# DUE DILLIGENCE ASSESSMENT OF THE LOWVELD AGRICULTURAL COLLEGE, MARAPYANE CAMPUS

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STATUS ASSESSMENT OF THE INFRASTRUCTURE OF THE LOWVELD AGRICULTURAL COLLEGE, MARAPYANE CAMPUS

Executive Summary

The Marapyane Campus located in the JS Maroka Municipality is a satellite campus of the Lowveld College of Agriculture (LCA) and is situated some 50kms north-west of
STATUS ASSESSMENT OF THE INFRASTRUCTURE OF THE LOWVELD AGRICULTURAL COLLEGE, MARAPYANE CAMPUS

1. Introduction

The Marapyane Campus located in the JS Maroka Municipality is a satellite campus of the Lowveld College of Agriculture (LCA) and is situated some 50kms north-west of Marble Arch in the Mpumalanga Province (MP). The DARDLA, through the LCA and the Marapyane Campuses, provides Certificate and Diploma training for students in courses on farm training and skills transfer. The Marapyane Campus was established as a centre of excellence specialising in zoological related farming activities as opposed to the ore biological activities of the Nelspruit campus.

The New University’s Project Management Team was requested to undertake a due diligence on the Marapyane Campus. The study is driven by the need to provide the Interim Council of the University of Mpumalanga (UMP) with sufficient substantive information in order for them to make an informed decision on the incorporation of the Marapyane Campus into the UMP and, if incorporated, as to what precisely will be incorporated inclusive of short, medium and long-term liabilities if any.

This report provides some background to the status of the infrastructure on the Marapyane Campus.

2. Background

The Marapyane Campus was initially built in 1990 by the then Bophuthatswana government as an educational college. It was closed in 2004 and was re-opened in 2012 following a visit by President Zuma in June 2010. The existing campus can accommodate 240 students with accommodation for 230 students (110 female and 120 Male) on site. The current student population is 233 comprising of 115 first year students and 118 second year students.

The Campus land is made up of three land parcels:

(1) the original College of Education site of 20Ha;
(2) 30Ha given to the College by the Cattle Co-Op; and
(3) a 125Ha site donated by the Tribal Authority as a long term lease,
The 125Ha site is located 5km to the east on a dirt road, and is used for Irrigation, Fodder Production, Agronomy and Dry Land Farming. A portion of the site is occupied by the local Provincial Veterinary Clinic also under the jurisdiction of the Mpumalanga DARDLA.

The decision to incorporate the LCA into the University of Mpumalanga was confirmed at a meeting held on the 6th March 2013 between the Minister of Higher Education and the Premier of Mpumalanga. This decision has enabled the Department of Higher Education and Training (DHET), together with the DARDLA and the New Universities Project Management Team (NU-PMT), to initiate detailed planning for incorporation.

As part of this planning process it was agreed to undertake a due diligence and feasibility study to review, assess and evaluate the most appropriate options and make recommendations on the future of the Marapyane Campus within the post-school education and training system.

3. Location of Site

The Marapyane Agricultural College is located on part of the Farm Klippan 680 K.R. The College is located within this property, and occupies only an un-subdivided portion of this Farm.

A public road, the D 2091, going north from the village of Marapyane, traverses the Farm Klippan. This would appear to be a Provincial Road and there may or may not be a proclamation in this regard. The Marapyane Agricultural College is located on the western side of this road and is fairly centrally positioned on the Farm Klippan 680 K.R.

The attached locality plans show the site in relation to the village of Marapyane. The site is located in the Dr JS Moroka Local Municipality in the Nkangala District Municipality in Mpumalanga Province.

The site is on the north-western edge of the Province, bordering on Gauteng and Limpopo provinces.

4. Objectives

The objective of this report is to document the information emanating from a due diligence and feasibility assessment on the Marapyane campus of the LCA. The Campus forms part of the LCA. The document will inform the Interim Council of the University of Mpumalanga (UMP) to make an informed decision as to the incorporation
of this campus into the broader UMP training programmes and to elaborate on the current and future infrastructure requirements for the Marapyane campus to function to its potential.

5. Scope of Work

The infrastructure and spatial requirement assessment was undertaken by a team of specialist consultants under the guidance of C Paddon and W Potgieter. This report conduct a comprehensive overview of the current status of “Marapyane Agricultural College Campus” which includes all three properties identified as portions of the campus and deals with the following infrastructure requirements:

- Environmental requirements including any proposed activity which may trigger the requirement of an EIA/BAR
- Town planning including the current land ownership of all three properties, the availability and the current status of SG diagrams and Title Deeds of all three properties and the current zoning rights of all three properties
- Geotechnical aspects including potential geotechnical problem which may hamper and/or hinder future development of the campus
- Bulk services requirements including the current and future planned provision of bulk services of all three properties and the compliance of these bulk services to acceptable standards of engineering practice
- Current building structures - detailed review of the current structures and infrastructure improvements to be done per building with reference to suitability for use and current and potential occupation rates and considering the scenarios for future expansion of the campus as mentioned below.
- Costing of current, “to be completed” and future extensions of buildings and infrastructure on the campus
- Operational and Maintenance cost in terms of short, medium and long-term operational and maintenance liabilities if the Marapyane campus, should this campus be incorporated into the University of Mpumalanga.

This report is the products from review of relevant documentation and literature over the last 4 years, two site visits and inspections to the campus and various discussions with consultants previously involved with development of the campus (DARDLA strategic plans, proposals, funding documents in so far as they relate to the building/s on the campus and spatial development plans).

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6. Development Scenarios
The infrastructure report provides an assessment of two scenarios set for possible current and future development, including:

(1) Scenario 1 – current status with 230 students in residences on campus (50 day students), and

(2) Scenario 2 – increase the number of students to 330 students on campus and 50 off campus which is regarded as taking the campus to its capacity in terms of residences and classrooms.

7. Town planning
The town planning inputs were provided by Beth Heydenrich.

The information contained herein has been compiled to assist in gaining clarity with regard to the ownership of the land, the extent of the property boundaries, zoning information and other issues which will impact on the development of the Marapyane Agricultural College and the possible inclusion of the college as part of the University of Mpumalanga.

7.1. Property Description
The Marapyane Agricultural College is located on part of the Farm Klippan 680 K.R. A locality plan, a Regional Locality plan and an Aerial view of the site are included in Annexure 3. The Farm Klippan 680 K.R. is 692,1267 hectares in extent. SG diagrams SG A 7416/1958 and SG Y207/1989 are also included in the Annexure 3. They pertain to the whole of the Farm Klippan.

There are no approved Surveyor General diagrams for the portion of the Farm Klippan on which the Marapyane Agricultural College is located. As such, it cannot be stated with any certainty how large the area used by the College, is. A very approximate size, as calculated from the aerial photography, is that the Marapyane Agricultural College occupies approximately 10 hectares, this being just a small portion of the total property which is 692, 1267 hectares.

7.2. Ownership and Legal Issues
The Farm Klippan 680 K.R. is registered in the name of the SUID AFRIKAANSE NATURELLE TRUST and is held in terms of Deed of Transfer Nº T1148/1990 BP. The Suid Afrikaanse Naturelle Trust owns the entire Farm Klippan 680 K.R
A copy of the Title Deed is required to ascertain whether there are any servitudes or restrictions in the Title Deed.

Investigation has ascertained that this Title Deed has not been microfilmed in the Deeds Office and obtaining a copy of this deed is thus proving problematic. The deed has been ordered from the Pretoria Deeds Office.

The Marapyane Agricultural College is located on a small portion of this property. The property has never been subdivided and nor has a formal lease accompanied by any SG diagrams, been registered.

7.3. Existing Zoning

As the site was originally part of the Transvaal prior to its incorporation into Bophuthatswana it would be zoned in terms of the Town Planning and Townships Ordinance Act No. 15 of 1986. The site is presumably zoned as one of the following “Agricultural Industry”, “Agricultural Land” or “Agricultural Purposes”. No copy of the zoning certificate has been found.

Neither of the three “Agricultural” zoning permit any form of educational institution as a primary right on land; this would mean the portion would need to be rezoned to a more appropriate land use.

Historically, the State, Provincial authorities and Local authorities were not required to comply with their own regulations. As such, when this facility was established, no building plans or Town Planning approvals would have been required. In line with the transparency now required of public bodies, all environmental and other legislation must be complied with by any entity wishing to develop. This is to ensure that public comment can be obtained through the advertising process required for a consent or rezoning application.

7.1. Other aspects

It is unclear whether any approved building plans exist for the development. For any further buildings, this should be regularised, with “as built” plans being submitted for approval as well as plans being submitted for all new structures. These plans should then be approved by the Local Authority where after Occupancy Certificates will be issued and relevant insurances will be possible.

For a facility of this nature, this is imperative to protect the public and reduce liability on the educational institution.
Prior to the Local Authority being able to approve such plans, the land use zoning must first be attended to so that an Education use is permitted on this land.

This would require the submission of consent of use or rezoning application.

Furthermore, an Environmental Impact Assessment (EIA) may well be required due to the size of the site. See Environmental considerations hereafter.

Another issue to be dealt with is the provision of services to the site. It would appear that sewer is a particular problem, and that the scale of the development was not taken into consideration when the present arrangements for dealing with sewerage, were made. The environmental impact in this regard may well presently contravene certain Environmental laws. The Municipality also needs to approve the sewer treatment proposals.

Water also needs to be dealt with more formally than has been done to date.

8. Environmental considerations

Lidwala was requested to do a desk top assessment of environmental considerations for further developments and improvements of infrastructure on the campus.

A number of maps were compiled from the Mpumalanga Biodiversity Conservation Plan (MBCP) project. The MBCP maps were used to investigate the sensitivity of the area and the following were noted from the different maps:

(1) Map 1: Critical Biodiversity Area – The existing college and proposed developments falls within the CBA area (Central Sandy Bushveld SVcb12) marked in red.

(2) Map 2: Listed Notice 3 Biodiversity Priority Areas – The Agricultural College site falls in the pink zone because of the CBA and it would be necessary to apply for activities under Listed Notice 3 as well.

(3) Map 3: Sensitive vegetation – The yellow area indicate that the area is “Important and necessary” to maintain the sensitive vegetation in this area

(4) Map 4: Vegetation type - is the Central sandy Bushveld SVcb which is very vulnerable vegetation type.

(5) Map 5: The area is not an important aquatic area and no maintenance of an aquatic ecosystem is required.
(6) Map 6: The land capability is Medium for agricultural use and can be used for grazing

(7) Map 7: Topographical Map indicating the College as being located on the farm Klippan 692KR names.

From the maps and information, the following information is important and indicate:

(1) The Marapyane campus falls in a Critical Biodiversity Area (CBA).
(2) It would be necessary to apply for and EIA for any improvements and extensions to the infrastructure – for the size of the activity.
(3) An EIA process will take 14 months to get and EA depending on the availability of specialist assessments and information needed for the project.
(4) Specialist assessments will be needed to identify and mitigate possible impacts on the sensitive area.

Should the Marapyane campus wish to extend their activities, the following activities will require an Environmental Authorization application:

(1) LN 1 Activity 3: the construction of facilities for the slaughter of animals (more than 50 poultry/6 game or red meat units per day).
(2) LN 1 Activity 4: The construction of infrastructure for the concentration of animals.
(3) LN1 Activity 9: the construction of facilities for the transportation of water, sewerage or storm water for more than 1000m.
(4) LN2 Activity 15: The alteration of undeveloped land to residential and institutional.
(5) LN3 Activity 2(dd): The construction of a reservoir in a CBA.
(6) LN3 Activity 12(b): The clearance of an area of 300m² of vegetation where 75% of the vegetation is indigenous vegetation.

9. Geotechnical aspects

SMEC South Africa undertook a geological and geotechnical engineering desk study of the Marapyane site. The investigation was focussed at providing advanced warning of any geotechnical related problems which may occur during further development.
The investigation comprised a desk study of available information (from published sources and previous geotechnical reports). No profiles were inspected or samples taken. The geotechnical report is based on a limited desk study of published records of likely geotechnical problems.

### 9.1. Site Description

**The Physical Environment** - The area of investigation comprises tall grassland veld with scattered scrub, mostly thorn trees. The topography is nearly flat plains. Drainage is from North to South and drainage courses are poorly defined and widely spaced, a few shallowly incised streams occur on the site and both are non-perennial.

**Climate** - The area may be classified (after Thornwaite) as having a sub-humid warm climate and a Weinert’s N value of between 3 and 4. This implies that the predominant mechanism of weathering in the area is chemical rather than mechanical.

The average annual rainfall at Settlers (20km west of the site) is 601mm, with a minimum of 317 and a maximum of 844, with about 85% of this falling in the summer months. On about 21 days of the year a precipitation of more than 10mm may be expected. Average maximum and minimum air temperatures are 27° and 11° respectively with extremes of 39° and -6° being recorded.

**Geology** - The entire area is underlain by basalt of the Letaba Formation of the Karoo sequence. The basalt is a dark coloured, fine grained rock. It is generally weathered to a depth of about 3m. In the weathered state it is grey-green and exhibits a sugary texture. Being a massive igneous rock, it exhibits an undulating weathering surface and this may give rise to problems with hard rock occurring at varying depths below surface.

**Soils** - The predominant soil type in the area is clay which varies in colour from black to red brown and is derived from the basalt. When the depth to bedrock is shallow the overlying soil is usually a brown, gravelly sand. Calcrete occurs as a capping to and formed within the upper weathered basalt.

### 9.2. Engineering Geological

**Construction Materials**

The only materials suitable for use during construction were weathered basalt and calcrete. These should both be suitable for use as selected subgrade and for sub base
if stabilised in the construction of paved or surfaced roads. The calcrete is variable in quality in any one source an detailed testing and control will be necessary for this material. From a geological point of view, no sources of crushed stone or sand are likely to occur in the area and it is likely that these will have to be imported. The nearest source of suitable rock is likely to be from the Soutpansberg Group near Nylstroom, some 50km away.

**Expansive Clay**

The basalt on weathering gives rise to an expansive clay. The clay is generally not thick except along stream courses where a thickness of at least 2m can be expected.

**Excavations and Slope Stability**

In view of the very flat topography, it is not envisaged that any excavations of any appreciable depth will be required. It is anticipated that blasting will not be required in any excavations less than about 4m depth.

**Foundation Conditions**

Given the likely thinness of the clays it will most probably be most economical to remove the clays beneath planned roads or foundations. A detailed determination of the thickness and expansiveness of the clay must be carried out during a detailed geotechnical investigation should further development of the area be planned, with particular emphasis on low lying areas.

**9.3. Conclusions**

Conditions are generally considered to be favourable for development of the site, and there are no geotechnical conditions which preclude development from taking place or which would result in an uneconomic development due high foundation, ground treatment or other costs relating solely to the ground conditions.

The basalt weathers to an expansive clay and this gives rise to what is expected to be the most significant problem during construction.

There is a general lack of good quality soils and natural gravels in the area which implies that these would need to be imported.

**10. Bulk Infrastructure**

This section deals with a brief evaluation of the bulk infrastructure, comprising water, sewage, electricity, roads, parking and storm water. The bulk infrastructure
requirements will be assessed in terms of the current and future planned provision of these services of all three properties and the compliance of these bulk services to acceptable standards of engineering practice.

10.1. Water
The water supply system of the Marapyane Main Campus Premises comprises:

- Two boreholes and pumpstation to pump ground potable water towards an elevated water tower.
- A 50 kl elevated water tower with a 50,000 litre dam at its base of locally supplied potable water;
- A basic water treatment installation treat the borehole water, and
- A gravity system supplying potable water to each building

3 boreholes provide irrigation water on the premises.

The boreholes are located on the western boundary of the premises.

The primary borehole lies some 500 m from the sewage package plant and could due to the fall in elevation be exposed to the future contamination of this valuable source of water.

10.1.1. Maintenance Requirements
The maintenance requirements allow for daily, monthly and annual maintenance requirements to ensure that the potable water system operates optimally.

Water from the borehole on the southern-western corner of the premises is exposed to possible pollution from the uncontrolled discharge of untreated effluent from the sewage package plant.

10.1.2. Future extensions
Due to uncertainties around a deteriorating ground water source, the possibility is being pursued to supply potable water in future from Dr JS Maroka’s potable water supply system. The consultant company, Endecon has pursued the possible connection of the Marapyane water system to the Greenside Clinic or any other point
close to the Marapyane College. The current demand that could be supplied from external source is summarized below (excluding any irrigation of sportfields, gardens, etc that will be supplied from on-site boreholes:

- Large Stock 2 500 litres/day
- Small Stock 2 400 litres/day
- Hostels 48 000 litres /day
- Houses 6 000 litres/day
- Kitchens 28 000 litres/day
- Office 10 400 litres/day
- Future farm houses and stores 2 100 litres/day

**Total daily potable water consumption:** 99 400 litres / day

Details on costs to facilitate the upgrading is covered under Section 9.5

10.2. Sewage

The sewage system of the Marapyane Main Campus Premises comprises:

- a sewer collector system with a gravity drainage system from each building towards a collector sump, pump station and pipeline, and
- Bio-Filter plant where effluent is being treated and disposed into the environment

All sewerage is processed on the property at the sewerage plant.

10.2.1. Sewage collector system

The sewage collector system comprises a gravity network, a collector sump and pump station – see layout attached.

**Current Condition**

A site inspection was held on 28 March 2014. A photo report was developed from this site visit. During this inspection the following observations were made:

1. It is apparent that none of the operation and maintenance requirements have
Maintenance Requirements

The maintenance requirements allow for daily, monthly and annual maintenance requirements to ensure that the sewer system operates optimally and to prevent any failure of this strategic and environmentally sensitive installation.

10.2.2. Bio-Filter Plant

The Bio-Filter plant has been developed for minimal operating attention. All that is normally necessary to obtain satisfactory operation of this type of plant is to ensure that all mechanical equipment operates continuously. The rotating biological contactors should operate at all times, and the re-circulation pump operates intermittently on float control. The chlorinator should operate at all times. In the longer term, it will also be necessary to remove accumulated sludge or solids from the septic tank (generally, sludge removal may be required between eight months and a year. Sludge level should be checked periodically.

The Bio-Filter plant comprises of a primary septic tank, Bio-Filter RBC (Rotating Biological Contactor) rotor unit, a humus tank and a chlorine contact tank. The effluent from the development (mainly domestic waste) is received in the concrete septic tanks or primary sedimentation tanks from where it is treated in the RBC. The Bio-Filter RBC plant is generally simple to operate and is fitted with continuously rated motors, transmissions and bearings which will function for many years with the minimum of attention, if correctly maintained.

The RBC Operating Process

Raw sewage flows into the first compartment of the septic tank where primary sedimentation and anaerobic digestion takes place. From the second compartment of the septic tank, the effluent flows to the Bio-Filter RBC stage, where aerobic treatment takes place. It should be noted that over a period of time, sludge build-up occurs in the septic tank, and needs to be drawn-off every 8 – 12 months (desludging process) and carted away by vacuum tanker.

Septic tank effluent then flows through the Bio-Filter basins where aerobic treatment
takes place, by the RBC units. Primary rotors will show more intense bacterial growth on the discs that the secondary rotors due to the variety of organisms present. Bio-Filter rotors must rotate at all times, except during the maintenance shutdown periods. Individual rotors may be stopped by depressing the stop-lock buttons adjacent to each machine. There are certain cleaning requirements to clean the rotor discs under normal operating conditions.

The third component in the system is the humus Tank. Effluent from the Bio-filter plant flows to the humus tank where the humus is settled out. The settled humus sinks to the bottom of the cone from which it is returned to the septic tank by means of the humus return pump and through the automatic re-circulation arrangement, fitted in the adjacent pump sump. Some manual operation is necessary to spray and disperse floating humus on top of the humus tank. The sludge draw-off valve is manually operated and installed in the pump sump and should be opened for 3 minutes twice daily, in the morning and afternoon, to desludge the humus tank.

Clarified effluent from the humus tank is disinfected in the chlorine contact tank by means of a Chlorine dosing which should be at a rate of 4 – 6 mg/l. Residual chlorine level should periodically be tested at the outlet of the chlorine contact tank.

The RBC is supplied with an electrical control panel from where pumps are controlled. Electrical installations are generally robust but also require normal servicing by skilled technical artisans or when continuous tripping occur.

Like any other sewage purification plant, it is recommended to keep the site generally in a clean and neat condition. This includes hosing down the various parts of the plant periodically.

**Quality control**

The Bio-Filter plant has been designed and rated to handle domestic sewage only. The operation of the plant could be seriously impaired should this plant receive foreign matter in the form of industrial waste. It is therefore extremely important to ensure that foreign matters not enter the sewage system.

All kitchens should be fitted with screens and grease traps at the outlet sewers from these kitchens where oils, fats and food residues are intercepted and not be allowed to enter the sewer systems.

For cleaning purposes, use should only be made of biodegradable soaps and cleaning materials. Use only environmental friendly disinfectants.
In accordance with the recommendations of the Department of Water Affairs, monthly tests of plant-effluent should be undertaken, and the test results be made available for inspection.

**Current Condition**

A site inspection was held on 28 March 2014. A photo report was developed from this site visit. It is apparent that none of the operation and maintenance requirements have been attended to during this inspection the following observations were made:

1. The area where the Bio-Filter plant was operated was fenced in.
2. The access gate to the Bio-filter plant was completely overgrown and it could only be opened with major effort – no lock was on the gate.
3. There was clearly no signs of any movement of people into the premises for a number of months.
4. There was clearly signs of birds and the entrance and walkway to the different components was covered with spider webs.
5. There was dead birds lying on the premises (on and around the septic tank structure).
6. The area around the septic structure was clearly wet with clear signs that the septic tank was spilling through the top access manholes.
7. None of the mechanical equipment was in a working order with no indication of live electrical installations on the premises.
8. All the mechanical equipment was clearly in a very poor state of deterioration.
9. The chlorine contact tank and chlorine storage tank was empty and clearly not working.

**Maintenance requirements**

The supplier of the Bio-Filter package plant has developed an operations and maintenance and manual for the installation. This allows for daily, monthly and annual maintenance requirements to ensure that the plant operates optimally and to prevent any failure of this strategic and environmentally sensitive installation.
10.2.3. Corrective actions
The following should be considered into corrective actions

- Develop a Maintenance and operations contract for the operations of the Bio-filter RBC purification plant and college sewer system at Marapyane for at least a three year term. The work should at least include the following:
  - Desludging of the Septic Tank
  - Maintenance on mechanical equipment including the drive units, rotors and pumps
  - Desludge and clean humus tank and chlorine contact tank
  - Cleaning of plant area and
  - Installation of screen at sewer booster sump

10.3. Roads, Parking and Storm water

The roads, storm water and parking on the premises are very basic with significant room for improvement.

The area is relatively flat and proper storm water management to keep surface water away from buildings needs to be attended to.

A ringroad to feed all buildings and facilities on the campus is planned which will also include access and parking area at all buildings on the campus.

10.4. Electricity

Pienaar and Erwee Electrical Engineers was involved with evaluation and assessment of the bulk electrical infrastructure on the Marapyane Campus. The bulk connector electrical infrastructure on the College premises consists of the following:

- 2 x 1MVA 22/11kV transformers
- 5 x 315kVA 11kV/400V miniatures substations
- 11kV reticulation network,
• 400V Reticulation, and

• LV installations to the following buildings:
  o Main Hall
  o 2 x Admin Buildings
  o 15 x Classrooms/Labs
  o 4 x Dining halls
  o 32 Hostel wings
  o 20 Small Houses

From the brief evaluation it was recommended that the existing electrical installation on the campus needs to be evaluated, tested and re-commissioned by a certified Contractor. The contractor will be responsible for the following:

1. Testing of the complete system and insure that the it complies to the following standards:
   a) SABS 0142: "Code of Practice for the Wiring of Premises",
   b) the Occupational Health and Safety Act
   c) the Local Government Act, municipal by-laws and any special

2. Test all circuits with respect to:
   a) Correct operation of all circuits
   b) Earth resistivity test with 500V megger
   c) Earth leakage test on all switched socket outlets with a certified earth leakage test unit.
   d) All luminaries to confirm correct operation of lamps, ballast and starters.
   e) Ensures that the load is balanced over the three phases as far as practical.

3. Fixing of all the defective equipment and installations that do not comply.

4. Supplying COC’s and associated documentation.

A report was compiled by Pienaar and Erwee Electrical Engineers in October 2012 following an investigation on the supplies to the new admin block, animal clinic, sports
The existing load on the 315kVA miniature substations are as follow:

- MS3 (the substation on southern side of the admin block) is 260A or 180kVA.
- MS2 (the substation on western side of the admin block) is 455A or 314kVA.

We requested the loads of the different developments from the consultants. From the information received the loads are as follow:

- Admin Block - 250A / 175kVA
- Animal Clinic - 250A / 175kVA
- Sports Fields - 80A / 50kVA
- Kitchen - 250A / 175kVA

From the numbers received it was estimated that the total additional load to the college will be 830A / 575kVA. It was also assessed that the existing miniature substation infra-structure will not be sufficient to feed all the new developments. The capacity of the substation would have to be increased. It was recommended to replace the existing MS3 with a new 500kVA miniature substation to feed the existing load and the new admin block and kitchen.

The existing MS3 can then be repositioned to feed the new animal clinic and sports fields.

The cost (Vat and fees excl) for the above mentioned upgrade to be as follow:

- New 500kVA miniature substation - R 240,000.00
- Repositioning the existing 315kVA MS - R 60,000.00
- Total Estimated Cost - R 300,000.00

Electricity is supplied from the local Eskom supply and a standby generator is urgently needed.

10.5. Solid Waste

Limited information was obtained on the management of solid waste on site. The site visit revealed that limited effort is made to manage rubbish on the premises. Photos of an area currently being used as a dumping area demonstrates that solid waste
management be addressed as a matter of priority. See photo report 7c

10.6. Recreation
Recreational facilities need to be planned to ensure that this aspect be appropriately addressed on the campus, including sport fields, etc.

10.7. Costs
The bulk infrastructure on the premises requires upgrading and further development to service the demands. Allowance should be made for attending to priority items (short term) items and longer term upgrading.

10.7.1. Short term priorities
The short term infrastructure requirements are included in the following table as determined in October 2013:

<table>
<thead>
<tr>
<th>No</th>
<th>Item Description</th>
<th>Budget Estimate</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Welding Laboratory</td>
<td>R 200 000</td>
<td>Electrical Installation to make area functional</td>
</tr>
<tr>
<td>2</td>
<td>Water laboratory</td>
<td>R 530 000</td>
<td>Bulk Connection and irrigation to tunnels, Testbench Pumpstation and irrigation</td>
</tr>
<tr>
<td>3</td>
<td>Sewer Plant</td>
<td>R 130 000</td>
<td>Desludgeing of septic tanks and blockage clearance, Mechanical Servicing and clearing of plant area</td>
</tr>
<tr>
<td>4</td>
<td>Water Supply repairs</td>
<td>R 20 000</td>
<td>Immediate repairs</td>
</tr>
<tr>
<td>5</td>
<td>Paving</td>
<td>R 500 000</td>
<td>Phase 1 Completion and New Areas needed to reduce excessive dust</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>R 1 380 000</td>
<td></td>
</tr>
</tbody>
</table>

10.7.2. Planned infrastructure
ICT coverage is from the local MTN network. Vodacom is at present not available but is to be installed in the very near future. This coverage is intermittent and unsuitable for education purposes as it supplies a minor amount of band width. The current contract is with a private company. It was said that DARDLA would prefer a direct contract with Telkom providing at least 4 GB for the 250 students and 20 staff members.

11. Buildings

The original campus buildings are marked out on the Marapyane Site Layout as buildings 1-86 and include staff housing.

The campus itself is well cared for in the sections that are used regularly, but the outlying areas tend to be left untouched. There is definitely a serious lack of maintenance.

The existing campus had dirt roads and these have deteriorated to the rear of the property. New paving has been laid out from the main gate past the new Administration block but the balance of the roadway and parking lots have not been completed. There is a serious storm water problem in these areas.

Since 2012 an additional four new buildings have been constructed, the main gate house, a double storey Administration Block, the Veterinary Clinic and a Kitchen. The attached building register table (Annexure 5x) indicates the area, condition and needs for refurbishment.

The following two scenarios have been evaluated.
11.1. Scenario 1 – Existing 234 Students
Currently the College accommodates 234 students, 224 of whom are in residence. However the unfinished classrooms and laboratories are vital to the development of the academic programme. The most essential of these are the incomplete laboratories (Agri-Mechanics, Soil Science, Water and Welding), student recreation centres and not listed on the building register is the outdoor recreational sports facilities.

11.2. Scenario 2 - Upgrade for 330 Students
The original Education College was designed to accommodate 330 students. This included 6 additional residences, housing 66 students in total which were destroyed in a veld fire. These buildings were demolished entirely for safety. An additional 106 students need to be accommodated to bring the students bed number to 330. To meet this number, the suggestion is to rebuild 4 2-storey 24 bed units and 1 single storey of 12 beds. The location of these units would be the original building sites.

These double storey units would duplicate the standard units currently on site, which have rooms to the north and the bathrooms and kitchenette on the south.

To accommodate the increase in teaching staff an additional classroom block, one auditorium and academics offices would need to be refurbished as will the as yet unrefurbished 15 staff houses.

Concern lies in what the existing unfinished Great Hall and Gymnasium buildings would be used for. The Great Hall is very large and can accommodate more than a thousand people. The gymnasium is more suitable as an examination hall as it is north facing and does not require as much heat in winter as the Great Hall.

11.3. Costing for upgrades
The costing of the buildings to accommodate the two scenarios have been done. The costing is based on standard and market related unit cost upgrades. The cost estimates for upgrading to accommodate student numbers for the two scenarios (inclusive of VAT, professional fees) are:

- Scenario 1 – R 18,1m
- Scenario two – R 80,1m

More detail of which buildings have been scheduled for upgrade/renovation for the two scenarios are included in the Annexure 5.
12. Financials

The following
13. Conclusions

The following conclusions have been reached from the brief assessments:

13.1. Townplanning
As the entire Farm Klippan 680 KR is owned by the Tribal Trust and as the Marapyane Agricultural College is located on a small portion of this entire property, no formal Deeds, lease or SG diagrams exist in this regard. This would need to be attended to. It may be necessary to submit a consent use or rezoning application. This process is likely to take approximately 18 months and needs to be attended to legalise the existing use.

13.2. Environmental
The environmental considerations with regard to this site need to be further investigated. The proposed extension of the academic programme to include animal husbandry etc. requires a full description of the proposed land improvements in order to finalise exactly what activities would trigger the need for an EIA.

13.3. Geotechnical
Conditions are generally considered to be favourable for development of the site. There are no geotechnical conditions which preclude development from taking place or which would result in an uneconomic development due high foundation, ground treatment or other costs relating solely to the ground conditions.

The basalt weathers to an expansive clay and this gives rise to what is expected to be the most significant problem during construction.

There is a general lack of good quality soils and natural gravels in the area which implies that these would need to be imported at high cost.

13.4. Bulk Infrastructure
The following conclusions can be drawn with respect to the bulk infrastructure on the Marapyane premises

1. Specialists (Engineers, environmentalists) would need to be appointed to advise the LCA and to gain Council approval of extensions to bulk services (most notably water and sewage).
2. Water – the following brief findings:

a. The internal supply network on the campus was not evaluated due to lack of information,

b. The Marapyane campus’ ground water source can still cope with the current demand, however the system needs proper operating procedures and maintenance. An on-going and short term budget should be made available for this purpose. The nature of the on-site source is that funding is spent on electricity only (pumping costs) and ongoing maintenance is omitted,

c. The phase 2 budget of R560,000 should be made available to do immediate upgrading of the water system to sustain the water supply infrastructure in the short and medium term and to accommodate the scenario 2 expansions, should that realise

d. Further developments (increase the number of students and expansions of farming activities) will put the existing ground water potable water system under stress to meet the future demand. Alternative boreholes on the property will have to be developed or the planned connection to the Municipal system should be implemented. The costs for this development was budgeted for at R6,6 million which excludes the upgrading of the internal network on the campus.

3. Sewage – the following brief findings from the evaluation:

a. The sewage from the premises is supposedly being treated by a Bio-filter RBC purification plant. The package plant is suitable to handle sewage volumes and quality of this magnitude and nature, however the plant requires proper maintenance and operations. The plant has severely been neglected to a non-functional state.

b. The plant will require a complete revamp, cleaning and decommissioning. The estimated cost for this purpose according to the Endecon report is in the order of R4,6million.

c. A proper maintenance and operations contract (for at least 3 years) for the operations of the purification plant and college sewer system at Marapyane should be introduced. The cost of such an operational procedure should be budgeted for and an allowance of about R300 000 per annum should be made available for this purpose, assuming the
entire plant and supporting infrastructure be upgraded to deal with the current effluent load. These should allow for the following:

i. Desludging of the Septic Tank

ii. Maintenance on mechanical equipment including the drive units, rotors and pumps

iii. Desludge and clean humus tank and chlorine contact tank

iv. Cleaning of plant area and

v. Installation of screen at sewer booster sump

d. The extension of activities on the campus should not be allowed unless the plant be upgraded and re-commissioned.

4. Electricity – Electricity is supplied from Eskom. The following need to be attended to:

a. A brief evaluation of the infrastructure by a specialist requested that the existing electrical installation on the campus be evaluated, tested and re-commissioned by a certified Contractor (see Section 9 for detail). It is important to fix all defective equipment and installations that do not comply to the local authority requirements and to issue COC’s and associated documentation.

b. From the specialist assessments it was found that the existing mini substation infrastructure will not be sufficient to feed all the new proposed developments. The capacity of the substation would have to be increased to feed the existing load and the new admin block and kitchen. The total estimated cost for this upgrade was about R 300,000.

c. From the Endecon report it was also found that a general investment of R2,6million is required for the upgrading of electricity on the campus. The details of this proposed extension was requested not verified yet.

d. Due to intermittent supply, a standby generator is urgently needed. It is assumed that the cost for this supply is included in the R2,6m.

5. Roads, parking and storm water.

a. The roads, storm water and parking on the premises are sparsely developed and should be attended to ensure proper access to all buildings.
b. Ongoing paving, storm water management and landscaping has been budgeted for at about R1 million.

c. A budget of R 7,9 million has been budgeted for to address proper development of a ring road, proper storm water management to keep surface water away from buildings and to secure parking areas at assembly points.

6. Other infrastructure

a. The campus will have to attend to proper fencing of their fixed assets
b. Sport fields and other amenities – upgrading and new facilities (R25m)
c. Irrigation requirements (R12m)
d. New farming developments

13.5. Buildings

The balance of the refurbishment needs to be completed; a suitable building programme proposed in order to complete the priority areas soonest. Of great importance are the four laboratories which are preventing the full academic programme from being taught thoroughly.

Due consideration must be taken of the public open space and the outdoor recreational sports facilities. The College is not in walking distance from any amenities and the students need more constructive opportunities for social engagement.

13.6. Finances
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Marapyane Campus
Status Assessment Report

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Annexure 6a: Location and basic layout of sewer plant
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<td>Discharge pond</td>
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<td>Chlorine store and Bio-Filters with DB</td>
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<td>Electrical DB and Humus tanks</td>
<td>Overgrown Bio-Filter plant area</td>
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DE BEERS LAND & PROPERTY IN KIMBERLEY

FEASIBILITY ASSESSMENT

SUMMARY REPORT

Prepared by the Wits Project Management Team

October 2015
# DE BEERS LAND & PROPERTY IN KIMBERLEY

## FEASIBILITY ASSESSMENT - SUMMARY REPORT

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Annexures
### DEFINITIONS AND ACRONYMS

The following terms are used for the sake of brevity in this report:

<table>
<thead>
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<th>Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>SPU</td>
<td>Sol Plaatje University</td>
</tr>
<tr>
<td>De Beers</td>
<td>De Beers Consolidated Mines (Proprietary) Limited</td>
</tr>
<tr>
<td>De Beers land or property</td>
<td>Property offered by De Beers to the SPU</td>
</tr>
<tr>
<td>Hospital, Clinic, Hostels and Lesedi Conference area</td>
<td>Different components of the buildings being investigated as part of the feasibility study</td>
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Executive Summary

The SPU received an offer from De Beers to take over the use of few unused properties owned by De Beers in Kimberley and to incorporate these into the suite of Sol Plaatje University (SPU) properties. The property currently houses a hostel and hospital that were abandoned approximately 10 years ago, a clinic that is still in use as an occupational health facility and a training/conference facility (also referred to as Lesedi) that appears to have been in use until recently.

The SPU wishes to consider the use of these properties as part the broader SPU campus.

This report briefly summarizes a brief assessment by the NU PMT team to prepare an indicative valuation and a feasibility assessment of the said property.

The site is located approximately 3 km east of the Kimberley CBD, off Molyneaux Road. Figure 1 shows the location of the site.

Figure 1 – Location of De Beers site

In anticipation of accepting the donation from De Beers, the property could serve as a possible satellite campus. Some of the risk considerations which are apparent in evaluating the property is summarized below with related costs to mitigate, either capital or operational or maintenance cost linked to it.

Development considerations

Geological assessment - There is evidence that severe settlement has occurred throughout the improvements upon the land portions under consideration. Extensive geo-technical
surveys and structural analyses will have to be conducted so as to preclude development which may attract construction risk.

**Construction Risk** - Improvements to existing building structures may contain construction risk due to age and condition of structures and infrastructure. Special care will have to be taken with related additional costs.

**Security and Access Control** - It is relatively easy to access the land portions and even buildings, despite strict security control by the mining security personnel. The property in its current state is therefore unsuitable for use as a controlled university facility. Extensive capital expenditure will be required to upgrade and enhance the security and access control to the properties.

**Distance from Main Campus** - The De Beers property lies approximately 3 kilometres from the SPU main campus. Regular transport would need to be provided between this property (satellite campus) and the UMP main campus to facilitate student integration between the campuses and for staff transfers to and from the main campus.

**Rezoning and Environmental Authorization** - The property would have to be re-zoned to ‘university’ use if it was to be used as a satellite campus. In addition to this, the property portion would also have to acquire a ‘special’ use zoning if a hospital and/or clinic were to be administered upon thereon. These rezoning applications will require comprehensive environmental impact studies with long duration and costs associated.

**Infrastructure Upgrades** - The property’s infrastructure and buildings in general are aged and obsolete in terms of the character and impression that the university currently establish on its campus. A significant portion of the property will have to be completely refurbished. The Conference centre will have to be upgraded and refitted to provide the extent of lecture- and accommodation facilities contemplated by the SPU’s requirements.

**Mineral and Petroleum Resources Development Act vs Heritage Act** - Careful consideration must be given to the legal implications in taking over the building complex from De Beers. The Mineral and Petroleum Resources Development Act of 2002 stipulates that a mining company must rehabilitate the environment when a mine is closed and this responsibility will be carried over to the new owner. The Heritage Act in turn stipulates that any structure older than sixty years may not be altered or demolished without a permit from the relevant heritage resources authority.

**Business implications** - SPU shall, from the date of transfer, become responsible for the operating costs of the property. The SPU will have to carefully evaluate and assess the business risk of managing and controlling such a facility, including high costs related to operations and maintenance of the property, high upgrading costs of buildings and infrastructure, security and the like. An indicative projection if these costs is contained in the section on finances below.

**Financial considerations**

The following financial considerations are relevant to the proposed purchase of the property.

**Property valuation** - The valuation of the property is a combination of the depreciated asset valuation methodology and land residual valuation methodology and the property is valued at about R19 million.

**Capital Cost Projection** – The property will be donated “voetstoots”, any and all survey costs shall be for the account of SPU. De Beers, as donor, shall be liable for donation tax upon transfer of the land portions to SPU. The projected refurbishment costs of existing improvements are extensive. More clarity is required from the SPU management on the potential use of the property before these could be quantified. Option 1, material revamp of all existing facilities in order to ensure the optimal use of the donated land portions has been
costed. The total estimated capital costs to upgrade and renovate the existing property in its current state for the SPU to use is about R 630 million.

**Operational and Maintenance Expenses** - The total annual management, operational and preventative maintenance costs are estimated at about R13,6 million.

**Conclusions**

From the feasibility assessment and following the discussion with the SPU Management, the following conclusions can be made:

**Infrastructure Upgrades** - Although almost 30 000 m² of building improvements will become available to the SPU as part of this donation, it is evident that the property’s infrastructure and buildings in general are aged, neglected, run-down and obsolete in terms of the physical condition, its character and impression that the university currently establish on its campus. A significant portion of the property will have to be completely demolished and rebuild at high costs.

**Operational costs** - SPU shall, from the date of transfer, become responsible for the operating costs of the property. The SPU will have to carefully evaluate and assess the cost to operational and maintenance expenses incurred by this additional property which need to be managed by the SPU.

The estimated additional expenses result to about R 13,6 million/annum, including high costs related to operations and maintenance of the property, security, personnel costs and the like. The distance of the De Beers property from the main campus will add to this expense.

**Projected Capital Costs** - De property will be donated “voetstoots” and any projected refurbishment or new building costs will be for the account of the SPU. Based on option 1 to do a complete revamp of all existing facilities which will require material upgrading of the improvements on the property, it was estimated that R630 million will be required for this purpose.

**Geological Risk** - There is evidence that severe settlement has occurred throughout the improvements on this property. The entirety of the site is built on a platform of approximately 2m above natural ground level. The cracks are associated with differential settlement within the poorly compacted or variably compacted fill materials. Expensive and extensive geotechnical surveys and structural analyses will have to be conducted so as to preclude development which may attract construction risk due to poor founding conditions and to repair existing structures.

**Security and Access Control** - The existing level of security and access control are unsuitable for the use of the facility as university residences or academic/office space. Extensive capital expenditure will be required to upgrade and enhance the security and access control.

**Rezoning and Environmental Authorization** - The property would have to be re-zoned to ‘university’ use if it were to be used as a residence and satellite campus and to a ‘special’ use zoning if a hospital and/or clinic were to be administered upon thereon. The rezoning will require comprehensive environmental impact studies in accordance to the National Environmental Management Act (number 107 of 1998).

**Legislation and legal requirements** - Careful consideration must be given to the legal implications in taking over the building complex from De Beers. Of relevance is:

- the Mineral and Petroleum Resources Development Act of 2002 which stipulates that a mining company must rehabilitate the environment when a mine is closed and this responsibility will probably be transferred to a new owner, and
• The Heritage Act in turn stipulates that any structure older than sixty years may not be altered or demolished without a permit from the relevant heritage resources authority.

Business Opportunity – External business opportunities and development options were not evaluated, however it is recognized that the potential exists to establish a satellite campus within the clinic and/or hospital. Any development of this nature would, however, require the extension of the current urban edge by the Sol Plaatje local authority as the property are not within an established or promulgated township. Suitable partners or investors will also have to be identified to raise the required funding for such developments and to assist the SPU not to be distracted from its core focus to development educational facilities for students on the campus.

Recommendations

As will be apparent from the extensive capital expenditure which is required to redevelop and refurbish the improvements upon the land portions as well as the estimated annual operational expenditure, the acceptance of this property by way of donation shall encumber the finances of SPU extensively.

Accordingly, it is recommended that:

• the SPU should focus their capital investment of student residences and a conference centre and consolidate their operational costs on the available properties of the north, central and south campuses, and
• should the need arise, alternatives be sought upon which a hospital or clinic can be constructed (to modern standards).

The SPU’s focus of attention on the main campus should not encumber opportunities of partnering with private investors or developers who may consider purchasing or taking over the De Beers property and involving the SPU for educational or research purposes.
DE BEERS LAND & PROPERTY IN KIMBERLEY

FEASIBILITY ASSESSMENT - SUMMARY REPORT

1. Introduction
The SPU received an offer from De Beers to take over the use of few unused properties owned by De Beers in Kimberley and to incorporate these into the SPU. The property currently houses a hostel and hospital that were abandoned approximately 10 years ago, a clinic that is still in use as an occupational health facility and a training/conference facility (also referred to as Lesedi) that appears to have been in use until recently.

The Sol Plaatje University wishes to consider the use of these properties. The NU PMT was therefore requested to perform an indicative valuation and feasibility of the said property which is currently owned by de Beers Consolidated Mines (Proprietary) Limited (referred as “de Beers”) and which de Beers wishes to donate to Sol Plaatje University for its subsequent use for educational purposes.

The site is located approximately 3 km east of the Kimberley CBD, off Molyneaux Road. Figure 1 shows the location of the site.

Figure 1 – Location of De Beers site

2. Methodology
From the outcome from this assessment, the SPU wishes to consider the acceptance (or not) of the donation of the land portions for these purposes. The NU PMT’s mandate therefore is as follows:
- Obtain, where necessary and appropriate, relevant title deed- and zoning- information from the relevant deeds office and the Sol Plaatje Local Authority so as to provide a use- and development- analysis of the property,
Prepare an indicative valuation of the property and use the information to do a feasibility assessment for the use of the property by the SPU,

- Provide a risk analysis and list advantages of acquiring the property,
- Consider alternative development scenarios to assess the value or beneficiation that the SPU could reach from this donation, and
- Undertake a financial assessment of operational, maintenance and upgrading costs for consideration by the SPU Management.

The NU PMT therefore contracted from its professional team a number of experienced consultants to assist in this assessment. An inspection of the site was undertaken at a few stages. Staff from De Beers kindly accompanied the team to inspect the facilities within the De Beers security area. During this site visit the team obtained as much relevant data and information from the De Beers property so as to prepare an indicative valuation and feasibility analysis (as defined below) of the property. The De Beers Security Manager, Mr Deon Voster assisted the team with some information which could assist in the outcome to this report.

A number of reports were compiled by team members each in their field of expertise, the context of each summarized in this summary report.

In order for the SPU Council to make an informed decision, the Project Management Team was requested to do a high level due diligence assessment and feasibility investigation and to include the commercial and business risk of taking over and operate this property as part of the SPU’s fixed assets.

A team of consultants were appointed to assess the condition of the existing properties. The outcome from the different investigations are summarized in this report.

3. **Property Description**

The NU PMT’s understanding is that Sol Plaatje University wishes to consider the use of the to be donated land portions (or portions of this property) as:

- Existing Hostel (formerly referred to as “Compounds”), estimated at about 11 400 m² in size – for university student- and staff residences in the staff quarters,
- An existing clinic (health and safety and associated), estimated at about 800 m² in size – with training facilities which could maintain its current practise to serve the mining and related industries.
- A conference and/or training centre, estimated at about 3 600 m² in size, and
- A hospital or care centre with training facilities, estimated at about 11 500 m² in size – which could be developed in co-operation with a larger specialist medical group.

See Figure 2 for an aerial photo view of the premises.
Figure 2 – Aerial photo of property layout

The De Beers Property under review is held in the name of de Beers Consolidated Mines (Proprietary) Limited and comprises two land portions as follows:

- the remaining extent of the farm Dorstfontein 77 registration division Kimberley Road, Kimberley, Northern Cape [measuring 532,144 hectares in extent], and
- portion 12 of the farm Dorstfontein 77 registration division Kimberley Road, Kimberley, Northern Cape [measuring 8 914 square metres (0.8914ha) in extent]

It is intended that the first land portion (of the farm Dorstfontein) shall be sub-divided prior to transfer so that only 5,7086 hectares of this land portion shall be transferred to SPU. De Beers has verbally indicated that they shall bear the costs of sub-division.

The total extent of the land portions to be donated are approximate 6,6 hectares in size.

The property is located adjacent to non-operational mines but some secondary filtering activity is currently taking place in various adjacent land portions.

4. Town planning, Zoning and Rights

4.1 Ownership and Legal issues

Portion 12 of the Farm Dorstfontein 77, Kimberley is registered in the name of DE BEER CONSOLIDATED MINES (PTY) LTD and is held in terms of Deed of Transfer Nº T3044/20000.

The Remainder of the Farm Dorstfontein 77, Kimberley is registered in the name of DE BEER CONSOLIDATED MINES (PTY) LTD and is held in terms of Deed of Transfer Nº T7211/1899.

Neither of these deeds has been microfilmed at the Deeds Office and as such the only way to obtain a copy of these deeds is at the Kimberley Deeds Office.

4.2 Servitudes

Nineteen servitudes and four restrictions are recorded within the title deeds of the property portions. Such servitudes pertain to municipal and national supplies/rights of way and shall need to be examined in anticipation of sub-division and transfer to SPU.
4.3 Existing Zoning

Portion 12 of the Farm Dorstfontein 77, Kimberley is presently zoned “Institutional” which permits a hospital as a primary right.

The Remainder of the Farm Dorstfontein 77, Kimberley is presently zoned “Mining” which permits mining purposes and buildings necessary for the use of the mine as a primary right. Zoning certificates are attached as Annexure 1.

The Sol Plaatje Municipality has confirmed that the site falls outside the Urban Development Boundary or Urban Edge. Therefore, in addition to the uses presently permitted, only rural uses will be supported in the area and the provision of services could not be guaranteed by the Municipality.

4.4 Future development

If any other development were to be proposed, the Urban Edge could potentially be reviewed. A Township Establishment process would need to be followed in order to further develop the site.

If a change of land use is envisaged eg for the development of a satellite campus, or any additional structures were to be built, an Environmental Impact Assessment (EIA) may well be required as well as any Town Planning approvals as needed. The Municipality would need to approve any other proposals with regards to the treatment of sewerage, the provision of water and the disposal of solid waste.

Existing and any potential land claims have not been assessed. De Beers could not give any confirmation of any such land claim on the property.

5. Development options - Potential use

The SPU management has expressed the following potential uses of the De Beers Property:

- Medical facility utilising the previous hospital facility and extend on the existing Health and Safety clinic operated by a private medical practitioner for the mines.
- Accommodation for visiting lecturers, staff members and visiting students and the public which will attend short educational programmes at the SPU,
- Temporary accommodation for new university staff (currently the UMP provides accommodation for two months),
- The conference facilities (and dining amenities) can be made available to groups for hire.
- Offer short learning programmes to the public.

6. Status assessment of facilities

In order for the SPU Council to make an informed decision, a team of consultants visited the property to assess the current building and infrastructure on the premises. From the visual information and based on the documentation received, the observations below were made. The assessment is separated into the following buildings:

- Hospital building
- The Staff quarter complex
- The Conference Centre and Clinic

6.1 Architecture and Heritage
a) Observations

(i) The Staff quarter complex

The Staff quarter complex (also referred to as the “Compound”) consists of shed-like structures built around a huge courtyard area of about 260 meters by 120 meters. A number of loose standing buildings are situated inside the courtyard area.

The buildings were probably built in the early 1900’s, although similar complexes existed as early as 1885, albeit on a much smaller scale. The complex for the most part were used as dormitories for mine labourers. See Figure 3 below for a view dating back to early years after establishment.

Figure 3 – View of staff quarters during early years.

The main structure of these units consists of steel columns and trusses finished off with a corrugated iron roof at a fairly steep pitch and brick walls on either side with enclosing steel columns and timber windows. A clerestory runs the full length of the dormitories and was originally fitted with timber windows, but this has for the most part been replaced with alternating fixed steel windows and steel louvres. This was undoubtedly done at a stage when the timber window frames disintegrated.

It is unlikely that the buildings had ceilings or any other form of insulation. This must have been uncomfortable to live in during the extremes of summer and winter in the Northern Cape. Efforts to fit ceilings in parts of the complex have proven difficult as the trusses are too low to fit ceilings underneath which is not aesthetically pleasing.

The remaining timber windows in the side walls are in varying state of deterioration and will require replacing or, at best, intensive restoration.
Some sections of the compound complex were added or altered at a later stage such as the double storey portion on the southern side, which is structurally in a fair condition.

(ii) Hospital
The hospital is from a later era and was probably built around the 1950’s. The building shows a number of major cracks that extend through the walls and floors and may be the result of the building being erected on top of mine debris. The cracks could also be as a result of movement due to the presence of clay in the sub-soil – see geotechnical assessment for more details.

The building consists of large wards for patients partitioned off with low walls topped off with timber and glass panels and has adjoining ablution facilities. The general layout is not suitable for a modern hospital and if it is to be used for this purpose major alterations will be necessary. The finishes are in a poor state and the plumbing and electrical services will have to be re-done. The roof sheeting is loose in places and most of the gutters are rusted.

(iii) The Conference Centre
This building is fairly new and functional, but will require some maintenance. If the building is fully utilized, the existing parking area is inadequate and much more parking will be required.

(iv) Clinic
The Clinic building is in daily use and the finishes are in a good condition. The external finishes consist of fair face brickwork and a corrugated iron roof with steel framed windows and is in a fair condition.

b) Risks
Careful consideration must be given to the legal implications in taking over the building complex from De Beers. The Mineral and Petroleum Resources Development Act of 2002 stipulates that a mining company must rehabilitate the environment when a mine is closed and this responsibility will probably carry over to a new owner.

The Heritage Act stipulates that any structure older than sixty years may not be altered or demolished without a permit from the relevant heritage resources authority.

A legal opinion should be obtained to ensure that the SPU adhere to legislation before future development will take place.

(i) The Staff quarter complex
The compound system developed in South Africa is of historical importance. There are not many such structures left. The heritage resources authority may not grant a permit to alter these buildings. The compound and, to a lesser extent, the hospital are old and if permitted it may be costly to renovate the entire premises to the authority’s requirements.

Efforts to fit ceilings in parts of the complex have proven difficult as the trusses are too low to fit ceilings underneath. This will result changing the entire roof structure for the complex
Timber windows will require replacing or intensive restoration.
The double storey portion on the southern side is structurally in a fair condition, but will require new floor finishes, ceilings, paint, plumbing, electrical and new steel stairs.

(ii) Hospital
The general layout of the hospital requires major alterations if to be used as hospital. This require redone of plumbing, electrical services, roof sheeting and gutters.

(iii) The Conference Centre
Existing parking area is inadequate and should be upgraded.

(iv) Clinic:
The Clinic building is in daily use and the finishes are in a good condition. The external finishes consist of fair face brickwork and a corrugated iron roof with steel framed windows and is in a fair condition.
The clinic and conference centre will require less in terms of renovations and are more functional structures.

c) Remedial actions proposed
The clinic and conference centre will require less in terms of renovations and are more functional structures.
It may be possible to convince the heritage resources authority to allow a portion of the building to be restored and the rest to be converted for other uses or demolished as the need dictates.

6.2 Building structure
a) Observations to adequacy
The buildings of the improvements listed under Clause 3 were inspected.

(i) Old hostel and hospital
- The old hostel and hospital were constructed on a filling varying in depth of between 1m to 2m.
- Severe cracking was observed at some of the buildings at the old hostel and hospital.
- Soil settlement or movement might be the main reasons for the cracking that took place at the buildings.
- Cracks of up to of the 25mm wide were observed at these buildings.
- Most of the cracks occurred in the walls and concrete floors (surface beds).
- The roof structures were in a fair state.
- There were instances where a combination of timber and structural steel were used for the roof structures which can result in thermal expansion problems.

(ii) Clinic
• The clinic was also constructed on a filling varying in depth of between 1m to 1.5m. The constructed filling consists of material from the mine tailings which is known for its settlement and heaving resulting in cracking of building structures.
• Cracks occurred mostly on the external walls of the buildings. The cracks were not nearly as severe as those observed at the old hostel and hospital.
• The roof structure seems to be structurally sound. Structural steel and timber were also used in this instance.

(iii) Training/conference facility
• The training/conference facility is structurally sound and in a very good condition.
• This facility was constructed by means of a frame structure with a brick infill consisting of structural steel, concrete and brick elements.
• The frame structure also reduces the risk of potential cracks that might occur.
• The roof structure is also structurally sound consisting of a steel truss/rafter and purlin system.
• Only one horizontal plaster crack was observed.

b) Risks
• **National Building Regulations compliancy** - No proof was provided with the inspection to conform the compliance to the latest requirements of the National Building Regulations regarding the required certificates for the building and roof structures.
• The old hostel and hospital pose a risk of further cracking and deterioration of the structures due to either soil settlement or heaving that could still be experienced. No structural drawings are available and the structural steel used at time of construction is surely of a lower grade than what is used these days. No additional loads or amendments to the old buildings can be made as a result of the lack of structural information.
• The risk of further cracking and deterioration at the clinic is much less compared to the old buildings since these buildings are currently occupied and maintained. Underpinning of the foundations and the construction of a few expansion joints might reduce the risk of further cracking at the clinic.
• A very low structural risk can be ascribed to the training/conference facility due to its structural configuration mentioned earlier. This facility is fairly new and can surely be earmarked as an option for lecturing and training.

c) Remedial actions proposed
• Should the required compliancy certificates not be available, a proper full scale investigation will be required to confirm compliance which can include structural upgrading work on the older buildings. An effort should be made to obtain the structural drawings of the buildings in this regard in order to make informed decisions.
• The alternative will be to demolish and replace the unacceptable older structures. The older structures that might be affected will be the hostels, hospital, restaurant and administrative offices complex.
• Foundation underpinning and the construction of expansion joints can be considered for the clinic.
6.3 Electrical services

a) Observations

The following general observations were made during the site visit:

(i) Hospital
- No electrical connection
- Some of the cable feeders are none exiting and the others looks damaged
- Most of the distribution boards are damaged and the boards that had still equipment in are with old redundant equipment.
- Most of the wiring is none exiting.
- All the outlet equipment, light fittings and power outlets, are none exiting or old and redundant equipment.
- There is no indication of any smoke detection installation in the buildings
- No Emergency generator Installation.

No Certificates of compliancy (COC) documentation will be available.

(ii) Old Hostel
- Equipment of bulk electrical connection is very old and redundant, reported by De Beers personnel as in working order.
- Most of the LV cable reticulation are in a working condition and can be re-used, although the reticulation system is out dated.
- Most of the distribution boards are in a working condition but with old redundant equipment.
- Most of the wiring is none exciting.
- All the outlet equipment, light fittings and power outlets, are none exiting or old and redundant equipment.
- There is no indication of any smoke detection installation in the buildings
- No Emergency generator Installation.

Certificates of compliancy (COC) documentation were not inspected but are apparently available.

(iii) Clinic
- Electrical connection from one of the distribution boards of the Hostel.
- LV cable reticulation is in a working condition and can be re-used, although it will be needed to install a complete new supply to the clinic from the main connection.
- The distribution boards are in a working condition but mostly with old redundant equipment.
- Wiring is in a working condition.
- Most of the outlet equipment, light fittings and power outlets, are replaced and in working condition.
- There is no indication of any smoke detection installation in the building.
- No Emergency generator Installation.

Certificates of compliancy (COC) documentation were not inspected but are apparently available.
(iv) Training/Conference Facility

- Electrical connection from De Beers Electrical Connection.
- LV cable reticulation is in a working condition and can be re-used.
- The distribution boards are in a working condition but mostly with old redundant equipment.
- Wiring is in a working condition.
- Most of the outlet equipment, light fittings and power outlets, are replaced or newly installed and in working condition.
- There is a smoke detection installation in the building but we are not sure if it is completely in a working condition.
- No Emergency generator Installation.

Certificates of compliancy (COC) documentation were not inspected but are apparently available.

b) Risks

Some of the risks identified with regards to electrical installations include:

- The bulk electrical power are currently fed from the De Beers electrical connection via their electrical reticulation. De Beers has a certain agreement with Eskom which should be considered when SPU will be taking over some of the buildings.
- The complete electrical building infrastructure will have to be replaced in the Hospital and the Hostels.

c) Remedial Actions

Based on the risks and observations made, the following remedial actions are proposed:

- The possibility to have an own Eskom supply to the premises need to be investigated as this can save on basic power demand charge.
- New bulk electrical connections for all these buildings fed from a new Eskom connection.
- Upgrading of the Training/Conference Facility LV reticulation and electrical installation that will included that some of the equipment had to be replaced.
- Installation of Fire detection systems and Emergency power for all the buildings.
- Testing and Commissioning of all the buildings with compiling of all the proper test certificates.

6.4 Mechanical

The mechanical installations for the complex have been evaluated as follows:

a) Observations

The following general observations were made during the site visit:

(i) Hospital

- The hospital wards have only natural ventilation with no air conditioning installation allowed for. Most areas currently have good cross-ventilation.
- Ablutions do not have any ventilation, only natural ventilation by means of openable windows.
(ii) **Conference Centre (Lesedi)**
- Lesedi has areas with reasonably new air conditioning systems. Those units that were tested seemed to be in working condition.
- The ablutions did not have any mechanical ventilation, as they are naturally ventilated. A few areas that were devoid of ventilation, are isolated and will have to be attended to.
- There are air conditioned areas (eg. large classrooms, offices etc.) that have air conditioning but no fresh air supply which is not in accordance with SANS 10400-O. The method used in air conditioned venues (ceiling extract fans and transfer grills) draws secondary air into the spaces and is also not in compliance with SANS 10400-O.

(iii) **Clinic**
- There are vertical louvres in roofs which seemed to have been exposed originally to ventilate the internal spaces. Ceilings have been installed below trusses and vents installed in ceilings for ventilation.
- There are areas that do not have any mechanical ventilation installed.

(iv) **Old Hostel**
- Wall mounted fans in kitchen / dining area and natural ventilation in all areas via windows and vertical louvres.

b) **Risks**

(i) **Hospital**
- Improvements with new partitions could affect natural ventilation and/or cross ventilation to areas if air conditioning and mechanical ventilation are to be installed.
- The wards, recovery and other sterile areas do not comply with the latest regulations from Department of Health and to comply with EN12101.
- Fire detection systems will have to be installed.

(ii) **Conference Centre (Lesedi) and Clinic**
- New internal layouts can affect the current air conditioning layout.
- The condition of some of the current air conditioning equipment is unknown.
- Ventilation is not in accordance with SANS 10400-O

(iii) **Old Hostel**
- Mechanical ventilation will have to be installed in kitchen / dining areas at high costs.
- If ceilings are installed, the vertical louvres will no longer provide ventilation to the internal spaces.

c) **Remedial Actions**

Based on the risks and observations made, the following remedial actions are proposed:

(i) **Hospital**
- A total new system of ventilation to be installed based on the partition and air conditioning layout, new HVAC for theatres and sterile areas, etc.
• Detailed fire plans to be done to determine whether mechanical smoke ventilation and fire sprinklers are required.
• Heat pump / solar hot water plant to be considered for the hot water requirements.

(ii) Conference Centre (Lesedi)
• An audit to be done on all air conditioning equipment and ventilation. Based on this audit, recommendations will be made on servicing/replacement of equipment, also considering communal extract ventilation systems.

(iii) Clinic
• Ventilation to be installed in air conditioned spaces.
• A full audit also to be done on all air conditioning equipment. Based on this audit, recommendations to be made whether equipment will be serviced or replaced.

(iv) Old Hostel
• A new ducted ventilation system to be installed in kitchen / dining areas to provide filter fresh air in accordance with SANS 10400-O.
• If ceilings and partitions are added, their impact on the ventilation needs to be assessed.
• Consider heat pump / solar hot water plant to cater for the hot water requirements.

6.5 Water and Sanitation
The property is located in a mining area on the south eastern periphery of Kimberley. The Sol Plaatje Municipality provides potable water services to the mining area at the northern extremity to the south of Casandra and at a point to the east of Greenside. How De Beers distributes water between these two delivery points and whether there is an internal De Beers reticulation that connects the points are unknown. The connection points and the intervening mining area can be seen in Figure 4 below.

a) Observations
(i) Domestic Water
The actual infrastructure feeding the buildings could not be observed but, from drawings made available by De Beers, it appears that they are fed from a 100 mm connection at the mine entrance and that water is conveyed to the hostels through a 100 mm (4”) fire main and a 75 mm (3”) domestic main. The mains are labelled “Vaal” and it is uncertain what material was used.

Many of the reticulation pipes within the building were surface mounted and appeared to be GMS piping although there were examples of polycop or similar piping.

The municipal connection feeding the area is relatively small (100 mm) and the area was previously boosted by a 350 mm diameter steel line from Casandra. It has been established that the municipality intends abandoning this line between the De Beers connection in Casandra and Herlear as shown in red in Figure 1. While the pressure for the area is likely to be acceptable after the abandonment, the effect of any increased demand is unknown. According to the De Beers representatives there had been problems with water supply and on-site storage was provided to alleviate this.
(ii) Waste Water

- As with the water network, the waste water collection network was not readily observable. Plans received from De Beers indicate that the sewage generated by the hostel is conveyed to the municipal network through a 100 mm (4”) waste water network. Although the material of the pipes is not specified, at the time of development earthenware pipes were common and are likely to have been used. If this is the case, the pipes are still likely to be in a good condition.

- The municipal network conveys the sewage to a sewage pump station located on the part of the mine that has been transferred to Petra Diamonds as indicated in Figure 5 below. The capacity of the system is unknown.

Figure 5 – Sewer layout
b) Risks

Risks identified are the following:

- The capacity to deliver potable water from the municipal network appears to be limited.
- The on-site potable water network is in an unknown condition and has been out of operation for some time. Any stagnant water that may have been in the system is likely to have caused corrosion problems in any metallic pipes.
- While it is surmised that the sewer network is constructed from earthenware pipes, this is not conclusively known and there could be problems with the network. Even if the pipes are in good condition they are likely to be blocked and unusable until refurbished.

c) Remedial actions proposed

In order to mitigate risk the following should be considered:

(i) Domestic water

- The municipal water supply system should be revaluated in terms of volumes and pressure once the nature of any proposed development is known.
- It will probably be prudent to plan for installing a new on-site water network to ensure that it is in a good condition and properly separated from the remaining De Beers and Petra Diamonds network.

(ii) Waste Water

- Provision should also be made for the on-site sewerage system to be replaced and thus ensure that it is in an acceptable condition and dedicated to the university facilities.

6.6 Roads, stormwater and parking

a) Observations

The following observations were made:

- The stormwater system on site appears to be very rudimentary as shown in the photographs below.
- It can be seen from Figure 5 that there is no significant municipal stormwater infrastructure in the area. In discussions the De Beers representatives indicated that the stormwater makes its way to the Du Toit's Pan that lies to the south east of the development as shown in Figure 5.
- The main access to the site is currently through a De Beers Security area.
- The internal quadrant at the hostels is made up of open areas, an open air theatre and a soccer field. There is ample space to provide parking for a future development although the current parking facilities are very limited. The

Figure 5 – Storm water layout
b) Risks

The stormwater system is not well developed but this is common in Kimberley and it should be possible to drain the area towards the DuToits Pan.

c) Remedial actions proposed

Remedial actions include:

- Alternative access, preferably from the north east of the site should be included in any donation to ensure that access is independent of the mining operations.
- It should be ensured that there is an agreement in place for the stormwater to drain over the land belonging to Petra Diamonds. Although it is established practice that lower lying land must accept runoff from higher lying land, the concentration of runoff and discharge onto lower lying land is not generally acceptable and this is likely to be the only method of discharging from the site.

6.7 Geotechnical

According to the 1:250 000 scale Geological Map 2824 Kimberley, the site is underlain by unconsolidated Quaternary and Tertiary alluvium and scree. Dolerite in the form of a large sill (sheet-like igneous intrusion) is located to the west of the investigation area.

The following summarizes the findings from the investigation:

a) Structural Inspection

Cracks of variable orientations and thickness (some wider than 25 mm) were visible in the building walls the site. The type of cracking observed can be caused by:

- Foundation settlement,
- Structural deformation due to overloading.
• Inadequate design or poor construction methods, or
• Ground movements (such as soil heave)

b) Ground Conditions
The entirety of the site is built up on a platform of approximately 1.5 to 2m above natural ground level.

c) Test Pits
Six test pits, TP1 to TP6, were excavated across the site using a Tractor Loader-Backhoe (TLB) and hand tools. See Figure 2 for location of TP’s. The test pits were advanced immediately adjacent the buildings to expose the foundations and assess the founding materials. The following general observations:

- No natural ground was encountered in any of the test pits.
- Foundations of these structures is conventional strip footing founded at different depths as indicated,
- The cracks are associated with differential settlement within the poorly compacted or variably compacted fill materials,
- The test pits were profiled by an Engineering Geologist according to standard South African profiling methods.

(i) Test Pit (TP1) Old Hospital
- Near vertical cracks > 25 mm were visible.
- The foundation is 0.75 m below ground level
- The material underneath the foundation to a depth of 1.25 m can be described as fill comprising loose, silty sandy fine gravel with abundant cobbles and small boulders.

(ii) TP2 – Old Hospital
- Vertical cracks > 25 mm were visible.
- The foundation is founded 0.25 m below ground level. The material underneath the foundation to a depth of 0.35 m can be described as fill comprising loose, clayey silty fine sand.

(iii) TP3 – Old Hospital
- Vertical cracks < 25 mm were visible.
- The foundation is founded at a depth of 0.75 m
- The material underneath the foundation to a depth of 1.30 m is loose, silty sandy gravel with abundant cobbles and boulders.

(iv) TP4 – Mine H&S Clinic
- Vertical cracks > 25 mm were visible.
- The foundation could not be inspected due to a concrete apron adjacent to the building and the presence of sub-surface services.
- The material next the foundation to a depth of 0.80 can be described as Fill comprising loose, silty fine sand with abundant cobbles and small boulders.
(v) TP5 – Conference Centre
- No cracking interpreted to be related to ground movements were observed.
- The foundation is at a depth of 1.45 m below ground level.
- The material encountered underneath the foundation to a depth of 1.80 m can be described as fill comprising dense, silty sandy gravel.
- The geotechnical founding conditions encountered in this test pit is deemed to be adequate to support the single storey structure.

(vi) TP6 – Living Quarters
- Near vertical and near horizontal cracks < 25 mm were visible.
- The foundation is at a depth of 0.55 m below ground level.
- The material underneath the foundation to a depth of 0.70 m can be described as fill comprising medium dense, silty gravelly fine sand with abundant cobbles.

d) Conclusions
The following conclusions can be made:
- Poorly and/or variably compacted fill beneath the foundations
- Variable quality of fill material or the presence of boulders within the fill
- There is a general correlation between the consistency (and inferred degree of compaction) of the fill materials observed and the degree of damage observed in adjacent buildings,
- the depth to competent founding medium is expected to exceed 1.50 – 2.00 m.
- The presence of cobbles and boulders within the fill must be taken into account when determining suitable remediation measures.

It is recommended that the structural integrity of the buildings be assessed by a structural engineer and that proposed geotechnical conditions be taken into consideration in mitigation measures undertaken by a structural engineer.

6.8 Refuse removal
Refuse removal is likely to be in bulk and arrangements should be made with the municipality to remove skips at regular intervals

7. Legal Considerations
The following legislation may have an impact on the transfer of land to the SPU or on any future developments that the SPU will be planning on the property.

7.1 SUBDIVISION OF AGRICULTURAL LAND ACT (70 of 1970)
Although the land portions are currently zoned ‘mining’ and ‘institutional’, they remain farm portions. In view thereof, and although unlikely, SPU should, as a precaution, ensure that the Minister of Agriculture’s consent for this donation to proceed is not required as contemplated within the Subdivision of Agricultural Land Act (number 70 of 1970).
7.2 PREVENTION OF ILLEGAL EVICTION FROM and UNLAWFUL OCCUPATION OF LAND ACT (19 of 1998)

SPU should obtain a warranty from the donor that the land portions shall be transferred free from occupation of any unlawful occupants so as to avoid the onerous responsibilities of the Prevention of Illegal Eviction from and Unlawful Occupation of Land Act (number 19 of 1998).

7.3 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (107 of 1998)

In view of the nature of the proposed re-development and use of the land portions (hospital, clinic and student residence), an environmental impact assessment (“EIA”) shall be necessary to ensure that the redeveloped land portions are not in contravention of the National Environmental Management Act (number 107 of 1998).

This act requires that certain activities (including the aforementioned) may not commence until an EIA has distinguished the precautions that must be implemented to prevent harm to the surrounding environment and community.

7.4 NATIONAL HERITAGE RESOURCES ACT (25 of 1999)

The primary purpose of this act is to protect properties which are of cultural or other specific significance for present and future generations.

Permission from the South African Heritage Resources Agency shall have to be sought (by way of a permit) to redevelop and refurbish the improvements upon the land portions as the present improvements were constructed more than sixty years ago.

7.5 THE MINERAL and PETROLEUM RESOURCES DEVELOPMENT ACT (28 of 2002)

The Mineral and Petroleum Resources Development Act (number 28 of 2002) provides at section 44, “Removal of buildings, structures and other objects”, which indicates that when a prospecting right, mining right, retention permit or mining permit lapses, is cancelled or is abandoned or when any prospecting or mining operation ceases the holder of any such right or permit may not demolish or remove any building, structure or object without written approval from the Minister.

As the improvements are subject to the control of National Environmental Management Act (number 107 of 1998) referred to above, SPU shall be required to undertake an environmental impact study but may, otherwise, remove and alter the improvements upon the land portions. A certificate shall be required from the relevant minister to confirm that no historic mining activity has contaminated the environment or water surrounding the land portions under review.

8. Advantages

The following advantages are apparent to the acceptance of the proposed donation by de Beers:

- The acquisition of approximately 25 000 square metres of buildings by SPU shall enable SPU to develop student- and staff- accommodation and various other
beneficial facilities in due course. Such development would be subject to the soil conditions being suitable for development purposes.

- The subject land portions are relatively close, within 3 kilometres to the main campus of SPU,
- The property contains some improvements which could, with refurbishment, be used immediately eg the conference centre and the clinic,

9. Risk Considerations

In anticipation of accepting the donation from De Beers, the property as a possible satellite campus or business venture that need to be operated and maintained by SPU, it provides a summary of risk considerations which are apparent in evaluating the property. Some of these items has a cost component, either capital or operational/maintenance cost linked to it and which need to be confirmed:

a) Geological Risk - There is evidence that severe settlement has occurred throughout the improvements upon the land portions. It is recommended that an extensive geo-technical survey and structural analyses be conducted so as to preclude development which may attract construction risk due to poor founding conditions.

b) Construction Risk - Improvements to existing building structures may contain extensive construction risk due to age, condition and design approach of existing structures and infrastructure. No evidence of occupation certificates for existing improvements is available.

c) Security and Access Control - It is extremely easy to access the land portions and even buildings, despite strict control by the mining security. It is therefore unsuitable for use as controlled university residences or facilities. Extensive capital expenditure shall have to be incurred in order to upgrade and enhance the security and access control to the properties.

d) Business Risk - SPU shall, from the date of transfer, become responsible for the operating costs of the property. The SPU will have to carefully evaluate and assess the business risk of managing and controlling such an asset, including high costs related to operations and maintenance of the property, high upgrading costs of buildings and infrastructure, security, personnel costs and the like. An indicative projection if these costs is contained in the section on finances below.

e) Distance from the main SPU Campus - The De Beers property lies approximately 3 kilometres from the SPU main campus. Regular transport would need to be provided between this property (satellite campus) and the SPU main campus to facilitate student integration between the campuses and for staff transfers to- and from- the main campus.

f) Rezoning and Environmental Authorization - The property would have to be rezoned to ‘university’ use if it was to be used as a residence and satellite campus. In addition to this, the property portion would also have to acquire a ‘special’ use zoning if a hospital and/or clinic were to be administered upon thereon. These rezoning applications will require comprehensive environmental impact studies.

g) Mining Survey and Consent - Any further development and/or procuring an occupation certificate for the existing improvements shall require a mining survey to be performed so as to procure the necessary consent of the (national) Department of Mineral Resources.
h) Infrastructure Upgrades - The property's infrastructure and buildings in general are aged and obsolete in terms of the character and impression that the university currently establish on its campus. A significant portion of the property will have to be completely overhauled. The Conference centre will have to be upgraded and refitted to provide the extent of lecture- and accommodation facilities contemplated by the SPU's requirements.

i) Mineral and Petroleum Resources Development Act vs Heritage Act - Careful consideration must be given to the legal implications in taking over the building complex from De Beers. The Mineral and Petroleum Resources Development Act of 2002 stipulates that a mining company must rehabilitate the environment when a mine is closed and this responsibility will probably be transferred to a new owner. The Heritage Act in turn stipulates that any structure older than sixty years may not be altered or demolished without a permit from the relevant heritage resources authority.

10. Financial considerations

The following financial considerations are relevant to the proposed purchase of the property.

10.1 Property valuation

The property valuation was undertaken by Courtwell and is described in their report. The most appropriate valuation methodology to employ in the valuation of the property is a combination of the depreciated asset valuation methodology and land residual valuation methodology.

The value of the property was calculated to be in the order of about R19 million with approximate 50:50 split between the value of the land and the value of improvements.

The following financial considerations (by the SPU) are relevant to the proposed acquisition of the De Beers property.

10.2 Capital Cost Projections

In view of de Beers’ offer of donation being “voetstoots”, any and all survey costs shall be for the account of SPU. De Beers, as donor, shall be liable for donation tax upon transfer of the land portions to SPU. The conveyancing fees relevant to the transfer at estimated at about R70 000.

The projected refurbishment costs of existing improvements are extensive. More clarity is required from the SPU management on the potential use of the property before these could be quantified. These could include:

- Option 1 – Complete revamp of all existing facilities - Materially upgrading the improvements upon the property so as to derive optimal use of the donated land portions,
- Option 2 – Demolish and rebuild unutilised improvements - Removing all improvements upon the property and replacing them with new and modern improvements, and
- Option 3 – Combination of options 1 and 2 - Materially upgrading certain of the current improvements and replacing certain of the improvements with new and modern facilities.
For the purpose of this report, Option 1, complete upgrade of the entire property was considered. A projection of estimated capital costs to improve and/or renovate the existing properties has been included in the Courtwell report.

A summary of these costs includes:

- Acquisition costs of the property (donation): R 0 million
- Transfer, surveys and re-zoning costs: R 2.2 million
- Upgrade of existing facilities: R 485 million
- Bulk, site, security, access infrastructure upgrade: R 145 million

The total estimated capital costs to upgrade and renovate the existing property in its current state for the SPU to use = R 630 million.

#### 10.3 Operational and Maintenance Expenses

In the Courtwell report there is a brief summary description of the essential operational and maintenance costs in operating and maintaining the De Beers property as a going concern. The total annual management, operational and preventative maintenance costs are estimated at about R13.6 million. These include:

- Municipal and utility expenses including rates (60% of costs) - R 8.3 million
- Services costs (security, cleaning, pest control, etc) - R 1.9 million
- Staff costs (conference, hostel, hotel site) - R 2.9 million
- Building, mechanical, electrical, general maintenance - R 0.5 million

#### 11. Conclusions

From the feasibility assessment and following the discussion with the SPU Management, the following conclusions can be made:

**Infrastructure Upgrades**

Although almost 30 000 m² of building improvements will become available to the SPU as part of this donation, it is evident that the property's infrastructure and buildings in general are aged, neglected, run-down and obsolete in terms of the physical condition, its character and impression that the university currently establish on its campus. A significant portion of the property will have to be completely demolished and rebuild at high costs.

**Operational costs**

SPU shall, from the date of transfer, become responsible for the operating costs of the property. The SPU will have to carefully evaluate and assess the cost to operational and maintenance expenses incurred by this additional property which need to be managed by the SPU.

The estimated additional expenses result to about R 13.6 million/annum, including high costs related to operations and maintenance of the property, security, personnel costs and the like. The distance of the De Beers property from the main campus will add to this expense.

**Projected Capital Costs**

De property will be donated “voetstoots” and any projected refurbishment or new building costs will be for the account of the SPU. Based on option 1 to do a complete revamp of all existing facilities which will require material upgrading of the improvements on the property, it was estimated that R630 million will be required for this purpose.

**Geological Risk**
There is evidence that severe settlement has occurred throughout the improvements on this property. The entirety of the site is built on a platform of approximately 2m above natural ground level. The cracks are associated with differential settlement within the poorly compacted or variably compacted fill materials. Expensive and extensive geo-technical surveys and structural analyses will have to be conducted so as to preclude development which may attract construction risk due to poor founding conditions and to repair existing structures.

Security and Access Control

The existing level of security and access control are unsuitable for the use of the facility as university residences or academic/office space. Extensive capital expenditure will be required to upgrade and enhance the security and access control.

Rezoning and Environmental Authorization

The property would have to be re-zoned to ‘university’ use if it were to be used as a residence and satellite campus and to a ‘special’ use zoning if a hospital and/or clinic were to be administered upon thereon. The rezoning will require comprehensive environmental impact studies in accordance to the National Environmental Management Act (number 107 of 1998).

Legislation and legal requirements

Careful consideration must be given to the legal implications in taking over the building complex from De Beers. Of relevance is:

- the Mineral and Petroleum Resources Development Act of 2002 which stipulates that a mining company must rehabilitate the environment when a mine is closed and this responsibility will probably be transferred to a new owner, and
- The Heritage Act in turn stipulates that any structure older than sixty years may not be altered or demolished without a permit from the relevant heritage resources authority.

Business Opportunity

External business opportunities and development options were not evaluated, however it is recognized that the potential exists to establish a satellite campus within the clinic and/or hospital. Any development of this nature would, however, require the extension of the current urban edge by the Sol Plaatje local authority as the property are not within an established or promulgated township. Suitable partners or investors will also have to be identified to raise the required funding for such developments and to assist the SPU not to be distracted from its core focus to development educational facilities for students on the campus.

12. Recommendations

As will be apparent from the extensive capital expenditure which is required to redevelop and refurbish the improvements upon the land portions as well as the estimated annual operational expenditure, the acceptance of this property by way of donation shall encumber the finances of SPU extensively.

Accordingly, it is our considered recommendation that:

- the SPU should focus their capital investment of student residences and a conference centre and consolidate their operational costs on the available properties of the north, central and south campuses, and
- should the need arise, alternatives be sought upon which a hospital or clinic can be constructed (to modern standards).
The SPU’s focus of attention on the main campus should not encumber opportunities of partnering with private investors or developers who may consider purchasing or taking over the De Beers property and involving the SPU for educational or research purposes.

13. References

This report is a summary extraction form information provided by the following team members:

- Presentation and input from the SPU and NUPMT staff,
- Valuation and feasibility report on the De Beers Property, prepared by Courtwell Consulting,
- Report on Town planning issues, prepared by Beth Heydenrych Town Planning Consultant,
- Brief status report on infrastructure prepared by Consultants:
  - Electricity - Civilsence
  - Civil services - Aurecon
  - Structural - Civilsence
  - Geotechnical - Jeffaris and Green Incorporated, and
  - Mechanical - Elements
  - Architectural and heritage - GXY architects

Annexures

Annexure 1 – Letter from De Beers offering the property to SPU
Annexure 2 – Zoning Certificates for De Beers property
Annexure 3 – Aerial photo of De Beers property
29 June 2015

Prof Yunus Ballim
SOL PLAATJIE UNIVERSITY
Private Bag X 5006
Old Legislature Building
Chapel Street
Kimberley
8300

ANGLO AMERICAN DONATION OF LAND

We refer to your letter dated 25 March 2014 where by you provisionally accepted the donation of a parcel of land.

Attached to this letter please find a diagram outlining the area allocated for donation to Sol Plaatje University (SPU).

The donation to SPU to be “voetstoots”

The Deed of Donation to make provision for a reversionary clause for the land to fall back to DBCM in the event of SPU not using the facility for its original purposes anymore.

Please provide us with the timeframes associated with the necessary due diligent study that has to be completed before formal acceptance can be given by SPU.

Mr Abel Madonsela can be contacted for a site inspection of the area and infrastructure.

Yours faithfully

PH OOSTROUZEN
SENIOR MANAGER: DBCM PROPERTIES

DE BEERS CONSOLIDATED MINES PROPRIETARY LIMITED
Head Office: 56 Stockdale Street Kimberley 8501. PO Box 614 Kimberley 8500 South Africa
Tel: +27 (0) 158 490 4111 | Fax: +27 (0) 158 490 4230 | www.debeersgroup.com
Registration No. 1989/000097/07
Annexure 1 – Zoning Certificates for De Beers property

Ref: 15/3-Dorstfontein 77 Portion 12

ZONING CERTIFICATE
TO WHOM IT MAY CONCERN

I, the undersigned, Ngoako Modiba, in my capacity as Chief Town Planner, Sol Plaatje Municipality, hereby certify that Portion 12 of Farm Dorstfontein 77 Kimberley (8914m²), Molyneaux Road, Kimberley, is zoned for Institutional purposes in terms of the Sol Plaatje Land Use Management Scheme 2008.

Signed this 31st day of September 2015.

Ngoako Modiba
Chief Town Planner

1

2

3

4

5

Use zone

Notation as shown on the Map

Primary Land Use Rights

Secondary Land Use Rights

Forbidden Uses

Institutional

Institution (hospital)

Social hall, special buildings, place of refreshment

Buildings not under columns (3) and (4)

*No consent granted at present
Nothing contained in this Scheme shall be deemed to grant exemption from any of the Municipal by-laws or any other Act.
Where there is a conflict between this Scheme and any condition registered against any title deed, the most restrictive condition shall prevail.

Property is subject to the National Heritage Resources Act (Act 25 of 1999)
Annexure 1 – Zoning Certificates for De Beers property (cont)

ZONING CERTIFICATE
TO WHOM IT MAY CONCERN

I, the undersigned, Ngoako Modiba, in my capacity as Chief Town Planner, Sol Plaatje Municipality, hereby certify that Remainder of Farm Dorstfontein 77, off Molyneaux Road, Beaconfield, Kimberley, is zoned for Mining purposes in terms of the Sol Plaatje Land Use Management Scheme 2008.

Signed this 14th day of September 2015.

Ngoako Modiba
Chief Town Planner

<table>
<thead>
<tr>
<th>Use zone</th>
<th>Notation as shown on the Map</th>
<th>Primary Land Use Rights</th>
<th>Secondary Land Use Rights</th>
<th>Prohibited Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td></td>
<td>May or be erected and/or used</td>
<td>May or be erected and/or used with the Consent of the Municipality</td>
<td>Buildings which may not be erected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mining purposes and buildings necessary for the use of the mine</td>
<td>Buildings not under columns (3) and (4)</td>
<td></td>
</tr>
</tbody>
</table>

*In terms of the City Council's Kimberley Zoning Scheme this property was previously reserved for Mining purposes.

All property is subject to the National Heritage Resources Act (Act 25 of 1999) if applicable.
Annexure 2 – Aerial photo of De Beers property
Annexure 3 – Photos existing electrical connection

Hospital connection

Typical hospital DB

Typical redundant power outlets

Redundant equipment
Annexure 5 - Photos existing structural issues

<table>
<thead>
<tr>
<th>Photo 1</th>
<th>Photo 2</th>
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<td></td>
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<td></td>
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</table>
### Annexure 6 – Photos existing civil issues

<table>
<thead>
<tr>
<th>Image 1</th>
</tr>
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<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Image 2</th>
</tr>
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<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
MEMO

TO: A/DDG: U

DATE: 28 MARCH 2014


1. Please note that the Department of Environmental Affairs has granted the Department authorisation regarding above mentioned matter.

2. Your attention is brought to the dates mentioned in the letter regarding notification of the interested and affected parties and for appealing.

DEPUTY DIRECTOR
OFFICE OF THE DIRECTOR-GENERAL
Mr Qwebinkundla Qonde  
Department of Higher Education and Training  
Private Bag X 893  
PRETORIA  
0001  
Tel: (012) 312 5555  
Fax: (012) 323 5618 

PER FACSIMILE / MAIL

Dear Mr Qonde


With reference to the above application, please be advised that the Department has decided to grant authorisation. The environmental authorisation (EA) and reasons for the decision are attached herewith.

In terms of regulation 10(2) of the Environmental Impact Assessment Regulations, 2010 (the Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 12 (twelve) days of the date of the EA, of the Department’s decision in respect of your application as well as the provisions regarding the submission of appeals that are contained in the Regulations.

Your attention is drawn to Chapter 7 of the Regulations, which prescribes the appeal procedure to be followed. This procedure is summarised in the attached document. Kindly include a copy of this document with the letter of notification to interested and affected parties.

Should the applicant or any other party wish to appeal any aspect of the decision a notice of intention to appeal must be lodged by all prospective appellants with the Minister, within 20 days of the date of the EA, by means of one of the following methods:

By facsimile: 012 320 7561;  
By post: Private Bag X447,  
Pretoria, 0001; or  
By hand: 2nd Floor, Fedsure Building, North Tower,  
Cnr. Lilian Ngoyi (Van der Walt) and Pretorius Streets,  
Pretoria.
If the applicant wishes to lodge an appeal, it must also serve a copy of the notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection, should you intend to submit an appeal.

Please include the Department (Attention: Director: Integrated Environmental Authorisations) in the list of interested and affected parties, notified through your notification letter to interested and affected parties, for record purposes.

**Appeals must be submitted in writing to:**

Mr Z Hassam Director: Appeals and Legal Review, of this Department at the above mentioned addresses or fax number. Mr Hassam can also be contacted at:

Tel: 012-310-3271
Email: AppealsDirectorate@environment.gov.za

The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation. Further, please note that the Minister may, on receipt of appeals against the authorisation or conditions thereof suspend the authorisation pending the outcome of the appeals procedure.

Yours faithfully

Mr Ishaam Abader
Deputy Director-General: Legal, Authorisations, Compliance and Enforcement
Department of Environmental Affairs
Date: 26/03/2014

<table>
<thead>
<tr>
<th>CC</th>
<th>Name</th>
<th>Tel</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms R Wilken</td>
<td>Lidwala Consulting Engineers</td>
<td>011-807-0660</td>
<td>011-807-1507</td>
</tr>
<tr>
<td>Mrs R Luyt</td>
<td>Provincial Department: MDEDET</td>
<td>011-321-5555</td>
<td>013-768-4814</td>
</tr>
<tr>
<td>Mr S Mthembu</td>
<td>Mbombela Local Municipality</td>
<td>013-759-2236</td>
<td>086-718-1038</td>
</tr>
</tbody>
</table>
### APPEALS PROCEDURE IN TERMS OF CHAPTER 7 OF THE NEMA EIA REGULATIONS, 2010 (THE REGULATIONS) AS PER GN R. 543 OF 2010 TO BE FOLLOWED BY THE APPLICANT AND INTERESTED AND AFFECTED PARTIES UPON RECEIPT OF NOTIFICATION OF AN ENVIRONMENTAL AUTHORISATION (EA)

<table>
<thead>
<tr>
<th>APPLICANT</th>
<th>INTERESTED AND AFFECTED PARTIES (IAPs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Receive EA from the relevant Competent Authority (the Department of Environmental Affairs (DEA)).</td>
<td>1. Receive EA from Applicant/Consultant.</td>
</tr>
<tr>
<td>2. Within 12 days of date of the EA notify all IAPs of the EA and draw their attention to their right to appeal against the EA in terms of Chapter 7 of the Regulations.</td>
<td>2. N/A.</td>
</tr>
<tr>
<td>3. If you want to appeal against the EA, submit a notice of intention to appeal within 20 days of the date of the EA with the Minister of Water and Environmental Affairs (the Minister).</td>
<td>3. If you want to appeal against the EA, submit a notice of intention to appeal within 20 days of the date of the EA, with the Minister of Water and Environmental Affairs (the Minister).</td>
</tr>
<tr>
<td>4. After having submitted your notice of intention to appeal to the Minister, provide each registered IAP with a copy of the notice of intention to appeal within 10 days of lodging the notice.</td>
<td>4. After having submitted your notice of intention to appeal to the Minister, provide the applicant with a copy of the notice of intention to appeal within 10 days of lodging the notice.</td>
</tr>
<tr>
<td>5. The Applicant must also serve on each IAP: • a notice indicating where and for what period the appeal submission will be available for inspection.</td>
<td>5. Appellant must also serve on the Applicant within 10 days of lodging the notice, • a notice indicating where and for what period the appeal submission will be available for inspection by the applicant.</td>
</tr>
<tr>
<td>6. The appeal must be submitted in writing to the Minister within 30 days after the lapping of the period of 20 days provided for the lodging of the notice of intention to appeal.</td>
<td>6. The appeal must be submitted to the Minister within 30 days after the lapping of the period of 20 days provided for the lodging of the notice of intention to appeal.</td>
</tr>
<tr>
<td>7. Any IAP who received a notice of Intention to appeal may submit a responding statement to that appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.</td>
<td>7. An Applicant who received notice of intention to may submit a responding statement to the appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.</td>
</tr>
</tbody>
</table>

### NOTES:

1. An appeal against a decision must be lodged with:-
   a) the Minister of Water and Environmental Affairs if the decision was issued by the Director-General of the Department of Environmental Affairs (or another official) acting in his/ her capacity as the delegated Competent Authority;
   b) the Minister of Justice and Constitutional Development if the applicant is the Department of Water Affairs and the decision was issued by the Director-General of the Department of Environmental Affairs (or another official) acting in his/ her capacity as the delegated Competent Authority;

2. An appeal lodged with:-
   a) the Minister of Water and Environmental Affairs must be submitted to the Department of Environmental Affairs;
   b) the Minister of Justice and Constitutional Development must be submitted to the Department of Environmental Affairs;

3. An appeal must be:-
   a) submitted in writing;
   b) accompanied by:
      • a statement setting out the grounds of appeal;
      • supporting documentation which is referred to in the appeal; and
      • a statement that the appellant has complied with regulation 62 (2) or (3) together with copies of the notices referred to in regulation 62.
Environmental Authorisation

In terms of regulation 36 of the Environmental Impact Assessment Regulations, 2010

Construction of the new university of Mpumalanga within the Mbombela Local Municipality in the
Mpumalanga Province

Ehlanzeni District Municipality

<table>
<thead>
<tr>
<th>Authorisation register number:</th>
<th>14/12/16/3/3/1/1057</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEAS reference number:</td>
<td>DEA/EIA/0002296/2014</td>
</tr>
<tr>
<td>Last amended:</td>
<td>First issue</td>
</tr>
<tr>
<td>Holder of authorisation:</td>
<td>DEPARTMENT OF HIGHER EDUCATION AND TRAINING</td>
</tr>
<tr>
<td>Location of activity:</td>
<td>MPUMALANGA PROVINCE: On portion 31 of Farm Boschrand, portion 32 of Farm Boschrand 286 JT and portion 17, 19, 28 and 36 of Farm Friedenheim Within Mbombela Local Municipality</td>
</tr>
</tbody>
</table>

This authorisation does not negate the holder of the authorisation’s responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.
Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the EIA regulations.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 the Department hereby authorises –

DEPARTMENT OF HIGHER EDUCATION AND TRAINING

with the following contact details –

Mr Qwebinkundla Qonde
Department of Higher Education and Training
Private Bag X893
PRETORIA
0001
Tel: (012) 312 5555
Fax: (012) 323 5618
to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notices 1 & 3 (GN R: 544 and 548):

<table>
<thead>
<tr>
<th>Listed activities</th>
<th>Activity/Project description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GN R. 544 Item 11: The construction of: (iii) bridges; (vi) bulk storm water outlet structures; (x) buildings exceeding 50 square metres in size; or (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</td>
<td>A ±240 m² footbridge will be constructed over the Nels River that will connect the Hill Campus with the Riverside Mall. Storm water outlet structures will be constructed within 32 metres of the stream/watercourse between the Hill and Orchard campus to direct storm water from the different campuses into the stream. Gabions and infrastructure (exceeding 50m²) to mitigate storm water impacts will be developed within the stream between the Hill and Orchard campuses. The construction of sport facilities and a waste recycling site within 32 meters of a wetland on the Lower Campus.</td>
</tr>
<tr>
<td>GN R. 544 Item 18: 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; but excluding where such infilling, depositing, dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by</td>
<td>The construction of gabions and infrastructure to mitigate storm water impacts and the proposed upgrading of the bridges on the Hill &amp; Orchard Campuses and the upgrading of the road in the wetland situated on the Lower Campus will need infilling, depositing, removing or moving of material (soil, sand, pebbles or rock) of more than 5m³ from or into the stream/watercourse and wetland.</td>
</tr>
</tbody>
</table>
the relevant environmental authority; or

(b) occurs behind the development setback line.

**GN R. 544 Item 39:**

The expansion of

(iii) bridges;

within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.

**GN R. 545 Item 15:**

Physical alteration of undeveloped vacant or derelict land for residential retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more;

except where such physical alteration takes place for:

(i) linear development activities; or

(ii) Agriculture or afforestation where activity 16 in this Schedule will apply.

**GN R. 546 Item 4:**

The construction of a road wider than 4 meters with a reserve less than 13.5 meters.

ii. Outside urban areas, in:

(ee) Critical biodiversity areas as identified in

The expansion/upgrading of the 2 bridges within the watercourse/stream between the Hill and Orchard Campus and the bridge in wetland on the Lower Campus.

The physical alteration of an undeveloped land for the construction of academic, administration and sport facilities as well as student housing for the New University, where the total area to be transformed is 96.69ha.

The construction of internal roads, wider than 4m, on the 3 campuses outside urban areas and in an Ecological Sensitive Area (ESA).
systematic biodiversity plans adopted by the competent authority or in bioregional plans;

**GN R. 546 Item 13:**
The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:

1. the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), in which case the activity is regarded to be excluded from this list.

2. the undertaking of a linear activity falling below the thresholds mentioned in Listing Notice 1 in terms of GN No. 544 of 2010.

-as described in the Basic Assessment Report (BAR) dated December 2013 at:

<table>
<thead>
<tr>
<th>Site alternative</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferred Site Alternative</td>
<td>25° 26'55.88&quot; S</td>
<td>30° 58'24.43&quot; E</td>
</tr>
</tbody>
</table>

- for the proposed construction of the new university of Mpumalanga on portion 31 of Farm Boschrand, portion 32 of Farm Boschrand 286 JT and portion 17, 19, 28 and 36 of Farm Friedenheim within the Mbombela Local Municipality in the Mpumalanga Province, hereafter referred to as “the property”.

The proposed project will include the construction and operation of the following components:

- The construction of Mpumalanga University will be constructed on a total development area of 268.62ha on the following farms: Boschrand 283 JT, Portion 31 (TOJ00000000028300031), Boschrand 283 JT, Portion 32 (TOJ0000000028300032), Friedenheim 282 JT, Portion 31.
The construction of facilities for 15 000 students on the Mpumalanga University includes general lecture theatres, seminar rooms, laboratories, accommodation for 60% (9000) students on the campus, multi-purpose sports fields, academic and administration offices, security, IT facility and ancillary facilities. The potential space needed to construct the new university is 449,854m² of which 203,880m² is for the purpose of academic & administration and 245,974m² for student housing. The maximum height of the buildings will be 3 storeys.

- This university consist of three campuses (Viz. Hill campus, Orchard campus and Lower campus).
- Hill campus will be situated between the stream and the R40 and will comprises of a park, residence, academic and administration buildings.
- Orchard campus will be situated west of the stream will comprises of a mixed use buildings, residences for students, administration buildings and sport facilities.
- The Lower campus will be situated on the south western part of the university and will consist of a mixture of residence, administration building, academic buildings, sport fields and an eco-waste recycling centre.
- The proposed development will also entails upgrading of the existing Lowveld College of Agriculture (i.e. Lecture rooms, hostels, residences, administration buildings, roads and sport facilities).
- Bridges that connect the Hill and Orchard campus and a road that cross a wetland on the lower campus have to be upgraded.
- A footbridge that will cross the Nels River will be constructed in order to link Hill campus with the Riverside Mall.
- Existing roads on the Mpumalanga University campus will be upgraded.
Conditions of this Environmental Authorisation

Scope of authorisation

1. The preferred Site Alternative 1 (Lowveld Agricultural College) with the abovementioned coordinates as indicated in the BAR dated December 2013 is hereby authorised.

2. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.

3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder’s behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.

4. The activities authorised may only be carried out at the property as described above.

5. Any changes to, or deviations from, the project description set out in this authorisation must be approved in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.

6. This activity must commence within a period of five (5) years from the date of issue of this authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.

7. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.

8. The holder of an environmental authorisation must notify the competent authority of any alienation, transfer and change of ownership rights in the property on which the activity is to take place.
Notification of authorisation and right to appeal

9. The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.

10. The notification referred to must –
   10.1. specify the date on which the authorisation was issued;
   10.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment Regulations, 2010;
   10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
   10.4. give the reasons of the competent authority for the decision.

11. The holder of the authorisation must publish a notice –
   11.1. informing interested and affected parties of the decision;
   11.2. informing interested and affected parties where the decision can be accessed; and
   11.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in the newspaper(s) contemplated and used in terms of regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.

Management of the activity

12. The Environmental Management Programme (EMP) submitted as part of the Application for EA is hereby approved. This EMP must be implemented and adhered to.

Monitoring

13. The applicant must appoint a suitably experienced Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMP.

13.1. The ECO must be appointed before commencement of any authorised activities.
13.2. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department.

13.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.

13.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

14. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the Director: Compliance Monitoring at the Department.

15. The holder of the authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.

16. The environmental audit report must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the EMP.

17. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Commencement of the activity

18. The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.

19. An appeal under section 43 of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended), does not suspend an environmental authorisation or exemption, or any provisions or conditions attached thereto, or any directive, unless the Minister, MEC or delegated organ of state directs otherwise.

20. Should you be notified by the Minister of a suspension of the authorisation pending appeal procedures, you may not commence with the activity until such time that the Minister allows you to commence with such an activity in writing.
Notification to authorities

21. Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number. This notification period may coincide with the notice of intent to appeal period.

Operation of the activity

22. Fourteen (14) days written notice must be given to the Department that the activity operational phase will commence.

Site closure and decommissioning

23. Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

24. The applicant is required to inform the Mpumalanga Tourism and Parks Agency and this Department should the removal of protected species, medicinal plants and "data deficient" plant species be required.

25. The holder of the authorisation must ensure that a Water Use Licence is obtained from the Department of Water Affairs before construction commence.

26. All trees protected in terms National Forest Act no 84 of 1998 must be marked with Geographical Positioning System (GPS) and permits for cutting and trimming must be applied from the Department of Agriculture and Forestry (DAFF) prior to construction.

27. Soil conservation measures must be implemented in conjunction with engineering specialists.

28. Rehabilitation areas must be cordoned off areas as no-go areas using danger tape and steel droppers.
29. Best environmental practice must be applied during construction activities to prevent degradation of the wetland area on site and also impacts to downstream areas.

30. The construction site must be clearly demarcated and clear signage must be erected during the construction phase.

31. Potable water must not be used to suppress dust during the construction phase.

32. On-going alien vegetation clearing on and around the proposed site must be implemented.

33. Concrete mixing on site during construction (if mixed on the ground) must be conducted on plastic sheeting in order to avoid permanent soil contamination and to facilitate clean-up of the site.

34. The use of generators on site must include the use of drip trays.

35. Construction vehicles and machineries must be cleaned, maintained and monitored regularly to reduce environmental impacts caused by fuel spillages.

36. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste shall be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).

General

37. A copy of this authorisation and the approved EMPr must be kept at the property where the activity will be undertaken. The authorisation and approved EMPr must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.

38. The holder of the authorisation must notify both the Director: Integrated Environmental Authorisations and the Director: Compliance Monitoring at the Department, in writing and within 48 (forty eight) hours, if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.

39. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.
Date of environmental authorisation: 26 March 2014

Mr Ishaam Abader
Deputy Director-General: Legal, Authorisations, Compliance and Enforcement
Department of Environmental Affairs
Annexure 1: Reasons for Decision

1. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

a) The information contained in the BAR dated December 2013 and received by the Department on 23 January 2014;

b) Mitigation measures as proposed in the BAR dated December 2013;

c) The information contained in the specialist studies contained within Appendix D of the BAR dated December 2013; and

d) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998).

2. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

a) The findings of all the specialist studies conducted and their recommended mitigation measures;

b) The need for the proposed project was well explained and the Department taken the need of the project into consideration;

c) The BAR dated December 2013 identified all legislation and guidelines that have been considered in the preparation of the BAR dated December 2013;

d) The methodology used in assessing the potential impacts identified in the BAR dated December 2013 and the specialist studies have been adequately indicated; and

e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2010 for public involvement.
3. Findings

After consideration of the information and factors listed above, the Department made the following findings:

a) The identification and assessment of impacts are detailed in the BAR dated December 2013 and sufficient assessment of the key identified issues and impacts have been completed;
b) The procedure followed for impact assessment is adequate for the decision-making process;
c) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts;
d) The information contained in the BAR dated December 2013 is accurate and credible; and
e) EMPR measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the BAR and will be implemented to manage the identified environmental impacts during the construction process.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The application is accordingly granted.
FINAL ENVIRONMENTAL MANAGEMENT PROGRAM

PROPOSED DEVELOPMENT OF THE NEW UNIVERSITY OF
MPUMALANGA IN NELSPRUIT,
MPUMALANGA PROVINCE.

July 2014
<table>
<thead>
<tr>
<th>Contact person</th>
<th>Ria Wilken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postal Address</td>
<td>PO Box 8163, Nelspruit, 1200</td>
</tr>
<tr>
<td>Tel.</td>
<td>013 7411512</td>
</tr>
<tr>
<td>Cell.</td>
<td>082 3386934</td>
</tr>
<tr>
<td>Fax</td>
<td>086 6304313</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:Ria.wilken@telkomsa.net">Ria.wilken@telkomsa.net</a></td>
</tr>
</tbody>
</table>

**Expertise**

- **MSc in Environmental Science, (Urban ecology) North-West University, Potchefstroom. Experience in biological science since 1982 –**

  **Agricultural Research** 1982- 2001: (19 years) Nematology laboratories, soil and plant analysis, agricultural trials – field and glasshouse, fertilizer recommendations, vegetable production training for people in rural areas.

  **Environmental & Waste management:** 2001 – (current) Inspect and Regulate waste issue – industrial and municipal, including WWTP’s, evaluate EIA Reports for Environmental authorization, mentor students at the Environmental Department.

**Director** of UmSinsi Environmental Specialist and is a professional scientist, Ecologist and Botanist – Manage various EIA projects – township & agricultural development, including public consultation, consult with various specialists such as Town planners, Engineers as well as Government Departments & Municipalities, writing BA & EIA reports, Environmental Management Programs and Plan & rehabilitate disturbed open spaces. Apply for Water Use and Waste Licenses. Other projects include: Business Plan and Application for funds at the National Lottery Board for 2010 Soccer World Cup, Business Plan for the Rehabilitation of the Bergvlam Stream, Nelspruit, Project Manager for the Rehabilitation of the Bergvlam Stream, Nelspruit, ECO for different projects, Waste Management Plan for Sudwala Lodge.

**Memberships:** BirdLife Lowveld, Plant Specialist Group, Honorary Rangers (SANPARKS) – Lowveld Region, Mbombela Environmental Management Committee, International Association for Impact Assessment, South Africa (IAIA_{SA}), Botanical Society of South Africa.
EXECUTIVE SUMMARY

The Department of Higher Education and Training (DHET) was formed in 2009 as a new Department with the responsibility of post-school systems. DHET has to expand the capacity of higher education, including universities. The annual growth of scholars that need to study at a higher university is 4.7% per year and current universities are already over enrolled. Government policy as stipulated in the Higher Education Act, Act 101 of 1997 determines through section 20 that the Minister by notice in the Gazette may establish a university which is required to deliver through this act teaching, research and community service. This new University is a national asset serving national interests.

In 2010 the Minister of Higher Education and Training appointed two task teams to investigate the feasibility and possibility models for the establishment of Universities in the Northern Cape and Mpumalanga Province. These are the two Provinces in South Africa that do not have universities at the moment. Stakeholders in the provinces were engaged, taking into account provincial and national needs and imperatives, recommendations on the type and size of the two universities were made including the possible sites for the institutions. Since November 2011, the Department of Higher Education and Training (DHET) has appointed a project management team to take forward the planning process under the guidance of a project steering committee, which includes academics from existing universities as well as representatives of the Premiers and of the National Institutes of Higher Education in the two Provinces. Academic work groups have been set up to flesh out the academic direction of each University. Technical work for the 2 universities started in October 2011 and Wits was appointed as project managers with a multi-disciplinary team that includes an architect, civil engineer, geotechnical engineer and urban planner.

The Mpumalanga University will be a comprehensive university (offering a combination of academic programmes usually offered by universities of technology and by traditional universities) with a maximum of 15 000 Fulltime Equivalent Students (FTE) of which a maximum of 60% of the students will be housed on on-campus residences. The University will open its doors to new students as from 2014 and will be operating from the main campus in Mbombela – Lowveld Agricultural College and a satellite campus at the former teachers training college at Siyabuswa. Siyabuswa College will offer a BEd in co-operation with the University of Johannesburg. The university will not offer any postgraduate studies in the short term, but with the presence of two centres of research excellence at the University, postgraduate studies will be introduced eventually.

The university has to be properly planned to ensure that the provision of staff and facilities match the growth in student numbers. An enrolment plan has been compiled which provides for the phased introduction of the different programmes. An annual intake of 120 FTE students for each of the qualification and an accelerated growth 6 years after the qualification had been introduced, will bring the university to its target of 15 000 students by 2024. The annual intake for the BEd students at Siyabuswa Campus, is assumed to be 100 FTE’s per year and will grow to 368 FTE students in 2024. It is noted that the sum of 368 and 14 623 students by 2024 constitute the required 15000 FTE’s of the university of which 11 402 students will be housed on on-campus residences. As a start-up position four faculties have been selected as a basis for the academic organizational structure, namely:

- Faculty of Science and Information Technology
- Faculty of Engineering and Applied Science
- Faculty of Humanities and Business Management
- Faculty of Agriculture.

The transformation of undeveloped, vacant or derelict land to institutional use outside urban area and where the total area to be transformed consist of more than 20ha is a listed activity according to the Environmental Impact Assessment (EIA) Regulations R543, 2010 and it must be adhered to in terms of Sections 24(2)(a) and 24(d) of the National Environmental Management Act (NEMA), Act no 107 of 1998. Most of the development will be on existing agricultural fields, but it would be necessary to clear an area of 1ha or more of vegetation where 75% of the vegetation constitutes of indigenous vegetation on the Lower campus.
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ABBREVIATIONS:

<table>
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<th>Acronym</th>
<th>Description</th>
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<tr>
<td>BAR</td>
<td>Basic Assessment Report</td>
</tr>
<tr>
<td>BID</td>
<td>Background Information Document</td>
</tr>
<tr>
<td>DAFF</td>
<td>Department of Agriculture, Forestry and Fishery</td>
</tr>
<tr>
<td>DEA</td>
<td>Department of Environmental Affairs</td>
</tr>
<tr>
<td>DDEET</td>
<td>Department of Economic Development, Environment and Tourism</td>
</tr>
<tr>
<td>DWA&amp;E</td>
<td>Department of Water Affairs and Environment</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Authorization</td>
</tr>
<tr>
<td>EAP</td>
<td>Environmental Assessment Practitioner</td>
</tr>
<tr>
<td>EAR</td>
<td>Environmental Audit Report</td>
</tr>
<tr>
<td>ECA</td>
<td>Environmental Conservation Act, Act No 73 of 1989</td>
</tr>
<tr>
<td>ECO</td>
<td>Environmental Control Officer</td>
</tr>
<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
</tr>
<tr>
<td>EMPPr</td>
<td>Environmental Management Program</td>
</tr>
<tr>
<td>FET</td>
<td>Full-time equivalent Training</td>
</tr>
<tr>
<td>I&amp;AP</td>
<td>Interested and Affected Parties</td>
</tr>
<tr>
<td>MLM</td>
<td>Mbombela Local Municipality</td>
</tr>
<tr>
<td>NEMA</td>
<td>National Environmental Management Act, Act No 107 of 1998</td>
</tr>
<tr>
<td>NIHE</td>
<td>National Institute of Higher Learning</td>
</tr>
<tr>
<td>NMT</td>
<td>Non-Motorised Transport</td>
</tr>
<tr>
<td>PPP</td>
<td>Public Participation Process</td>
</tr>
<tr>
<td>SABS</td>
<td>South African Bureau of Standards</td>
</tr>
<tr>
<td>RoD</td>
<td>Record of Decision</td>
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</table>

It is assumed that all information received from the owner and specialists have been correct.
1. INTRODUCTION

The EMPr describes the methods and procedures to mitigate potential impacts and the monitoring thereof. It is however not a specification of the exact methods to be applied. The document aims to provide a guide towards the management, mitigation and monitoring of environmental impacts associated with the different phases of development in terms of the National Environmental Management Act - NEMA (Act 107 of 1998).

The proposed development of the University of Mpumalanga in Nelspruit was planned according to the principles of section 2 of NEMA, 107/1998 where people and their needs was placed at the forefront of its concern. The development will serve the public of Nelspruit, future students and staff of the University’s physical, psychological, developmental, cultural and social interests equitably. Possible impacts were identified and will have minimum impact on the environment if mitigation measures are implemented. Therefore the development will be socially, environmentally and economically sustainable.

Specialist assessments to determine possible impacts were evaluated and incorporated in the EMPr. The following specialist recommendations were included in the EMPr:

- Heritage assessment
- Social-economic assessment
- Ecological assessment: Fauna, flora and wetlands
- Civil Engineering: roads, water provision, sewerage capacity and storm water management.
- Traffic assessment: vehicle and non-motorised traffic (mobility assessment on the campus).

2. OBJECTIVES OF THE EMPr

The key objectives of an EMPr are to reduce or eliminate possible negative environmental impacts by giving due consideration to any potential impacts already identified in the Basic Assessment (BA) process and to ensure that the environment is protected during the construction and operational phases. When and if the quality of the environment can be improved, it should be investigated and implemented where possible. Minimal environmental impacts or damage during the construction and operational phase of the development can be achieved through the following:

- Prevent possible negative socio-economic impacts on the Nelspruit and surrounding communities,
- Prevent siltation in the stream between the Hill and Orchard Campus and Nels River,
- Reduce storm water impact on the banks of the stream and Nels River,
- Prevent degradation of wetlands,
- Soil conservation measures must be implemented,
- Protect trees listed on the RDL and/or in terms of the National Forest Act, Act no 84 of 1998,
- Mitigate visual impact,
- Keep as much as possible natural vegetation on natural / sensitive areas. Rehabilitate area with the planting of indigenous plants and trees,
- Improve biodiversity with indigenous gardens on the University’s premises,
- Implement an integrated waste management plan,
- Promote reduce, re-use and recycling of waste,
- Final rehabilitation of area after construction is completed,
- Provide bulk infrastructure such as clean electricity, water and sewerage system without any negative impact on the rest of Nelspruit,
- Mitigate the impact of 4000 additional cars and 30 additional busses per day that will be additional to existing traffic in Nelspruit,
- Prevention of accidents with students that use bicycles or have to walk from their residence to and from different campuses.
### 3. LEGAL REQUIREMENTS

Table 1: The legal requirements applicable to the development are:

<table>
<thead>
<tr>
<th>Title of legislation, policy or guideline</th>
<th>Applicability to the project</th>
<th>Administering authority</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Heritage Resources Act, Act No 25 of 1999.</td>
<td>No heritage sites were found.</td>
<td>Dept of Arts and Culture</td>
<td>1999</td>
</tr>
<tr>
<td>National Water Act, Act No. 36 of 1998.</td>
<td>Consider possible impacts in water resources where bridges will be built and water usage in general.</td>
<td>D Water Affairs and Forestry</td>
<td>1998</td>
</tr>
<tr>
<td>National Environmental Management: Biodiversity Act, Act No 10 of 2004.</td>
<td>Consider possible impacts on the biodiversity of the area where construction will take place.</td>
<td>Department of Environment</td>
<td>2004</td>
</tr>
<tr>
<td>National Environment Conservation Act, Act No 73 of 1989.</td>
<td>Consider possible impacts on conservation for the specific area where development will take place.</td>
<td>Department of Environmental Affairs</td>
<td>1989</td>
</tr>
<tr>
<td>National Heritage Resources Act, Act No. 25 of 1999.</td>
<td>No heritage sites were found</td>
<td>Department of Arts and Culture</td>
<td>1999</td>
</tr>
<tr>
<td>Occupational Health and Safety Act, Act No 85 of 1993.</td>
<td>Health issues during construction of the university and of the students and staff of the university during the operational phase.</td>
<td>Department of Labour</td>
<td>1993</td>
</tr>
<tr>
<td>Promotion of Access to Information Act, Act No 2 of 2000.</td>
<td>All documentation have to be available for consideration by any I&amp;AP</td>
<td>All Departments</td>
<td>2000</td>
</tr>
<tr>
<td>Electricity Regulation Act, Act No 4 of 2006.</td>
<td>Electricity supply for the university</td>
<td>Department of Environmental Affairs</td>
<td>2006</td>
</tr>
<tr>
<td>EIA regulations as listed in Government Notices R543 and R544 (20 June 2010)</td>
<td>Activities that trigger listed activities have to be registered at DEA</td>
<td>Department of Environment</td>
<td>2010</td>
</tr>
</tbody>
</table>

The Environmental Control Officer (ECO) and the Task Team For The Development/Contractor shall note that the obligations imposed by the Environmental Management Program (EMPr) are legally binding in terms of legislation during preparation, construction and operational phase as described in the Basic Assessment Report. The EMPr informs and binds the ECO and the Task Team For The Development/Contractor to their duties, with particular reference to the prevention and mitigation of environmental impacts caused during the construction and operational phase.
4. ENVIRONMENTAL MANAGEMENT AND RESPONSIBILITIES

The recommendations within this document act as guidelines for environmental management. However, recommendations may be altered or added onto at the discretion of the Task Team For The Development/Contractor after consultations and discussions with all affected parties (i.e. the authorities, neighbours, Registered I&AP).

4.1 RESOURCE ALLOCATION AND DUTIES

To ensure that this EMPr is implemented, the following staff resources will have to be made available:

4.1.1 Environmental Control Officer (ECO)

The ECO has to be appointed by the applicant for the construction phase of the development. The ECO has the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in the authorization, dated 26/03/2014 are implemented and ensure compliance with the provisions of the EMPr. The ECO have the following duties:

- **Monitor** the implementation of the EMPr.
- **Advise** the Task Team for the development on environmental issues during the implementation of the EMPr.
- **Continuous auditing** of the construction activities for the adherence to the EA conditions and EMPr. Auditing / Site inspections have to be conducted on a monthly basis to notify and advise the Task Team for the development and additional workers/sub-contractor on environmental issues during development, preparation and construction phase.
- **Monthly auditing reports** have to be compiled and sent to DEA Compliance Section until the end of the construction phase.
- **Identify** problem areas as soon as possible and provide action plans to avoid further environmental damage.
- **Review** the Task Team for the development proposal for impact and pollution control measures and advise on their adequacy.
- **Report** significant environmental incidents to DEA and advise the Task Team for the development thereof during the development / construction phase.
- **Communication with the public during the construction phase** – receives and resolves problems or complaints.
- **Make alterations to the EMPr if necessary.**

4.1.2 Task Team For The Development

The Task Team for the development/Contractor has the responsibility for implementing the management measures contained in this document and the EA during the construction phase. The Task Team for the development /Contractor has the following duties:

- **Inform** MTPA, DEA and/or NDAFF should the removal of protected species, medical plants and “data deficient” plants species be required (conditions 24).
- **Ensure** that a Water Use Licence is obtained from the Department of Water Affairs (condition 25).
- **All protected trees** must be marked with GPS and necessary applications for the cutting, trimming or removal must be applied from the DAFF (condition 26).
- **Best environmental practice** to prevent degradation of the wetland (condition 29).
- **Establish** an effective environmental control program.
- **Establish** routine management, liaison and reporting systems and prepare management reports.
- **Monitor** environmental aspects and advise the UNIVERSITY OF MPUMALANGA Management/staff of actions required.
- **Manage** the staff to implement methods to prevent potential negative environmental impacts and recommend safeguards.
- **Site inspections** have to be conducted on a daily basis to notify and advise the Contractor and ECO on environmental issues.
- **Liaise** in collaboration with the ECO with adjacent and nearby Land owners.
A Complaint Register must be kept at the Office of the contractor.

4.2 PERFORMANCE
The Task Team for the development / Contractor and ECO shall compile a monitoring and auditing plan, in order to ensure that all of the environmental management measures are implemented and are effective. The ECO shall review the Environmental Management Performance of the Task Team for the development on a regular basis. The Task Team for the development / Contractor shall be deemed not to have complied with the EMPr if:

- There is evidence of the contravention of any of the conditions of the EMPr.
- The Task Team for the development / Contractor fails to comply with corrective measures or other instructions by the ECO.
- The Task Team for the development / Contractor fails to respond to complaints from the public.
- The Contractor or University Of Mpumalanga staff and students are found poaching, removing natural vegetation, entering neighbouring areas or cause destruction due to unacceptable behaviour.

4.3 REPORTING
A copy of the Environmental Authorization/Record of Decision (EA/RoD) and the EMPr must at all times be available to all relevant staff as well as general public (condition 37). The Task Team for the development, the contractors and subcontractors should be acquainted with the contents thereof.

The complaint’s register have to be on site and all complaints recorded. Complaints shall be investigated, corrective action implemented and feedback given to the complainant on the issues raised within 24 hours.

The ECO shall conduct compliance audits once per month and compile a summary in terms of the EMPr. The reports have to be compiled, summarized and sent to the Directorate: Compliance Monitoring at the Department of Environmental Affairs on a quarterly basis until the end of the construction phase. Reports must be available on request to the Public and I&AP.
5. ENVIRONMENTAL IMPACTS

The proposed establishment of a new university will have positive and negative environmental impacts. The positive impacts on the environment have been identified and will be used to enhance the benefits for the local community. The negative impacts have been identified and measures will be proposed to minimize the adverse impacts on the receiving environment. These mitigation measures will be tabled in an Environmental Management Program (EMPr).

5.1 KEY ISSUES IDENTIFIED

Some of the areas are highly disturbed and the impact will be of no significance. The presence of exotic, invader plants have an impact on the biodiversity of this area. Special care has to be taken to protect vegetation listed on the Red Data species list if found during bush clearing. Key issues identified within the proposed project were:

- Social issues
- Environment: Soil, Flora, Fauna & Wetlands
- Sewerage management on the property
- Waste management – Eco Waste Centre – Recycling and storage
- Traffic

Possible key environmental issues identified by the EAP and the I&AP is summarized in Table 3. The issues are assessed before mitigation measures.

5.2 ASSESSMENT OF SIGNIFICANCE

5.2.1 Identification of impacts

The following was done to determine possible impacts:

- determine the current environmental conditions (i.e. baseline) against which to assess impacts;
- determine the future changes in the receiving environment baseline if the project does not proceed;
- an understanding of the proposed activity in sufficient detail; and
- all findings from assessed documents, previous and adjusted layout plan was taken into account.

The classification of an issue as a ‘key issue’ was done after the assessment of the specialist reports and does not necessarily imply that an impact of high significance will result. After mitigation measures, it is possible that a key issue may turn out to have an impact of low or no significance.

5.2.2 Assessment of impacts

The methodology for assessing impacts and assigning significance to the key issues is according to “Guideline 5: Assessment of alternatives and Impacts in support of the Environmental Impact Assessment Regulations, 2006” published by DEAT in June 2006.
Table 2: The description and prediction of the impacts include the following components

<table>
<thead>
<tr>
<th>Nature of impact</th>
<th>Describes the type of effect that a proposed activity would have on the environment (“what would be affected and how?”)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indicates whether the impact is direct, indirect or cumulative;</td>
</tr>
<tr>
<td></td>
<td>Indicates whether the impact occurs during the construction, operations or decommissioning phases of the project.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Magnitude / Intensity of the impact</th>
<th>Low where no or minimum environmental functions and processes are affected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medium where the environment continues to function but in a modified manner</td>
</tr>
<tr>
<td></td>
<td>High where environmental functions and processes are altered such that they temporarily or permanently cease</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Extent / location</th>
<th>whether the impact would be site specific and limited to the immediate area of the development site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>Limited to within approximately 5km of the site</td>
</tr>
<tr>
<td>Regional</td>
<td>Limited to the region</td>
</tr>
<tr>
<td>National/ international</td>
<td>National impact</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration</th>
<th>the lifetime of the impact, whether the impact is permanent or reversible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short term</td>
<td>(0 – 5 years),</td>
</tr>
<tr>
<td>Medium term</td>
<td>(5 – 15 years),</td>
</tr>
<tr>
<td>Long term</td>
<td>(&gt;15 years but where the impacts would cease after the operation of the site); and/or whether the impact is intermittent or continuous.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probability</th>
<th>Probability considers the likelihood of the impact occurring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improbable</td>
<td>low likelihood</td>
</tr>
<tr>
<td>Probable</td>
<td>distinct possibility</td>
</tr>
<tr>
<td>Highly probable</td>
<td>most likely</td>
</tr>
<tr>
<td>Definite</td>
<td>impact would occur regardless of prevention measures (more than 90% sure of the impact)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Significance</th>
<th>Based on a synthesis of the above predictions, the significance of the impact shall be evaluated as follows:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Where the impact would not have an influence on the decision or require to be significantly accommodated in the project design.</td>
</tr>
<tr>
<td>Medium</td>
<td>Where it could have an influence on the environment which would require modification of the project design or alternative mitigation.</td>
</tr>
<tr>
<td>High</td>
<td>Where it could have a ‘no-go’ implication for the project unless effective measures are taken to avoid or mitigate the impact.</td>
</tr>
</tbody>
</table>

The degree of confidence with respect to the assessment of significance in the prediction of the impacts is high based on the availability of information available. The significance of impacts was evaluated before mitigation was suggested ("as predicted" impacts"). Most impacts will be mitigated and will have a low impact after mitigation. The predicted impacts before mitigation was analysed and summarised in Table 3. Also summarised in the table, is if the impacts will be positive or negative.
5.3 MANAGEMENT ACTIONS AND MONITORING

The following was done to suggest management and monitoring actions of possible impacts:

- Where negative impacts are identified, mitigation objectives and mitigation actions (i.e. ways of avoiding or reducing negative impacts) is set. Where no mitigation is feasible, this will be stated and the reasons given.
- Where positive impacts are identified, actions to enhance the benefit will be recommended.
- Quantifiable standards for measuring the effectiveness of mitigation and enhancement will be set. In addition, monitoring and review programmes will be recommended in order to assess the effectiveness of mitigation.

The suggested management actions to mitigate possible negative impacts are summarised in Table 4
Table 3: Assessment of predicted impacts before mitigation measurements are applied.

<table>
<thead>
<tr>
<th>Key Issue</th>
<th>Summary</th>
<th>Nature of predicted impact</th>
<th>Planning / Construction/Operational Phase</th>
<th>Direct / indirect / cumulative</th>
<th>Magnitude / intensity</th>
<th>Extent / location</th>
<th>Duration</th>
<th>Probability</th>
<th>Significance</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology and soils</td>
<td>Sandy-clay soils – Spillage of hazardous substances, Ground water pollution Erosion possibility</td>
<td>Construction Operational</td>
<td>Indirect</td>
<td>Low</td>
<td>Local</td>
<td>Short-term</td>
<td>Probable</td>
<td>Low</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Sensitive Vegetation comm.</td>
<td>Fragmentation of sensitive plant communities. Degradation of rocky area vegetation</td>
<td>Construction</td>
<td>Direct</td>
<td>Medium</td>
<td>Local</td>
<td>Short-term</td>
<td>Probable</td>
<td>Medium</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Invader &amp; exotic species</td>
<td>Removal of invader and exotic plant species that reduce available space for indigenous plant species.</td>
<td>Construction Operational</td>
<td>Indirect</td>
<td>Med/High</td>
<td>Local</td>
<td>Long-term</td>
<td>Definite</td>
<td>High</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Protected plant spp</td>
<td>Destruction of protected plant species.</td>
<td>Construction</td>
<td>Direct</td>
<td>Med</td>
<td>Local</td>
<td>Short-term</td>
<td>Probable</td>
<td>Medium</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Flora: Riparian vegetation</td>
<td>Degradation of vegetation Impact of storm water from development on riparian vegetation.</td>
<td>Construction Operational</td>
<td>Direct &amp; cumulative</td>
<td>Med/High</td>
<td>Local</td>
<td>Short-term</td>
<td>Definite</td>
<td>Medium</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Fauna</td>
<td>Reduce habitat &amp; biodiversity of indigenous animal species.</td>
<td>Construction Operational</td>
<td>Indirect</td>
<td>Medium</td>
<td>Local</td>
<td>Long term</td>
<td>Probable</td>
<td>Medium</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Wetlands</td>
<td>Destruction of wetland – storm water Contamination of water resources Sedimentation of wetlands/water courses</td>
<td>Construction Operational</td>
<td>Direct &amp; cumulative</td>
<td>Medium</td>
<td>Local</td>
<td>Short-term</td>
<td>Probable</td>
<td>High</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Surface water - River</td>
<td>Possible soil erosion because of storm water. Sedimentation of water courses / wetlands.</td>
<td>Construction</td>
<td>Direct &amp; cumulative</td>
<td>Medium</td>
<td>Local &amp; Regional</td>
<td>Long-term</td>
<td>Probable</td>
<td>Medium</td>
<td>Negative</td>
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</tr>
<tr>
<td>Storm water management</td>
<td>Negative impact of storm water from the Proposed University</td>
<td>Operational</td>
<td>Direct</td>
<td>High</td>
<td>Local &amp; Regional</td>
<td>Long-term</td>
<td>Probable</td>
<td>Medium</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Water resource contamination &amp; quality.</td>
<td>• Negative impact on the sensitive plant communities. • Health implications. • Deterioration of wetlands</td>
<td>Construction</td>
<td>Direct</td>
<td>Low</td>
<td>Local</td>
<td>Long-term</td>
<td>Probable</td>
<td>Low</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Waste management</td>
<td>• Leakages of pipes on development area.</td>
<td>Operational</td>
<td>Indirect</td>
<td>Low</td>
<td>Local</td>
<td>Long term</td>
<td>Probable</td>
<td>Low</td>
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<tr>
<td>Sewerage management</td>
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<tr>
<td>Key Issue</td>
<td>Nature of predicted impact</td>
<td>MITIGATION MEASURES &amp; MANAGEMENT ACTIONS</td>
<td>MONITORING OF IMPACTS</td>
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<tr>
<td><strong>Geology and soils</strong></td>
<td>• Spillage of hazardous substances.</td>
<td>• Remove contaminated soil – take to registered hazardous waste site or treat soil if possible.</td>
<td>• Daily monitoring of construction area</td>
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<tr>
<td></td>
<td>• Ground water pollution.</td>
<td>• Repair leakages at the plant immediately.</td>
<td>• Daily monitoring of plant during operational phase</td>
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<td></td>
<td>• Erosion</td>
<td>• Cut and fill areas and other soil stabilization works must be constructed for foundations on the gentle slope.</td>
<td>• Manager/responsible person has to monitor daily for possible impacts of pollution (Waste and spills).</td>
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<td></td>
<td></td>
<td>• Sandbags have to be used to prevent erosion during rainy season.</td>
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<td></td>
<td></td>
<td>• Prevent the unnecessary removal of vegetation and leaving soil barren.</td>
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<td>• De-bushed areas have to be covered with plants or paved within 7 days.</td>
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<td></td>
<td></td>
<td>• Re-vegetation of indigenous plants in open areas.</td>
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<tr>
<td><strong>Flora: Sensitive Vegetation community</strong></td>
<td>• Endemic or near endemic vegetation and important taxa in this vegetation type could be impacted.</td>
<td>• No open fires.</td>
<td>• Final layout plan has to be used for the positioning of the associated structures.</td>
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<tr>
<td></td>
<td>• Fragmentation of vegetation community.</td>
<td>• Formalise access roads.</td>
<td>• ECO has to approve the final position of the associated structures.</td>
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<td></td>
<td>• Invading of alien plants if not controlled.</td>
<td>• Vegetation rehabilitation plan to be implemented.</td>
<td>• Manager/responsible official has to monitor protected and invader plant species on a monthly base.</td>
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<td></td>
<td></td>
<td>• Be aware of protected plant species.</td>
<td>• Quarterly audit reports have to be submitted to the DEDET during construction phase.</td>
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<td></td>
<td></td>
<td>• Indigenous plants can be planted next to the fence to ensure increased biodiversity in and around the site.</td>
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<td></td>
<td></td>
<td>• No harvesting of any vegetation resources by construction workers or staff is allowed.</td>
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<td></td>
<td></td>
<td>• Alien plants have to be removed regularly</td>
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<tr>
<td>Issue</td>
<td>Nature of impact</td>
<td>MITIGATION MEASURES &amp; MANAGEMENT ACTIONS</td>
<td>MONITORING OF IMPACTS</td>
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</tr>
<tr>
<td>Flora: Invader exotic &amp; indigenous plant spp.</td>
<td>Removal of invader and exotic species that reduce the space and water availability of indigenous plant species.</td>
<td>A program to control all listed invasive exotic and indigenous plant species.</td>
<td>Monthly inspection by the Manager/responsible person to verify that no new exotic or indigenous invader species occur on the property.</td>
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</tbody>
</table>
• Apply for necessary permits at the relevant Departments to remove protected plant species.  
• Use protected tree species and endemic plants in landscape plan. | • The ECO has to confirm that no protected plant species will be affected.  
• Regular surveys to monitor protected species.  
• Re-vegetation of protected plant spp listed for the area. |
| Flora: Riparian vegetation | Alteration of banks of river at the Storm water outlet. | • Regular monitoring of storm water structures in the stream.  
• Repair banks of stream with gabions if it is impacted.  
• Sensitive and protected plants can be re-vegetated.  
• Removal of invader spp on the banks of the stream. | • Manager/responsible person has to monitor daily for possible impacts of pollution (Waste and spills).  
• ECO has to provide a re-vegetation plan. |
| Fauna | Biodiversity of indigenous animal species can reduce because of habitat loss. | • Establishment of indigenous vegetation between dams and on the edge of the site has to be upgraded and managed regularly. | • ECO has to monitor construction phase. |
| Air quality - Dust suppression | Dust from trucks on road | • Regular spraying of water in dry periods of the year.  
• The contractor should employ appropriate measures for dust suppression during construction.  
• Construction vehicles must be inspected for good working conditions and not be the source of excessive fumes. | • Manager/responsible person has to monitor dust pollution during dry months.  
Drivers have to be trained to ensure safe and slow driving on the gravel road. |
| Noise pollution | Noise from trucks on road | • No excessive revving of truck engines.  
• Truck drivers must drive 30 km/h or slower on gravel road.  
• Water roads during dry periods (winter). | Monitor development according to the approved layout plan and RoD. |
| Visual | The University would be visible from the R40, commercial area and other developments in the area. | • Cut and fill areas and other soil stabilisation works must be constructed to blend in with the natural environment.  
• Re-vegetation of indigenous tree species to improve the visual impact. | |
| Storm water management | • Possible soil erosion because of storm water.  
• Surface water contamination. | • Water runoff during the rainy season may cause erosion  
• Storm water will be controlled and managed to follow natural watercourses and/or channels with road reserves to prevent erosion and damage to other properties  
• Overland surface run off will be controlled by means of | • Final storm water management plan has to be implemented. |
<table>
<thead>
<tr>
<th>Issue</th>
<th>Nature of impact</th>
<th>MITIGATION MEASURES &amp; MANAGEMENT ACTIONS</th>
<th>MONITORING OF IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>stone/concrete lined surface canals and field inlets.</td>
<td></td>
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<td>Spills &amp; leakage from parking area for construction vehicles.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construction vehicles shall be kept in a good working condition to avoid fuel and/or oil leaks.</td>
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<td></td>
<td></td>
<td>Under no circumstance shall vehicle maintenance take place within the site.</td>
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<td></td>
<td></td>
<td>Manually cleaning/removing of spilled area have to be a daily activity.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Any spills &amp; leakages of any chemicals, fuel, diesel or any hazardous material discovered, must be cleaned immediately in an appropriate manner and the affected soil should be removed with the spilled material as hazardous waste.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Affected and/or polluted areas must be treated with a neutralizing agent to neutralize the active polluting materials.</td>
<td></td>
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<tr>
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<td></td>
<td>Cleaned up areas must be re-vegetated as soon as possible to reduce risk of soil erosion from denuded areas.</td>
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<tr>
<td></td>
<td></td>
<td>Proposed buildings are located far from the 1:100 flood lines and drainage areas.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Regular monitoring of parking and servicing area.</td>
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<td>Check open storm water drains on a regular basis in rainy season.</td>
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<tr>
<td></td>
<td></td>
<td>Borehole monitoring system.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Monthly effluent monitoring.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Quality of groundwater should be maintained during the lifespan of the production unit.</td>
<td></td>
</tr>
</tbody>
</table>

**Water resource contamination & quality**

- Spills and or leakages from parking area for construction vehicles.
- Contaminated storm water from the University may affect the environment negatively if waste is not properly managed.

**Waste management**

- Negative impact on the sensitive plant communities.
- Health implications.

- Wasted pave bricks or concrete may not be discarded into vegetation/open field. Keep the proposed development Area neat and tidy at all times.
- No waste materials shall be disposed of in open veld in the surrounding area.
- Unmanaged dumping should be avoided.
- Do not dump waste of any nature into drainage lines and or in the stream areas.
- There has to be a dedicated storage area for the general waste.
- The storage area of the general and recycled waste has to be neat and tidy.
- Waste has to be removed on a weekly base.
- Spilled oil and diesel (hazardous contaminated items) has to be removed the same day when collected.

**Socio-economic**

- Job creation for construction workers.
- Permanent jobs academic &

Employ only local people if at all possible during the construction phase.

No monitoring
<table>
<thead>
<tr>
<th>Issue</th>
<th>Nature of impact</th>
<th>MITIGATION MEASURES &amp; MANAGEMENT ACTIONS</th>
<th>MONITORING OF IMPACTS</th>
</tr>
</thead>
</table>
| **Safety of workers** | Injuries on site.   | During the construction phase:  
  - The construction manager of the proposed development must keep a first aid kit and the telephone numbers of local emergency services in prominent positions at the staff quarters and site offices. All personnel must be made aware of these locations.  
  - Ensure that the handling of equipment and material is supervised and adequately instructed. | Keep records of injuries. |
6. ENVIRONMENTAL MANAGEMENT MEASURES

6.1 Description of the proposed development

The development of the New University of Mpumalanga involves the construction of facilities to accommodate 15 000 students and 1250 staff. This includes the upgrading of existing facilities and the construction of new facilities such as lecture rooms, hostels, residences, administration buildings and sport facilities over a period of 10 years. Most of the new buildings will be constructed on existing agricultural fields between existing buildings of the Agricultural College or next to the sport fields. An Eco-waste site to store general waste temporarily and to recover recyclable waste will be constructed near the sport facilities on the Lower campus. The existing road network on the campus and the D752 will be upgraded. An evaluated circle will be constructed to link the R40 with the D752. The existing electricity infrastructure will be enough but 3 new substations have to be constructed.

There will be three (3) campuses namely:

- **Hill Campus** will be between the stream and the R40 on portion 31 of the farm Boshrand 283 JT. It will consist of a park, residence, academic and administration buildings. The Hill and Orchard campus will be linked with a bridge over the wetland. This is an existing bridge that has to be upgraded and expanded. A footbridge will be constructed to connect the Hill Campus and the Riverside Mall. The bridge will be constructed over the Nelsriver and underneath the bridge of the N4.

- **Orchard Campus** will be west of the stream on portion 32 of the farm Boschrand 286 JT. The Orchard Campus will have buildings with a mixture used, residences for students, administration buildings and sport facilities.

- **Lower Campus** will consist of a mixture of residents, administration & academic as well as Sport fields and sport facilities. The Eco-waste centre to recycle at source will be on the Lower Campus/portion 36 of the farm Friendenheim 282 JT.

6.2 Development Aspects

The development aspects are divided into the planning and design, preparation & construction, operational and decommissioning phases and are as follows:

6.2.1 Planning and Design Phase

The **Task Team for the development** is responsible for the following aspects:

- The commitment to a conservation approach during the planning phase;
- Environmental friendly, sustainable urbanization, layout and design plans. Sustainable urbanization involves a combination of strategies and elements that together can produce more energy-efficient, liveable communities. It includes the design, mobility, connectivity, climate & energy and economy.
- Socio-economic impact on Nelspruit.
- Develop a code of good conduct for construction workers in consultation with the local municipality.
- Economic advice and management.
- Increase of traffic has to be mitigated to be acceptable for the community of Nelspruit.
- Planning of the aesthetic quality to ensure minimal visual impact of the site.
- Landscaping plans to improve biodiversity in the area.
- The layout plan of the University must have a minimal impact on the vegetation and removal of trees.
- The necessary plant destruction permits must be obtained from the regulating authorities prior to construction (condition 24);
- Ensure that a Water Use Licence is obtained from the Department of Water Affairs (condition 25).
- A specialist must assist the surveyor to ensure that the above recommendations are followed.
- Protect trees that are listed on the RDL and/or in terms of the National Forest Act, Act no 84 of 1998,
- On-going alien vegetation clearing on and around the proposed site must be implemented (condition 32)
- Mitigate visual impact,
o Provide bulk infrastructure such as clean electricity, water and sewerage system without any negative impact on the rest of Nelspruit,
o Mitigate the impact of 4000 additional cars and 30 additional busses per day that will be additional to existing traffic in Nelspruit,
o Prevention of accidents with students that use bicycles or have to walk from their residence to and from different campuses,
o The University should establish a Recruitment/Labour Desk before construction start.
o The employment selection process should seek to promote gender equality and the employment of women wherever possible.
o The need to implement a training and skills development program for locals prior to the commencement of the construction phase should be investigated. The aim should be to maximize the number of locals employed during the construction phase.

6.2.2 Site preparation & construction Phase

The members of the Task Team for the development are responsible for the following aspects:
o The applicant must be committed to a conservation approach of practice and the actual footprint of construction/disturbance must be kept to a minimum;
o As much of the natural environment as possible must be conserved (minimal construction of access roads and bush clearing). Improve biodiversity with indigenous gardens on the University’s premises,
o Site establishment and preparation – storage area for construction equipment.
o The construction site must be clearly demarcated and clear signage must be erected (condition 30)
o Potable water must not be used to suppress dust during construction phase (condition 31),
o The use of generators of site must include the use of drip trays (condition 34).
o Construction vehicles and machineries must be cleaned, maintained and monitored regularly to reduce environmental impacts caused by fuel spillage (condition 35)
o Site preparation – removal of vegetation and levelling of terrain.
o Concrete mixing on site during construction must conducted on plastic sheeting in order to avoid permanent soil contamination and to facilitate clean-up of the site (condition 33),
o Soil conservation measures must be implemented (condition 27).
o Waste management of additional construction material.
o Rehabilitation areas must be cordoned of areas as no-go areas (condition 28).
o Rehabilitation, landscaping and planting of vegetation on the site
o Rehabilitate area with the planting of indigenous plants and trees,
o Prevent degradation of wetlands (condition 29).
o Preventative erosion control measures to be put in place.
o Prevent siltation in the stream between the Hill and Orchard Campus and Nels River,
o Reduce storm water impact on the banks of the stream and Nels River,
o On-going alien vegetation clearing on and around the proposed site must be implemented (condition 32)
o Relocation of important species, identification and demarcation of specimens and sub-habitats not to be disturbed will have to be done beforehand by a specialist;
o Important species (fauna as well as flora) that will be threatened by the development must be relocated to safer habitats by suitable specialists;
o Final rehabilitation of area after construction is completed,

6.2.3 Operational Phase

University Of Mpumalanga Management/staff staff/officials is responsible for the following aspects:
o Operations associated with the infrastructure of the university must have minimum impact on the environment.
o Prevention of ground water & stream pollution.
o Prevent the deterioration of the fauna and flora on the proposed 3 Campuses of the University.
o On-going alien vegetation clearing on and around the proposed site must be implemented (condition 32)
o Plan to remove minimal vegetation and cut only the necessary trees.
o Implement an integrated waste management plan *(condition 36)*
 o Promote reduce, re-use and recycling of waste *(condition 36)*.
 o Ensure good air quality by managing traffic in and around the university
 o Prevent noise pollution.
 o Mitigate visual impact.
 o Provide healthy environment to students, staff of the university and neighbouring residents.
 o Final rehabilitation with indigenous vegetation of area after construction is completed.
 o Maintenance staff of gardens must be educated with regards to the importance of biodiversity;
 o The operational phase must be monitored by *University Of Mpumalanga Management/staff staff/officials* to ensure that adequate mitigation measures are in place and to take reactive measures in places where impacts pose problems.

### 6.2.4 Decommissioning Phase

*Task Team for the development* is responsible for the demolishing of the buildings.

### 6.3 Environmental Management Programme

The following table forms the basis of this EMPr for planning, preparation and operational phases of the project. The EMPr should guide the *Task Team for the development* and it should be implemented as an auditing list during the preparation/construction and operational phase. Daily compliance with the EMPr should be monitored by the *Task Team for the development*. The ECO should conduct compliance audits on a monthly basis and summarize the reports to report quarterly to DEA till the final construction and rehabilitation of construction site is completed.
### 6.3.1 PLANNING AND DESIGN PHASE

<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
</table>
| **Layout and Design** | o The layout and design of the Mpumalanga University and all associated infrastructure must comply with the conditions as described in the BAR and the EA/RoD.  
  o The proponent must be committed to a conservation approach during the planning phase.  
  | Task team for the development                                                                                            | Start of project                    |                 |
| **Land uses**       | o The different neighbouring land owners have to be accommodated in the planning of the UNIVERSITY OF MPUMALANGA.                                                                                                       | Task team for the development       | Start of project|
| **Socio-economic:** | o Job opportunity.  
  o Population influx.  
  o Business opportunities – Create business areas.  
  o Traffic and safety hazards.  
  o Service and community development.  
  o Code of conduct for staff and students.  
  | Task team for the development                                                                                            | Start of project                    |                 |
| **Job opportunities** | o Local first policy for low skilled jobs.  
  o Establish a Recruitment/Labour Desk for the construction phase.  
  o Develop a code of good conduct for the construction phase.  
  o Implement a training and skills development programme for locals – maximise the number of local employment.  
  o Database of local firms that qualify as potential service providers (construction, catering, security, recycling of waste and waste collection).  
  o Dismissal procedures have to be in place before appointing staff. Dismissal procedures have to be according to Labour laws.  
  | Task team for the development                                                                                            | Start of project                    |                 |
| **Traffic**         | o Increase of traffic in and around the university.  
  o Congestion of traffic at crossings of roads.  
  o Reduce air pollution directly associated to the traffic in and around the university.  
  o Save crossings for pedestrians.  
  o Save walkways for pedestrians and cyclists.  
  o Enough parking for students, staff and visitors of the university.  
<p>| Task team for the development                                                                                            | Start of project                    |                 |</p>
<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
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<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk services: Water provision</td>
<td>Clean water has to be available at all time to the university. Development planned to be developed for the university have to be connected to the main sewer system. A system to separate grey and black water. Sewerage from the university has to be accommodated at the existing WWTP. Waste has to be stored on a dedicated area – Eco-waste Centre. Waste has to be removed on a regular basis to a permitted waste site. Storm water management design must be in such a manner that no erosion is caused. Water harvesting / capturing of water from roofs – reduce storm water impact. Plan to prevent erosion by only removing vegetation 1 week before construction started Prepare a landscaping plan to plant fast growing indigenous trees to mitigate possible erosion impact.</td>
<td>Task team for the development</td>
<td>Start of project</td>
</tr>
<tr>
<td>Protected plant spp, sensitive habitat</td>
<td>The removal of vegetation has to be planned in such a manner that it is only removed on the proposed development areas and associated infrastructure. Obtain permission from the ECO to proceed with the clearing of vegetation from the development area. No protected trees may be removed without the permits from the DAFF if protected tree species are located. Plan to translocate protected/sensitive plant species to similar habitats (See list of possible plant spp that could be found on the site and Vegetation Assessment, A Eyssell, September 2013 and Wetland Assessment, A Bootsma, September 2013). Sensitive habitats must be avoided. Landscaping plan for university must be planned with indigenous vegetation.</td>
<td>Task team for the development</td>
<td>Start of project</td>
</tr>
</tbody>
</table>
### 6.3.2 THE PREPARATION & CONSTRUCTION PHASE

<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
</table>
| Site establishment                    | *Inform the STAFF/CONTRACTORS of:*  
  o All staff must be committed to a conservation approach of practice.  
  o The requirements of EMPr.  
  o That no vegetation may be removed before permission from the ECO.  
  o Locate site office and storage area for the CONSTRUCTION material.  
  o A complaint register have to be available to the public at all times. | Task team for the development, Contractor & ECO.                                     | Start of project |
| Site preparation                      |  
  o Keep actual footprint of construction site to the minimum.  
  o If vegetation has to be removed, it has to be handled according to the EA conditions and Landscaping plan. It has to be re-vegetated in similar habitats where protected plants can be established.  
  o The levelling or excavation of the constructed areas has to be environmental friendly.  
  o If sites of cultural significance or heritage importance are discovered during the site preparation period the work must cease immediately. The area must be secured and an archaeologist should be contacted. Site preparation may proceed in the area once agreed to mitigation measures that have been implemented and approved by the Heritage Resources Agency. | Task team for the development, Contractor & ECO.                                     | On going          |
| Storm and runoff water management     |  
  o Vegetation may only be removed on the demarcated construction areas to prevent the rush down of run-off water during a storm event.  
  o Construction of infrastructure has to be started within a week (1 week) after the removal of plants to limit duration that soils are exposed. Storm water has to be managed and channelled on the construction site during site preparation to prevent erosion.  
  o Prevent the discharge of polluted water or water containing suspended materials into seepage or drainage areas.  
  o Prevent antiseptic liquids entering storm water channels. Antiseptic liquids should be handled and stored in a safe place.  
  o Sandbags have to be used to prevent water run off to the stream.  
  o The re-vegetation of constructed area with indigenous plants has to start immediately after construction. | Task team for the development, Contractor & ECO                                     | On going          |
<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
</table>
| Waste management:                         | o Keep the construction area, construction offices and other facilities free of domestic waste.  
   o A dedicated storage area has to be provided for general waste.  
   o Ensure that no illegal dumping of waste on adjacent properties take place.  
   o Do not dump waste of any nature into storm water systems. | Task team for the development/ Contractor | On going   |
| Access                                    | o Make use of existing access roads.                                             | Task team for the development, Contractor & ECO | On going   |
| Flora                                     | o Be aware of any medical or protected plant species.  
   o Replant trees that have to be removed in a similar habitat.  
   o Plant yearly additional indigenous trees in the area.  
   o Remove alien invader species. | Task team for the development, Contractor & ECO | On going   |
| Fauna                                     | o Avoid sensitive areas such as rocky outcrops, wetlands, forests areas.  
   o Removal of large trees has to be restricted to the minimum.  
   o Construct owl nests to control mice if needed. | Task team for the development, Contractor & ECO | On going   |
| Air quality                               | o Access dirt roads should be sprinkled with water using water tanks.  
   o Vehicles have to drive slowly to create less dust. | Task team for the development, Contractor & ECO | On going   |
| Noise pollution                           | o Regular servicing of vehicles to prevent high pitched roars  
   o Construction workers should be alerted not to scream or hoot at the public or near residential areas. | Task team for the development, Contractor & ECO | On going   |
| Social & Health Aspects. Safety and security | o The Task Team For The Development/ contractor must comply with the National building Regulations and Building Act (Act no 103 of 1997).  
   o The Task Team For The Development/ Contractor must comply with the Occupational Health and Safety Act, 1993 (Act no. 85 of 1993).  
   o Health and Safety officer have to be on site during working hours.  
   o Ensure that the handling of equipment and material is supervised and adequately instructed.  
   o Ensure that construction vehicles are under control of competent personnel. | Task team for the development, Contractor & ECO | On going   |
### 6.3.3 OPERATIONAL PHASE

<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecological impact</td>
<td>- Removal of alien invasive species and regular monitoring thereof.</td>
<td>Task Team For the Development/contractor</td>
<td>On going</td>
</tr>
<tr>
<td></td>
<td>- All pristine areas outside the proposed development areas have to be protected at all time.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Biodiversity can improve by planting indigenous vegetation in the gardens of the university.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland impact</td>
<td>- Prevent degradation of wetlands.</td>
<td>Task Team For the Development/contractor</td>
<td>On going</td>
</tr>
<tr>
<td></td>
<td>- Remove alien vegetation in the wetlands on a regular basis.</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>- Prevent waste entering wetlands.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Prevent siltation of wetlands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid Waste management</td>
<td>- Ensure that no illegal dumping of waste on the adjacent properties take place.</td>
<td>Task Team For the Development/contractor</td>
<td>On going</td>
</tr>
<tr>
<td></td>
<td>- Do not dump waste of any nature into drainage lines, stream or pristine natural areas.</td>
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</tr>
<tr>
<td></td>
<td>- Dedicate storage areas for general and recycled waste has to be neat and tidy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Remove recycled waste on a regular basis to prevent fire hazard.</td>
<td></td>
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</tr>
<tr>
<td>Social impact</td>
<td>- Workers have to be provided with a code of conduct to address the required standards in terms of the universities standards.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Dismissal procedures have to be in place before appointing staff. Dismissal procedures have to be according to Labour laws.</td>
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</tr>
</tbody>
</table>

### 6.3.4 DECOMMISSIONING/CLOSING PHASE

<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Demolishing of associated structures and buildings.</td>
<td>Department of Higher Education.</td>
<td>End of project</td>
</tr>
</tbody>
</table>

This document acts as a guideline for the Management of Task Team for the development, the appointed ECO and relevant staff members of UNIVERSITY OF MPUMALANGA. The content should be implemented as an auditing list and compliance should be monitored.
7. IMPLEMENTATION OF EMPR

7.1 TRAINING AND AWARENESS
DHET has to advise/train staff on a regular basis to manage the university, to monitor potential impacts and to mitigate negative impacts where possible. Operators and contractors have to be informed to work according to the EMPr.

7.2 DOCUMENTATIONS AND RECORD KEEPING
A copy of the Environmental Authorization/Record of Decision (EA/RoD) and the EMPr must at all times be available and all relevant staff, contractors and sub-contractors should be acquainted with the contents thereof.

The Complaint Register has to be on site and all complaints have to be recorded. Complaints shall be investigated, corrective action implemented and feedback given to the complainant on the issues raised, within 24 hours.

7.3 REPORTING
All records related to the implementation of this management plan (site instruction book, method statement diary and monthly auditing – App A) must be kept together in an office where it is safe and can be retrieved easily. These records should be kept for 2 years and should at any time be available for security by any relevant authorities.

The ECO shall conduct compliance audits once a month and compile written environmental auditing reports in terms of the EMPr. Reports must be available on request to the Public and I&AP.

Operators have to report immediately to the supervisors of any malfunction.

7.4 STAKEHOLDER ENGAGEMENT
Stakeholders have the opportunity to comment on the impacts and management actions described in the BA Report and EMPr. An Environmental Monitoring Committee may be established by the management of the University, in the implementation of the EMPr and can provide a forum for stakeholder engagement. During the operational phase, stakeholders should have an opportunity to provide inputs into the revisions of the EMPr as well as the design of corrective actions where appropriate. The main benefit of involving stakeholders in the EMPr is to include local knowledge and to ensure that the EMPr addresses aspects of the project that could be a source of social risks. Stakeholders need to understand that their safety, health and environment are not being compromised. They should be kept informed so that no uncertainty exists in this regard.

7.5 AUDITS
Procedures should be developed by the project manager for conducting EMPr audits and should incorporate processes for the scheduling and reporting as well as timing and frequency of the audits. External audits should be scheduled and conducted by competent auditors, properly recorded and corrective actions should be verified. The manager is responsible for scheduling and ensuring execution of the audits as well as for the verification of the implementation of corrective action.
7.6 RESPONDING TO NON-COMPLIANCE

The ECO shall review the Environmental Management Performance of the Contractor on a regular basis and shall compile a monitoring and auditing plan, in order to ensure that all of the environmental management measures are implemented and are effective. The Contractor shall be deemed not to have complied with the EMPr if:

- There is evidence of the contravention of any of the conditions of the EMPr.
- The Contractor fails to comply with corrective measures or other instructions by the ECO.
- The contractor fails to respond to complaints from the public.
- Employees of the contractor are found illegally removing vegetation, entering neighbouring areas or cause destruction due to unacceptable behaviour.

7.7 TRANSFER OF EMPr REQUIREMENTS TO THE CONTRACTOR, SUB-CONTRACTOR AND OTHER I&AP

Responsibilities have to be transferred legally to operators and contractors. The EMPr has to be part of tender documents, job descriptions and/or appointment letters. Non-compliance should be the responsibility of the person in control of the operation.

7.8 MANAGEMENT, REVIEW AND REVISION OF THE EMPr

EMPr should be dynamic, flexible and subject to periodic review. The extent to which the EMPr should be reviewed will vary depending on the impacts and variation of the process. Regular review will be required if some of the processes has to be stopped and some others has to be modified. Conditions under which the EMPr would require revision include:

- Change in legislation
- Occurrence of unanticipated impacts or impacts of greater intensity, extend and significance than predicted.
- Inadequate mitigation measures and secondary impacts that occur as a result of the mitigation measures.

Senior management is responsible for a review of the EMPr and the implementation to ensure that the EMPr remains effective and appropriate.
REFERENCES


www.plantzafrica.com
www.posa.sanbi.org
www.sibis.sanbi.org
Mr. A. Douglass  
Mbombela Local Municipality 
P O Box 45  
Nelspruit  
1200  

Fax : 086 636 2668  
Email: Arthur.douglass@sembcorp.com  

Dear Sir,

APPLICATION FOR ENVIRONMENTAL AUTHORIZATION FOR ACTIVITIES LISTED IN GOVERNMENT NOTICE R544 ASSOCIATED WITH THE CONSTRUCTION OF BULK SERVICE INFRASTRUCTURE (WATER AND SEWER LINES) FOR THE MPUMALANGA UNIVERSITY ON PORTIONS 31 AND 32 OF THE FARM BOSCHRAND 283 JT, AND PORTIONS 17, 19, 28, 36, 74 AND 84 OF THE FARM FRIEDENHEIM 282 JT, NELSPRUIT, MBOMBELA LOCAL MUNICIPALITY

With reference to the abovementioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation and reasons for the decision are attached herewith.

In terms of Regulation 10(2) of the Environmental Impact Assessment Regulations, 2010, you are instructed to notify all registered interested and affected parties, in writing and within 12 (twelve) days of the date of this letter, of the Department’s decision in respect of your application. Such notification must comply with the requirements of Regulations 10(2)(a)-(d) and must draw the attention of registered interested and affected parties to the fact that an appeal may be lodged against the decision in terms of Chapter 7 of the EIA Regulations, 2010.

Your attention is drawn to Chapter 7 of the Regulations, which regulates appeal procedures. Should you wish to appeal any aspect of the decision, you must, inter alia, lodge a notice of intention to appeal with the MEC, within 20 days of the date of this letter, by means of one of the following methods:

By facsimile: (013) 766 8295

By post: Private Bag x 11219  
Nelspruit  
1200
By hand: Building 6, No. 7 Government Boulevard
Riverside Park Extension 2
Nelspruit
1200

Should you decide to appeal, you must serve a copy of your appeal on all registered interested and
affected parties and any organ of state with interest in the matter, as well as a notice indicating
where, and for what period, the appeal submission will be available for inspection.

Yours sincerely,

DR. A. DE LANGE
ACTING CHIEF DIRECTOR: ENVIRONMENTAL SERVICES
DATE: ____________

cc. Ria Wilken
Lidwala Consulting Engineers
Fax: 086 630 4313
Email: rwilken@lidwala.com
Environmental Authorisation

Application number: 17/2/3/E-68

Holder of Authorisation: Mbombela Local Municipality

NEAS reference number: MPP/EIA/0000803/2014

Location of activity: Portions 31 and 32 of the farm Boschrand 283 JT, and Portions 17, 19, 28, 36, 74 and 84 of the farm Friedenheim 282 JT, Nelspruit, Mbombela Local Municipality, Mpumalanga Province
1. Decision
The Department is satisfied on the basis of the information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activity as specified below. Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

2. Activities authorised
By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations 2010, the Department hereby authorises:

Mbombela Local Municipality
P O Box 45
Nelspruit
1200

Contact person: Mr. A. Douglass
Tel: 013 752 6839
Fax: 086 636 2668
Email: Arthur.douglass@sembcorp.com

To undertake the following activities listed in Government Notice R544 and R546 of 18 June 2010 associated with the construction of bulk service infrastructure (water and sewer pipelines) for the Mpumalanga University on Portions 31 and 32 of the farm Boschrand 283 JT, and Portions 17, 19, 28, 36, 74 and 84 of the farm Friedenheim 282 JT, Nelspruit, Mbombela Local Municipality, Mpumalanga Province, at the following co-ordinates indicated in the table below (hereafter referred to as “the activity”):

<table>
<thead>
<tr>
<th>Activity number</th>
<th>Activity Description</th>
<th>Extent to which Activity is Authorised</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sewer pipeline</td>
</tr>
<tr>
<td>GN R545</td>
<td>The construction of facilities or infrastructure exceeding 1000m in length for the bulk transportation of water, sewage or storm water with i) an internal diameter of 0.36m or more, or ii) peak throughput of 120l/s or more</td>
<td>The construction of a sewer pipeline 6810m in length with a diameter that will vary between 160mm and 710mm at the following co-ordinates: Start: 30°58'2.35&quot;E 25°25'38.95&quot;S Middle: 30°59'6.24&quot;E 25°26'13.59&quot;S End: 30°58'47.00&quot;E 25°27'13.76&quot;S</td>
</tr>
<tr>
<td>Activity 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GN R544</td>
<td>The construction of: infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse.</td>
<td>• The construction of a sewer pipeline across two watercourses as follows: - Unknown stream on campus: 30°58'19.20&quot;E 25°26'1.97&quot;S - Crocodile River: 30°58 59.63&quot;E 25°27'6.84&quot;S • The construction of a sewer pipeline within 32m of, but not closer than 20m to, a watercourse. • The construction of two</td>
</tr>
</tbody>
</table>
| GN R544 Activity 18 | R.544, Activity 18 - The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand | The infilling or depositing of material into or the removal of material from a watercourse for the purpose of constructing sewer and water supply lines across watercourses at the coordinates indicated above.

| GN R544 Activity 39(iii) | The expansion of bridges within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint. | The expansion/reinforcement of an existing structure/bridge in the Crocodile River for the purpose of securing the water and sewer pipelines to it at the co-ordinates 30°58' 59.63"E 25°27' 6.84"S.

| GN R546 Activity 2 | The construction of reservoirs for bulk water supply with a capacity of more than 250m³. | The construction of 2x3.1ML reservoirs at the co-ordinates 30°58'15.56"E 25°25'49.4"S.

| GN R546 Activity 13 | The clearance of an area of 1 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation | The clearance of 700m² of indigenous for the purpose of constructing two reservoirs at the co-ordinates 30°58'15.56"E 25°25'49.4"S.

The granting of this environmental authorisation is subject to the conditions set out below.

3. Conditions of Authorisation

Scope of authorisation

3.1. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.

3.2. The holder of the authorisation must ensure compliance with these conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of the authorisation.

3.3. The activity which is authorised may only be carried out at the property indicated above.

3.4. Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.

3.5. In the event that the impacts exceed the significance as predicted in the basic assessment report, the authorisation may be suspended and/or withdrawn after proper procedures have been followed.

3.6. In the event of any dispute concerning the significance of a particular impact, the opinion of the Department in respect of its significance will prevail.

3.7. The Department may change or amend any of the conditions of this authorisation if, in the opinion of the Department, it is environmentally justified.
3.8. This activity must commence within a period of five (5) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapsed and a new application for environmental authorisation must be made in order for the activity to be undertaken, unless the holder of this environmental authorisation has lodged a valid application to amend the validity period of this authorisation before this authorisation lapsed, in which case, this authorisation will remain valid. However, the activity, including site preparation, may not commence prior to the amendment application being decided.

3.9. The holder of this authorisation is responsible for compliance with the provisions for Duty of Care and Remediation of Environmental Damage contained in Section 28 of the National Environmental Management Act, 1998 (Act 107 of 1998).

3.10. This authorisation does not negate the holder of the authorization, responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity, including, inter alia, the National Forests Act, 1998 (Act 84 of 1998), and the National Water Act, 1998 (Act No. 36 of 1998).

Appeal of authorisation

3.11. The holder of the authorisation must notify every registered interested and affected party, in writing and within twelve (12) days of the date of this decision, of the outcome of the application.

3.12. The notification referred to above, must —
   a) Specify the date on which the authorisation was issued;
   b) Inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Regulations;
   c) Advise the interested and affected party to the manner in which the decision can be accessed;
   d) Be published in the newspaper contemplated in Regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.

Management and monitoring of the activity

3.13. The Environmental Management Programme (EMPr) dated January 2015 submitted as part of the basic assessment report is hereby approved, and must be implemented and adhered to throughout the lifecycle of the activity.

3.14. Before construction activities may commence, plant species of conservation importance (endemic, protected, Red Data) must be identified and marked, and may not be disturbed, or, where required, the relevant permits for their relocation or removal must be obtained from the relevant authority.

3.15. Plant species of conservation concern that are identified for relocation must be relocated to areas of similar habitat that will not be transformed on the property, unless otherwise stipulated by the relevant permitting authority.

3.16. The disturbance of nests or breeding activities of birds, reptiles, or any other wildlife, is strictly prohibited.

3.17. All vertebrates, including slow moving reptiles and smaller mammals, must be allowed to move unharmed, or be assisted and relocated in consultation with the Environmental Control Officer, to the areas of the property that will not be transformed.

3.18. The applicant must appoint an independent Environmental Control Officer (ECO) that will have the responsibility of monitoring and reporting on compliance with the conditions of this environmental authorisation as well as monitoring and reporting on the implementation of the approved EMPr:

3.18.1. The ECO must be appointed before the commencement of construction and the Department must be notified of such an appointment for communication purposes.

3.18.2. The ECO must oversee the identification, and relocation or removal of plant species of conservation importance.
3.18.3. The ECO must, prior to any site clearing activities, oversee the identification and marking of trees that may not be removed.
3.18.4. The ECO must oversee faunal search and rescue prior to and during site clearing activities.
3.18.5. The ECO must monitor the contractors’ entry into sensitive habitat.
3.18.6. The ECO must monitor the restriction of construction to designated areas.
3.18.7. The ECO must oversee all rehabilitation activities.
3.18.8. During the construction phase, the ECO must submit monthly compliance reports to the Department in writing and copy the applicant with such reports. Where applicable, the ECO may negotiate the required frequency for the submission of reports with the Department, which must be agreed to in writing by the Department. The reports must include a description of all activities on site, problems identified, transgressions noted and remedial action implemented. All reports must reflect the Department’s reference number of the project on the cover page.
3.18.9. The ECO must maintain the following on site:
   - A site diary
   - Copies of all reports submitted to the Department
   - A complaints, register of all environmental complaints regarding the proposed project and the remedies applied to such complaints
3.18.10. The ECO must remain employed until all rehabilitation measures as well as site clean-up are completed and the site is handed over to the applicant by the contractor for operation.

3.19. The holder of the authorisation must submit an environmental compliance audit report to the Department within 30 days of completion of the construction phase. The environmental audit report must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the conditions of this authorisation as well as the requirements of the EMP.

3.20. The Department retains the right to monitor and/ or inspect the proposed project throughout its lifecycle.

**Commissioning and operation of the activity**

3.21. At least fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, and must include the name and contact details of the appointed ECO.

3.22. An alien plant control program must be implemented at the inception of the site clearing phase.

3.23. The perimeter of the area to be cleared must be defined and demarcation of material lay down areas must precede all activities on site.

3.24. Only areas designated in consultation with the ECO may be used for the storage of materials, machinery and equipment, construction camps, temporary ablution, site offices and stockpiling of topsoil. Such areas may not be sited in close proximity to steep areas, or within 32m from the edge of any wetland or riparian zone of any watercourse.

3.25. No other activity, temporary or unauthorised access, haul roads, parking, or any other use, may take place within 32m of a watercourse, unless it is specifically authorized herein.

3.26. The placement of any fencing on site must be finalised in consultation with the ECO.

3.27. All riparian zones must be maintained as ecological corridors which must be kept intact throughout the life cycle of the project.

3.28. No activity adjacent to wetlands or riparian zones may impede the free movement of wetland or riverine biota by the construction of any barrier that inhibits the continuity of the corridor function.

3.29. The construction of roads within or through wetlands is prohibited.

3.30. The removal of indigenous vegetation must be strictly limited, and the removal of indigenous trees taller than 4m is prohibited.
3.31. The removal of material may not destabilize watercourse banks.
3.32. Construction activities may not result in a damming or draining effect on the flow upstream.
3.33. Lowering the base level and increasing the gradient in any wetland is prohibited.
3.34. Topsoil must be stockpiled at a height not exceeding 1.5m at a pre-designated location for use during rehabilitation.
3.35. Topsoil stockpiles may not have slopes steeper than 1 vertical: 2,5 horizontal, and may not be compacted in any way or stockpiled for a period longer than 6 months.
3.36. The profile of watercourses must be returned to one similar to pre-construction.
3.37. Clean water runoff must be diverted away from the construction site, and all necessary drainage works must be installed at the inception of the construction phase.
3.38. Current flow regimes may not be altered.
3.39. Where water flow is required to be diverted or impeded, it may only be temporarily and partially diverted or impeded during the construction period in order to allow for natural flow to continue.
3.40. Surface water rich in sediments and other pollutants must be prevented from entering watercourses and wetlands, and mechanisms for dissipating water energy must be implemented at the inception of the construction phase to prevent erosion.
3.41. Measures must be taken to prevent an increase in suspended solids downstream of the construction site.
3.42. The quality of water downstream may not deteriorate as a result of the activity.
3.43. Measures must be taken to prevent and manage soil erosion during and after construction.
3.44. Increased runoff due to vegetation clearance and/ or soil compaction and/or any hardened surfaces must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering any watercourse.
3.45. Scouring, erosion or sedimentation of all watercourses and wetlands must be prevented, and the stability of watercourses may not be detrimentally affected.
3.46. Soils that become compacted through the activities of the development must be loosened to an appropriate depth to allow seed germination.
3.47. The storage and handling of fuel, lubricants, paint, tar, bitumen binders and other chemicals must be in especially demarcated impervious and bunded areas.
3.48. The mixing of cement, asphalt, chemicals or other noxious materials must be undertaken in designated areas on an impermeable layer such as a concrete slab or in a container suitable for this.
3.49. Construction vehicles and equipment must be checked and maintained regularly to ensure that there is no environmental contamination as a result of oil, fuel or hydraulic fluid leakages.
3.50. The pollution of adjacent areas due to improper storage of construction materials or any hazardous substances is prohibited.
3.51. If ablation facilities are required, dry chemical toilet facilities, or evaporative or eco-loos, must be provided on site at a ratio of 1:10 for construction staff, but may not be located within 50 m from any watercourse or wetland, and may not cause pollution.
3.52. Chemical toilets must be maintained and cleaned regularly and effluent must be disposed of off-site into an approved municipal sewage system.
3.53. Construction activities may not harm or disturb the breeding activities of any animal.
3.54. No animal is to be poached or unnecessarily killed (including snakes, mice, birds and spiders).
3.55. Painting or permanent marking of natural features is prohibited.
3.56. It is the responsibility of the holder of the authorisation to rectify any source of pollution from their undertaking and to take appropriate measures to prevent any pollution of surface or ground water.
3.57. Measures must be taken to remove alien vegetation and control new alien vegetation recruitment on the property.
3.58. All disturbed areas must be fully rehabilitated and protected from erosion. Rehabilitation measures must be aimed at the prevention of soil erosion and the re-establishment of indigenous vegetation.

3.59. Only vegetation indigenous to the area may be used for rehabilitation purposes.

3.60. Hydro-seeding of all cleared and disturbed areas is compulsory.

3.61. No construction material or any other waste material may be dumped into any watercourse or surrounding area.

3.62. All general waste generated on the site must be disposed of at a registered landfill site or as directed by any other relevant authority.

3.63. All hazardous waste must be disposed of at an official registered site, or be removed by registered hazardous waste contractors.

3.64. Construction personnel must be sensitized to the requirements of the South African Heritage Resources Act. Should any material of cultural or archaeological significance be encountered during construction, all activities must cease immediately and the South African Heritage Resources Agency (SAHRA) must be informed accordingly.

3.65. Complaints received from the public during the construction and operational phases of the activity must be attended to as soon as possible and addressed to the satisfaction of all concerned.

General

3.66. A copy of this authorisation must be kept at the property where the activity will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.

3.67. Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/ or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.

3.68. Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.

3.69. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

ENVIRONMENTAL AUTHORISATION APPROVED BY:

[Signature]

DR. A. DE LANGE
ACTING CHIEF DIRECTOR: ENVIRONMENTAL SERVICES
DATE: 11/6/15

[Logo: MPUMALANGA – THE PLACE OF THE RISING SUN]
Annexure 1: Reasons for the Decision

1. Background

1.1 The applicant, Mbombela Local Municipality, applied for authorisation to carry out the following activities listed in Government Notices R544 and R546 of 18 June 2010 associated with the construction of bulk service infrastructure (water and sewer pipelines) for the Mpumalanga University on Portions 31 and 32 of the farm Boschrand 283 JT, and Portions 17, 19, 28, 36, 74 and 84 of the farm Friedenheim 282 JT, Nelspruit, Mbombela Local Municipality, Mpumalanga Province, at the co-ordinates indicated in the table below:

<table>
<thead>
<tr>
<th>Activity number</th>
<th>Activity Description</th>
<th>Extent to which Activity is Authorised</th>
</tr>
</thead>
<tbody>
<tr>
<td>GN R545 Activity 9</td>
<td>The construction of facilities or infrastructure exceeding 1000m in length for the bulk transportation of water, sewage or storm water with i) an internal diameter of 0.38m or more, or ii) peak throughput of 120l/s or more</td>
<td>The construction of a sewer pipeline 8810m in length with a diameter that will vary between 160mm and 710mm at the following co-ordinates: Start: 30°58'2.35&quot;E 25°25'38.95&quot;S Middle: 30°59'6.24&quot;E 25°26'13.59&quot;S End: 30°58'47.00&quot;E 25°27'13.76&quot;S</td>
</tr>
<tr>
<td>GN R544 Activity 11 (xi)</td>
<td>The construction of infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse.</td>
<td>The construction of a sewer pipeline across two watercourses as follows: - Unknown stream on campus: 30°58'19.20&quot;E 25°26'1.97&quot;S - Crocodile River: 30°58 59.63&quot;E 25°27'6.84&quot;S</td>
</tr>
<tr>
<td>R544, Activity 18 - The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand</td>
<td>The construction of two pump stations within 32m of, but not closer than 20m to, a watercourse as follows: - Friedenheim pump station: 30°59'1.52&quot;E 25°27'4.38&quot;S - UMP pump station: 30°58'22.52&quot;E 25°26'3.39&quot;S</td>
<td>The infilling or depositing of material into or the removal of material from a watercourse for the purpose of constructing sewer and water supply lines across watercourses at the co-ordinates indicated above.</td>
</tr>
</tbody>
</table>
| GN R544 Activity 18 | The expansion of bridges within a watercourse or within 32 metres of a | The expansion/reinforcement of an existing structure/bridge in the Crocodile River for the purpose of securing the water and sewer pipelines to it at the co-ordinates 30°58' 59.63"E 25°27'
<table>
<thead>
<tr>
<th>39(iii)</th>
<th>watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint.</th>
<th>6.84°S</th>
</tr>
</thead>
<tbody>
<tr>
<td>GN R546 Activity 2</td>
<td>The construction of reservoirs for bulk water supply with a capacity of more than 250m³.</td>
<td>The construction of 2x3.1ML reservoirs at the co-ordinates 30°58'15.56&quot;E 25°25'49.4&quot;S</td>
</tr>
<tr>
<td>GN R546 Activity 13</td>
<td>The clearance of an area of 1 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</td>
<td>The clearance of 700m² of indigenous for the purpose of constructing two reservoirs at the co-ordinates 30°58'15.56&quot;E 25°25'49.4&quot;S</td>
</tr>
</tbody>
</table>

1.2 The applicant appointed the following Environmental Assessment Practitioner (EAP) to undertake a basic assessment process:

Lidwala Consulting Engineers
P O Box 2930
Nelspruit
1200

Contact person: Ria Wilken
Tel: 0861 543 9252
Fax: 086 764 8258
Email: rwilken@lidwala.com

2. **Information considered in making the decision.**

   In reaching its decision, the Department took the following into consideration:
   a) The information contained in the basic assessment report and environmental management programme dated January 2015.
   b) The comments received from interested and affected parties as included in the abovementioned reports.
   c) The objective and requirements of relevant legislation, policies and guidelines, including Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Mpumalanga Biodiversity Conservation Plan.

3. **Key factors considered in making the decision.**

   All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below:
   a) Sustainability
   b) Need and desirability
   c) Ecological impact

4. **Findings**

   After consideration of the information and factors listed above, the Department made the following findings:
   a) According to the basic assessment report, the proposed development is considered to be environmentally, economically and socially sustainable.
   b) According to the basic assessment report, no threats to species or habitat were identified, and no critical limitations to the development could be identified that are of
ecological significance.

a) Mitigation measures and recommendations outlined in the basic assessment report and environmental management programme prepared for the activity are appropriate and practical for implementation, and it is anticipated that they will reduce the significance of potential impacts.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity will not conflict with the general objectives of integrated environmental management as laid down in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. Authorisation is accordingly granted.
Enquiries : R. Luyt
Telephone : (013) 759 4000
Reference : 17/23/E-263
NEAS No. : MPP/EIA/0000799/2014

Department of Public Works, Roads and Transport
Private Bag X11302
Nelspruit
1200

Attention: Mr. N.M.D. Malatji
Fax : 013 766 8471
Email : dmalatji@mpg.gov.za

Dear Sir,

APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR ACTIVITIES LISTED IN GOVERNMENT NOTICES R544 AND R545 ASSOCIATED WITH THE CONSTRUCTION OF INFRASTRUCTURE WITHIN A WATERCOURSE FOR THE PURPOSES OF UPGRADE ROAD D725 AND ROAD R40 FOR THE MPUMALANGA UNIVERSITY, NELSPRUIT, MBOMBELA LOCAL MUNICIPALITY

With reference to the abovementioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation and reasons for the decision are attached herewith.

In terms of Regulation 10(2) of the Environmental Impact Assessment Regulations, 2010, you are instructed to notify all registered interested and affected parties in writing, and within 12 (twelve) days of the date of this letter, of the Department's decision in respect of your application. Such notification must comply with the requirements of Regulations 10(2)(a)-(d) and must draw the attention of registered interested and affected parties to the fact that an appeal may be lodged against the decision in terms of Chapter 7 of the EIA Regulations, 2010.

Your attention is drawn to Chapter 7 of the Regulations, which regulates appeal procedures. Should you wish to appeal any aspect of the decision, you must, inter alia, lodge a notice of intention to appeal with the MEC, within 20 days of the date of this letter, by means of one of the following methods:

By facsimile: (013) 766 8295

By post: Private Bag x 11219
Nelspruit
1200

By hand: Building 6, No. 7 Government Boulevard
Riverside Park Extension 2
Nelspruit
1200

MPUMALANGA
THE PLACE OF THE RISING SUN
Should you decide to appeal, you must serve a copy of your appeal on all registered interested and affected parties and any organ of state with interest in the matter, as well as a notice indicating where, and for what period, the appeal submission will be available for inspection.

Yours sincerely,

MR S.S. MALULEKA  
CHIEF DIRECTOR: ENVIRONMENTAL AFFAIRS  
DATE: 29.01.2016

cc: Ria Wilken  
Lidwala Consulting Engineers  
Fax: 086 6304 313  
Email: riawilken@lidwala.com
Environmental Authorisation

Application number: 17/2/3/E -263

Holder of Authorisation: Department of Public Works, Roads and Transport

NEAS reference number: MPP/EIA/0000799/2014

Location of activity: Road D725 and Road R40, Nelspruit, Mbombela Local Municipality, Mpumalanga Province

Page 3 of 11
1. Decision
The Department is satisfied on the basis of the information available to it and subject to compliance
with the conditions of this environmental authorisation, that the applicant should be authorised to
undertake the activity as specified below. Details regarding the basis on which the Department
reached this decision are set out in Annexure 1.

2. Activities authorised
By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act
107 of 1998) and the Environmental Impact Assessment Regulations 2010, the Department hereby
authorises:

The Department of Public Works, Roads and Transport
Private Bag X11302
Nelspruit
1200

Contact: Mr. N.M.D. Malatji
Tel: 013 766 8525
Fax: 013 766 8471
Email: dmalatji@mpg.gov.za

To undertake the following activities listed in Government Notice R544 of 18 June 2010 associated
with the construction of infrastructure within a watercourse or within 32m of a watercourse measured
from the edge of a watercourse for the purposes of upgrading Road D725 and Road
R40 to provide access to Mpumalanga University, Nelspruit, Mbombela Local Municipality,
Mpumalanga Province, at the co-ordinates mentioned below (hereafter referred to as “the activity”):

<table>
<thead>
<tr>
<th>Activity number</th>
<th>Activity Description</th>
<th>Extent to which Activity is Authorised</th>
</tr>
</thead>
</table>
| GN R544 Activity 11(v) and (xi) | The construction of: bulk storm water outlet structures; and, infrastructure covering 50m² or more, where such construction occurs within a watercourse or within 32m of a watercourse | - The construction of storm water outlets within 32m of the Nels River.  
- The construction of the western entrance to the University of Mpumalanga campus within 32m of the Nels River, at the co-ordinates S25°25'59.92"E30°58'10.11".  
- The construction of a slipway from the D725 to the R40 within 32m of the Nels River at the co-ordinates S25°25'39.51"E30°57'59.77". |
| GN R544 Activity 18 | The infilling or depositing of any material of more than 5m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from - a watercourse | The infilling, removal and movement of more than 5m³ of material into, from and within the Nels River for the purposes of undertaking the activities listed above. |
| GN R546 Activity 19 | The widening of a road by more than 4m. | - The construction of an elevated traffic circle on the R40 and the widening of the road for slipways to and from the University of Mpumalanga campus on Road D725 at the co-ordinates S25°25'38.04"E30°58'00.55".  
- The construction of the western entrance to the University of Mpumalanga campus and the widening of the road for slipways at the co-ordinates S25°25'59.92"E30°58'10.11".  
- The construction of the main entrance to the University of Mpumalanga campus and the widening of the road for slipways at the co-ordinates S25°26'6.67" |
The granting of this environmental authorisation is subject to the conditions set out below.

3. Conditions of Authorisation

Scope of authorisation
3.1. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.

3.2. The holder of the authorisation must ensure compliance with these conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of the authorisation.

3.3. The activity which is authorised may only be carried out at the property indicated above.

3.4. Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.

3.5. In the event that the impacts exceed the significance as predicted in the basic assessment report, the authorisation may be suspended after proper procedures have been followed.

3.6. In the event of any dispute concerning the significance of a particular impact, the opinion of the Department in respect of its significance will prevail.

3.7. The Department may change or amend any of the conditions of this authorisation if, in the opinion of the Department, it is environmentally justified.

3.8. This activity must commence within a period of five (5) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken, unless the holder of this environmental authorisation has lodged a valid application to amend the validity period of this authorisation before this authorisation lapses, in which case, this authorisation will remain valid. However, the activity, including site preparation, may not commence prior to the amendment application being decided.

3.9. The holder of this authorisation is responsible for compliance with the provisions for Duty of Care and Remediation of Environmental Damage contained in Section 28 of the National Environmental Management Act, 1998 (Act 107 of 1998).

3.10. This authorisation does not negate the holder of the authorisation, responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity, including, *inter alia*, the National Forests Act, 1998 (Act 84 of 1998) and the National Water Act, 1998 (Act No. 36 of 1998).

Appeal of authorisation
3.11. The holder of the authorisation must notify every registered interested and affected party, in writing and within twelve (12) days of the date of this decision, of the outcome of the application.

3.12. The notification referred to above, must–
   a) Specify the date on which the authorisation was issued;
   b) Inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Regulations;
c) Advise the interested and affected party to the manner in which the decision can be accessed;
d) Be published in the newspaper contemplated in Regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.

Management and monitoring of the activity
3.13. The amended Environmental Management Programme (EMPPr) dated July 2015 as included in the addendum to the final basic assessment report is hereby approved, and must be implemented and adhered to throughout the lifecycle of the activity.

3.14. Before construction activities may commence, plant species of conservation importance (endemic, protected, Red Data) must be identified and marked, and may not be disturbed, or, where required, the relevant permits for their relocation or removal must be obtained from the relevant authority.

3.15. Plant species of conservation concern that are identified for relocation must be relocated to areas of similar habitat that will not be transformed, unless otherwise stipulated by the relevant permitting authority.

3.16. The disturbance of nests or breeding activities of birds, reptiles, or any other wildlife, is strictly prohibited.

3.17. The Present Ecological State (PES) of the riparian zone must be maintained at all sites.

3.18. The applicant must appoint an independent Environmental Control Officer (ECO) that will have the responsibility of monitoring and reporting on compliance with the conditions of this environmental authorisation as well as monitoring and reporting on the implementation of the approved EMPPr:

3.18.1. The ECO must be appointed before the commencement of construction and the Department must be notified of such an appointment for communication purposes.

3.18.2. The ECO must oversee the identification, and relocation or removal of plant species of conservation importance.

3.18.3. The ECO must, prior to any site clearing activities, oversee the identification and marking of trees that may not be removed.

3.18.4. The ECO must oversee faunal search and rescue prior to and during site clearing activities.

3.18.5. The ECO must oversee all surveying and demarcation activities.

3.18.6. The ECO must monitor the contractors’ entry into sensitive habitat.

3.18.7. The ECO must monitor the restriction of construction to designated areas.

3.18.8. The ECO must oversee the implementation of an alien plant control program.

3.18.9. The ECO must oversee and monitor the success of all rehabilitation activities.

3.18.10. During the construction phase, the ECO must submit monthly compliance reports to the Department in writing and copy the applicant with such reports. Where applicable, the ECO may negotiate the required frequency for the submission of reports with the Department, which must be agreed to in writing by the Department. The reports must include a description of all activities on site, problems identified, transgressions noted and remedial action implemented. All reports must reflect the Department’s reference number of the project on the cover page.

3.18.11. The ECO must maintain the following on site:
   ▪ A site diary
   ▪ Copies of all reports submitted to the Department
   ▪ A complaints’ register of all environmental complaints regarding the proposed project and the remedies applied to such complaints

3.18.12. The ECO must remain employed until all rehabilitation measures as well as site clean-up are completed and the site is handed over to the applicant by the contractor for operation.

3.19. The holder of the authorisation must submit an environmental compliance audit report to the Department within 30 days of completion of the construction phase. The environmental

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audit report must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the conditions of this authorisation as well as the requirements of the EMP.

3.20. The Department retains the right to monitor and/or inspect the proposed project throughout its lifecycle.

**Commissioning and operation of the activity**

3.21. At least fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, and must include the name and contact details of the appointed ECO.

3.22. The perimeter of the construction site must be defined and demarcation of material lay down areas must precede all activities on site.

3.23. Only areas designated in consultation with the ECO may be used for the storage of materials, machinery and equipment, construction camps, temporary ablation, site offices and stockpiling of topsoil. Such areas may not be sited in close proximity to steep areas, or within 32m from the edge of any wetland or riparian zone or any watercourse.

3.24. No activity or development, such as site clearing, alteration of virgin soil, construction camps, temporary housing, temporary ablation, stockpiling of topsoil, storing of equipment and material, disturbance of natural habitat, temporary or unauthorised access, parking, or any other use, other than that which is herein authorised, may take place within 32m of any watercourse or riparian zone.

3.25. Site clearing and construction activities may only take place during low flow periods.

3.26. The removal of indigenous vegetation must be strictly limited, and the removal of indigenous trees taller than 4m is prohibited.

3.27. Loss of and/or damage to *Breonadia salicina* trees within the riparian zone is prohibited.

3.28. Clean water runoff must be diverted away from the construction site, and all necessary drainage works must be installed at the inception of the construction phase.

3.29. Embankments must be protected and stabilized during construction, and beds and embankments must be restored to original condition at completion.

3.30. The current flow regime of the watercourse may not be altered.

3.31. No surface storm water generated as a result of the development may be channeled directly into any wetland or watercourse. All surface runoff generated during both construction and operation phases must be managed prior to entering any natural drainage system or wetland.

3.32. No activity may cause a damming or draining effect upstream, or result in concentrated flow downstream.

3.33. Lowering the base level and increasing the gradient of watercourses is prohibited.

3.34. Where water flow is required to be diverted, it may only be diverted within the riverbed zone.

3.35. Scouring, erosion or sedimentation of all watercourses and wetlands must be prevented, and the stability of watercourses may not be detrimentally affected.

3.36. Increased runoff due to vegetation clearance and/or soil compaction and/or any hardened surfaces must be managed.

3.37. The quality of water downstream may not deteriorate as a result of construction activities.

3.38. Surface water rich in sediments and other pollutants must be prevented from entering watercourses and wetlands.

3.39. Construction and domestic waste must be removed daily to a designated area at least 32m outside the edge of the riparian zone. The applicant is responsible for the removal of litter that may accumulate downstream as a result of construction activities.

3.40. In the event of structural damage, the damaged material must be removed with immediate effect in order to prevent degradation of the environment or any watercourse.
3.41. Rehabilitation of the in-stream habitat is compulsory and must commence before the end of the construction phase. Only vegetation indigenous to the area may be used for the rehabilitation purposes.

3.42. Soils that become compacted through the activities of the development must be loosened to an appropriate depth to allow seed germination.

3.43. The storage and handling of fuel, lubricants, paint, tar, bitumen binders and other chemicals must be in especially demarcated impervious and bunded areas.

3.44. The mixing of cement, asphalt, chemicals or other noxious materials must be undertaken in designated areas on an impermeable layer such as a concrete slab or in a container suitable for this.

3.45. Construction vehicles and equipment must be checked and maintained regularly to ensure that there is no environmental contamination as a result of oil, fuel or hydraulic fluid leakages.

3.46. Pollution due to improper storage of construction materials or any hazardous substances is prohibited.

3.47. Dry chemical toilet facilities, or evaporative or eco-loos, must be provided on site at a ratio of 1:10 for construction staff, but may not be located within 50m from any watercourse or wetland, and may not cause pollution.

3.48. Chemical toilets must be maintained and cleaned regularly and effluent must be disposed of off-site into an approved municipal sewage system.

3.49. Topsoil must be stockpiled at a height not exceeding 1.5m at a pre-designated location for use during rehabilitation.

3.50. Painting or permanent marking of natural features is prohibited.

3.51. It is the responsibility of the holder of the authorisation to rectify any source of pollution from their undertaking and to take appropriate measures to prevent any pollution of surface or ground water.

3.52. Measures must be taken to remove alien vegetation and control new alien vegetation recruitment on the property.

3.53. All disturbed areas must be fully rehabilitated and protected from erosion. Rehabilitation measures must be aimed at the prevention of soil erosion and the re-establishment of indigenous vegetation.

3.54. All general waste generated on the site must be disposed of at a registered landfill site or as directed by any other relevant authority.

3.55. All hazardous waste must be disposed of at an official registered site, or be removed by registered hazardous waste contractors.

3.56. Construction personnel must be sensitized to the requirements of the South African Heritage Resources Act. Should any material of cultural or archaeological significance be encountered during construction, all activities must cease immediately and the South African Heritage Resources Agency (SAHRA) must be informed accordingly.

3.57. Complaints received from the public during the construction and operational phases of the activity must be attended to as soon as possible and addressed to the satisfaction of all concerned.

**General**

3.58. A copy of this authorisation must be kept at the property where the activity will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.

3.59. Where any of the applicant’s contact details change, including the name of the responsible person, the physical or postal address and/ or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.
3.60. Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.

3.61. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

ENVIRONMENTAL AUTHORISATION APPROVED BY:

[Signature]

MR S.S. MALULEKA
CHIEF DIRECTOR: ENVIRONMENTAL AFFAIRS
DATE: 24.01.2016

MPUMALANGA
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## Annexure 1: Reasons for the Decision

### 1. Background

1.1 The applicant, The Department of Public Works, Roads and Transport, applied for authorisation to carry out the following activities listed in Government Notices R544 and R546 of 18 June 2010 associated the construction of infrastructure within a watercourse or within 32m of a watercourse for the purposes of upgrading Road D725 and Road R40 to provide access to Mpumalanga University, Nelspruit, Mbombela Local Municipality, Mpumalanga Province, at the co-ordinates mentioned below:

<table>
<thead>
<tr>
<th>Activity number</th>
<th>Activity Description</th>
<th>Extent to which Activity is Authorised</th>
</tr>
</thead>
</table>
| GN R544 Activity 11(vi) and (xi) | The construction of: bulk storm water outlet structures; and infrastructure covering 50m² or more, where such construction occurs within a watercourse or within 32m of a watercourse | - The construction of storm water outlets within 32m of the Nels River.  
- The construction of the western entrance to the University of Mpumalanga campus within 32m of the Nels River, at the co-ordinates S25°25'59.92" E30°58'10.11".  
- The construction of a slipway from the D725 to the R40 within 32m of the Nels River at the co-ordinates S25°25'39.51" E30°57'59.77". |
| GN R544 Activity 18 | The infilling or depositing of any material of more than 5m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from a watercourse | The infilling, removal and movement of more than 5m³ of material into, from and within the Nels River for the purposes of undertaking the activities listed above. |
| GN R546 Activity 19 | The widening of a road by more than 4m. | - The construction of an elevated traffic circle on the R40 and the widening of the road for slipways to and from the University of Mpumalanga campus on Road D725 at the co-ordinates S25°25'36.04" E30°58'00.55".  
- The construction of the western entrance to the University of Mpumalanga campus and the widening of the road for slipways at the co-ordinates S25°25'59.92" E30°58'10.11".  
- The construction of the main entrance to the University of Mpumalanga campus and the widening of the road for slipways, at the co-ordinates S25°26'6.67" E30°58'28.18".  
- The construction of the eastern entrance to the University of Mpumalanga campus and the widening of the road for slipways at the co-ordinates S25°26'15.59" E30°58'53.74". |

1.2 The applicant appointed the following Environmental Assessment Practitioner (EAP) to undertake basic assessment process:

Lidwala Consulting Engineers  
P O Box 2930  
Nelspruit  
1200
2. **Information considered in making the decision.**
   In reaching its decision, the Department took the following into consideration:
   a) The information contained in the basic assessment report, the addendum to the basic assessment report and the amended environmental management programme.
   b) The comments received from interested and affected parties as included in the basic assessment report.
   c) The objective and requirements of relevant legislation, policies and guidelines, including Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Mpumalanga Biodiversity Conservation Plan.

3. **Key factors considered in making the decision.**
   All information presented to the Department was taken into account in the Department’s consideration of the application. A summary of the issues which, in the Department’s view, were of the most significance is set out below:
   a) Ecological impact
   b) Sustainability
   c) Need and desirability

4. **Findings**
   After consideration of the information and factors listed above, the Department made the following findings:
   a) According to the basic assessment report, the activity is considered to be environmentally, economically and socially sustainable.
   b) Mitigation measures and recommendations outlined in the basic assessment report and environmental management programme prepared for the activity are appropriate and practical for implementation, and it is anticipated that they will reduce the significance of potential impacts.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity will not conflict with the general objectives of integrated environmental management as laid down in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated for to acceptable levels. Authorisation is accordingly granted.
FINAL ENVIRONMENTAL MANAGEMENT PROGRAM

PROPOSED DEVELOPMENT OF THE SOL PLAATJE UNIVERSITY IN KIMBERLEY, NORTHERN CAPE PROVINCE.

July 2014

Prepared by:
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Prepared for:
DEPARTMENT OF HIGHER EDUCATION AND TRAINING
P/Bag X174
PRETORIA
0001
Tel: (012) 312 6349/50
Fax: (012) 323 0291
Contact person: Mr G Qonde
E-mail:
# ENVIRONMENTAL ASSESSMENT PRACTITIONER – EXPERTISE

<table>
<thead>
<tr>
<th>Contact person</th>
<th>Ria Wilken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postal Address</td>
<td>PO Box 8163, Nelspruit, 1200</td>
</tr>
<tr>
<td>Tel.</td>
<td>013 7411512</td>
</tr>
<tr>
<td>Cell.</td>
<td>082 3386934</td>
</tr>
<tr>
<td>Fax</td>
<td>086 6304313</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:Ria.wilken@telkomsa.net">Ria.wilken@telkomsa.net</a></td>
</tr>
</tbody>
</table>

**Expertise**

- MSc in Environmental Science, (Urban ecology) North-West University, Potchefstroom. Experience in biological science since 1982 –

- **Agricultural Research** 1982- 2001: (19 years) Nematology laboratories, soil and plant analysis, agricultural trials – field and glasshouse, fertilizer recommendations, vegetable production training for people in rural areas.

- **Environmental & Waste management:** 2001 – (current) Inspect and Regulate waste issue – industrial and municipal, including WWTP’s, evaluate EIA Reports for Environmental authorization, mentor students at the Environmental Department.

- **Director** of UmSinsi Environmental Specialist and is a professional scientist, Ecologist and Botanist – Manage various EIA projects – township & agricultural development, that includes public consultation, consult with various specialists such as Town planners & Engineers as well as Government Departments & Municipalities, writing BA & EIA reports, Environmental Management Programs and Plan & rehabilitate disturbed open spaces. Apply for Water Use and Waste Licenses. Other projects include: Business Plan and Application for funds at the National Lottery Board for 2010 Soccer World Cup, Business Plan for the Rehabilitation of the Bergvlam Stream, Nelspruit, Project Manager for the Rehabilitation of the Bergvlam Stream, Nelspruit, ECO for different projects, Waste Management Plan for Sudwala Lodge.

- **Memberships:** BirdLife Lowveld, Plant Specialist Group, Honorary Rangers (SANPARKS) – Lowveld Region, Mbombela Environmental Management Committee, International Association for Impact Assessment, South Africa (IAIA\textsubscript{SA}), Botanical Society of South Africa.
EXECUTIVE SUMMARY

The Department of Higher Education and Training (DHET) was formed in 2009 as a new Department with the responsibility to manage the post-school system. DHET has to expand the capacity of higher education, including the universities. The annual growth of scholars that need to study at a higher university is 4.7% and current universities are already over enrolled. Government policy as stipulated in the Higher Education Act, Act 101 of 1997 determines through section 20 that the Minister by notice in the Gazette may establish a university which is required to deliver through this act teaching, research and community service.

In 2010 the Minister of Higher Education and Training appointed two task teams to investigate the feasibility and possibility models for the establishment of Universities in the Northern Cape and Mpumalanga Province. These are the two Provinces in South Africa that do not have universities at the moment. Task teams investigated provincial and national needs and imperatives and made recommendations on the type, size and position of the two new institutions. Since November 2011, the Department of Higher Education and Training (DHET) has appointed a project management team to take forward the planning process under the guidance of a project steering committee, which includes academics from existing universities as well as representatives of the Premiers and of the National Institutes of Higher Education in the two Provinces. Academic work groups have been set up to flesh out the academic direction of each University. Technical work for the 2 universities started in October 2011 and Wits was appointed as project managers with a multi-disciplinary team that includes an architect, civil engineer, geotechnical engineer and urban planner.

This University is a national asset serving national interests and more specifically the interests of the Northern Cape. Kimberley was the preferred position for the new university in the Northern Cape for different reasons and includes the following: the position of the city, the range of retail and community facilities and it is an established tourism and recreation center. Kimberley has a well-developed civic bulk infrastructure and the best housing and student accommodation in the province. Kimberley is well located between Cape Town and Johannesburg, has both road and railway infrastructure and has an airport connecting it to major cities in South Africa.

The authorities have decided to name the new Northern Cape University the Sol Plaatje University. The Sol Plaatje University in Kimberley will be a comprehensive university of 5000 FTE students to be enrolled in the medium term. The University will open its doors to new students as from the beginning of 2014 and will be operating, for the time being, from a single campus in Kimberley.

The transformation of undeveloped, vacant or derelict land to institutional use inside urban area where the total area to be transformed is more than 5ha is a listed activity according to the Environmental Impact Assessment (EIA) Regulations R543, 2010 and it must be adhered to in terms of Sections 24(2)(a) and 24(d) of the National Environmental Management Act (NEMA), Act no 107 of 1998. The proposed activity triggers Listing Notice 1, RS44 of June, 2010 and the following activities were registered: Activity No 23(ii) & Activity No 24.

This listing requires the Applicant to carry out a Basic Assessment Process.
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<td>ABBREVIATIONS:</td>
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<td>BAR Basic Assessment Report</td>
<td></td>
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<tr>
<td>BID Background Information Document</td>
<td></td>
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<tr>
<td>DAFF Department of Agriculture, Forestry and Fishery</td>
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<tr>
<td>DEA Department of Environmental Affairs</td>
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<tr>
<td>DENC Department of Environment and Nature Conservation</td>
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<tr>
<td>DWA&amp;E Department of Water Affairs and Environment</td>
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<tr>
<td>EA Environmental Authorization</td>
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<td>EAP Environmental Assessment Practitioner</td>
<td></td>
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<td>EAR Environmental Audit Report</td>
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<td>ECA Environmental Conservation Act, Act No 73 of 1989</td>
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<tr>
<td>ECO Environmental Control Officer</td>
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<td>EIA Environmental Impact Assessment</td>
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<tr>
<td>EMPr Environmental Management Program</td>
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<tr>
<td>FBDM Fraancis Baard District Municipality</td>
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<tr>
<td>FET Full-time equivalent Training</td>
<td></td>
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<tr>
<td>I&amp;AP Interested and Affected Parties</td>
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<tr>
<td>NEMA National Environmental Management Act, Act No 107 of 1998</td>
<td></td>
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<tr>
<td>NIHE National Institute of Higher Learning</td>
<td></td>
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<tr>
<td>NMT Non-Motorised Transport</td>
<td></td>
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<tr>
<td>PPP Public Participation Process</td>
<td></td>
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<tr>
<td>SABS South African Bureau of Standards</td>
<td></td>
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<tr>
<td>SPLM Sol Plaatje Local Municipality</td>
<td></td>
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<tr>
<td>RoD Record of Decision</td>
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It is assumed that all information received from the owner and specialists have been correct.

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1. INTRODUCTION

The EMPr describes the methods and procedures for mitigating potential impacts and monitoring thereof. It is however not a specification of the exact methods to be applied. The document aims to provide a guide towards the management, mitigation and monitoring of environmental impacts associated with the different phases of development in terms of the National Environmental Management Act (Act 107 of 1998).

The proposed development of a university in Northern Cape was planned according to the principles of section 2 of NEMA, 107/1998 where people and their needs was placed at the forefront of its concern. The development will serve the public of Kimberley, future students and staff of the University’s their physical, psychological, developmental, cultural and social interests equitably. Possible impacts were identified and will have minimum impact on the environment if mitigation measures are implemented. Therefore the development will be socially, environmentally and economically sustainable.

Specialist assessments to determine possible impacts were evaluated and incorporated in the EMPr. The following specialist recommendations were included in the EMPr:

- Social-economic assessment
- Traffic assessment, vehicle and no-motorised traffic.
- Ecological assessment
- Heritage assessment
- Civil Engineering: water provision, sewerage capacity and storm water management.
- Electrical engineering:

2. OBJECTIVES OF THE EMPr

The key objectives of an EMPr are to reduce or eliminate possible negative environmental impacts by giving due consideration to any potential impacts already identified in the Basic Assessment (BA) process and to ensure that the environment is protected during the construction and operational phases. When and if the quality of the environment can be improved, it should be investigated and implemented where possible. Minimal environmental impacts or damage during the construction and operational phase of the development can be achieved through the following:

- Prevent possible negative socio-economic impacts on Kimberley
- Mitigate the impact of 900-1000 cars that will be additional to existing traffic in the CBD of Kimberley.
- Prevention of accidents with students that use bicycles or have to walk from their residence to the classrooms.
- Prevent possible air pollution in the CBD with more cars that drive through or idle in the city centre.
- Mitigate visual impact.
- Keep as much as possible natural vegetation on the vacant stand. Rehabilitate area with the planting of indigenous plants and trees.
- Improve biodiversity with indigenous gardens on the University’s premises,
- Implement an integrated waste management plan,
- Promote reduce, re-use and recycling of waste,
- Final rehabilitation of area after construction is completed.
- Provide bulk infrastructure such as clean water and sewerage system without any negative impact on the rest of Kimberley.
3. LEGAL REQUIREMENTS

The legal requirements applicable to the development are:

<table>
<thead>
<tr>
<th>Title of legislation, policy or guideline</th>
<th>Applicability to the project</th>
<th>Administering authority</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising on Roads and Ribbon Development Act, Act No 21 of 1940</td>
<td>Advertising on the municipal and national roads (N12)</td>
<td>Dept of Public works</td>
<td>1940</td>
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<td>Planning and Development Act -</td>
<td>Development and construction of buildings for the university</td>
<td>Dept of rural Development</td>
<td>2010</td>
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<tr>
<td>National Heritage Resources Act, Act No 25 of 1999.</td>
<td>No heritage sites were found.</td>
<td>Dept of Arts and Culture</td>
<td>1999</td>
</tr>
<tr>
<td>National Water Act, Act No. 36 of 1998.</td>
<td>Consider possible impacts in water resources where bridges will be built and water usage in general.</td>
<td>D Water Affairs and Forestry</td>
<td>1998</td>
</tr>
<tr>
<td>National Environmental Management: Biodiversity Act, Act No 10 of 2004.</td>
<td>Consider possible impacts on the biodiversity of the area where construction will take place.</td>
<td>Department of Environment</td>
<td>2004</td>
</tr>
<tr>
<td>National Environment Conservation Act, Act No 73 of 1989.</td>
<td>Consider possible impacts on conservation for the specific area where development will take place.</td>
<td>Department of Environmental Affairs</td>
<td>1989</td>
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<tr>
<td>National Heritage Resources Act, Act No. 25 of 1999.</td>
<td>No heritage sites were found</td>
<td>Department of Arts and Culture</td>
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<tr>
<td>Occupational Health and Safety Act, Act No 85 of 1993.</td>
<td>Health issues during construction of the university and of the students and staff of the university during the operational phase.</td>
<td>Department of Labour</td>
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<td>Promotion of Access to Information Act, Act No 2 of 2000.</td>
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<td>All Departments</td>
<td>2000</td>
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<td>Electricity Regulation Act, Act No 4 of 2006.</td>
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<td>Department of Environmental Affairs</td>
<td>2006</td>
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<tr>
<td>EIA regulations as listed in Government Notices R543 and R544 (20 June 2010)</td>
<td>Activities that trigger listed activities have to be registered at DEA</td>
<td>Department of Environment</td>
<td>2010</td>
</tr>
</tbody>
</table>

The Environmental control Officer (ECO) and the Task Team For The Development/Contractor shall note that the obligations imposed by the Environmental Management Program (EMPr) are legally binding in terms of legislation during preparation, construction and operational phase as described in the Basic Assessment Report. The EMPr informs and binds the Task Team For The Development/Contractor to their duties, with particular reference to the prevention and mitigation of environmental impacts caused during the construction and operational phase.
4. ENVIRONMENTAL MANAGEMENT AND RESPONSIBILITIES

The recommendations within this document act as guidelines for environmental management. However, recommendations may be altered or added onto at the discretion of the Task Team For The Development/Contractor after consultations and discussions with all affected parties (i.e. the authorities, neighbours, Registered I&AP).

4.1 RESOURCE ALLOCATION AND DUTIES

To ensure that this EMPr is implemented, the following staff resources will have to be made available:

4.1.1 Environmental Control Officer (ECO)

The ECO has to be appointed by the applicant for the construction phase of the development responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in the authorization, dated 26/03/2014 are implemented and ensure compliance with the provisions of the EMPr. The ECO have the following duties:

- Monitor the implementation of the EMPr.
- Advise the Task Team For The Development on environmental issues during the implementation of the EMPr.
- Continuous auditing of the construction activities for the adherence to the EA conditions and EMPr. Auditing / Site inspections have to be conducted on a monthly basis to notify and advise the Task Team For The Development and additional workers/sub-contractor on environmental issues during development, preparation and construction phase.
- Monthly auditing reports have to be compiled and sent to DEA Compliance Section until the end of the construction phase.
- Identify problem areas as soon as possible and provide action plans to avoid further environmental damage.
- Review the Task Team For The Development proposal for impact and pollution control measures and advise on their adequacy.
- Report significant environmental incidents to DEA and advise the Task Team For The Development thereof during the development / construction phase.
- Communication with the public during the construction phase – receives and resolves problems or complaints.
- Make alterations to the EMPr if necessary.

4.1.2 Task Team For The Development

The Task Team For The Development has the responsibility for implementing the management measures contained in this document during the construction phase. The Task Team For The Development has the following duties:

- Apply for necessary permits at the DAFF should the removal of protected species, medical plants and “data deficient” plants species be required. Copies of the permits have to be submitted to the Department (conditions 26&27).
- Obtain permits from SAHRA for the construction of protected buildings and areas of heritage importance. Copies of the permits have to be submitted to the Department (conditions 28&29)
- Establish an effective environmental control program.
- Establish routine management, liaison and reporting systems and prepare management reports.
- Implement the Storm Water Management Plan of Sol Plaatje Local Municipality (SPLM) (Condition 13.2).
- Operate the Oppenheimer Memorial Park that is zoned as a public open space according to the Open Space Management Plan of the SPLMunicipality (condition 13.4).
- Implement a Traffic Management Plan as recommended by Vela VKE, December 2013 (Condition 13.5).
- Implement the Disaster Management Plan of SPLM if necessary. It must be reviewed every year (condition 13.6).
- Monitor environmental aspects and advise the SOL PLAATJE UNIVERSITY, KIMBERLEY Staff of actions required.
- Manage the staff to implement methods to prevent potential negative environmental impacts and recommend safeguards.
- Implement the Storm water management plan of SPLM (Condition 13.2).
Site inspections have to be conducted on a daily basis to notify and advise the Contractor and ECO on environmental issues.

- Liaise in collaboration with the ECO with adjacent and nearby Land owners.
- A Complaint Register must be kept at the Task Team For The Development Office.

4.2 PERFORMANCE

The Task Team For The Development and ECO shall compile a monitoring and auditing plan, in order to ensure that all of the environmental management measures are implemented and are effective. The ECO shall review the Environmental Management Performance of the Task Team For The Development on a regular basis. The Task Team For The Development shall be deemed not to have complied with the EMPr if:

- There is evidence of the contravention of any of the conditions of the EMPr.
- The Task Team For The Development fails to comply with corrective measures or other instructions by the ECO.
- The Task Team For The Development fails to respond to complaints from the public.

4.3 REPORTING

A copy of the Environmental Authorization/Record of Decision (EA/RoD) and the EMPr must at all times be available to all relevant staff as well as general public, Task Team For The Development and sub-contractors should be acquainted with the contents thereof.

The complaint’s register have to be on site and all complaints recorded. Complaints shall be investigated, corrective action implemented and feedback given to the complainant on the issues raised within 24 hours.

The ECO shall conduct compliance audits once per month and compile a summary in terms of the EMPr. The reports have to be compiled, summarized and sent to DEA Compliance Section on a quarterly basis until the end of the construction phase. Reports must be available on request of the Public and I&AP.
5. ENVIRONMENTAL MANAGEMENT MEASURES

5.1 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The university will be fully integrated spatially with the City of Kimberley in 3 linked areas south of the existing CBD. The university will consist of 3 distinct areas which will consist of a Northern, Central and Southern campus. The university will accommodate 5000 students of which 4000 will be accommodated on the premises. The proposed project includes:

• The **Northern Campus** which is a site nearest to the CBD and will consist of academic and admin buildings with the existing Oppenheimer Park as its central focus. In the Northern Campus area, 25 buildings with an area of 60 063m² will be developed.

• The **Central Campus** will be southwest of the Northern Campus with a mixture of academic buildings and student residences. In the central campus area 36 buildings with a total area of 66 751m² will be developed; mostly 3 story buildings will be constructed.

• The **Southern Campus** will be in the vicinity of Hoffe Park Sports Stadium and a mixture of student residences and sports fields will be developed. In the Southern Campus area, 22 buildings of 36 528m² will be developed.

5.2 DEVELOPMENT ASPECTS

The development aspects are divided into the planning and design, preparation & construction, operational and decommissioning phases and are as follows:

5.2.1 Planning and Design Phase

The **Task Team For The Development** is responsible for the following aspects:

- The commitment to a conservation approach during the planning phase;
- Environmental friendly, sustainable urbanization, layout and design plans. Sustainable urbanization involves a combination of strategies and elements that together can produce more energy-efficient, liveable communities. It includes the design, mobility, connectivity, climate & energy and economy.
- Socio-economic impact on Kimberley.
- Develop a code of good conduct for construction workers in consultation with the local municipality.
- Economic advice and management.
- Increase of traffic has to be mitigated to be acceptable for the community of Kimberley.
- Mitigation of air pollution in the CBD caused by the increased traffic.
- Planning of the aesthetic quality to ensure minimal visual impact of the site.
- Landscaping plans to improve biodiversity in the area.
- The layout Plan of the UNIVERSITY must have a minimal impact on the vegetation and removal of trees.
- The necessary plant destruction permits must be obtained from the regulating authorities prior to construction and submit to the Department *(condition 25&26).*
- A specialist must assist the surveyor to ensure that the above recommendations are followed.
- Necessary permits for buildings and areas of archaeology value must be obtained and submit to the Department *(condition 28&29).*
- Ensure that a Water Use Licence is obtained from the Department of Water Affairs if necessary *(condition 25).*
- Provide bulk infrastructure such as clean electricity, water and sewerage system without any negative impact on the rest of Kimberley.
- The **University** should establish a Recruitment/Labour Desk before construction start.
- The employment selection process should seek to promote gender equality and the employment of woman wherever possible.
- The need to implement a training and skills development program for locals prior to the commencement of the construction phase should be investigated. The aim should be to maximize the number of locals employed during the construction phase.
5.2.2 Site preparation & construction Phase

The members of the Task Team For The Development are responsible for the following aspects:

- Site establishment and preparation – storage area for construction equipment.
- Site preparation – removal of vegetation and levelling of terrain.
- Waste management of additional construction material.
- Rehabilitation, landscaping and planting of vegetation on the site.
- The proponent must be committed to a conservation approach of practice and the actual footprint of construction/disturbance must be kept to a minimum;
- As much of the natural environment as possible must be conserved (minimal construction of access roads and bush clearing);
- Relocation of important species, identification and demarcation of specimens and sub-habitats not to be disturbed will have to be done beforehand by a specialist;
- Important species (fauna as well as flora) that will be threatened by the development must be relocated to safer habitats by suitable specialists;
- Preventative erosion control measures to be put in place.
- The University should establish a Recruitment/Labour Desk before construction started.
- The need to implement a training and skills development program for locals prior to the commencement of the construction phase should be investigated. The aim should be to maximize the number of locals employed during the construction phase.
- The employment selection process should seek to promote gender equality and the employment of women wherever possible.

5.2.3 Operational Phase

Task Team For The Development is responsible for the following aspects:

- Operations associated with the infrastructure of the university must have minimum impact on the environment.
- Prevention of ground water & stream pollution.
- Prevent the deterioration of the fauna and flora on the proposed 3 Campuses of the University.
- Plan to remove minimal vegetation and cut only the necessary trees.
- Waste Management on the premises of the University.
- Ensure good air quality by managing traffic in and around the university
- Prevent noise pollution.
- Mitigate visual impact.
- Provide healthy environment to students, staff of the university and neighbouring residents.
- Final rehabilitation with indigenous vegetation of area after construction is completed.
- Maintenance staff of gardens must be educated with regards to the importance of biodiversity;
- The operational phase must be monitored by SOL PLAATJE UNIVERSITY, KIMBERLEY staff/officials to ensure that adequate mitigation measures are in place and to take reactive measures in places where impacts pose problems.

5.2.4 Decommissioning Phase

Task Team For The Development is responsible for the demolishing of the buildings.

6. ENVIRONMENTAL MANAGEMENT MEASURES

The following table forms the basis of this EMPr for planning, preparation and operational phases of the project. The EMPr should guide the Task Team For The Development and it should be implemented as an auditing list during the preparation/construction and operational phase. Daily compliance with the EMPr should be monitored by the Task Team For The Development. The ECO should conduct compliance audits on a monthly basis and summarize the reports to report quarterly to DEA till the final construction and rehabilitation of construction site is completed.
# 6. ENVIRONMENTAL MANAGEMENT MEASURES:

## 6.1 PLANNING AND DESIGN PHASE

<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
</table>
| Layout and Design | - The layout and design of the Sol Plaatje University and all associated infrastructure must comply with the conditions as described in the BAR and the EA/RoD.  
- The proponent must be committed to a conservation approach during the planning phase. | Task team for the development | Design and planning     |
| Land uses     | - The different land owners have to be accommodated in the planning of the Sol Plaatje University, Kimberley.                                                                                                 | Task team for the development | Design and planning     |
| Socio-economic: | - Job opportunity.  
- Population influx.  
- Business opportunities – Create business areas.  
- Traffic and safety hazards.  
- Service and community development.  
- Code of conduct for staff and students.  
- Prepare an "Emergency preparedness plan" according to the disaster management plan of SPLM. | Task team for the development | Design and planning     |
| Job opportunities | - Local first policy for low skilled jobs.  
- Establish a Recruitment/Labour Desk for the construction phase.  
- Develop a code of good conduct for the construction phase.  
- Implement a training and skills development programme for locals – maximise the number of local employment.  
- Database of local firms that qualify as potential service providers (construction, catering, security, recycling of waste and waste collection).  
- Dismissal procedures have to be in place before appointing staff. Dismissal procedures have to be according to Labour laws. | Task team for the development | Design and planning     |
| Traffic       | - Increase of traffic in and around the university.  
- Congestion of traffic at crossings of roads.  
- Reduce air pollution direct associated to the traffic in and around the university.  
- Save crossings for pedestrians.  
- Save walkways for pedestrians and cyclists.  
- Enough parking for students, staff and visitors of the university.  
- Prepare a “Traffic management plan” according to the suggestions of the traffic assessment. | Task team for the development | Design and planning     |
<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
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<tbody>
<tr>
<td><strong>Bulk services:</strong></td>
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<tr>
<td>Water provision</td>
<td>o Clean water has to be available at all time to the university. Permitted purification plant.</td>
<td>Task team for the development</td>
<td>Design and planning</td>
</tr>
<tr>
<td>Sewerage management</td>
<td>o Evens planned to be developed for the university have to be connected to the main sewer system.</td>
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<tr>
<td>Waste management</td>
<td>o A system to separate grey and black water.</td>
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<tr>
<td>Storm water plan and erosion management</td>
<td>o Sewerage from the university has to be accommodated at the existing WWTP. Permitted purification plant.</td>
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<td></td>
<td>o Waste has to be stored on a dedicated area.</td>
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<td>o Waste has to be removed on a regular basis to a permitted waste site.</td>
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<td></td>
<td>o Storm water management design must be in such a manner that no erosion is caused.</td>
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<td></td>
<td>o Water harvesting / capturing of water from roofs – reduce storm water impact.</td>
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<td></td>
<td>o Plan to prevent erosion by only removing vegetation 1 week before construction started.</td>
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<td></td>
<td>o Prepare a landscaping plan to plant fast growing indigenous trees to mitigate possible erosion impact.</td>
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<tr>
<td>**Protected plant spp, sensitive habitat</td>
<td>o The removal of vegetation has to be planned in such a manner that it is only removed on the proposed development areas and associated infrastructure.</td>
<td>Task team for the development</td>
<td>Design and planning</td>
</tr>
<tr>
<td></td>
<td>o Obtain permission from the ECO to proceed with the clearing of vegetation from the development area. No protected trees may be removed without the permits from the DAFF if protected tree species are located.</td>
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<td></td>
<td>o Plan to translocate protected/sensitive plant species to similar habitats</td>
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<td></td>
<td>o Sensitive habitats must be avoided.</td>
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<td></td>
<td>o Landscaping plan for university must be planned with indigenous vegetation.</td>
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<td></td>
<td>o Prepare an “Open space management plan” according to the “Open space management” of SPLM.</td>
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<tr>
<td>**Buildings / areas of archaeology value</td>
<td>o Permits have to be obtained from SAHRA before construction of identified buildings of archaeology value.</td>
<td>Task team for the development</td>
<td>Design and planning</td>
</tr>
<tr>
<td></td>
<td>o Permit to construct on the old Malay Camp.</td>
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</table>
### 6.2 THE PREPARATION & CONSTRUCTION PHASE

<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
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</thead>
</table>
| **Site establishment** | Inform the STAFF/CONTRACTORS of:  
  - All staff must be committed to a conservation approach of practice.  
  - The requirements of EMPr.  
  - That no vegetation may be removed before permission from the ECO.  
  - Locate site office and storage area for the CONSTRUCTION material.  
  - A complaint register have to be available to the public at all times. | Task team for the development & ECO. | Start of project |
| **Site preparation** |  
  - Keep actual footprint of construction site to the minimum.  
  - If vegetation has to be removed, it has to be handled according to the EA conditions and Landscaping plan. It has to be re-vegetated in similar habitats where protected plants can be established.  
  - The levelling or excavation of the constructed areas has to be environmental friendly.  
  - If sites of cultural significance or heritage importance are discovered during the site preparation period the work must cease immediately. The area must be secured and an archaeologist should be contacted. Site preparation may proceed in the area once agreed to mitigation measures that have been implemented and approved by the Heritage Resources Agency. | Task team for the development & ECO. | On going |
| **Storm and runoff water management** |  
  - Vegetation may only be removed on the demarcated construction areas to prevent the rush down of run-off water during a storm event.  
  - Construction of infrastructure has to be started within a week (1 week) after the removal of plants to limit duration that soils are exposed. Storm water has to be managed and channelled on the construction site during site preparation to prevent erosion.  
  - Prevent the discharge of polluted water or water containing suspended materials into seepage or drainage areas.  
  - Prevent antiseptic liquids entering storm water channels. Antiseptic liquids should be handled and stored in a safe place.  
  - Sandbags have to be used to prevent water run off if necessary.  
  - The re-vegetation of constructed area with indigenous plants has to start immediately after construction.  
  - Work according to the “Storm water management Plan” to prevent erosion. | Task team for the development & ECO. | On going |
| **Waste management** |  
  - Keep the construction area, construction offices and other facilities free of domestic waste.  
  - A dedicated storage area has to be provided for general waste.  
  - Ensure that no illegal dumping of waste on adjacent properties take place.  
  - Do not dump waste of any nature into storm water systems. | Task team for the development | On going |
<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>o Make use of existing access roads.</td>
<td>Task team for the development &amp; ECO</td>
<td>On going</td>
</tr>
<tr>
<td>Flora</td>
<td>o Be aware of any medical or protected plant species.</td>
<td>Task team for the development &amp; ECO</td>
<td>On going</td>
</tr>
<tr>
<td></td>
<td>o Replant trees that have to be removed in a similar habitat.</td>
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<td></td>
<td>o Plant yearly additional indigenous trees in the area.</td>
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<td></td>
<td>o Remove alien invader species.</td>
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<tr>
<td>Fauna</td>
<td>o Avoid sensitive areas such as rocky outcrops, wetlands, forests areas.</td>
<td>Task team for the development &amp; ECO</td>
<td>On going</td>
</tr>
<tr>
<td></td>
<td>o Removal of large trees has to be restricted to the minimum.</td>
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<td></td>
<td>o Construct owl nests to control mice if needed.</td>
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<tr>
<td>Air quality</td>
<td>o Access dirt roads should be sprinkled with water using water tanks.</td>
<td>Task team for the development &amp; ECO</td>
<td>On going</td>
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<tr>
<td></td>
<td>o Vehicles have to drive slowly to create less dust.</td>
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<tr>
<td>Noise pollution</td>
<td>o Regular servicing of vehicles to prevent high pitched roars</td>
<td>Task team for the development &amp; ECO</td>
<td>On going</td>
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<tr>
<td></td>
<td>o Construction workers should be alerted not to scream or hoot at the public or near residential areas.</td>
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<tr>
<td>Social &amp; Health Aspects. Safety and security</td>
<td>o The Task Team For The Development must comply with the National building Regulations and Building Act (Act no 103 of 1997).</td>
<td>Task team for the development &amp; ECO</td>
<td>On going</td>
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<td></td>
<td>o The Task Team For The Development must comply with the Occupational Health and Safety Act, 1993 (Act no. 85 of 1993).</td>
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<td>o Health and Safety officer have to be on site during working hours.</td>
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<td></td>
<td>o Ensure that the handling of equipment and material is supervised and adequately instructed.</td>
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<td></td>
<td>o Ensure that construction vehicles are under control of competent personnel.</td>
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### 6.3 OPERATIONAL PHASE

<table>
<thead>
<tr>
<th>ASPECT/IMPACT</th>
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<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
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<tbody>
<tr>
<td>Ecological impact</td>
<td>o Removal of alien invasive species and regular monitoring thereof.</td>
<td>Task team for the development</td>
<td>On going</td>
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<tr>
<td></td>
<td>o All pristine areas outside the proposed development areas have to be protected at all time.</td>
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<td></td>
<td>o Use indigenous vegetation for the gardens.</td>
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<td></td>
<td>o Gardens of the university have to improve biodiversity.</td>
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<tr>
<td>Solid Waste management</td>
<td>o Ensure that no illegal dumping of waste on the adjacent properties take place.</td>
<td>Task team for the development</td>
<td>On going</td>
</tr>
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<td></td>
<td>o Do not dump waste of any nature into drainage lines, stream or pristine natural areas.</td>
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<td></td>
<td>o Dedicate storage areas for general and recycled waste has to be neat and tidy.</td>
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<td></td>
<td>o Remove recycled waste on a regular basis to prevent fire hazard.</td>
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<tr>
<td>Social impact</td>
<td>o The Emergency preparedness plan must be reviewed annually.</td>
<td>Task team for the development</td>
<td>On going</td>
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<td></td>
<td>o Workers have to be provided with a code of conduct to address the required standards in terms of the universities standards.</td>
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<td></td>
<td>o Dismissal procedures have to be in place before appointing staff. Dismissal procedures have to be according to Labour laws.</td>
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### 6.4 DECOMMISSIONING/CLOSING PHASE

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<th>ASPECT/IMPACT</th>
<th>MITIGATION MEASURE</th>
<th>RESPONSIBILITY</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Demolishing of associated structures and buildings.</td>
<td>Task team for the development</td>
<td>End of project</td>
</tr>
</tbody>
</table>
Mr. Gwebinkundla Qonde
Department of Higher Education and Training
Private Bag X893
PRETORIA
0001

Fax no: (012) 323 5618

PER FACSIMILE / MAIL

Dear Mr Qonde

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GN R. 544: PROPOSED ESTABLISHMENT OF SOL PLAATJE UNIVERSITY AND ITS ASSOCIATED INFRASTRUCTURE IN KIMBERLEY, NORTHERN CAPE PROVINCE

With reference to the above application, please be advised that the Department has decided to grant authorisation. The environmental authorisation (EA) and reasons for the decision are attached herewith.

In terms of regulation 10(2) of the Environmental Impact Assessment Regulations, 2010 (the Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 12 (twelve) days of the date of the EA, of the Department’s decision in respect of your application as well as the provisions regarding the submission of appeals that are contained in the Regulations.

Your attention is drawn to Chapter 7 of the Regulations, which prescribes the appeal procedure to be followed. This procedure is summarised in the attached document. Kindly include a copy of this document with the letter of notification to interested and affected parties.

Should the applicant or any other party wish to appeal any aspect of the decision a notice of intention to appeal must be lodged by all prospective appellants with the Minister, within 20 days of the date of the EA, by means of one of the following methods:

By facsimile: 0123207561;
By post: Private Bag X447, Pretoria, 0001; or
By hand: 2nd Floor, Fedsure Building, North Tower, Cnr. Lilian Ngoyi (Van der Walt) and Pretorius Streets, Pretoria.

If the applicant wishes to lodge an appeal, it must also serve a copy of the notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection, should you intend to submit an appeal.
Please include the Department (Attention: Director: Integrated Environmental Authorisations) in the list of interested and affected parties, notified through your notification letter to interested and affected parties, for record purposes.

**Appeals must be submitted in writing to:**

Mr Z Hassam Director: Appeals and Legal Review, of this Department at the above mentioned addresses or fax number. Mr Hassam can also be contacted at:

Tel: 012-310-3271  
Email: AppealsDirectorate@environment.gov.za

The authorised activities shall not commence within twenty (20) days of the date of signature of the authorisation. Further, please note that the Minister may, on receipt of appeals against the authorisation or conditions thereof suspend the authorisation pending the outcome of the appeals procedure.

Yours faithfully,

\[Signature\]

Mr Ishaam Abader  
Deputy Director-General: Legal, Authorisations, Compliance & Enforcement  
Department of Environmental Affairs  
Date: 26/03/2014

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<thead>
<tr>
<th>CC</th>
<th>Party</th>
<th>Tel</th>
<th>Fax</th>
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<tbody>
<tr>
<td>Ms R Wilken</td>
<td>Lidwala Consulting Engineers</td>
<td>0861-543-9252</td>
<td>086-764-8258</td>
</tr>
<tr>
<td>Mr J Mutyorauta</td>
<td>NC: DENC</td>
<td>053-807-7300</td>
<td>053-807-7328</td>
</tr>
<tr>
<td>Mr G Akharwaray</td>
<td>Sol Plaatje Local Municipality</td>
<td>053-830-6100</td>
<td>053-833-1005</td>
</tr>
<tr>
<td>Mr S Malaza</td>
<td>Compliance Monitoring (DEA)</td>
<td>012-310-3397</td>
<td>012-320-5744</td>
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</tbody>
</table>
**APPEALS PROCEDURE IN TERMS OF CHAPTER 7 OF THE NEMA EIA REGULATIONS, 2010 (THE REGULATIONS) AS PER GN R. 543 OF 2010 TO BE FOLLOWED BY THE APPLICANT AND INTERESTED AND AFFECTED PARTIES UPON RECEIPT OF NOTIFICATION OF AN ENVIRONMENTAL AUTHORISATION (EA)**

<table>
<thead>
<tr>
<th>APPLICANT</th>
<th>INTERESTED AND AFFECTED PARTIES (IAPs)</th>
</tr>
</thead>
<tbody>
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</tr>
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<td>2. Within 12 days of date of the EA notify all IAPs of the EA and draw their attention to their right to appeal against the EA in terms of Chapter 7 of the Regulations.</td>
<td>2. N/A.</td>
</tr>
<tr>
<td>3. If you want to appeal against the EA, submit a notice of intention to appeal within 20 days of the date of the EA with the Minister of Water and Environmental Affairs (the Minister).</td>
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</tr>
<tr>
<td>5. The Applicant must also serve on each IAP:</td>
<td>5. Appellant must also serve on the Applicant within 10 days of lodging the notice,</td>
</tr>
<tr>
<td>• a notice indicating where and for what period the appeal submission will be available for inspection.</td>
<td>• a notice indicating where and for what period the appeal submission will be available for inspection by the applicant.</td>
</tr>
<tr>
<td>6. The appeal must be submitted in writing to the Minister within 30 days after the lapsing of the period of 20 days provided for the lodging of the notice of intention to appeal.</td>
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</tr>
<tr>
<td>7. Any IAP who received a notice of intention to appeal may submit a responding statement to that appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.</td>
<td>7. An Applicant who received notice of intention to appeal may submit a responding statement to the appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.</td>
</tr>
</tbody>
</table>

**NOTES:**

1. **An appeal against a decision must be lodged with:-**
   a) the Minister of Water and Environmental Affairs if the decision was issued by the Director- General of the Department of Environmental Affairs (or another official) acting in his/ her capacity as the delegated Competent Authority;
   b) the Minister of Justice and Constitutional Development if the applicant is the Department of Water Affairs and the decision was issued by the Director- General of the Department of Environmental Affairs (or another official) acting in his/ her capacity as the delegated Competent Authority;

2. **An appeal lodged with:-**
   a) the Minister of Water and Environmental Affairs must be submitted to the Department of Environmental Affairs;
   b) the Minister of Justice and Constitutional Development must be submitted to the Department of Environmental Affairs;

3. **An appeal must be:-**
   a) submitted in writing;
   b) accompanied by:
      • a statement setting out the grounds of appeal;
      • supporting documentation which is referred to in the appeal; and
      • a statement that the appellant has complied with regulation 62 (2) or (3) together with copies of the notices referred to in regulation 62.
# Environmental Authorisation

In terms of regulation 36 of the Environmental Impact Assessment Regulations, 2010

**Establishment of the Sol Plaatje University in Kimberley, Northern Cape Province**

**Frances Baard District Municipality**

<table>
<thead>
<tr>
<th>Authorisation register number:</th>
<th>14/12/16/3/3/1/896</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEAS reference number:</td>
<td>DEA/EIA/0001881/2013</td>
</tr>
<tr>
<td>Last amended:</td>
<td>First issue</td>
</tr>
<tr>
<td>Holder of authorisation:</td>
<td>Department of Higher Education and Training</td>
</tr>
<tr>
<td>Location of activity:</td>
<td>NORTHERN CAPE PROVINCE: On Erven 879, 2436, 2503, 2511, 2513, 2516, 3009, 3780, 3781, 16434, 16436, 24755, 36473 1 Sol Plaatje, A, B, C, D, SP ERF 1, E, Memorial Area within Sol Plaatje Local Municipality</td>
</tr>
</tbody>
</table>

This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.
Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the EIA regulations.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 the Department hereby authorises –

DEPARTMENT OF HIGHER EDUCATION AND TRAINING

with the following contact details –

Mr. Gwebinkundla Qonde
Department of Higher Education and Training
Private Bag X893
PRETORIA
0001

Tel: (012) 312 5555
Fax: (012) 323 5618
E-mail: gwebinkundla.q@dhet.gov.za
to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notices 1 (GN R. 544):

### Listed activities

**GN R. 544 Item 23 (i):**
Transformation of undeveloped, vacant or derelict land to institutional use inside urban area and where the total area to be transformed is 5ha or more

**GN R. 544 Item 24:**
The transformation of land bigger than 1000 square meters in size to institutional use where such land was open space.

### Activity/Project description

- **3 Stands/Erven not in use for more than 10 years according to the use zoned = vacant land. These 3 Erven/stands are more than 5ha. (Erf 2511, 2513 & 3781).**

- **More than 1000 square meters of the total site consisting of open space will be transformed to institutional use (Erf 2).**

### Alternative S1

<table>
<thead>
<tr>
<th>Latitude</th>
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<tbody>
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<td>28°44'31.88&quot;S</td>
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**Property boundaries co-ordinates**
Department of Environmental Affairs
Environmental Authorisation Reg. No. 14/12/16/3/3/1/896
NEAS Reference Number: DEA/EIA/0001881/2013

| 28°44'45.86"S | 24°45'53.65"E |
| 28°44'40.07"S | 24°45'51.42"E |
| 28°44'39.11"S | 24°45'55.03"E |
| 28°44'34.83"S | 24°45'53.77"E |

...for the establishment of a new university to be known as the Sol Plaatje University on Erven 1, 879, 2436, 2503, 2511, 2513, 2516, 3009, 3780, 3781, 16434, 16436, 24755, 36473, A, B, C, D, E, SP Erf 1, Memorial Area within Sol Plaatje Local Municipality, Kimberley in the Northern Cape Province, hereafter referred to as “the property”.

The infrastructure associated with this facility includes:

- Educational, residential and sporting facilities;
- Provision of access control and roads;
- Provision of engineering services; and
- A sewer and water supply network.

Conditions of this Environmental Authorisation

Scope of authorisation

1. Authorisation is granted for the development of the Sol Plaatje University and associated infrastructure listed above, at the property site co-ordinates indicated above. The development of the new university and upgrade of existing educational buildings, roads and sewage network and water supply to accommodate the university demand is hereby approved.

2. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.

3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder’s behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.

4. The activities authorised may only be carried out at the property as described above.

5. Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it
may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.

6. This activity must commence within a period of five (5) years from the date of issue of this authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.

7. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.

8. The holder of an environmental authorisation must notify the competent authority of any alienation, transfer and change of ownership rights in the property on which the activity is to take place.

Notification of authorisation and right to appeal

9. The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.

10. The notification referred to must —

10.1. specify the date on which the authorisation was issued;

10.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment Regulations, 2010;

10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request, and

10.4. give the reasons of the competent authority for the decision.

11. The holder of the authorisation must publish a notice —

11.1. informing interested and affected parties of the decision;

11.2. informing interested and affected parties where the decision can be accessed; and

11.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in the newspaper(s) contemplated and used in terms of regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.
Management of the activity

12. The Environmental Management Programme (EMP) submitted as part of application for EA must be amended and submitted to the Department for written approval prior to commencement of the activity. The recommendations and mitigation measures recorded in the BAR dated November 2013 must be incorporated as part of the EMP. Once approved, the EMP must be implemented and adhered to.

13. The amended EMP must also include the following:

13.1. All recommendations and mitigation measures recorded in the BAR dated November 2013.

13.2. A storm water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion. The plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.

13.3. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.

13.4. An open space management plan to be implemented during the construction and operation of the facility.

13.5. A traffic management plan prepared for the sites access to ensure that no hazards would result from the increased traffic and that traffic flow would not be adversely impacted during construction and operation of the facility.

13.6. An emergency preparedness plan which must be reviewed on an annual basis when conducting an audit and after each emergency incident and or major accident. The plan must, amongst others address:

(a) Site Fire

(b) Spillage (through the sewer and water supply network)

(c) Natural disasters such as floods

(d) Industrial action

(e) Contact details of police, ambulances and any emergency centre closer to the site.

13.7. The requirements and conditions of this authorisation.
Monitoring

14. The applicant must appoint an independent Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMP.

14.1. The ECO must be appointed before commencement of any authorised activities.

14.2. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department.

14.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.

14.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

15. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the Director: Compliance Monitoring at the Department.

16. The holder of the authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.

17. The environmental audit report must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the EMP.

18. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Commencement of the activity

19. The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.
20. An appeal under section 43 of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended), does not suspend an environmental authorisation or exemption, or any provisions or conditions attached thereto, or any directive, unless the Minister, MEC or delegated organ of state directs otherwise.

21. Should you be notified by the Minister of a suspension of the authorisation pending appeal procedures, you may not commence with the activity until such time that the Minister allows you to commence with such an activity in writing.

Notification to authorities

22. Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number. This notification period may coincide with the notice of intent to appeal period.

Operation of the activity

23. Fourteen (14) days written notice must be given to the Department that the activity operational phase will commence.

Site closure and decommissioning

24. Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

25. No activities will be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Water Affairs.

26. A permit must be obtained from the relevant nature conservation agency for the removal or destruction of indigenous protected and endangered plant and animal species.

27. Copies of permits in respect of 26 above required must be submitted to the Department for record keeping.
28. A permit must be obtained from SAHRA for undertaking construction in close proximity to protected buildings and areas of heritage importance within the areas of proposed development and/or upgrading of the buildings.

29. Copies of permits in respect of 28 above required must be submitted to the Department for record keeping.

30. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste shall be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).

General

31. A copy of this authorisation and the approved EMPr must be kept at the property where the activities will be undertaken. The authorisation and approved EMPr must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.

32. The holder of the authorisation must notify both the Director: Integrated Environmental Authorisations and the Director: Compliance Monitoring at the Department, in writing and within 48 (forty eight) hours, if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.

33. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in titre in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of environmental authorisation: 26 March 2014

Mr Ishaam Abader
Deputy Director-General: Legal, Authorisations, Compliance and Enforcement
Department of Environmental Affairs
Annexure 1: Reasons for Decision

1. Key factors considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

a) The information contained in the BAR dated November 2013;
b) The comments received from the organs of state and interested and affected parties as included in the BAR dated November 2013;
c) Mitigation measures as proposed in the BAR dated November 2013 and the EMPr submitted as part of the application;
d) The information contained in the specialist studies contained within Appendix D of the BAR; and
e) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998).

2. Conclusions

After consideration of the information and factors listed above, the Department reached the following conclusions -

a) The proposed university development is a Strategic Infrastructure Project announced by the President of South Africa, President Jacob Zuma.
b) The proposed site for university development is located within already build-up area (brown area) with existing higher educational facilities.
c) The BAR dated November 2013 identified all legislation and guidelines that have been considered in the preparation of the BAR dated November 2013.
d) The identification and assessment of impacts are detailed in the BAR dated November 2013 and sufficient assessment of the key identified issues and impacts have been completed.
e) The methodology used in assessing the potential impacts identified in the BAR dated November 2013 and the specialist studies have been adequately indicated.
A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2010 for public involvement.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.
Mr. Gwebinkundla Qonde
Department of Higher Education and Training
Private Bag X893
PRETORIA
0001

Fax no: (012) 323 5618

PER FACSIMILE / MAIL

Dear Mr Qonde

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GN R. 544: PROPOSED ESTABLISHMENT OF SOL PLAATJE UNIVERSITY AND ITS ASSOCIATED INFRASTRUCTURE IN KIMBERLEY, NORTHERN CAPE PROVINCE

With reference to the above application, please be advised that the Department has decided to grant authorisation. The environmental authorisation (EA) and reasons for the decision are attached herewith.

In terms of regulation 10(2) of the Environmental Impact Assessment Regulations, 2010 (the Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 12 (twelve) days of the date of the EA, of the Department’s decision in respect of your application as well as the provisions regarding the submission of appeals that are contained in the Regulations.

Your attention is drawn to Chapter 7 of the Regulations, which prescribes the appeal procedure to be followed. This procedure is summarised in the attached document. Kindly include a copy of this document with the letter of notification to interested and affected parties.

Should the applicant or any other party wish to appeal any aspect of the decision a notice of intention to appeal must be lodged by all prospective appellants with the Minister, within 20 days of the date of the EA, by means of one of the following methods:

By facsimile: 0123207561;
By post: Private Bag X447, Pretoria, 0001; or
By hand: 2nd Floor, Fedsure Building, North Tower, Cnr. Lilian Ngoyi (Van der Walt) and Pretorius Streets, Pretoria.

If the applicant wishes to lodge an appeal, it must also serve a copy of the notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection, should you intend to submit an appeal.
Please include the Department (Attention: Director: Integrated Environmental Authorisations) in the list of interested and affected parties, notified through your notification letter to interested and affected parties, for record purposes.

**Appeals must be submitted in writing to:**

Mr Z Hassam Director: Appeals and Legal Review, of this Department at the above mentioned addresses or fax number. Mr Hassam can also be contacted at:

Tel: 012-310-3271  
Email: AppealsDirectorate@environment.gov.za

The authorised activities shall not commence within twenty (20) days of the date of signature of the authorisation. Further, please note that the Minister may, on receipt of appeals against the authorisation or conditions thereof suspend the authorisation pending the outcome of the appeals procedure.

Yours faithfully,

[Signature]

Mr Ishaam Abader  
Deputy Director-General: Legal, Authorisations, Compliance & Enforcement  
Department of Environmental Affairs  
Date: 26/03/2014

<table>
<thead>
<tr>
<th>CC</th>
<th>Name</th>
<th>Details</th>
<th>Tel:</th>
<th>Fax:</th>
</tr>
</thead>
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<tr>
<td>Ms R Wilken</td>
<td>Lidwala Consulting Engineers</td>
<td></td>
<td>0861-543-9252</td>
<td>086-764-8258</td>
</tr>
<tr>
<td>Mr J Mutiyowana</td>
<td>NC: DENC</td>
<td></td>
<td>053-807-7300</td>
<td>053-807-7328</td>
</tr>
<tr>
<td>Mr G Akharwarzay</td>
<td>Sol Plaatje Local Municipality</td>
<td></td>
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<td>053-833-1005</td>
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<tr>
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<td>012-320-5744</td>
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<td>5. The Applicant must also serve on each IAP: • a notice indicating where and for what period the appeal submission will be available for inspection.</td>
<td>5. Appellant must also serve on the Applicant within 10 days of lodging the notice, • a notice indicating where and for what period the appeal submission will be available for inspection by the applicant.</td>
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<td>6. The appeal must be submitted in writing to the Minister within 30 days after the lapsing of the period of 20 days provided for the lodging of the notice of intention to appeal.</td>
<td>6. The appeal must be submitted to the Minister within 30 days after the lapsing of the period of 20 days provided for the lodging of the notice of intention to appeal.</td>
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<td>7. Any IAP who received a notice of intention to appeal may submit a responding statement to that appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.</td>
<td>7. An Applicant who received notice of intention to may submit a responding statement to the appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.</td>
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**NOTES:**

1. **An appeal against a decision must be lodged with:**
   a) the Minister of Water and Environmental Affairs if the decision was issued by the Director- General of the Department of Environmental Affairs (or another official) acting in his/ her capacity as the delegated Competent Authority;
   b) the Minister of Justice and Constitutional Development if the applicant is the Department of Water Affairs and the decision was issued by the Director- General of the Department of Environmental Affairs (or another official) acting in his/ her capacity as the delegated Competent Authority;

2. **An appeal lodged with:**
   a) the Minister of Water and Environmental Affairs must be submitted to the Department of Environmental Affairs;
   b) the Minister of Justice and Constitutional Development must be submitted to the Department of Environmental Affairs;

3. **An appeal must be:**
   a) submitted in writing;
   b) accompanied by:
      • a statement setting out the grounds of appeal;
      • supporting documentation which is referred to in the appeal; and
      • a statement that the appellant has complied with regulation 62 (2) or (3) together with copies of the notices referred to in regulation 62.
# Environmental Authorisation

In terms of regulation 36 of the Environmental Impact Assessment Regulations, 2010

**Establishment of the Sol Plaatje University in Kimberley, Northern Cape Province**

*Frances Baard District Municipality*

<table>
<thead>
<tr>
<th>Authorisation register number:</th>
<th>14/12/16/3/3/1/896</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEAS reference number:</td>
<td>DEA/EIA/0001881/2013</td>
</tr>
<tr>
<td>Last amended:</td>
<td>First issue</td>
</tr>
<tr>
<td>Holder of authorisation:</td>
<td>Department of Higher Education and Training</td>
</tr>
<tr>
<td>Location of activity:</td>
<td>NORTHERN CAPE PROVINCE: On Erven 879, 2436, 2503, 2511, 2513, 2516, 3009, 3780, 3781, 16434, 16436, 24755, 36473 1 Sol Plaatje, A, B, C, D, SP ERF 1, E, Memorial Area within Sol Plaatje Local Municipality</td>
</tr>
</tbody>
</table>

This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.
Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the EIA regulations.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 the Department hereby authorises –

DEPARTMENT OF HIGHER EDUCATION AND TRAINING

with the following contact details –

Mr. Gwebinkundla Qonde
Department of Higher Education and Training
Private Bag X893
PRETORIA
0001

Tel: (012) 312 5555
Fax: (012) 323 5618
E-mail: gwebinkundla.q@dhet.gov.za
to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notices 1 (GN R. 544):

<table>
<thead>
<tr>
<th>Listed activities</th>
<th>Activity/Project description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GN R. 544 Item 23 (i): Transformation of undeveloped, vacant or derelict land to institutional use inside urban area and where the total area to be transformed is 5ha or more</td>
<td>3 Stands/Erven not in use for more than 10 years according to the use zoned = vacant land. These 3 Erven/stands are more than 5ha. (Erf 2511, 2513 &amp; 3781).</td>
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<tr>
<td>GN R. 544 Item 24: The transformation of land bigger than 1000 square meters in size to institutional use where such land was open space.</td>
<td>More than 1000 square meters of the total site consisting of open space will be transformed to institutional use (Erf 2).</td>
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</table>

at:

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<tr>
<th>Alternative S1</th>
<th>Latitude</th>
<th>Longitude</th>
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<tbody>
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<td></td>
<td>28°44'31.88&quot;S</td>
<td>24°46'7.45&quot;E</td>
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<td></td>
<td>28°44'47.12&quot;S</td>
<td>24°45'52.02&quot;E</td>
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</tbody>
</table>

Property boundaries co-ordinates
for the establishment of a new university to be known as the Sol Plaatje University on Erven 1, 879, 2436, 2503, 2511,2513, 2516, 3009, 3780, 3781, 16434, 16436, 24755, 36473, A, B, C, D, E, SP Erf 1, Memorial Area within Sol Plaatje Local Municipality, Kimberley in the Northern Cape Province, hereafter referred to as "the property".

The infrastructure associated with this facility includes:

- Educational, residential and sporting facilities;
- Provision of access control and roads;
- Provision of engineering services; and
- A sewer and water supply network.

Conditions of this Environmental Authorisation

Scope of authorisation

1. Authorisation is granted for the development of the Sol Plaatje University and associated infrastructure listed above, at the property site co-ordinates indicated above. The development of the new university and upgrade of existing educational buildings, roads and sewage network and water supply to accommodate the university demand is hereby approved.

2. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.

3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder’s behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.

4. The activities authorised may only be carried out at the property as described above.

5. Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it
may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.

6. This activity must commence within a period of five (5) years from the date of issue of this authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.

7. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.

8. The holder of an environmental authorisation must notify the competent authority of any alienation, transfer and change of ownership rights in the property on which the activity is to take place.

**Notification of authorisation and right to appeal**

9. The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.

10. The notification referred to must—

   10.1. specify the date on which the authorisation was issued;

   10.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment Regulations, 2010;

   10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request, and

   10.4. give the reasons of the competent authority for the decision.

11. The holder of the authorisation must publish a notice—

   11.1. informing interested and affected parties of the decision;

   11.2. informing interested and affected parties where the decision can be accessed; and

   11.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in the newspaper(s) contemplated and used in terms of regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.
Management of the activity

12. The Environmental Management Programme (EMPr) submitted as part of application for EA must be amended and submitted to the Department for written approval prior to commencement of the activity. The recommendations and mitigation measures recorded in the BAR dated November 2013 must be incorporated as part of the EMPr. Once approved, the EMPr must be implemented and adhered to.

13. The amended EMPr must also include the following:

13.1. All recommendations and mitigation measures recorded in the BAR dated November 2013.

13.2. A storm water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion. The plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.

13.3. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.

13.4. An open space management plan to be implemented during the construction and operation of the facility.

13.5. A traffic management plan prepared for the sites access to ensure that no hazards would result from the increased traffic and that traffic flow would not be adversely impacted during construction and operation of the facility.

13.6. An emergency preparedness plan which must be reviewed on an annual basis when conducting an audit and after each emergency incident and or major accident. The plan must, amongst others address:
   (a) Site Fire
   (b) Spillage (through the sewer and water supply network)
   (c) Natural disasters such as floods
   (d) Industrial action
   (e) Contact details of police, ambulances and any emergency centre closer to the site.

13.7. The requirements and conditions of this authorisation.
Monitoring

14. The applicant must appoint an independent Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMPr.

14.1. The ECO must be appointed before commencement of any authorised activities.

14.2. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department.

14.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.

14.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

15. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the Director: Compliance Monitoring at the Department.

16. The holder of the authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.

17. The environmental audit report must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the EMPr.

18. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Commencement of the activity

19. The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.
20. An appeal under section 43 of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended), does not suspend an environmental authorisation or exemption, or any provisions or conditions attached thereto, or any directive, unless the Minister, MEC or delegated organ of state directs otherwise.

21. Should you be notified by the Minister of a suspension of the authorisation pending appeal procedures, you may not commence with the activity until such time that the Minister allows you to commence with such an activity in writing.

Notification to authorities

22. Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number. This notification period may coincide with the notice of intent to appeal period.

Operation of the activity

23. Fourteen (14) days written notice must be given to the Department that the activity operational phase will commence.

Site closure and decommissioning

24. Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

25. No activities will be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Water Affairs.

26. A permit must be obtained from the relevant nature conservation agency for the removal or destruction of indigenous protected and endangered plant and animal species.

27. Copies of permits in respect of 26 above required must be submitted to the Department for record keeping.
28. A permit must be obtained from SAHRA for undertaking construction in close proximity to protected buildings and areas of heritage importance within the areas of proposed development and/or upgrading of the buildings.

29. Copies of permits in respect of 28 above required must be submitted to the Department for record keeping.

30. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste shall be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).

General

31. A copy of this authorisation and the approved EMPr must be kept at the property where the activities will be undertaken. The authorisation and approved EMPr must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.

32. The holder of the authorisation must notify both the Director: Integrated Environmental Authorisations and the Director: Compliance Monitoring at the Department, in writing and within 48 (forty eight) hours, if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.

33. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of environmental authorisation: 26 MARCH 2014

Mr Ishaam Abader
Deputy Director-General: Legal, Authorisations, Compliance and Enforcement
Department of Environmental Affairs
Annexure 1: Reasons for Decision

1. Key factors considered in making the decision

In reaching its decision, the Department took, inter alia, the following into consideration -

a) The information contained in the BAR dated November 2013;
b) The comments received from the organs of state and interested and affected parties as included in the BAR dated November 2013;
c) Mitigation measures as proposed in the BAR dated November 2013 and the EMPr submitted as part of the application;
d) The information contained in the specialist studies contained within Appendix D of the BAR; and

e) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998).

2. Conclusions

After consideration of the information and factors listed above, the Department reached the following conclusions -

a) The proposed university development is a Strategic Infrastructure Project announced by the President of South Africa, President Jacob Zuma.
b) The proposed site for university development is located within already build-up area (brown area) with existing higher educational facilities.
c) The BAR dated November 2013 identified all legislation and guidelines that have been considered in the preparation of the BAR dated November 2013.
d) The identification and assessment of impacts are detailed in the BAR dated November 2013 and sufficient assessment of the key identified issues and impacts have been completed.
e) The methodology used in assessing the potential impacts identified in the BAR dated November 2013 and the specialist studies have been adequately indicated.
I) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2010 for public involvement.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.