DRAFT BASIC ASSESSMENT REPORT

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

Proposed Development of Optic Fibre Cables along the R524 and R81 roads, Thohoyandou Registration Division within the Thulamela Local Municipality, Limpopo Province

27 October 2015

Prepared for:

Vodacom

Prepared by

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EXECUTIVE SUMMARY

Neotel (Pty) Ltd. (hereafter referred to as "Neotel") is licensed as South Africa's first alternative infrastructure-based telecoms provider, capable of delivering a broad range of wireline and wireless data telecoms services on a national and international level. Neotel has been appointed by the Vodacom Group Limited (hereafter referred to as "Vodacom") for the establishment of a broadband network, to improve the network which will benefit the community using the Vodacom cell phone network in the Thohoyandou area, Limpopo Province. The broadband network can also provide high speed fixed line internet services to businesses and other customers that are situated close to the fibre network.

Neotel (Pty) Ltd. proposes to install construct belowground optical fibre cables on behalf of the Vodacom Group Limited (hereafter referred to as "Vodacom") in provincial and national road reserves of the Thulamela Local Municipality, Limpopo 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). The Environmental Impact Assessment (EIA) Regulations, 2014 promulgated in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA)

To assess the environmental impact of this proposed development and to meet the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998), Enviroworks has been appointed to undertake a Basic Assessment process. This draft Basic Assessment Report forms part of this process and has been prepared in accordance with the listed requirements as stated by the Competent Authority, Limpopo Department of Economic Development, Environment & Tourism (LEDET).

This report is structured as Section A to G for which a succinct description of the content herein is as follows:

Section A: Activity Description provides an overview of the development proposal and listed activities which are triggered in terms of listing notices GN R. 985 of the EIA Regulations, 04 December 2015. Activities triggered by the development proposal are as follow:

Government Notice No. R985 – Listing Notice 3

Activity 12(a)(i): The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

(a) In Eastern Cape, Free State, Gauteng, Limpopo, North West and Western Cape provinces:

Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;

Neotel propose to construct three belowground optical fibre cables (in other words three portions), which will be linked to existing Vodacom communication masts. The proposed belowground optical fibre cable portions will be as follow:

- **Route Section 1** – this section of the underground cable will be located on the R524 road between Mphego and Thohoyandou-P. Portion 1 stretches over approximately 6.2 kilometer (km) along the R524 road from Mphego towards Thohoyandou-P.
- **Route Section 2** – this section of the underground cable will be located on the R524 road between Nyavhani and Muraga. Portion 2 stretches over approximately 8.2 km along the R524 road from Nyavhani passing Segalo's towards Muraga.
- **Route Section 3** – this section of the underground cable will be located on the R81 road between Nyavhani and Malamulele-A. Portion 3 stretches over approximately 9.9 km along the R81 road form Nyavhani passing Shigalo towards Malamulele-A.

The route's road and shoulder surfaces are gravel, extending through a range of terrain and altitudes. To view this route, please refer to the locality maps in **Appendix A**.

Section B: Description of Receiving Environment 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 route and surrounding area are described herein, whilst applicable legislation, policy and guidelines considered are recognised.

Given the linear nature of the proposed activity and associated placement thereof within existing road reserves of the R81 and R524, a broad-level land use description of the receiving environment has been made. Aspects of the receiving environment like geology and soil, surface water, biodiversity and land use have all been described and are detailed in the provided section. Key attributes thereof are the predominant land uses of residential between natural areas. Nevertheless, the proposed development intends to align within the road corridors of the R81 and R524 roads, thus limiting disturbance to the landscape in the surrounding area.

Topography

The site's altitude varies between approximately 565 – 600m. The study area is situated on undulating plains. There are a number of drainage lines which drains towards the Levuvhu River which flows past the southern parts of Thohoyandou (Du Preez, 2015).

Geology & soils

The geology consists of the Bushveld complex containing granites, quartzites and diabase intrusions. The soils are of the Sterkspruit, Rensburg, Estcourt and Avalon soil forms (MacVicar et al. 1974, sited by du Preez, 2015).

Land-use & land-cover

The road reserve sites are highly transformed with impacts such as the original road construction activities as well as present day impacts such as grass cutting, vehicles driving onto the vegetation of the road reserve as well as the installation of new infrastructure such as pipelines, etc.

Vegetation, biogeography and conservation value

The vegetation of the study is shrub-savanna namely the Granite Lowveld Bushveld (SVl3) with scattered individuals of larger trees such as Marula (*Sclerocarya birrea*) and Red Syringa (*Burkea africana*). Important shrub species include *Albizia harveyii*, *Acacia caffra, Acacia robusta, Combretum apiculatum, C. collinum, C. zeyheri, Terminalia sericea, Ochna pulchra, Pterocarpus angolensis, Searsia leptodictya, Peltophorum africanum.* The grasses present are *Aristida congesta*, *Brachiaria nigropedata, Melinis repens, Eragrostis curvula, E. trichophora, E. rigidior, Hypethelia dissoluta, Hyparrhenia hirta, Heteropogon contortus, Themeda triandra* and *Panicum maximum. Forbs such as Diceerocaryum senecoides, Barleria macrostegia, Blepharis subvolvulus, Crabbea angustifolia, Kyphocarpha angustifolia,* and *Evolvulus alsinoides* and many others occur (Du Preez, 2015).

The conservation status of the vegetation type is Vulnerable and whilst the conservation target is 19%. The rest is considered to be transformed, mostly by mining activities, crop production, overgrazing and dams (Mucina & Rutherford, 2006, sited by du Preez, 2015).

Streams & Wetlands

There are a number of seasonal drainage lines which cross the R524 and R81. All these streams drain towards the Levuvhu River. These seasonal drainage lines are episodic streams and only flows after thunderstorms. The Levhuvhu River is a perennial stream (Du Preez, 2015).

Protected species in terms of the National Forests Act (Act 84 of 1998)

The only tree species noted in the area which is protected terms of the National Forests Act (Act 84 of 1998) is the Marula Tree (*Sclerocarya birrea*) and Leadwood (*Combretum imberbe*). All along the roads (R524 & R81) Marula Tree specimens as well as small Leadwood Trees occur (Du Preez, 2015).

Aquatic assessment of the Levuvhu River and episodic streams

All the episodic drainage lines on the study sites are streams which only flow when it is raining in their catchments. There is no riparian shrub but wetland vegetation occurs along these streams. These drainage lines are present on both sides of the road and are linked with a culvert or storm water pipes. The trenches for the optic fibre cables will cut through these wetlands. In the case of the Olifants River the infrastructure will be attached to the bridge itself (Du Preez, 2015).

Archaeological and Palaeontological aspects

No traces of any heritage resources were found. The Archaeologist concluded that the proposed installation of the optic fibre cable along the indicated sections of the R524 and R81 will have no negative impact on archaeological or any other heritage resources. There were no objections with regards to the proposed development from a cultural heritage perspective (Roodt, 2015).

Given the nature of the proposed development it is expected that impact on *in situ* palaeontological material from unweathered sedimentary bedrock strata is considered very low. There is very low potential for irreplaceable loss of palaeontological resources and the probability of impact on palaeontological resources as a result of the proposed development is also considered very low. It is recommended by the Palaeontologist that the proposed development is exempt from a Phase 1 Palaeontological Impact Assessment (Rossouw, 2015).

Section C: Public Participation describes the consultation component of this study between the EAP and Interested or Affected Parties and Stakeholders. Regulatory requirements of this process are discussed, with a summary of consultation made with state departments and comments and responses given. This BAR will be made available for a 30 day comment period from 28 October 2015 until 27 November 2015. Comment periods were afforded to parties, whereby an initial registration period was provided to parties from the **28th October 2015**.

Section D: Impact Assessment, Management, Mitigation and Monitoring Measures describe how the proposed development may impact on the geographical and physical, biodiversity, socio-economic and historical and cultural aspects of the receiving environment. Resource uses of the proposed development phases, attributed to waste and emissions, water use, power supply and energy efficiency are further discussed.

The section is then expanded to provide a description and assessment of the significance of impacts prior to and after mitigation, which incorporates a table with assigned values based on a significance matrix of magnitude, duration, extent, probability, irreplaceability and reversibility. This component is followed by the description of specialist studies and outgoing recommendations. Concluding the chapter, an impact summary is provided to recap on the range of impacts predicted, for which other management, mitigation and monitoring measures are proposed

Section E: Recommendation of the EAP 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.

Hereafter, **Section G: Declaration of the Environmental Assessment Practitioner**

TABLE OF CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS

CBA	Critical Biodiversity Areas
DWDM	Dense Wave Division Multiplexing
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
ESA	Ecological Support Areas
FMC	Fixed Mobile Convergence
Gbps	Gigabytes per second
GN	Government Notice
HIA	Heritage Impact Assessment
HDPE	High Density Polyethylene
IDP	Integrated Development Plan
I&APs	Interested and Affected Parties
NDSF	Non Dispersion Shifted Fibre
NEMBA	National Environmental Management Biodiversity Act
NEMPAA	National Environmental Management Protected Areas Act
NFEPA	National Freshwater Ecosystem Priority Area
NGN	New Generation Network
NWA	National Water Act
OF	Optic Fibre
OFC	Optic Fibre Cable
OTN	Optical Transport Network
PES	Present Ecological State
PSDF	Provincial Spatial Development Framework
Pty	Proprietary Limited
SDF	Spatial Development Framework

VIA	Visual Impact Assessment
WMA	Water Management Area

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

BASIC ASSESSMENT REPORT - EIA REGULATIONS, 2014

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.

File Reference Number:	
	(For official use only)
NEAS Reference Number:	
Date Received:	
Due date for acknowledgement:	
Due date for acceptance:	
Due date for decision	

Kindly note that:

1. The report must be compiled by an independent Environmental Assessment Practitioner.

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 in the report.

4. 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 Department of Economic Development, Environment and Tourism as the competent authority (Department) for assessing the application, it may result in the rejection of the application as provided for in the regulations.

5. An incomplete report may be returned to the applicant for revision.

6. Unless protected by law, all information in the report will become public information on receipt by the department. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

7. The Act means the National Environmental Management Act (No. 107 of 1998) as amended.

8. Regulations refer to Environmental Impact Assessment (EIA) Regulations of 2014.

9. The Department may require that for specified types of activities in defined situations only parts of this report need to be completed. No faxed or e-mailed reports will be accepted.

10. This application form must be handed in at the offices of the Department of Economic Development, Environment and Tourism:-

Postal Address:	**Physical Address**:
Central Administration Office Environmental Impact Management P. O. Box 55464 **POLOKWANE** 0700	Central Administration Office Environmental Affairs Building Cnr Suid and Dorp Streets **POLOKWANE** 0699

Queries should be directed to the Central Administration Office: Environmental Impact Management:-

For attention: Mr E. V. Maluleke
Tel: (015) 290 7138/ (015) 290 7167
Fax: (015) 295 5015
Email: malulekeev@ledet.gov.za

View the Department's website at http://www.ledet.gov.za/ for the latest version of the documents.

SECTION A: ACTIVITY INFORMATION

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

If YES, please complete the form entitled "Details of specialist and declaration of interest" or appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail[1]:

Optical fibre systems have revolutionised the transferal of information, through the conveyance of data by means of a tiny laser, at unprecedented speeds of up to 1 Terabit per second (one million binary digits per second), and over distances of thousands of kilometers.

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Neotel propose to construct three belowground optical fibre cables (in other words three portions), which will be linked to existing Vodacom communication masts. The proposed belowground optical fibre cable portions will be as follow:

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[1] Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

The proposed optical fibre network for this project will provide Vodacom with almost infinite bandwidth capacity to carry more information (voice and data) at higher speeds over greater distances using far less power than copper cables.

The proposed Optical Transport Network (OTN) architecture is designed to accommodate geographic reach, to uptake new services and to support increasing bandwidth demands. It will support multiple service nodes, allowing the service nodes to be optimally located in business centres. It will serve as a basis for the provision of a Fixed Mobile Convergence (FMC) New Generation Network (NGN) with offerings of various Broadband Services.

THE OPTIC FIBRE CABLE:

The Optic Fibre cable fibre type is quartz glass single mode, suitable for duct installation, applicable to transmission at the wavelength of 1310nm and 1550nm. The single mode optical fibre cable, to be installed, shall comply with the requirements of this specification and shall meet ITU-T Recommendation G.652 for Non Dispersion Shifted Fibre (NDSF), as well as the best industry practices for Dense Wave Division Multiplexing (DWDM)[2];

- The fibre shall be suitable for 155 Mbps, 622 Mbps, 2.5 Gbps transmission at 1550nm wavelength (C-band or 3rd window);
- The cable shall be applied for duct installation having excellent protection against external pressure and against rodents. Type of armouring shall be laminated glass yarns or of equivalent type;
- The cable shall be new and its lifetime shall be at least 30 years without any significant deterioration;
- The allowed temperature interval for operation & installation shall be 0°C to 55°C at relative humidity of 60% to 100% and transportation storage shall be -5o°C to 60°C at relative humidity of 60% to 95%;
- The minimum allowed bending radius for the coated fibres shall be less than 20 times the cable radius,

MANHOLES:

Manholes shall be constructed along the cable routes to accommodate access to the cable and enable maintenance of sections.

- The installation of prefabricated concrete manholes will be preferred, to speed up the construction process;
- The number of manholes required in an optical fibre network is mainly determined by the selected duct structure. For the urban construction method of placing the ducts inside the PVC conduits and hauling the OF into the ducts, the distance between manholes will be in the range of 150-200 meters, with the limiting factor being the installation of HDPE ducts inside the larger PVC conduits. Outside the urban area the distance

[2] DWDM transmission – Every fibre is lit with a rainbow of coloured lasers (Dense Wave Division Multiplexing or DWDM), each carrying a separate high bandwidth signal at several Gigabits per second (billions of bits per second). Adding the ability to switch these optical signals from one path to another at key nodes around the country (Optical Cross Connects) creates a network resilient to fibre breaks.

between manholes shall typically be in the range of 800-1 000 meters;

- Vodacom will use Fibre Cement round manholes. The manholes will be installed 1 meter deep so that they will be covered by 20cm of soil. The covered manholes shall be equipped with passive locating metallic discs.
- All splicing joints shall occur in manholes. The cables shall be supported fixed to suitable cable racks and brackets in all manholes.

PROTECTION OF THE OPTIC FIBRE CABLE

For optic fibre (OF) cable protection, protective ducts and conduits shall be used. The OF cables shall be inserted into ducts and installed into conduits as shown by Figure 1.

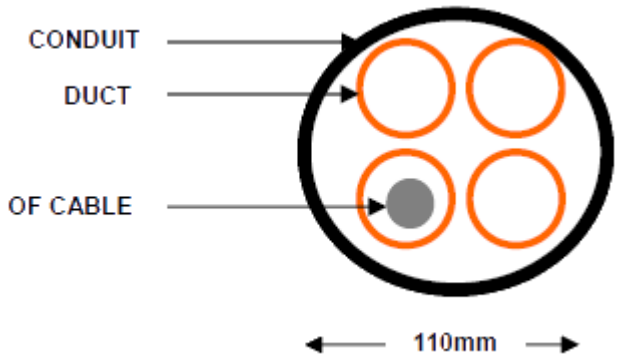

Figure 1: OF Duct and Conduit standard configuration

- The installation of the optic fibre cable (OFC) into the HDPE ducts shall be done by hauling or, preferable, blowing methods. Cables being installed across drainage trenches or channels shall be buried not less than 1 meter below the bottom of the drainage trenches or channels, and protected against mechanical damage by ferro-concrete plates, to be placed ±50cm above the cable.
- A warning tape will be laid along the whole length of the trench 30cm from the surface to prevent accidental damage to the duct.
- Optionally, location wire made of an insulated 0.9 mm copper wire may be laid along the route 10 cm under the warning tape. This method shall be used in areas potentially affected by cable vandalism and in areas where an increased cable protection is desirable or highly recommended. The ducts shall be protected by a concrete layer above the conduits.

EXECUTION OF WORKS

General

The optic fibre will be installed belowground by means of

- trenching by hand or by means of mechanical trenching;
- horizontal directional drilling method; and
- pipe crossings for bridges (bridge attachments);

The project mainly entails:

- The digging of a trench with dimensions of approximate 0.1 m to 0.35 m wide and 1 m deep;
- An area of approximately 0.5 m will be cleared on both sides of the trench;
- Directional drilling will be the preferred method in the case were roads, highways, and rivers will have to be crossed and in the case were all other services may prove dangerous and costly to cross, using the conventional trenching and ploughing methods;
- The construction of manholes;
- Filling of trench with 20 cm of soft sandy material;
- Laying of 2 x 32 mm - diameter PVC pipes on the soft material in the trench;
- Backfilling of the trench with the original excavated material;
- Compaction of the excavated material;
- Replacing of topsoil and reinstatement of the area;
- This trench will deviate between the road reserves and road surface of the road corridor depending on the environmental sensitivity of the area;
- Where water courses need to be crossed, the applicant proposes the following methods:
- Where possible for river crossings of 100m or narrower in width the horizontal directional drilling method (the drilling of more than 2m below the riverbed from one side of the river to the other, in order to minimise the environmental impact) shall be instated;
- Where possible river crossings of a width of 100m or more will be crossed using the method of bridge attachments;
- Where neither of the above two methods are found viable trenching shall be the chosen method of crossing;
- Where possible, wetlands of 100m or narrower in width shall be crossed using the horizontal directional drilling method;
- Alternatively if the opposing side of the road contains vegetation of lower sensitivity, construction will move under the road to the opposite side or within the road and continue until the wetland has been cleared where

construction will revert back to the original path; and

- Where possible for wetlands wider than 100m, construction shall move to the opposite side of the road, or within the road and continue until the wetland in question has been cleared, at which point it will revert back to the original path.

Duct Installation Method

1. Materials

a. Duct:

The main purpose of the duct is to provide a clear, protected pathway for the fibre optic cables. The duct shall be a flexible continuous solid wall duct.

b. Bedding Material:

- Material for use in bedding the duct shall be selected from the following:
    - Material excavated from the trench, provided that it contains little or no organic material and that it is graded with no particles exceeding 13mm and that it can be placed without significant voids;
    - A selected soil of natural or crushed material that has a PI not exceeding 6, free from vegetation, lumps and stones of diameter exceeding 13mm.

c. Backfill Material:

- Material excavated from trenches may be used as backfill in all areas, provided that such material complies with the civil works standards;
- The padding layer shall cover the duct(s) and/or cable(s) which have been laid and bedded by at least 150mm;
- The main backfill layer is placed on top of the padding layer;
- The re-instatement layer refers to the uppermost layer of the backfill that will form the surface of the filled trench. The surface of roads and walkways shall be restored to a state that comply with the standard specifications of the responsible Road Authority and to the full satisfaction of the owner of private roads and passage ways; and
- All backfill material, that needs to be imported, will be sourced from a licensed borrow area or bought from licensed suppliers.

2. Installation

a. Alignment:

- The duct infrastructure shall be placed in accordance with the way leave conditions; and
- Trenching across embankments and slopes shall be avoided to minimize erosion damages. Trenching within the verge areas will be allowed by means of labourers who manually excavate the trench, positioning of the trench line in verge areas of the road reserve shall take into account environmental sensitive areas with large indigenous trees to avoid damages to roots and branches, marsh areas and obstruction of water courses.

b. Duct Installation:

- Two ducts shall be laid in the trenches;
- The trenching depth must be set to the greater depth of the project specifications and the way leave conditions; and
- All artificial watercourses must be cleared such as not to reduce, or interfere with, the capacity of the water flow.

c. Ducts/Manholes:

- When the surrounding surface is generally level, the manholes shall be installed level such that there are no steps or slopes between the lid of the manholes and the surrounding area's surface. The surface of the lid and the surface of the surrounding walkway area shall not differ by more than 3mm;
- The manholes will be placed approximately 900m apart; and
- In the typical urban configuration, both ducts shall enter the manholes through a single knock-out hole, and exit the manholes through a single, other, knock-out hole.

d. Separation of trench from power cables:

- Where the ducts cross an existing underground power cable the ducts shall be laid at a minimum radial distance of 300mm from the power cable; and
- Trigonometric and other survey beacons or pegs may not be removed or altered. Where this becomes necessary the Engineer must be advised in order that suitable action may be taken.

Bridge Crossings

- Where possible river crossings of a width of 100m or more will be crossed using the method of bridge attachments;
- Prior to any bridge crossing permission must first be obtained in writing from the bridge owner; and
- Retainer blocks shall be installed at bridges where manhole placing requires angular reinstatement.

Horizontal Direction Drilling (HDD)

- Directional drilling shall be the preferred method to cross roads, highways, railway lines, rivers and all other services that may prove dangerous or costly to cross, using conventional methods like trenching or ploughing;
- When undertaking drills for the installation of the FOC underneath Freeways in urban and semi-urban areas as well as underneath Provincial Roads where there is uncertainty on any future road widening and/or construction that will take place, the straight line horizontal method should be considered;
- Drilling under watercourses must be approved by the ECO; and
- Abandoned drilling holes must be refilled by the Contractor with materials of homogenous composition and must harden after a specified time.

Control of Water

Storm water seepage precaution

- The Contractor shall properly and adequately protect the works from flooding and damage by storm water, flow from springs, and seepage; and
- No work shall be carried out within 32m of any natural water course without a valid Environmental Authorisation.

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 Department 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.

(a) the property on which or location where it is proposed to undertake the activity;

N/A

(b) the type of activity to be undertaken;

Optical fibre systems have revolutionised the transport of information. A single strand of glass thinner than a human hair can convey signals from a tiny laser at almost unimaginable speeds, today up to 1 Terabit per second (one million binary digits per second), and over distances of thousands of kilometers.

The backbone of Vodacom's network consists of many thousands of kilometers of optical fibre cable following railway lines and power lines across South Africa.

In the light of the aforementioned the following alternatives were considered by which the purpose and need of the proposed activity could be accomplished in the specific instance.

The proposed optic fibre cable will be installed belowground for all three route sections. This alternative is the preferred and only alternative.

The belowground installation will be undertaken by means of three methods i.e. trenching, directional drilling and bridge attachments. No other alternatives were assessed as SANRAL will only allow belowground cables within the road reserves, making all other alternatives unfeasible.

The optic fibre will be installed by means of one of the following methods:

- **Activity alternative 1: Trenching**
    - Trenching will be the chosen method of installing the cable within the road reserve, where not viable (e.g. at road, river and wetland crossings) activity alternatives 2 and 3 will be used.
    - The dimensions of the trenches with conduits will typically be 40cm to 50cm wide and 75cm to 100cm deep.
    - The trench will mainly remain within the road servitude. Where this is not possible a deviation request (such as bridge crossings and embankments) will be submitted to the roads authority.
    - Backfill will consist of excavated material without stones (stone-free soil). Whenever the trench bottom is abrasive, a layer of sand will be provided. Whenever the backfill is abrasive, the cable has to be covered by an additional layer of sand.

- Compaction of the filled trench will be done followed by the replacement of topsoil. Re-vegetation will be done where deemed necessary.

- **Activity alternative 2: Horizontal directional drilling (HDD)**

  - Directional drilling will be the preferred method in the case were roads, highways, railway lines and rivers will have to be crossed and in the case were all other services may prove dangerous and costly to cross, using the conventional trenching and ploughing methods;

- **Activity alternative 3: Bridge attachment**

  - Where possible river crossings of a width of 100m or more will be crossed using the method of bridge attachments;

All three Activity Alternatives is applicable to the proposed development since different Activity Alternatives will be applicable within different portions of the route sections, e.g.:

- Activity Alternative 1 is only applicable within the road reserves where viable, if not, Activity Alternative 2 will be used;
- Activity Alternative 2 will be undertaken where roads and watercourses should be traversed; and
- Activity Alternative 3 will be used to cross rivers wider than 100m.

Installing the proposed optic fibre cable belowground will have the following advantages and disadvantages:

- ***Advantages:***

  - No visual impact will occur given that the infrastructure will be belowground and thus out of sight;
  - The high scenic value of the affected routes will be preserved;
  - There are no impacts on avifauna; and
  - Visual impacts to cultural and historical features of the landscape will be avoided.

- ***Disadvantages:***

  - Impact on ecological features of the landscape like plants of conservation concern, critical biodiversity areas, and the introduction of invasive alien species and others may arise;
  - Disturbance to physical attributes of the landscape like rocky outcrops and associated habitat may arise;

- The capital expense for constructing a network that is predominantly belowground will exceed four times that for one which is predominantly aboveground.

(c) the design or layout of the activity;

N/A

(d) the technology to be used in the activity;

N/A

(e) the operational aspects of the activity; and

N/A

(f) the option of not implementing the activity.

A no-go option has been considered, which would result in the status quo of the affected area with the associated biophysical and social environment remaining as is. Whilst the no-built option would avoid anticipated impact on sensitive ecological, cultural and heritage features of the surrounding landscapes, the socio-economic benefits generated by the development would be foregone.

In the short-term, these would entail the generation of employment opportunities for individuals of local communities in low and semi-skilled positions, business prospects for local contractors, farmers and suppliers of aggregate, whilst the tourism industry would benefit through the hosting of personnel at guest houses for the duration of the construction phase.

In the medium and long-term, benefits created by the development pertain to the distribution of internet bandwidth, boosting Information and Communication Technology (ICT) networks and providing of a range of public services. Following the digitisation of business and government systems before the turn of the century, there is a need to improve internet connectivity of government offices, facilities and centres to boost operational capacity and the provision of many public services, offered by both provincial and local government authorities.

Presently, optic fibre cable networks have linked major cities in South Africa, driving bandwidth capability in speed and capacity both nationally and within the Limpopo Province. This has however not yet been expanded in towns within the interior of the province, thus omitting government buildings and users in these areas from benefiting from this technology and the positive effects thereof.

Given the rapid expansion of such services throughout the country, it is therefore important for all local municipalities within the province to benefit from faster internet to remain competitive, which enables for higher

productivity and ultimately improved public service delivery.

Therefore, should the proposed development not occur, the long-term benefits of enhancing government operations and the provision of public services would not occur.

Summary of Alternatives

The belowground installation of cable ducts on all three route sections is the only alternative, as SANRAL will not allow any activities other than belowground installation within the road reserves. Notwithstanding, impacts to sensitive ecological features of the landscape would occur and need to be proactively mitigated through implementation of the Environmental Management Programme (EMPr). Given that all alternatives will entail the belowground installation of the optical fibre cable within existing road reserves, the extent of impacts will predominantly be limited to within the boundaries of these road servitudes.

The determination of the routes for the proposed development was prepared in such a way that trenching will not be undertaken within 32m of any watercourses. If trenching is to be undertaken within 32 meters of any watercourses it will trigger additional listed activities as well as a water use license.

All three Activity Alternatives is applicable to the proposed development since different Activity Alternatives will be applicable within different portions of the route sections, e.g.:

- Activity Alternative 1 is only applicable within the road reserves where viable, if not, Activity Alternative 2 will be used;
- Activity Alternative 2 will be undertaken where roads and watercourses should be traversed; and
- Activity Alternative 3 will be used to cross rivers wider than 100m.

The **no-go option** would result in the development not taking place, thus foregoing positive socio-economic impacts associated with the distribution of bandwidth to towns within the Vhembe District Municipality.

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

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, minutes and seconds. The projection that must be used in all cases is the Hartebeeshoek 94 WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative:	Latitude (S):			Longitude (E):		
Alternative S1[3] (preferred or only site alternative)	°	'	"	°	'	"
Alternative S2 (if any)	°	'	"	°	'	"
Alternative S3 (if any)	°	'	"	°	'	"

In the case of linear activities:

Alternative:	Latitude (S):			Longitude (E):		
Route Section 1						
Alternative S1 (preferred and only route alternative)						
• Starting point of the activity	22°	57'	43.16"	30°	31'	10.38"
• Middle/Additional point of the activity	22°	58'	17.67"	30°	29'	29.09"
• End point of the activity	22°	58'	54.36"	30°	27'	48.73"
Alternative S2 (if any)						
• Starting point of the activity	°	'	"	°	'	"
• Middle/Additional point of the activity	°	'	"	°	'	"
• End point of the activity	°	'	"	°	'	"
Route Section 2						
Alternative S1 (preferred and only route alternative)						
• Starting point of the activity	22°	54'	20.59"	30°	43'	42.82"
• Middle/Additional point of the activity	22°	54'	2.59"	30°	41'	21.98"
• End point of the activity	22°	54'	44.27"	30°	39'	7.93"
Alternative S2 (if any)						
• Starting point of the activity	°	'	"	°	'	"
• Middle/Additional point of the activity	°	'	"	°	'	"
• End point of the activity	°	'	"	°	'	"
Route Section 3						
Alternative S1 (preferred and only route alternative)						
• Starting point of the activity	22°	54'	26.21"	30°	44'	16.67"
• Middle/Additional point of the activity	22°	56'	28.25"	30°	42'	33.92"
• End point of the activity	22°	58'	59.64"	30°	41'	25.97"
Alternative S2 (if any)						
• Starting point of the activity	°	'	"	°	'	"
• Middle/Additional point of the activity	°	'	"	°	'	"
• End point of the activity	°	'	"	°	'	"

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

[3] "Alternative S..." refer to site alternatives.

A list of co-ordinates taken every 250 meters along the routes is included under Appendix H2.

4. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	**Size of the activity:**
Alternative A1 (preferred activity alternative)	m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

or,

for linear activities:

Alternative: Route Section 1	**Length of the activity:**
Alternative A1 (preferred activity alternative)	6 151 m
Alternative A2 (if any)	m
Alternative A3 (if any)	m
Alternative: Route Section 2	**Length of the activity:**
Alternative A1 (preferred activity alternative)	8 139 m
Alternative A2 (if any)	m
Alternative A3 (if any)	m
Alternative: Route Section 3	**Length of the activity:**
Alternative A1 (preferred activity alternative)	9 863 m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

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

Alternative: Route Section 1	**Size of the servitude:**
Alternative A1 (preferred activity alternative)	6 m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2
Alternative: Route Section 2	**Size of the servitude:**
Alternative A1 (preferred activity alternative)	6 m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

Alternative: Route Section 3	Size of the servitude:
Alternative A1 (preferred activity alternative)	6 m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

5. SITE ACCESS

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

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.

6. 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 meters 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 Department of Water Affairs);
- 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.

A detailed route plan is included under Appendix A2 of this report for.

7. SITE PHOTOGRAPHS

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

Site photographs are included under Appendix B of this report.

8. 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.

Facility illustrations are included under Appendix C of this report.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 36 026 000.00	
What is the expected yearly income that will be generated by or as a result of the activity?	R 4 000 000.00	
Will the activity contribute to service infrastructure?	YES	
Is the activity a public amenity?	YES	
How many new employment opportunities will be created in the development phase of the activity?	60	
What is the expected value of the employment opportunities during the development phase?	R 2 500 000.00	
What percentage of this will accrue to previously disadvantaged individuals?	80%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	30	
What is the expected current value of the employment opportunities during the first 10 years?	R 21 000 000.00	
What percentage of this will accrue to previously disadvantaged individuals?	80%	

9(b) Need and desirability of the activity

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

NEED:			
i.	Was the relevant municipality involved in the application?		NO
ii.	Does the proposed land use fall within the municipal Integrated Development Plan?	YES	
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		

	The Thulamela Local Municipality was not involved in this application. The purpose of the proposed development of the optic fibre infrastructure is to connect the cell phone base stations to the master station with optic fibre cables in order to provide an improved cell phone network with better coverage and better data functionalities. This improved network will benefit the community using the Vodacom cell phone network in the area. The fibre network can also provide high speed fixed line internet services to businesses and other customers that are situated close to the fibre network.

DESIRABILITY:			
i.	Does the proposed land use / development fit the surrounding area?	YES	
ii.	Does the proposed land use / development conform to the relevant structure plans, Spatial development Framework, Land Use Management Scheme, and planning visions for the area?	YES	
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	
iv.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
v.	Will the proposed land use / development impact on the sense of place?		NO
vi.	Will the proposed land use / development set a precedent?		NO
vii.	Will any person's rights be affected by the proposed land use / development?		NO
viii.	Will the proposed land use / development compromise the "urban edge"?		NO
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
i.	Will the land use / development have any benefits for society in general?	YES	
ii	*Explain:* The purpose of the proposed development of the optic fibre infrastructure is to connect the cell phone base stations to the master station with optic fibre cables in order to provide an improved cell phone network with better coverage and better data functionalities. This improved network will benefit the community using the Vodacom cell phone network in the area. The fibre network can also provide high speed fixed line internet services to businesses and other customers that are situated close to the fibre network.		

iii.	Will the land use / development have any benefits for the local communities where it will be located?	YES	[redacted]
iv.	*Explain:* This improved network will benefit the community using the Vodacom cell phone network in the area. The fibre network can also provide high speed fixed line internet services to businesses and other customers that are situated close to the fibre network.		

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	**Administering authority:**	**Date:**
National Environmental Management Act, 1998 (Act No. 107 of 1991) (NEMA)	Limpopo Department of Economic Development, Environment and Tourism (LEDET)	1998
NEMA Environmental Impact Assessment (EIA) Regulations, 04 December 2014	LEDET	2014
National Heritage Resources Act (Act No. 25 of 1999)	South African Heritage Resources Agency (SAHRA)	1999
National Water Act (Act No. 36 of 1998)	Department of Water and Sanitation	1998
National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	LEDET	2004

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES [redacted]
If yes, what estimated quantity will be produced per month?	± 65m^3

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

The solid waste generated during the construction phase, will be collected in containers and transported with a truck from the site to a registered landfill site. Solid waste include off-cuts of cable duct casing, torn plastic barricade sheeting and cement bags.

The solid waste at the construction sites will not amount to more than 3m³ at any given day.

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

Solid waste will be disposed of at a registered landfill site.

Will the activity produce solid waste during its operational phase?	NO
If yes, what estimated quantity will be produced per month?	m^3

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

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

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the department 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

If yes, inform the department 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

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

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?		NO
If yes, what estimated quantity will be produced per month?		m^3
Will the activity produce any effluent that will be treated and/or disposed of on site?		NO

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?		NO

If yes, provide the particulars of the facility:

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

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

Water is not required for the activity to be undertaken. It is however needed for dust suppression through the watering of exposed bare soil. Other than this, no specific measures are anticipated.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?		NO
If yes, is it controlled by any legislation of any sphere of government?		

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
If no, describe the emissions in terms of type and concentration:

The only emissions that will be released will be from the construction vehicles.

11(d) Generation of noise

Will the activity generate noise?	YES	
If yes, is it controlled by any legislation of any sphere of government?		NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
If no, describe the noise in terms of type and level:

Noise generation will occur during the construction phase of the development, but will however be invariably localised to only sections of the route at any one given time. As such this will be intermittent and short lived.

12. WATER USE

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

Municipal	Water Board	Groundwater	River, Stream, Dam or Lake	Other	The Activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month: Liters

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

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.

13. ENERGY EFFICIENCY

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

The proposed infrastructure does not use energy during the operational phase and as such does not require the adoption of such design measures.

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

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. 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): **A**

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

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Property description/physical address:	A full list of properties is included under Appendix H1 of this report.

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:	Road reserve

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

Is a change of land-use or a consent use application required?	NO
Must a building plan be submitted to the local authority?	NO

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

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

A locality map is included under Appendix A1 of this report.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Route Section 1

Alternative S1:

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 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

Route Section 2

Alternative S1:

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 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

Route Section 3

Alternative S1:

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 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

2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline		2.6 Plain	
2.2 Plateau		2.7 Undulating plain / low hills	**X**
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.5 Open valley			

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	YES	NO	YES	NO

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

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

The geology consists of the Bushveld complex containing granites, quartzites and diabase intrusions. The soils are of the Sterkspruit, Rensburg, Estcourt and Avalon soil forms (MacVicar et al. 1974, sited by Du Preez, 2015). Seasonally wet soils occur in areas where drainage lines occur. Soils close to rivers have a high clay content.

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

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

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

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

The vegetation of the study is shrub-savanna namely the Granite Lowveld Bushveld (SVI3) with scattered individuals of larger trees such as Marula (*Sclerocarya birrea*) and Red Syringa (*Burkea africana*). Important shrub species include *Albizia harveyii, Acacia caffra, Acacia robusta, Combretum apiculatum, C. collinum, C. zeyheri, Terminalia sericea, Ochna pulchra, Pterocarpus angolensis, Searsia leptodictya, Peltophorum africanum*. The grasses present are *Aristida congesta, Brachiaria nigropedata, Melinis repens, Eragrostis curvula, E. trichophora, E. rigidior, Hypethelia dissoluta,*

Hyparrhenia hirta, Heteropogon contortus, Themeda triandra and Panicum maximum. Forbs such as *Diceerocaryum senecoides, Barleria macrostegia, Blepharis subvolvulus, Crabbea angustifolia, Kyphocarpha angustifolia*, and *Evolvulus alsinoides* and many others occur (Du Preez, 2015).

The conservation status of the vegetation type is Vulnerable and whilst the conservation target is 19%. The rest is considered to be transformed, mostly by mining activities, crop production, overgrazing and dams (Mucina & Rutherford, 2006, sited by Du Preez, 2015).

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does 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**	5.22 School	**X**
5.2 Low density residential	**X**	5.23 Tertiary education facility	
5.3 Medium density residential	**X**	5.24 Church	
5.4 High density residential		5.25 Old age home	
5.5 Medium industrial [AN]		5.26 Museum	
5.6 Office/consulting room		5.27 Historical building	
5.7 Military or police base/station/compound		5.28 Protected Area	
5.8 Spoil heap or slimes dam [A]		5.29 Sewage treatment plant [A]	
5.9 Light industrial	**X**	5.30 Train station or shunting yard [N]	
5.10 Heavy industrial [AN]		5.31 Railway line [N]	
5.11 Power station		5.32 Major road (4 lanes or more)	
5.12 Sport facilities		5.33 Airport [N]	
5.13 Golf course		5.34 Harbour	
5.14 Polo fields		5.35 Quarry, sand or borrow pit	
5.15 Filling station [H]		5.36 Hospital/medical centre	
5.16 Landfill or waste treatment site		5.37 River, stream or wetland	**X**
5.17 Plantation		5.38 Nature conservation area	
5.18 Agriculture	**X**	5.39 Mountain, koppie or ridge	
5.19 Archaeological site		5.40 Graveyard	
5.20 Quarry, sand or borrow pit		5.41 River, stream or wetland	**X**
5.21 Dam or Reservoir	**X**	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?

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

If YES, specify and explain:	
If NO, specify:	There are no industrial areas within 500m of the proposed development area.

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

If YES, specify and explain:	
If NO, specify:	There are no filling stations within 500m of the proposed development area.

Wetland and stream functionality:

These streams are, as the PES indicates, largely natural with few modifications. A small change in natural habitats and biota may have taken place but the ecosystem functions are essentially unchanged. This ecosystem functionality includes wetland services such as flood attenuation, sediment trapping and provision of livestock grazing water retention, water purification (Du Preez, 2015).

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
		Uncertain

If YES, explain:	

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:	**Archaeological impact statement** *Stone Age remains* No Stone Age material was noted. In addition, the terrain is not suitable for Rock Art as there are no large lose-standing boulders or rock overhangs which could facilitate rock art. *Iron Age*

No Iron Age sites or material were noted.

Intangible Heritage

No signs of ritual use or the presence of graves were noted along the project area.

The built environment

The built environment in close proximity to the proposed installation consists of more recent and modern homesteads and businesses. No specific structure of heritage significance will be affected. No threat exists to the built environment.

It is however possible that obscured cultural remains may be discovered by chance. In such an event the heritage authority (LIHRA) or the archaeologist must be informed.

The sections of road reserves along which the proposed underground fibre optic cables are likely to be installed have been severely modified. No traces of any heritage resources were noted. It is concluded that the proposed installation of the optic fibre cable along the indicated sections of the R524 and R81 roads will have no negative impact on archaeological or any other heritage resources. From a cultural heritage perspective we have no objection with regard to the proposed project (Roodt, 2015).

Palaeontological assessment

The proposed route is located on Early Proterozoic (c. 2 to 1.8 Ga) basalts, coarse-grained sandstones and conglomerates of the Soutpansberg Group (Mokolian Era). Rocks of the Soutpansberg and overlying Waterberg Groups contain the earliest strata that indicate deposition under an atmosphere that contained free oxygen. Although minor indications of algal mat structures have been recorded in sediments of the Waterberg Group north of Pretoria, no major fossil finds have been recorded to date. There are currently no records of vertebrate fossil occurrences from superficial overburden (e.g. Quaternary fluvial deposits near watercourses) in the area (Rossouw, 2015).

Will any building or structure older than 60 years be affected in any way?	[redacted]	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	[redacted]	NO

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. 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 department) 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 department;

(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 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 department, 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.

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 department 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

(v) the manner in which and the person to whom representations in respect of the application may be made.

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 department 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 these Regulations.

Advertisements and notices must make provision for all alternatives.

This section will be completed after the 30 calendar day public comment period.

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 department to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

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 these Regulations and be attached to this application. The comments and response report must be attached under Appendix E.

A comments and response report will be compiled after the 30 calendar day public comment period.

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

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.

Name of Authority informed:	**Comments received (Yes or No)**
Department of Economic Development, Environment & Tourism (LEDET)	To be added after the 30 calendar day public comment period
LEDET Biodiversity Section	
Vhembe District Municipality	
Thulamela Local Municipality	
Department of Water and Sanitation (DWS)	DWS undertook a site visit on 19 May 2015 and the letter from DWS dated 13 July 2015 refers: **<u>Recommendations by DWS</u>** 1. An EMP must be compiled and implemented in accordance with NEMA Section 28. 2. An ECO must be appointed to perform environmental monitoring and auditing. 3. A site visit should be organised between DWS and the consultants to optimise and ground truth the route and different PES/EIS scenarios. **<u>Conclusion by DWS</u>** No water use is triggered therefore no water use authorisation is required.
Eskom	To be added after the 30 calendar day public comment period
Telkom	
SANRAL	

South African Heritage Resources Agency (SAHRA)	

A list of all organs of state and other applicable authority is included under Appendix E4 of this report.

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 department.

Proof of any such agreement must be provided, where applicable.

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

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

This section will be completed after the 30 calendar day public comment period.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

This section will be completed after the 30 calendar day public comment period.

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 as Annexure E):

This section will be completed after the 30 calendar day public comment period.

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.

A complete impact assessment is included under Appendix G of this report.

Potential Impact	**Significance before mitigation**			
	Activity Alternative 1: Trenching	**Activity Alternative 2: Horisontal Directional Drilling**	**Activity Alternative 3: Bridge attachments**	**No-go alternative (compulsory)**
Planning and design phase & construction phases				
1. Direct impacts:				
1.1. Geographical and physical aspects				
Impact on Topsoil	**Medium-high**	**Medium**	-	-
Impact on Watercourses	N/A	**Medium**	-	-
1.2. Biological aspects				
Impact on Protected Trees	**High**	-	N/A	-
Impact on Freshwater Ecosystems	N/A	**Medium-high**	**Low**	-
Impact on Terrestrial Areas	**Low**	**Low**	N/A	-
Impact on Fauna	**Medium**	**Medium**	**Low**	-
Possible Fire Outbreaks	**Medium**	**Medium**	**Medium**	-
Impact of Waste Management	**Medium**	**Medium**	**Medium**	-

Potential Impact	Significance before mitigation			
	Activity Alternative 1: Trenching	Activity Alternative 2: Horisontal Directional Drilling	Activity Alternative 3: Bridge attachments	No-go alternative (compulsory)
Impact on Aquatics	N/A	**Medium**	**Low**	-
Impact of Alien Invasive Species	**Medium**	**Low**	N/A	-
1.3. Socio-economic aspects				
Employment and Business Opportunities	**Medium High (+)**	**Medium High (+)**	**Medium High (+)**	-
Presence of construction workers in the area	**Medium**	**Medium**	**Medium**	-
Security	**Medium**	**Medium**	**Medium**	-
Traffic Impact	**Medium-high**	**Medium-high**	**Medium**	-
1.4. Aesthetical aspects				
Impact on road users	**Medium**	**Medium**	**Medium**	-
1.5. Cultural-historical aspects				
Impact on Palaeontology	**Low**	**Low**	-	-
1.6. Sense of place				
Noise impact	**Medium**	**Medium**	**Low**	-
2. Indirect impacts:				
None foreseen	-	-	-	-
3. Cumulative impacts:				
3.1. Socio-economic aspects				
Employment and Business Opportunities	**Medium High (+)**	**Medium High (+)**	**Medium High (+)**	-
Presence of construction workers in the area	**Medium**	**Medium**	**Medium**	-
Operational Phase				
1. Direct impacts:				
1.1. Socio-economic aspects				
Impact on service delivery	**Medium (+)**	**Medium (+)**	**Medium (+)**	**Medium**
2. Indirect impacts:				
None foreseen	-	-	-	-
3. Cumulative impacts:				
3.1. Socio-economic aspects				
Employment and Business Opportunities	**Medium High (+)**	**Medium High (+)**	**Medium High (+)**	-
Presence of construction workers in the area	**Medium**	**Medium**	**Medium**	-

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.

Potential Impact	Significance after mitigation			
	Activity Alternative 1: Trenching	Activity Alternative 2: Horisontal Directional Drilling	Activity Alternative 3: Bridge attachments	No-go alternative (compulsory)
Planning and design phase & construction phases				
1. Direct impacts:				
1.1. Geographical and physical aspects				
Impact on Topsoil	**Medium**	**Low**	-	-
Impact on Watercourses	N/A	**Low**	-	-
1.2. Biological aspects				
Impact on Protected Trees	**Medium**	-	N/A	-
Impact on Freshwater Ecosystems	N/A	**Medium**	**Low**	-
Impact on Terrestrial Areas	**Low**	**Low**	N/A	-
Impact on Fauna	**Low**	**Low**	**Low**	-
Possible Fire Outbreaks	**Low**	**Low**	**Low**	-
Impact of Waste Management	**Low**	**Low**	**Low**	-
Impact on Aquatics	N/A	**Low**	**Low**	-
Impact of Alien Invasive Species	**Low**	**Low**	N/A	-
1.3. Socio-economic aspects				
Employment and Business Opportunities	**Medium High (+)**	**Medium High (+)**	**Medium High (+)**	-
Presence of construction workers in the area	**Low**	**Low**	**Low**	-
Security	**Low**	**Low**	**Low**	-
Traffic Impact	**Medium**	**Medium**	**Medium**	-
1.4. Aesthetical aspects				
Impact on road users	**Low**	**Low**	**Low**	-
1.5. Cultural-historical aspects				
Impact on Heritage resources	**Low (+)**	**Low (+)**	**Low (+)**	
Impact on Palaeontology	**Low**	**Low**	-	-
1.6. Sense of place				
Noise impact	**Low**	**Low**	**Low**	-
2. Indirect impacts:				
None foreseen	-	-	-	-
3. Cumulative impacts:				
3.1. Socio-economic aspects				

Potential Impact	Significance after mitigation			
	Activity Alternative 1: Trenching	Activity Alternative 2: Horisontal Directional Drilling	Activity Alternative 3: Bridge attachments	No-go alternative (compulsory)
Employment and Business Opportunities	**Medium High (+)**	**Medium High (+)**	**Medium High (+)**	-
Presence of construction workers in the area	**Low**	**Low**	**Low**	-
Operational Phase				
4. Direct impacts:				
4.1. Socio-economic aspects				
Impact on service delivery	**Medium (+)**	**Medium (+)**	**Medium (+)**	-
5. Indirect impacts:				
None foreseen	-	-	-	-
6. Cumulative impacts:				
6.1. Socio-economic aspects				
Employment and Business Opportunities	**Medium High (+)**	**Medium High (+)**	**Medium High (+)**	-
Presence of construction workers in the area	**Low**	**Low**	**Low**	-

Impacts associated with this proposed alternatives are described and the significance rating given under Appendix G of this report.

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

Given the sensitivity of the area there is no preferred alternative. Certain activity alternatives will only be applicable to certain portions of the routes, to minimise the impacts on the receiving environment. The activities will be implemented as follow:

- **Activity alternative 1: Trenching**
    - Only applicable to road servitudes; and
    - May not be undertaken within 32 meters within any watercourse.
- **Activity alternative 2: Directional drilling**
    - Applicable to road and watercourse crossings; or
    - Where any obstacles exist in the road servitude, or where viable.

- **Activity alternative 3: Bridge attachments**
    - Where viable at all bridges and river crossings.

SECTION E: RECOMMENDATION OF PRACTITIONER

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

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

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

Recommendations by EAP

Routing suitability of the Road corridor

This assessment has demonstrated that whilst the landscape surrounding the proposed development consist of sensitive ecological features, the alignment of the cable route within the road reserve and road surfaces of provincial routes reduces the magnitude of impact posed thereto. This is explained by recognising that the road corridor is a historically disturbed area, primarily used for the movement of motorists, as well as to cater for secondary services through accommodating distribution infrastructure. Therefore, as far as the selection of a route alignment is concerned, the placement of infrastructure within road reserves limits environmental impact to an area under land use which is accommodating to services and in parts has been historically transformed.

Activity Alternatives

Trenching (Activity Alternative 1) is the preferred method of undertaking the activity within road reserves. This activity may only be undertaken within road reserves where viable and under no circumstances within 32m of any watercourses. Directional drilling (Activity Alternative 2) should be used where road crossings should be undertaken.

The crossing of watercourses is an important aspect for consideration, which is primarily affected by the method of crossing implemented. The following two activity alternatives, whichever is viable, will be undertaken when watercourses needs to be crossed:

- Activity Alternative 2 - directional drilling; or
- Activity alternative 3 - bridge attachment.

Through the appropriate selection and assignment of methods of crossings to each of these watercourses, the impacts associated with this approach can be managed and mitigated, to ensure that the least impact on these systems takes place.

Impact on sensitive terrestrial features like trees of conservation concern and threatened ecosystems are anticipated, however given the flexibility to alternate between methods of installation provided by activity alternatives, this can be minimised. Furthermore, for portions where trenching is deemed plausible, impacts on vegetation can be limited through the application of mitigation measures and by restricting this activity to within the dimensions required.

The following recommendations from the Specialists and DWS should also be considered:

Recommendation by Ecological and Wetlands Specialist

- During the trenching operation all large trees must be kept intact and the trenching must steer clear from the large roots of these trees. No trees may be removed without permission and the required permits.
- Trenching guidelines must be applied when trenching takes place (Du Preez, 2015).

Recommendations by Archaeologist

In view of the above it is recommended that the proposed development can be authorised. Mitigation measures will only be required should any chance discoveries be made during the pre-construction phase or the construction phase. In such an event the heritage authority must be informed immediately (Roodt, 2015).

Recommendations by Palaeontologist

Given the nature of the proposed impact (linear development on degraded terrain) it is expected that impact on *in situ* palaeontological material from unweathered sedimentary bedrock strata is considered to be of a very low significance. There is very low potential for irreplaceable loss of palaeontological resources and the probability of impact on palaeontological resources as a result of the proposed development is also considered very low. It is therefore recommended that the proposed development is exempted from a Phase 1 Palaeontological Impact Assessment (Rossouw, 2015).

Recommendations by the Department of Water and Sanitation (DWS)

- An EMP must be compiled and implemented in accordance with NEMA Section 28.

- An ECO must be appointed to perform environmental monitoring and auditing.
- A site visit should be organised between DWS and the consultants to optimise and ground truth the route and different PES/EIS scenarios.

Other reasons for why the proposed development should be authorised include:

- No impacts after mitigation produce unacceptable impacts on the receiving environment nor any fatal flaws; and
- The development generates considerable long-term socio-economic benefits which will enhance the delivery of public services thus benefiting recipient communities within towns traversed connected to be the optic fibre cable network.

Is an EMPr attached? YES

The EMPr must be attached as Appendix F.

An EMPr is included under Appendix F of this report.

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

- Appendix A1: Locality map
- Appendix A2: Route plan

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

- Appendix E1: Proof of the placement of the relevant advertisements and notices (to be added after 30 day comment period)
- Appendix E2: Proof of written notification received by key stakeholder (to be added after 30 day comment period)
- Appendix E3: Comments and Response
- Appendix E4: Proof of written notification received by the Authorities and Organs of State (to be added after 30 day comment period)
- Appendix E5: List of registered I&APs

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Impact Assessment

Appendix H: Other information

- Appendix H1: List of Properties
- Appendix H2: List of route co-ordinates along the routes

SECTION G: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, **Adél Groenewald** declare that I –

(a) act as the independent environmental practitioner in this application;

(b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;

(c) do not have and will not have a vested interest in the proposed activity proceeding;

(d) have no, and will not engage in, conflicting interests in the undertaking of the activity;

(e) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;

(f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;

(g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;

(h) will keep a register of all interested and affected parties that participated in a public participation process; and

(i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

Signature of the Environmental Assessment Practitioner:

Enviroworks

Name of company:

Date: