenance is done.

  Generator will only be used when site is without power for longer than 8 hours. Silent Generators will be used.
- **Telecommunication mast is supported by council within rural areas. Mast will be painted green to blend in with surrounding environment.**
- **The mast is situated a fair distance from the road and it is not expected that it will cause an adverse negative visual impact to the surrounding area as the surrounding area is undeveloped in nature.**
- **The EMPr has been attached. Please refer to Appendix H**

Response to comments from the Gauteng Department of Agriculture and Rural Development on the Draft BAR

- **The Basic Assessment Report has been amended.**
- **The Basic Assessment Report has been amended.**
- **1:10 000 Locality map, property boundary, location of MTN site, contours attached.**
  Drawing attached and indicates public and access roads.

  Zoning and land use Map attached.
- **Layout plan for Site on attached drawings. Site layout is both on 1:500 and 1:2500 (Cannot go smaller scale due to size of the MTN site).**

  Servitude indicated as right of way indicated on drawings.

- **EMPr attached.**
- **Comments received from CTMM included in Final BAR**

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

Table 1: Methodology

Rating	Definition of Rating	Score
A. Extent – ***the area in which the impact will be expected***		
None		**0**
Local	**Confined to project or study area or part thereof (eg. site)**	**1**
Regional	The region, which may be defined in various ways, eg. Cadastral, catchment, **topographic**	**2**
(Inter) national	**Nationally or beyond**	**3**
B. Intensity – ***the magnitude or size of the impact***		
None		**0**
Low	**Natural and/or social functions and processes are negligibly altered**	**1**
Medium	**Natural and/or social functions and processes continue albeit in a modified way**	**2**
High	**Natural and/or social functions or processes are severely altered**	**3**
C. Duration – ***the time frame for which the impact will be experienced***		
None		**0**
Short term	**Up to 2 years**	**1**
Medium term	**2 – 15 years**	**2**
Long Term	**More than 15 years**	**3**

The combined score of these three criteria corresponds to a Consequence Rating, as set out in Table below:

Table 2: Method used to determine the Consequence Score

Combined score (A+B+C)	0 - 2	3 - 4	5	6	7	8-9
Consequence Rating	Not **significant**	**Very low**	**Low**	**Medium**	**High**	**Very high**

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications indicated in table below:

Table 3: Probability Classification

Probability of impact – the likelihood of the impact occurring	
Improbable	**< 40% chance of occurring**
Possible	**40% - 70% chance of occurring**
Probable	**> 70% - 90% chance of occurring**
Definite	**> 90% chance of occurring**

The overall significance of impacts is determined by considering consequence and probability using the rating system indicated in table below:

Table 4: Impact Significance Ratings

Significance Rating	Consequence		Probability
Insignificant	**Very low**	**&**	**Improbable**
	Very low	**&**	**Possible**
Very Low	**Very low**	**&**	**Probable**
	Very low	**&**	**Definite**
	Low	**&**	**Improbable**
	Low	**&**	**Possible**
Low	**Low**	**&**	**Probable**
	Low	**&**	**Definite**
	Medium	**&**	**Improbable**
	Medium	**&**	**Possible**
Medium	**Medium**	**&**	**Probable**
	Medium	**&**	**Definite**
	High	**&**	**Improbable**
	High	**&**	**Possible**
High	**High**	**&**	**Probable**
	High	**&**	**Definite**
	Very high	**&**	**Improbable**
	Very high	**&**	**Possible**
Very High	**Very high**	**&**	**Probable**
	Very high	**&**	**Definite**

In conclusion the impacts are also considered in terms of their status (positive or negative impact) and the confidence in the ascribed impact significance rating. The prescribed system for considering impacts status and confidence (in assessment) is indicated in table below.

Table 5: Impact status and confidence classification

Status of Impact	
Indication of where the impact is adverse (negative) or beneficial (positive)	**+ ve (positive – a 'benefit')**
	- ve (negative – a 'cost')
	Neutral
Confidence of assessment	
The degree of confidence in predictions based on available information, EAP's **judgement and/or specialist knowledge**	**Low**
	Medium
	High

The impact significance rating should be considered by GDARD in their decision-making process based on the implications of ratings ascribed below:

- Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity / development;
- Very low: the potential impact should not have any meaningful influence on the decision regarding the proposed activity / development;
- Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity / development;
- Medium: the potential impact should influence the decision regarding the proposed activity / development;
- High: the potential impact will affect the decision regarding the proposed activity / development;
- Very high: The proposed activity should only be approved under special circumstances.

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Table 6: Impact assessment - Construction phase

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
1. ISSUE: AIR QUALITY								
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	**Local (1)**	**Short term (1)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Definite = Very low**	**-ve**	**High**
2. ISSUE VISUAL IMPACTS								
2.1 Visual Impacts due to clearance of site, cut and fill	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very low (4)**	**Probable**	**Very low & Probable = Very low**	**-ve**	**High**
3. ISSUE GEOLOGY AND SOILS								
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Local (1)**	**Medium term (2)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Probable = Very low**	**-ve**	**High**
3.2 Soil pollution	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**High**
3.3 Disturbance of surface geology for development foundations	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**Med**
4. ISSUE FAUNA AND FLORA								
4.1 Degradation, destruction of habitats/ ecosystem	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
4.2 Impacts on fauna and flora Disruption of nutrient flow dynamics; Introduction of chemicals into the ground and surface water through leaching; Habitat fragmentation Changes to abiotic environmental conditions; Changes to disturbance regimes e.g. decreased or increased incidences of fire; Changes to successional processes; effects on	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
pollinators; And increased invasion by plants and animals not endemic to the area.								
5. ISSUE HYDROLOGY								
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	**Regional (2)**	**Medium (2)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Medium& Probable = Medium**	**-ve**	**High**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE								
6.1 Noise/ vibration	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
7.1 Safety and Security	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
7.2 Job opportunities	**Regional (2)**	**High (3)**	**Medium term (2)**	**High (7)**	**Definite**	**High & Definite = High**	**+ ve**	**Medium**
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
of time.								
8. ISSUE HISTORICAL ENVIRONMENT								
8.1 Destruction of cultural / heritage sites	**None**	**None**	**None**	**Not significant (0)**	**Improbable**	**Not significant & improbable = insignificant**	**-ve**	**Medium**
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE								
9.1 Waste	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Low & Definite = Low**	**-ve**	**High**

Alternative 1

Table 7: Impact assessment-Construction phase

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
1. ISSUE: AIR QUALITY								
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	**Local (1)**	**Short term (1)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Definite = Very low**	**-ve**	**High**
2. ISSUE VISUAL IMPACTS								
2.1 Visual Impacts due to clearance of site, cut and fill	**Local (1)**	**Low (1)**	**Medium term (2)**	**Very low (4)**	**Probable**	**Very low & Probable = Very low**	**-ve**	**High**
3. ISSUE GEOLOGY AND SOILS								
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Local (1)**	**Medium term (2)**	**Medium term (2)**	**Very low (4)**	**Definite**	**Very low & Probable = Very low**	**-ve**	**High**
3.2 Soil pollution	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**High**
3.3 Disturbance of surface geology for development foundations	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**Med**
4. ISSUE FAUNA AND FLORA								
4.1 Degradation, destruction of habitats/ ecosystem	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Definite**	**Medium & Definite = Medium**	**-ve**	**High**
4.2 Impacts on fauna and flora Disruption of nutrient flow dynamics; Introduction of chemicals into	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Definite**	**Medium& Definite = Medium**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
the ground and surface water through leaching; Habitat fragmentation Changes to abiotic environmental conditions; Changes to disturbance regimes e.g. decreased or increased incidences of fire; Changes to successional processes; effects on pollinators; And increased invasion by plants and animals not endemic to the area.								
5. ISSUE HYDROLOGY								
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	**Regional (2)**	**Medium (2)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Medium& Probable = Medium**	**-ve**	**High**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE								
6.1 Noise/ vibration	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
7.1 Safety and Security	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
7.2 Job opportunities	**Regional (2)**	**High (3)**	**Medium term (2)**	**High (7)**	**Definite**	**High & Definite = High**	**+ ve**	**Medium**
7.3 Visual impact Site clearing and removal	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.								
8. ISSUE HISTORICAL ENVIRONMENT								
8.1 Destruction of cultural / heritage sites	**None**	**None**	**None**	**Not significant (0)**	**Improbable**	**Not significant & improbable = insignificant**	**-ve**	**Medium**
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE								
9.1 Waste	**Local (1)**	**High (3)**	**Medium term (2)**	**Medium (6)**	**Probable**	**Low & Definite = Low**	**-ve**	**High**

Table 8: Impact assessment - Operational phase
Proposal

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	status	Confidence
1. ISSUE: FAUNA AND FLORA								
1.1 Alien invasion	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & probable = Medium**	**-ve**	**Medium**
2. ISSUE: HYDROLOGY								
2.1 Erosion of adjacent areas	**Regional (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & probable = Medium**	**-ve**	**Medium**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
3. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
3.1 Safety and Security	**Local (1)**	**Low (1)**	**Long term (3)**	**Low (5)**	**Probable**	**Low & probable = Low**	**-ve**	**High**
4. ISSUE: TRAFFIC								
4.1 Structure might impact on air traffic if it does not have day night markings	**Regional (2)**	**Medium (2)**	**Long term (3)**	**High**	**Probable**	**Low & probable = Low**	**-ve**	**Medium**

Alternative 1 ***(REPEAT THIS TABLE FOR EACH ALTERNATIVE)***				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
The impacts of alternative 1 are similar to that of the proposal.				

No Go				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
None				

Proposal

Table 9: Significance Rating - Construction phase

Preferred Option construction phase

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: AIR QUALITY				
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	Very Low	• Dust generation should be kept to a minimum. • Dust must be suppressed on construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent. • Speed limits must be	Very Low	Negative impact to the ambient air quality of the area.

		implemented in all areas, including public roads and private property to limit the levels of dust pollution. • It is recommended that the clearing of vegetation from the site should be selective and done just before construction so as to minimise erosion and dust. • Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided. • All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials. • No burning of refuse or vegetation is permitted.		
2. ISSUE VISUAL IMPACTS				
2.1 Visual Impacts due to clearance of site, cut and fill.	Very Low	• Site development to be limited to footprint and access road.	Very Low	
3. ISSUE GEOLOGY AND SOILS				
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	• Strip topsoil prior to any construction activities. • Reuse topsoil to rehabilitate disturbed areas. • Topsoil must be kept separate from overburden and must not be used for building purposes or maintenance or access roads. • Appropriate erosion and storm water management structures must be installed around the construction site.	Very Low	
3.2 Soil pollution	Low	• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution. • Ensure appropriate handling of hazardous substances • Remediate polluted soil. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes.	Very Low	

		• Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded. • All excavations and foundations must be inspected regularly		
3.3 Disturbance of surface geology for development foundations	Low	• Site development to be limited to footprint and access road	Very low	
4. ISSUE FAUNA AND FLORA				
4.1 Degradation, destruction of habitats/ ecosystem	Very low	• Minimise construction footprints prior to commencement of construction and control all edge effects of construction activities (proliferation of alien vegetation, disturbance of soils, dumping of construction waste). • Existing roads should be utilized wherever possible to provide access to construction area. • Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities. • Clearly demarcate areas to be cleared and ensure that vegetation clearing only occurs within the demarcated areas • Ensure that erosion management and sediment controls are strictly implemented from the beginning of the site clearing activities. Follow either access route 1 or access route 2 as per the ecological report in order to reach the site, use the shortest practical route, following disturbed vegetation where feasible.	Very Low	
4.2 Impacts on fauna and flora	Very Low	• The contractor must ensure that no fauna species are disturbed, trapped, hunted or killed during the construction phase. • The illegal hunting or capture of wildlife will not be tolerated. Such matters will be handed over to the relevant authorities for prosecution. • Disturbance to birds, animals and reptiles and their habitats should be prevented at all times. • All Declared Weeds and invaders must be removed • Ensure that the construction footprint is adequately revegetated after completing construction. • Avoid bush clumps, geophytes and rock outcrops both in the construction footprint and the access route. • Areas that are not part of the site development plan should be marked as no go zones. • Construction should be limited to daylight hours. • Construction personnel should	Very Low	

		be informed of the Animal Protection Act No. 71 of 1962 and encouraged not to harm any wildlife; and • Construction personnel should undergo awareness training regarding fauna assemblages and the correct procedures to follow should fauna be found within the site. They should be encouraged not to harm any wildlife. They should also be informed of any policies and procedures applicable for fauna and flora.		
5. ISSUE HYDROLOGY				
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	Medium	• Storm water measures to be implemented prior to construction taking place on site: • All measures should be implemented during the construction of earthworks (terraces and roadways) to ensure that disturbed soil is not transported into any water course or system where storm water is to flow. Building rubble and other products that can cause contamination must be managed according to best practice and monitored by the site's environmental control officer (ECO).	Low	
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE				
6.1 Noise/ vibration	Low	• Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise. • No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. • Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays. • Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance. • Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.	Very Low	
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
7.1 Safety and Security	Low	• Signs should be erected on all entrance gates to the site camp indicating that no temporary	Very Low	

		jobs are available, thereby limiting opportunistic labourers and crime. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured (including toilets). • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are undertaken on or near public roads. • Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues. • All construction workers shall be issued with ID badges and clearly identifiable uniforms. • Access to fuel and other equipment stores is to be strictly controlled. • Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at		

		prominent locations around the construction site and the construction crew camps at all times. • The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. • The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. • Washing and toilet facilities shall be provided on site and in the Contractors camp. • Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided. • The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately. • The chemical toilets must be emptied on a regular basis. • The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site. • HIV AIDS awareness and education should be undertaken by all Contractor staff.		
7.2 Job opportunities	High	• Make use of local labour • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations. • Provide skills training for construction workers.	Medium	
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.	Low	• Phased, rather than indiscriminate clearing of the site to be undertaken.	Very Low	
8. ISSUE HISTORICAL ENVIRONMENT				
8.1 Destruction of cultural / heritage sites	Insignificant	• Ensure that construction staff members are aware that heritage resources could be unearthed and the scientific importance of such finds. • Ensure that heritage objects	Insignificant	

		are not to be moved or destroyed without the necessary permits from the South African Heritage Resources Agency (SAHRA) in place.		
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE				
9.1 Waste	Medium	• Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. • No burning of waste. • Waste will be collected and removed off-site to a registered waste site. • Remove all construction material and detritus after construction is complete.	Low	

Alternative 1

Table 10: Significance Rating-Construction phase

Alternative 1 construction phase

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: AIR QUALITY				
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	Very Low	• Dust generation should be kept to a minimum. • Dust must be suppressed on construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent. • Speed limits must be implemented in all areas, including public roads and private property to limit the levels of dust pollution. • It is recommended that the clearing of vegetation from the site should be selective and done just before construction so as to minimise erosion and dust. • Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided. • All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials. • No burning of refuse or vegetation is permitted.	Very Low	Negative impact to the ambient air quality of the area.
2. ISSUE VISUAL IMPACTS				
2.1 Visual Impacts due to clearance of site, cut and fill.	Very Low	• Site development to be limited to footprint and access road.	Very Low	
3. ISSUE GEOLOGY AND SOILS				
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	• Strip topsoil prior to any construction activities. • Reuse topsoil to rehabilitate disturbed areas. • Topsoil must be kept separate from overburden and must not be used for building purposes or maintenance or access	Very Low	

		roads. • Appropriate erosion and storm water management structures must be installed around the construction site.		
3.2 Soil pollution	Low	• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution. • Ensure appropriate handling of hazardous substances • Remediate polluted soil. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes. • Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded. • All excavations and foundations must be inspected regularly	Very Low	
3.3 Disturbance of surface geology for development foundations	Low	• Site development to be limited to footprint and access road	Very low	
4. ISSUE FAUNA AND FLORA				
4.1 Degradation, destruction of habitats/ ecosystem	Medium	• Minimise construction footprints prior to commencement of construction and control all edge effects of construction activities (proliferation of alien vegetation, disturbance of soils, dumping of construction waste). • Existing roads should be utilized wherever possible to provide access to construction area. • Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities. • Clearly demarcate areas to be cleared and ensure that vegetation clearing only occurs within the demarcated areas • Ensure that erosion management and sediment	Low	

		controls are strictly implemented from the beginning of the site clearing activities		
4.2 Impacts on fauna and flora	Medium	• The contractor must ensure that no fauna species are disturbed, trapped, hunted or killed during the construction phase. • The illegal hunting or capture of wildlife will not be tolerated. Such matters will be handed over to the relevant authorities for prosecution. • Disturbance to birds, animals and reptiles and their habitats should be prevented at all times. • All Declared Weeds and invaders must be removed • Rehabilitation with indigenous species. • Mark the plant and any other plants observed on or near the site and protect the marked plants from damage from construction activities. • Should any protected plant be located on the site of the activity, obtain permission from GDARD to relocate the plants. • Ensure that contractors do not remove any herbaceous plants and ferns from around the immediate environment of the construction footprint, other than known weeds or common grasses and shrubs.	Low	
5. ISSUE HYDROLOGY				
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation	Medium	• Storm water measures to be implemented prior to construction taking place on site: • All measures should be implemented during the construction of earthworks (terraces and roadways) to ensure that disturbed soil is not transported into any water course or system where storm water is to flow. Building rubble and other products that can cause contamination must be managed according to best practice and monitored by the site's environmental control officer (ECO).	Low	
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
6. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE				
6.1 Noise/ vibration	Low	• Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise. • No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. • Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between	Very Low	

		7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays. • Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance. • Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.		
7. ISSUE SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
7.1 Safety and Security	Low	• Signs should be erected on all entrance gates to the site camp indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured (including toilets). • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are undertaken on or near public roads. • Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues. • All construction workers shall be issued with ID badges and clearly identifiable uniforms. • Access to fuel and other equipment stores is to be strictly controlled.	Very Low	

		• Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at prominent locations around the construction site and the construction crew camps at all times. • The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. • The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. • Washing and toilet facilities shall be provided on site and in the Contractors camp. • Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided. • The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately. • The chemical toilets must be emptied on a regular basis. • The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site. • HIV AIDS awareness and education should be undertaken by all Contractor staff.		
7.2 Job opportunities	High	• Make use of local labour • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to	Medium	

		prevent unrealistic expectations. • Provide skills training for construction workers.		
7.3 Visual impact Site clearing and removal of vegetation could partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil. Construction vehicles equipment such as cranes could be visually intrusive albeit for a short period of time.	Low	• Phased, rather than indiscriminate clearing of the site to be undertaken.	Very Low	
8. ISSUE HISTORICAL ENVIRONMENT				
8.1 Destruction of cultural / heritage sites	Insignificant	• Ensure that construction staff members are aware that heritage resources could be unearthed and the scientific importance of such finds. • Ensure that heritage objects are not to be moved or destroyed without the necessary permits from the South African Heritage Resources Agency (SAHRA) in place.	Insignificant	
9. ISSUE INFRASTRUCTURE AND SERVICES/WASTE				
9.1 Waste	Medium	• Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. • No burning of waste. • Waste will be collected and removed off-site to a registered waste site.	Low	

Table 11: Significance rating for the Operational phase
Proposal and Alternative 1

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. ISSUE: FAUNA AND FLORA				
1.1 Alien invasion	Medium	• Site to be kept neat and weed free. • Access to the site only through clearly demarcated access routes. • The footprint of damage to vegetation must be limited to the footprint of the activity and the immediate access route. • No permanent vegetation removal should be conducted. • Removal of any plants should require evaluation of the ECO and permission from relevant authority.	Low	Infestation of adjacent vacant areas
2. ISSUE: HYDROLOGY				
2.1 Erosion of adjacent areas	Medium	• Erosion and storm water from site to be checked regularly. • Should erosion take place the storm water situation to be rectified	Low	
SOCIO- ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				

3. ISSUE: SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
3.1 Safety and Security	Low	• Site to be secured. • Regular checkup on fencing	Very low	
4. ISSUE: TRAFFIC				
4.1 Structure might impact on air traffic if it does not have day night markings	High	• Mast to have Markings	Medium	

Alternative 1 ***(REPEAT THIS TABLE FOR EACH ALTERNATIVE)***				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
The impacts of alternative 1 are similar to that of the proposal.				

No Go				
Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
None				

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

Ecological Assessment – Portion 57 of Doornrandje 386, Rooihuiskraal 3. Please refer to Appendix G for the Specialist Report.

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

No impact assessment can be completely certain of the exact nature and extent of the various impacts that would result from a given development activity. However, this assessment strives to limit any uncertainties by optimising the collection of base data, and by following a rigorous impact assessment methodology.

3. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact and mitigation not being implemented**
Waste (Rubble)	**High**	**Rehabilitation plan**	**Medium**	**Risk of disturbance of adjacent vacant area**
Visual	**Medium**	**Rehabilitation plan**	**Low**	**Visual impact on adjacent area**
Dust	**High**	**Rehabilitation plan**	**Medium**	
Noise	**High**	**Rehabilitation plan**	**Medium**	**Disturbance to sense of place**

				of area
Sense of place	**Low**	**Rehabilitation plan**	**Low**	

Alternative 1

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
The impacts are similar to that of the proposal.				

Alternative 2

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
None				

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

None

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

The cost for decommissioning a cellular structure is in the range of R1mil and this includes the rehabilitation of the affected area.

Post closure management includes 6 monthly monitoring of the regrowth of vegetation and erosion control for a period of 2 years.

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

1. **Disturbance of the site might lead to alien plant infestation.**
2. **Visual impact of the mast. The proposed type of structure, the colour and the position must be compatible with the surrounding land uses.**
3. **There is a socio-economic need for an effective and efficient telecommunication network in the area for economic and safety purposes. Therefore the proposed project will accommodate the interests of the applicant, community and economy**

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal 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.

Proposal

As a necessary part of infrastructure and a business service, this development is bound to have a positive effect on the surrounding area in terms of communication, and it will provide a needed service to the immediate area

From a purely biophysical perspective the area impacted on by the mast is relatively small especially due to the fact that the site will be accessed from an existing road. Also, the area to the west of the site has been impacted upon by some form of dumping. Besides the vegetation occurring in the area being endangered, there are no sensitive habitats such as water bodies present on site or in close proximity to the site.

The biophysical impact of the development will be limited in a regional context, and will be more than offset by the social benefits for the immediate urban development. The proposal can therefore proceed from an environmental perspective.

The construction phase has the greatest impact on the environment even with mitigation. The negative impacts associated with the construction phase include:

- **Soil and Ground Water pollution**
- **Increased run off of water**
- **Visual Intrusion & Light Pollution**
- **Destruction of Flora & Fauna**
- **Noise Pollution**
- **Atmosphere pollution and odours resulting from dust and construction equipment**
- **Safety & Security on the site**
- **Spread of Alien Vegetation**

The construction phase will be associated with positive socio-economic impacts in terms of job creation. A number of mitigation measures to reduce or improve these impacts have been identified and are presented in the tables above. A key environmental imperative of the construction phase would be to prevent soil, air, water and noise pollution and erosion on the site.

The negative impacts relating to the operational phase include the following:

- **Due to the disturbance of the site alien plants will be able to establish and could become a problem by infesting neighbouring land.**

The primary positive impacts relate to the improved communications network in the area.

The construction phase will be of short duration and operational phase will have limited environmental impacts if constructed according to the conditions outlined in this report and if managed according to the EMPr.

Alternative 1

The impacts of Alternative 1 relate to the impact on the *Cheilanthes deltoidea* that is considered sensitive

Alternative 2

None

No-go (compulsory)

If the no-go option were to be followed it will have an impact on the nearby community that is experiencing problems with their cellular network. It might only shift the development activity to a different location, where there could be

a greater loss of sensitive features. The no-go alternative will entail leaving the site in its present vacant state.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The proposal is preferred. The impacts of the proposed development have been summarised under paragraph 5.

For alternative:

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

1. The preferred option will have a minimal visual impact on the area.
2. The character of the area and the surrounding land uses can accommodate the preferred option.
3. The property owner agreed to the proposed position
4. The preferred option will have a minimal impact on the protected plant referred to in the ecological report when compared to Alternative 1

7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

One of the strategic objectives of the Tshwane Metropolitan Spatial Development Framework is Economic growth and development and job creation.

The proposed development will create job opportunities thus positively influencing Economic growth and development.

8. RECOMMENDATION OF THE 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 as bound by professional ethical standards and the code of conduct of EAPASA).

YES	~~NO~~

If "NO", indicate the aspects that require further assessment 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 proposed activity is not anticipated to have significant environmental impacts.

The following recommendations should be implemented in order to ensure that potential impacts associated with the establishment and operation of the site are minimised:

- **Any areas disturbed during construction and operation must be rehabilitated.**
- **The structures are to be removed when the structure is ceased to be used for telecommunications purposes and the site rehabilitated.**
- **Construction to take place during working hours.**

- **Trampling and disturbance associated with construction should be limited to within 5m (five metres) of the footprint of the site.**
- **On completion of the project all litter and construction debris shall be immediately removed from the site.**
- **Adherence to the Ecological report.**

9. THE NEEDS AND DESIREBILITY OF THE PROPOSED DEVELOPMENT
(as per notice 792 of 2012, or the updated version of this guideline)

Need and desirability of the proposed development

Cellular telecommunication technology is an integral part of modern daily life and licensed cellular telecommunication service operators have an obligation in terms of their license agreements, as stipulated by national government, to provide the services throughout South Africa within the allocated bandwidth spectrum. The cellular telecommunication user base is still increasing (quantitative growth) and users must be enabled to choose the services rendered by any of the licensed operators anywhere in South Africa (choice and availability). The expansion of service types and content (content & technology growth) furthermore requires continuous equipment and network fine-tuning, upgrades and expansion. The user base also expects a continuous quality service to be provided and therefore network capacity and capabilities are under constant review to maintain or improve quality coverage (qualitative growth).

Due to the rural setting of the area, there is poor network connectivity. Therefore it has become essential to provide a new cellular base station in the area. Furthermore the cellular base station is proposed to accommodate six service providers thus ensuring that the residents of the area have a wide variety of service providers to choose from.

The benefits that the activity will have for society in general are:
- **Better cellphone Network/ signal coverage and Cellular Communication**
- **Security**
- **Socio-economic development**
- **Improved medical response**

The benefits that the activity will have for the local communities where the activity will be located are:
- **Better cell phone Network/ signal coverage and Cellular Communication**
- **Security**
- **Socio-economic development**
- **Improved medical response**

The motivation and benefits to society in general above apply to the local community directly.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)

Medium term (2-15 years)

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

(must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPr attached	**YES**

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s) – *(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)*

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
- All relevant sections of the form have been completed.