



**PROPOSED DEVELOPMENT OF A TWENTY FIVE METER (25 M) TREE
MAST AND ASSOCIATED INFRASTRUCTURE ON PORTION 87 OF THE
FARM CRAGGA KAMMA NO. 23, PORT ELIZABETH, EASTERN CAPE
PROVINCE**

Final Basic Assessment Report

ECm1/C/LN3/3/24-2019

August 2019

Prepared for:

HIGH WAVE
CONSULTANTS

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Today's Impact | Tomorrow's Legacy



EXECUTIVE SUMMARY

Introduction and Background

Highwave Consultants on behalf of Blue Sky Towers (PTY) Ltd. (The Applicant) appointed Enviroworks, an Independent Environmental Assessment Practitioner (EAP), to undertake the required Basic Assessment Process for the proposed development of a twenty five metre (25m) high tree mast on Portion 87 of the Farm Cragga Kamma No. 23, Port Elizabeth, Eastern Cape Province.

The proposed project is a listed activity in terms of Sections 24(2) and 24(d) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) (as amended). The Environmental Impact Assessment (EIA) Regulations, 2017 promulgated in terms of Chapter 5 of the NEMA provide for the control of certain activities that are listed in Government Notice Regulations No. (GN R) No. R327, R325 and R324. Activities listed in these notices must comply with the regulatory requirements listed in GN R No. R326, which prohibits such activities until written authorisation is obtained from the Competent Authority. Such Environmental Authorisation, which may be granted subject to conditions, will only be considered once there has been compliance with the EIA regulations, 2017. GN R No. 326 sets out the procedure and documentation that need to be compiled when undertaking a Basic Assessment Report.

Project Description

Blue Sky Towers (PTY) Ltd (The Applicant) proposes the construction of a twenty five metre (25m) high Tree mast with associated infrastructure on Portion 87 of the Farm Cragga Kamma No. 23, Port Elizabeth, Eastern Cape Province. The proposed development entails the construction of an eighty square metre (80m²) compound. At ground level four (4) concrete plinths will be constructed to which four (4) telecommunication equipment containers will be installed.

Attached to the mast will be six (6) associated antennas and one (1) microwave dish. Due to a lack of coverage in terms of telecommunications in undeveloped areas, Blue Sky Towers wishes to meet the demand for better telecommunication services. The compound will be ten metres (10 m) in length and eight metres (8m) wide, surrounded by a 2.4m high palisade fence.

Since the introduction of LTE in South Africa in 2012 there has been greater need for access to faster data. Higher penetration of LTE data in educational, residential, commercial and business areas has led to lower subscription fees which in itself provide economic sustainability and development. When selecting a site, special consideration is given to the geographical aspects so that the cellular infrastructure is positioned to ensure optimal functionality and availability to the customer.

Blue Sky Towers (Pty) Ltd pride themselves in ensuring that a positive impact is created in terms of the social and economic wellbeing in the area and will endeavor to erect a base station in such a manner so that it does not detract from the aesthetics in the surrounding area.

Legislative Context

The proposed project constitutes the following listed activities in terms of the NEMA:

Government Notice 324 of 2017: Listing Notice 3 of the National Environmental Management Act, 1998 (Act No. 107 of 1998)



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) is to be placed on a site not previously used for this purpose; and,

(b) will exceed 15 metres in height.

a. Eastern Cape

i. outside urban areas:

(gg) Areas within 10 kilometers from National Parks or World Heritage Sites or 5 kilometers from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve.

Preferred Location Alternative

Only one location alternative exists for the proposed development.

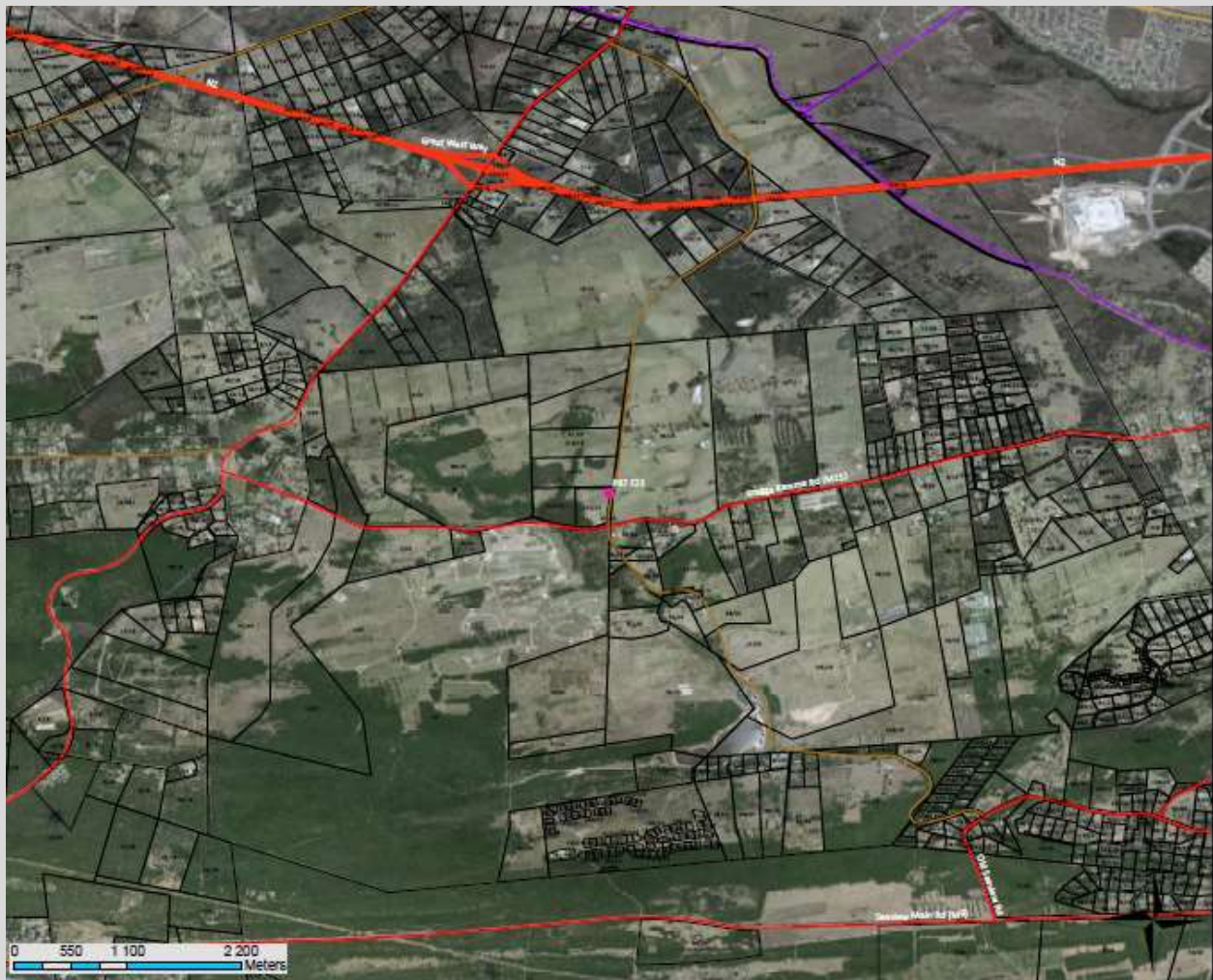


Figure 1: Locality of the Proposed Development



The Preferred alternative is situated at the following coordinates:

- 33° 58' 33.68" S
- 25° 25' 01.31" E

Site Selection Criteria

When Selecting a site, special consideration is given to the geographical aspects so that the cellular infrastructure is positioned to ensure optimal functionality and availability to the customer. This reduces the number of base telecommunication stations necessary to provide the best possible experience for the end user.

RF Engineers are subject matter experts and identify sites by utilizing a specific set of engineering rules and principles, Portion 87 of the Farm Cragga Kamma No. 23, Port Elizabeth was identified as a prime position on the following premises:

- Property offers the optimal position situated between existing and planned base stations to provide efficient data and voice coverage;
- Surrounding geographical aspects are in line with the requirements;
- Minimised physical-, natural- and visual impact;
- Ability to reduce the number of base stations in the surrounding areas;
- Ability to provide sufficient security equipment;
- Capacity to share infrastructure with majority operators;
- Property position will address the complaints received in the area; and,
- Sufficient space to erect a freestanding base telecommunication station.

The possibility of installing a rooftop base telecommunication station was investigated, but unfortunately due to the average height of buildings in the area being less than the optimal height of twenty five metres (25m) this option was unachievable. In order to achieve the optimal data and voice coverage objectives base stations needs to be approximately three hundred to five hundred metres (300m – 500m) apart on average, this depends on the density of the surrounding areas as well as geographical and physical features.

Preferred Design Alternative

The Tree mast is a single monopole tube tower disguised as a tree, of twenty five metres (25m) in height, with antennas mounted on the upper end of the tower. The mast will provide for co-location, allowing multiple operators to use the same mast as a base station. This will reduce the demand for base stations in the same location.



Figure 2: Visual Impression of a Tree Mast (Please note that the impression is not of Portion 87 of the Farm No. 23).

Report Structure

This report is set out as followed:

- **Section A: Activity Information** provides an overview of the development proposal and listed activities which is triggered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and Government Notice Regulation 326 of the EIA Regulations, 07 April 2017.
- **Section B: Site/Area/Property Description** provides detail on the affected landscape in its present state. A range of aspects relating to the biophysical (e.g. geology, soil surface and sub-surface water and biodiversity), socio-economic and historic and cultural character of the immediate site and surrounding areas are described herein, whilst applicable legislation, policy and guidelines considered are recognised.
- **Section C: Public Participation** describes the consultation component of this study between the EAP and Interested or Affected Parties (I&AP's) and Organs of State. Regulatory requirements of this process are discussed, with a summary of consultation made with state departments and comments and response given. Comment periods were afforded to parties, with an initial registration period provided to parties.
- **Section D: Impact Assessment** describes aspects underpinning the procedures, thinking and actions taken whilst conducting investigations and in compilation of this report, that are not necessarily recognized without



elucidation. These are determined both by the EAP and specialist parties and form applicable to some or all sections of the report and its appendices.

- **Section E: Recommendation of Practitioner** provides, based on such findings as various site surveys, impact assessment, investigation of alternatives and the review of strategic policy to consider the needs and desirability, the outgoing opinion of the EAP is detailed. Any noteworthy recommendations emanating from the study are described here.
- **Section F: Appendices** lists all supportive documents enclosed with this report, after which declarations of the Applicant, EAP and specialist parties are given.

Public Participation Process

A comprehensive **Public Participation Process** was undertaken to engage stakeholders and interested and affected parties on the development proposal. I&AP's was informed of the Basic Assessment Process through an advertisement in one (1) local newspaper and poster notices was erected at strategic locations. The surrounding landowners was informed of the proposed project by means of the distribution of comment forms and the Basic Assessment Report (BAR), as well as relevant Organs of State.

This BAR was made available for a 30-day comment period from **3 May 2019 – 17 August 2019**. The Basic Assessment (BA) was made available on Enviroworks website (www.enviroworks.co.za) and a link to Enviroworks website will be send via email to all relevant Stakeholders and Organs of State.

Specialist Findings

Due to the small scale infrastructure being developed, Enviroworks have not identified any Specialist Studies.

Recommendations from the Environmental Assessment Practitioner

- Towers must operate within the standards as set out by the International Commission on Non-Ionising Radiation Protection (ICNIRP);
- The Applicant must ensure that regular measurements are taken to ensure that the cell base station and related infrastructure meet the ICNIRP public exposure guidelines. Such measurements are to be at the cost of the applicant and made available to the Executive Director Health Services;
- In the event of such measurements showing that the ICNIRP public exposure guidelines are being exceeded, Council reserves the right to withdraw the LUPO and NBR permission and cause the cellular telecommunication infrastructure to be decommissioned at the cost of the Applicant;
- Health standards are to be reviewed periodically based on on-going scientific research. The Applicant will be required to decommission or upgrade any communication structure that does not meet the most recently published health standards of the World Health Organisation, the International Committee on Non-Ionising Radiation Protection and the Independent Communication Authority of South Africa;
- Should the Health Department determine that the current limits of the electromagnetic radiation pose a significant health risk, decommissioning shall be required and the site be rehabilitated to the satisfaction of the Health Department; and,
- All mitigation measures must be adhered to as stipulated within the Environmental Management Programme.



BASIC ASSESSMENT REQUIREMENT CHECKLIST

Content Requirements of a Basic Assessment Process	Section in the Report
(a) details of – (i) the EAP who prepared the report, and (ii) the expertise of the EAP, including a curriculum vitae;	Page ix
(b) the location of the activity, including: (i) the 21digit Surveyor General code of each cadastral land parcel; (ii) where available, the physical address and farm name; (iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Appendix C: Facility Illustrations
(c) a plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale;	Appendix C: Facility illustrations
(d) a description of the scope of the proposed activity, including – (i) all listed and specified activities triggered and being applied for; and (ii) a description of the activities to be undertaken including associated structures and infrastructure;	Section A: 1.1 Activity Description
(e) a description of the policy and legislative context within which the development is proposed including – (i) an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report; and (ii) how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools framework, and instruments;	Section A: 1.11 Applicable Legislation
(f) a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	Section A: 1.10.2 Need and Desirability of the Activity
(g) a motivation for the preferred site, activity and technology alternative;	Section A: 1.4 Design Alternatives Investigated
(h) a full description of the process followed to reach the proposed preferred alternative within the site, including: (i) details of all the alternatives considered; (ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; (iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them; (iv) the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; (v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts – (aa) can be reversed;	Page iii: Site Selection Criteria & Section D



<p>(bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated;</p> <p>(vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risk associated with the alternatives;</p> <p>(vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;</p> <p>(viii) the possible mitigation measures that could be applied and level of residual risk;</p> <p>(ix) the outcome of the site selection matrix;</p> <p>(x) if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and</p> <p>(xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity;</p>	
<p>(i) a full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including –</p> <p>(i) a description of all environmental issues and risk that were identified during the environmental impact assessment process; and</p> <p>(ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;</p>	Section D
<p>(j) an assessment of each identified potentially significant impact and risk, including-</p> <p>(i) cumulative impacts;</p> <p>(ii) the nature, significance and consequences of the impact and risk;</p> <p>(iii) the extent and duration of the impacts and risk occurring;</p> <p>(iv) the probability of the impact and risk occurring;</p> <p>(v) the degree to which the impact and risk can be reversed;</p> <p>(vi) the degree to which the impact and risk may cause irreplaceable loss of resources;</p> <p>and</p> <p>(vii) the degree to which the impact and risk can be avoided, managed or mitigated;</p>	Section D
<p>(k) where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulation and an indication as to how these findings and recommendations have been included in the final report;</p>	Executive Summary
<p>(l) an environmental impact statement which contains –</p> <p>(i) a summary of the key findings of the environmental impact assessment;</p> <p>(ii) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the proposed site indicating any areas that should be avoided, including buffers; and</p> <p>(iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;</p>	Section D & Appendix A: Sensitivity Map
<p>(m) based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management objectives, and the</p>	Appendix F



impact management outcomes for the development for inclusion in the EMP'r;	
(n) any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;	Section E: Recommendation of the EAP
(o) a description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed;	Section D: Assessment Methodologies
(p) a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;	Section E: Recommendations of the EAP
(q) where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised;	N/A
(r) an undertaking under oath or affirmation by the EAP in relation to: (i) the correctness of the information provided in the reports; (ii) the inclusion of comments and inputs from stakeholders and I&APs; (iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties; and	Declarations
(s) where applicable, details of any financial provision for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;	N/A
(t) any specific information that may be required by the competent authority; and	Appendix G
(u) any other matters required in terms of section 24(4)(a) and (b) of the Act.	N/A



CURRICULUM VITAE OF THE EAP



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Christoff du Plessis

RELEVANT QUALIFICATIONS

Baccalaureus Scientiae (B.Sc.) in Environmental Geography: University of the Free State (2014)

Baccalaureus Scientiae (B.SC) Honours in Environmental Management: University of South Africa (2018)

WORK EXPERIENCE

January 2015 – Present: Environmental Specialist at Enviroworks

ENVIRONMENTAL IMPACT ASSESSMENT EXPERIENCE

- Environmental Impact Assessment for the proposed 171ha expansion of Nalisview Cemetery in Bloemfontein on behalf of Mr. Jannie Nel.

BASIC ASSESSMENT EXPERIENCE

- Construction of 30 Broiler Houses and an Abattoir, Leipoldtville, Western Cape Province (Mocke Poultry).
- Dewetsdorp Reservoir System Augmentation, Dewetsdorp, Free State Province (Bloemwater).
- Construction of the Palmiet Truck Stop, Vrede, Free State Province (DeStudio Town Planning).
- Section 24G for the unlawful operation of a Recycling Centre, Swellendam, Western Cape Province (Agri-World Recyclers).
- Construction of a 3.2 kilometre pipeline and associated infrastructure, Olifantshoek, Northern Cape Province (Ghamagara Local Municipality).
- Construction of 4 telecommunication masts, Cape Town, Western Cape Province (Highwave Consultants).
- Installation of a 90 000l LPG Cylinder, Bloemfontein, Free State Province (EASIGAS).
- Installation of a 45 000l LPG Cylinder, East London, Eastern Cape Province (EASIGAS).
- Upgrade of Day-visitor facilities at Kraalbaai, West Coast National Park, Western Cape Province (SANParks).
- Development of the Phalaborwa Wildlife Activity Hub, Kruger National Park, Limpopo Province (SANParks).
- Periodic maintenance of National Route 2 Section 4 between Riviersonderend (Km 0.0) and Swellendam (Km 56.9), Western Cape Province (SANRAL).
- Proposed development of the Klein Mooimaak Rest Camp Facility, West Coast National Park (SANParks).
- Proposed development of the 35m Buffeljagsrivier Monopole Mast, Western Cape Province (Coast to Coast Towers).
- Compilation of a River Maintenance Management Plan for Bath River, Caledon, Western Cape Province (Theewaterskloof Local Municipality).
- Proposed development of a 12.5 ha cemetery, Grabouw, Western Cape Province (Theewaterskloof Local



Municipality).

- Proposed development of Hostels and Orientation Centres, Mapungubwe National Park, Limpopo Province (SANParks).
- Proposed upgrade of the R27 Gate & Geelbek Restaurant, West Coast National Park, Western Cape Province SANParks).
- Proposed development of the 25m Joostenbergvlakte Monopole Mast, Western Cape Province (Coast to Coast Towers).
- Proposed development of 30 Chicken Houses and an Abattoir, Odendaalsrus, Free State Province (Chridel Consulting).
- Design, Rehabilitation / Improvement, Routine Maintenance works of N220: Chissano to Chibuto and N/C Crz. N220 to N1, Mozambique (World Bank).
- Proposed development of a Curro Castle on Portion 54 of the Farm Blue Hills No. 397, Midrand, Gauteng Province (Curro Holdings).
- Proposed development of a 25m Monopole Mast on Portion 25 of the Farm Klein Bottelary No. 17, Brackenfell, Western Cape Province (Coast to Coast Towers).
- Proposed development of a Housing Development in Hartswater, Northern Cape Province (Makespace Architects).
- Routine maintenance of TR/1, TR1/3, TR44/1, TR88/1, MR401, MR402 and DR1834 near Uniondale, Western Cape Province (Western Cape Department of Transport and Public Works).
- Proposed development of a Tree Mast on Portion 87 of the Farm Cragga Kamma No. 23, Port Elizabeth, Eastern Cape Province (Blue Sky Towers).

EXPERIENCE IN PERMITS AND LICENCING

- Water Use License (General Authorisation) for the expansion of a cemetery by more than 2500 m² (Jannie Nel).
- Water Use License for 30 Broiler Houses and Abattoir, Leipoldtville, Western Cape Province (Mocke Poultry).
- Waste Management License and Section 24 G report for Agri World Recycling, Swellendam, Western Cape Province (Agri-World Recycling).
- Water Use License (General Authorisation) for the construction of a 3.2km pipeline, Olifantshoek, Northern Cape Province (Ghamagara Local Municipality).

ENVIRONMENTAL CONTROL OFFICER (ECO)

- The construction of the Cecilia Park powerline and sub-station, Bloemfontein, Free State Province (Centlec).
- The construction of a dual carriageway and bridge from Mthatha up to and including the Ngqeleni interchange of Provinsial Road 61 Section 8, Eastern Cape Province.
- The construction of a road from Moretele to Khaukhwe, North West Province (Department Public Works).
- The construction of a 14km water pipeline, Botshabelo, Free State Province (Bloemwater).
- The construction of a sub-station, Bloemfontein, Free State Province (Centlec).
- The rehabilitation of bridges on National Route 14: Upington to Kuruman, Northern Cape Province (SANRAL).
- The rehabilitation of the Theekloof Pass, Fraserburg, Northern Cape.
- Reseal of Diversional Road 1468, 1470, 1473 and Minor Road 5873 on behalf of Actophambili,



Witzenberg, Western Cape Province.

- Reseal of Section MR 201 and MR 305 on behalf of Actophambili, Wolsely, Western Cape Province.
- Reseal of the National Route 1, on behalf of Actophambili, Leeu Ghamka, Western Cape Province (SANRAL).
- The widening of Pella Road on behalf of the City of Cape Town, Atlantis, Western Cape Province (City of Cape Town).
- The widening of structures over the Orange River on National Route 12 Section 9 near Hopetown, Northern Cape Province (SANRAL).
- The construction of a bulk water supply reservoir, Olifantshoek, Northern Cape Province (Ghamagara Local Municipality).
- Rehabilitation of the Donkergat Road within the West Coast National Park on behalf of BVI Procurement Management Engineers, Western Cape Province (Department of Defence & Department of Public Works).
- Periodic Maintenance of National Route 2 Section 4 between Swellendam and Riviersonderend, Western Cape Province (SANRAL).

VISUAL IMPACT ASSESSMENT (VIA):

- Phalaborwa Wildlife Activity Hub, Kruger National Park, Limpopo Province (SANParks).
- 4.9ha Sand Mine on Portion 5 of the Farm Doornekraal No. 830, Western Cape Province (Greenmined).
- Proposed development of the Harvard Powerline, Bloemfontein, Free State Province (Centlec).
- Proposed development of the 35 m Buffeljagsrivier Monopole Mast, Buffeljagsrivier, Western Cape Province (Coast to Coast Towers).
- Proposed development of the 25 m Robertson Monopole Mast, Robertson, Western Cape Province (Coast to Coast Towers).
- Proposed development of the Klein Mooimaak Rest Camp Facility, West Coast National Park (SANParks).
- Proposed development of a Sand Mine near Malmesbury, Western Cape Province (Greenmined).
- Proposed upgrade of the R27 Gate and Geelbek Restaurant, West Coast National Park, Western Cape Province (SANParks).
- Proposed development of the 25 m Roodekrans Monopole Mast, Krugersdorp, Gauteng Province (Coast to Coast Towers).
- Proposed development of a 25 m Monopole Mast on Portion 25 of the Farm Klein Bottelary No. 17, Brackenfell, Western Cape Province (Coast to Coast Towers).
- Proposed development of a Landfill Site on Portion 3 of the Farm Katbosch No. 93, Sasolburg, Free State Province (Metsimaholo Landfill).
- Proposed development of numerous visitor information centres at Schroda and Mapungubwe Hill, Mapungubwe National Park, Limpopo Province (SANParks).
- Proposed development of a 35 m Monopole Mast on Portion 13 of the Farm Van Aries Kraal No. 455, Grabouw, Western Cape Province (Coast to Coast Towers).
- Proposed development of a 25 m Monopole Mast on Erf 532, Gansbaai, Western Cape Province (Coast to Coast Towers).
- Proposed development of a 35 m Lattice Mast on Portion 7 of the Farm Jagersvlakte No. 292, Grabouw, Western Cape Province (Warren Petterson Planning).
- Proposed development of a 35 m Lattice Mast on Erf 532, Stanford, Western Cape Province (Warren Petterson Planning).



- Proposed development of a 15 m Lattice Mast on Portion 4 of the Farm No. 53, Genadendal, Western Cape Province (Warren Petterson Planning).
- Proposed development of a 25 m Monopole Mast on Portion 8 of the Farm Delta No. 1003, Groot Drakenstein, Western Cape Province (Coast to Coast Towers).
- Proposed development of a 30 m Tree Mast on Portion 87 of the Farm Langverwacht No. 241, Kuils River, Western Cape Province (Warren Petterson Planning).

WETLAND DELINEATION STUDIES:

- Development of 13 borrow pits along National Road 8, Ladybrand, Free State Province (SANRAL).
- Development of a 12.5ha cemetery on Erf 4233, Western Cape Province (Theewaterskloof Local Municipality).
- Proposed development for the proposed Alfred Nzo Agri-Hub, Cederville, Eastern Cape Province (Department Public Works).

STORMWATER MANAGEMENT PLANS:

- Stormwater Management Plan for a Recycling Plant on Erf 5172, Swellendam, Western Cape Province (Agri-World Recycling).
- Stormwater Management Plan for the proposed Granite Mine on the Remaining Extent of the Farm Biesjesfontein No. 218, Springbok, Northern Cape Province (Greenmined Environmental).
- Stormwater Management Plan for the proposed development of Six Layer Hen Houses on the Remaining Extent of the Farm Helena 1492, Bloemfontein, Free State Province (Katawa Trading).
- Stormwater Management Plan for the Routine Maintenance of a Drainage System near Karatara, Western Cape Province (Garden Route District Municipality).
- Stormwater Management Plan for the Unlawful establishment of a Chicken Broiler Facility on Portions 10 and 11 of the Farm Blesbokfontein No. 558, Bronkhorspruit, Gauteng Province (Sintier Poultry).

ENVIRONMENTAL AUDITING:

- Decommissioning Audit for the closure of a warehouse, Cape Town, Western Cape Province (Wheatherford).
- Annual Audit on the Waste Management License for Elgin Fruit Juice, Grabouw, Western Cape (Elgin Fruit Juice).
- Annual Environmental Compliance Audit for the operation of the Olive Hill Quarry, Bloemfontein, Free State Province (Lafarge Aggregate).
- Monthly Environmental Compliance Audit for the operation of a Sand Mine near Sasolburg, Free State Province (Mission Point Mine).
- Quarterly Environmental Compliance Audit for the Xina Solar Thermal Plant (Phase 2) and its associated infrastructure near Pofadder, Northern Cape Province (Abengoa Solar).

OTHER EXPERIENCE:

- Conducting the Public Participation Process on the Draft Management Plan for the Goukamma Nature Reserve Complex, Western Cape Province (Cape Nature).
- Compilation of an Environmental Management Plan and a Risk Assessment for the pressure testing of a 1 000 000 litre LPG Cylinder within the Port Elizabeth Harbour, Eastern Cape Province (EASIGAS).
- Compilation of an Environmental Management Plan for the development of two Billboards, Bloemfontein,



Free State Province (Outdoor Network).

- GIS mapping and technical for various projects, including the drawing of locality, sensitivity, and alien and invasive management maps.
- Public Participation Processes and assistance to several projects.



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ACRONYMS AND ABBREVIATIONS

AGL	-	Above Ground Level
BA	-	Basic Assessment
BAR	-	Basic Assessment Report
CBA	-	Critical Biodiversity Area
DEDEAT	-	Department of Economic Development, Environmental Affairs and Tourism
DWS	-	Department of Water and Sanitation (previously known as DWA / DWAF)
EAP	-	Environmental Assessment Practitioner
EIA	-	Environmental Impact Assessment
EMF	-	Environmental Management Framework
EMPr	-	Environmental Management Program Report
ESA	-	Ecological Support Area
FSBTS	-	Freestanding Base Telecommunication Station
GN	-	Government Notice
ICNIRP	-	International Commission on Non-Ionizing Radiation Protection
IDP	-	Integrated Development Plan
I&AP's	-	Interested and Affected Parties
NEMA	-	National Environmental Management Act
NMB	-	Nelson Mandela Bay
NNR	-	No Natural Area Remaining
ONA	-	Other Natural Area
PSDF	-	Provincial Spatial Development Framework
RBTS	-	Rooftop Base Telecommunication Station
SAHRA	-	South African Heritage Resources Agency
SDF	-	Spatial Development Framework
SKA	-	Square Kilometre Array
SIP	-	Strategic Integrated Projects
WWTW	-	Waste Water Treatment Works



BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:

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Application Number:

--

Date Received:

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Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998(Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. 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.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner (EAP).
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.



SECTION A: ACTIVITY INFORMATION

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

	No
	X

If YES, please complete form for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1.1 ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

Blue Sky Towers (PTY) Ltd (The Applicant) propose the construction of a twenty five metre (25m) high Tree mast with associated infrastructure on Portion 87 of the Farm Cragga Kamma No. 23, Port Elizabeth, Eastern Cape Province. The proposed development entails the construction of an eighty square metre (80m²) compound. At ground level four (4) concrete plinths will be constructed to which four (4) telecommunication equipment containers will be installed.

Attached to the mast will be six (6) associated antennas and one (1) microwave dish. Due to a lack of coverage in terms of telecommunications in undeveloped areas, Blue Sky Towers wishes to meet the demand for better telecommunication services. The compound will be ten metres (10 m) in length and eight metres (8m) wide, surrounded by a 2.4m high palisade fence.

Since the introduction of LTE in South Africa in 2012 there has been greater need for access to faster data. Higher penetration of LTE data in educational, residential, commercial and business areas has led to lower subscription fees which in itself provide economic sustainability and development. When selecting a site, special consideration is given to the geographical aspects so that the cellular infrastructure is positioned to ensure optimal functionality and availability to the customer.

Blue Sky Towers (Pty) Ltd pride themselves in ensuring that a positive impact is created in terms of the social and economic wellbeing in the area and will endeavor to erect a base station in such a manner so that it does not detract from the aesthetics in the surrounding area.

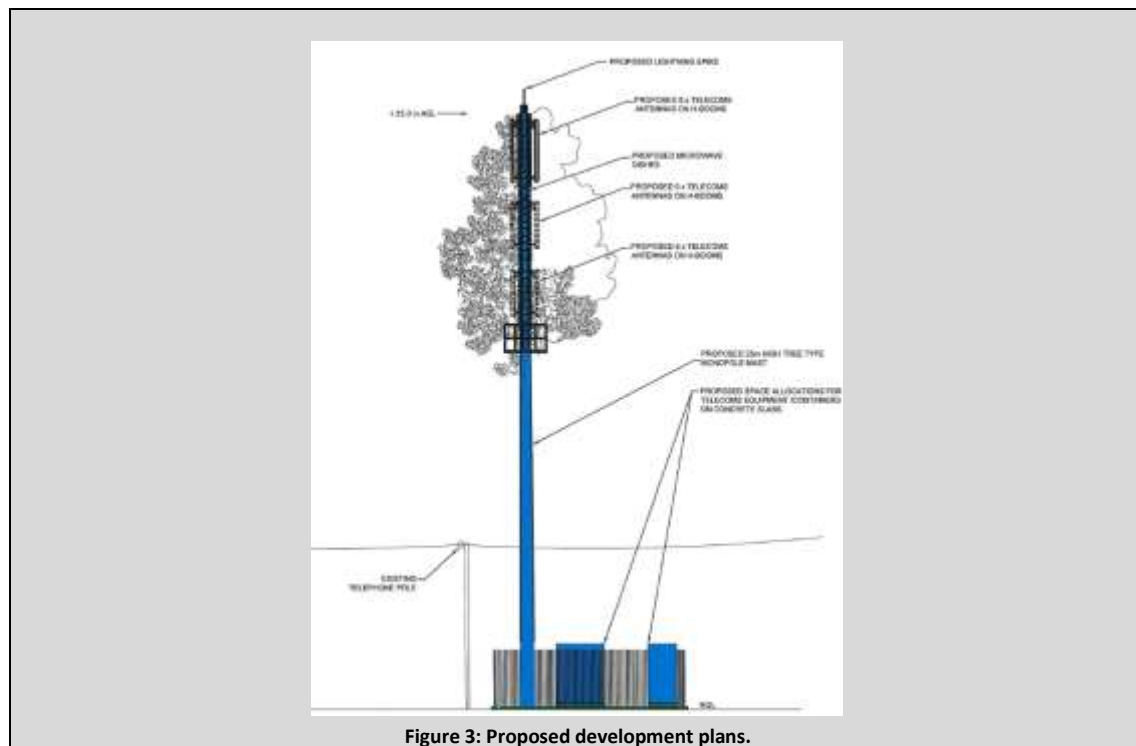


Figure 3: Proposed development plans.

1.2 FEASIBLE AND REASONABLE ALTERNATIVES

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

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

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

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



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

List alternative sites if applicable.

Alternative:

	Latitude (S):		Longitude (E):	
Alternative S1 ¹ (preferred or only site alternative)	33°	58'	25°	25'
Alternative S2 (if any)	N/A			
Alternative S3 (if any)	N/A			

In the case of linear activities:

Alternative:

Alternative S1 (preferred or only route alternative)

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

	Latitude (S):		Longitude (E):	
	°	'	°	'
	°	'	°	'
	°	'	°	'

Alternative S2 (if any)

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

	°	'	°	'
	°	'	°	'
	°	'	°	'

Alternative S3 (if any)

- 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 an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

1.4 DESIGN ALTERNATIVES INVESTIGATED

Design or layout alternative to avoid negative impacts, mitigate unavoidable negative impacts and maximize positive impacts, or detailed motivation if no reasonable of feasible alternatives exist:

Two design alternatives are proposed, as detailed below.

1. Alternative 1: Construction of a twenty five meter (25m) Tree Mast – Preferred Option
 The Tree Mast is a singular tube measuring in at twenty five meters (25 m) in height, with the antennas mounted

¹ "Alternative S.." refer to site alternatives.



on the upper end of the tower. A Tree Mast has a slim line design like a Monopole Mast; however, the antennae will be covered with tree branches and the pole will be camouflaged to resemble a tree trunk. Due to its design it blends into the surrounding environment more effectively. The mast will provide for the co-location, allowing multiple operators to use the same mast as a base station. This will reduce the demand for base stations in the same location.

As the proposed development will be situated outside the urban edge of the town of Port Elizabeth the Tree Mast is considered to be the preferred design alternative due to the trees present on site. Figure 4 and 5 has been included in order to provide the reader with a visual impression of a Tree as well as a Monopole Mast.



Figure 4: Visual Impression of a Tree Mast (Please note that the impression is not of Portion 87 of the Farm No. 23).

2. Alternative 2: Construction of a twenty five meter (25m) Monopole Mast

The monopole mast is a single tube tower measuring in at twenty five metres (25m) in height, with antennas mounted on the upper end of the tower. While the monopole mast is taller than surrounding buildings and infrastructure, the design of the monopole mast can be considered to blend in with the surrounding area as it resembles to the trees found within the Cragga Kamma area. The mast will provide for co-location, allowing multiple operators to use the same mast as a base station. This will reduce the demand for base stations in the same location.



Figure 5: Visual Impression of a Monopole Mast (Please note this impression is not for Portion 87 of the Farm No. 23)

1.5 PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

80 m ²
m ²
m ²

Length of the activity:

m
m
m

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

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Size of the site/servitude:

m ²
m ²

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



Alternative A3 (if any)

m ²

1.6 SITE ACCESS

Does ready access to the site exist?

YES	
X	
N/A	

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

Describe the type of access road planned:

N/A

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

1.7 SITE OR ROUTE PLAN

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

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 meters;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 meters of the site or sites including (but not limited thereto):
 - rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);



6.10 for gentle slopes the 1 meter contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and

6.11 the positions from where photographs of the site were taken.

NOTE: REFER TO APPENDIX A OF THIS REPORT FOR A DETAILED LOCALITY MAP.

1.8 SITE PHOTOGRAPHS

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

NOTE: REFER TO APPENDIX B OF THIS REPORT FOR DETAILED PHOTOGRAPHS OF THE SITE.

1.9 FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

NOTE: REFER TO APPENDIX C OF THIS REPORT FOR A DETAILED FACILITY ILLUSTRATION.

1.10 ACTIVITY MOTIVATION

1.10.1 Socio-economic value of the activity

What is the expected capital value of the activity on completion?

What is the expected yearly income that will be generated by or as a result of the activity?

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

How many new employment opportunities will be created in the development phase of the activity?

What is the expected value of the employment opportunities during the development phase?

What percentage of this will accrue to previously disadvantaged individuals?

How many permanent new employment opportunities will be created during the operational phase of the activity?

What is the expected current value of the employment opportunities during the first 10 years?

What percentage of this will accrue to previously disadvantaged individuals?

Confidential	
Confidential	
	NO
	X
	NO
	X
0	
R 0	
N/A	
0	
N/A	
N/A	



1.10.2 Need and desirability of the activity

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

According to the Integrated Development Plan 2017/18 – 2021/22 of the Nelson Mandela Metropolitan Municipality *“the quality of infrastructure systems – including transportation, utilities and telecommunications - is the most important factor influencing real estate investment and development decisions in cities around the world, according to a survey of public sector and private sector leaders conducted by the Urban Land Institute and EY.*

There is poor network coverage in the area, affecting persons living in the suburb and travelling through the area. ICASA places an obligation on all operators to provide minimum levels of coverage and service. The construction of the mast applies to the meeting of these aforementioned obligations. Necessary existing infrastructure in the form of an Eskom power source is present within the immediate vicinity to accommodate such a structure.

Indicate any benefits that the activity will have for society in general:

The activity will provide network reception for clients of the service providers that will rent space on the mast structure within or travelling through the area. Network coverage is important with regard to socio-economic development within the area of Cragga Kamma.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The Applicant will make use of a Local Construction Contractor for the development of the mast. The construction period; however, only take three (3) months to complete. Furthermore, the elevated network coverage will provide needed connectivity between cellphone users, especially necessary in periods of emergency. Numerous businesses and low density residential estates are in close proximity of the site and as such better connectivity is needed in the area.



The figure above illustrates the 4G coverage of the area prior to the development of the proposed mast. The figure below illustrates the coverage within the area after the construction of the proposed mast. From the said figure it is evident that the proposed mast will contribute to signal strength within the area.



1.11 APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:



	Administering authority:	Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998)	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism.	1998
National Environmental Management Act (NEMA), Amended Environmental Impact Assessment Regulations of 07 April 2017.	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism.	2017
Civil Aviation Act, 1962 (Act No. 74 of 1962)	Civil Aviation Authority	1962
National Building Regulations and Building Standard Act, 1977 (Act No. 103 of 1977)	Nelson Mandela Bay Metropolitan Municipality	1977
The Hazardous Substances Act, 1973 (Act No. 15 of 1973)	Health, Directorate Radiation Control (NDOH)	1973
Electronic Communications Act (Act No. 36 of 2005) and Independent Communication Authority of South Africa Amended Act of 2000, amended in 2005.	ICASA	2005
The National Health Act, 2003 (Act No. 61 of 2003)	Nelson Mandela Bay Metropolitan Municipality: Environmental Health	2003

1.12 WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

1.12.1 Solid waste management

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

YES	<input type="checkbox"/>
X	<input checked="" type="checkbox"/>
If yes, what estimated quantity will be produced per month?	
3 m ³	

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

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

Waste comprising of cement bags and general construction-related solid waste will be collected on site and kept at a temporary designated area which will be removed on a regular basis by the Contractor. Construction waste will be disposed of at a permitted landfill site within the city of Port Elizabeth. This will be included within the Environmental Management Plan Report (EMP'r).

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

All construction waste must be disposed of at the Addo Langbos Landfill Site permit no. B33/2/1920/54/P16 which is classified as a G:S:B- landfill site.

Will the activity produce solid waste during its operational phase?

<input type="checkbox"/>	NO
<input checked="" type="checkbox"/>	X
If yes, what estimated quantity will be produced per month?	
N/A	

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

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

No solid waste will be generated by the activity during the operational phase.



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

The proposed project will not generate any solid waste during the operational phase.

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

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

	NO
	X

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?

	NO
	X

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

1.12.2 Liquid effluent

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

	NO
	X

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

N/A

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

	NO
	X

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

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

	NO
	X

If yes, provide the particulars of the facility:

Facility name:	N/A		
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:



N/A. There will be no waste water on site.

1.12.3 Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

	NO X
N/A	

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

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

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

N/A

1.12.4 Generation of noise

Will the activity generate noise?

YES X	
	NO X

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

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

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

Noise impacts will be limited to the construction – and in a much lesser degree to the operational phase. The source of noise includes:

- Delivery of materials to the area of construction.
- Machinery such as generators, construction vehicles and delivery trucks.

1.13 WATER USE

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

Municipal	water board	groundwater	river, stream, dam or lake	other	the activity will not use water X
-----------	-------------	-------------	-------------------------------	-------	---

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:

Does the activity require a water use permit from the Department of Water Affairs?

N/A	
YES X	



If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

1.14 ENERGY EFFICIENCY

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

N/A.

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

A renewable energy source would not be able to provide continuous power supply and as such it is not a feasible alternative.



SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

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

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

1

- Paragraphs 1 - 6 below must be completed for each alternative.
- Has a specialist been consulted to assist with the completion of this section?

	NO
	X

If YES, please complete form XX for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

1.1 GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15 X	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
------	-------------	------------------	-------------	--------------	-------------	---------------------

Alternative S2 (if any):

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

Alternative S3 (if any):

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

1.2 LOCATION IN LANDSCAPE

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

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley



2.5 Open valley

2.6 Plain

2.7 Undulating plain / low hills X

2.8 Dune

2.9 Seafront

1.3 GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

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

1.4 GROUNDCOVER

Indicate the types of groundcover present on the site:

4.1 Natural veld – good condition ^E

4.2 Natural veld – scattered aliens ^E X

4.3 Natural veld with heavy alien infestation ^E

4.4 Veld dominated by alien species ^E

4.5 Gardens X

4.6 Sport field

4.7 Cultivated land X



4.8 Paved surface

4.9 Building or other structure X

4.10 Bare soil

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

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

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

1.5 LAND USE CHARACTER OF SURROUNDING AREA

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

5.1 Natural area X

5.2 Low density residential X

5.3 Medium density residential

5.4 High density residential

5.5 Informal residential

5.6 Retail commercial & warehousing

5.7 Light industrial

5.8 Medium industrial^{AN}

5.9 Heavy industrial^{AN}

5.10 Power station

5.11 Office/consulting room X

5.12 Military or police base/station/compound

5.13 Spoil heap or slimes dam^A

5.14 Quarry, sand or borrow pit

5.15 Dam or reservoir X

5.16 Hospital/medical centre

5.17 School

5.18 Tertiary education facility

5.19 Church

5.20 Old age home

5.21 Sewage treatment plant^A

5.22 Train station or shunting yard^N

5.23 Railway line^N



- 5.24 Major road (4 lanes or more)^N
- 5.25 Airport^N
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station^H
- 5.31 Landfill or waste treatment site
- 5.32 Plantation

5.33 Agriculture X

5.34 River, stream or wetland X

- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site
- 5.42 Other land uses (describe)

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

N/A

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

N/A

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

N/A

1.6 CULTURAL/HISTORICAL FEATURES

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

	NO X
--	-----------------

If YES, explain: N/A

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



Briefly explain the findings of the specialist:

A Heritage Impact Assessment was conducted by Ms Jenny Benny on site in September 2008. The report was obtained from the South African Heritage Resources Agency and concluded that *“the almost demolished building in the study area would appear to have no real historical value and there would be no merit in restoring or rebuilding it. According to oral sources there are no known graves or burial sites in the vicinity. The rest of the proposed area is unoccupied and it may be concluded that the establishment of a rural residential scheme, although altering the current use and ambience of the countryside, and impacting on the outlook and possible traffic escalation on The Flats, will not affect negatively on any historical structures currently on the land from a built environment perspective (Bennie, 2008).*

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

	NO
	X

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

	NO
	X

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.



SECTION C: PUBLIC PARTICIPATION

1.1 ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

1.2 CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:



- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (iv) the manner in which and the person to whom representations in respect of the application may be made.

1.3 PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

1.4 DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation 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, ratepayers associations and traditional authorities where appropriate. 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 inadequate.

1.5 COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

1.6 AUTHORITY PARTICIPATION

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 30 (thirty) calendar days before the submission of the application.



List of authorities informed:

- Department Economic Development, Environmental Affairs & Tourism;
- Nelson Mandela Bay Metropolitan Municipality – Environmental Branch;
- Civil Aviation Authority;
- South African National Heritage Authority; and,
- Department of Water and Sanitation.

List of authorities from whom comments have been received:

1. Department Economic Development, Environmental Affairs and Tourism; and,
 2. Civil Aviation Authority.
- Comments are still awaited from:
1. South African National Heritage Authority; and,
 2. Nelson Mandela Bay Metropolitan Municipality.
- If comments are received from these entities it will be distributed to the Case Official.

1.7 CONSULTATION WITH OTHER STAKEHOLDERS

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

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

Has any comment been received from stakeholders?

YES	
X	

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

Please refer to Appendix E: Comments and Response Report.



SECTION D: IMPACT ASSESSMENT

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

1.1 ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

Please refer to Appendix E: Comments and Response Report.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

Please refer to Appendix E: Comments and Response Report.

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

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

Impact Assessment Methodology

For each potential impact, the EXTENT (spatial scale), MAGNITUDE, DURATION (time scale), PROBABILITY of occurrence, IRREPLACEABLE loss of resources and the REVERSIBILITY of potential impacts must be assessed by the specialist by using the results of their specialist studies. The assessment of the above criteria will be used to determine the significance of each impact, with and without the implementation of the proposed mitigation measures. The scales to be used to assess these variables and to define the rating categories are tabulated in Table 1 and Table 2 below.

Evaluation component	Ranking scale and description (criteria)
MAGNITUDE of NEGATIVE IMPACT (at the indicated spatial scale)	<p>10 - Very high: Bio-physical and/or social functions and/or processes might be <i>severely</i> altered.</p> <p>8 - High: Bio-physical and/or social functions and/or processes might be <i>considerably</i> altered.</p> <p>6 - Medium: Bio-physical and/or social functions and/or processes might be <i>notably</i> altered.</p> <p>4 - Low : Bio-physical and/or social functions and/or processes might be <i>slightly</i> altered.</p> <p>2 - Very Low: Bio-physical and/or social functions and/or processes might be <i>negligibly</i> altered.</p> <p>0 - Zero: Bio-physical and/or social functions and/or processes will remain <i>unaltered</i>.</p>



<p>MAGNITUDE of POSITIVE IMPACT (at the indicated spatial scale)</p>	<p>10 - Very high (positive): Bio-physical and/or social functions and/or processes might be <i>substantially</i> enhanced.</p> <p>8 - High (positive): Bio-physical and/or social functions and/or processes might be <i>considerably</i> enhanced.</p> <p>6 - Medium (positive): Bio-physical and/or social functions and/or processes might be <i>notably</i> enhanced.</p> <p>4 - Low (positive): Bio-physical and/or social functions and/or processes might be <i>slightly</i> enhanced.</p> <p>2 - Very Low (positive): Bio-physical and/or social functions and/or processes might be <i>negligibly</i> enhanced.</p> <p>0 - Zero (positive): Bio-physical and/or social functions and/or processes will remain <i>unaltered</i>.</p>
<p>DURATION</p>	<p>5 - Permanent</p> <p>4 - Long term: Impact ceases after operational phase/life of the activity > 60 years.</p> <p>3 - Medium term: Impact might occur during the operational phase/life of the activity – 60 years.</p> <p>2 - Short term: Impact might occur during the construction phase - < 3 years.</p> <p>1 - Immediate</p>
<p>EXTENT (or spatial scale/influence of impact)</p>	<p>5 - International: Beyond National boundaries.</p> <p>4 - National: Beyond Provincial boundaries and within National boundaries.</p> <p>3 - Regional: Beyond 5 km of the proposed development and within Provincial boundaries.</p> <p>2 - Local: Within 5 km of the proposed development.</p> <p>1 - Site-specific: On site or within 100 m of the site boundary.</p> <p>0 - None</p>
<p>IRREPLACEABLE loss of resources</p>	<p>5 – Definite loss of irreplaceable resources.</p> <p>4 – High potential for loss of irreplaceable resources.</p> <p>3 – Moderate potential for loss of irreplaceable resources.</p> <p>2 – Low potential for loss of irreplaceable resources.</p> <p>1 – Very low potential for loss of irreplaceable resources.</p> <p>0 - None</p>
<p>REVERSIBILITY of impact</p>	<p>5 – Impact cannot be reversed.</p> <p>4 – Low potential that impact might be reversed.</p> <p>3 – Moderate potential that impact might be reversed.</p> <p>2 – High potential that impact might be reversed.</p> <p>1 – Impact will be reversible.</p> <p>0 – No impact.</p>
<p>PROBABILITY (of occurrence)</p>	<p>5 - Definite: >95% chance of the potential impact occurring.</p> <p>4 - High probability: 75% - 95% chance of the potential impact occurring.</p> <p>3 - Medium probability: 25% - 75% chance of the potential impact occurring</p> <p>2 - Low probability: 5% - 25% chance of the potential impact occurring.</p> <p>1 - Improbable: <5% chance of the potential impact occurring.</p>



Evaluation component	Ranking scale and description (criteria)
CUMULATIVE impacts	<p>High: The activity is one of several similar past, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p>Medium: The activity is one of a few similar past, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p>Low: The activity is localised and might have a negligible cumulative impact.</p> <p>None: No cumulative impact on the environment.</p>

Table 1: Evaluation components, ranking scales and descriptions (criteria).

Significance Points	Environmental Significance	Description
125 – 150	Very high (VH)	An impact of very high significance will mean that the project cannot proceed, and that impacts are irreversible, regardless of available mitigation options.
100 – 124	High (H)	An impact of high significance which could influence a decision about whether or not to proceed with the proposed project, regardless of available mitigation options.
75 – 99	Medium-high (MH)	If left unmanaged, an impact of medium-high significance could influence a decision about whether or not to proceed with a proposed project. Mitigation options should be relooked.
40 – 74	Medium (M)	If left unmanaged, an impact of moderate significance could influence a decision about whether or not to proceed with a proposed project.
<40	Low (L)	An impact of low is likely to contribute to positive decisions about whether or not to proceed with the project. It will have little real effect and is unlikely to have an influence on project design or alternative motivation.
+	Positive impact (+)	A positive impact is likely to result in a positive consequence/effect, and is likely to contribute to positive decisions about whether or not to proceed with the project.

Table 2: Definition of significance ratings (positive and negative)

Once the evaluation components have been ranked for each potential impact, the significance of each potential impact will be assessed (or calculated) using the following formula:

- **SP (significance points) = (magnitude + duration + extent + irreplaceable + reversibility) x probability.**

The maximum value is 150 SP (significance points). The unmitigated and mitigated scenarios for each potential environmental impact should be rated as per Table below.



1.3 Potential Impacts during Construction Phase

Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS :					
Nature of impact: Negative impact of haphazard placement of infrastructure on the environment.	Activity: The establishment of a main site office and storage site during the construction period will ensure that the poor placement of materials and infrastructure will be avoided. This could also result in the damage or pollution to the surrounding areas caused by construction activities.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	0	2	0	-
Reversibility:	2	1	2	1	-
Probability:	4	3	4	3	-
Total SP:	44	18	44	18	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Draw up and submit for approval a Site Layout Master Plan. This plan must show the final positions and extent of all permanent and temporary site structures and infrastructure; • The planning for layout must be done in consultation on-site with the Environmental Control Officer (ECO); • The contractor may not deface, paint, damage or mark any natural features situated in or around the site for survey or other purposes; • The contractor must ensure that all construction personnel, labourers and equipment remain within the demarcated construction sites at all times; • No servicing of vehicles may be permitted on site, unless for emergency purposes; • Stockpiles may not be situated in such a manner that they obstruct pathways; • Location of storage area must take into account prevailing winds, distance to water bodies and general on-site topography; • Place infrastructure as far as possible on sites that have already been transformed; 				N/A



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> Facilities may not be used as staff accommodation; The Contractors camp layout must take into account availability of access for deliveries and services and any future works; The Contractors camp must be of sufficient size to accommodate the needs of all sub-contractors that may work on the project; and, The Contractor must implement the following as required: <ul style="list-style-type: none"> Suitable sanitation facilities, adequate for the number of staff on site (1 for every 15 personnel and 1 for each gender); and, Facilities for solid waste collection. 				
Nature of impact: Topsoil Removal and Soil Erosion	Activity: The clearing of topsoil and excavation for the establishment of building foundations may result in the destruction of fertile topsoil.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	4	1	4	1	-
Reversibility:	3	3	3	3	-
Probability:	4	2	4	2	-
Total SP:	56	18	56	18	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Remove topsoil approximately 300mm deep from establishment area and stockpile areas; Topsoil stockpiles to be kept free from weeds; Topsoil stockpiles to be placed on a levelled area and measures to be implemented to safeguard the piles from being washed away in the event of heavy rain/storm water; Topsoil need to be stored on designated areas only. This need to be planned and indicated in the site-layout plan; Ensure that topsoil is not mixed with subsoil and/or any other excavated material; 				N/A



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> • Provide containment and settlement facilities for effluents from concrete mixing and washing facilities; • Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan; • Provide spill containment facilities for hazardous materials like fuel and oil; and, • Topsoil must be used in all rehabilitation activities, and may not be compacted to ensure that its plant support capacity remain of high quality. 				
Nature of impact: Surface and groundwater contamination due to construction activities such as the use of hazardous materials on site e.g. fuel and oil.	Activity: Spills could possibly occur on site and lead to the contamination of soil and groundwater.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	2	6	2	-
Duration:	2	2	2	2	-
Extent:	2	1	2	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	3	2	3	2	-
Probability:	3	2	3	2	-
Total SP:	45	16	45	16	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Concrete must be mixed on mixing trays only and not on exposed soil. Concrete must be mixed only in areas which have been specially demarcated for this purpose (preferable where no natural vegetation occur); • Concrete mixing to be carried out away from sensitive areas and on impermeable surfaces; • Where batching of concrete is to take place on site, the following must be strictly adhered to: <ul style="list-style-type: none"> (a) It must be ensured that minimal water is used for washing of concrete batching equipment; (b) Used cement bags must be stored neatly in weather proof containers until disposal off-site. Unused cement 				N/A



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
		<p>bags must be stored under dry conditions to prevent leaching of cement;</p> <p>(c) All reasonable measures must be taken to ensure that transportation of concrete from the batcher to the work area does not result in spillage;</p> <p>(d) Cleaning of equipment and flushing of mixers shall not result in pollution of the surrounding environment; and,</p> <p>(e) Waste concrete, cement sludge and mortar leftovers shall be removed from site to an approved landfill site;</p> <ul style="list-style-type: none"> • Should ready-mix concrete be used for construction activities, the Contractor must ensure that it is sourced from a reputable supplier; • Material Safety Data Sheets (MSDSs) must be available on site for all chemicals and hazardous substances to be used on-site, including information on their ecological impacts and how to minimise the impacts in case of leakage; • All spillage must be cleaned up immediately after they have occurred; • Spillage of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bio-remediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site; • Do not locate any ablution facilities, sanitary convenience, septic tank or French drain within the 1:100 year flood line, or within a horizontal distance of 100m (whichever is greater) of a watercourse or drainage line; • Vehicles and machinery must be regularly serviced to avoid leakages; • At the work site the Contractor must maintain strict surveillance to ensure that no spills occur; • No water courses may be used to clean equipment, or for bathing. All cleaning operations must take place off site at a location where waste water can be disposed of correctly; • The discharge of any pollutants such as cement, concrete, lime, chemicals, etc. into the natural environment and the storm water system must strictly be prohibited; • Fuel and chemical storage must be done within a designated area only, which is properly bund and able to contain 110% of the capacity of fuel or chemicals stored within; • Construction vehicles must be inspected every morning before work commence to ensure that no leakages do occur; • All personnel must receive induction on how to report spillages, contain them and treat them accordingly; • Spill kits must be available at each working station; 			



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> Drip trays must be placed beneath all construction equipment that is stationary on site or within the site camp; and, Hazardous waste must be stored in bins with a lid in a demarcated waste area, and must be disposed of at a hazardous treatment facility with records on file. 				
Nature of impact: Handling of general waste materials on the development site.	Activity: The presence of personnel and construction operations on site will increase the likelihood of littering and the dumping of solid waste.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	2	6	2	-
Duration:	2	2	2	2	-
Extent:	2	1	2	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	2	0	2	0	-
Probability:	4	2	4	2	-
Total SP:	56	12	56	12	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> An adequate number of scavenger proof litter bins are to be placed throughout the site. Two waste bins at least must be present, one (1) for hazardous waste and one (1) for non-hazardous waste at each working site. Dumping of waste on site is prohibited; Waste sorting and separation must form part of the environmental induction and awareness programme, to encourage personnel to collect waste paper, glass and metal waste separately; Keep all work sites including storage areas, offices and workshops neat and tidy; Dedicate a demarcated and signposted storage area on site for the collection of construction waste; All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site (Addo Langbos Landfill) as mentioned in the Basic Assessment Report; Care must be taken to ensure that no waste fall off disposal vehicles on-route to the landfill. If needed, a tarpaulin can be utilised; The burning or burying of solid waste on site is prohibited. Do not burn PVC pipes or other plastic materials, as 				N/A



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	this is regarded as hazardous waste; <ul style="list-style-type: none"> Littering by construction workers shall not be permitted; Workers from the immediate area need to be encouraged to take their waste with them at the end of each day; General refuse/rubbish shall be removed from site on a weekly basis to an approved registered landfill site or as soon as the waste bins are reaching full capacity; Minimise waste by sorting wastes into recyclable and non-recyclable waste; Ablution facilities must be serviced by a registered service provider, cleaned at least once a week, and safe disposal slips must be on file at the site office; A bi-weekly (twice a week) litter patrol of the entire site shall be conducted by the designated Environmental Control Officer (ECO); Hazardous waste must be sorted from non-hazardous waste and disposed of at a hazardous treatment facility, records and proof of disposal must be kept; and, A register must be kept of the quantities of waste disposed and proof of disposal must be available at the site office. 				
Nature of impact: Increased risk of veld fires.	Activity: Due to the presence of construction personnel in natural areas, fires can occur if not managed to the correct standard.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	8	4	8	4	-
Duration:	2	2	2	2	-
Extent:	2	1	2	1	-
Irreplaceable:	3	3	3	3	-
Reversibility:	4	4	4	4	-
Probability:	3	2	3	2	-
Total SP:	57	28	57	28	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> The potential risk of veld fires is heightened by windy conditions in the area, specifically during the dry, windy winter months; 				N/A



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> Assume acceptable precautions to guarantee that fires are not started as a result of works on site as specified below: the Contractor will be held responsible for any damage to structures or property on or neighbouring the Site as a result of any fire caused by personnel; The Contractor must ensure that construction related activities that pose a potential fire risk, such as welding etc., are properly managed and confined to areas where the risk of fires has been reduced. Measures to reduce the risk of fires include clearing working areas and avoiding working in high wind conditions when the risk of fires is greater. In this regard special care must be taken during the high risk dry, windy winter months; The Contractor must provide fire-fighting training to selected construction staff and take cognisance of the Veld and Forest Fire Act, Act No. 101, 1998; As per the conditions of the Code of Conduct, in the event of a fire being caused by construction workers and or construction activities, the appointed contractors must compensate farmers for any damage caused to their farms. The contractor must compensate the fire-fighting costs borne by farmers and local authorities; Equip vehicles and site structures with fire extinguishers. Rubber beaters must be stored on site; No open fires are allowed anywhere on site; Storage of fuel or chemicals under trees is not permitted; Gas and liquid fuel is not to be stored in the same place; Smoking may only occur within a 3m radius from designated areas; Personnel must be adequately trained in the handling of firefighting equipment; and, Fuel, diesel, oil, or any other flammable substance must be stored 6m away from the smoking area. 				
Nature of impact: Traffic impacts associated with the movement of construction vehicles on site.	Activity: The movement of vehicles on site may result in the destruction of biodiversity, compaction of valuable topsoil and mortalities of fauna on site.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	1	2	1	-



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Reversibility:	2	2	2	2	-
Probability:	4	2	4	2	-
Total SP:	44	16	44	16	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • During construction create designated turning areas and strictly prohibit any off-road driving or parking of vehicles and machinery outside designated areas; • Monitor the establishment of (Alien) Invasive Species and remove as soon as detected, before regenerative material can be formed; • Abnormal loads and machinery should avoid movement over gravel roads during and immediately after rainfall events, so as to limit destruction of road surfaces and sedimentation of downhill rivers/streams; • All vehicles must be road-worthy, be maintained to prevent fuel or oil leaks and drivers are to be licensed appropriately for the driving of their assigned vehicle. Drivers responsible for the transportation of personnel must be specifically licensed to do so; • Construction vehicles may not leave the designated roads and tracks, whilst U-Turns are prohibited on all roads; • Signage is to be placed on vehicles at all times; • All construction vehicles must adhere to construction sites and avoid off road to minimise impact on vegetation and soil; • After decommissioning, if access roads or portions thereof will not be of further use to the landowner, remove all foreign material and rip area to facilitate the establishment of vegetation, followed by a suitable revegetation program, and • Construction-related vehicles and machinery may not operate on site without reflective safety signage, car-top lights and reflective personnel gear. 				N/A
Nature of impact: Traffic impacts associated with the movement of construction vehicle.	Activity: The movement of vehicles in the vicinity of the construction site may cause damage to road surfaces as well as increase in the traffic volume of Lakeside Road.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	4	6	4	-



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Duration:	2	2	2	2	-
Extent:	3	3	3	3	-
Irreplaceable:	2	2	2	2	-
Reversibility:	2	2	2	2	-
Probability:	5	3	5	3	-
Total SP:	75	39	75	39	-
Significance rating:	Medium-High	Low	Medium-High	Low	-
Cumulative impact:	Low	-	Low	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Abnormal loads must be timed to avoid times of year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods; Vehicles used for transport of materials and sand must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces; Any damage to public roads is to be reported to the management authority and repaired to its original condition; Transport of materials should be limited to the least amount of trips possible; and, Abnormal loads may not be transported after dark. 				N/A

Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON BIOLOGICAL ASPECTS:					
Nature of impact: Direct impact on vegetation during construction and loss of species.	Activity: The construction of several permanent structures on site will result in the loss of vegetation due to foundation excavation.				No impact will occur as the development activities will not take place. Vegetation and habitat features of the proposed development site will remain unaffected.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Irreplaceable:	2	0	2	0	-
Reversibility:	2	0	2	0	-
Probability:	5	5	5	5	-
Total SP:	55	25	55	25	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated foundation footprint area; Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMP'r, if possible; Indigenous vegetation unique to the area must be used during landscaping activities; There should be a pre-construction environmental induction for all construction staff on site to ensure that basic environmental biodiversity principles are adhered to; Where the ECO deems it necessary (e.g. sensitive, natural areas) the ecologist appointed to do the vegetation study will be utilized; Restoration measures will be required to reinstate functionality in the disturbed soil and vegetation; Impacts to sensitive sites (drainage lines) must be avoided; No vegetation may be gathered for the purpose of creating fire; and, Areas to be cleared should be agreed and demarcated before the start of the clearing operations. 				N/A
Nature of impact: Dust nuisance generated by the operation of machinery and vehicles.	Activity: The frequent upwelling of dust as consequence of the movement of vehicles and machinery on site may impact on worker health causing asthma and other respiratory conditions. Stockpiles are susceptible to the upwelling of fine particulate matter. Several ambient factors, the terrain characteristics, soil type and land use forms can attribute to the degree of loss and susceptibility of stockpiles towards the generation of dust. Regular watering of exposed surfaces may result in the reduction of wind-generated dust from stockpiles.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	2	1	2	1	-



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Irreplaceable:	1	1	1	1	-
Reversibility:	1	1	1	1	-
Probability:	3	2	3	2	-
Total SP:	30	14	30	14	-
Significance rating:	Low	Low	Low	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Implement dust suppression measures by watering areas to be cleared as well as already exposed surfaces with damaged soil particles, particularly during dry, windy periods; Ensure all vehicles remain on designated roads and avoid the opening of detour or by-pass tracks; Implement speed restrictions for vehicles on gravel roads; Vehicles delivering or removing soil must be covered to reduce spills and windblown dust; Any complaints received by the Contractor regarding dust will be recorded and communicated to the ECO; Ensure all vehicles remain on designated roads and avoid the opening of detour or by-pass tracks; A speed limit of 30km/h must be applied on gravel roads; and, After construction decommissioning, if access roads or portions thereof will not be of further use to the landowner, remove all foreign material and rip area to facilitate the establishment of vegetation, followed by a suitable revegetation program. 				N/A
Nature of impact: Fauna will be directly impacted as a result of construction activities and human presence at the site.	Activity: The construction of facilities will result in some habitat loss for resident fauna, as some species will occur within the affected areas. In addition, increased levels of noise, pollution, disturbance and human presence during construction will be detrimental to resident fauna. Sensitive and shy fauna may move away from the area during the construction phase as a result of the noise and human activities present, while some slow-moving species (such as mole rats or blind snakes) would not be able to avoid the construction activities and might be killed.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	0	4	0	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	5	0	5	0	-
Probability:	3	2	3	2	-



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Total SP:	42	8	42	8	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> No hunting, snaring, shooting, nest raiding or egg collection by the construction staff may be allowed; Holes and trenches must not be left open for extended periods of time and should only be dug when needed for immediate construction. Trenches that may stand open for some days should have places where the loose material has been returned to the trench to form an escape ramp present at regular intervals to allow any fauna that fall in to escape; Fires should only be allowed within fire safe demarcated area; Ensure that the construction area is fenced off from adjacent areas which may harbor wild animals; Do not store building materials and excess stockpiled soils within riparian zones or within areas where natural vegetation occur; and Should any fauna be discovered it should be relocated to an area outside the development footprint by a trained professional. 				N/A

Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON SOCIO-ECONOMIC ASPECTS:					
Nature of impact: Occupational Health and Safety.	Activity: During the construction phase, accidents, occupational diseases, ill health and damage to property can occur if precautionary measures are not taken. Increased movement of vehicles may lead to increased accidents among local communities, construction workers and vehicle operators.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	2	6	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	4	2	4	2	-
Reversibility:	4	4	4	4	-
Probability:	3	2	3	2	-
Total SP:	51	22	51	22	-



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> The Contractor shall comply with all standard and legally required health and safety regulations; The Contractor shall provide a standard first aid kit at the site offices; There must be a Safety Officer on site who has first aid training and knowledge of safety procedures; The Contractor shall provide the appropriate Personal Protective Equipment for staff; and, The Contractor must have insurance cover for the workmen. 				N/A

Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON CULTURAL-HISTORICAL ASPECTS:					
Nature of impact: Damage and destruction of vertebrate fossils during excavation activities.	Activity: Excavation activities can result in the discovery of cultural and historical artefacts beneath the earth surface. Damage or loss can occur if the correct procedures are not followed.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	0	4	0	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	5	5	5	5	-
Probability:	2	1	2	1	-
Total SP:	28	9	28	9	-
Significance rating:	Low	Low	Low	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Should any heritage resources (including but not limited to fossil bones, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and other built features, rock art and rock engravings) be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to 				N/A



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	assess the finds, and this must then be reported to the applicable heritage authority; <ul style="list-style-type: none"> • Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so, has been given; • Excavations must be limited to the footprint area and be maintained in a narrow corridor; • All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed: <ul style="list-style-type: none"> ○ All construction in the immediate 50 m vicinity radius of the site must cease; ○ The heritage practitioner must be informed as soon as possible; ○ In the event of obvious human remains SAPS must be notified; ○ Mitigation measures (such as refilling, etc.) must not be attempted; ○ The area in a 50 m radius of the find must be cordoned off with hazard tape; • Public access must be limited and the area must be placed under guard; and, • The appointed archaeologist must apply for a valid permit from SAHRA to excavate the furnace for display and educational purposes. 				

Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL VISUAL IMPACTS:					
Nature of impact: Impact on the sense of place for surrounding users.	Activity: The movement of construction vehicles, machinery and personnel on site shall result in a visual impact on surrounding users. Furthermore to this, the storage of materials and excavation shall result in disturbance and an unsightly character.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	1	1	1	1	-
Probability:	3	3	3	3	-
Total SP:	30	21	30	21	-



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low	Low	Low	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Access roads are to be kept clean and dust suppression techniques should be implemented to minimise impacts of vehicle movement; • Site offices and structures should be limited to one location and carefully situated to reduce visual intrusions. Roofs should be grey and non-reflective; • Construction camps as well as development areas must be screened with netting; • Lights within the construction camp must face directly down (angle of 180°); • Minimum vegetation may be removed to ensure the visual absorption capacity remain high; • Infrastructure design need to be in line with the sense of place (Agriculture); • Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact; and, • Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare. 				N/A

Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON NOISE ASPECTS:					
Nature of impact: Noise nuisance generated by construction works, vehicles and personnel.	Activity: The operating of vehicles and machinery on site results in the generation of noise disturbing users of the surrounding area.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	2	6	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	0	2	0	-
Reversibility:	1	1	1	1	-
Probability:	5	5	5	5	-



Planning, design and construction phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Total SP:	60	30	60	30	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Limit working hours of noisy equipment to daylight; No unnecessary hooting by project and resident vehicles; Any complaints received by the Contractor regarding noise will be recorded and communicated to the Environmental Officer; All stationary noisy equipment such as compressors and pumps should be contained behind acoustic covers, screens or sheds where possible; The regular inspection and maintenance of equipment must be undertaken to ensure that all components is functioning optimally; Where recurrent use of machinery is frequent, machines should be shut down during intermediate periods; Fit silencers to equipment; Unless otherwise specified by the ESA, normal work hours will apply (i.e. from 06:30 to 17:00, Mondays to Fridays); Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours; and, No loud music is permitted on site or in the Camp. 				N/A

1.4 Potential Impacts during the Operational Phase:

Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:					
Nature of impact: Increased risk of veld fires due to the undertaking of maintenance and hot works.	Activity: Due to maintenance hot works that may need to be conducted on the proposed mast, fires can occur if not managed to the correct standard.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.



Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Magnitude:	6	6	6	6	-
Duration:	3	3	3	3	-
Extent:	2	1	2	1	-
Irreplaceable:	3	3	3	3	-
Reversibility:	3	3	3	3	-
Probability:	3	2	3	2	-
Total SP:	51	32	51	32	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Ensure that the area where maintenance hot work is conducted is equipped with adequate firefighting equipment. This includes at least rubber beaters as well as a fire extinguisher of the appropriate type irrespective of the site; • Maintenance personnel must be adequately trained in the handling of firefighting equipment, and can include but not limited to: <ul style="list-style-type: none"> ➢ Regular fire prevention talks and drills; ➢ Posting of regular reminders to staff; • Do not store any flammable materials anywhere near where the hot works are to be undertaken; • In the event of a fire, the maintenance Contractor shall immediately employ such plant and personnel as is at his disposal and take all necessary action to prevent the spread of the fire and bring the fire under control; and, • Hot works must be restricted to an area approved by the landowner as well as the maintenance contractor. 				N/A

Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON BIOLOGICAL ASPECTS:					
Nature of impact: Potential Avifaunal Impacts.	Activity: The height of the mast may pose a risk to night migrating birds that are generally attracted to the light at the top of the mast and may collide with the mast. Bird mortalities may thus result. Additionally, in certain conditions, such as inclement or misty weather, bird collisions may occur.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	4	4	4	-
Duration:	3	3	3	3	-



Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Extent:	1	1	1	1	-
Irreplaceable:	5	5	5	5	-
Reversibility:	5	3	5	3	-
Probability:	3	2	3	2	-
Total SP:	54	32	54	32	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Any potential bird collision and associated mortalities must be monitored and recorded on an ongoing basis. Should any mortalities be recorded, records must be reviewed by an avifaunal specialist (e.g. Endangered Wildlife Trust) to determine if any further investigation or specific mitigation measures are needed; and, Should any bird nest be found on the mast, an avifaunal specialist must be contacted to determine if any permits is required for removal and advice should be sought from the Eastern Cape Department of Environmental Affairs. 				N/A

Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON SOCIO-ECONOMIC ASPECTS:					
Nature of impact: Health Impacts on surrounding landowners.	Activity: Possible effects of electromagnetic field radiation from the base station on localised residence. Telecommunication masts cause noise and vibrations from the power generators at the telecommunication base station.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	10	2	10	2	-
Duration:	3	3	3	3	-
Extent:	1	1	1	1	-
Irreplaceable:	5	5	5	5	-
Reversibility:	5	5	5	5	-
Probability:	4	2	4	2	-
Total SP:	96	32	96	32	-
Significance rating:	Medium-High	Low	Medium-High	Low	-



Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • The base station infrastructure (or any future combination of such infrastructure) shall not at any time cause the public to be exposed to RF levels that exceed the ICNIRP public exposure guideline; • The projected RF exposure levels within the area to which the public has reasonable access to must be determined and certified by a qualified person and supplied to Council’s Director Health Services, prior to the erection of the cell mast infrastructure. Such qualified person must provide a certified statement that the projected RF exposure levels are within the ICNIRP public exposure guidelines; • Appropriate steps must be taken by the Applicant, to the satisfaction of Council, to ensure that: <ol style="list-style-type: none"> 1. The public exclusion zone is determined by a qualified person and forwarded to Council prior to the erection of the infrastructure. Such exclusion zone must thereafter be adequately sign posted with the appropriate health warning signs in accordance with international best practise; and, 2. Access control measures must be implemented to ensure that unauthorised persons do not gain access to the public exclusion zone; • The applicant must ensure that regular measurements are taken to ensure that the cell base station and related infrastructure meet the ICNIRP public exposure guidelines. Such measurements are to be at the cost of the applicant and made available to the Executive Director Health Services; • In the event of such measurements showing that the ICNIRP public exposure guidelines are being exceeded, Council reserves the right to withdraw the land use planning and national building regulations permission and cause the cellular telecommunication infrastructure to be decommissioned at the cost of the applicant; • Health standards are to be reviewed periodically based on on-going scientific research. The Applicant will be required to decommission (including site rehabilitation) or upgrade any communication structure that does not meet the most recently publish health standards of the World Health Organisation, the International Committee on Non-Ionising Radiation Protection (which have been adopted by the National Department of Health) and the Independent Communication Authority of South Africa; • Should the Health Department determine that the current limits of the electromagnetic radiation pose a significant health risk, decommissioning shall be required and the site be rehabilitated to the satisfaction of this Department; • Numerical simulations of predicted RF EME levels must be submitted to the City Health’s Senior Mechanical Engineer, for verification and assessment, prior to approval of the site. This Department may request further information or verification form the Applicant, which may include numerical simulations of predicted RF EME 				N/A



Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	levels done by an independent certified institution. These readings must be submitted with reference to compliance with the latest public exposure limits i.e. what percentage it is of the ICNIRP guidelines; and, <ul style="list-style-type: none"> The following legislation that pertains to Environmental Health must be complied with: <ol style="list-style-type: none"> The National Health Act, 2003 (Act 61 of 2003). 				
Nature of impact: Connectivity and Internet Speed within the area.	Activity: Since the introduction of LTE in South Africa in 2012 there has been greater need for access to faster data. Higher penetration of LTE data in educational, residential, commercial and business areas has led to lower subscription fees which in itself provide economic sustainability and development.				Should the proposed development not take place, users within the area will continue to experience weak signal and dropped calls.
Magnitude:	4	N/A	4	N/A	6
Duration:	3		3		3
Extent:	2		2		2
Irreplaceable:	0		0		0
Reversibility:	0		0		1
Probability:	5		5		5
Total SP:	45		45		60
Significance rating:	Medium (+)		Medium (+)		Medium
Cumulative impact:	-	-	-		
Proposed Mitigation:	<ul style="list-style-type: none"> Mitigation measures are not applicable as the impact is positive. 				N/A

Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON NOISE:					
Nature of impact: Noise nuisance generated by vehicles and maintenance personnel.	Activity: Noise nuisance that may be created by maintenance work conducted on the proposed mast as well as the presence of personnel on site.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	3	3	3	3	-



Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Extent:	1	1	1	1	-
Irreplaceable:	2	0	2	0	-
Reversibility:	1	0	1	0	-
Probability:	3	2	3	2	-
Total SP:	33	12	33	12	-
Significance rating:	Low	Low	Low	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Limit working hours of noisy equipment to daylight hours; Unless otherwise specified, normal working hours will apply (i.e. from 07:00 to 17:00, Mondays to Fridays); Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours; and, No loud music is permitted on site. 				N/A

Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON VISUAL:					
Nature of impact: Impact on the sense of place for surrounding users.	Activity: The development of the Mast will cause a visual intrusion to observers within a five kilometre (5km) radius from the proposed development.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	6	4	-
Duration:	3	3	3	3	-
Extent:	2	2	2	2	-
Irreplaceable:	4	3	4	3	-
Reversibility:	1	1	1	1	-
Probability:	5	4	5	4	-
Total SP:	70	44	80	52	-
Significance rating:	Medium	Medium	Medium-High	Medium	-
Cumulative impact:	-	-	-	-	-



Operational Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Proposed Mitigation:	<ul style="list-style-type: none"> Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare; The proposed mast must be painted Brown and glare must be prevented. Should the tree mast be developed (Preferred Alternative) it must be painted green in order to blend with the surrounding trees; Mitigation to minimise lighting impacts include the following: <ul style="list-style-type: none"> Shielding the source of light by physical barriers (walls, vegetation or structures itself); Limit mounting heights of lighting fixtures, or alternatively using foot-lights or bollard level lights; Make use of downward directional lighting fixtures; Make use of minimum lumen or wattage in lights; Use motion sensors to activate lighting ensuring light is available when needed. 				N/A

1.5 Potential Impacts during the Decommissioning Phase

Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS :					
Nature of impact: Negative impact of haphazard placement of infrastructure on the environment.	Activity: The establishment of a main site office and storage site during the decommissioning period will ensure that the poor placement of materials and infrastructure will be avoided. This could also result in the damage or pollution to surrounding areas caused by construction activities.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	0	2	0	-
Reversibility:	2	1	2	1	-
Probability:	4	3	4	3	-
Total SP:	44	18	44	18	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Proposed Mitigation:	<ul style="list-style-type: none"> • Draw up and submit for approval a Site Layout Master Plan. This plan must show the final positions and extent of all permanent and temporary site structures and infrastructure; • The planning for layout must be done in consultation on-site with the Environmental Control Officer (ECO); • The contractor may not deface, paint, damage or mark any natural features situated in or around the site for survey or other purposes; • The contractor must ensure that all construction personnel, labourers and equipment remain within the demarcated construction sites at all times; • No servicing of vehicles must be permitted on site, unless for emergency purposes; • Stockpiles should not be situated such that they obstruct pathways; • Location of storage area must take into account prevailing winds, distance to water bodies and general on-site topography; • Place infrastructure as far as possible on sites that have already been transformed; • Facilities may not be used as staff accommodation; • The Contractors camp layout shall take into account availability of access for deliveries and services and any future works; • The Contractors camp should be of sufficient size to accommodate the needs of all sub-contractors that may work on the project; and, • The Contractor shall implement the following as required: <ul style="list-style-type: none"> ➤ Suitable sanitation facilities, adequate for the number of staff on site (1 for every 15 personnel and 1 for each gender); and, ➤ Facilities for solid waste collection. 				N/A
Nature of impact: Topsoil Removal and Soil Erosion	Activity: The clearing of topsoil and excavation for the removal of building foundations that will result in the destruction of fertile topsoil.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Irreplaceable:	4	1	4	1	-
Reversibility:	3	3	3	3	-
Probability:	4	2	4	2	-
Total SP:	56	18	56	18	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Remove topsoil approximately 300mm deep from establishment area and stockpile areas; Topsoil stockpiles to be kept free from weeds; Topsoil stockpiles to be placed on a levelled area and measures to be implemented to safeguard the piles from being washed away in the event of heavy rain/storm water; Topsoil need to be stored on designated areas only. This need to be planned and indicated in the site-layout plan; Ensure that topsoil is not mixed with subsoil and/or any other excavated material; Provide containment and settlement facilities for effluents from concrete mixing and washing facilities; Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan; Provide spill containment facilities for hazardous materials like fuel and oil; and, Topsoil must be used in all rehabilitation activities, and may not be compacted to ensure that its plant support capacity remain of high quality. 				N/A
Nature of impact: Surface and groundwater contamination due to decommissioning activities such as the use of hazardous materials on site e.g. fuel and oil.	<p>Activity: Spills could possibly occur on site and lead to the contamination of soil and groundwater.</p>				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	2	6	2	-
Duration:	2	2	2	2	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Extent:	2	1	2	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	3	2	3	2	-
Probability:	3	2	3	2	-
Total SP:	45	16	45	16	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Concrete can be mixed on mixing trays only and not on exposed soil. Concrete must be mixed only in areas which have been specially demarcated for this purpose (preferable where no natural vegetation occur); • Concrete mixing to be carried out away from sensitive areas and on impermeable surfaces; • Material Safety Data Sheets (MSDSs) should be available on site for all chemicals and hazardous substances to be used on-site, including information on their ecological impacts and how to minimise the impacts in case of leakage; • All spillage must be cleaned up immediately after they have occurred; • Spillage of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bio-remediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site; • Do not locate any ablution facilities, sanitary convenience, septic tank or French drain within the 1:100 year flood line, or within a horizontal distance of 100m (whichever is greater) of a watercourse or drainage line; • Vehicles and machinery must be regularly serviced to avoid leakages; • At the work site the Contractor must maintain strict surveillance to ensure that no spills occur; • No water courses may be used to clean equipment, or for bathing. All cleaning operations should take place off site at a location where waste water can be disposed of correctly; • The discharge of any pollutants such as cement, concrete, lime, chemicals, etc. into the natural environment and the storm water system must strictly be prohibited; • Fuel and chemical storage should be done within a designated area only, which is properly bund and able to contain 110% of the capacity of fuel or chemicals stored within; • Construction vehicles must be inspected every morning before work commence to ensure that no leakages do occur; 				N/A



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> All personnel must receive induction on how to report spillages, contain them and treat them accordingly; Spill kits must be available at each working station; Drip trays must be placed beneath all construction equipment that is stationary on site or within the site camp; and, Hazardous waste must be stored in bins with a lid in a demarcated waste area, and must be disposed of at a hazardous treatment facility with records on file. 				
Nature of impact: Handling of general waste materials on the decommissioning site.	Activity: The presence of personnel and decommissioning operations on site will increase the likelihood of littering and the dumping of solid waste.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	2	6	2	-
Duration:	2	2	2	2	-
Extent:	2	1	2	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	2	0	2	0	-
Probability:	2	2	2	2	-
Total SP:	4	12	4	12	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> An adequate number of scavenger proof litter bins are to be placed throughout the site. Two waste bins at least must be present, one (1) for hazardous waste and one (1) for non-hazardous waste at each working site. Dumping of waste on site is prohibited; Waste sorting and separation should form part of the environmental induction and awareness programme, to encourage personnel to collect waste paper, glass and metal waste separately; Keep all work sites including storage areas, offices and workshops neat and tidy; Dedicate a demarcated and signposted storage area on site for the collection of decommissioning waste; All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site (Addo Langbos Landfill site) as mentioned in the Basic Assessment Report; 				N/A



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> Care should be taken to ensure that no waste fall off disposal vehicles on-route to the landfill. If needed, a tarpaulin can be utilised; The burning or burying of solid waste on site is prohibited. Do not burn PVC pipes or other plastic materials, as this is regarded as hazardous waste; Littering by decommissioning workers shall not be permitted; Workers from the immediate area need to be encouraged to take their waste with them at the end of each day; General refuse/rubbish shall be removed from site on a weekly basis to an approved registered landfill site or as soon as the waste bins are reaching full capacity; Minimise waste by sorting wastes into recyclable and non-recyclable waste; Ablution facilities must be serviced by a registered service provider, cleaned at least once a week, and safe disposal slips must be on file at the site office; A bi-weekly (twice a week) litter patrol of the entire site shall be conducted by the designated Environmental Control Officer (ECO); Hazardous waste must be sorted from non-hazardous waste and disposed of at a hazardous treatment facility, records and proof of disposal must be kept; and, A register must be kept of the quantities of waste disposed and proof of disposal must be available at the site office. 				
Nature of impact: Increased risk of veld fires.	Activity: Due to the presence of decommissioning personnel in natural areas, fires can occur if not managed to the correct standard.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	8	4	8	4	-
Duration:	2	2	2	2	-
Extent:	2	1	2	1	-
Irreplaceable:	3	3	3	3	-
Reversibility:	4	4	4	4	-
Probability:	3	2	3	2	-
Total SP:	57	28	57	28	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> The Contractor shall take all reasonable and precautionary steps to ensure that fires are not started as a consequence of the activities on site; Ensure the work site and the contractor’s camp is equipped with adequate firefighting equipment. This includes at least rubber beaters when working in veldt areas, and at least one fire extinguisher of the appropriate type irrespective of the site; Workers must be adequately trained in the handling of firefighting equipment, and can include but not limited to: <ul style="list-style-type: none"> ➤ Regular fire prevention talks and drills; and, ➤ Posting of regular reminders to staff; No open fires are permitted anywhere on site. Do not store any fuel or chemicals under trees; Do not store gas and liquid fuel in the same storage area (Hazardous substances to be stored in accordance with SANS); Any fires that occur on site shall be reported to the ECO immediately and then to the relevant authorities; In the event of a fire, the Contractor shall immediately employ such plant and personnel as is at his disposal and take all necessary action to prevent the spread of the fire and bring it under control; Do not permit any smoking within 3m of any fuel or chemical storage area, or refuelling area. A designated smoking area must be established on site. All construction vehicles must be fitted with at least one fire extinguisher. 				N/A
Nature of impact: Traffic impacts associated with the movement of decommissioning vehicles on site.	Activity: The movement of vehicles on site may result in the destruction of biodiversity, compaction of valuable topsoil and mortalities of fauna on site.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Extent:	1	1	1	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	2	2	2	2	-
Probability:	4	2	4	2	-
Total SP:	44	16	44	16	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • During construction create designated turning areas and strictly prohibit any off-road driving or parking of vehicles and machinery outside designated areas; • Monitor the establishment of (Alien) Invasive Species and remove as soon as detected, before regenerative material can be formed; • Abnormal loads and machinery should avoid movement over gravel roads during and immediately after rainfall events, so as to limit destruction of road surfaces and sedimentation of downhill rivers/streams; • All vehicles must be road-worthy, be maintained to prevent fuel or oil leaks and drivers are to be licensed appropriately for the driving of their assigned vehicle. Drivers responsible for the transportation of personnel must be specifically licensed to do so; • Construction vehicles may not leave the designated roads and tracks, whilst U-Turns are prohibited on all roads; • Signage is to be placed on vehicles at all times; • All decommissioning vehicles should adhere to decommissioning sites and avoid off road to minimise impact on vegetation and soil; • After decommissioning, if access roads or portions thereof will not be of further use to the landowner, remove all foreign material and rip area to facilitate the establishment of vegetation, followed by a suitable revegetation program, and • decommissioning-related vehicles and machinery may not operate on site without reflective safety signage, car-top lights and reflective personnel gear. 				N/A
Nature of impact: Traffic impacts associated with the movement of	Activity: The movement of vehicles in the vicinity of the site may cause damage to road surfaces as well as increase in the traffic volume of Riverside Road.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
decommissioning vehicles.					undertaken.
Magnitude:	6	4	6	4	-
Duration:	2	2	2	2	-
Extent:	3	3	3	3	-
Irreplaceable:	2	2	2	2	-
Reversibility:	2	2	2	2	-
Probability:	5	3	5	3	-
Total SP:	75	39	75	39	-
Significance rating:	Medium-High	Low	Medium-High	Low	-
Cumulative impact:	Low	-	Low	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Abnormal loads should be timed to avoid times of year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods; Vehicles used for transport of materials and sand must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces; Any damage to public roads is to be reported to the management authority and repaired to its original condition; Transport of materials should be limited to the least amount of trips possible; and, Abnormal loads should not be transported after dark. 				N/A

Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON BIOLOGICAL ASPECTS:					
Nature of impact: Direct impact on vegetation during decommissioning and loss of species.	Activity: The decommissioning of several permanent structures on site will result in the loss of vegetation due to foundation removal.				No impact will occur as the decommissioning activities will not take place. Vegetation and habitat features of the proposed development site will remain unaffected.
Magnitude:	4	2	4	2	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	0	2	0	-
Reversibility:	2	0	2	0	-
Probability:	5	5	5	5	-
Total SP:	55	25	55	25	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated foundation footprint area; Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the decommissioning of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMP'r, if possible; Indigenous vegetation unique to the area must be used during landscaping activities; There should be a pre-decommissioning environmental induction for all staff on site to ensure that basic environmental biodiversity principles are adhered to; Where the ECO deems it necessary (e.g. sensitive, natural areas) the ecologist appointed to do the vegetation study will be utilized; Restoration measures will be required to reinstate functionality in the disturbed soil and vegetation; Impacts to sensitive sites (drainage lines) should be avoided; No vegetation may be gathered for the purpose of creating fire; and, Areas to be cleared should be agreed and demarcated before the start of the clearing operations. 				N/A
Nature of impact: Dust nuisance generated by the operation of machinery and vehicles.	Activity: The frequent upwelling of dust as consequence of the movement of vehicles and machinery on site may impact on worker health causing asthma and other respiratory conditions. Stockpiles are susceptible to the upwelling of fine particulate matter. Several ambient factors, the terrain characteristics, soil type and land use forms can attribute to the degree of loss and susceptibility of stockpiles towards the generation of dust. Regular watering of exposed surfaces may result in the reduction of wind-generated dust from stockpiles.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Duration:	2	2	2	2	-
Extent:	2	1	2	1	-
Irreplaceable:	1	1	1	1	-
Reversibility:	1	1	1	1	-
Probability:	3	2	3	2	-
Total SP:	30	14	30	14	-
Significance rating:	Low	Low	Low	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Implement dust suppression measures by watering areas to be cleared as well as already exposed surfaces with damaged soil particles, particularly during dry, windy periods; Ensure all vehicles remain on designated roads and avoid the opening of detour or by-pass tracks; Implement speed restrictions for vehicles on gravel roads; Vehicles delivering or removing soil shall be covered to reduce spills and windblown dust; Any complaints received by the Contractor regarding dust will be recorded and communicated to the ECO; Ensure all vehicles remain on designated roads and avoid the opening of detour or by-pass tracks; A speed limit of 30km/h must be applied on gravel roads; and, After decommissioning, if access roads or portions thereof will not be of further use to the landowner, remove all foreign material and rip area to facilitate the establishment of vegetation, followed by a suitable revegetation program. 				N/A
Nature of impact: Fauna will be directly impacted as a result of decommissioning activities and human presence at the site.	Activity: The decommissioning of facilities will result in some habitat loss for resident fauna, as some species will occur within the affected areas. In addition, increased levels of noise, pollution, disturbance and human presence during decommissioning will be detrimental to resident fauna. Sensitive and shy fauna may move away from the area during the decommissioning phase as a result of the noise and human activities present, while some slow-moving species (such as mole rats or blind snakes) would not be able to avoid the decommissioning activities and might be killed.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	0	4	0	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Irreplaceable:	2	1	2	1	-
Reversibility:	5	0	5	0	-
Probability:	3	2	3	2	-
Total SP:	42	8	42	8	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> No hunting, snaring, shooting, nest raiding or egg collection by the decommissioning staff should be allowed; Holes and trenches should not be left open for extended periods of time and should only be dug when needed for immediate decommissioning. Trenches that may stand open for some days should have places where the loose material has been returned to the trench to form an escape ramp present at regular intervals to allow any fauna that fall in to escape; Fires should only be allowed within fire safe demarcated area; Ensure that the decommissioning area is fenced off from adjacent areas which may harbor wild animals; Do not store building materials and excess stockpiled soils within riparian zones or within areas where natural vegetation occur; and Should any fauna be discovered it should be relocated to an area outside the development footprint by a trained professional. 				N/A

Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON SOCIO-ECONOMIC ASPECTS:					
Nature of impact: Health Impacts on surrounding landowners.	Activity: Possible effects of electromagnetic field radiation from the base station on localised residence will no longer be a thread due to the removal of the mast.				Should the mast not be decommissioned it will remain a health hazard to the surrounding landowners.
Magnitude:	6	N/A	6	N/A	4
Duration:	3		3		3
Extent:	2		2		2
Irreplaceable:	0		0		5



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Reversibility:	0		0		5
Probability:	5		5		4
Total SP:	55		55		76
Significance rating:	Medium (+)		Medium (+)		Medium-High
Cumulative impact:	-		-		-
Proposed Mitigation:	<ul style="list-style-type: none"> N/A 				<ul style="list-style-type: none"> Towers must operate within the standards as set out by the International Commission on Non-Ionising Radiation Protection (ICNIRP); The Applicant must ensure that regular measurements are taken to ensure that the cell base station and related infrastructure meet the ICNIRP public exposure guidelines. Such measurements are to be at the cost of the applicant and made available to the Executive Director Health Services; In the event of such measurements showing that the ICNIRP public exposure guidelines are being exceeded, Council reserves the right to withdraw the LUPO and



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
					<p>NBR permission and cause the cellular telecommunication infrastructure to be decommissioned at the cost of the Applicant;</p> <ul style="list-style-type: none"> • Health standards are to be reviewed periodically based on on-going scientific research. The Applicant will be required to decommission or upgrade any communication structure that does not meet the most recently published health standards of the World Health Organisation, the International Committee on Non-Ionising Radiation Protection and the Independent Communication Authority of South Africa; • Should the Health Department determine that the current limits of the electromagnetic radiation pose a significant health risk, decommissioning shall



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
					be required and the site be rehabilitated to the satisfaction of the Health Department. <ul style="list-style-type: none"> Applicant to ensure compliance with the City of Cape Town Cellular Telecommunication Infrastructure Policy;
Nature of impact: Connectivity and Internet Speed within the area.	Activity: Since the introduction of LTE in South Africa in 2012 there has been greater need for access to faster data. Should the mast be decommissioned the Cragga Camma area will experience a shortfall in signals, which may hamper economic development within the area.				Activity: Since the introduction of LTE in South Africa in 2012 there has been greater need for access to faster data. Higher penetration of LTE data in educational, residential, commercial and business areas has led to lower subscription fees which in itself provide economic sustainability and development.
Magnitude:	6	N/A	6	N/A	4
Duration:	3		3		3
Extent:	2		2		2
Irreplaceable:	0		0		0
Reversibility:	1		1		0
Probability:	5		5		5
Total SP:	60		60		45
Significance rating:	Medium		Medium		Medium (+)
Cumulative impact:	-	-			
Proposed Mitigation:	<ul style="list-style-type: none"> Mitigation measures are not applicable as the impact can only be minimised through the construction of a 				N/A



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	Telecommunication Base Station.				
Nature of impact: Occupational Health and Safety.	Activity: During the decommissioning phase, accidents, occupational diseases, ill health and damage to property can occur if pre-cautionary measures are not taken. Increased movement of vehicles may lead to increased accidents among local communities, construction workers and vehicle operators.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	2	6	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	4	2	4	2	-
Reversibility:	4	4	4	4	-
Probability:	3	2	3	2	-
Total SP:	51	22	51	22	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> The Contractor shall comply with all standard and legally required health and safety regulations; The Contractor shall provide a standard first aid kit at the site offices; There must be a Safety Officer on site who has first aid training and knowledge of safety procedures; The Contractor shall provide the appropriate Personal Protective Equipment for staff; and, The Contractor must have insurance cover for the workmen. 				N/A

Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON CULTURAL-HISTORICAL ASPECTS:					
Nature of impact: Damage and destruction of vertebrate fossils during excavation activities.	Activity: Excavation activities can result in the discovery of cultural and historical artefacts beneath the earth surface. Damage or loss can occur if the correct procedures are not followed.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Magnitude:	4	0	4	0	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	5	5	5	5	-
Probability:	2	1	2	1	-
Total SP:	28	9	28	9	-
Significance rating:	Low	Low	Low	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Should any heritage resources (including but not limited to fossil bones, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and other built features, rock art and rock engravings) be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to assess the finds, and this must then be reported to the applicable heritage authority; • Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so, has been given; • Excavations must be limited to the footprint area and be maintained in a narrow corridor; • All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed: <ul style="list-style-type: none"> ○ All construction in the immediate 50 m vicinity radius of the site must cease; ○ The heritage practitioner must be informed as soon as possible; ○ In the event of obvious human remains SAPS must be notified; ○ Mitigation measures (such as refilling, etc.) must not be attempted; ○ The area in a 50 m radius of the find must be cordoned off with hazard tape; • Public access must be limited and the area must be placed under guard; and, • The appointed archaeologist must apply for a valid permit from SAHRA to excavate the furnace for display and educational purposes. 				N/A

Decommissioning Phase	Tree Mast Alternative 1	Monopole Mast Alternative 2	No-Go Alternative
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	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL VISUAL IMPACTS:					
Nature of impact: Impact on the sense of place for surrounding users.	Activity: The movement of construction vehicles, machinery and personnel on site shall result in a visual impact on surrounding users. Furthermore to this, the storage of materials and excavation shall result in disturbance and an unsightly character.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	4	2	4	2	-
Duration:	2	2	2	2	-
Extent:	1	1	1	1	-
Irreplaceable:	2	1	2	1	-
Reversibility:	1	1	1	1	-
Probability:	3	3	3	3	-
Total SP:	30	21	30	21	-
Significance rating:	Low	Low	Low	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Access roads are to be kept clean and dust suppression techniques should be implemented to minimise impacts of vehicle movement; • Site offices and structures should be limited to one location and carefully situated to reduce visual intrusions. Roofs should be grey and non-reflective; • Decommissioning camps as well as development areas should be screened with netting; • Lights within the decommissioning camp should face directly down (angle of 180°); • Minimum vegetation should be removed to ensure the visual absorption capacity remain high; • Infrastructure design need to be in line with the sense of place (Agriculture); • Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact; and, • Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare. 				N/A
Nature of impact: Visual impact of the proposed	Activity: The removal of the proposed telecommunication mast will have a positive impact on the character of the site due to the removal of the visual intrusion.				Activity: The development of the Mast will cause a visual intrusion to



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
telecommunication mast					observers within a five kilometre (5km) radius from the proposed development.
Magnitude:	6	N/A	6	N/A	4
Duration:	5		5		3
Extent:	2		2		2
Irreplaceable:	0		0		4
Reversibility:	0		0		1
Probability:	5		5		5
Total SP:	65		65		70
Significance rating:	Medium (+)		Medium (+)		Medium
1Cumulative impact:	-		-		-
Proposed Mitigation:	<ul style="list-style-type: none"> No mitigation measures are necessary as the telecommunication mast will be removed. 				<ul style="list-style-type: none"> Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare; The proposed mast must be painted silver and glare must be prevented. Should the monopole mast be developed (Alternative 1) it must be painted green in order to blend with the surrounding trees; Mitigation to minimise lighting impacts include the following: <ul style="list-style-type: none"> Shielding the source of light by physical



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
					barriers (walls, vegetation or structures itself); <ul style="list-style-type: none"> • Limit mounting heights of lighting fixtures, or alternatively using foot-lights or bollard level lights; • Make use of downward directional lighting fixtures; • Make use of minimum lumen or wattage in lights; • Use motion sensors to activate lighting ensuring light is available when needed.

Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON NOISE ASPECTS:					
Nature of impact: Noise nuisance generated by decommissioning works, vehicles and personnel.	Activity: The operating of vehicles and machinery on site results in the generation of noise disturbing users of the surrounding area.				No decommissioning phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
Magnitude:	6	2	6	2	-
Duration:	2	2	2	2	-



Decommissioning Phase	Tree Mast Alternative 1		Monopole Mast Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Extent:	1	1	1	1	-
Irreplaceable:	2	0	2	0	-
Reversibility:	1	1	1	1	-
Probability:	5	5	5	5	-
Total SP:	60	30	60	30	-
Significance rating:	Medium	Low	Medium	Low	-
Cumulative impact:	-	-	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Limit working hours of noisy equipment to daylight; • No unnecessary hooting by project and resident vehicles; • Any complaints received by the Contractor regarding noise will be recorded and communicated to the Environmental Officer; • All stationary noisy equipment such as compressors and pumps should be contained behind acoustic covers, screens or sheds where possible; • The regular inspection and maintenance of equipment must be undertaken to ensure that all components is functioning optimally; • Where recurrent use of machinery is frequent, machines should be shut down during intermediate periods; • Fit silencers to equipment; • Unless otherwise specified by the ESA, normal work hours will apply (i.e. from 06:30 to 17:00, Mondays to Fridays); • Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours; and, • No loud music is permitted on site or in the Camp. 				N/A

3. ENVIRONMENTAL IMPACT STATEMENT

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

No specialist studies are foreseen due to the size of the development and as no sensitive environmental areas occur within close vicinity of the site.

All potential impacts on biological, geological and physical, noise, socio-economic and cultural-heritage aspects range from a moderate-high to low significance without mitigation and management there-of, however it can all be mitigated to an acceptable low significance rating with implementation of the mitigation measures and strict compliance with the EMPr.

Impacts associated with this proposed project are described and the significance rating given in Section D.

No-go alternative (compulsory)

The no-go option to construct the base station to serve multiple cellular providers with secure cellular network coverage, capacity and 4G internet connectivity to the surrounding area, was considered, but would only have been recommended if it were found that the construction of a cellular base station on this site might potentially cause substantial detrimental harm to the environment. Each base station in the network forms an integral part of the network. The no-go option in this case would thus not only mean that the surrounding area would continue to have weak cellular coverage or 4G wireless internet connectivity, but would affect the functionality of the entire network. Additionally, the ICASA standards will not be met and the potential visual impacts associated with the proposed project will not be realized.

For these reasons, the no-go option is considered to be undesirable.

SECTION E: RECOMMENDATIONS OF PRACTITIONER

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

YES X	
YES X	

Is an EMPr attached?

The EMPr must be attached as Appendix F.

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

N/A

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:

- Towers must operate within the standards as set out by the International Commission on Non-Ionising Radiation Protection (ICNIRP);
- The Applicant must ensure that regular measurements are taken to ensure that the cell base station and related infrastructure meet the ICNIRP public exposure guidelines. Such measurements are to be at the cost of the applicant and made available to the Executive Director Health Services;
- In the event of such measurements showing that the ICNIRP public exposure guidelines are being exceeded, Council reserves the right to withdraw the LUPO and NBR permission and cause the cellular telecommunication infrastructure to be decommissioned at the cost of the Applicant;
- Health standards are to be reviewed periodically based on on-going scientific research. The Applicant will be required to decommission or upgrade any communication structure that does not meet the most recently published health standards of the World Health Organisation, the International Committee on Non-Ionising Radiation Protection and the Independent Communication Authority of South Africa;
- Should the Health Department determine that the current limits of the electromagnetic radiation pose a significant health risk, decommissioning shall be required and the site be rehabilitated to the satisfaction of the Health Department; and,
- All mitigation measures must be adhered to as stipulated within the Environmental Management Programme.

References

Bennie. SJ. 2008. Heritage Impact Assessment Portion 87 of the Farm Cragga Kamma No. 23, Port Elizabeth [web: https://sahris.sahra.org.za/sites/default/files/heritagereports/9-2-073-0001-20080904-JB_0.pdf (Date of Access: 29 April 2019)].

SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Program (EMPr)

Appendix G: Other information