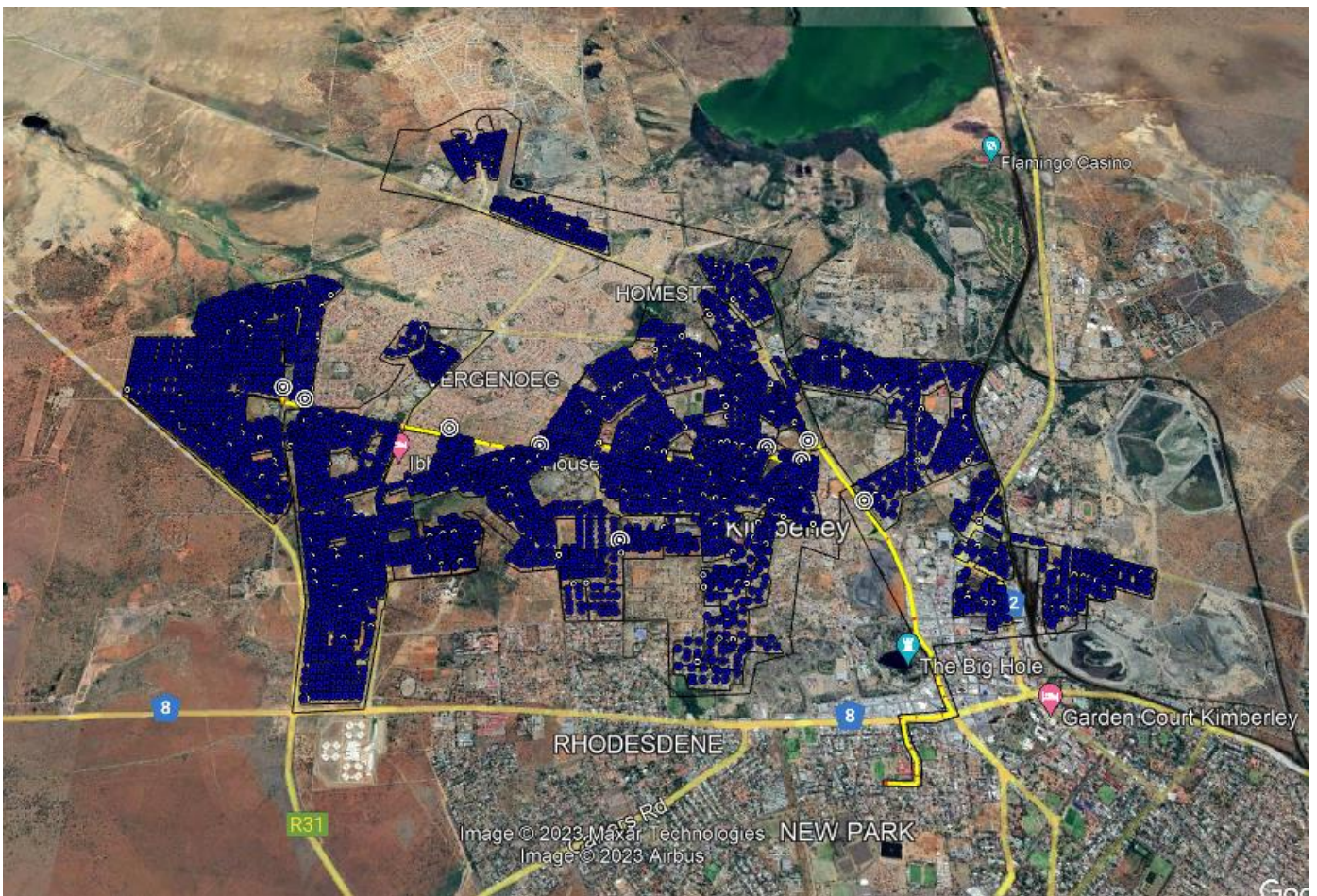


HERITAGE REPORT

SECTION 38 OF NHRA: SUBMISSION OF NOTICE OF INTENT TO DEVELOP FOR THE DEPLOYMENT OF A FIBRE NETWORK WITHIN THE ALBERTYNSHOF, WEST END AND GALESHEWE AREAS OF THE SOL PLAATJE MUNICIPAL AREA



Prepared by Christine Havenga & Associates

For Africa Fibre Infrastructure Solutions (Pty) Ltd

May 2023

EXECUTIVE SUMMARY

This report is a Heritage Statement in support of the submission of a Notice of Intent to Develop in terms of Section 38 of the National Heritage Resources Act of 1999 (NHRA) for the deployment of a fibre network (conventional trenching and poles/overhead stringing of cables) exceeding 300m in length within various areas within the Sol Plaatje Municipal area in the Northern Cape Province. The fibre network will mostly be deployed within the residential areas of the Galeshewe township area, but also within the De Beers, Kimberley North, Turner Road Industrial area, Ashburnham, Diamond Park and Kirstenhof areas.

The application also includes an application in terms of Section Section 38(1)(d) for possible alterations made to structures older than 60 years (some sidewalks within the study area) which is normally regulated by Section 34 of the NHRA. Due to the nature of the activities and the specific areas where the fibre lines are proposed, no impact is foreseen on any structures and specifically not on historical sidewalks and curb stones. Some mature trees are considered heritage resources and specific mitigating measures are proposed to limit any impact thereon during excavations.

The study area includes a main underground feeder route and from there aerial fibre is deployed within various residential areas. For purposes of the Heritage Report, the study area was divided into three routes:

- **Route 1: Galashewe area main underground fibre line which primarily runs along Johan Daka Road,** (an aerial fibre network is proposed within the various residential areas)
- **Route 2: West End/Open Mine area main underground fibre line running primarily along the N12** (an aerial fibre network is proposed in the De Beers, Kimberley North, Turner Road Industrial area and Ashburnham to the east of the N8 and the Diamond Park and Kirstenhof areas to the west of the N8)
- **Route 3: Albertynshof area**

The Galashewe township area is not identified as a potential heritage conservation area, except for a section within Hulana and the Greater no 2 area. As no formal heritage audit has been done for the area, a basic assessment of the area was done for the NID to identify any heritage resources within the study area. The fibre network deployment within Galeshewe would primarily be by means of mid-block aerial fibre deployment and it is not foreseen that it would negatively impact on any heritage resources within this area or on streetscapes. The streetscapes in this area are characterised by various types of poles and overhead cables. In general the economic and social advantages of fibre deployment within this area would trump the visual impact of the proposed overhead fibre network. A relatively intact section of streetscape was identified along Royal Street (between Morgan and Molefe Streets) in the Greater no 2 area and it is recommended that no aerial fibre be deployed along this section of the road.

Certain areas within the West End/Open Mine area was identified as a heritage area and was partially assessed in the above mentioned study of the former National Monuments Council. The Big Hole site specifically is an important heritage resource within the Sol Plaatje Municipal area as well as the wider Northern Cape. The fibre network deployment along the N12 and the Big Hole site would be by means of conventional trenching (underground lines) and will have no impact on these heritage resources. An assessment done of the heritage resources within the residential areas where aerial fibre is proposed was done and it is not foreseen that there would be any negative impact on any significant heritage resources in these areas.

The Albertynshof area is identified as a potential mixed-use/heritage area in the Sol Plaatje Municipal Spatial Development Framework. The area was partially assessed in a survey by the former National Monuments Council and some heritage resources have been identified. The fibre network deployment in this area would be by means of conventional trenching (underground lines). The area affected by the proposed fibre network deployment was assessed and it was concluded that there would be no negative impact on any heritage resources in this area. Mitigating measures are prescribed to prevent any negative impact on any trees or curb stones which may have heritage significance.

Africa Fibre Infrastructure Solutions (Pty) Ltd applied for wayleave approval to the relevant departments within the Directorate Infrastructure and Service of the Sol Plaatje Municipality to enable them to deploy the fibre optic network systems.

The Heritage Statement assessed the heritage significance of the study areas and did not find any negative impact caused by the proposed fibre network installation on any heritage resources along the proposed routes. It is thus recommended that the deployment of fibre as per the individual route plans submitted with this application be implemented due to the economic and social advantages thereof for local communities, especially those in previously disadvantaged areas, who currently have very limited access to good quality broadband services. Some mitigation measures are proposed to limit the impact on any identified heritage resources along these routes as well as on road reserve (side walk) trees and historical curb stones during excavations. Archaeological and palaeontological monitoring would be required.

It should be noted that the local Northern Cape Heritage Authority has no delegation to deal with Section 38 applications in terms of the National Heritage Resources Act, 1999. Although it is not foreseen that any structures older than 60 years would be affected, should it be the case the necessary application should be submitted to the Northern Cape Heritage Authority who is the controlling authority for Section 34 applications.

**NOTICE OF INTENT TO DEVELOP
DEPLOYMENT OF A FIBRE NETWORK WITHIN THE SOL PLAATJE
MUNICIPAL AREA**

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SECTION 1: INTRODUCTION

1.1 PROJECT AND SITE DESCRIPTION

This project will entail the deployment of a fibre network (a combination of conventional trenching and poles/overhead stringing of cables) exceeding 300m in length in various areas within the Sol Plaatje Municipal area in the Northern Cape Province. The fibre network will mostly be deployed within the residential areas of the Galeshewe township area, but also within the De Beers, Kimberley North, Turner Road Industrial area, Ashburnham, Diamond Park and Kirstenhof areas.

Africa Fibre Infrastructure Solutions (Pty) Ltd is a South African company that provides open-access connectivity telecommunication infrastructure. They applied for wayleave approval to the relevant Departments within the Directorate Infrastructure and Service of the Sol Plaatje Municipality to allow for the optic fibre deployment on municipal land (within their road reserves and sidewalks). Most of the approvals from the relevant line departments have been obtained and an indication of support was given during a discussion with the Municipality. A formal approval will be issued once the heritage Record of Decision is received.

Two types of deployment are proposed, namely conventional trenching (underground lines) and aerial fibre (poles and overhead stringing of cables either within the sidewalk area of the road reserve or mid-block depending on where municipal services are located). Africa Fibre Infrastructure Solutions (Pty) Ltd had several discussions with the Sol Plaatje Municipality regarding the possibility of micro-trenching in the road reserves as they have done in other municipal areas. No micro trenching in the road reserve is however allowed as the Municipality's Directorate Infrastructure and Services indicated that there is currently no National Standard for the provision of micro trenching in existence (in compliance with the Standards Act). It was further indicated that they are of the opinion that the current standard for the provision of telecom ducting is SANS 1200LC (Standardised Specification for Civil Engineering Construction) which only makes provision for conventional trenching methods. The Municipality indicated that the methodology employed in micro trenching is a machined one which relies on scanning technology which has serious limitation when dealing with older services which tend to have densities beyond the parameters of such devices.

Wayleave Route Plans (attached as **Annexure 3**) were submitted with the wayleave application indicating the routes of the proposed fibre network and the proposed/preferred manner to install the fibre network along these routes. This was discussed and negotiated with the relevant Departments of the Municipality, taking into consideration the location of existing municipal services and soil conditions as well as the possible impact thereof on heritage resources and the streetscape within the historical areas.

The study area is depicted on **Figures 1** and **2** as well as **Annexure 2 (Locality Plan)**. **Figure 1** depicts the **underground Main Feeder Route**. The study area will be divided into three areas in the Heritage Report.

- **Route 1:** **Galashewe area main underground fibre line which primarily runs along Johan Daka Road**, (an aerial fibre network is proposed within the various residential areas)
 - **Route 2:** **West End/Open Mine area main underground fibre line running primarily along the N12** (an aerial fibre network is proposed in the De Beers, Kimberley North, Turner Road Industrial area and Ashburnham to the east of the N8 and the Diamond Park and Kirstenhof areas to the west of the N8)
- Route 3:** **Albertynshof area**

Figure 1, underneath, shows the route the main feeder line will run. This line is underground and will be deployed by means of conventional trenching.

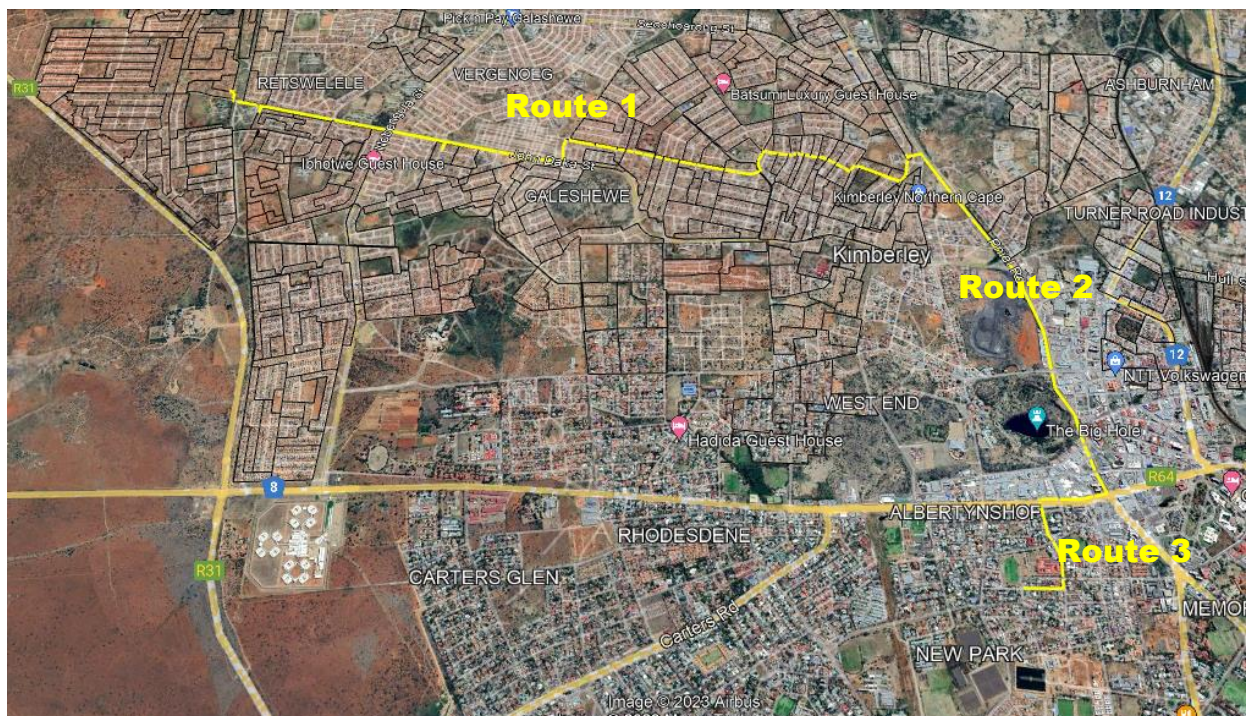


Figure 1: *The proposed underground main fibre route (marked with yellow lines)*

Figure 2 on the next page and the various plans in **Annexure 3, Wayleave Route Plans** show the manner of fibre deployment and the position of the main underground fibre lines (yellow lines) and the aerial fibre network routes (blue dots shows the position of the poles) within the areas as indicated in the previous paragraph. This position of the poles can be seen in more detail on the **Locality Plan (Annexure 1)**.

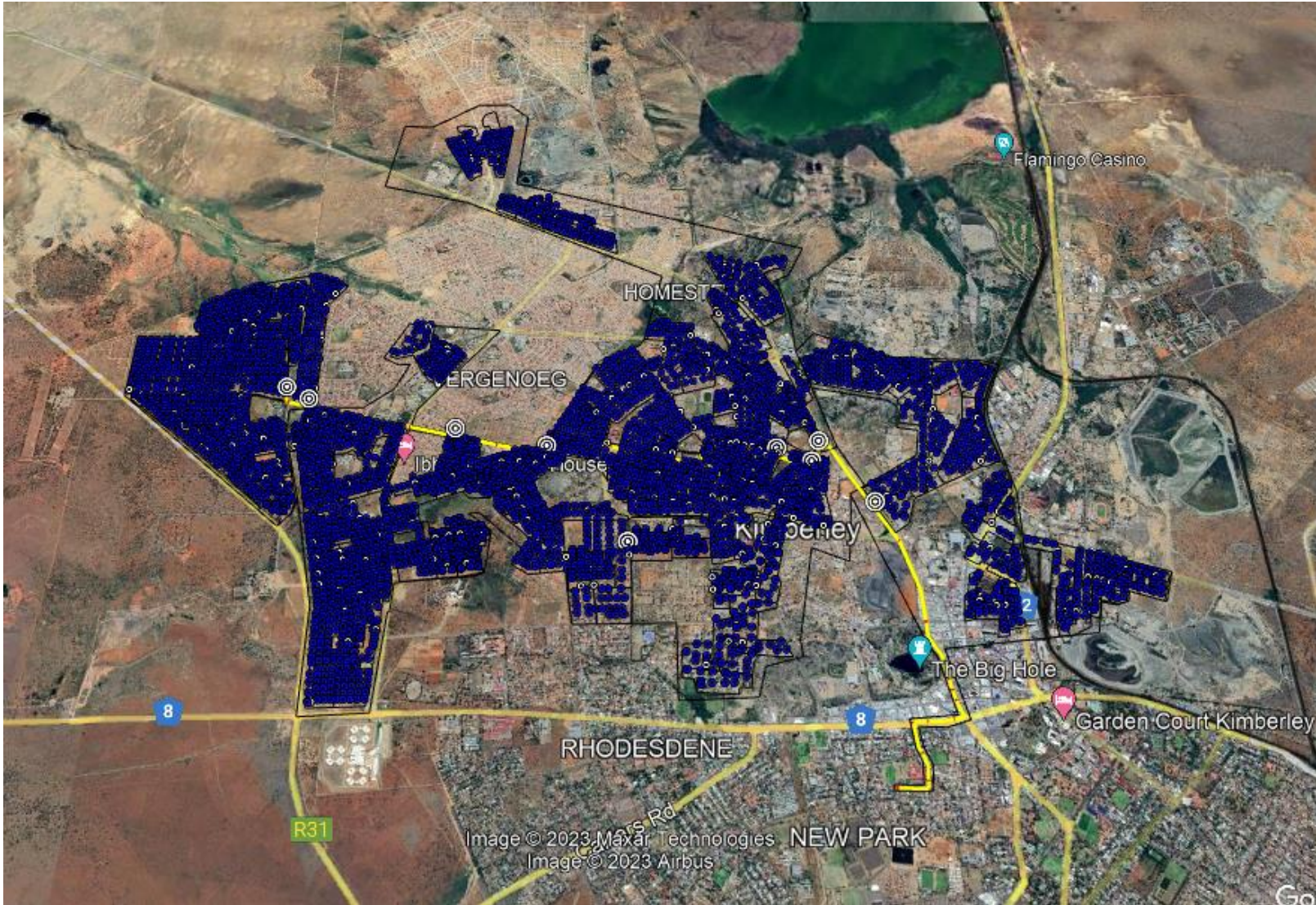


Figure 2: The blue dots shows the positions of the overhead fibre routes and the yellow lines the route of the main underground fibre lines

1.2 LEGAL REQUIREMENTS

1.2.1 NATIONAL HERITAGE RESOURCES ACT, 1999

The National Heritage Resources Act, 1999 describes the national estate and what can be considered as heritage resources:

The national estate consists of the following as set out in Section 3 of the NHRA:

Section 3(1):

For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

Section 3(2):

Without limiting the generality of subsection (1), the national estate may include—

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including—
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves of victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the Gazette;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
 - (i) movable objects, including—
 - (ii) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens; (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;

- (vi) objects of scientific or technological interest; and (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

The National Heritage Resources Act also makes provision for the grading of local heritage resources if it fulfils one or more of the criteria set out in Section 3(3) of the Act or in the case of a site contributing to the environmental quality or cultural significance of a larger area. Certain heritage resources are considered more valuable than others based on age, symbolic context, architectural merit, uniqueness or associations with significant people and other considerations. This will influence their grading.

Section 3(3):

Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of—

- (a) its importance in the community, or pattern of South Africa's history;
- (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- (i) sites of significance relating to the history of slavery in South Africa

Sections 27 and 30

Some sites and buildings within the Sol Plaatje Municipal area have been identified as Provincial Heritages Sites in terms of Section 27 of the NHRA and are listed on the Northern Cape Heritage Register prepared in terms of Section 30 of the NHRA. Some of these sites fall within the study area of this NID.

It can be accepted that the total study area has not yet been formally assessed. The NID will, however, do an assessment of possible heritage resources along the proposed fibre network routes to determine any possible negative impact on heritage resources.

Section 34

Section 34(1) of the NHRA states that “no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority”. In terms of the NHRA a structure is defined as “any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith”.

No alterations are proposed to any buildings. In terms of this definition a sidewalk could, however, possibly be considered as a structure. Some sidewalks within the study area may be older than 60 years and application is thus simultaneously made to allow for a permit in terms of Section 34 to allow for the excavations within these side walk areas. It should be noted that none of the historical curb stones (older than 60 years) are removed during the conventional trenching activities. Where road cuts are done, the contractors tunnel/trench underneath these curb stones.

On the next page, **Figure 2**, is a map showing the areas older than 60 years within the study area. The boundaries of the areas older than 60 years have been determined by utilising historical aerial photographs and more specifically the 1960, 1964 and 1968 aerial photographs which have been obtained from the website of the National Geo Spatial Information Section of the Department of Rural Development and Land Reform’s Geospatial Portal. (<http://www.cdngiportal.co.za/cdngiportal/>)

The suburbs within the study area are thus all older than 60 years except for the newer areas of Galeshewe towards the north west of the study area.

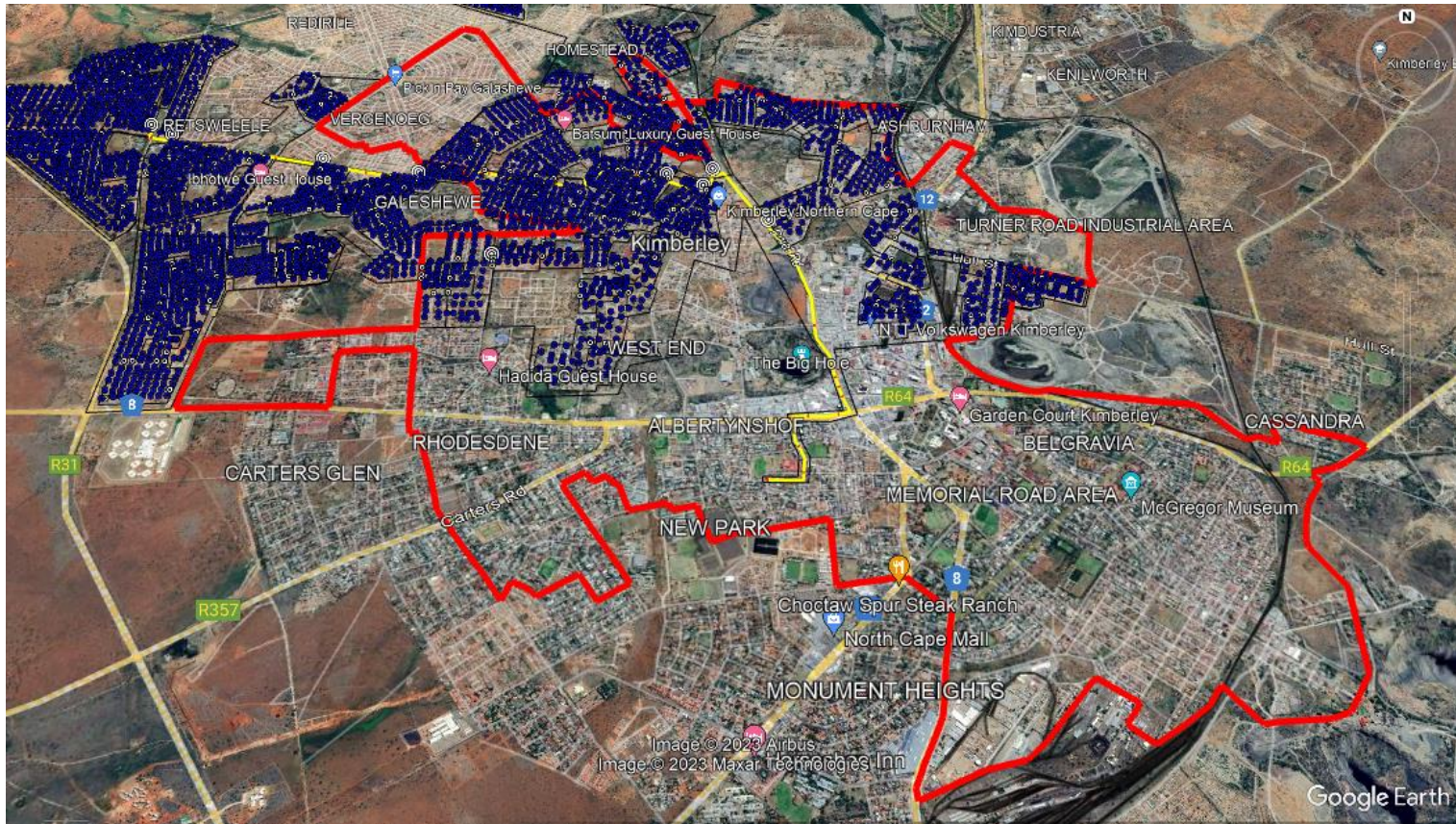


Figure 2: Areas older than 60 years demarcated with a red line and the proposed fibre network route in yellow (Source Google Maps and NGI historical photographs)

Section 38

The proposed activities associated with the deployment of the fibre network routes will include the following development categories as listed in Section 38(1) of NHRA, namely:

Section 38(1)(a): *The construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;*

Section 38(1)(c): *Any development or other activity which will change the character of a site—*

(i) *exceeding 5 000 m² in extent.*

Section 38(1)(d): *Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority – thus e.g. including approvals for any alterations to any structures older than 60 years as required in terms of Section 34 of the NHRA. (No alterations are proposed to any buildings. In terms of this definition of a structure a sidewalk could, however, possibly be considered as a structure. Some sidewalks within the study area are older than 60 years and application is thus simultaneously made to allow for a permit in terms of Section 34 to allow for the excavations within these side walk areas. It should be noted that there are no historical curb stones within the study area.)*

The installation of the fibre network lines thus requires the submission of a Notice of Intent to Develop in terms of Section 38 – the purpose of this Heritage Statement.

The proposed development does not trigger any of the listed activities as set out in the 2014 Environmental Regulations published in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and would thus not require environmental authorisation.

1.2.2 THE SOL PLAATJE MUNICIPAL LAND USE MANAGEMENT SCHEME, 2008

The Sol Plaatje Land Use Management Scheme, 2008 does not make provision for any Heritage Overlay Zones (HPOZ's). There are specific provisions with regard to the Big Hole area, but the study area is not affected by any HPOZ's.

In Section 17(1) it states that “permission in terms of Clause 28 shall be required for any alteration to or development affecting an erf listed in the heritage register as compiled and gazetted in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)”. This provision would not affect any of the proposed routes within the study area for the NID.

1.2.4 MUNICIPAL WAYLEAVE APPROVAL PROCESS

All public land within the Sol Plaatje Municipal Area's road reserves is owned by the municipality. The local Council is therefore responsible to administrate this publicly owned land and need to give permission to all parties before any contractor may install utility services or infrastructure. All parties and their contractors therefore need to obtain permission from the local authority to install their services or infrastructure on the public land.

Normally a department within the municipality acts as the custodian of these permissions, even for council services. For the Sol Plaatje Municipal Area it is done by the Directorate Infrastructure and Services. This enables the responsible use of public assets, by co-ordinating service installation, minimising service clashes, simplifies maintenance of assets, and minimises collateral damage due to new installations or construction.

Using a formalised Wayleave, the Council also has the opportunity to control the installation of services, as well as to specify installation and protection requirements for the installed services, and to verify that the service designs meet the engineering and other standards prescribed by the council.

To allow for the deployment of fibre within the road reserves, a Wayleave Approval was thus submitted to the Directorate Infrastructure and Services for each of the different Sectors. These Wayleave Approvals are subject to certain conditions of approval. As indicated earlier in this report, Africa Fibre Infrastructure Solutions (Pty) Ltd applied for the required wayleave approvals.

The proposed routes and manner of deployment of the fibre lines in this case, is the result of several discussions with the Municipality and what they would support in terms of their wayleave approvals.

No micro trenching in the road reserve is allowed within the Sol Plaatje Municipal Area as indicated earlier in this report.

1.3 STATEMENT OF INDEPENDENCE

This is to confirm that *Christine Havenga and Associates*, acting as the Heritage Practitioner (with inputs from Andrew Berman of *Urban Design Services* acting as Urban Designers and Rene Maria Brett of *Viridian Consulting Landscape Architects* acting as the Landscape Architect) are responsible for undertaking the report. They are independent practitioners and have no vested or financial interest in the future development of the study area being either approved or rejected by the relevant authorities.

1.4 EXPERTISE AND PROFESSIONAL ACCREDITATIONS OF THE SPECIALISTS

The expertise of the Heritage, Urban Design and Landscape specialists is presented underneath:

<i>Company name</i>	Qualifications and expertise	Professional accreditations
<i>Christine Havenga and Associates (Christine Havenga)</i>	M Phil in the Conservation of the Built Environment – University of Cape Town M Town and Regional Planning – University of Stellenbosch	Association of Professional Heritage Practitioners (APHP) No. 0083 South African Council for Professional Planners (SACPLAN) – Reg. No. A/945/1997
<i>Viridian Consulting Landscape Architects (Rene Brett)</i>	B. Landscape Architecture - University of Pretoria, RSA Master of City Planning and Urban Design - University Cape Town Green Star SA Accredited Professional	South African Council for the Landscape Architectural Profession (SACLAP) – Reg. No. 20122 Urban Design Institute of South Africa (UDISA) – Reg No. V002

1.5 METHODOLOGY AND SOURCES OF INFORMATION

A survey of diverse information repositories was made to identify appropriate relevant information sources. These sources were analysed for credibility and relevance. Credible, relevant sources were then critically reviewed. The objectives of the literature review were to gain an understanding of the cultural landscape within which the project is located; and identify any potential fatal flaws, sensitive areas, current social complexities/issues and known or possible tangible heritage. Information was gained through obtaining the following historical and archival documentation:

- (i) Diagrams and township plans of the study area.
- (ii) Maps and aerial photographs from National Geo-spatial Information.
- (iii) SAHRIS, online/electronic journals and platforms, and certain internet sources.
- (iv) Heritage surveys done by the former National Monuments Council.
- (v) The Northern Cape Heritage Authority Heritage Register
- (vi) The Sol Plaatje Integrated Development Plan and Municipal Spatial Development Framework.

- (vii) Other relevant resources which are cited and included in the literature review's bibliography.
- (viii) Assessment of the areas by means of site visits and photographic surveys of the study area and historical research.

SECTION 2: KEY POLICY INFORMANTS AND SPATIAL POLICIES

This section briefly outlines key policy informants and Spatial Studies/Policies which informs the future development of the study areas and its immediate surrounds, and includes a brief description of relevant planning and urban design policy for the study area.

2.1 SOL PLAATJE MUNICIPALITY INTEGRATED URBAN DEVELOPMENT FRAMEWORK (2022-2027)

The Sol Plaatje Integrated Urban Development Framework (IUDF) is guided by the four principles set out in the National Development Plan (NDP): spatial justice, spatial sustainability, spatial quality, spatial efficiency, and spatial resilience. To achieve this transformative vision, the IUDF introduces four overall strategic goals:

- **Spatial Integration:** To forge new spatial forms in settlement, transport, social and economic areas.
- **Inclusion and Access:** To ensure people have access to social and economic services, opportunities and choices.
- **Inclusive Growth:** To harness urban dynamism for inclusive, sustainable economic growth and development.
- **Good Governance:** To enhance the capacity of the state and its citizens to work together to achieve spatial and social integration.

The proposed fibre network would extend the existing fibre network within the So Plaatje Municipal area to primarily the Galeshewe township area to allow residents in this area with better quality broadband access. The IDP states that 31.9% of the population in this area is unemployed – a number which is probably much higher at this stage. The youth make up 41.7% of the unemployed population in the area, 14,8% of the households in this township do not have a source of income while 20,4% (highest percentage) has an income between R19,601 and R38,200. The township's formal housing sits at 74,3%. This confirms the need for affordable high quality broadband access for residents.

2.2 SOL PLAATJE LOCAL MUNICIPALITY DRAFT SPATIAL DEVELOPMENT FRAMEWORK 2018-2023

The Municipal Spatial Development Framework (MSDF) is a dynamic model of strategic planning that is reviewed annually, adjusting its focus and direction based on spatial transformation that takes place on the ground. In addition, it is a spatial policy document that identifies the main challenges and opportunities in the Sol Plaatje Local Municipality (SPLM). Fundamentally, it sets a spatial vision for the future and outlines a set of strategies in order to achieve the vision.

The main strategies identified for the Sol Plaatje Municipal area are:

Strategic Objective 1: The Smart City

The core focus of a smart city is that it uses different types of electronic internet of things which will allow spatial economic empowerment in which investment can grow and jobs can be generated and improve service delivery. It will allow the Municipality to be South Africa's Hub for Science and Engineering research as well as data Management Hub based on the established Sol Plaatje University, proposed science centre in Galeshewe and close proximity to the SKAP. Improved broadband connectivity will assist to achieve this objective.

Strategic Objective 2: The Inclusive City

The intention is to address the segregated nature of the Municipality and stimulate social and economic inclusion of all area. The fibre network within the disadvantaged areas of the City will assist to ensure a more inclusive City.

Strategic Objective 3: The Compact City – Creating a Settlement Form of Opportunity and Inclusivity

The importance of a compact and sustainable urban form to ensure urban justice.

Strategic Objective 4: The City that provides Strategic Leadership to develop a Resilient Economy through Heritage, Tourism, Innovation and Corporate Governance.

This will allow for the robust preservation of the significant heritage areas and enhance of tourism that defines the Municipality and promote integrated government amongst the different Directorates of the Municipality.

An effective fibre network will contribute to achieving this objective of the Municipality.

The MSDF further states the need for spatial transformation which will enhance and preserve the heritage of the municipal area. An Environmental Sensitivity and Heritage Policy is proposed as the heritage value of Kimberly is one of the key assets of the City. It is therefore important to protect areas of conservation value and buildings. The natural and heritage assets, cultural experiences and destinations places identified in the MSDF are considered important structuring elements of the city and the importance thereof to promote tourism is also stressed. Certain areas which are deemed to be heritage conservation worthy areas (inter alia based on a survey of the former National Monument Council, 1986) within the city have been identified, namely:

- (i) Beaconsfield;
- (ii) Belgravia;
- (iii) Inner City;
- (iv) Areas within De Beers;
- (v) Open Mine;
- (vi) Areas within West End;
- (vii) Memorial Road area;
- (viii) Greater no 2 area in Galeshewe; and
- (ix) Herclear.

It should be noted that neither the Northern Cape Heritage Authority nor the Sol Plaatje Municipal Municipality have done any heritage audits yet. There is thus no formal Heritage Register available. Very few of the formally identified heritage resources as per the National Monuments Council study are found within the study area of this report. The study area was thus assessed during the surveys done for the NID submission to determine if there are any other heritage resources which would be affected by the fibre network deployment proposals.

Certain of the identified heritage areas falls within the study area of the Heritage Report. The following recommendations were made about them in the Spatial Development Framework:

- **Galeshewe**

The largest extent of the study area falls within the Galeshewe township area. The spatial structure of the original Kimberly municipal area was influenced by the historical mining activities, its infrastructure and the Group Areas Act. This resulted in a city that is both socially and economically disconnected. Galeshewe is the largest predominantly black township in Kimberley where most of the municipal population resides. It has many extensions to the township which are found in the west and central areas of the municipality. These areas are largely residential in nature and a mix of formal houses and some informal settlements and backyard structures. Some community facilities and informal small scale commercial activities are found in the area.

The Galeshewe area is the poorest in terms of income and economic opportunity. The focus is therefore to enhance the economic viability within these area by the promotion of development opportunities through the application of incentive schemes and the provision of adequate infrastructure that can sustain development as a matter of priority. The Neighbourhood Development Partnership Grant (NDPG) and the Galeshewe Urban Renewal Programme (GURP) are programmes of the National Government in which public spending and investment is made to renew townships and enhance economic growth. Galeshewe is a direct beneficiaries of the GURP funding. Linked to the GURP is the NDPG which is an initiative aimed at stimulating and accelerating investment in underserved residential neighbourhoods by providing technical support and capital grant financing for municipal projects that have a distinct private sector element or an intention to achieve this. The provision of a fibre network to ensure better quality broadband access is thus in line with the provisions of the Spatial Development Framework.

Within the Galeshewe township the Hulana and Greater No. 02 area is identified as a Neighbourhood Node of which the heritage significance thereof needs to be preserved and protected. The fibre network would run through a section of this area and the impact of the proposed fibre network on heritage resources within this area would specifically be addressed. Underneath, **Figure 3**, is an extract of a plan for the Hulana/Greater Nr 2 Node Precinct Plan and the position of the area with heritage significance is indicated in blue.

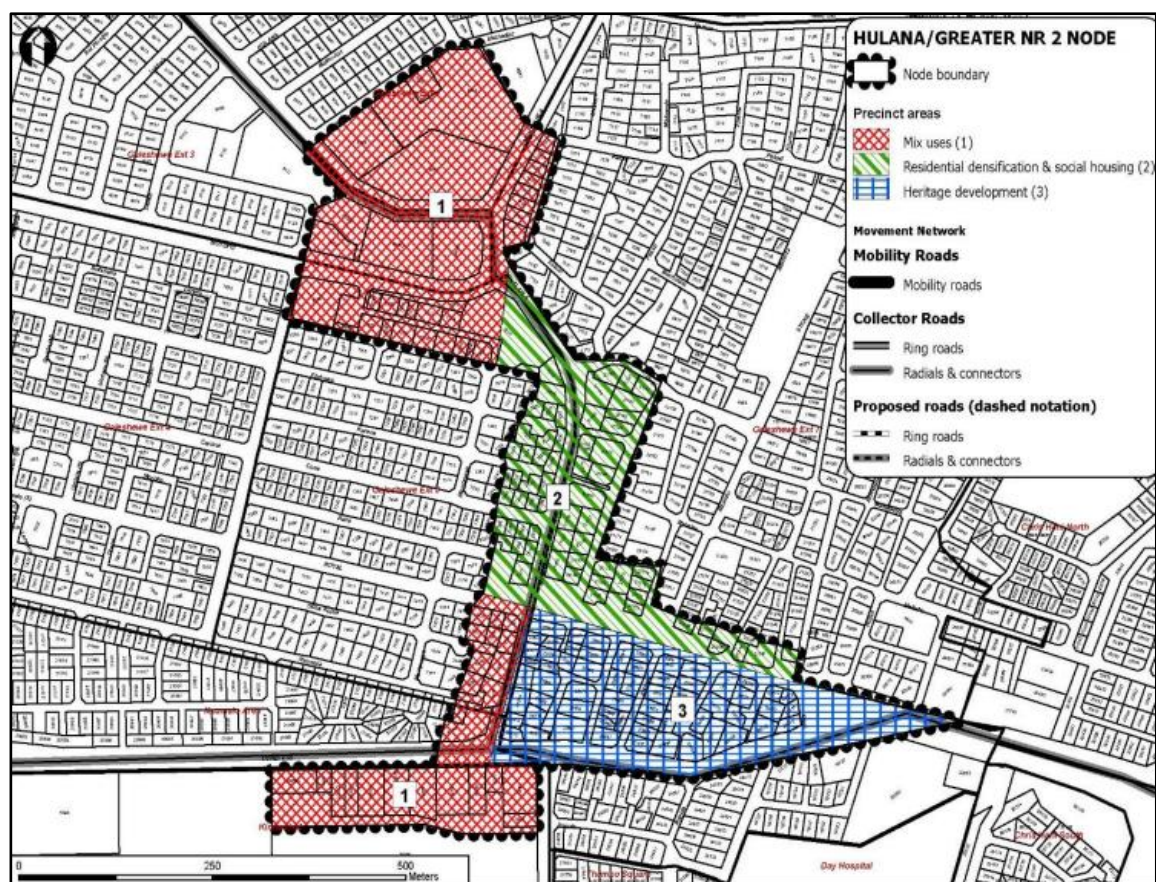


Figure 3: Extract from the Sol Plaatje Municipality Spatial Development Framework 2018 - 2023 – Precinct Plan for the Hulana and Greater No. 02 area

The Spatial Development Framework states the importance of promoting the expansion and development of new investments in the area to promote public facilities, social amenities, residential densification and a heritage environment to make it a Neighbourhood Node which will function as a public facility and cultural and heritage hub.

More info will be provided in Section 3 about the history and heritage significance of this area and the impact of the proposed fibre deployment on the heritage significance of this area will be addressed in Sections 5 and 6 of this report.

• De Beers and Open Mine areas

Certain areas and structures with the De Beers suburb have heritage significance. The areas where aerial fibre is proposed, however, does not affect these area or structures as will be explained in the report and as can be seen on the underneath extract from the Spatial Development Framework, .

No aerial fibre is proposed along the Open Mine and Big Hole area and there would thus be no negative impact on these heritage resource. Access to better broadband connectivity would positively contribute to the Municipality's vision of the proposed Big Hole Adventure Precinct with the aim to retain and promote heritage and adventure activities.

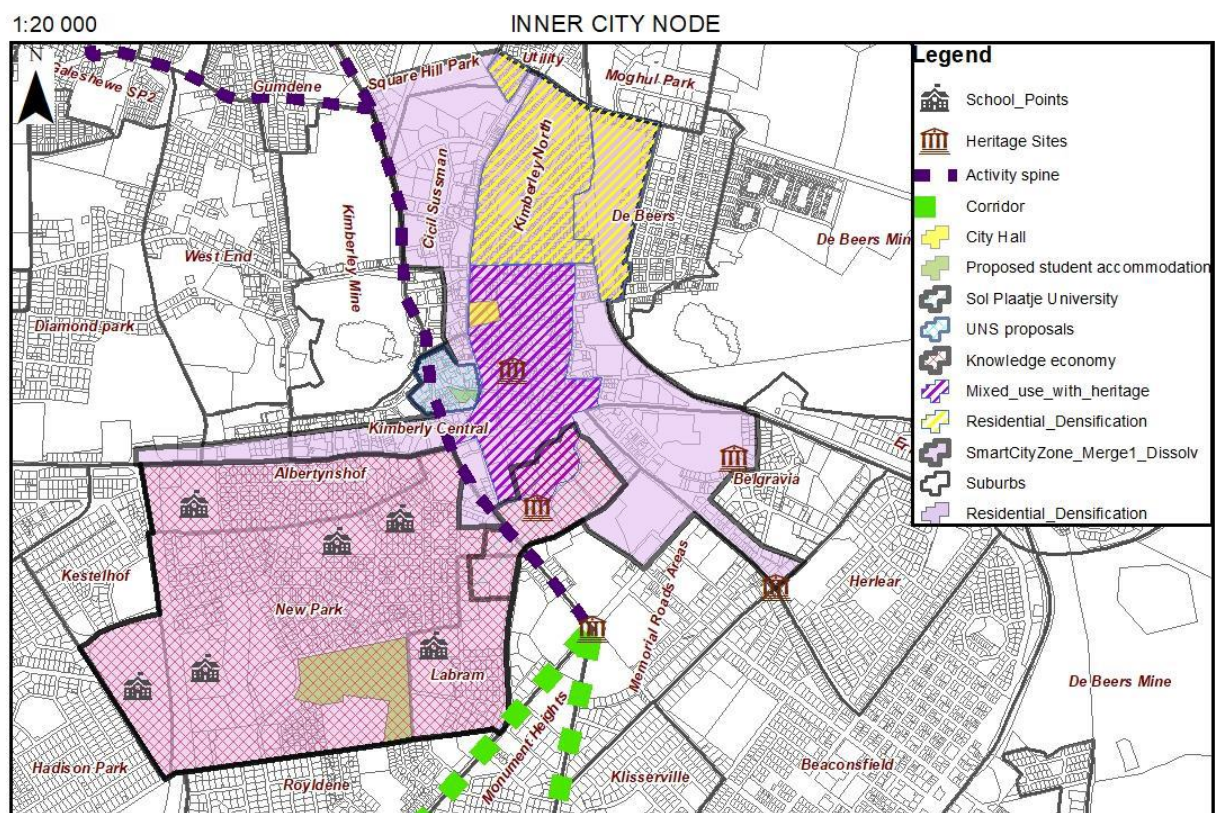


Figure 4: Extract from the draft Sol Plaatje Municipal Spatial Development Framework, 2018-2023

Although the MSDF stresses the importance of protecting heritage resources within the city, it also promotes social and economic development. In this regard it specifically refers to the importance of telecommunication in this regard. It is stated that a 'smart city' approach to development should be adopted. The MSDF describes a smart city as "*an urban development vision that integrates numerous information and communication technologies and the internet solutions in a secure fashion. This is done in order to better manage and distribute a city's assets. Technologies such as social media, information market places, and the internet of things can support the Sol Plaatje in achieving objectives such as community well-being, social mobility, economic growth, and infrastructure resilience. New housing developments must include fibre optic networks to ensure that an information rich future is secured. Adopting this approach in Sol Plaatje can go a long way in addressing the urban and social ills faced in the municipality. The Sol Plaatje University intends to commence with a pilot to stimulate a safe zone with free Wi-Fi within the CBD linking the university and the FET College through this initiative. This will be the beginnings of the smart city in Sol Plaatje.*"

SECTION 3: BRIEF HISTORY OF THE STUDY AREA AND THE BROADER KIMBERLEY AREA

- **Founding history of Kimberley**

The study area contains a number of residential suburbs located within the Kimberley township area (demarcated municipal area of the Sol Plaatje Municipality) which is the capital and largest city of the Northern Cape Province. The city developed from the diamond mining camp that was formerly known as Vooruitzicht, Colesberg Kopje and De Beers New Rush. It was renamed Kimberly in 1873 in honour of the Earl of Kimberley and attained municipal status in 1877, and city status in 1912. (*Richardson, Historic Sites of South Africa, 2001, p 53*) Around 1994 post the apartheid era, the Kimberley City Council was renamed Sol Plaatje Municipality.

The only traces of any precolonial settlement within the city's boundaries are scatters of Stone Age artefacts and there is no record of what the place/s might have been called before the first nineteenth century frontier overlay of farm names. It lay beyond the areas occupied by Tswana people in the pre-colonial period. Sites such as the nearby Wildebeest Kuil testify to a Khoe–San history dating up into the nineteenth century.

The city has considerable historical significance due to its diamond mining past and the siege during the Second Anglo-Boer war. It is further associated with important business people of this period such as Barney Barnato and Cecil Rhodes who established the De Beers diamond company in the early days of the mining town. It is also associated with some other historical figures such as Sol Plaatje, a prominent writer and activist and Frances Baard as well-known trade unionist.

Founded after the discovery of diamonds on farms in the area in 1869–71, the mining camp of Kimberley grew as a result of the intensive digging of the diamond-bearing pipe at the hill called Colesberg Koppie. The camp was named after John Wodehouse, 1st Earl of Kimberley, who was then British colonial secretary. The town of Kimberley was created in 1878 and incorporated into the Cape Colony in 1880. In 1885 the Cape Town Railway reached Kimberley, and during the South African War the town was besieged by the Boers for 126 days until relieved by Gen. John French on February 15, 1900. City status was granted in 1912 with absorption of the mining town of Beaconsfield.

After 1888 the Kimberley Mine at Colesberg Koppie and most other mines in the area were controlled by a trust organized by Cecil Rhodes, with production placed in the hands of De Beers Consolidated Mines Ltd. Kimberley Mine (now called the Big Hole), long the richest diamond-producing mine in the world, was closed in 1914, but several other mines remain productive, and diamond mining and cutting remain prominent industries.

The oldest residential suburbs such as Belgravia which dates back to the 1870s, bear testament to the success stories of the time, with many of these massive homes built during the peak of diamond trade. It became a fashionable suburb in the 1890's during a building boom which followed the amalgamation of the mines. The wealthier citizens built large, elegant homes of clay-coloured Kimberley brick, with elaborate iron roofs and intricate wooden verandah trim. The area has tree-lined streets, hedges and pleasant gardens which contribute to the historical streetscapes of this area. Large open spaces such as Queens Park and the school sport fields also contribute to the specific character of the area. Some well-known residents, associated with the early mining era history of Kimberley, resided in Belgravia, e.g. J. B. Currey, John Orr, Fritz Hirschhorn and Ernest Oppenheimer as well as Rhodes who financed the Sanatorium Kimberley's former most prestige hotel and health resort. Several declared National Monuments, Provincial Heritage sites and other sites/structures which have been included in the heritage register of the Province are found in this area.

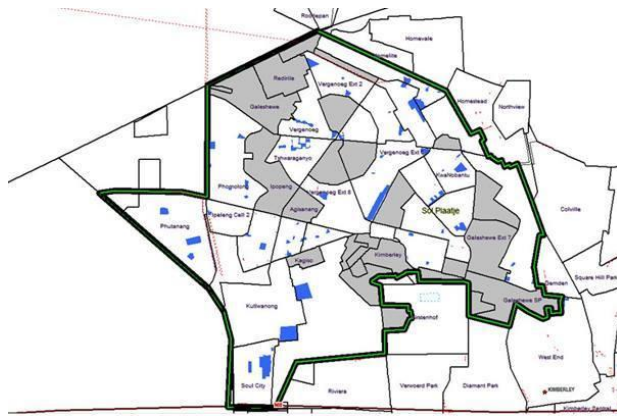
The Memorial Road area also contains several National Monuments (e.g. the Honoured Dead Memorial designed by Sir Herbert Baker, which commemorates those who fell during the Kimberley siege I 1904) Provincial Heritage sites and other identified sites/structures which have been included in the heritage register of the Province.

- **History of suburbs within the study area**

The study area falls mainly within the residential areas of Galeshewe, a small area within the De Beers suburb, Kimberley North and Diamond Park. Although older than 60 years, except for certain areas of Galeshewe (Hulana and Greater No. 02 areas), most areas within these suburbs are relatively newer areas within the larger Sol Plaatje Municipal area and are not associated it with the early settlement history and earlier mining activities.

The first areas of Galeshewe developed in the early 1870s to accommodate the migrant labour population in Kimberley. In 1886, the first large compounds for workers known as the Greater No 2 were introduced at the De Beers Mine. Galeshewe started to grow westwards from the Greater No 2 in the 1930s. The central part of the present Galeshewe was built between 1950s and 1970s. This makes Galeshewe Kimberley's oldest township and one of the oldest in the country.

In 1952 the Native Advisory Committee of Kimberley approved a recommendation from residents to name the township Galeshewe after Kgosi (Chief) Galeshewe of the Batlhaping tribe. On 1 August 1973, the Kimberley Council granted control of Galeshewe township to the then Bantu Administration Board of the Diamond Fields. A May 5, 1976 edition of the Kimberley newspaper "*The Diamond Fields Advertiser*" reported that "slums" in the township were a problem with at least 9 or 10 people living in a four-roomed house. This problem was because of the lack of suitable housing and the ongoing problem of unemployment. On 2 January 1978, the Community Board took over the control of the township. Galeshewe Municipality was inaugurated on 30 November 1983 making the township the first Black-controlled municipality in South Africa.



Figures 5 and 6: Kgosi (Chief) Galeshewe of the Batlhaping tribe and the Township Map for Galashewe

A number of important heritage resources are found within Galeshewe. The Hulana and Greater No. 02 areas which falls partially within the study area, are areas with heritage significance as they are the oldest part of the township as indicated earlier. By the end of the Anglo-Boer War on 31 May 1902, "No 2 Location" was split in two distinct sections. There was a small section lying parallel and to the rear of Barkly Road, with the larger area being beyond an expanse of low ground, this low ground being a spruit known as the "Kei River". The area was some 150 acres in size. Mankurwane's location (where Cassandra is now) was closed in May/June 1902 and the inhabitants all sent to No 2 to

reside. The total population at the time in No 2 was some 6 000-7 000, with about 800 huts available for accommodation. All the streets were about 60 feet in width (± 15 m). Many of the houses were of brick and were in a good state of repair. (*Posted by Steve Lunderstedt on the Kimberley Calls and Recalls Facebook Group, 10 September 2015 <https://www.facebook.com/groups/1374275302814914/>.*)

According to Matthews, there were lots of Indian stores in the township, although in May/June 1901 all trading by shopkeepers were prohibited from trading in all townships in the municipal area. Many of the traders moved to Barkly Road and opened their shops there. One such trader affected, was Dick Sutela (Sutilla), who had been trading in No 2 proper from 1885 until forced to move in 1901. On 9 September 1902, the local population asked the council for permission to open such businesses as a grocery, butcher, fruiterer, as well as a Boarding and Lodging house. This was not granted. This area is still primarily residential in nature with very few community and commercial facilities.

Underneath are some photographs of these earlier houses and an early church building in the Greater No 2 area of Galeshewe.



Figures 7 and 8: ***Old dwelling houses in Greater No 2 Township and the old church, commonly known as the “Donkey Church”. These are considered important local heritage resources.***

In 1988 there were several new suburbs making up Greater Galeshewe. No 2 was still there, but there was also Ikageng (Redirile, and referred to as Stocks and Stocks), Ikageleng, Retswele, KwaNobantu, Zone Six (Extension Six), Ipeleng, and Vergenoeg.

A monument for the Mayibuye Uprising Memorial in Kimberley is found on Galeshewe Square (cnr of Blom Street and Corless Road) in Greater No 2 Township. The Mayibuye Uprising that took place on Saturday, 8 November 1952 did not occur in isolation, but as a result of the culmination of the Defiance Campaign started in 1952. The Campaign was meant to protest the apartheid laws which oppressed black people in South Africa. On Friday, 7 November 1952, protesters, led by Dr. Arthur Elias Letele demonstrated against

apartheid laws by occupying racially segregated public spaces in Kimberley. They blocked whites-only benches at the railways station. Letele and seven other ANC leaders were arrested and that fuelled further resentment and led to an uprising in Greater Nr 2 Township where both public and private properties were destroyed. The protest continued into the second day November 1952 with more arrests. The protest escalated to several other buildings including the creche which was burnt. Police, municipal and private vehicles were set alight where the protesters were marching towards the memorial site where they were stopped by the police who opened fire on them and thirteen people were killed and seventy eight injured.

The pedestal of the memorial has a sculpture of a clenched fist with a raised thumb, a sign which symbolizes the Defiance Campaigns and stands at the site of the uprising. The open space was protected by a fence and a stall was included in the open space; benches/chairs were also included. Throughout the years it got vandalized which leads to it being fenced off for security reasons.



Figure 9: *Mayibuye Uprising Memorial on Galeshewe Square*

Galeshewe Square is surrounded by dwelling houses, a bottle store, shops and a stall area. An open space was created for the memorial as it is in the same area of Robert Sobukwe's office. Robert Sobukwe was the founder of the Pan African Congress and was elected a president of this party at their first conference in 1959 after breaking away from the ANC Youth League. The apartheid government had jailed Sobukwe for three years for incitement – after he organised a march against ‘pass laws’ in Sharpsville on 21 March 1960. When Sobukwe was supposed to be released after three years, he was kept in jail and re-sentenced through a law, the so-called “Sobukwe clause”. The “Sobukwe clause” was developed and renewed every year just to keep him in jail on Robben Island where he was kept in solitary confinement. He was only released from Robben Island and banished to Galeshewe in Kimberley in 1969. He lived in Naledi Street at Sobantu, in Galeshewe.

He was released from prison in 1969 and was allowed to live in Kimberley with his family but remained under house arrest. Kimberley had been suggested as an area where he could not easily foster subversive activities and also a place where he could live and work, while being easily monitored by the state. At the same time he was also restricted through a banning order, which disallowed political activities. Various restrictions barred him from travelling overseas, thus curtailing his attempts to further his education. Sobukwe completed his law degree with the help of a local lawyer, in Galeshewe, and then started his own practice in 1975 in Kimberley. He died at the Kimberley Hospital on 27 February 1978. The hospital was renamed Robert Mangaliso Sobukwe Hospital on Heritage day in September 2018.



Figures 10 and 11: The Robert Sobukwe offices also form part of the larger Mayibuye Uprising Memorial on Galeshewe Square

SECTION 4: NATURE OF THE ACTIVITIES OF THE DEPLOYMENT OF THE FIBRE NETWORK

As indicated earlier, two options for fibre deployment within the Sol Plaatje Municipal area are possible as agreed with the municipality, namely:

- Conventional trenching
- Overhead lines (either within the sidewalk area of the road reserved or mid-block)

There are certain requirements and guidelines in terms of legislation such as the Telecommunications Act 103 of 1996 and National Forest Act 84 of 1998 which guide the deployment of aerial fibre and conventional trenching. Underneath are some basic specifications about the different manners of fibre deployment being allowed in terms of wayleave approval:

Conventional trenching

Underneath are some images which give an indication of the nature of the activities associated with conventional trenching.

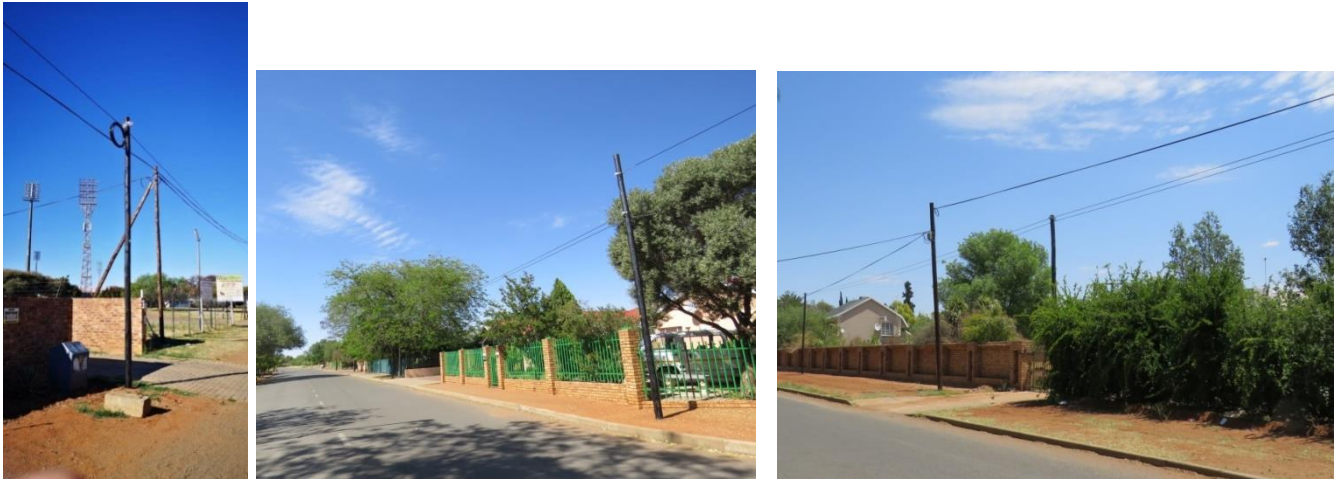


Figures 12 - 14: Some photographs of conventional trenching within the Sol Plaatje Municipal area

Deployment of aerial fibre

As indicated earlier, there are certain requirements and guidelines in terms of legislation such as the Telecommunications Act 103 of 1996 and National Forest Act 84 of 1998 which guide the deployment of aerial fibre. These include specific specifications and guidelines with regard to e.g. the number of poles per kilometre (1 pole every 50 metres), determining the most appropriate position of poles, the height and nature of the poles and cables, colours of cables, fixing of boxes to poles and taking cognisance of other overhead lines such as Telkom lines. There are also specific guidelines with regard to tree pruning where required, e.g. liaison with private land owners and authorities and guidelines with regard to the type of trees to be pruned.

Underneath are some images of the manner in which the aerial fibre is deployed within the sidewalk, showing the wooden poles and overhead lines. There would be no links to individual households or other facilities at this stage. As can be seen on the Wayleave Route Plans, aerial fibre will be deployed mostly mid-block.



Figures 15 - 17: Some photographs of aerial fibre deployed elsewhere within the Municipal area

A combination of conventional trenching and overhead fibre (both overhead stringing which refers to the distribution cables which is mostly running mid-block in private property and feeder overhead stringing which refers to our feeder cables that will mainly be in the road reserves) is proposed within the study area. The considerations which would guide the preferred/most desirable manner of fibre deployment within the Sol Plaatje municipal area would inter alia include the following:

- An assessment of the soil conditions, e.g. if a terrain is very rocky and accordingly difficult to trench which have e.g. cost implications.
- The existing utilities infrastructure of the municipality and other service providers such as Eskom are not deployed to the required specifications which has the risk of conventional trenching disrupting the already fragile services which could be difficult to fix.
- The visual impact of aerial fibre on existing structures and streetscapes, e.g. in areas with heritage significance or with scenic qualities.

SECTION 5: SITE INFORMATION OF FIBRE NETWORK ROUTE AND ANALYSIS OF IMPACT ON HERITAGE RESOURCES

5.1 SITE INFORMATION OF FIBRE NETWORK ROUTE

This Section will provide information regarding the proposed fibre network routes and the proposed manner of deployment as well as the possible impact thereof on heritage resources and how to prevent or mitigate it. For ease of reference and due to the wide area of deployment the study area was divided into 3 areas, which is described as Routes 1, 2 and 3.

- **Route 1:** Galashewe area main underground fibre line which primarily runs along Johan Daka Road, (an aerial fibre network is proposed within the various residential areas)
- **Route 2:** West End/Open Mine area main underground fibre line running primarily along the N12 (an aerial fibre network is proposed in the De Beers, Kimberley North, Turner Road Industrial area and Ashburnham to the east of the N8 and the Diamond Park and Kirstenhof areas to the west of the N8)
- **Route 3:** Albertynshof area

Figure 18, underneath, shows the main fibre line in yellow which will be underground and the blue dots the position of the poles for the aerial fibre within the residential areas.



Figure 18: The proposed study area with the 3 main routes

5.1.1 Route 1: Galashewe area

An underground line is proposed along John Daka Road, Motopo Street and Moaketsi Street from where an aerial fibre network is proposed to the north and south within the various residential areas of Galeshewe. This route is divided into five (5) sections for the purposes of the heritage analysis – see **Figure 19** underneath.

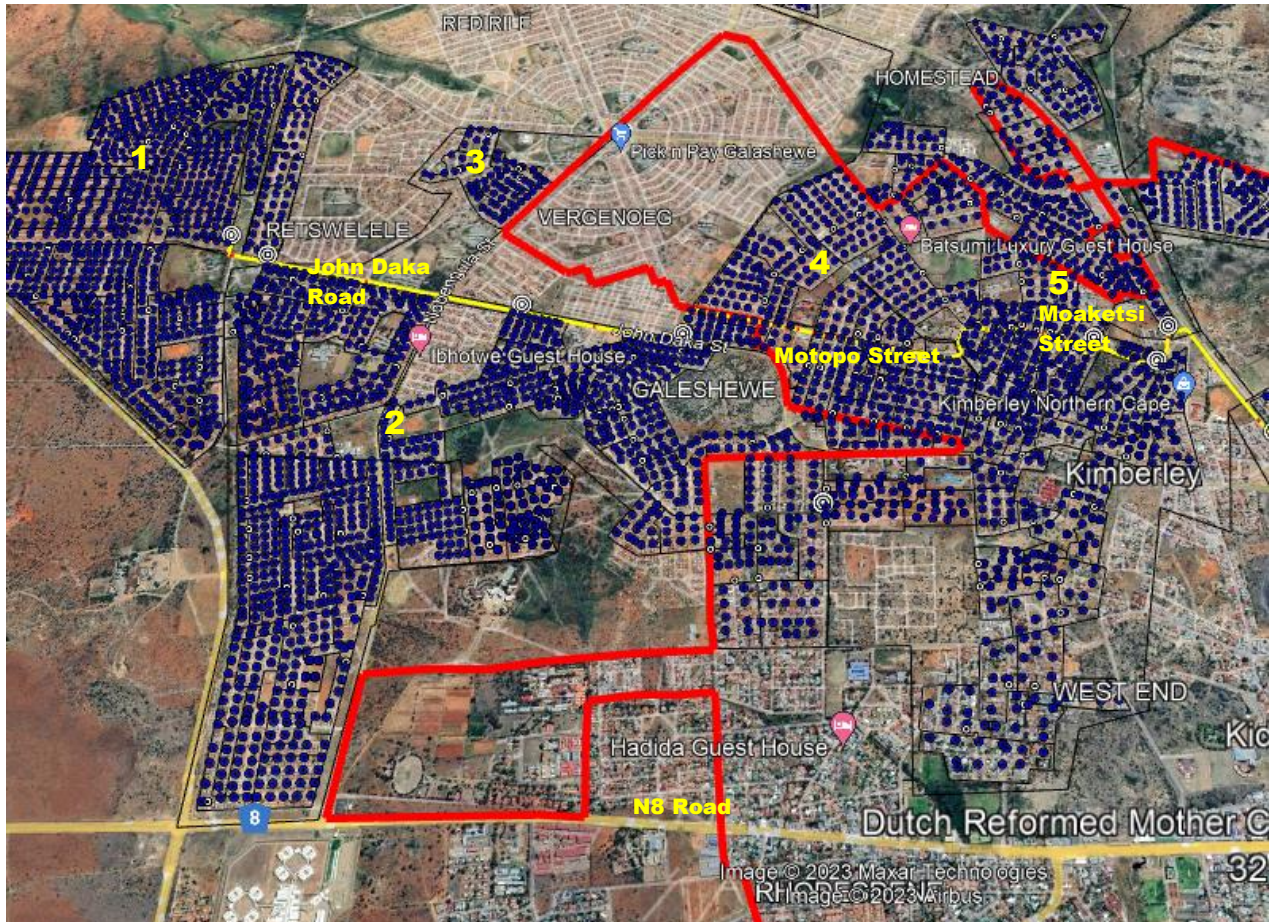


Figure 19: Route 1 (Galeshewe): Yellow line indicates the underground main line and the blue dots the position of the poles for the aerial fibre. The red lines show the boundary of the area older than 60 years.

- **Section 1 of Route 1: John Daka Road and Galeshewe residential areas to the north**

The underground main line runs along John Daka Road which is the main distributor road within this area and although primarily abutted by residential areas, there are small pockets of mixed land uses (community facilities, commercial and light industrial land uses) and a cemetery site. The fibre line along John Daka would be deployed within the road reserve by means of underground trenching. The sidewalks are a combination of a paved sidewalk and gravel area with very little greenery except for the mature trees along the road. The underground fibre line will not have any impact on the streetscape. There are no historical curbstones within this area. The mature trees can be considered a local

heritage resource and mitigation is proposed to ensure that the trenching will not cause damage to roots systems thereof during the excavation process.

Aerial fibre is proposed for the surrounding suburbs of Retswele, Thwarangano and Bunn. The proposed aerial fibre network would be mid-block or within the pavement section of the road reserve, depending on the position of existing municipal services and wayleave approvals from the Municipality. The aerial fibre deployment will have a visual impact on the streetscapes of these areas, but it should be noted that there are already various overhead cables found in this area and it would thus not be a foreign element within these streetscapes as can be seen on the photographs of the area.

None of these areas are older than 60 years and the dwelling houses are typical examples of more recent township architectural styles and do not have special heritage or architectural significance. There are very few paved or tarred sidewalks within the area and little or no greenery is found along the streets.

Where there are trees found within the pavement area of the road reserve, mitigation measures will be prescribed to prevent damage to the root systems of these trees. Although it will be proposed as a mitigation measure that street poles be placed on erf boundaries and not right in front of dwelling houses, the erven within this area are small and for practical reasons it would be difficult to position the poles everywhere as such.



Figure 20: Section 1 of Route 1: John Daka Road and residential areas of Galeshewe to the north (the blue dots show the proposed position of the poles for the aerial fibre (either mid-block or on the pavement areas of the road reserve))

Underneath are some photographs of the study area. The underneath photographs will provide a general idea of the character of the streetscapes within these areas .

The first photographs (**Images 1 – 7**) gives an indiation of the streetscape along Johan Daka Road where the fibre line would be underground.



Images 1 - 7: Streetscape along John Daka Road

The underneath photographs (*Images 8 – 17*) give an indication of the streetscapes within the residential areas to the north of John Daka Road within the study area where mid-block aerial fibre lines are proposed.



Images 8 - 17: Streetscapes in Galeshewe township to the north of John Daka Road. Note gravel pavements with little greenery and various overhead cables

- **Section 2 of Route 1: John Daka Road and Galeshewe residential areas to the south**

The character of the areas to the south of John Daka (**Figure 21** underneath) are very similar in nature to those to the north. See the photographs underneath – **Images 18 – 26**.

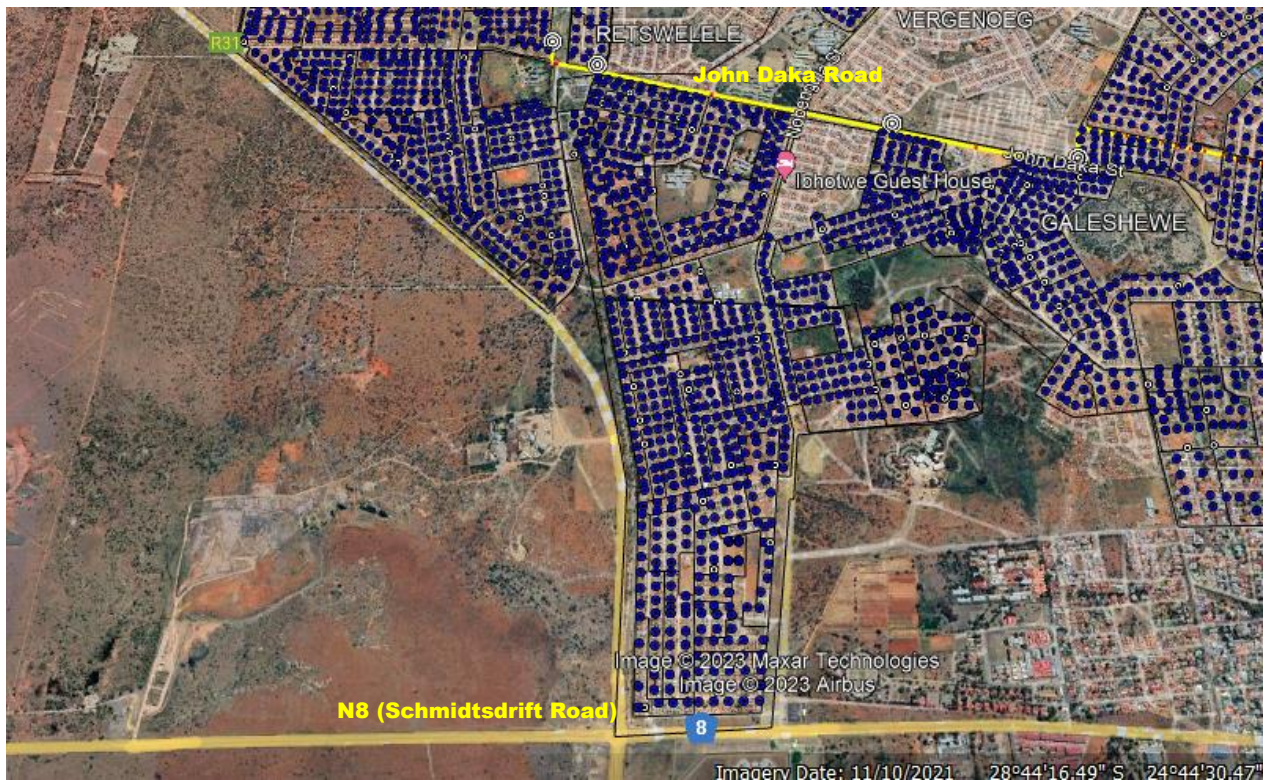


Figure 21: Section 2 of Route 1: John Daka Road and residential areas of Galeshewe to the south (the blue dots show the proposed position of the poles for the aerial fibre (either mid-block or on the pavement areas of the road reserve))



Image 18: Absolom Crescent



Image 19: Joe Selai Street



Image 20: Paul Khoza Street



Image 21: Edward Moeng Street



Image 22: Nobengula Street



Images 23 - 24: Some small-scale commercial uses



Image 25: Albert Luthuli Street



Image 26: Rebecca Motlhwai Street

- **Section 3 of Route 1: Residential area abutting the Galeshewe CBD area**

This area is a small residential component of the Tshwarano area abutting the Galeshewe CBD. This area is a relatively newer area which is predominantly residential with some community uses such as a clinic. The streetscape are similar to the other areas within Route 1. The fibre deployment will be primarily mid-block and the impact on the streetscapes would be limited. It should be noted that there is already several types of overhead cables within this area, e.g. overhead electrical cables and telephone lines. The sidewalks are unpaved or tarred. There is very little greenery on the sidewalks except for a few mature street trees.

Underneath are plans indicating the location of the area and the manner of fibre deployment (**Figures 27 – 31**) and photographs showing the streetscapes within the area.

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Figures 22 -23: Section 3of Route 1: A small area of the Tshwarano area abutting the Galeshwe CBD.



Images 27 and 28: Nobungula Street – abuts CBD central area (western edge)



Image 29: Moretele Street



Image 30: Phele Street



Image 31: Sediti Street – next to Betty Gaesewe Clinic site

- **Section 4 of Route 1: Area to the north and south of Motopo Street**

The area to the north and south of Motopo Street forms part of the older areas within the Galeshewe area (part of the original Galeshewe township establishment late 19th century, early 20th century). The area is primarily residential with some mixed land uses along

Motopo Street – community facilities (churches and schools) and smaller commercial facilities. See **Figure 32** underneath.

The streetscapes in this area are characterised by various overhead cable structures, namely Eskom overhead lines, Telkom lines and smaller electrical overhead lines providing electricity to the areas to the north and south of Motopo Street (See **Image 32**).

There are narrow sections of formal paved pavements in Motopo Street, but very little greenery of any nature within the road reserve. Some mature trees are found within the residential areas to the north and south and mitigating measures will be proposed to protect root systems of these trees.

The aerial fibre deployment in this area would be primarily mid-block and will have little impact on the streetscapes in this area.



Figure 24: Section 4 of Route 1 (Galeshewe): Yellow line indicates the underground main line and the blue dots the position of the poles for the aerial fibre. The red lines show the boundary of the area older than 60 years.



Image 32: Motopo Road streetscape

Underneath are photographs of the streetscapes within the residential areas to the north and south of Motop Street.



Image 33: Church cnr Nyembani and Motopo Streets



Image 34: Lerako Street



Image 35: Malunga Street



Image 36: Madiakgotla Avenue



Image 36: Nyembani Street



Image 37: Coos Street (example of one of the original houses – streetscape will not be affected by aerial fibre as it would be installed mid-block)



Image 38: Hulana Playpark in Mokgeledi Street –mid block fibre deployment in this area – no aerial fibre proposed along Mokgeledi Street



Image 39: So Plaatje Street

- **Section 5 of Route 1: Area to south and north along Moaketsi Street**

This area is part of the oldest area of Galeshewe and includes the Hulana and Greater No 2 area which was the first large compound for workers at the De Beers diamond mines which developed around 1886. The heritage significance of this area is addressed in Section 3 of this report.



Figure 25: Section 5 of Route 1 (Galeshewe): Yellow line indicates the underground main line and the blue dots the position of the poles for the aerial fibre. The red lines show the boundary of the area older than 60 years. The dotted lines show the block within Greater nr 2 area containing most heritage significance in this area.

The area within the street block between Royal and Corless Street, abutting Galeshewe Square (containing the Mayibuye Uprising Monument and the Robert Sobukwe's office) is one of the areas with much heritage significance within the Galeshewe Township as well as the wider Sol Plaatje Municipal area. This area was also identified as such within the Sol Plaatje Municipal Spatial Development Framework and was confirmed as such by a site visit. Many of the houses found here are good examples of the typical original compound houses found in the Galeshewe Township and the Manyibuye Uprising Monument and the Robert Sobukwe office both have Provincial if not a higher grade of heritage significance.

It is thus important to protect the character of these streetscapes. It should be noted that aerial fibre within this area is by means of mid-block lines and no aerial fibre is proposed along the Galeshewe Square. The sidewalk areas are very narrow and the Municipality is

not willing to give wayleave approvals for trenching along these sidewalks. The opinion is held that although there would be some form of visual impact on these streetscapes resulting from the mid-block aerial fibre the economic advantages which a fibre network will have within this area should be taken into consideration.

A relatively intact historical streetscape is still present along a section of Royal Street (see **Image 44**) which contains some of the original compound houses. As can be seen on the underneath aerial photograph, no aerial fibre is proposed in this street block. It is not foreseen that the mid-block aerial fibre will negatively impact on these heritage resources.



Figure 26: Street block between Royal Street and Corless Road. Blue dots show the position of the proposed mid-block aerial fibre

Underneath (**Image 40**) is a photograph of the Galeshewe Square - Cnr of Blom Street and Corless Road containing the Mayibuye Uprising Monument and the Robert Sobukwe's office. No aerial fibre is proposed along the boundaries of this square



Image 40: *Galeshewe Square - Cnr of Blom Street and Corless Road containing the Mayibuye Uprising Monument and the Robert Sobukwe's office. No aerial fibre is proposed along the boundaries of this square*

Underneath and on the next page are some photographs (***Images 41 – 44***) within the street block between Coreless Road and Royal Street.



Image 41: *Zimba Street*



Image 42: *Royal Street*



Image 43: Landele Street



Image 44: Royal Street – containing a relatively intact historical streetscape – aerial fibre along this streetscape will negatively impact on this heritage resource

The wider area is primarily residential with some mixed land uses, such as community facilities and small scale commercial activities. Underneath are some photographs showing the typical streetscapes within this area. The fibre network deployment will be primarily by means of mid-block aerial fibre.



Images 45 - 46: Saint Phillips African Church on the cnr of Moaketsi Street and Mafaro Church and a church in Rosa Street



Images 47 - 48: Streetscapes within Section 4 of Route 1

5.1.2 Route 2: West End/Open Mine area

The main underground feeder line's route starts approximately at the intersection of the N12 and Emerald Street over an open space abutting the Olympic Primary School. Aerial fibre will be deployed from there to the suburbs to the east (Turner Road Industrial Area, Square Hill Park, De Beer and Colville Park) and the west (Cemdene, Diamond Park and Kirstenhof). No aerial fibre will be deployed in the West End area around the Big Hole tourist area.



Figure 27: Position of the main underground feeder line in Area 2 running along the N12 (dotted yellow line)

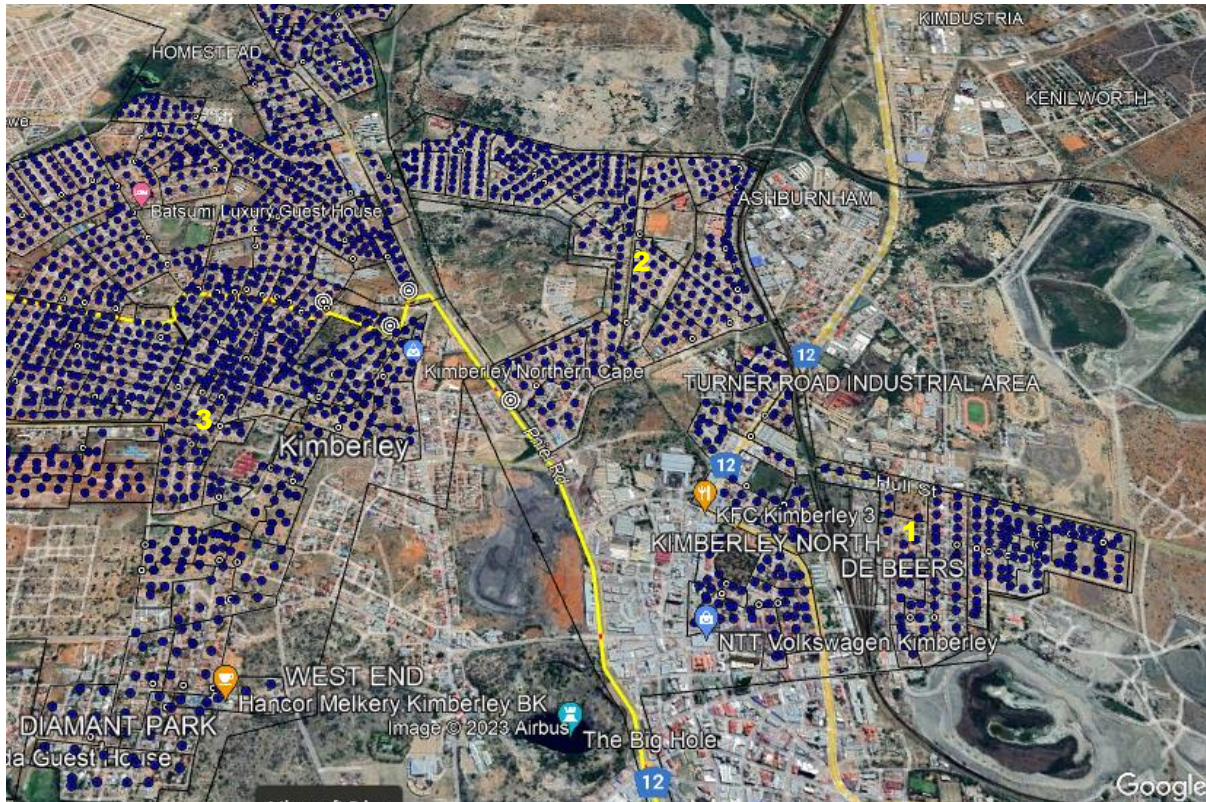


Figure 28: Proposed aerial fibre network within the areas to the east and west of the N12

The proposed aerial fibre network will be deployed within residential areas to the east and west of the N12. The different sections along the road will be addressed underneath:

Section along Long Road (N8) and N12 (Pniel Road)

The main underground feeder runs along Long Road (N9) and Pniel Road (N12) which are an important internal distributor road and one of the main access routes towards the City respectively. Both roads have a mixed use character. As the main feeder line will be deployed underground there would be no impact on the streetscape. There are not many trees within these areas and the impact on trees would be limited.



Images 49 - 52: Streetscape along Long Road (N8)



Images 53 - 55: N12 (Pniel Road) running along Big Hole



Images 56 - 57: N12 (Pniel Road) running along Open Mine area

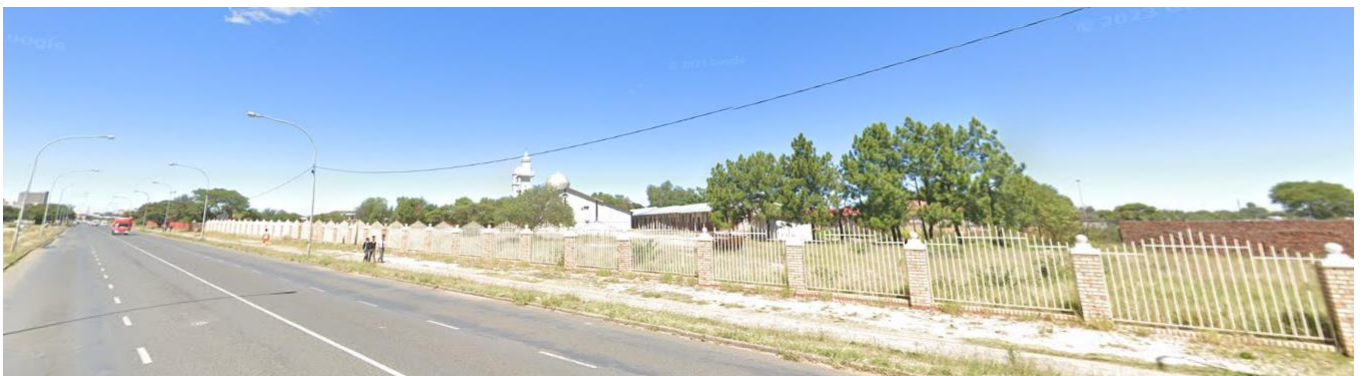


Image 58: N12 along Pniel Road Mosque

- **Route 2, Area 1: De Beers**

This section of De Beers consists of an older area and a newer area towards the east. This is a primarily residential area. This area has been formally assessed and some heritage resource were identified. They are indicated on the Map, **Figure 29**. These include the Old Residency (4 Bennett Street), St Albans Church (2 Takoon Square), the Old De Beers Mining Company Offices in the south eastern corner of the study area and the Old School of Mines. No aerial fibre is proposed in the streets where these heritage resources are located. No other significant heritage resources were identified within this area.



Figure 29: De Beers Section of Route 2. The red line indicate the boundary of the areas older than 60 years and the blue dots. The identified heritage resources are indicated with red dots.

On the next page are some photographs of the streetscapes within this area. The first series of photographs were taken in the older section of De Beers towards the west (abutting the industrial area next to the N12). Some heritage resources were identified, but no aerial fibre is proposed within these streetscapes.

The remainder of the area contains mid century dwelling houses with no specific architectural style or typical streetscapes. The aerial fibre deployment will be mostly through mid-block deployment and will not detrimentally impact on any heritage resources within the area. Better access and broadband connectivity will have social and economic advantages for this area which has become somewhat dilapidated.

The area to the south has a mixed use character. The pavement areas are in general not paved or tarred and there are no historical curb stones. Little greenery is found. Mitigation will be proposed to protect the root systems of mature street trees.



Image 59: *Small section in Takoon Square where some of the earlier dwelling houses in the area can be seen. Mid-blok aerial fibre deployment is proposed which will lessen the impact on this streetscape.*



Image 60: *The Old Residency Building (4 Bennett Street). An important local heritage resource being a remnant of the earlier dwelling house style within the City. No aerial fibre is proposed along this street.*



Images 61 and 62: Old De Beers Mining Offices in Warren Street – important local heritage resource – no aerial fibre is proposed along this streetscape



Image 63: Streetscape along McCaffery Street

Image 64: Streetscape along Wright Street



Image 65: Streetscape along Old De Beers Road

Image 66: Streetscape along Judge Street



Image 67: Streetscape along Hampton Street

Image 68: Streetscape along Picadilly Street



Image 69: Old Residency – 4 Bennett Street – heritage resource – no aerial fibre proposed in this streetscape

The newer area towards the east contains modern streetscapes as can be seen in the underneath Images 70 - 71.



Images 70 and 71: De Beers Terraces streetscapes in newer area to the east

- **Route 2, Section 2: Collville and Kimberley North areas**

Collville

Section 2 of Route 2 is the Collville and a section of the Kimberley North areas between the N12 and Pniel Road. This areas are primarily residential. The suburbs are older than 60 years but have no specific architectural style of contains any dwelling houses of heritage significance. The area has a rural character. Aerial fibre will have a visual impact, but there would be no impact on any heritage resources. Improved broadband access will have positive socio and economic advantages for this area.

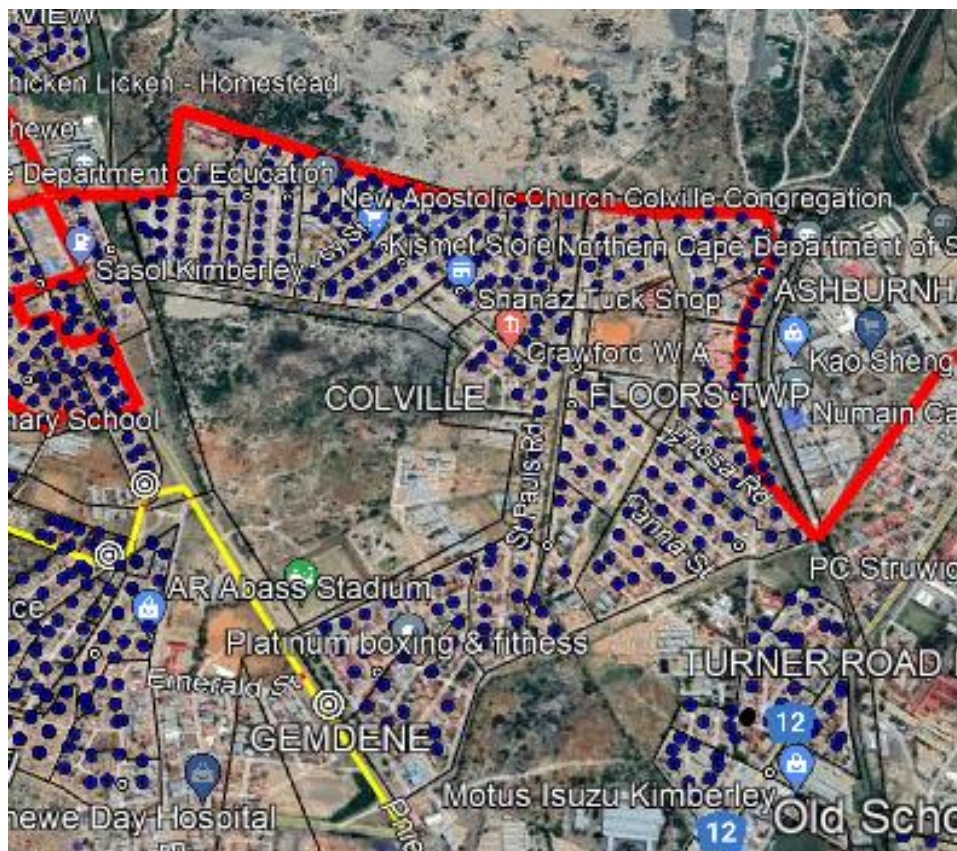


Figure 30: Collville and Kimberley North areas of Route 2. The red line indicate the boundary of the areas older than 60 years and the blue dots.

Underneath are some photographs of the Colville area streetscapes.



Image 72: Streetscape along Marigold Street



Image 73: Streetscape along Agnus Street



Image 74: Streetscape along Margaret Street



Image 75: Streetscape along Carl Street



Image 76: Streetscape along St Paul Street



Image 77: Streetscape along Verbena Avenue



Image 78: Streetscape along Community Road



Image 79: Streetscape along Peach Road



Image 80: Streetscape along Apricot Road



Image 81: Streetscape along Verbena Road



Image 82: Streetscape along Peach Road

Kimberley North

The Kimberly North suburb is located adjacent to the N12 towards the west. To the east of the N12 is an industrial area associated with the railway line activities. There would be no fibre deployment within this industrial section. Aerial fibre deployment is proposed in this area which has a mixed-use character. The area has been assessed and two local heritage resources were found, namely Rugby House in Roper Street which is a good architectural example of the earlier settlement in this area. No trenching or aerial fibre is proposed along Roper Street. Another local heritage resource is the Jewish Pioneering Cemetery in Bell Street. No aerial fibre is proposed on the edge of the cemetery.



Figure 31: Kimberley North area of Route 2. The red line indicate the boundary of the areas older than 60 years and the blue dots.

Underneath are some photographs of the streetscapes within this area.



Image 83: Streetscape along Willis Street



Image 84: Streetscape along Matthew Street



Image 85: Streetscape along Well Street next to N12



Image 86: Streetscape along Goodwin Street



Image 87: Rugby House in Roper Street



Image 88: Jewish Pioneering Cemetery as viewed from Belt Street – the aerial fibre would be at the opposite side of the street

Diamond Park

The residential streetscapes in Diamond Park are typical of the town's mid 20th century streetscapes with wide sidewalks and mature tree lanes. The houses do not reflect a unique architectural style but are a combination of facebrick and plastered houses. Certain areas still have a rural character. The aerial fibre deployment would be primarily mid-block which would limit the visual impact on the streetscape and harm to the mature tree lanes.



Figure 32: *Diamond Park area of Route 2. The blue dots show the position of the poles for the aerial fibre.*



Image 89: *Open Space along Elis Street*



Image 90: *Streetscape in Clifford Street*



Image 91: *Typical houses in Michae Street*



Image 92: *Reserve Road streetscape*

Kirstenhof

The character of Kirstenhof is very similar to that of Diamond Park. Although the area is older than 60 years the dwelling houses are very ordinary suburban houses most are modern structures which, although some being representative of a certain period within the Kimberley township development, don't have specific heritage or architectural significance. The sidewalks are mostly gravel with some trees, but not your typical tree lanes found elsewhere in the older residential suburbs of the town.



Figure 33: *Kirstenhof area of Route 2. The red lines shows that the area falls within the older than 60 years area. The blue dots show the position of the poles for the aerial fibre*

The Du Toitspan Cemetery can be considered as a local heritage resource (3C). No aerial fibre is proposed along the edges of the West End Cemetery. Aerial fibre deployment would be installed primarily mid-block. No negative impact on any streetscapes, individual dwelling houses or heritage resources is thus foreseen. Underneath are some photographs of the typical streetscapes in this area.



Image 93: *Green Street streetscape*



Image 94: *Prim Street streetscape*



Image 95: Palvie Road streetscape



Image 96: Carinus streetscape

5.1.3 Route 3 (Albertynshof)

This underground fibre line will run along Black Street which is a mixed use area running past the Adamantia High School, the D S Jacobs Sport Fields and a church. The route terminates in Francey Street. See **Figure 34** underneath. The underground line will have no impact on the streetscapes or heritage resources within the area.



Figure 34: Proposed Albertynshof Route (position of underground line indicated with yellow dots)

Underneath and on the next pages are photographs of the streetscapes within this area.



Figures 97 and 98: Dwelling houses and streetscapes in Francey Street



Figure 99: Cnr of Black and Francey Street



Figures 100-101: Black Street streetscape and buildings



Figure 102: High School Adamantia



Figures 103 - 104: Mixed land uses in Black Street



Figure 105: NG Church Kimberley



Figure 106: Monument on Park on the cnr of Black Street and N8

5.2 ANALYSIS OF THE AREA AND POSSIBLE IMPACT ON HERITAGE RESOURCES IN THE STUDY AREA

The different routes within the study have been assessed individually. The underneath listed factors were used to analyse the cultural landscape and built environment (townscape and streetscape) and assess the possible impact of fibre deployment on the character and heritage significance of the individual areas:

- Urban structure (framework and hierarchy of routes and space, landmarks/features and edge conditions)
- Density and mix (development intensity and range of uses)
- Scale, height and massing
- Architectural character form and appearances
- Landscape setting and character (typography, natural features, vegetation and greenery)
- Street character – spatial qualities and edge conditions, walls, trees, edges and fences.

The study areas contain primarily residential suburbs which also contain some community/civic facilities such as churches, schools, institutional buildings and public open spaces. Municipal and other infrastructure includes road reserves (black top and sidewalks as well as underground municipal services), street lightning poles, telecommunication infrastructure (Telkom poles/cables, cellular masts and satellite discs), electrical substations and Eskom overhead lines.

Although most of the residential areas within the study are older than 60 years except for the newer areas of Galeshewe to the west of the study area. As indicated earlier, there are no formally demarcated heritages areas within the study area, except for some pockets within the De Beers Area, West End and a small section of Galeshewe. It is acknowledged that no formal heritage audits have been done in most of the study area. The assessments did for the NID submission, however, aimed to identify and describe heritage resources identified along the three fibre deployment routes. Due to the nature of the activities more focus was placed on the cultural landscape/streetscapes than the history or significance of individual heritage resources. Where the fibre is deployed by means of aerial fibre, it may have a visual impact on the landscape and streetscapes. Such impact has been assessed in the report, but such an assessment will also take cognisance of the many positive social and economic advantages better broadband accessibility will have for especially the disadvantaged areas within the study area.

The main underground fibre lines will run primarily along two of the main access and distributor routes within the Sol Plaatje Municipal area, namely the N8 and the N12 which both have a mixed use character. As both areas are fully developed and services are already installed within the road reserves, it is unlikely that major new archaeological and

paleontological findings would be found during the excavation process for the underground fibre lines. Little greenery and mature trees which can be considered as local heritage resources are found within these road reserves and trenching is thus not foreseen to cause any major damage to mature trees on these sidewalks.

The aerial fibre is primarily deployed within residential areas of the municipal area, and the largest section of the study area falls within the Galeshewe township area. Aerial fibre within these residential areas will be mostly deployed in a mid-block manner in accordance with the submitted Wayleave Route plans. This is due to the existing position of municipal services. The impact of the aerial fibre on existing streetscape would thus in general be minimal.

The domestic scale prevalent in the residential areas within the study area is primarily single storey. Massing is commensurate with single residential dwellings. Edge conditions include a combination of more traditional fences and modern type of fences. The architectural character form and appearances of the study area is primarily domestic and is a mixture of 20th century architectural styles. The streetscapes consist of primarily dwelling houses (formal as well as informal) which are relatively ordinarily architectural examples with ordinary or minor aesthetic merit. The streetscapes in the older areas can be considered 3C's heritage resources – being typical/representative of a certain period within the establishment of the township and not having a high architectural or streetscape significance.

The study area is flat and there is a combination of avenue trees and pockets of garden trees. Mature trees are found on some of the sidewalks within the study area, although in general much less than elsewhere in the historic areas of the City. There is little other greenery on the sidewalks. Certain undeveloped areas have quite a rural character to it.

Building frontages and roof outlines are mostly nearer to the street and are very visible due to smaller front garden areas and lack of mature trees in front gardens. Roof lines are visible from the street. Some frontages are often obscured by high solid boundary walls and other security measures.

The exception is the industrial area to the east of De Beers and the commercial areas along the N8 and N12.

Route 1 runs through the Galeshewe area. Areas towards the west are the newer area which do not have any heritage significance. The older areas towards the far east are the oldest areas within Galeshewe and there are small pockets with relatively intact streetscapes such as in the old Hulana and Greater No 2 areas. Especially a small section along Royal which needs to be protected. It is not foreseen that the proposed mid-block aerial would negatively impact on this streetscape.

The visual impact of the mid-block aerial fibre proposed within the older areas of Galeshewe is considered acceptable and it is not foreseen that it would negatively impact on these streetscapes or the general character of the area. It should also be noted that there are already various other types of overhead lines within these residential area as can be seen on the photographs contained in this report. The major social and economic advantages which a fibre network will have in this area should also be considered.

Route 2 runs through residential areas such as De Beers, Kimberley North, Diamond Park and Kirstenhof which are mostly older than 60 years. The dwelling houses found in these areas are mostly very ordinary suburban houses and most are modern structures which, although some being representative of a certain period within the Kimberley township development, don't have specific heritage or architectural significance. The sidewalks are mostly gravel with some trees, but not your typical tree lanes found elsewhere in the older residential suburbs of the town. There are no historical sidewalks or curbstones within this area which would be affected by the trenching of holes for the poles. The mature trees which are found within the streetscapes can be considered as heritage resources and care should be taken to ensure that their root systems are not harmed. As indicated earlier, the fibre deployment will, however, be mostly midblock.

Some local heritage resources, mostly 3C, have been identified within the study area and have been discussed in the description of the individual routes. The impact of the specific manner of fibre deployment was considered and the opinion is held that there will be no potential negative impact on any heritage resources which have been identified during the study area assessment. While some of the proposed lines are in areas of high sensitivity as per the SAHRIS PalaeoSensitivity Map, it is not foreseen that there would be any major new findings as these areas have been previously disturbed by road construction and the installation of other services.

The proposed new fibre network will provide much improved broadband connectivity to especially the disadvantaged areas within the Municipal area which will have major socio and economic benefits for these areas.

SECTION 6. RECOMMENDATIONS AND CONCLUSIONS

The individual assessments of the different sections of the proposed fibre network routes confirmed that there would be no detrimental impact on any of the identified heritage resources. In certain sections some mature tree lanes, typical to the historical Kimberley streetscape are found. These trees can thus be considered as a heritage resource and care should be taken to not harm the tree roots during excavations.

Although the deployment of the aerial fibre may have a visual impact in some cases, it is important to consider that the project will offer major socio-economic advantages for local residents, especially within certain disadvantaged areas such as the Galeshewe area, which forms the largest part of the study area. It should also be noted that this area is characterised by several types of poles and overhead cables within the streetscape. The aerial fibre would thus not be a foreign element. In most cases the aerial fibre would be installed mid-block which would further limit the impact on streetscapes.

No further heritage studies are thus recommended.

The following is recommended to lessen the impact of the deployment of the fibre lines along the three routes within the study area:

- (i) The excavations should comply with the “*Tree Protection Guideline for Construction, Excavation & Trenching for Aerial and Underground Fibre Optic Cabling*” to prevent any damage to root systems of mature trees which are considered a heritage resource within certain area within the study area. Any subcontractors should be trained by Africa Fibre Infrastructure Solutions (Pty) Ltd regarding these protocols. It should be noted that Africa Fibre Infrastructure Solutions (Pty) Ltd is installing the fibre network on behalf of Frogfoot. (A copy of this Guideline document is submitted with the NID application, **Annexure 3**).
- (ii) Care should be taken to not harm any of the historical curb stones should it be present within the study area. Trenching underneath the curb stones is proposed.
- (iii) If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal, and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (must be alerted as per section 35(3) of the NHRA.
- (iv) If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit must be alerted immediately as per section 36(6) of the NHRA.
- (v) While some of the proposed lines are in areas of high sensitivity as per the SAHRIS PalaeoSensitivity Map, no further assessment of the impact to palaeontological

resources are required as the development footprint is located in areas that have been previously disturbed by road construction and the installation of other services; 38(4)c(i).

- (vi) If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the heritage resource. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA;
- (vii) All permit applications regarding section 34 heritage resources must be applied for from the Northern Cape Provincial Heritage Resources Authority (NCPHRA) should it be required.
- (viii) A Close-Up Report be prepared by Africa Fibre Infrastructure Solutions (Pty) Ltd within 30 days of completion of the project.

SECTION 7 REFERENCES

PRIMARY SOURCES

Google Earth images and Google Pro images

National Geo-Spatial Information (NGI): Historic aerial photographs

Photographs: Christine Havenga

Surveyor general: Survey diagrams and maps

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Frogfoot Draft FTTH Aerial Line Cable Specifications

ACTS, POLICIES AND GUIDELINES

Sol Plaatje Local Municipality Draft Spatial Development Framework 2018-2023

National Heritage Resources Act (Act No.25 of 1999). Government Gazette Vol: 406, Cape Town. 28 April 1999. No. 19974.

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