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BASIC ASSESSMENT PROCESS

THE PROPOSED UPGRADE OF MANTULI ROAD, IN WARD 8, NQUTHU LOCAL MUNICIPALITY, UMZINYATHI DISTRICT MUNICIPALITY, KWAZULU-NATAL

BACKGROUND INFORMATION DOCUMENT

OCTOBER 2016



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1. INTRODUCTION

1.1 Activity Background

Afzelia Environmental Consultants (Pty) Ltd has been appointed by Anderson Vogt Consulting on behalf of the Nquthu Local Municipality to conduct an Environmental Impact Assessment (EIA) in the form a Basic Assessment (BA). The proposed project involves the upgrade of Mantuli road into a gravel road.

1.2 Purpose of the Background Information Document (BID)

The purpose of the BID is to:

- (i) Inform the stakeholders, Organs of State, public as well as Interested and Affected Parties (I&APs) about the proposed project, and obtain their comments and inputs;
- (ii) Share information about the proposed project and environmental assessment process which will be of relevance to potentially affected parties; and
- (iii) Give I&APs an opportunity to register and comment.

The information provided is in terms of:

- (i) The National Environmental Management Act, 1998 (Act No 107 of 1998), as amended, the Environmental Impact Assessment Regulations (2014) as published in Government Notice No. 38282 of 2014, considering Government Notice No. R. 982, 983 and 985; and
- (ii) The National Water Act, 1998 (Act No 36 of 1998).

1.3 Regional Setting and Location of Activity

The proposed Mantuli road is situated in ward 8 east of Nquthu Town within the Nguthu Municipality which is one of four local municipalities that constitute the uMzinyathi District Municipality in KwaZulu-Natal. Refer to **Figure 1** for the Aerial Map and **Figure 2** for Topographic Map.

The geographical co-ordinates of the proposed project site are indicated in **Table 1** below:

Table 1: Coordinates of Proposed Site

Start	South	28°	13'	31.46"
	East	30°	46'	11.53"
End	South	28°	13'	24.72"
	East	30°	47'	41,81"

Access to the site is via the Road P36-2 and Road D1301 situated at the Start point of Mantuli road.

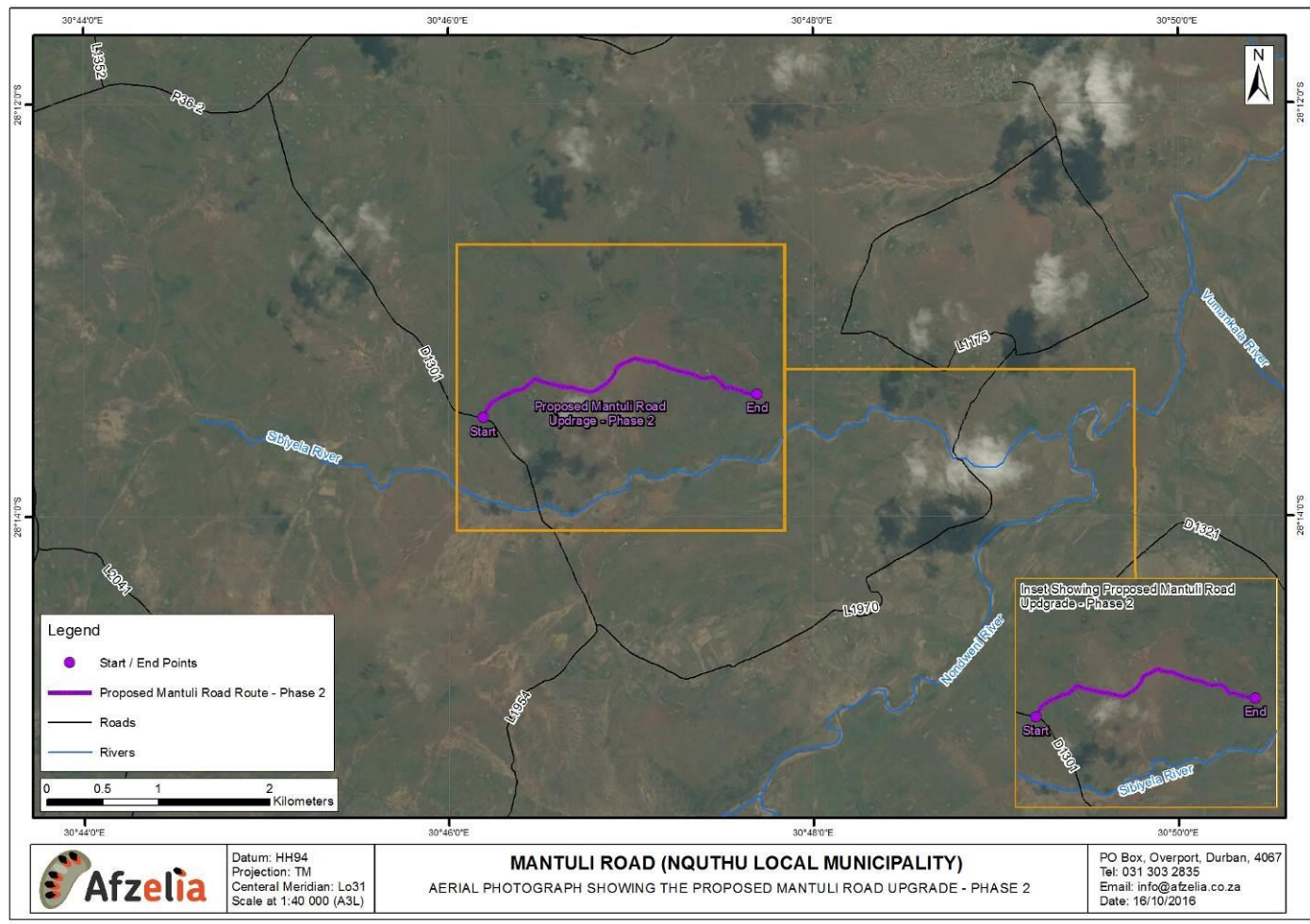


Figure 1: Aerial Map

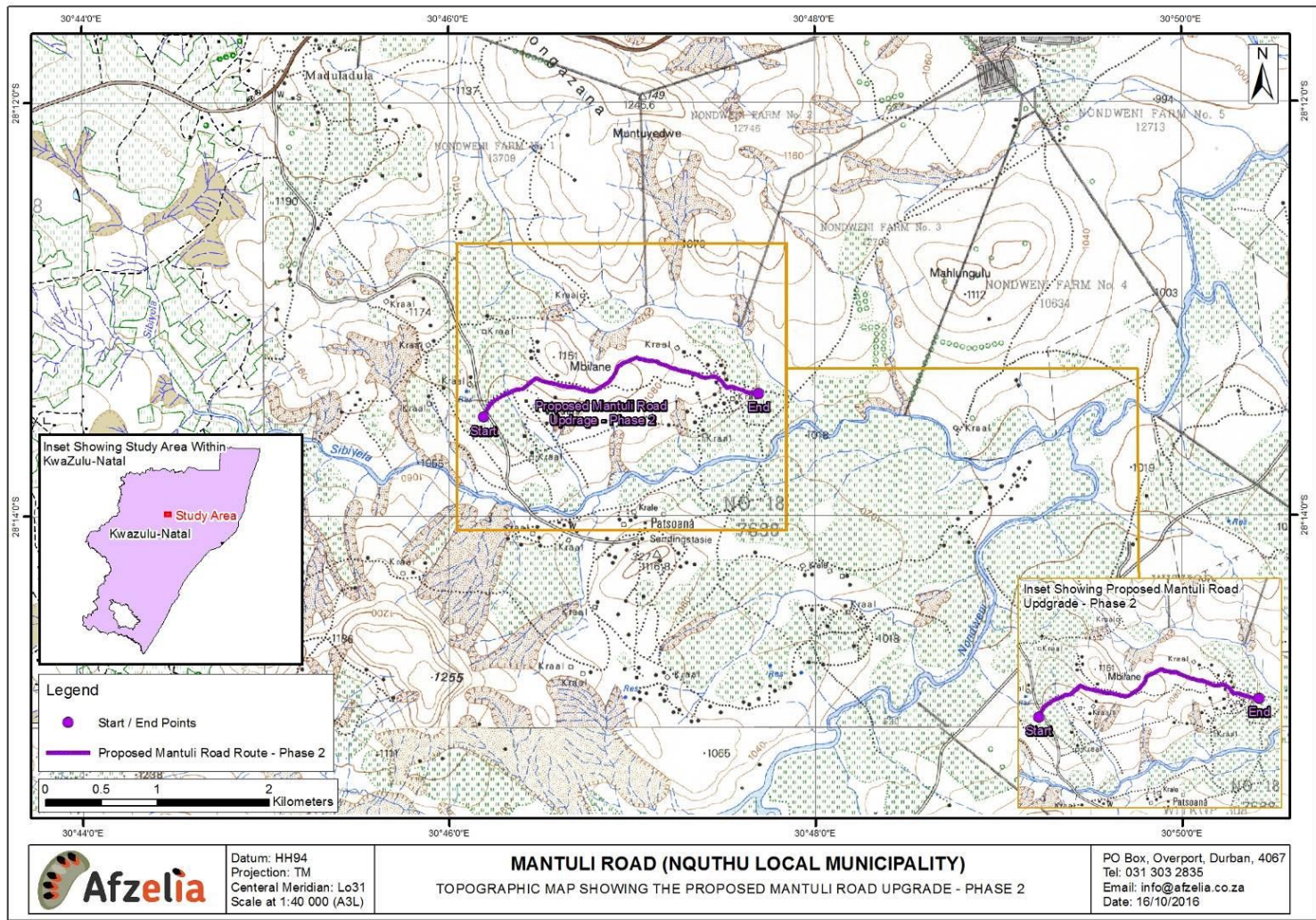


Figure 2: Topographic Map

2. CONCEPTUALISATION OF ACTIVITY

2.1 Project Description

The proposed new road alignment follows an existing track of about 2.8 km in length from the T-junction with road D1301 with a road reserve of 12m (6m each side). The proposed Mantuli road upgrade involves the widening from 5m to 8.4m and surfacing of an existing track to Type 7A standard gravel road (Refer to **Figure 3** for the proposed design layout). The proposed gravel road will conform to the Department of Transport Type 7A standard detail with a 5m carriageway. This section of the road is quite mountainous where boulders are probable and additional construction input might be required.

Over the mountainous section, it is proposed a 1000V-drain with rock bolsters will be required. On the open rolling terrain, a meadow drain is proposed. Minor drainage structures will be installed under the roadway where they are required. Minor accommodation of traffic will be required as the surrounding community makes use of the existing track. The project design will be based on the Technical Recommendations for Highways (TRH) manuals, South African National Standards (SANS), Committee of Land Transport Officials (COLTO), South African National Roads Agency (SANRAL) Drainage Manual, KZN Department of Transport Standard Details and other relevant specifications.

The following activities are to form part of the scope of works: site establishment, clearing and grubbing, the construction of possible drainage structures, mass earthworks, excavating more than 5m³ to use as a gravel wearing course on the road, wearing course layers, finishing off the road and completion and vacating the site.

2.2 Project Cost Estimate and Schedule

According to the Project Implementation Plan document for the Construction of Mantuli Road compiled by Nguthu Local Municipality (Project BID No.: NQU0080/235/2013); it is recommended that the proposed project be implemented as one individual contract for the upgrade of Manthuli Road at an estimated value of R4 785 917.30 (Including VAT and Contingencies) and for a contract period of 5 Months.

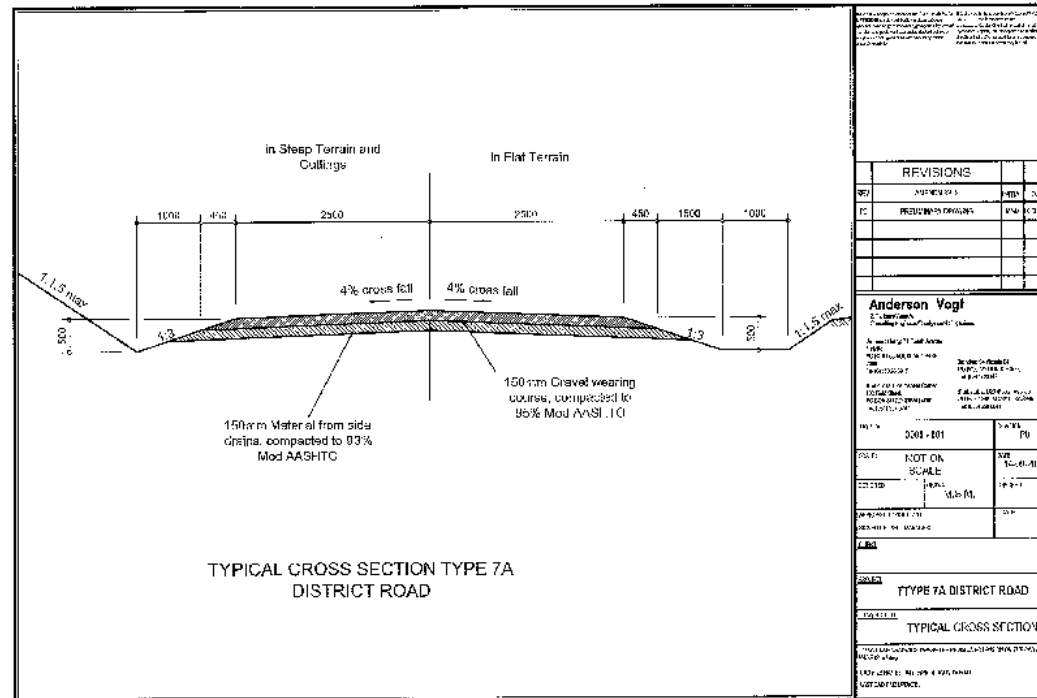


Figure 3: Proposed Design Layout

2.3 Need and Desirability

The Expanded Public Works Programme (EPWP) is a Government programme aimed at the alleviation of poverty and unemployment. Due to the circumstances of the proposed project the employment of local labour and participation in EPWP is minimal, only about 15 temporary employment opportunities are envisaged.

The following documents were interrogated with regards with need and desirability of the project:

- Nquthu Local Municipality Integrated Development Plan (IDP) 2015/2016; and
- Nquthu Local Municipality Spatial Development Framework (SDF) 2015

The Nquthu Municipality IDP identifies poor access to public amenities such as schools, clinics, pension points and other government services as an ongoing challenge for local communities. Moreover, the IDP has identified construction of local access roads as a planned intervention to raise the ratio of poor roads condition and increased accessibility for the local communities.

The Nquthu Local Municipality's long-term development goals and strategies are orientated towards improving accessibility, which will provide members of the communities with access to basic services and public amenities within government norms and standards which will facilitate regeneration in Nquthu.

Thus, the proposed upgrade of the Mantuli road supports the objectives and strategies of Nquthu Local Municipality by improving mobility, reducing inconvenience and delays, enabling transport services to access remote areas as well as creating economic opportunities through improved accessibility.

The SDF identified local economic development and community development as interrelated concepts. These are necessary to achieve the municipality's vision and are largely reliant on improved accessibility. Furthermore, the improvement of roads is a basic service delivery key performance area. Therefore, the upgrading of the proposed road would be a service to the community and will help improve the quality of life of the local residents.

Both the IDP and SDF emphasise the need for provision and improvement of basic infrastructure. The proposed Mantuli road upgrade will address the main focus of service delivery and infrastructure development, which is to provide upgrade and maintenance of existing infrastructure. Additionally, the creation of employment opportunities for local community members that will be generated during the construction phase, may provide a temporary solution to the challenge of unemployment as identified by the Municipal IDP.

3. POLICY AND REGULATORY FRAMEWORK

3.1 Applicable Legislation

The proposed road upgrade triggers Listed Activities as stipulated in the EIA Regulations (2014) promulgated in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) as amended under Government Notice No. 982, 983 and 985.; as well as Section 21 (c) and (i) of the National Water Act (Act No 36 of 1998) which requires a Water Use Licence.

3.1.1 National Environmental Management Act requirements

The following table provides a summary of the Listed Activities in terms of the EIA Regulations 2014 that are triggered by the proposed development:

Table 2: Summary of Listed Activities

Government Notice Number	Activity Number	Description of each Listed activity
No. R. 983 of 4 December 2014 (Listing Notice 1)	19	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from - (i) a watercourse.

The abovementioned activities contained in Listing Notice 1 of the Regulations promulgated in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (GN R. 982 and 983, of 04 December 2014); are subject to a Basic Assessment.

Other Listed Activities under Listing Notice 1 or 2 may be triggered by the proposed road upgrade, however, this will be verified following consultation with Department of Economic Development, Tourism and Environmental Affairs (DEDTEA).

3.1.2 National Water Act requirements

A Water Use License Application (WULA) is a legislative process governed by the Department of Water and Sanitation (DWS) for the authorisation of all water uses defined in section 21 of the National Water Act, 1998 (Act No 36 of 1998) (NWA). The NWA is a legal framework for the effective and sustainable management of water resources in South Africa.

Due to the proposed project occurring within 500m radius of a National Freshwater Ecosystem Priority Areas (NFEPA) wetland, a WULA must be submitted to the DWS in terms of Section 21 (c) and (i) in accordance with the NWA. Refer to **Figure 4** for the NFEPA Wetland Map.

The following table provides a summary of water uses that require a Water Use Licence in terms of the National Water Act:

Table 3: Summary of water uses that require a water use licence

Activity Number	Water Use	Explanation / Definitions
Section 21 (c) of NWA, 1998	Impeding or diverting the flow of water in a watercourse.	❖ Impeding flow means the temporary or permanent obstruction or hindrance to the flow of water into watercourse by structures built either fully or partially in or across a watercourse. ❖ Diverting flow means a temporary or permanent structure causing the flow of water to be rerouted in a watercourse for any purpose.
Section 21 (i) of NWA, 1998	Altering the bed and banks of a watercourse or characteristics of a watercourse.	❖ Altering the bed and banks means any change affecting the resource quality of the watercourse (the area within the riparian habitat or 1:100 year floodline, whichever is the greatest).

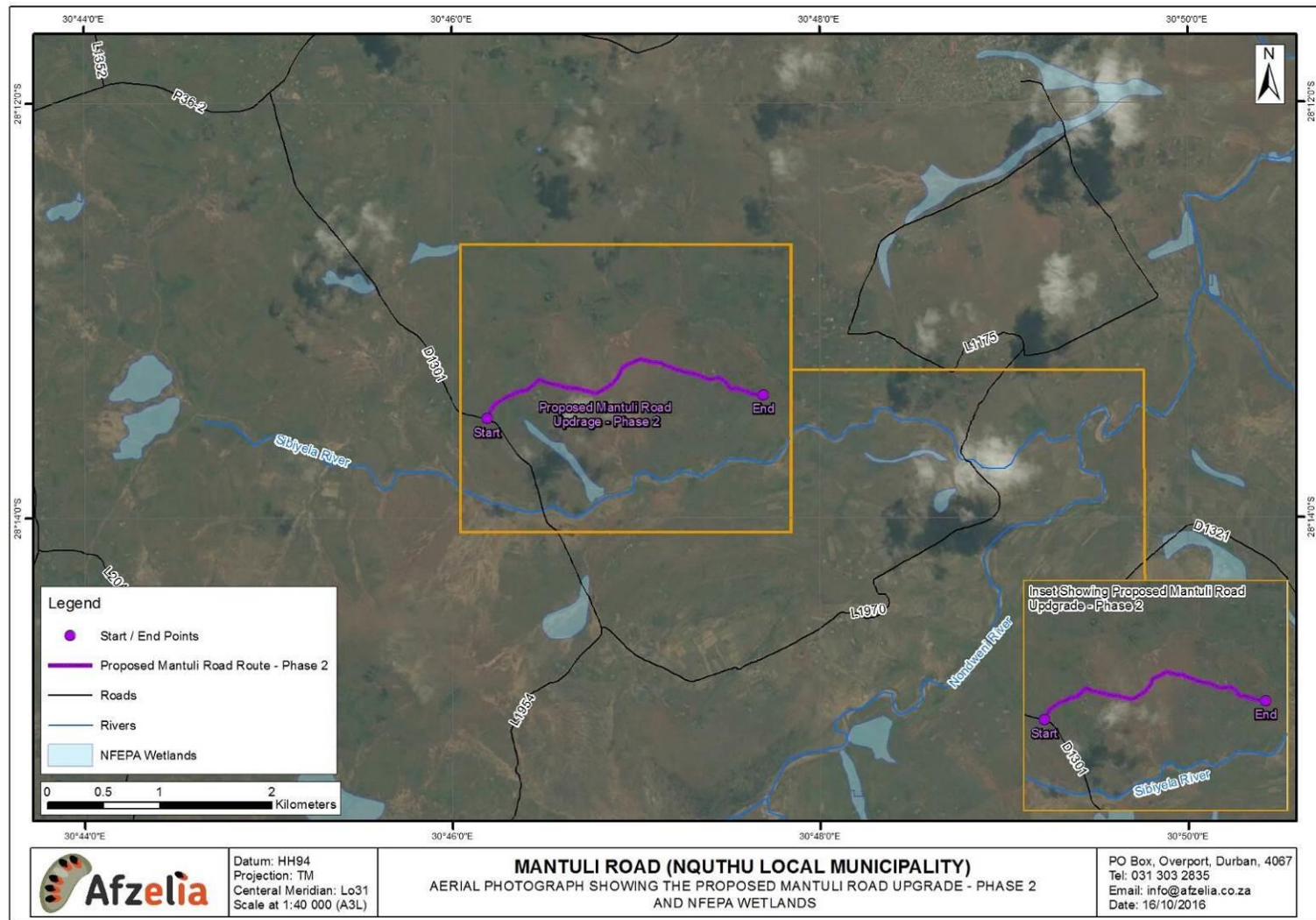


Figure 4: NFEPA Wetland Map

3.2 Scope of Work

3.2.1 Basic Assessment Process

The Basic Assessment Report (BAR) process is a comprehensive, independent assessment of all identified and potential environmental impacts. The aim of a BAR is to ensure that the development occurs in a sustainable manner and to formulate ways for reducing or mitigating any negative impacts of the project whilst enhancing its benefits. The findings and mitigation measures are recorded in the Environmental Management Programme (EMPr) which becomes a legally binding document on approval.

Impacts will be determined through a process of public participation (PPP), guidance from government authorities, specialist field assessments and impact modelling, and experience with similar projects.

The following will take place during the Basic Assessment process:

- Information sharing with Interested and Affected Parties (I&APs) and authorities through notifications, **Background Information Document (BID)**, and public meeting(s);
- Detailed environmental investigations;
- Impact assessment and modelling;
- Consolidating, addressing, and providing appropriate mitigation measures where necessary for all comments received; place this point before the one above
- Submission of the draft Basic Assessment Report (BAR) including the EMPr to the relevant authorities and I&APs for comment;
- Submission of the final BAR including the EMPr to the relevant authorities (including EDTEA, the authorising authority) and I&APs for comment; and

3.2.2 Water Use License Process

Due to the proposed development occurring within a 500 metre radius of a NFEPA wetland a WULA is required to be submitted to the Department of Water and Sanitation Affairs (DWS) in terms of Section 21 (c) and (i) in accordance with the National Water Act (NWA).

The following will take place during the Water Use License process:

- Risk Assessment Matrix undertaken by a South African Council for Natural Scientific Professions (SACNASP) registered specialist;
- Pre-application meeting with DWS;
- Information gathering;
- Completion of application forms;
- Public Participation Process;
- Completion of Water Use License report and Section 27 (1) motivation for the water use license application; and
- Submission of the water use license application to the DWS for authorisation.

3.2.3 Environmental Specialist Studies to be Undertaken

In order to quantify how and where a project may impact on the environment, specialist studies are required to inform the Basic Assessment process as well as the WULA to provide supporting specialist data. The following specialist studies have been identified so far and will be conducted during the BAR process and WULA:

- i. Wetland Delineation and Functionality Assessment;
- ii. Wetland Rehabilitation Plan;
- iii. Desktop Heritage Impact Assessment; and
- iv. Desktop Paleontological Impact Assessment

4. INFORMATION ON ASSESSMENT FACTORS

4.1 Climate and Rainfall

The overall average temperature in the Nquthu area is 16.7°C. Summers range from warm to hot and temperatures reach an average high temperature of 23.2°C whereas winters are relatively cool with cold spells and moderate to light frosts. Mist is relatively uncommon, with frost occurring for approximately 15 days per year. The climate of the area is characterised by summer rainfall and the mean annual precipitation of the region is 650 mm. The winter months of June and July receive an average of 2.6 rain days and precipitation in summer is generally in the form of thunderstorms. The mean annual evaporation ranges from 1 706 –1 918 mm with an overall average of 1830 mm (Mucina & Rutherford, 2006; Nquthu Municipality, 2015).

4.2 Geology and Soil

The area contains a diverse arrangement of Karoo Supergroup rocks, namely: Dwyka, Ecca and Beaufort Groups and marginally also Jurassic dolerite intrusions. Yellow-brown soils over plinthic subsoil and shallow duplex soils are also prevalent. Red and black heavy soils are derivatives of dolerite and are characteristic of high resistance to erosion. The numerous land types identified in this area include Ca, Fb, Fa, Db and Bb (Mucina & Rutherford, 2006).

4.3 Vegetation and Topography

The site is located within a region classified broadly as a Grassland biome, and more specifically as a KwaZulu-Natal Highland Thornveld vegetation unit. The conservation status is classified as least threatened, having a conservation target of 23 %. However, only a very small part of this vegetation unit is legally conserved in Spioenkop, Weenen, Ntinini, Wagendrift, Moor Park and Tugela Drift Nature Reserves. Approximately just above 16 % has already been transformed through means of cultivation, urban sprawl and building of dams. Erosion in this vegetation unit is generally very low (Mucina & Rutherford, 2006). (Refer to **Figure 5** for the Vegetation Map.)

The surrounding topography is characterised by rolling to moderately broken terrain with slopes ranging from 5 % to 12 %. One section of the road is quite mountainous (See **site photographs 1-4** below). The average elevation ranges from 689 m above sea level to 1551 m above sea level. (Nquthu Municipality, 2015).

The proposed site does not fall into a biodiversity priority area and the vegetation type is classified as least threatened in its conservation status. Refer to **Figure 6 and 7** respectively for the MINSET map and Threatened Ecosystem map.

The range of vegetation recorded along the proposed road servitude during Afzelia's site visit on 20/07/2016 is shown in the table provided below.

Table 4: Range of vegetation along the proposed road servitude

Botanical Name	Common Name	Conservation Status	Alien Species	Invasive Status (Category as per NEM:BA)
<i>Acacia natalitia</i>	Pale-barked sweet thorn	-		-
<i>Aloe marlothii</i>	Mountain aloe	Protected		
<i>Bidens pilosa</i>	Black jack	-	X	

Botanical Name	Common Name	Conservation Status	Alien Species	Invasive Status (Category as per NEM:BA)
<i>Melinis repens</i>	Natal Red top	-		
<i>Eragrostis plana</i>	Tough Love grass	-		
<i>Aristida junciformis</i>	Ngongoni Three-awn	-		
<i>Themeda trianda</i>	Red grass	-		
<i>Agave americana</i>	Spreading century plant	-		



Photograph 1



Photograph 2



Photograph 3



Photograph 4

4.4 Watercourses and Catchment Characteristics

The proposed road falls within Usutu to Mhlatuze Water Management Area (WMA), within quaternary catchment W21E. Quaternary catchments are subdivided into Sub-Quaternary Reaches (SQRs). The SQR in closest proximity to the proposed site is W21E-02912 (DWS, 2014). Refer to **Figure 8** for the W21E Quaternary Catchment Features Map.

The proposed road upgrade does not intercept the Sibiyela River which is draining in an easterly direction, and lies approximately 350m from the watercourse.

Desktop analysis of the National Wetland Map, 2004 produced by the South African National Biodiversity Institute (SANBI) indicated that a wetland was present in the immediate vicinity of the area within 500m of the proposed road. Refer to **Figure 4: NFEPA Wetland Map**.

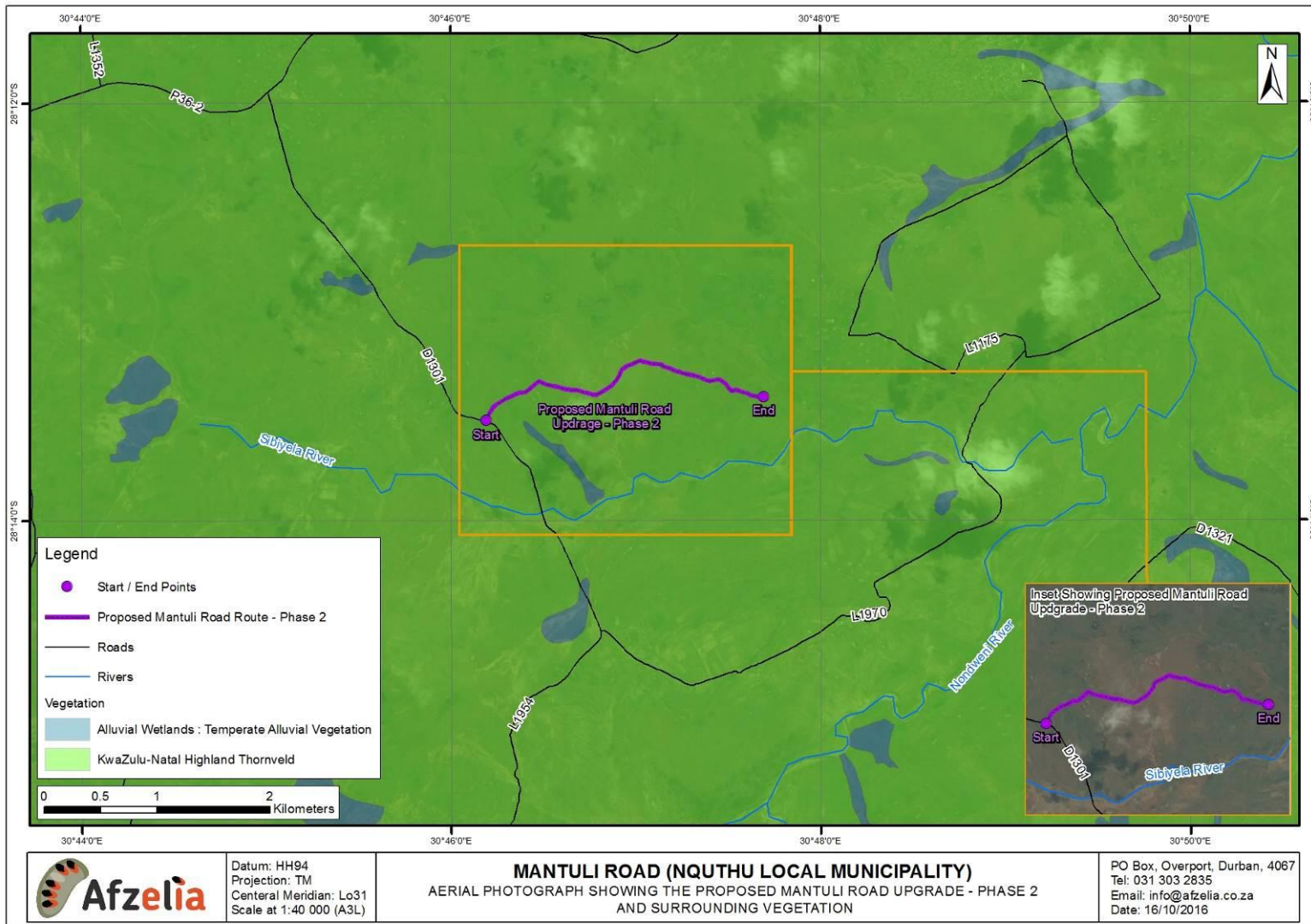


Figure 5: Vegetation Map

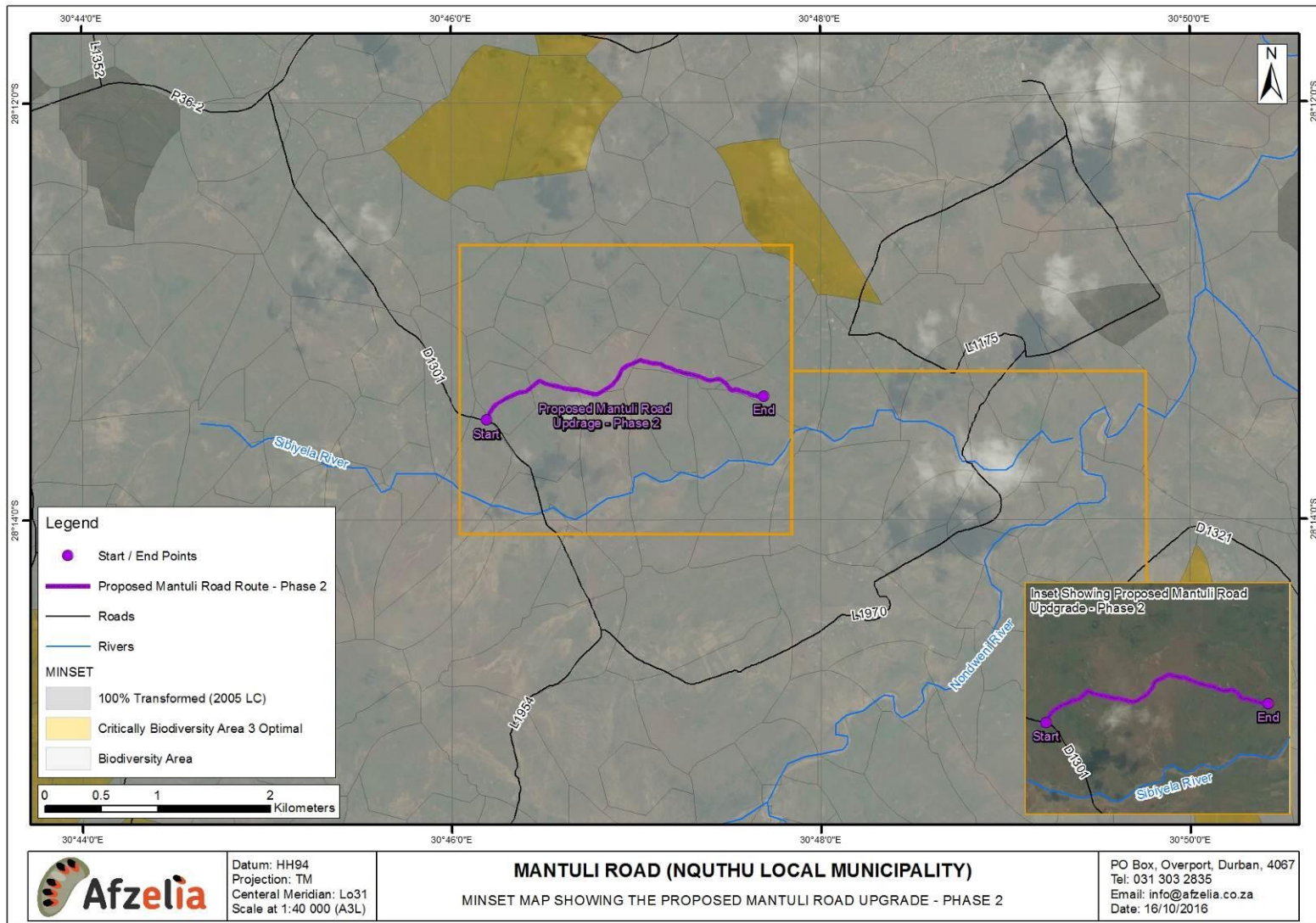


Figure 6: MINSET Map

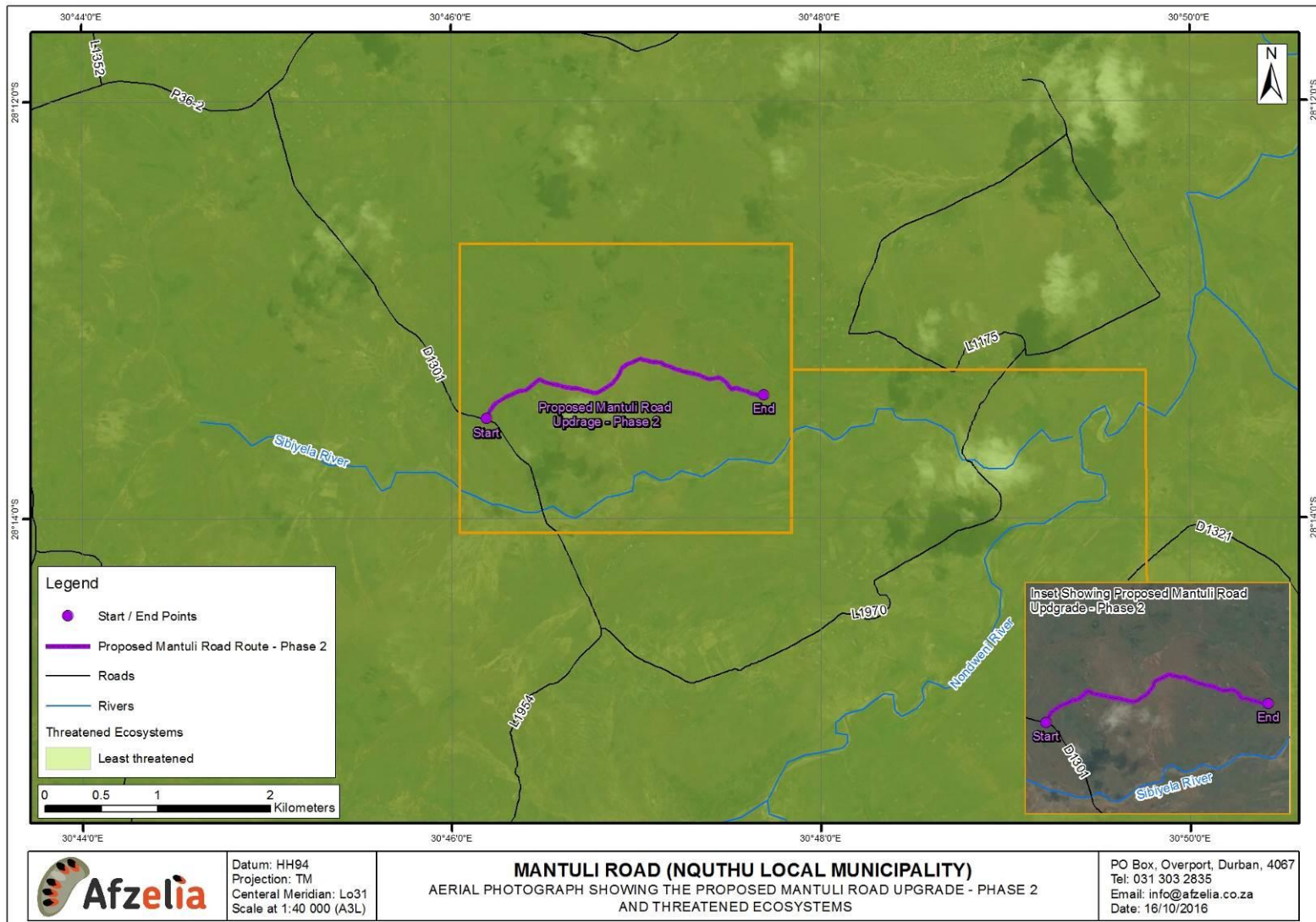


Figure 7: Threatened Ecosystem Map

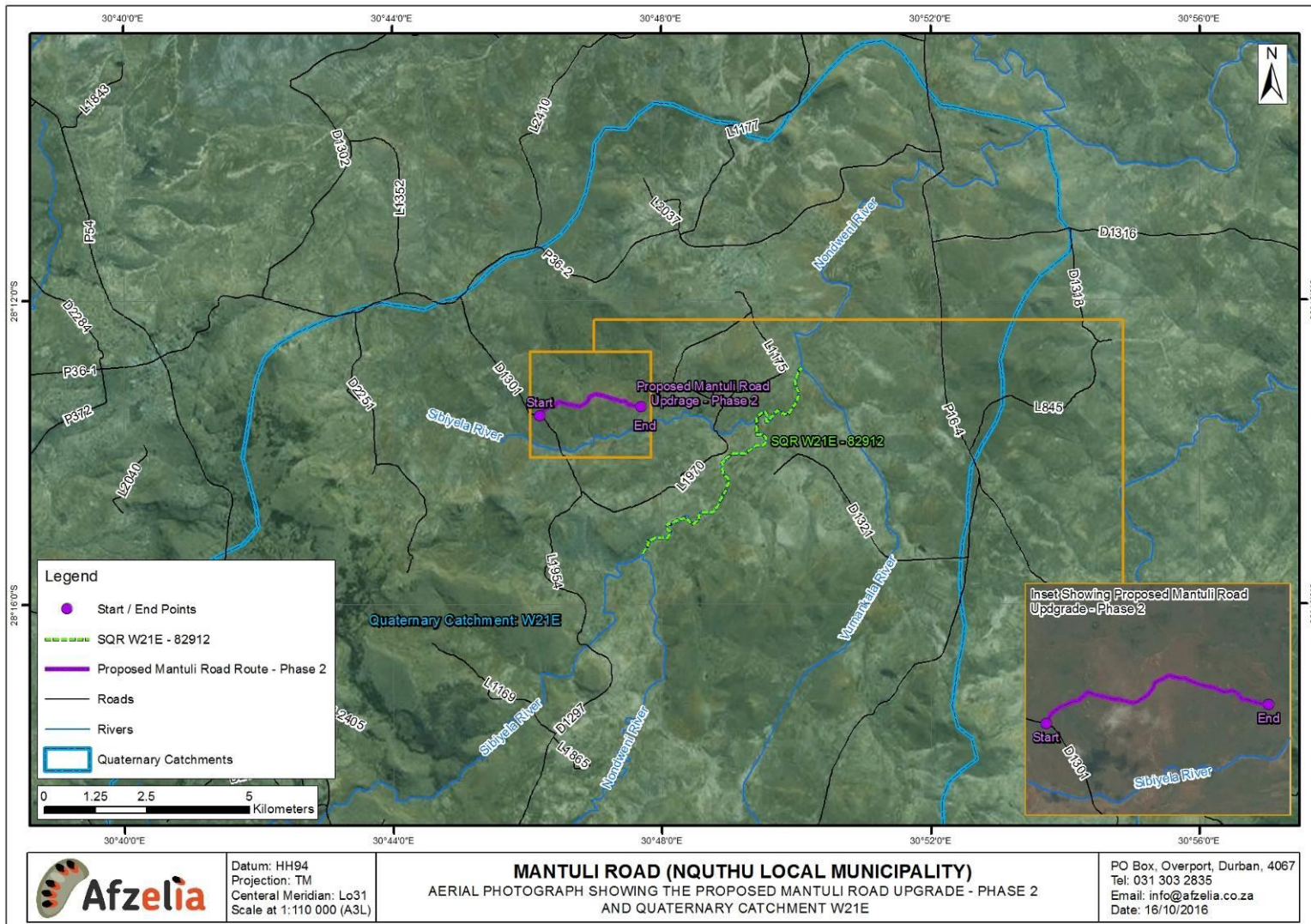


Figure 8: Quaternary Catchment Features Map

4.5 Social Aspect

4.5.1 Current Land Use Character of Surrounding Area

Nquthu Municipality is largely rural with extensive low-density rural settlements being a major feature. Land use in Nquthu is mainly dryland subsistence agriculture, where local people keep livestock and cultivate crops such as maize and beans (Nquthu Municipality, 2015).

4.5.2 Cultural/ historical features

A “heritage resource” refers to any place or object that has cultural significance. This could include a cultural or historic building, an area with special artefacts, historic grave sites etc. [National Heritage Resources Act, 1999 (Act No.25 of 1999)].

According to the correspondence dated 28 July 2016 received from Umlando: Archaeological Surveys & Heritage Management, Gavin Anderson states that: *“the proposed road upgrade occurs in an area that is both paleontologically and archaeologically sensitive. One site occurs near the road and will probably be affected by any road works. The area has a moderate palaeontological sensitivity. The area has also seen an increase in human occupation over the last 100 years and thus there could be several human graves which can be affected by the proposed road upgrade. The road, and its proposed road works, thus occurs in a very sensitive heritage area. Any road upgrades and related infrastructures would thus require a **heritage Impact assessment.**”* (Refer to correspondence with Umlando attached as **Appendix 2**).

5. PUBLIC PARTICIPATION PROCESS (PPP)

The PPP is a process in which stakeholders and Interested and I&APs are afforded an opportunity to comment on, or raise issues relevant to the construction activities and/or the EIA process. Stakeholders and I&APs are invited to:

- Respond (by phone, fax, mail or e-mail) to the invitation to participate in the PPP;
- Complete and forward (mail, fax or e-mail) the attached registration and comment form to Afzelia Environmental Consultants;
- Contact the Environmental Assessment Practitioner (EAP) regarding any query, comment or request for further project information; and
- Review the draft and final BAR within the legislated review periods that will be stipulated in the advertisements as well as in notification letters.

5.1 Responsibilities of an I&APs

I&APs have a right to participate in this process by requesting further information or by informing the relevant consultant of concerns regarding the environment in relation to the project. In order to participate in the BAR process, an I&AP **must**:

- Register on the project database in order to receive detailed information regarding the BAR process (See **Appendix 1**);
- Inform any other parties (neighbours, friends, colleagues, etc.) who may be interested and/or affected by the project about the BAR process and encourage involvement and participation;
- Ensure that any comments regarding the project are submitted within the timeframes that have been approved or set by the authorities, or within any extension of a timeframe agreed to by authorities and the applicant; and

- Disclose any direct business, financial, personal or other interest in the approval or refusal of the application for the project.

5.2 Responsibilities of EAP Consultant

In terms of the EIA Regulations, the EAP consultant has the following responsibilities:

- Robustly engage the key stakeholders, Competent Authority and I&APs;
- Provide sufficient information regarding the project and associated impacts;
- Ensure that all issues raised are recorded and forwarded to the environmental specialists to address in their impact studies; and
- Facilitate a transparent process.

You have been identified as a potential I&AP in this process and are therefore invited to participate in the project by registering. Your comments will ensure that all relevant issues are considered, documented and will assist in informed decision-making by the relevant authorities.

Should you wish to register as an I&AP and/or receive additional information regarding the project, you are requested to complete the form below and email, fax, post or hand deliver it to Afzelia Environmental Consultants by **30th November 2016** as per the details provided in the registration and comment form.

We invite all stakeholders and I&APs to participate freely and to submit any comments or information you feel may be useful.

6. REFERENCE

Department of Water and Sanitation. 2014. *A Desktop Assessment of the Present Ecological State, Ecological Importance and Ecological Sensitivity per Sub Quaternary Reaches for Secondary Catchments in South Africa. Secondary: [W2]. Compiled by RQIS-RDM: <https://www.dwaf.gov.za/iwqs/rhp/eco/peseismodel.aspx> accessed on 14/07/2014.*

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Republic of South Africa. 1999. *National Heritage Resources Act (Act No.25 of 1999).*

APPENDIX 1: I&AP REGISTRATION FORM

THE PROPOSED UPGRADE OF MANTULI ROAD, IN WARD 8, NQUTHU LOCAL MUNICIPALITY, UMZINYATHI DISTRICT MUNICIPALITY, KWAZULU-NATAL

Title		Name		Surname	
Company					
Designation					
Address					Postal code
Tel No.			Fax No.		
Email			Cell No.		
I would like to receive my notifications by (mark with X):			Post	Email	Fax
Please indicate why you have interest in the abovementioned project?					
Please write your comments and questions here:					
<i>Please feel free to attach a separate document</i>					
Please add any person you think may be an interested and affected party:					
Full Name			Company		
Address					
Email			Tel/ Cell No.		
PLEASE SEND YOUR REGISTRATION FORM AND COMMENTS TO:					
Company	Afzelia Environmental Consultants (Pty) Ltd		Contact person	Mr Solomon Fataki	
Address	PO Box 37069, Overport, 4067				
Tel No.	031 303 2835		Fax	086 692 2547	
Email	solomon@afzelia.co.za		Website	www.afzelia.co.za	

APPENDIX 2: Correspondence dated 28 July 2016 received from Umlando: Archaeological Surveys & Heritage Management for the proposed Upgrade of Mantuli Road.