



DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED ESTABLISHMENT OF
TSHEPISO PRIMARY SCHOOL AT TSHEPISO EXTENSION 3 WITHIN THE
JURIDICTION OF EMFULENI LOCAL MUNICIPALITY, IN THE GAUTENG PROVINCE.

Ref: Gaut: 002/17-18/E0027

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TERMS AND DEFINITIONS

TERM/S	DEFINITION
Alternatives	Alternatives are different means of meeting the general purpose and need of a proposed activity. Alternatives may include location or site alternatives, activity alternatives, process or technology alternatives, temporal alternatives or the no-go alternative.
Appeal	Any affected person may appeal a decision of the competent authority to the MEC.
Applicant	An applicant is a person who applies for an waste license in order to undertake a listed activity lawfully. The applicant must appoint an independent EAP to manage the application process.
Benefits assessment	The objective of the assessment of benefits is to identify and assess all the significant benefits that may arise from the undertaking of an activity.
Competent authority	The person who makes decisions in respect of applications for environmental authorizations is known as the competent authority. In this instance, the competent authority is the MEC of North West Province. Delegated officials from relevant departments assist the MEC with the final decision.
Cumulative impacts	Cumulative impacts are impacts that result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.
Direct impacts	Direct impacts are impacts that are caused directly by the activity and generally occur at the same time and at the place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable.
Disposal	Licensing, management, capacity, etc. of landfill sites and dump sites.
EAP	An EAP is a person who manages an application for environmental authorisation for an applicant.

EIA process	The scoping and EIA process involves a complex and intensive assessment of the potential impacts of an activity. The process takes place in three broad phases, namely submission of an application form, scoping and the EIA.
Environmental Impact Assessment	Assessment of the effects of a development on the environment
Environmental Management Programme	A working document on environmental and socio-economic mitigation measures that must be implemented by several responsible parties during all the phases of the proposed project.
Education and Awareness	Public education and awareness initiatives regarding the impact of waste on the environment and people's health and the promotion of sound waste management practices.
Impacts	Impacts are the changes in an environmental parameter that result from undertaking an activity. The change is the difference between the effects on the environmental parameter where the activity is undertaken compared to that where the activity is not undertaken. Impacts may be positive or negative and may be categorized as being direct (primary), indirect (secondary) or cumulative impacts.
Impacts assessment	The objective of the assessment of impacts is to identify and assess all the significant impacts that may arise from the undertaking of an activity.
Indirect impacts	Indirect impacts of an activity are indirect or induced changes that may occur as a result of the activity. These types of impacts include all the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
Interested and Affected Parties	The public is legally required to be given an opportunity to comment on applications for environmental authorization. Members of the public who want to participate in an assessment process must first register as I&AP's.
Integrated Waste Management Plan	An Integrated Waste Management Plan provides a framework within which local municipalities can deliver a waste management service to all residents and businesses.
Mitigation measures	Mitigation measures are the steps that are taken to reduce the identified

	impacts as far as possible. Mitigation measures will address the predicted factors of the impacts clearly to demonstrate how the impacts will be reduced through mitigation.
Municipal solid waste	Solid waste resulting from or incidental to municipal, community, commercial, institutional and recreational activities, and includes garbage, rubbish, ashes, street cleanings, abandoned automobiles, and all other solid wastes except hazardous waste, industrial solid waste, oilfield waste and biomedical wastes.
No-go alternative	The no-go alternative is the option of not undertaking the proposed activity or any of its alternatives. The no-go alternative also provides the baseline against which the impacts of other alternatives can be compared.
Public participation	Public participation is a key element of both the scoping and EIA processes and must be conducted in accordance with at least the minimum requirements as set out in the Regulations.
Recycle	Means to do anything that results in providing a use for a thing that otherwise would be disposed of or dealt with as waste, including collecting, transporting, handling, storing, sorting, separating and processing the thing, but does not include the application of waste to land or the use of a thermal destruction process.

ABBREVIATIONS AND ACRONYMS

APPA	Air Pollution Prevention Act
BAR	Basic Assessment Report
BID	Background Information Document
CRR	Comments and Response Report
DEA	Department of Environmental Affairs
ECA	Environment Conservation Act
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ELM	Emfuleni Local Municipality
EMPr	Environmental Management Programme
EMF	Environmental Management Framework
EMPR	Environmental Management Program Report
GA	General Authorization
GIS	Geographic Information System
GN	Government Notice
I&Aps	Interested and Affected Parties
IDP	Integrated Development Plan
IWULA	Integrated Water Use License Application
IDP	Integrated Development Plan
I&AP	Interested and/or Affected Parties
LED	Local Economic Development
MSA	Municipal Service Act
NEMA	National Environmental Management Act (No. 107 of 1998) (as amended)
NEMWA	National Environmental Management: Waste Act (No. 59 of 2008)
NHRA	National Heritage Resources Act (No. 25 of 1999)
NEMAA	National Environmental Management Amendment Act
NEM:BA	National Environmental Management: Biodiversity Act
NDP	National Development Plan
NSBA	National Spatial Biodiversity Assessment

NWA	National Water Act (No. 36 of 1998)
SDF	Spatial Development Framework
PPP	Public Participation Process
SANBI	South Africa National Biodiversity Institute
SANS	South Africa National Standards
SAHRA	South African Heritage Resources Agency
SDI	Spatial Development Initiative
SEA	Strategic Environmental Assessment
SEMP	Strategic Environmental Management Plan
ToR	Terms of Reference

EXECUTIVE SUMMARY

Lesekha Consulting have been appointed by Nkambule & Associates on behalf of the Applicant, Department of Education in the Gauteng Province as an independent Environmental Assessment Practitioner (EAP) responsible for facilitating the legally required Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, read with the Environmental Impact Assessment Regulations, (04 December 2014 as amended).

The applicant, Department of Education Gauteng province proposes to develop a new fully fledged Tshepiso Primary school in Tshepiso Extension 3. The extent of size of development footprint is approximately 2 hectares and proposed site of development is 4.5 hectares. The area falls under the jurisdiction of Emfuleni Local Municipality in the Gauteng Province.

The relevant application has already been lodged with the Gauteng Department of Agricultural and Rural Development for authorization, with the reference number as: **Gaut: 002/17-18/E0027**. As such, a Basic Assessment Application process (BAR) will be undertaken to obtain an Environmental Authorization for the proposed project.

The proposed construction of Tshepiso Primary School triggers EIA Regulation 327, 07 April 2017 of listed activity Number 27: The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for -

- (i) Undertaking of a linear activity; or
- (ii) Maintenance purpose undertaken in accordance with a maintenance management plan.

As such, a Basic Assessment Application process (BAR) will be undertaken to obtain an Environmental Authorization for the proposed project.

1. Introduction and Background Information of the Project

Lesekha Consulting have been appointed by Nkambule and Associates on behalf of the Applicant, Department of Education Gauteng to conduct an Environmental Impact Assessment for the proposed development of a new Tshepiso Primary School within the Emfuleni Local Municipality.

Lesekha Consulting has been appointed as an independent Environmental Assessment Practitioner (EAP) responsible for facilitating the legally required Environmental Impact Assessment for the proposed development of Tshepiso Primary School.

In terms of the National Environmental Management Act (No. 107 of 1998) (as amended) (NEMA), the proposed development triggered an activity which require authorization from the competent environmental authority before they can be undertaken. Furthermore, the National Environmental Management Act provides various measures for the prevention of pollution and ecological degradation, as well as for ecologically sustainable development in order to protect human health and the environment.

The relevant application has already been lodged with the GDARD for environmental authorization, with the reference number as: **Gaut: 002/17-18/E0027**. As such, a Basic Assessment Application process (BAR) will be undertaken to obtain an environmental authorization for the proposed project.

1.2 Terms and reference

Terms and reference

The proposed development of Tshepiso Primary School. The school facility to be constructed will comprise the following buildings:

- 28 classrooms,
- grade classroom (5),
- administration building (1),
- multipurpose room (1),
- laboratory (1),
- Library (1),
- computer lab (1),
- Ablution and fencing.

The entire site of development is 4.5 Hectares and the footprint of the development is about 2 Hectares. The potential environmental impacts of the proposed project will be assessed and recommend the mitigation measures to minimize negative impacts associated with the proposed development. The client specific requirements for the work are to obtain environmental authorization from the competent authority for this listed activity.

1.3 Site description

Tshepiso Primary school will be developed on Erf No. 5988 of Portion No. 181 of the Farm Vanderbijlpark No. 550- IQ; Tshepiso Extension3, Sedibeng East within the jurisdiction of Emfuleni Local Municipality, in the Gauteng Province. The site is bound by Steve Tshwete Street and Peter Skhosana Street, in Tshepiso Ext 3, Vereeniging.



Figure 1: Site description Map of Tshepiso Extension 3.

Property description	SG Digit code of all proposed sites	Coordinates	Proposed site per
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			Hectares
Erf No. 5988 of Portion No. 181 of the Farm Vanderbijlpark No. 550- IQ; Tshepiso Extension 3	9631/2003	Lat:(S) 26° 39' 12.25" Long:(E) 27° 52' 30.23"	4.5ha

1.4 DECLARATION OF INDEPENDENCE

Lesekha Consulting is fully independent and have no interest in the business nor receive any payment or benefit other than fair remuneration for the task undertaken as required in terms of GN No. R982, regulation 12(1) of NEMA. This report has been compiled by Lesekha Consulting who has an extensive experience in investigating and compiling Basic Assessment Report (BAR). The company has thoroughly investigated impacts that may negatively affect the site, including the fatal flaw and can attest to the information presented on this report as an actual situation at the proposed site.

LesegoSenna is a qualified Environmental Practitioner; she managed and coordinated the EIA study of the landfill in discussion. She holds the Bachelor Degree: in Biological Science majoring in Microbiology and Biochemistry. She also holds an Honors Degree: Environmental Sciences, Majoring in Environmental Impact Assessment and Earth Sciences – North West University (Potchefstroom Campus).

Lesego holds a certificate in Environmental Law (NQF level 7) with the following courses: Waste Management, Biodiversity Management, Waste Management, Heritage Assessment, Environmental law & Environmental Impact Assessment obtained from the Centre of Environmental Management at Potchefstroom University). She also holds a certificate in GIS and GPS course (NQF level 5) from the Free State University, with the following Modules: Spatial data Structures; Spatial data symbolization and analysis and interpretation Map design. Lesego is a registered Environmental Scientist registered with the South African Council of Natural Scientific Profession SACNASP (Reg.No.300029/14). The acquired qualifications and experience demonstrated that we are uniquely qualified to undertake this Environmental Impact Assessment Study.

2. Environmental and other legislation requirements

The Contractor shall ensure that all pertinent legislation concerning the protection of the natural environmental and prevention of pollution is strictly enforced. The most commonly applicable

legislation relevant to environmental management is listed below. All these laws and regulations relating to the environment shall be adhered to at all times.

The approved construction EMPr will form part of the contractual obligations of all contractors and sub-contractors engaged in the project. The approved EMPr will also to be kept on site for reference for all parties engaged in the project. Prior to the commencement of works the contractor is to make him/herself aware of the contents of the EMPr and is to sign the Declaration of Understanding included.

2.1 National Environmental Management Act, 1998 (Act No: 107 of 1998)

The National Environmental Management Act (Act 107) of 1998 (NEMA) is the overarching framework for Environmental Legislation as well as the Regulations for Environmental Impact Assessment. An application for Environmental Authorization for the identified Listed Activities will be lodged with the Gauteng Department of Agriculture and Rural Development (GDARD) Activities in terms of NEMA

According to National Environmental Management Act 1998 (Act no 107 of 1998), construction of school triggered NEMA 107 of 1998 and New amended EIA regulations GN: 327 of 07 April 2017. In terms of Activity No: 27 stated that the clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.

2.2 National Forest Act (Act No: 84 of 1998)

The site has vegetation and there is no protected or indigenous trees affected by construction. The purposes of this Act are to promote the sustainable management and development of forests for the benefit of all; provide special measures for the protection of certain forests and trees; promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes.

National Forest Act stated that it's prohibited of destruction any indigenous tress in any natural forest without a license or permit. In terms of Section 7(1) no person may cut, disturb, damage or destroy any indigenous living tree in, or remove or receive any such tree from a natural forest except in terms of (a) a license issued under subsection (4) the minister may issue a license to cut, damage or destroy any indigenous, living tree in or remove or receive ant such tree from a natural forest. (b) An exemption from the provision of this subsection published by the minister in the Gazette on the advice of the council.

2.3 South African School Act (Act No 84 of 1996)

2.3.1 Norms and standard for basic infrastructure and capacity in public schools

(1) The Minister may, after consultation with the Minister of Finance and the Council of Education Ministers, by regulation prescribe minimum uniform norms and standards for (a) school infrastructure; (b) capacity of a school in respect of the number of learners a school can admit; and (c) The provision of learning and teaching support material.

In terms of section 5 A (2) of South African School Act 84 of 1996, the norms and standards contemplated in subsection 1 must be provide for, but not be limited to, the following:

- (a) In respect of school infrastructure, the availability of classrooms; electricity; water; sanitation; a library; laboratories for science, technology, mathematics and life sciences; sport and recreational facilities; electronic connectivity at a school; and perimeter security;
- (b) In respect of capacity of school: the number of teachers and the class size; (ii) quality of performance of a school ;(iii) curriculum and extra-curricular choices; (iv) classroom size; and (v) utilization of available classrooms of a school;
- (c) In respect of provision of learning and teaching support material, the availability of—
 - (i) stationery and supplies; (ii) learning material; (iii) teaching material and equipment; science, technology, mathematics and life sciences apparatus; (v) electronic equipment; and (vi) school furniture and other school equipment.

2.4 Constitution of South Africa 108 of 1996

This application takes into account the Environmental and Social-Economic conditions as set out in Section 24 of the Constitution of South Africa (No 108 of 1996). In terms of section 7, the state is obliged to respect, promote and fulfill the rights in the Bill of Right. The environmental right states that:

Everyone has the right-

- To an environmental that is not harmful to their health or well-being; and
- To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:
 - Prevent pollution and ecological degradation
 - Promote conservation
 - Secure ecological sustainable development and use of natural resources promoting justifiable economic and social development.

2.5 National Heritage Resources Act 1999 (Act No: 25 of 1999)

The National Heritage Resources Act provides for an integrated and interactive system for the management of the National Heritage Resources and empowers civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations. Furthermore, the act establishment the South African Heritage Resources Agency (SAHRA) in 1999. SAHRA is tasked with protecting heritage resources of national significance. The heritage Impact Assessment study has been commissioned and the report will be appended on the final Basic Assessment Report.

2.6 Occupational Health and Safety Act 1993 (Act 85 of 1993)

The OHSA stated that every employer shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health and safety of his employees.

Personal Protective Equipments (PPE) refers to any equipment worn to protect the user whilst they are working. It includes an array of equipment such as safety glasses/goggles/visors, gloves, lab coats, respiratory masks, ear plugs/ear defenders and safetyshoes. PPE should be worn after all other methods of reducing risk have been properly considered. PPE only protects the wearer from harm, and is liable to failure due to incorrect use, damage or being forgotten entirely. The PPE that should be used will be specified in the Risk Assessment for the activity

2.7 National Environmental Management: Air Quality Act 39 of 2004

The NEMA Air Quality represents a distinct shift from exclusively source-based air pollution control to a holistic and integrated effects –based air quality management. This approach has the following basis: the prevention and minimization of atmosphere emissions and the management and reduction of impacts associated with unavoidable releases. The implementation of pollution prevention, impact mitigation and co-operative air quality governance varies between different sectors. Within the industrial sector, pollution prevention can take various forms including innovative product design, efficient use of natural resources and shift to cleaner production methods.

2.8 National Environmental Management: Waste Act

During construction various type of waste are expected to be generated from the site, in terms of National environmental Management Act: Waste part 5, section 21 states that any person who stores waste must at least take steps, unless otherwise provided by the Act, to ensure that

- (a) The containers, in which any waste is stored, are intact and not corroded or in any other way rendered unfit for the safe storage of waste.
- (b) Adequate measures are taken to prevent accidental spillage or leaking

(e) Pollution of the environment and harm to health are prevented.

2.9 National Environmental Management: Waste Bill 39 of 2007

The draft Bill seeks to reform the law regulating waste management in order to protect human health and well-being, and the environment by providing reasonable measures for:

- The minimization of the consumption of natural resources;
- The avoidance and minimization of the generation of waste;
- The recovery, re-use and recycling of waste
- The treatment and safe disposal of waste as a last resort;
- The prevention of pollution and ecological degradation;
- Promoting and ensuring the effective delivery of waste services
- Remediating land where contamination presents, or may present, a significant risk of harm.

2.10 National Water Act 36 of 1998

The National Water Act provides for fundamental reformation of legislation relating to water resources and use. The preamble to the act recognizes that the ultimate aim of water resource management is to achieve sustainable use of water for the benefits of all users and that the protection of the quality of water resources is necessary to ensure sustainability of the nation's water resources in the interests of all water users. The purpose of the act is to stated, in section 2 as, inter alia

- Promoting the efficient, sustainable and beneficial use of water in the public interest;
- Facilitate social and economic development;
- Protection aquatic and associated ecosystems and their biological diversity;
- Reducing and preventing pollution and degradation of water resources, ; and
- Meeting international obligations

In terms of section 19 of the act makes provision of the prevention of pollution. A landowner or occupier is responsible for the prevention, control and clean-up of water pollution occurring because of activities on his land. If the responsible person fails to undertake remediation (prevention, containment, clean-up), the catchment management agency may take measures it considers necessary, and recover the cost from the responsible person.

Part 5 of the act deals with pollution of water resources following an emergency incident, such as an accident involving the spill of a harmful substance that finds or may its way into a water resource. In terms of Section 30 of NEMA and Section 20 of the National Water Act the responsibility for

remedying the situation rests with the person responsible for the incident or the sustenance involved. If there is failure to act, the relevant catchment management agency may take the necessary steps and recover the cost from every responsible person.

A Water Use Authorization application will be lodged for Section 21 (c) and (i) water use activities with the Department of Water and Sanitation (Gauteng Regional office)

2.11 Environment Conservation Act No. 73 of 1989

The main purpose of this Act is to provide for the protection of the natural environment (Section 16) to control environmental pollution by prohibiting littering and controlling the removal of littering, and controlling waste management (Section 20) where the owner of a disposal site is required to apply for a permit from the minister of Water Affairs to operate such a facility. The Act further provides for the control of activities which may have a detrimental effect on the environment (Section 21). The Act defines a disposal site as:

“A site used for the accumulation of waste with the purpose of disposing or treatment of such waste.”

Sections 24 to 28 of the Act contain regulations regarding waste management, littering, noise, vibration and shock, environmental impact reports, limited development areas and general regulatory powers.

2.12 Water

2.12.1 Water supply

The National Water Act 36 of 1998 ensures that water resources are adequately protected, used, developed, conserved and controlled. The Act deals with the development of strategies to facilitate the proper management of water resources, provides for the protection of the water resource, the regulation of the use of water, for financial provision, catchment management agencies, water use associations, Advisory committees, international water management, government waterworks, dam safety, access to and rights over water, monitoring and assessment and information, appeals and dispute resolution.

Under the Act, a facility is required to obtain the necessary permits for water usage and the disposal of wastewater from the authority responsible for the administration of the Act, namely the Department of Water Affairs & Sanitation (DWS). The Act stipulates that if an industry is acquiring water from a municipality or other local supplier, it is the responsibility of that supplier to obtain the necessary permits. Any private well or borehole sunk for the abstraction of groundwater has to be reported to the regulatory authority.

2.12.2 Wastewater

The National Water Act is the principal piece of South African legislation governing wastewater management. Under the Act there are several important issues to note:

- Industrial and sanitary wastewater cannot be directly or indirectly discharged to stormwater drainage systems, surface or groundwater;
- Persons storing chemicals and oils must take the necessary precautions to prevent leakage into stormwater drains or water courses, unless specifically authorized by the regulatory authority;
- It is generally prohibited to allow stormwater to enter sewer systems;
- Industrial effluents may be discharged to sewer only with the permission of the regulatory authority. There are site effluent discharge limits that if exceeded can result in a fineable offence;
- It is an offence to willfully or negligently pollute surface water or groundwater;
- In the event of a pollution incident, the offending party is obliged to report the incident to the regulatory authority;
- The regulatory authority can take the necessary steps to prevent the pollution of water resources and can recover the costs of clean-up from the polluter. Local by-laws can also require a facility that stores or handles environmentally hazardous materials that could pollute stormwater runoff, rivers, water courses etc. to take 'adequate precautions' to prevent the spillage or seepage of such materials into the environment.

2.13 Pollution

Section 19 of the National Water Act deals with pollution prevention and remedying effects, and in particular the situation where pollution of a water resource occurs or might occur as a result of activities on land. The party who owns controls, occupies or uses the land in question is responsible for taking measures to prevent pollution of water resources. If these measures are not taken, the catchment management agency concerned may do whatever is necessary to prevent the pollution or to remedy its effects, and to recover all reasonable costs from the persons responsible for the pollution.

Section 31A of the Environmental Conservation Act empowers the regulatory authority to undertake action if a person or company carries out any activity that results in significant damage to the environment e.g. surface and groundwater pollution. The costs of remedial work can be recovered from the polluter. Currently there are no soil and groundwater clean-up guidelines. For groundwater,

DWS uses a range of standards depending on the final use of the water. It is unlikely that the project will affect any groundwater users. For the cleanup of soil the Department has accepted the use of risk assessments as the basis for establishing remediation criteria.

2.14 Hazardous Materials Management

The Hazardous Substances Act 15 of 1973 governs the control of substances that may cause ill health or death in humans by reason of their toxic, corrosive, irritant, flammability or pressure effects. The Act regulates the storage, handling, labeling and sale of Group I, II, and III hazardous substances. A license is required for an operation that stores, handles and sells. Group I substances. Regulations controlling the 'Conveyance of Hazardous Substances by Road tanker' have been promulgated under the Act. The Fire Brigade Services Act 99 of 1987 regulates the storage, handling and transport of flammable gases, flammable liquids and flammable solids through local by-laws.

2.15 Socio Economic and development

Since the start of the transition to democracy, there has been an increasing emphasis on local Economic Development (LED) in South Africa. LED is about local people working together to achieve sustainable economic growth that brings economic benefits and quality of life improvements for all in the community. LED brings into focus the role of towns in fostering new opportunities for people. This is important for promoting broad based economic growth, improving social welfare and promoting a more varied and vibrant local economy.

MUNICIPAL INFORMATION	EMFULENI LOCAL MUNICIPALITY
Demography information	
Population	721 663
Households	220 135
Household size	3.30
Population growth (pa)	0.92%
Household services	
Flush toilet connected to sewerage	88.20%
Weekly refuse removal	89.80%
Pipe Water inside Dwelling	69.90%
Economic sector	Manufacturing

Table1: Emfuleni Local Municipality service information.

The location of Sedibeng District within Gauteng Province, statistics table provides information of Emfuleni Local Municipality captured from Sedibeng Spatial Development Framework of 2014-2017.

MONTHLY INCOME	MALE	FEMALE	TOTAL
NO INCOME	23080	64606	87 686
1 – 400	57571	60315	117 886
401 - 800	12726	14519	27 245
801 - 1600	43086	14519	95 211
1600 - 3200	36144	52125	61 522
3201 - 6400	31048	17138	48 186
6401 - 12800	26027	16585	42 612
12801 - 25600	18372	9933	28 305
25601 - 51200	7088	2721	9 809
51201 - 102400	1895	512	2407
102401 - 204800	587	339	926
204801 or more	440	190	630
Unspecified	33724	35410	60 134
Total	299 450	305 301	60 4296

Table 2: Income per Month (Source: Statistics South Africa Census 2011)

Sedibeng District Spatial Development Framework indicates that the above table indicates that 54% of the economically active population either income or is paid less than R1 600 per month. Furthermore, 11.4% of the active population is described as unspecified, which generally means these people are mainly engaged in the informal sector of the economy.

2.15.1 Employment

The secondary sector (in particular manufacturing) and the tertiary sector (in particular community services) are the major economic contributors of significance in the District. This is reflected in both the economic activity per sector illustrated above and the employment per sector, as illustrated below.

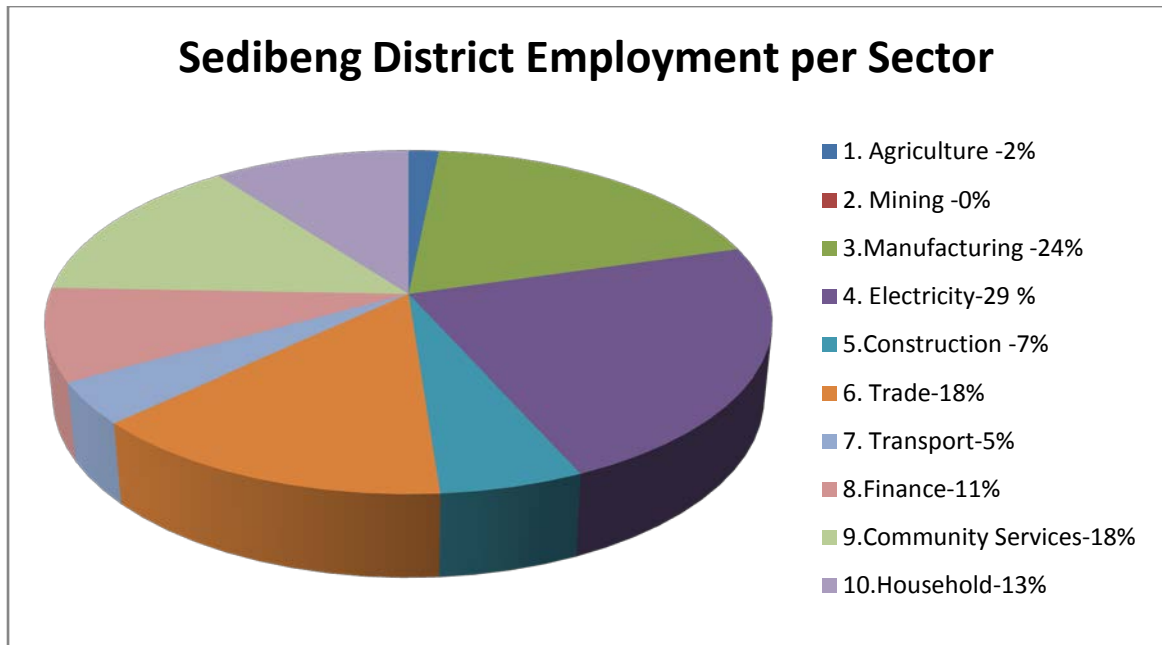


Figure2: Pie chart of Sedibeng District Employment rate

2.15.2 Education

According to the Statistics South Africa Census 2011, the educational levels for the district, 4.46% of the population has no schooling at all, 25.7% of the population may be functionally illiterate as it has less than grade 7 schooling, Far more males have a technical education than females, The presence of people with a postgraduate qualification (1.75%) is high compared to the national average due to the presence of two universities in Emfuleni Local Municipality.

2.15.3 Demography

The Sedibeng District Municipality has an overall population of 916 484 (Statistics South Africa Census 2011), made up of three local municipalities however Emfuleni Local Municipality with a population of 721 663.

2.15.4 Water supply

Emfuleni Local Municipality supply water to ward 11 including Tshepiso extension 1 to 4 and surrounding area, a new Tshepiso Primary school construction will be sourced by Emfuleni Local Municipality during construction and operational phase.

2.15.5 Electricity supply

Emfuleni Local Municipality are the local authority for the provision of electricity in the area, electricity capacity on the existing electrical network is adequate to cater for the development and therefore no additional bulk infrastructure will be required.

2.16 Sewer Management

The development will require an internal waterborne sewer system that will connect to the existing Emfuleni sewer lines. The existing bulk sewer is adequate to cater for the development and no additional bulks will be required. The internal waterborne sewer system has been designed in accordance with the Engineers Department.

2.17 Storm water Management

It is anticipated that storm water will be managed within road reserves for the proposed development. Runoff will be channeled along open side drains towards the existing storm water system for the adjoining roads, or to discharge points in adjacent vegetated areas. Storm water discharge points will be provided with suitable scour / erosion protection measures where appropriate.

2.18 Domestic waste

It is anticipated that during construction and operational phase, waste are expected to be generated at a certain amount of domestic waste. Domestic waste will be collected and managed by the Emfuleni Local Municipality (domestic waste collection and disposal service). It is anticipated that such waste will be disposed of at the nearest appropriately registered and licensed Municipal General Waste Disposal Facility (Emfuleni Local Municipality).

2.19 Land use and land capacity

Land use in the area is mainly in the form of dense residential housing development, comprising a mix of formal, semi-formal and informal dwellings. Infrastructure also includes a network of tarred roads. Associated with dense settlement of this nature and the apparent lack of service delivery, is the prevalence of solid waste dumping.

According to Emfuleni Local Municipality IDP base on Spatial Development Framework identified various land use such as recreational (parks), transport entails roads and railways, commercial-businesses and factories, residential (housing), secondary school and 1 kilometer away from site warehouse facility, vacant land and main road. The project is situated under jurisdiction of Emfuleni Local Municipality.

3. Biophysical Environment

3.1 Climate

The study area of proposed project climate is typical Highveld climate. Tshepiso extension 1 to 4 and surrounding areas receive weather statistics from near weather station called Sonlandpark. During summer season in Vanderbijlpark normally receives about 544mm of rainfall per annual. It receives lowest rainfall (0mm) in June and highest (106mm) in January.

During summer month's temperature can generally be described as warm with an average maximum of 30°C-35°C midday for the month of January in Vanderbijlpark. The minimum night temperatures for January are 10°C. During winters season maximum temperature drops from warm to cool 18°C midday and minimum night temperature of 5°C.

Implication of development:

- The climatic character of the region will not have a significant impact on the development potential of the study area
- Should the construction phase be scheduled for the summer months, frequent rain could cause very wet conditions, which makes construction and environmental rehabilitation works extremely difficult;
- Such wet conditions often cause delays to building projects

3.2 Geology of the site

There is limited information regarding the local geological conditions of the site and the information available is mostly used to determine the possible occurrence of suitable mineral deposits that could potentially be developed. According to Sedibeng Spatial Development Framework of 2014-2017 states the district has covered by mainly dolomitic and are degraded. Sedibeng is widely affected by a range of geological conditions that has implications for development. These areas are around Vereeniging, Vanderbijlpark, Meyerton and surrounding areas to their west.

In the East rand, it is underlain in places by dolomite, coal and gold undermining perched waterbodies. Vanderbijlpark is underlain by waterbodies, mines and wetlands area.

Many areas in the district will be limited to restricted suitable development to mitigate against negative environment impacts. The presence of dolomite in certain areas may result in increased

development costs and will restrict certain forms of development. Degraded geological areas are found throughout the district but are confined to small pockets. The information is based on a desktop study and the geotechnical study will be commissioned and report.

3.3 Vegetation

The study area identified natural vegetation types or untransformed indigenous vegetation and the area have been extracted soil material known as borrow pit in the past and currently transformed other area of vegetation.

Identified vegetation:



Picture 3 & 4: Eragrostis rigidior and Mix grassland



Picture 5 : Aloe

and Opuntia (Prickly Pear), Cactus Family

3.4 Wetlands

The site is characterized by a small channelled artificial wetland which is located in the south-west of the site. This wetland has a reasonably low floristic diversity and is dominated by *Typhacapis* (Bulrushes) which has formed small stands with an understory of indigenous ferns (mainly, with the indigenous low creeping plant also present. A number of exotic plants also occur at low moderate densities in this wetland, including *phragmites australis* common known as reed.

The site area is undulating landscape which entails by two drains (South-West and other one North) during raining season the area is unable to release storm water because of those drains are blocked and end up forming pond, as undulating land ponds form wetland area. According to the National Water Act (Act No.36 of 1998) a wetland means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil. Wetland study



Picture 7 & 8: Wetland grass commonly known as reed: *Phragmites australis*

BASIC ASSESSMENT REPORT IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.
4. A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.
10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.

11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development

Attention: Administrative Unit of the of the Environmental Affairs Branch

P.O. Box 8769

Johannesburg

2000

Administrative Unit of the of the Environmental Affairs Branch

Ground floor Diamond Building

11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377

Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference

Number:

File Reference Number:

Application Number:

Date Received:

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

Is a closure plan applicable for this application and has it been included in this report?

NO

if not, state reasons for not including the closure plan.

N/A

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity?

YES

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person?

If no, state reasons for not attaching the list.

1. Department of Agriculture, Forestry and Fisheries

Contact Name: Ms. Mulalo Sundani

Email: mulalosu@daff.gov.za

[Tel:012](tel:0123095756) 309 5756

2. Emfuleni Local Municipality

Contact Name: Mr. LM Motapane

Email: antonm@enfuleni.gov.za

[Tel:016](tel:0169505000) 950 5000

3. Department of Water and Sanitation - (Report will be sent tomorrow, details of the contact to be provided on the final BAR).

4. Department of Land Affairs- (Report will be sent tomorrow, details of the contact to be provided on the final BAR).

5. South African Heritage Resources Agency – (Report will be sent tomorrow, details of the contact to be provided on the final BAR).

Have State Departments including the competent authority commented?

No

If no, why?

Submission only done now

Section A: Activity information

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

1.1 Project title

The proposed development of Tshepiso Primary School on Erf 5985; Tshepiso extension 3 Vereeniging within Emfuleni Local Municipality, in Gauteng Province.

1.2 Activity Description

The proposed development of Tshepiso Primary School. The school facility to be constructed will comprise the following buildings: 28 classrooms

- 5 grade R classrooms
- 1 administration building
- 1 multipurpose room
- Ablution facilities
- 1 laboratory
- 1 library
- 1 computer room
- Fencing

Select the appropriate box

The application is for an upgrade of an existing development

☐

The application is for a new development

☒

Other, specify

Does the activity also require any authorisation other than NEMA EIA authorisation?

	NO
--	----

If yes, describe the legislation and the Competent Authority administering such legislation

N/A

If yes, have you applied for the authorisation(s)?

	N/A
	N/A

If yes, have you received approval(s)? (attach in appropriate appendix)

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998
National Environmental Management : Waste Act 2008 (Act no 59 of 2008)	National/Provincial	10 March 2009
National Environmental Management: Waste Bill 39 of 2007	National	03 August 2007
National Water Act, 1998 (Act No 36 of 1998)	National/Provincial	26 August 1998
National Forest Act 84 of 1998	National/Provincial	30 October 1998
National environmental Management : Air quality Act 39 of 2004	National /Provincial	25 February 2005
National Heritage Resources Act	South African Heritage Resource Agency	28 April 1999
The Constitution of South Africa Act (No 108 of 1996)	Parliament	18 December 1996
The Occupational Health and Safety Act no 85 of 1993	Department of Labour	23 June 1993
South African Schools Act no 84 of 1996	National/Provincial	15 November 1996

Environment Conservation Act No. 73 of 1989	National	09 June 1989
Municipal Structures Act, 1998 (Act No. 117 of 1998).	Provincial	11 December 1998
Municipal Systems Act, 2000 (Act No. 32 of 2000).	Provincial	14 November 2000

Description of compliance with the relevant legislation, policy or guideline:

Legislation, policy or guideline	Description of compliance
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	According to National Environmental Management Act 1998 (Act no 107 of 1998), construction of school required 4.5 hectares that triggered to NEMA regulation GN: 327 of 07 April 2017. In terms of Activity no: 27 stated that the clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.
National Environmental Management : Waste Act 2008 (Act no 59 of 2008)	No waste management license would be required for the construction or operational phases of the proposed activity. Only a limited amount of solid construction waste will be stored and handled on the site, before being hauled away and dumped at the nearest registered landfill site.

National Environmental Management: Waste Bill 39 of 2007	<p>The draft Bill seeks to reform the law regulating waste management in order to protect human health and well-being, and the environment by providing reasonable measures for:</p> <ul style="list-style-type: none"> • The minimization of the consumption of natural resources; • The avoidance and minimization of the generation of waste; • The recovery, re-use and recycling of waste; • The treatment and safe disposal of waste as a last resort; • The prevention of pollution and ecological degradation; • Promoting and ensuring the effective delivery of waste services • Remediating land where contamination presents, or may present, a significant risk of harm.
National Water Act, 1998 (Act No 36 of 1998)	<p>The National Water Act provides for fundamental reformation of legislation relating to water resources and use. The preamble to the act recognizes that the ultimate aim of water resource management is to achieve sustainable use of water for the benefits of all users and that the protection of the quality of water resources is necessary to ensure sustainability of the nation's water resources in the interests of all water users.</p>
National Forest Act 84 of 1998	<p>National Forest Act stated that it's prohibited of destruction any indigenous tress in any natural forest without a license or permit. In terms of Section 7(1) no person may cut, disturb, damage or destroy any indigenous living tree in, or remove or</p>

	<p>receive any such tree from a natural forest except in terms of (a) a license issued under subsection (4) the minister may issue a license to cut, damage or destroy any indigenous, living tree in or remove or receive ant such tree from a natural forest. (b) An exemption from the provision of this subsection published by the minister in the Gazette on the advice of the council.</p>
<p>National environmental Management : Air quality Act 39 of 2004</p>	<p>The NEMA Air Quality represents a distinct shift from exclusively source-based air pollution control to a holistic and integrated effects –based air quality management. This approach has the following basis: the prevention and minimization of atmosphere emissions and the management and reduction of impacts associated with unavoidable releases. The implementation of pollution prevention, impact mitigation and co-operative air quality governance varies between different sectors. Within the industrial sector, pollution prevention can take various forms including innovative product design, efficient use of natural resources and shift to cleaner production methods.</p>
<p>National Heritage Resources Act</p>	<p>The Act aims to promote the good management of the national heritage resources. According to the Act the South African Heritage Resources Agency (SAHRA) must be notified during the early planning phases of project for any development that meet certain criteria. The Agency has been notified as required. Any artefacts uncovered during the construction phase will be reported to SAHRA.</p>
<p>The Constitution of South Africa Act (No 108 of 1996)</p>	<p>The Constitution of the Republic of South Africa (No. 108 of 1996) (the Constitution), the supreme law in South Africa, contains far reaching clauses relevant to environmental rights.</p>

	<p>The environmental rights are guaranteed in section 24 of the Constitution, and states that: Everyone has the right:</p> <ul style="list-style-type: none"> a. to an environment that is not harmful to their health or well-being; and b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that - <ul style="list-style-type: none"> i. prevent pollution and ecological degradation; ii. promote conservation; and iii. Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.
The Occupational Health and Safety Act no 85 of 1993	The Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of machinery; the protection of persons other than persons at work, against hazards to health and safety arising out of or in connection with the activities of persons at work. The EMPr provides for measures to ensure that objectives of the Act are met on this site.
South African Schools Act no 84 of 1996	The Minister may, after consultation with the Minister of Finance and the Council of Education Ministers, by regulation prescribe minimum uniform norms and standards for (a) school infrastructure; (b) capacity of a school in respect of the number of learners a school can admit; and (c) The provision of learning and teaching support material.
Environment Conservation Act No. 73 of 1989	In terms of section 20 waste management states that no person shall establish, provide or operate any disposal site without a permit issued by the Minister.

National Development Plan	<p>The South African Government through the Presidency has published a National Development Plan. The Plan aims to eliminate poverty and reduce inequality by 2030. The Plan has the target of developing people's capabilities to be to improve their lives through education and skills development, health care, better access to public transport, jobs, social protection, rising income, housing and basic services, and safety. It proposes the following strategies to address the above goals:</p> <ol style="list-style-type: none"> 1) Creating jobs and improving livelihoods; 2) Expanding infrastructure; 3) Transition to a low-carbon economy; 4) Transforming urban and rural spaces; 5) Improving education and training; 6) Providing quality health care; 7) Fighting corruption and enhancing accountability; 8) Transforming society and uniting the nation.
Emfuleni Municipality IDP and SDF	<p>The Spatial Development Framework (SDF) is the legislated component of the municipality's IDP that prescribes development strategies and policy guidelines to restructure and reengineer the urban and rural form. The SDF is the municipality's long-term vision of what it wishes to achieve spatially, and within the IDP programmes and projects. The SDF should not be interpreted as a blueprint or master plan aimed at controlling physical development, but rather the framework giving structure to an area while allowing it to grow and adapt to changing circumstances.</p>

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. Do not include the no go option into the alternative table below.

Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Please describe the process followed to reach (decide on) the list of alternatives below

There are no additional location alternatives for this proposed project. The site is the only one owned by the municipality and the site to serve community of Tshepiso Extension 3.

Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	Description
1	Proposal	<p>1. Site location & layout:</p> <p>The proposed site is located on Erf 5985, Portion No. 181 of the Farm Vanderbijl Park 550- IQ, Vereeniging within Emfuleni Local Municipality, in the Gauteng Province. The site is bound by Steve Tshwete Street and Peter Skhosana Street, in Tshepiso Ext 3</p> <p>The proposed project is aimed at providing "sustainable" produce and ecologically responsible practices will be incorporated into the life cycle of the development. The layout plan of the preferred alternative has been developed based on the outcome of the specialist studies and sensitivity mapping. The</p>

		<p>total development footprint would thus be 2 ha.</p> <p>The site is currently serviced by the Municipality and services are available. Access roads to and on the site are already in existence. The proposed school facility to be constructed will comprise the following buildings of 28 classrooms.</p> <p>The proposed construction of school will consist of : 5 grade R classrooms, 1 administration building, 1 multipurpose room, Ablution facilities, 1 laboratory, 1 library, 1 computer room, Fencing</p>
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In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

1. Site location and layout alternatives

The site which is being investigated in this report is the only site available to the municipality and there are no available alternative sites to be considered. The layout of the proposed project has been carefully informed by the findings of the Impact Assessment so as to give due regards for environmental protection. The layout has been attached as APPENDIX A

2. Design, technology & operational alternatives

The project will entail the development of Tshepiso Primary School, local building material will be used and the project is labour intensive only, wheelbarrows peak and shovels will be used during the development phase. The proposed project will meet the requirement of sustainable development. Energy efficient technologies and water saving devices and technology will be utilised. Waste will be sorted and recycled prior to its disposal.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

Size of the
activity:

Proposed activity (*Total environmental(landscaping, parking, etc.) and the building footprint*)

2 hectares

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

or, for linear activities:

Length of the
activity:

Proposed activity

2 hectares

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

m/km

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

Size of the
site/servitude:

Proposed activity

2000m²

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

2 Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	YES	
If NO, what is the distance over which a new access road will be built	M	

Describe the type of access road planned:

The proposed site has an access road; SteveTshwete street will be used during construction and operational phase.

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?		NO
If NO, what is the distance over which a new access road will be built	M	

Describe the type of access road planned:

N/A

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?		NO
If NO, what is the distance over which a new access road will be built	M	

Describe the type of access road planned:

N/A

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated

0

 Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
 - A4 size for activities with development footprint of 10sqm to 5 hectares;
 - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
 - A2 size for activities with development footprint of >20 hectares to 50 hectares);
 - A1 size for activities with development footprint of >50 hectares);
- The following should serve as a guide for scale issues on the layout plan:
 - A0 = 1: 500
 - A1 = 1: 1000
 - A2 = 1: 2000
 - A3 = 1: 4000
 - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
 - Rivers and wetlands;
 - the 1:100 and 1:50 year flood line;
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

The proposed project layout plan overlaid on a locality map can be seen in **Appendix A**. Maps indicating the location of sensitive features on site can be found attached as **Appendix G**.

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- The scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

7. SITE PHOTOGRAPHS

Colour photographs from the center of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under the appropriate Appendix. It should be supplemented with additional photographs of relevant features on the site, where applicable. Site photographs in the eight major compass directions have been included in **Appendix B**.

8. FACILITY ILLUSTRATION

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

SECTION B: DESCRIPTION OF RECEIVING

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Instructions for completion of Section B for linear activities

- 1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
- 2) Indicate on a plan(s) the different environments identified
- 3) Complete Section B for each of the above areas identified
- 4) Attach to this form in a chronological order
- 5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route

N/A

 Times

Instructions for completion of Section B for location/route alternatives

- 1) For each location/route alternative identified the entire Section B needs to be completed
- 2) Each alternative location/route needs to be clearly indicated at the top of the next page
- 3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives

N/A

 time (complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route

N/A (complete only when appropriate for above)

Section B – Location/route Alternative No.

N/A (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	Erf No. 5988, Portion 181 of VanderbijlPark Farm No.550-IQ Tshepiso Extension 3, Sedibeng East, Gauteng. The site is bound by Steve Tshwete Street and Peter Skhosana Street, in Tshepiso Ext 3, Vereeniging.
--	---

2. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:

Latitude (S):

Longitude (E):

S 26°39' 12.25"	E 27°52' 30.23"
0	0

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Starting point of the activity

Middle point of the activity

End point of the activity

0	0
0	0
0	0

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives
attached

N/A

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	9631/2003
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3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

4. LOCATION IN LANDSCAPE

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

Ridgeline	Plateau	Side slope of hill/ridge	Valley	Plain	Undulating plain/low hills	River front
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5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

Shallow water table (less than 1.5m deep)

Dolomite, sinkhole or doline areas

Seasonally wet soils (often close to water bodies)

Unstable rocky slopes or steep slopes with loose soil

Dispersive soils (soils that dissolve in water)

Soils with high clay content (clay fraction more than 40%)

Any other unstable soil or geological feature

To be confirmed	
Once Geotechnical study is completed	
To be confirmed	
	NO
	NO
To be confirmed	
	NO

An area sensitive to erosion

	NO
--	----

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s)

	NO
--	----

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):

Longitude (E):

N/A

c) are any caves located within a 300m radius of the site(s)

	NO
--	----

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):

Longitude (E):

N/A	N/A
-----	-----

d) are any sinkholes located within a 300m radius of the site(s)

YES	NO
-----	----

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):

Longitude (E):

N/A	N/A
-----	-----

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)?

	NO
--	----

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

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

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 50	Natural veld with scattered aliens % =1	Natural veld with heavy alien infestation % =0	Veld dominated by alien species % =	Landscaped (vegetation) % =19
Sport field % =0	Cultivated land % =0	Paved surface (hard landscaping) % =0	Building or other structure % =0	Bare soil % =0

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site

	NO
--	-----------

If YES, specify and explain:

N/A

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.

	NO
--	-----------

If YES, specify and explain:

N/A

Are there any special or sensitive habitats or other natural features present on the site?

	NO
--	-----------

If YES, specify and explain:

N/A

Was a specialist consulted to assist with completing this section

NO

If yes complete specialist details

Name of the specialist:

Qualification(s) of the specialist:

Postal address:

Postal code:

Telephone:

Cell:

E-mail:

Fax:

Are any further specialist studies recommended by the specialist?

NO

If YES, specify:

If YES, is such a report(s) attached?

NO

If YES list the specialist reports attached below

Signature of specialist:

Date:

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA


Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	5. Koppie or ridge
----------------	---------------------------	-----------------------------	----------------------	--------------------

6. Dam or reservoir	7. Agriculture	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial ^{AN}	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport ^N	23. Train station or shunting yard ^N	24. Railway line ^N	25. Major road (4 lanes or more) ^N
26. Sewage treatment plant ^A	27. Landfill or waste treatment site ^A	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33. Spoil heap or slimes dam ^A	34. Small Holdings	
Other land uses (describe):				

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

	1	1	1,25	25	8	
	1	8	19	8,25	8	
WEST	1	2,8		8,25	8	EAST
	8	8	1,8	8	8	
	8	8,1	8	7	14,25	
SOUTH						

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "A" and with an "N" respectively.

Have specialist reports been attached

	NO
--	----

If yes indicate the type of reports below

N/A

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

Tshepiso extension is considered is a developing area where majority of dwellers receive municipal services such as water, electricity, refuse removal and sewage. Unemployment rate is high for those living in Tshepiso extensions.

MONTHLY INCOME	MALE	FEMALE	TOTAL
No income	23080	64606	87 686
1 – 400	57571	60315	117 886
401 – 800	12726	14519	27 245
801 – 1600	43086	14519	95 211
1600 – 3200	36144	52125	61 522
3201 – 6400	31048	17138	48 186
6401 – 12800	26027	16585	42 612
12801 – 25600	18372	9933	28 305
25601 – 51200	7088	2721	9 809
51201 – 102400	1895	512	2407
102401 – 204800	587	339	926
204801 or more	440	190	630
Unspecified	33724	35410	60 134
Total	299 450	305 301	60 4296

Table : Income per Month: (Source: Statistics South Africa Census 2011)

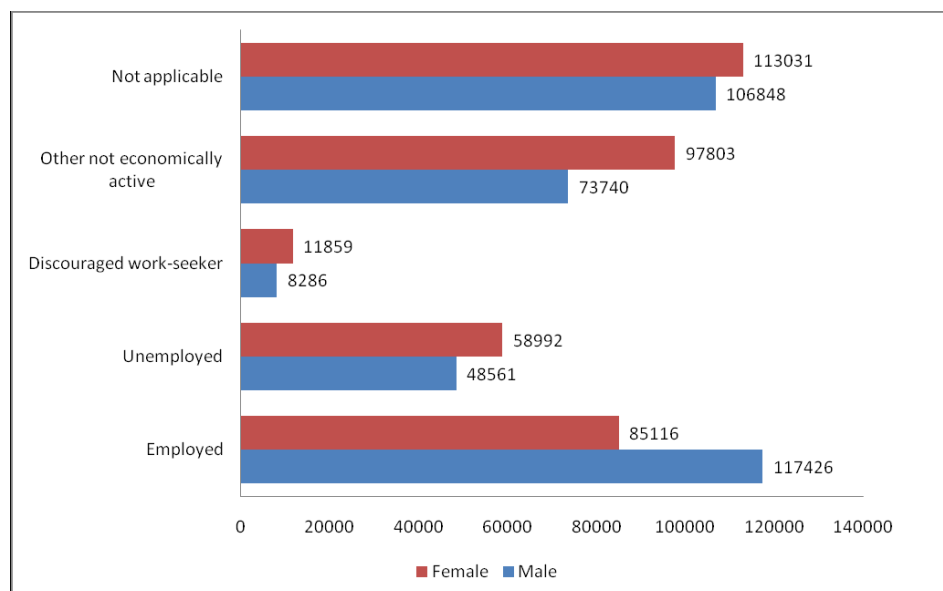


Figure: Emfuleni Local Municipality employment status.(source : stats SA 2011)

The location of Sedibeng District within Gauteng Province, statistics table provides information of Emfuleni Local Municipality captured from Sedibeng Spatial Development Framework of 2014-2017.

MONTHLY INCOME	MALE	FEMALE	TOTAL
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204801 or more	440	190	630
Unspecified	33724	35410	60 134
Total	299 450	305 301	60 4296

Table 2: Income per Month(Source: Statistics South Africa Census 2011)

Sedibeng District Spatial Development Framework indicates that the above table indicates that 54% of the economically active population either income or is paid less than R1 600 per month. Furthermore, 11.4% of the active population is described as unspecified, which generally means these people are mainly engaged in the informal sector of the economy.

Employment

The secondary sector (in particular manufacturing) and the tertiary sector (in particular community services) are the major economic contributors of significance in the District. This is reflected in both the economic activity per sector illustrated above and the employment per sector, as illustrated below.

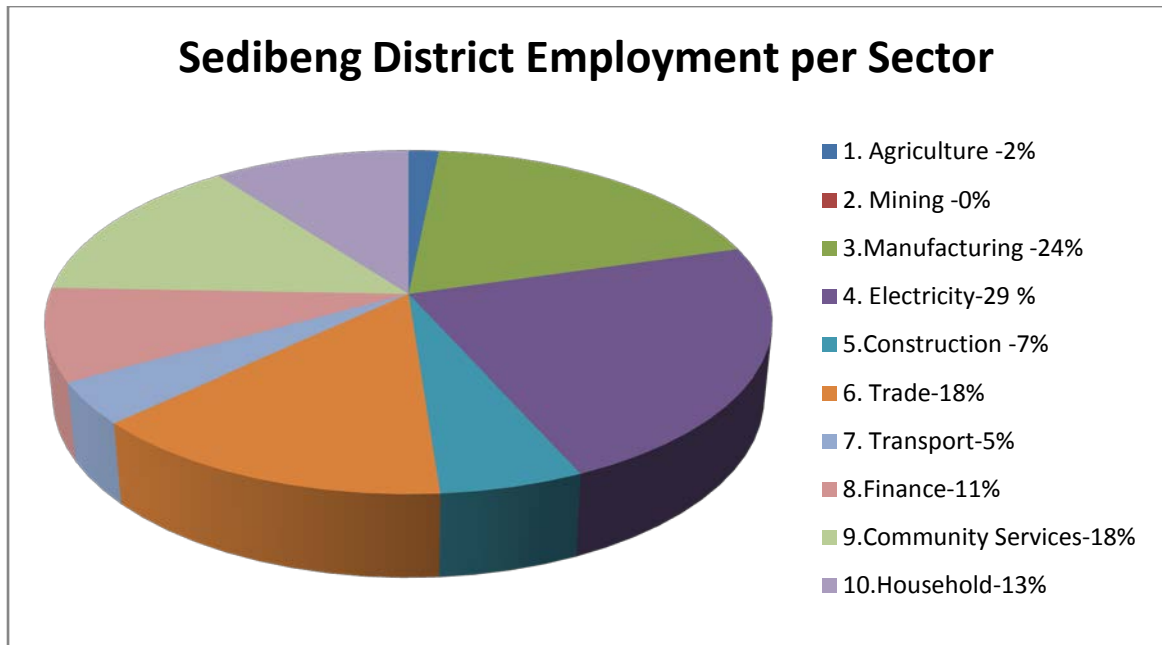


Figure 2: Pie chart of Sedibeng District Employment rate

Education

According to the Statistics South Africa Census 2011, the educational levels for the district, 4.46% of the population has no schooling at all, 25.7% of the population may be functionally illiterate as it has less than grade 7 schooling, Far more males have a technical education than females, The presence of people with a postgraduate qualification (1.75%) is high compared to the national average due to the presence of two universities in Emfuleni Local Municipality.

Demography

The Sedibeng District Municipality has an overall population of 916 484 (Statistics South Africa Census 2011), made up of three local municipalities however Emfuleni Local Municipality with a population of 721 663.

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of a site-
- (i) exceeding 5 000 m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m² in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If YES, explain:

	NO
--	----

N/A

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

Heritage Impact Assessment is being commissioned and awaiting the report.

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

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

	NO
	NO

If yes, please attached the comments from SAHRA in the appropriate Appendix

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?

	YES
--	-----

If yes, has any comments been received from the local authority?

Awaiting comments

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

The draft of basic assessment report will be submitted to the local authority.
--

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

N/A

3. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?

	NO
--	----

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

N/A

If "NO" briefly explain why no comments have been received

Any comments received will be included in the final BAR

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 – Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report(Not available at the time of the process)

Appendix 8 –Comments from I&APs on amendments to the BA Report (Not available at the time of the process)

Appendix 9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

- 1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
- 4) Each alternative needs to be clearly indicated in the box below
- 5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives

N/A

 times (complete only when appropriate)

Section D Alternative No.

N/A

 (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

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

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

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

YES	
Not able to predict at this stage of the project	

Waste generated during construction project will be taken to designated location of dumping waste hence that different dust bin will be place on site. The collection of waste materials will be contacted with local municipality waste management. Emfuleni local municipality has legal landfill site about 3km away from proposed site, whereby transportation of delivering waste to landfill will not be long travelling distance.

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

Solid waste will be disposed at a local landfill which authorized by Emfuleni local municipality. Disposal of solid waste will be done through suitably of license waste disposal facility.

Will the activity produce solid waste during its operational phase?

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

YES	
Not able to predict at this stage of the project	

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

Construction solid waste will be disposed of in litter bins and waste skips, to ensure that all generated waste are taken to the bins and disposal of waste will be requires to be disposed at legal landfill site, possible Emfuleni Local Municipality have Landfill site at Tshepiso Phase 4. All solid waste generated will be collected and disposed it at local landfill. If any of recyclable waste then will be taken to recycling companies.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?

	NO
--	----

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

Confirmation will be obtained from Emfuleni local municipality, if there is sufficient space exist for the waste. However proposed site is approximately 3km from Municipal landfill site whereby local municipality deposited waste.

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

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

	NO
--	----

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

	NO
--	----

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

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

<p>In terms of waste management , waste that will be generated within the construction premises such as paper, zinc, glass, plastic and polystyrene has to be separated to different place, with an objective of taken to recycling and reuse firm.</p> <p>Health and safety management will ensure that all materials and equipments are correctly placed where it cannot put risk to anyone including animals. Waste management intended to reduce adverse effects of waste to health and the environment.</p>

Liquid effluent (other than domestic sewage)

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

	NO
--	----

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

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?

	NO
--	----

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

	NO
--	----

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

Not known

If yes describe the nature of the effluent and how it will be disposed.

N/A

Note that if effluent is to be treated or disposed on site the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA

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

NO

If yes, provide the particulars of the facility:

Facility name:

Contact

person:

Postal

address:

Postal code:

Telephone:

E-mail:

Cell:

Fax:

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

N/A

Liquid effluent

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?

NO

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

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?

NO

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

NO

If yes describe how it will be treated and disposed off.

--

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

	NO
--	----

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

	NO
--	----

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

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

There will be possibility of producing emission during construction period such as movement of heavy construction trucks/vehicles. First phase of operation has high expectation of dust. However the EMpr will identify mitigation measures of emissions. The development do not require an Air Emissions License as per NEM:AQA.

2. WATER USE

Indicate the source(s) of water that will be used for the activity

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

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

the volume that will be extracted per month:

N/A

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

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

	NO
--	----

If yes, list the permits required

N/A

If yes, have you applied for the water use permit(s)?

	NO
--	----

If yes, have you received approval(s)? (attached in appropriate appendix)

	NO
--	----

Local municipality supply Tshepiso extension 3 then contractors will be provided water from municipality. In addition of improvement of water supply to the schools; it can be suggested of providing project with the plan of installation water tanks after completion of project.

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

Sedibeng District Municipality will supply electricity to Emfuleni Local Municipality then Tshepiso Primary school will be supplied power from municipality. In case of global climate change to support of renewable energy sources incorporation of installation of solar panels. However this it can be at alternative energy source.

If power supply is not available, where will power be sourced from?

N/A

4. ENERGY EFFICIENCY

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

School buildings will comply with the following:

- Use of building material originating from sensitive environmental resources should be minimised.
- Building material should be legally obtained by the supplier, e.g. wood must have been legally harvested, sand should be obtained only from legal borrow pits and from commercial sources.
- Building material that can be recycled/ reused should be used rather than building material that cannot.
- Use highly durable material for part of the building that is unlikely to be changed during the life of the buildings (unlikely to change due to e.g. renovation, fashion, changes in family life cycle) is highly recommended.

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

Cleaner production techniques can be important tools for planning and constructing buildings in a way that minimizes their environmental impacts. For example, green building (using energy-efficient and non-polluting construction materials, sewage systems and energy sources) is an increasingly important way for the building industry to decrease its impact on the environment.

- ✓ Fluorescent light bulbs instead of incandescent bulbs should be utilized in the classrooms.
- ✓ To enhance energy saving, solar heaters in the staff room or admin block could be installed. The initial outlay may be expensive but there will be a considerable amount of savings in the long term.

Solar powered geysers can be installed and used in the proposed development

Section E: impact assessment

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts as well as the impacts of not implementing the activity (Section 24(4)(b)(i)).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

1. Why is it important to investigate a proposed site
2. Why is necessary to conduct Environmental Impact investigation of the proposed site?
3. When the construction expected to be commencement?
4. Is the contractor already appointed for the school project?
5. Community asked if the school development will employee local people?

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included) (A full response must be provided in the Comments and Response Report that must be attached to this report):

1. The borrow pit like, that's the slope whereby downstream runoff pass through and It

has a negative during raining season. School development will affect fauna and flora habitat. The positive impact would be dense of vegetation.

2. The main purpose of conducting site investigation is to identify impact that will be encounter by construction and to avoid such cause then identify mitigation measures.
3. The process of basic assessment normal takes 3 months but for EIA takes up to 6 months thus expectation of the commencement of the project will be determined after compiled of all study area reports.
4. No. The project is still on the planning stage. Thato explained the environmental authorization should be obtained prior to commencement of the construction works. She explained that currently the process is ongoing, once public participation has been completed the draft Basic assessment report will be compiled and sent out for public comments, furthermore the final BAR will be submitted to the authorizing department to issue an environmental authorization.
5. The priority of School project is for local community members, as development will be taking place at Tshepiso extension 3, meaning prior of employment from local community members.

(Refer to the minutes of the meeting attached as Appendix 5)

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilized in the rating of significance of impacts

APPROACH TO THE BASIC ASSESSMENT

1) METHODOLOGY OF IMPACT ASSESSMENT

According to the DEA IEM Series guideline on "Impact Significance" (2002), there are a number of quantitative and qualitative methods that can be used to identify the significance of impacts resulting from a development. The process of determining impact significance should ideally involve a process of determining the acceptability of a predicted impact to society. Making this process explicit and open to public comment and input would be an improvement of the BA process. Lesekha Consulting approach to determining significance is generally as follows:

- Use of expert opinion by the specialists ("professional judgment"), based on their experience, a site visit and analysis, and use of existing guidelines and strategic planning documents and conservation mapping(e.g. SANBI biodiversity databases);
- Our approach is more a qualitative approach - we do not have a formal matrix calculation of significance as is sometimes done.

2) SPECIALIST CRITERIA FOR IMPACT ASSESSMENT

The following methodology has been provided by the Lesekha Consulting for incorporation into assessments:

Assessment of Potential Impacts

The assessment of impact significance is based on the following conventions:

Nature of Impact - this reviews the type of effect that a proposed activity will have on the environment and should include "what will be affected and how?"

Spatial Extent - this should indicate whether the impact will be:

- Site specific;
- Local (<2 km from site);
- Regional (within 30 km of site); or
- National.

Duration - The timeframe during which (lifetime of) the impact will be experienced:

- Temporary (less than 1 year);
- Short term (1 to 6 years);
- Medium term (6 to 15 years);
- Long term (the impact will cease after the operational life of the activity); or
- Permanent (mitigation will not occur in such a way or in such a time span that the impact can be considered transient).

Intensity - it should be established whether the impact is destructive or innocuous and should be described as either:

- High (severe alteration of natural systems, patterns or processes such that they temporarily or permanently cease);
- Medium (notable alteration of natural systems, patterns or processes; where the environment continues to function but in a modified manner); or
- Low (negligible or no alteration of natural systems, patterns or processes); can be easily avoided by implementing appropriate mitigation measures, and will not have an influence on decision-making.

Probability - this considers the likelihood of the impact occurring and should be described as:

- Improbable (little or no chance of occurring);
- Probable (<50% chance of occurring);
- Highly probable (50 – 90% chance of occurring); or
- Definite (>90% chance of occurring).

Reversibility - this considers the degree to which the adverse environmental impacts are reversible or irreversible. For example, an impact will be described as low should the impact have little chance of being rectified to correct environmental impacts. On the other hand, an impact such as the nuisance factor caused by noise impacts from wind turbines can be considered to be highly

reversible at the end of the project lifespan. The assessment of the reversibility of potential impacts is based on the following terms:

- High - impacts on the environment at the end of the operational life cycle are highly reversible;
- Moderate - impacts on the environment at the end of the operational life cycle are reasonably reversible;
- Low - impacts on the environment at the end of the operational life cycle are slightly reversible; or
- Non-reversible - impacts on the environment at the end of the operational life cycle are not reversible and are consequently permanent.

Irreplaceability - this reviews the extent to which an environmental resource is replaceable or irreplaceable. For example, if the proposed project will be undertaken on land that is already transformed and degraded, this will yield a low irreplaceability score; however, should a proposed development destroy wetland systems for example, these may be considered irreplaceable and thus be described as high. The assessment of the degree to which the impact causes irreplaceable loss of resources is based on the following terms:

- High irreplaceability of resources (this is the least favourable assessment for the environment);
- Moderate irreplaceability of resources;
- Low irreplaceability of resources; or
- Resources are replaceable (this is the most favourable assessment for the environment).

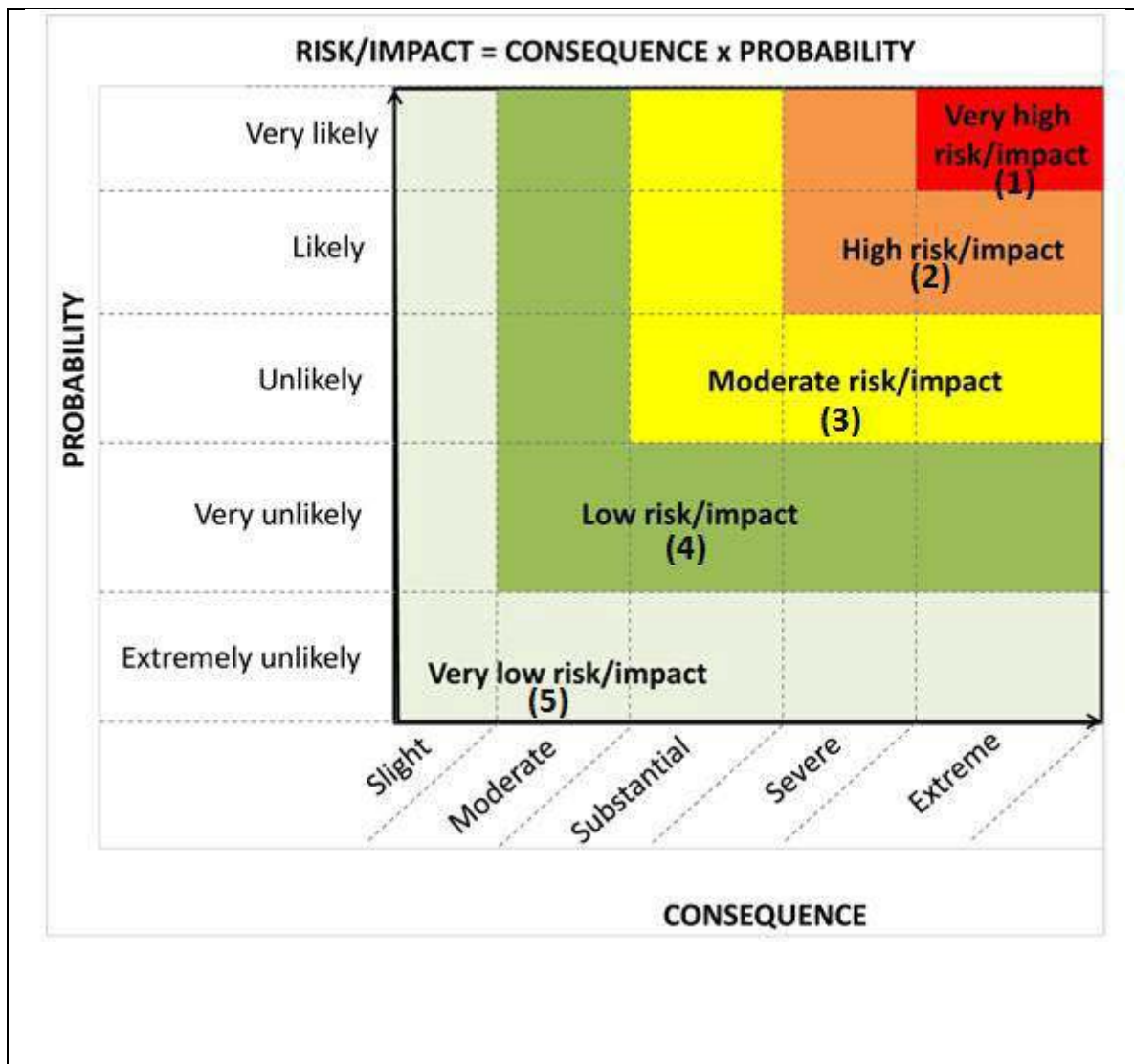


Figure 5: Guide to assessing risk/impact significance as a result of consequence and probability.

The status of the impacts and degree of confidence with respect to the assessment of the significance is stated as follows:

Status of the impact: A description as to whether the impact will be:

- Positive (environment overall benefits from impact);
- Negative (environment overall adversely affected); or
- Neutral (environment overall not affected).

Degree of confidence in predictions: The degree of confidence in the predictions, based on the availability of information and specialist knowledge. This should be assessed as:

- High;
- Medium; or
- Low.

Based on the above considerations, the specialist provides an overall evaluation of the significance of the potential impact, which should be described as follows:

- **Low to very low:** the impact may result in minor alterations of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated;
- **Medium:** the impact will result in moderate alteration of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated; or
- **High:** Where it could have a “no-go” implication for the project unless mitigation or re-design is practically achievable. Furthermore, the following must be considered:
- Impacts should be described both before and after the proposed mitigation and management measures have been implemented.
- All impacts should be evaluated for the construction, operation and decommissioning phases of the project, where relevant.
- The impact evaluation should take into consideration the cumulative effects associated with this and other facilities which are either developed or in the process of being developed in the region, if relevant.

Management Actions:

- Where negative impacts are identified, mitigatory measures will be identified to avoid or reduce negative impacts. Where no mitigatory measures are possible this will be stated.
- Where positive impacts are identified, augmentation measures will be identified to potentially enhance these.
- Quantifiable standards for measuring and monitoring mitigatory measures and enhancements will be set. This will include a programme for monitoring and reviewing the recommendations to ensure their on going effectiveness.

Monitoring:

Specialists should recommend monitoring requirements to assess the effectiveness of mitigation actions, indicating what actions are required, by whom, and the timing and frequency thereof.

Cumulative Impact:

Consideration is given to the extent of any accumulative impact that may occur due to the proposed development. Such impacts are evaluated with an assessment of similar developments already in the environment. Such impacts will be either positive or negative, and will be graded as being of negligible, low, medium or high impact.

Mitigation:

The objective of mitigation is to firstly avoid and minimise impacts where possible and where these cannot be completely avoided, to compensate for the negative impacts of the development on the receiving environment and to maximise re-vegetation and rehabilitation of disturbed areas. For each impact identified, appropriate mitigation measures to reduce or otherwise avoid the potentially negative impacts are suggested. All impacts are assessed without mitigation and with the mitigation measures as suggested. Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts. Feasible site alternatives (i.e. location and property alternatives) do not exist for the proposed project. The No-Go alternative will be considered.

PROPOSAL: IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE
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Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
ACCESS ROADS				
Biophysical impacts due to development and use of access roads during the development of the school.	Medium (Negative)	No access roads should be constructed on a sensitive area. Routing roads will be the same as the existing access track to the development site unless tracks are impassable due to physical characteristics or unless they pass through or close to sensitive areas. Unnecessary compaction of soil by heavy vehicles must be avoided; construction vehicles must be restricted to demarcated access and turning areas. Agreed turning areas are to be formalized and used by contractors. No turning manoeuvres other than at the designated places must be permitted. Machine/vehicle operators should receive clear instructions to remain within demarcated access routes and operations/construction areas.	Low	Low
Access to site	Medium	The contractor should ensure that the access roads leading to the construction are in good conditions.	Low	Low
Risk associated with materials on site	Medium	All Material must be stable and well secured to avoid collapse and possible injury to site workers/local residents. No materials are to be stored in unstable or high-risk areas such as in floodplains or on steep slopes.	Low	Low
Housekeeping Establishment	Medium	Storage areas of all the building materials and equipments	Low	Low

and Maintenance of storage areas		<p>.must be designed, demarcated and fenced if necessary. Location of storage areas must take into account prevailing winds, distance to water bodies, boreholes and on-site topography. Storage areas should be secure and be safe from access by children and animals. Fire prevention facilities must be present at all storage facilities.</p> <p>Contractors/Developer must ensure that storage facilities are cleaned and maintained regularly and that leaking containers are disposed of without spillage onto the soil</p>		
ENVIRONMENTAL EDUCATION & AWARENESS				
Various biophysical and sociological impacts due to poor staff conduct of contractor Staff Conduct on Site Social Environment & Affected Parties (IAPs).	High	<p>The contractor/developer should ensure proper supervision of employees at all times. Staffs needs to be made aware of the following general rules which must be followed at all times. No alcohol or drugs are to be present on site. No firearms are allowed on site or in vehicles transporting staff to/from site, unless used by security personnel. Prevent excessive noise. No harvesting of firewood from the site or from the areas adjacent to it.</p>	Low	Low

Potential Impacts	Significance rating of impacts (positive or negative):	Proposed Mitigation	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
CULTURAL HERITAGE				
All the archaeological, historical or paleontological objects found on the development activity must not be disturbed.	Medium	Before construction starts, all staff must be informed regarding possible archaeological, historical or paleontological objects (e.g. tools, human's remains, fossils, etc) of value and what they look like. The engineer or contractor/developer must be notified should such an item be uncovered. All work should cease immediately and SAHRA GP will be notified if any archaeological, historical or paleontological remains are discovered during development.	Low	Low
AQUATIC HABITAT IMPACTS				
During the construction phase this refers to the direct physical destruction or disturbance of aquatic habitat (affecting current ecological state and functionality) caused by vegetation clearing, disturbance of in-stream, riparian	Medium	Habitat can be impacted directly through the complete removal or partial disturbance of existing indigenous wetland/riverine vegetation during construction by machinery and workers accessing the site, impacting directly on the	Low	Low

<p>and wetland habitat and alteration of river profiles (including stream bed and banks).</p>		<p>ecological condition of vegetation and availability of natural habitat. Impacts are immediate and associated with a short-term loss of potential habitat and aquatic invertebrates/insects. Construction activities in the vicinity of the rivers on site may result in decreased bank stability within the construction zone, potentially resulting in localised erosion and increased lateral sediment delivery to aquatic resources. Impacts to affected areas, potential sedimentation.</p> <p>As such, the existing poor condition of wetland and riparian habitat and limited diversity associated with this particular project site lowers the intensity of this impact quite significantly.</p> <p>Special care will be taken to demarcate the buffer zone and to actively prevent encroachment into this zone during construction barring construction.</p> <p>Buffer zones must be established and maintained with indigenous vegetation cover as open space areas with appropriate alien plant control and slashing to maintain grass.</p> <p>A storm water management system is implemented to ensure that runoff volumes/velocities are closely aligned with pre-development conditions at the site. Measures are undertaken to stabilise and reduce the risk of instability of any embankments so as to</p>		
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		limit the risk of slumping and erosion.		
SOIL				
Erosion of stockpiled material (sand and steel etc).	Medium	Material must be stockpiled in such a way that it cannot fall or cause injury or damage to properties or the natural environment. Stockpiles must not exceed 2m in height and must be covered if exposed to heavy wind or rain. Alternatively, low walls or berms must be constructed around the stockpiles. On completion of the construction all exposed soil must be revegetated, preferably with indigenous vegetation. Implementation of erosion control measures is essential.	Low	Low
STORMWATER				
Poor storm water Management during construction can lead to erosion and loss of soil.	Medium	Stormwater control must be implemented during construction; however this is a temporary impact of the proposal. A drainage system must be established for the construction camp. Contaminated stormwater must not be allowed to enter the river. The drainage system must be regularly checked to ensure an unobstructed water flow. To reduce erosion and loss of soil/silt during rain, slit traps should be used on slopes and areas that are likely to erode during development. If vegetation is to be removed, it must be done in phases to ensure that a minimum area of soil is	Low	Low

		exposed to potential erosion at any one time. Storm-water outfalls should be designed to reduce flow velocity and avoid stream bank and soil erosion. Disturbed surfaces must be re-vegetated immediately after completion of construction activities in each area.		
IMPACTS ON WATER				
Impact on the regional water balance as a result of increased water usage.	Low	Water is required during the construction phase for various purposes, such as earthworks, as well as to fulfil the requirements of construction personnel on-site. Where possible, water conservation should be practiced. Water conservation techniques include making construction personnel aware of the importance of limiting water wastage, as well as reducing water use during the cleaning of the site (such as sweeping the site before it is being washed). Contractor should also ensure that the water infrastructure on site is monitored for leakages on a regular basis to prevent wastage.	Low	Low
FLORA				
Risk of alien invasive Encroachment into disturbed areas.	Low	At present, alien encroachment is minimal but must be controlled during construction. The establishment or spread of alien plant species on site must be monitored and the correct removal and disposal of alien plant species must be followed. Rehabilitation of disturbed areas must commence as soon as construction activities are completed in	Low	Low

		those areas.		
Damage and removal of Existing vegetation.	Low	Workers must be educated / trained on minimizing damage to vegetation during construction. Only vegetation that must be removed for the construction of the school should be removed and the footprint must be kept to a minimum. Rehabilitation of disturbed areas must be undertaken with locally indigenous species upon completion of construction activities. Disturbance of indigenous fauna and flora, and the natural ecology in the surrounding areas must be avoided where possible. Gathering of firewood, fruit, medicinal plants, crops or any other natural material or the collecting of animals on site or in areas adjacent to the site is not allowed.	Low	Low
FAUNA				
Impact of removal of riparian vegetation	High	Disturbance of mammals, birds, reptiles, other animals and their habitats must be prevented. If subterranean mammals are found in a construction area, construction must stop and the Environmental Control Officer must arrange for their capture and translocation to a safe area.	Low	Low
NOISE				
Noise generated during construction can result in health and nuisance to neighboring property owners.	Low	With regard to unavoidable very noisy construction activities in the area, these should be screened off with acoustic screens where possible. However if	Low	Low

		<p>there no acoustic screening during exceptionally noisy construction period then prior warning to community members would be extremely important.</p> <p>During construction activities, it must be ensure that everyone on site comply with the requirement of the Occupational Health and Safety Act (Act 85 of 1993) and Employees must be issued with appropriate Personal Protective Equipment.</p>		
TRAFFIC				
The construction phase is likely to have traffic for delivering earth moving vehicles and materials on site	Medium	<p>Access road with designated by road sign and speed limits.</p> <p>Planning of utilizing access route. During the construction phase, suitable parking areas should be created and designated for construction trucks and vehicles.</p> <ul style="list-style-type: none"> • A construction supervisor should be appointed to co-ordinate construction traffic during the construction phase (bydrawing up a traffic plan prior to construction). • Road barricading should be undertaken where required and road safety signs should be adequately installed at strategic points within the construction site. 	Low	Low
HEALTH AND SAFETY IMPACT				

During construction, health and safety impacts can affect not only those working on the site, but they can also affect those residing in close proximity, as well as those passing through/by the site. A good, clear interpretation of the Health and Safety Rules and Guidelines can help to prevent potentially dangerous and fatal incidents from occurring. Numerous families currently reside within the wetland area and will continue to do so during the construction phase, thus special care must be taken so as to prevent any injuries to residents. Health and safety impacts must be assessed before construction workers commence work, as well as during their work activities so as to prevent harm to themselves, either via machinery operation, construction materials or through improper ergonomics.	High	The safety of residents and construction workers is of great importance as people can be injured and in extreme circumstances death may even result. For these reasons it is very important that mitigation measures are strictly adhered to and enforced. Injury and loss of life is considered highly significant and once it has occurred cannot be reversed. The overall significance of the potential death/injury to residents/construction workers is considered to be Insignificant provided that the mitigation measures, stipulated. All relevant Health and Safety legislation as required in South Africa should be strictly adhered to including the Occupational Health & Safety Act, 1993 (Act No.85 of 1993). Potentially hazardous areas (i.e. trenches) will be demarcated and clearly marked.	Low	Low
Waste generation				
Structuring of sewage waste during construction requires proper treatment. If sewage connection is not properly fitted it can have adverse impact on both biophysical and socio-economic environment	High	The contractors must be responsible for the maintenance of the chemical toilets. All incidents must be reported to the responsible site officer as soon as possible.	Low	Low
Air quality				
Construction activities have been the source	High	To reduce dust entrainment water or an appropriate	Low	Low

of dust generated during construction activities. Generation of fumes from vehicles emissions may pollute the air		dust suppressant must be sprayed on topsoil of material storage site until such time as the material storage site to control dust. There must be strict speed limits of dust road to prevent entrainment into the atmosphere. Vehicle transporting material must be covered by a tarpaulin, or watered down to prevent dust pollution. All earth moving vehicles and equipment must be regularly maintained to ensure their integrity and reliability. No repairs are to be performed on an impervious surface with clean and dirty water separation systems in place		
TRAFFIC				
The construction phase is likely to have traffic for delivering earth moving vehicles and materials on site	Medium	Access road with designated by road sign and speed limits Planning of utilizing access route.	Low	Low
WASTE GENERATION				
Structuring of sewage waste during construction requires proper treatment. If sewage connection is not properly fitted it can have adverse impact on both biophysical and socio-economic environment	High	The contractors must be responsible for the maintenance of the chemical toilets. All incidents must be reported to the responsible site officer as soon as possible.	Low	Low
STORMWATER				

Minimum impact of construction phase on roadway and driveway site. Erosion could result on losing material of being exposed at downstream.	Medium	Short-term impacts during construction are commitment to use the strategy to mitigate erosion.	Low	Low
SECURITY				
Construction camp requires security reason to keep materials and other equipment's safe due to increased number of personnel on site.	Medium	Security guards must be on site all the time to secure property from theft.To use advance technology, light, and alarm system. Weapons must not be allowed on site. No unauthorized personnel should access the site.	Low	Low
Socio-economic impact				
Impact: Employment creation and skills development opportunities during the construction phase, which is expected to give rise to approximately several new jobs. This impact is rated as positive.	Medium positive	<p>Liaise with the client to maximise job creation opportunities during the construction phase.</p> <ul style="list-style-type: none"> Enhance the use of local labour and local skills as far as reasonably possible. Where the required skills do not occur locally, and where appropriate and applicable, ensure that relevant local individuals are trained. Ensure that an equitable percentage allocation is provided for local labour 	High Positive	High Positive

		<p>employment as well as specify the use of small-to-medium enterprises and training specifications in the Contractors contract.</p> <ul style="list-style-type: none"> • Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible. 		
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NO GO ALTERNATIVE

Direct impacts:

Should the development of Tshepiso Primary School not be achieved the following will not be addressed:

- Tshepiso extension 3 is a developing area with approximately 1550 housing units and has a high potential to expand to more than 5000 housing units and therefore the area will continue not to have primary school in this area and learner's will still attend schools in extension 1 and 2 .
- The schools within 3km radius of extension 3 are almost to capacity and overcrowding will continue and no relieve to the existing schools in extension 1 and 2 will occur.
- None of the impacts mentioned above will occur.
- The existing site will remain uncleared which will result in no clearance of indigenous vegetation and in addition, no clearance of present alien species.
- The need for a mega primary school as identified by the Department of Education would not be met.
- Parent will still continue to spend transport money for the pupils to reach school, non construction of a new school in this area will not reduce transporting costs and pressure in the schools in Sedibeng West.
- The long-term objective of providing functional and modern schools that enable quality teaching and learning to protect and promote the right of every learner to quality, equitable and relevant education would not be achieved.
- There would still be continued lack of primary schools that will enhance learning thus leading to high level of education in Tshepiso Extension 3.
- A number of potential employment opportunities will not be realised, and high unemployment rate of educators will not be addressed.

- School environment and community infrastructure will not be improved.
- A school that supports the integrity of the natural and social environment and provide opportunities for educational activities to sustain the learners for future generations would not be achieved if the school is not developed.
- The mission and vision of the department of Education for access and better education for all will not be achieved.
- Dropout rate will not be curbed as a result of the absence of primary school within walkable distance; learners will be daunted to travel to school especially in cold winter.
- Banking of classes due to no travelling fares available will still continue.
- No creation of both temporary and permanent jobs during construction and operation would be achieved to the poverty stricken community of Tshepiso Extension 3.
- School will continue to be overcrowded and with no availability of school infrastructure like science laboratory, sports facilities, library and other essential amenities.

Should the project not go ahead as planned, the current status quo will remain and probably the availability of secondary school at Tshepiso Extension 3 will not be addressed and this will have negative implications towards the envisaged improved living conditions of the community.

Indirect impacts:

- There are no indirect impacts during the construction phase for the No-go Option.

Cumulative impacts:

There are no cumulative impacts during the construction phase for the No-go Option.

PROPOSAL: IMPACTS THAT MAY RESULT FROM THE OPERATION PHASE

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
SOIL EROSION AND LANDSCAPE CHARACTERISTICS				
Uncontrolled storm water runoff and potential associated with soil erosion.	High	<p>Evidently, continuous trampling reduces the ability of the soil to recover, due to the decrease in abundance of active roots.</p> <p>Mitigation - Ongoing prevention of soil erosion, storm water drainage on site must conform to the natural drainage regime of the site.</p> <p>Correct drainage of the site should ensure that potential contaminants do not come into contact with soil. Ensure that vegetation protection over soil in landscaped areas is maintained during operation to avoid erosion. The design of the school and its surroundings must include the designation of pathways to which movement of people</p>	Low	Low

		<p>on foot is restricted. This will prevent the chances of erosion occurring through people movement.</p> <p>The project manager must be proactive in preventing soil erosion through maintaining drainage on roads. Unnecessary denudation of soil surfaces with new developments must be prevented.</p>		
Erosion and sedimentation				
Erosion and sedimentation impacts are linked to alterations in hydrological regimes as a result of increased storm water floodpeaks and altered terrestrial surfaces in the catchment area of wetlands/ivers.	High	<p>Increases in peak discharge may significantly increase stream power, thereby increasing the risk of erosion (localised scouring and incision) and resultant sedimentation of watercourses. Local site factors such as soil erodibility, vegetation cover, gradient of local slopes and regional rainfall/runoff intensity will affect the probability and intensity of erosion impacts.</p> <p>Typical results of erosion & sedimentation on water resources may include:</p>	Low	Low

		<ul style="list-style-type: none"> - Locally increased channel slopes. - Loss of in-stream biotope diversity due to scouring or blanketing of sites with sediment. - Localised scouring at stormwater discharge points into watercourses. - Lowering of the local water table and subsequent desiccation of adjacent wetland and riparian areas. 		
STORM WATER IMPACTS				
Erosion of surrounding banks due to storm water. Hardened surfaces, as opposed to undeveloped areas natural vegetation, will lead to an increase in runoff, which in turn may lead to increased pressure being exerted on the school storm water control system.	High	Storm water control measures will need to be implemented to ensure run off from the road and footpath does not cause erosion to the surrounding environment. With no municipal sewer systems in the area, all storm water should be directed to the dam(water course) or surrounding vegetative environment via storm water channels or pipelines without the possibility of sediment being picked up or structural	Low	Low

		damage to the river/dam banks occurring. Impermeable surface will be replaced by a permeable surface, leading to the reduction of storm water runoff.		
IMPACT ON FLORA				
The ecological characteristics of the land development area and its surrounding. Habitat fragmentation and negative impact on the functional contribution to the larger ecosystem Increase and spread of exotic invader species habitat destruction.	High	<p>The proposed construction of the school would not be in a sensitive area, the development is unlikely to have adverse impact on faunal species, no protected trees and fauna will be tempered with.</p> <p>Protected indigenous fauna will not be destroyed. Introduce and maintain indigenous vegetation where possible in line with landscaping plan.</p> <p>Appropriate indigenous vegetation will be planted around the site. Where trees and other vegetation have had to be removed, these must be re-planted. The school developer must incorporate the planting of indigenous vegetation and trees, rather than extensive lawns (lawns require</p>	Low	Low

		<p>constant watering, necessitating the usage of water).</p> <p>Exotic plant management programme should be implemented by management to regularly control the encroachment of alien invasive species. The design of the school and surrounds must include the designation of pathways to which movement of teachers and learners on foot is restricted.</p>		
IMPACT ON VEGETATION				
<p>Impacts on vegetation around the school itself. Recreational activities can have an immediate, direct impact on the species composition of vegetation. This is especially true of ground layer vegetation, and particularly as a result of trampling. Almost invariably this involves a decrease in species diversity.</p>	High	<p>Passage of teachers' vehicles has also been observed to have adverse effects on vegetation. This has led to localized degradation of the grass and development of multiple tracks. These have in turn destroyed the naturalness of the areas affected. Increase in vehicle passage resulted in increased loss of vegetation cover on the parallel strips.</p> <p>The following measures have been recommended:</p>	Low	Low

		There should be a strict policy not to park on vegetated area but only on the parking lot.		
IMPACTS ON WATER AND POLLUTION				
Surface and ground water Pollution	High	<p>The water and sewer reticulation networks infrastructure will be properly maintained on ongoing basis at the school site.</p> <p>Groundwater contamination is a specific concern for the aquifer. Potential threats to the aquifer include failing sewage pipelines and storm water runoff from roads. These impacts can be reduced through pollution prevention and storm water management plans.</p> <p>Groundwater concerns focus on pollution caused by hazardous laboratory wastes, solid waste disposal and increased impervious surface runoff that result from increased urban development. Urban runoff and other waterborne pollutants may pollute groundwater.</p>	Low	Low

		<p>A form of groundwater pollution that is a public health concern is excess nitrates originating from the effluent of faulty septic systems and application of, or runoff from, animal wastes. Water resource impacts may be mitigated through adopting and implementing site design and storm water management standards, as well as using best management practices for the treatment and control of storm water runoff, are important mitigation procedures. This requires small municipal, separate storm sewer system operators to follow six minimum control measures to meet the requirements.</p> <p>Storm water management standards that require on-site storm water control and treatment limit post development storm water peak flows. This can reduce impacts to surface water quality and stream channels.</p>		
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WATER RESOURCE ISSUE				
As the new school becomes operational, the existing pressures on water resources due to water usage demands would increase significantly. This would place pressure on the water supply to the school	High	<p>Water Resource Management at the school is imperative. Water-saving devices must be installed in all kitchens and bathrooms in all the school buildings.</p> <p>This includes the installation of dual flush toilets. Toilets must be regularly checked to ensure that no water leakage occurs. The site must be landscaped in such a way that minimal irrigation of landscaped areas is required. Rainwater from the roof of the building must be captured, stored, and utilised for irrigation of landscaped areas to spare municipal water.</p>	Low	Low
WATER LEAKAGES				
Potential impacts of leaking of pipes, bursting of pipesoverflowing of sewage pipes.	Medium	The material that will be used when laying reticulation pipes will be of high quality to sustain the condition of the pipes when it is in operation. The good quality uPVC pipe will be used. They will range from 400mm to 900mm diameter.	Low	Low

		Leakage in water and sewer overflow must be properly monitored in order minimize water loss and groundwater pollution.		
EDUCATION ON WATER CONSERVATION				
Education on water conservation	Medium	<p>The learners and educators must be educated about the water conservation. The cups should be made available to be used when drinking water.</p> <p>Environmental education is essential; this should be actively encouraged especially in the context of developing knowledge of the natural environment and the role of water conservation in society. Where possible, partnerships should be established with role players and interested parties to ensure that this takes place.</p>	Low	Low
WASTE MANAGEMENT IMPACT				
Impacts of Waste Management at schools.	Medium	A lack of management with regards to solid waste collection and sanitation could lead to surface water contamination, and may attract problem animals to the site.	Low	Low

		<p>Incorrectly stored waste could lead to the development of odours. All waste must be removed promptly to ensure that it does not attract vermin or produce odours.</p> <p>It is recommended that policies, plans, and appropriate waste management practices for the conduct of school is published. The following waste prevention strategies should be generally applied:</p> <ul style="list-style-type: none"> -Use products that minimize waste and are nontoxic Compost or anaerobically digest biodegradable wastes. - Solid waste separation or recycling should take place for the duration of the operational phase for the school. Solid waste should be collected on a regular basis and disposed off at the landfill site. Burning of waste is absolutely prohibited. 		
WASTE DISPOSAL				
Waste Disposal	Medium	School Management must adopt a responsible and environmentally-friendly	Low	Low

		<p>waste management plan.</p> <p>The learners must use recyclable material only at schools.</p> <p>Solid waste must be separated and sorted on-site, waste must be reused, recycled and where possible disposed in an environmentally responsible manner.</p>		
Littering	Medium	<p>The litter left behind by learners and educators create a sanitation problem which can affect local populations. It is important to separate organic from inorganic waste. Organic waste may be processed and turned into compost.</p> <p>it is customary to provide learners with small litter bags, but these should be made of paper, not plastic). The use of returnable bottles and other containers should be universally encouraged, by means of a deposit fee to be recovered when returning the item. Waste prevention leads to thinking about materials in terms of reduce, reuse</p>	Low	Low

		<p>and recycle.</p> <p>Have an area designated for smoking at the school only for educators as well as the assembly point in case of any emergencies.</p>		
VISUAL IMPACTS				
Visual impacts	Medium	<p>No visual impacts would be experienced. The location of the school is compatible facilities will be with materials that blend with the surroundings to enhance the sense of place/character of the area.</p> <p>The height of structures is limited and the construction material is finished to blend into the natural surroundings. The Architectural Guidelines for the development specify the restriction of the height of the structure to single or double storey and the utilization of appropriate materials and finishes to reduce the visual impact. The proposed project is considered to be compatible with the surrounding</p>	Low	Low

		landscape and is not likely to impact negatively on the existing visual quality or landscape character of the area; rather it is expected to improve the general environment through better use of the area; rather than its current state as an illegal dumping site. The development of Tshepiso Primary school will enhance the sense of place of the project area (it is anticipated that the project will result in improved safety and Aesthetics as well as provision of nearer school		
Aesthetics, Landscape Character and Sense of Place. Irresponsible and/or uncontrolled schooling activity (e.g. using school as hall for entertainment) activity can have serious negative aesthetic impacts on the landscape. The most common of these impacts are due to litter of tin cans, paper and plastic bags.	High	Waste will be properly managed to avoid aesthetic impact and the landscape of the school will be appealing, grass will be planted. Maintaining cleanliness around and within the school & Proper fencing and landscaping will be enforced	Low	Low
NOISE POLLUTION				

<p>Noise Pollution. Noisy activities from learner's or during break times or athletics or any other noisy school activity could disturb sensitive receptors in the vicinity of the school.</p> <p>Air conditioning units, refrigeration compressor units and kitchen extractor at the NSNP fans placed on the outside of the building could create a noise impact for sensitive receptors. Noise from vehicles using the road may disturb receptors.</p>	Medium	<p>Appropriate architectural design measures must be designed into the school building. The noise mitigating measures in the school building will need to be designed in order to optimise the design parameters and ensure that the cost/benefit of the measure is optimised. The architectural design consideration must be adequate in order to meet interior noise standards as specified by SANS 10103.</p> <p>High quality air-conditioning equipment especially at the science laboratory should be installed. Equipment with the best noise rating should be used. Roof mounted fans may further require attenuators and need to be screened from noise sensitive areas.</p> <p>High quality refrigeration compressors should be installed. Equipment with the best noise rating should be used. Outside building installation should be acoustically encapsulated. All mechanical equipment is</p>	Low	Low
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		to be well maintained. Night-time use of the facility should be kept to a minimum to ensure that no activities and regular operational activities, or movement of facility users to and from the facility disturb adjacent noise sensitive users.		
FIRE IMPACTS				
The development of the science laboratory building may result in ignition of fires.	Medium	Experiments that would be conducted at the laboratories might instigate fires therefore firebreaks and extinguishers will be established around the school building. Extreme caution should also be applied in the laboratory. Designated smoking area and provision for disposal of cigarette remains is also needed.	Low	Low
TRAFFIC IMPACT				
Improved access to the school yard.	Medium	The completed development of the school will facilitate connectivity and increase mobility within the school. School drop off zone should be clearly marked to avoid confusion of learners in the morning and	Low	Low

		<p>after school.</p> <p>The increase in carrying capacity of the road after the improvement will improve the current traffic problem and allow free flow of vehicles in future thereby contributing to efficient utilization of the road in general.</p> <p>This can be considered as the positive impact of the proposed improvement</p>		
SOICO-ECONOMIC IMPACTS				
The socio economic impact of Tshepiso extensions communities and its surrounding. Number of employment (educators, cleaners and gardeners) opportunities will be created during the operation phase. Where possible local people should be employed for this project. Livelihood of civilians will be improved both from a social and economic perspective.	Positive	This would be associated with a positive impact no mitigation required.	Positive Impact. No mitigation required	Positive Impact. No mitigation required
Community Participation. Recognizing that the school will continue to have a significant impact on neighboring	Positive	It is also envisaged that the school development stimulus to the local and regional economy will be recognized and	Positive Impact. No mitigation required	Positive Impact. No mitigation required

communities and will not be able to achieve its objectives without their understanding and appreciation, it is envisaged that the school will have the support of education to all learners neighboring and affected communities.		that it will therefore be seen as an important vehicle through which skill development, education and transformation is achieved.		
SAFETY AND SECURITY				
Maintenance, safety and security of the school building.	Medium	<p>The client will ensure that the school is well maintained.</p> <p>The security at the school must be beefed up as more people will flock into the area once it's developed. Fenced must be well maintained to also prevent criminals.</p> <p>All facilities to be introduced at the school buildings should provide wheelchair access as far as possible. All gates will be under the control of the Warden and at least one gate will be available for the public to enter the school.</p>	Low	Low
MONITORING AND MAINTANANCE OF THE SCHOOL				

Long term Structural integrity of the school should not be compromised during a large flood event.	Medium	<p>The architectural design must take into account the stability of all the structural buildings, they must be able to withstand whether and strong winds.</p> <p>Regular maintenance of the school is required to ensure the structural integrity and any potential damage to the buildings must be mitigated.</p> <p>Monitor disturbed areas and keep them free of invasive alien plant growth; and Check structures periodically, particularly after higher flow events and before the onset of winter to ensure that the structure is not blocked with debris and reeds that will impede flows.</p>	Low	Low
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List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

No specialists input available now, reports to be attached on the final BAR.

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

It is important to note that the absence of species on site does not conclude that the species is not present at the site. Reasons for not finding certain species during the winter site visit may be due to:

- The short duration of fieldwork as well as the timing of the fieldwork (which occurred close to the end of the winter season). During winter many species have died and retracted making it difficult to confirm identification.
- Some plant species, which are small, have short flowering times, rare or otherwise difficult to detect may not have been detected even though they were potentially present on site.

Vegetation mapping was based on the brief in-field survey as well as aerial imagery. Positioning of the vegetation units may not be exact due to potential georeferencing errors displayed in Google Earth, GPS accuracy in field as well as the age of the aerial image

3. Impacts that may result from the decommissioning and closure phase

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

3. Impacts that may result from the decommissioning and closure phase

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
INFRASTRUCTURE & SOIL				
All the rubble would need to be removed and disposed of Off-site. As a result, there will be a potential increase in the amount of waste sent to the landfill site.	Low (Negative)	All permanent buildings must be removed from the site. Removals should be phased so that rehabilitation can begin and soil surfaces are not exposed for too long. All rubble must be removed to a licensed waste disposal facility. Alternative uses for all waste materials should be sorted and recycling should take place where possible. Infrastructure removal must be phased in order to reduce soil exposure and the risk of soil erosion. Rehabilitation should begin as soon as buildings are removed to ensure that soil is stabilised as soon as possible. Any fuel required on site must be stored in a bunded area with walls high enough to contain 110% of the total volume of the hazardous material. Care must be taken not to contaminate soils on site. A full rehabilitation plan needs to be compiled in order for the soils to be adequately rehabilitated to their original state.	Low (Negative)	Low (Negative)
SOIL EROSION				

Decommissioning activities causing erosion.	Medium	The school will need to be rehabilitated and revegetated preventing any possible erosion once decommissioning is complete. Control measures must be implemented during decommissioning and care should be taken to prevent any rubble or other waste material entering the river/dam.	Low	Low
SOLID WASTE POLLUTION				
Pollution of the surrounding environment as a result of the handling, temporary storage and disposal of solid waste.	Medium(Negative)	<p>General waste (i.e. building rubble, demolition waste, discarded concrete, bricks, tiles, wood, glass, plastic, metal, excavated material, packaging material, paper and domestic waste etc.) and hazardous waste (i.e. empty tins, paint and paint cleaning liquids, oils, fuel spillages and chemicals etc.) generated during the decommissioning phase should be stored temporarily onsite in suitable (and correctly labelled) waste collection bins and skips (or similar). Waste collection bins and skips should be covered with suitable material, where appropriate.</p> <ul style="list-style-type: none"> • Should the on-site storage of general waste and hazardous waste exceed 100m³ and 80 m³ respectively, then the National Norms and Standards for the Storage of Waste (published on 29 November 2013 under GN 926) must be adhered to. • Ensure that general waste and hazardous waste generated are removed from the site 	Low	Low

		<p>on a regular basis and disposed of at an appropriate, licensed waste disposal facility by an approved waste management Contractor. Wastedisposal slips or waybills should be kept on file for auditing purposes as proof of disposal.</p> <ul style="list-style-type: none"> • Ensure that sufficient general wastedisposal bins are provided for all personnel throughout the site. These bins must be emptied on a regular basis. • Appropriately time demolition /rehabilitation activities to minimise sensory disturbance to fauna. 		
AIR POLLUTION IMPACTS				
Air Quality Impact:Emissions from decommissioning vehicles and generation of dust as a result of earthworks and demolition.	Medium	<p>Dust created during the removal of the buildings and associated infrastructure could potentially adversely affect nearby landowners. This potential issue must be managed through the damping down of exposed soils. The rehabilitation of the site must be made a priority in order to avoid dust becoming an issue in the surrounding areas. Ensure that cleared (excavated) areas and unpaved surfaces are sprayed with water (obtained from an approved source) to minimise dust generation.</p> <ul style="list-style-type: none"> • Approved soil stabilisers may be utilised to limit dust generation. • Ensure that decommissioning 	Low (Negative)	Low (Negative)

		vehiclestravelling on unpaved roads do not exceed a speed limit of 40 km/hour.		
FLORA AND FAUNA IMPACTS				
Flora and Fauna impacts	Medium	Care must be taken during the decommissioning phase to take account and not disturb any fauna which may have re-inhabited the area since the inception of the camp. No fauna must be harmed through the process. Indigenous vegetation must be utilised for the rehabilitation of the site. Vegetation similar to that of the surrounding areas should be used. A full rehabilitation plan is recommended in this regard to ensure that the site is returned to its original state. Any exotic species must be removed immediately during the rehabilitation process. The process should be carried out as quickly as possible to ensure that the disturbance of fauna is kept to a minimum.	Low	Low
Visual impact				
Potential visual intrusion of decommissioning activities on the existing views of sensitive visual receptors.	Low (Negative)	<p>No specific mitigation measures are required other than standard site housekeeping and dust suppression. These are included below:</p> <ul style="list-style-type: none"> • The contractor(s) should maintain good housekeeping on site to avoid litter and minimise waste. • Litter and rubble should be timeously removed from the work site and disposed at a licenced waste disposal facility. 	Low (Negative)	Low (Negative)

		<ul style="list-style-type: none"> The project developer should demarcatede commissioning boundaries and minimise areas of surface disturbance. Appropriate plans should be in place to minimise fire hazards and dust generation. Night lighting of the decommissioning site should be minimised within requirements of safety and efficiency. 		
NOISE IMPACT				
Noise generation from demolition activities (e.g.grinding, steel falling, use of angle grinders) during the decommissioning phase. This impact is rated as neutral.	Medium (Neutral)	<p>A method statement, including detailed procedures, must be drawn up prior to any decommissioning of any structure.</p> <ul style="list-style-type: none"> Decommissioning personnel must wear proper hearing protection, which should be specified as part of the Decommissioning Phase Risk Assessment carried out by the Contractor. The Contractor must ensure that all decommissioning personnel are provided with adequate PPE, where appropriate. 	Low(Neutral)	Low(Neutral)
HEALTH & SAFETY IMPACTS				
Potential health injuries to demolition staff during the decommissioning phase. This impact is rated as neutral. Demolition safety injuries. This impact is rated	Medium Neutral	The Contractor must ensure that all decommissioning personnel are provided with adequate PPE for use where appropriate. Ensure that a skilled and competent Contractor is appointed. The Contractor must be evaluated during the tender/appointment process in terms of	Low Neutral	Low Neutral

as neutral.		<p>safety standards.</p> <ul style="list-style-type: none"> • The Contractor must ensure that all decommissioning personnel are provided with adequate PPE for use where appropriate. • The Contractor must undertake a Decommissioning Phase Risk Assessment. • A Site Manager or Safety Supervisor should be appointed, in conjunction with the project manager, to monitor all safety aspects during the decommissioning phase. 		
POLLUTION OF THE SURROUNDING WATER				
Pollution of the surrounding water and ground as are salt of spillages, generation of building rubble and waste scrap material. This impact is rated as neutral.	High (Neutral)	<p>The amount of hazardous materials and liquids (such as cleaning materials) handled will be minimal. Fumes generated during welding will be minimal, within a well-ventilated area.</p> <ul style="list-style-type: none"> • All demolition waste (including rubble) should be frequently removed from site and correctly disposed by a suitable waste Contractor. • The work area should be cleaned regularly. • The Contractor should provide adequate waste skips (or similar) onsite and the contract should specify that the Contractor must be 	Low (Neutral)	Low (Neutral)

		<ul style="list-style-type: none"> responsible for the correct disposal of the contents of the waste skips. 		
SOCIO-ECONOMIC IMPACTS				
Socio-economic impacts	Medium	Employees of the Tshepiso Primary School must be given sufficient notification of the closure of the school in order for them to search for alternative employment. All employees must be compensated for accordingly. Construction workers must be briefed on the dangers of the area.	Low	Low

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

N/A

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

N/A

4. Cumulative impacts

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

Potential impacts	Significance rating of impacts(positive or negative):	Proposed mitigation	Significance rating of impacts after mitigation
CUMMULATIVE IMPACTS			
<ul style="list-style-type: none"> Impacts of extra operational vehicle on the road. 	Low(Negative)	<ul style="list-style-type: none"> Undertake re-calibration of existing traffic signals if required. 	Low(Negative)
<ul style="list-style-type: none"> Shortage of water that will be use during the school operation. 	Medium (Negative)	<ul style="list-style-type: none"> Water conservation and harvesting of rainwater should still be practised during the operational phase. Irrigation systems and water tanks for storage should be inspected regularly so as to insure that there are no leaks. 	Low(Negative)
<ul style="list-style-type: none"> Increase job opportunities and boosting of local development in the area. 	Medium (Positive)	<ul style="list-style-type: none"> No mitigation required. 	Medium (Positive)

5. Environmental impact statement

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

Proposal

Having schools locally is considered to be a basic need that should be fulfilled by the department mandated with that service in this case the Department of Education. The proposed development of Tshepiso Primary School is therefore considered to be an essential public amenity for the community. The development of the school should not be on any sensitive environment, ultimate aim of the location and development of the school should always be to protect the environment. There special or sensitive habitats or other natural features present on the school site, which is the artificial wetland should not be tempered with.

From the EIA finding and site visit there are no archaeological, rare or endangered floras or fauna species including red data species present on the site proposed for the development of the school. It should be noted that the identified impacts have the potential to environmentally degrade the site if not properly managed and therefore we recommend the adherence to the mitigation measures. The proposed site of activity, we do not anticipate any major adverse impacts to the environment.

Alternative 1

N/A

Alternative 2

N/A

No-go (compulsory)

This option assumes that a conservative approach would ensure that the environment is not impacted upon any more than is currently the case. It is important to state that this assessment is informed by the current condition of the area. Should the Competent Authority decline the application, the 'No-Go' option will be followed and the status quo of the site will remain.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

IMPACT SUMMARY – CONSTRUCTION PHASE		
IMPACT	SIGNIFICANCE RATING OF	SIGNIFICANCE RATING OF

	IMPACT BEFORE MITIGATION	IMPACT AFTER MITIGATION
• Loss of terrestrial vegetation	High (Negative)	Medium (Negative)
• Increased risk of the spread of alien invasive species.	Medium (Negative)	Low (Negative)
• Loss of faunal habitat.	Medium (Negative)	Low (Negative)
• Faunal Mortality and displacement.	Medium (Negative)	Low (Negative)
• Impact on the regional water balance.	Medium (Negative)	Low (Negative)
• Potential spillage of effluent.	Low(Negative)	Low (Negative)
• Pollution caused by spillage or discharge of construction waste water.	Low(Negative)	Low (Negative)
• Emissions from construction vehicles and generation of dust.	Medium(Neutral)	Very -Low (Negative)
• Increase in erosion.	Medium(Negative)	Very- Low (Negative)
• Employment creation and skills development opportunities.	Medium(Positive)	High(Positive)
• Potential visual intrusion of construction/demolition activities.	Low(Negative)	Low (Negative)
• Potential noise impact from the use of construction equipment.	Medium(Neutral)	Low (Neutral)
• Noise generation from demolition and construction work.	Medium(Neutral)	Low (Neutral)
• Potential health injuries to construction personnel.	Medium(Neutral)	Low (Neutral)
• Traffic, congestion and potential for collisions.	Low(Neutral)	Low (Neutral)
• Construction safety injuries.	High (Neutral)	Medium (Neutral)
• Pollution of the surrounding water and ground.	High (Neutral)	Medium (Neutral)

IMPACT SUMMARY – OPERATIONAL PHASE done only clour		
IMPACT	SIGNIFICANCE RATING OF IMPACT BEFORE MITIGATION	SIGNIFICANCE RATING OF IMPACT AFTER MITIGATION
• Environmental contamination of the surrounding.	Medium (Negative)	Low (Negative)
• Reduction in CI Species.	Low (Negative)	Low (Negative)
• Increased municipal water usage.	Medium (Negative)	Low (Negative)
• Potential re-establishment of alien plants on site.	Low (Negative)	Low (Negative)
• Potential re-establishment of alien plants on site.	Low (Negative)	Low (Negative)

• Improved service delivery by the department of education with regards to development of the school.	Medium(Positive)	High(Positive)
• Skills development opportunities and economic spin off	Medium(Positive)	High(Positive)
• Improved high chances of educated individual and decrease in dropouts.	Medium(Positive)	High(Positive)
• Potential visual intrusion of structures and buildings.	Low (Neutral)	Low (Neutral)
• Potential impact of night lighting of the development.	Low (Neutral)	Low (Neutral)
• Potential noise impact from operations and road transport.	Medium(Neutral)	Low (Negative)
• Atmospheric pollution due to fumes, smoke from fires.	Medium(Neutral)	Low (Neutral)
• Potential impact on the health of operating personnel	Medium(Neutral)	Low (Neutral)
• Minor accidents to the public and moderate accidents to operational staff	Medium(Neutral)	Low (Neutral)
• Impact of extra operational vehicles on the road network.	Low (Negative)	Low (Negative)

IMPACT SUMMARY – CLOSURE PHASE		
IMPACT	SIGNIFICANCE RATING OF IMPACT BEFORE MITIGATION	SIGNIFICANCE RATING OF IMPACT AFTER MITIGATION
• Increased water usage.	Low (Negative)	Low (Negative)
• Introduction & proliferation of alien species.	High(Negative)	Low (Negative)
• Potential spillage of effluent.	Medium(Negative)	Low (Negative)
• Discharge of contaminated storm water into the surrounding environment.	Medium(Negative)	Low (Negative)
• Pollution of the surrounding environment (waste).	Medium(Negative)	Low (Negative)
• Emissions from decommissioning vehicles and generation of dust.	Low (Negative)	Low (Negative)
• Potential visual intrusion of decommissioning activities.	Low (Negative)	Low (Negative)
• Noise generation from demolition activities.	Medium(Neutral)	High(Positive)
• Potential health injuries to demolition staff.	Medium(Neutral)	Low (Neutral)
• Heavy traffic, congestion and potential for collisions.	Medium (Neutral)	Low (Neutral)

• Demolition safety injuries.	High(Neutral)	Medium (Neutral)
• Pollution of the surrounding water and ground as a result of spillages.	High(Neutral)	Low (Neutral)

For alternative:

N/A

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

The proposed project does not have location alternatives therefore the impacts assessed were specific to the preferred alternative/proposal

7. Spatial development tools

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

Sedibeng District Spatial Development Framework (2016/17)

Emfuleni is situated at the southern end of two north-south corridors that are aligned along the N1 and the R59 freeways respectively. Emfuleni is tied into the rest of Gauteng and the Johannesburg and Ekurhuleni metropolitan area in particular via these corridors. These corridors also link Emfuleni to the settlements and activity nodes situated along these corridors, such as Orange Farm, Soweto, Meyerton and Germiston. The N1 corridor is supplemented by a commuter railway line, which links Vereeniging to the Johannesburg CBD via Sebokeng and Orange Farm.

A freight railway line links Vereeniging to Germiston, via Meyerton. In essence, Emfuleni thus forms the southern anchor of the greater Emfuleni-Johannesburg-Tshwane axis. Further strengthening of this southern anchor will benefit this axis as a whole, because it will facilitate movement and people and goods along this axis. Based on the regional context, a development concept was drafted for Emfuleni that aims to strengthen the role of Emfuleni as the southern anchor of the greater Emfuleni-Johannesburg-Tshwane axis.

Lethabong and Tshepiso are residential expansion areas that basically straddle the Vereeniging-Johannesburg commuter railway line. The primary advantage of this residential expansion area is the fact that it has excellent access to road and rail infrastructure.

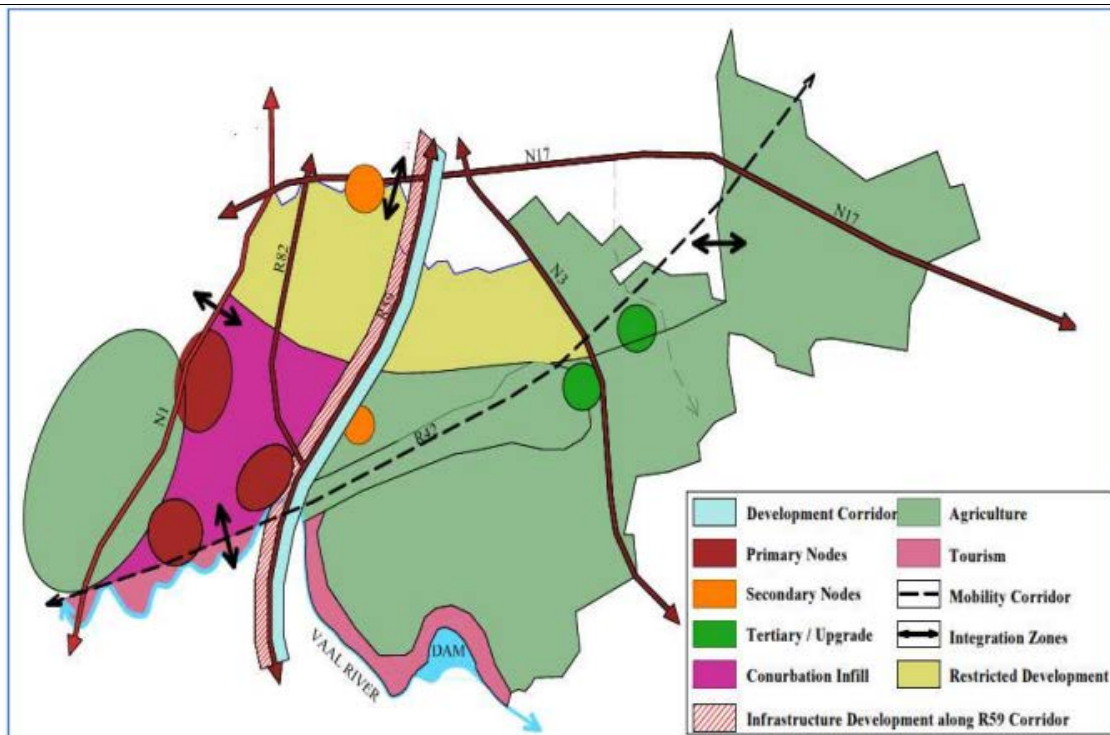
Another advantage of the Lethabong and Tshepiso residential expansion area is the fact that it is

currently the focus area for affordable housing development within Emfuleni. Some of these developments are already at implementation stage, such as the Tshepiso extensions, and others are already at a detailed planning stage, such the Lethabong extensions. The Lethabong extension will provide approximately 6000 affordable housing units once completed. The Tshepiso extension will

The educational infrastructure of Emfuleni comprises primary schools, secondary schools, combined primary and secondary schools and tertiary educational facilities. It is estimated that Emfuleni currently has an oversupply of primary and secondary schools. To an extent, this oversupply of schools can help provide interim education to pupils from new township areas, where schools have not yet been built. However, this is an undesirable state over the longer term, because schools need to be located within walking distance of pupils; also those living within new township areas in Emfuleni.

Another problem with school provision is related to the provision of schools, which are systematically being converted to cluster housing development. Individually, these cluster developments do not have the number of units necessary to reach the thresholds needed to provide community facilities. Collectively, these cluster housing developments comprise large numbers of units that require community facilities to support the families that live within these dwelling units. This is an issue that needs to be addressed. Emfuleni has 3 tertiary educational facilities, of which is Vaal University of Technology is the most significant. This tertiary educational facility is located on the intersection of the K174 (Barrage Road) and AndriesPotgieter Boulevard.

Spatial Structuring Elements" are town planning "tools" for structuring Spatial Development Frameworks. The Sedibeng District IDP 2012/13 to 2016/17 has identified,16 "Flagship Projects" that are in various stages of implementation. The preferred Conceptual Spatial Development Framework alternative selected through workshops and confirmed by the Gauteng Office of the Premier and the Sedibeng District Council is illustrated in Figure below:



The above concept aligns with the Gauteng Province Vision 2055 of a “Gauteng City Region” with cross border linkages, as illustrated in Figure 3, as well as the Gauteng Provincial Spatial Development Framework and the local SDFs. In particular, the above Sedibeng Conceptual Spatial Development Framework takes into account the nodes, corridors and other spatial structuring elements identified in the SDFs of the local municipalities in Sedibeng, namely Emfuleni, Lesedi and Midvaal, as well as the main corridors and structuring elements of the Gauteng Spatial Development Framework. The need for schools is therefore very significant in this area, where several job opportunities already exist, resulting in the continued flocking of many young people to the area.

8. Recommendation of the practitioner

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).

	NO
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If "NO", indicate the aspects that require further assessment before a decision can be made (list the aspects that require further assessment):

This only a draft report, the specialists study will be attached on the final basic assessment report to enable the authorizing department to make decision. Heritage Impact Assessment Report and the Wetland study are underway.

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

Recommendation to be made once all the specialist studies has been commissioned.

9. The needs and desirability of the proposed DEVELOPMENT (as per notice 792 of 2012, or the updated version of this guideline).

NEED AND DESIRABILITY OF THE PROPOSED PROJECT	
QUESTIONS (NOTICE 792,NEMA,2012	
PART I: NEED	ANSWER
1. Is the land use associated with the activity being applied for considered within the timeframe intended by the existing approved SDF agreed to be the relevant environmental authority?	Yes. The land use associated with the activity being applied for considered within the timeframe intended by the existing approved SDF agreed to be the relevant environmental authority. The municipality regional services model and regional structures are an integral part of its rationale to bring services closer to the people and to transform regions into superb places to live, work and stay while capitalising on each regions' uniqueness to create strong, resilient and prosperous areas. The Sedibeng District adopted its Integrated Development Plan in 2013 which maps out the delivery agenda of the current term of office of the district for the period 2013 to 2016. As part of the process of establishing the seven (7) service delivery regions, the district have embarked on a process to develop Regional Integrated Development Plans (RIDPs) which will complement the district –wide IDP. The budget to implement this plan has been drafted until 2017.
2. Should the development, or if applicable, expansion of the town/area concerned in terms of this land use occurs here at this point in time?	Yes, according to the Regional Developmental Overview for Region, the proposed project falls within an area which is demarcated as "rural",

	<p>and the intention of development in this area is to create vibrant, equitable and sustainable rural development which provides schools and learning opportunities.</p> <p>Department of Education is accountable for the education of the learners. The access to better education and proper well equipped school building around South Africa to improve the level of education is pivotal. Proper and well maintained school buildings will improve the socioeconomic lives of the community and will enhance learning. Investment in schools is one of the two most important factors in teacher motivation, for example, teachers have improved morale when working in a physical environment that functions well. Development of Tshepiso Primary school will provide better school infrastructure and better enhanced learning environment; therefore it is in the PSDF to develop adequate well equipped schools.</p>
3. Does the community/area need the activity and the associated land use concerned? This refers to the strategic as well as local level.	<p>There are no primary schools around Tshepiso Extension Township, learners have to travel distance to access schools. The availability of school is a basic need for all the people to have the right to education. The nearest available school is also overcrowded because of many learners flocking in to the school.</p> <p>The 2013 IDP identified that the challenge of unavailability of schools need to be attended to. Access to comfortable schools is one of the key national priorities. The rate of population growth (rural and urban) is greater than the rate of availability of primary schools in the municipality, the district, province and the entire country. An essential well built and sustainable school and asset of an urban area, and in particular for the local community, as such, the development of the school plays an important role in terms of environmental health & well-being. This serves as an important area in terms of conserved for future generations.</p>
4. Are the necessary services with adequate capacity currently available (at the time of application) or must additional capacity be	<p>Yes there are necessary services with adequate capacity available. The school site is surrounded by household which are well serviced and have</p>

created to cater for the development?	<p>electricity connection.</p> <p>The proposed project will rely on municipal water services. The school will also have access to municipal electricity. The road networks are fully intact and the project will not have a major impact on road congestion. Thus, additional capacity does not need to be created for the development.</p>
5. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of the services and opportunity cost)?	<p>The development of the school facilities is the mandate of the department of education and therefore they have allocated funding for the development of Tshepiso primary School. The department of education is prioritizing the development of schools to be a full functional and equipped area to attract more learners to attend school and be educated and be better people</p> <p>The development is provided for in the infrastructure planning of the municipality as it is a development of greater local importance. The proposed project will not have any implications for the infrastructure planning, however services and/or infrastructure will need to be upgraded or created to cater for this development.</p> <p>The project will create a sense of ownership and empowerment for the community to operate and manage their assets and strengthen local government and generate sustainable economic development. A well managed and operated school will motivate school attendance and will deeply influence the community it serves.</p>
6. Is the project part of a national programme to address an issue of national concern or importance?	<p>This project is part of national programme to address the issue of schooling institution in the entire country, furthermore to encourage learners to attend school, enjoying conducive school environment with all the recreational activities e.g. Sporting facilities, libraries and laboratories. The development of Tshepiso Primary school will contribute positive to achieving adequate schooling facilities in the area.</p> <p>The main goals highlighted in the NDP which pertain to the proposed project are employment and adequate access to schools. Chapter 6 of the National Development Plan highlights an "inclusive rural economy" and the objectives of this plan are to create jobs for educators.</p>
NEED AND DESIRABILITY OF THE PROPOSED PROJECT	

QUESTIONS (NOTICE 792,NEMA,2012)	
PART II: DESIRABILITY	ANSWER
1. Is the development the best practicable environmental option for this land/site?	Yes, the development is the best practicable environmental option for this land/site Sound environmental management of education and school facilities can increase the benefits to natural areas. Cleaner production techniques can be important tools for planning and operating school buildings in a way that minimizes their environmental impacts. For example, green building (using energy-efficient and non-polluting construction materials, sewage systems and energy sources) is an increasingly important way for the building industry to decrease its impact on the environment.
2. Would the approval of this application compromise the integrity of the existing approved and credible IDP and SDF as agreed to by the relevant authorities?	<p>The proposed development is in line with the projects and a programme identified as priorities within the credible Department of Education, development plan to enhance environmentally responsible utilization of the school building that is compatible with the present land use. The development of Tshepiso Primary School has low impact on the environment and utilization will occur on the least sensitive zones Identified, to create, establish and maintain a safe environment which can be enjoyed by a diverse group of society.</p> <p>Proposed development and utilization of land use will contribute to the finances of the department in order to maintain and improve education level. The natural fauna and flora of the school site should be conserved with any development and utilization alternative.</p> <p>The proposed project aligns itself with the Sedibeng Vision 2055 outlined in the IDP. The following strategic objectives are sought to be achieved and are aligned with the objectives of the proposed project:</p> <ul style="list-style-type: none"> • Promote shared economic growth and job creation. • Improve financial sustainability. • Continue institutional development, transformation and innovation.
3. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustainability considerations?	Approval of the development of the school would not compromise the integrity of the existing approved and credible municipal IDP and SDF instead the socio economic life of Tshepiso

	<p>Community will be uplifted and employment will be created.</p> <p>The project will create a sense of ownership and empowerment for the community to operate and manage their assets and strengthen local government and generate sustainable economic development. A well managed and operated school will motivate school attendance and will deeply influence the community it serves. The proposed project aligns itself with the Sedibeng Vision 2055 outlined in the IDP. The following strategic objectives are sought to be achieved and are aligned with the objectives of the proposed project:</p> <ul style="list-style-type: none"> • Promote shared economic growth and job creation. • Improve financial sustainability. • Continue institutional development, transformation and innovation.
4. Do location factors favour this land use at this place? (This relates to the contextualization of the proposed land use on this site within its broader context).	<p>Yes the location favours the land use at this site. The site is currently zoned as school site. The land use will not change and the development of new school facilities will not be in a sensitive area.</p>
5. How will the activity of the land use associated with the activity being applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	<p>The development of the proposed development will exert an impact on the environment; however the impacts associated with this proposed development can be mitigated to an acceptable level (Low, Low- Medium).</p> <p>Kindly see impacts and mitigation for a further explanation of the impacts of the proposed project on the environment.</p>
6. How will the development impact on people's health and well-being? (E.g. In terms of noise, odours, visual character and sense of place, etc.)?	<p>No person's rights will be affected by the development, interested and affected parties were consulted and no issues have been raised. All the impacts to be encountered e.g. dust and noise will be minimized to be a nuisance to people to can violate their peaceful environment rights. This development would still put the rights of people at the forefront of the development.</p> <p>Kindly see impacts and mitigation of the development on people's health and wellbeing. following mitigation, will be as follows:</p> <ul style="list-style-type: none"> • Visual: Low • Odours: low

	<ul style="list-style-type: none"> Noise: Low Sense of place: low
7. Will the proposed activity or the land use associated with the activity being applied for, result in unacceptable opportunity costs?	No; the proposed activity or the land use associated with the activity being applied for, will not result in unacceptable opportunity costs. Employment opportunity will be created.
8. Will the proposed land use result in unacceptable cumulative impacts?	No. The proposed project has only been identified to have less cumulative impacts that can be mitigated to an acceptable level. The measures will be outlined in the EMPr to be attached on the final BAR that will serve as a method to keep the proposed project from having any serious long term cumulative impacts on the receiving environment.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(CONSIDER WHEN THE ACTIVITY IS EXPECTED TO BE CONCLUDED)

10 years

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)(must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPr attached

NO

12 : AFFIRMATION BY EAP

I Lesego Senna(name of person representing EAP) of Lesekha Consulting(name of company) declare that the information provided is correct and relevant to the activity/ project and that, the

information was made available to interested and affected parties for their comments. All specialist (s) reports are relevant for the competent authority to make informed decision.



SIGNATURE OF EAP

DATE

19 June 2017

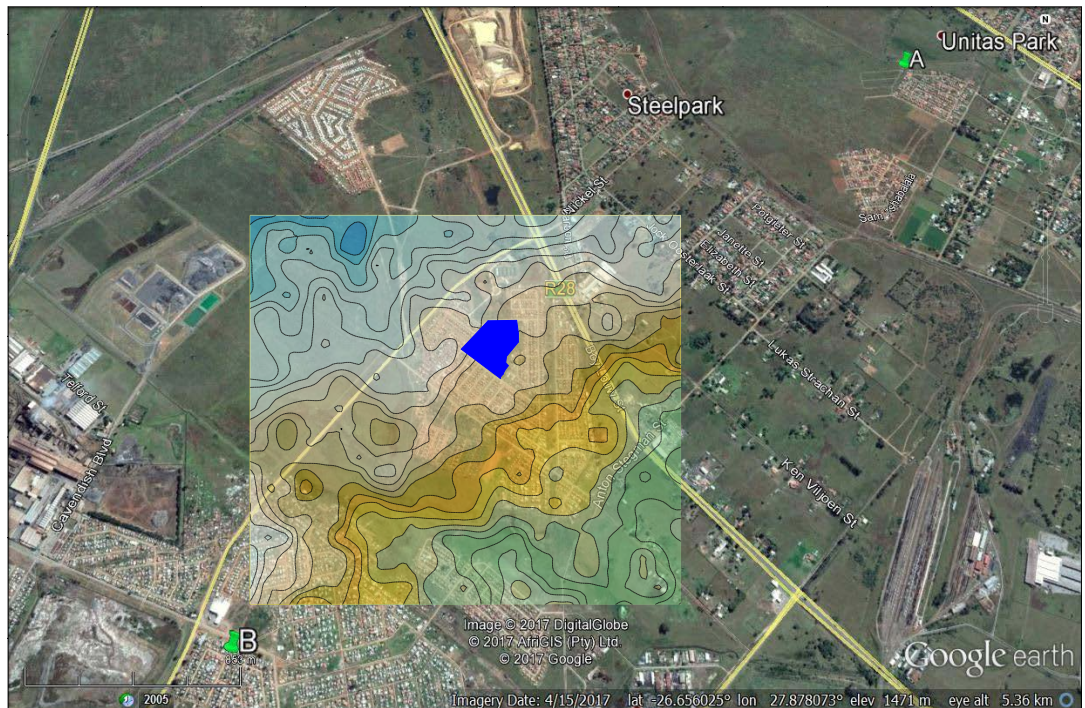
Section F: Appendixes





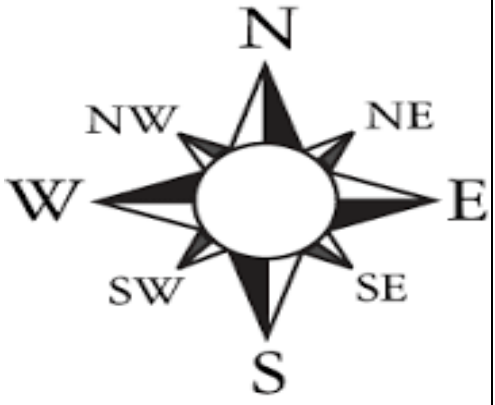




The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s)–(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)

SITE DESCRIPTION MAP OF TSHEPISO PRIMARY SCHOOL



	NORTH WEST		NORTH		NORTH EAST	
						
WEST T					EAST T	
						
	SOUTH WEST		SOUTH		SOUTH EAST	

Appendix E: Municipality Information

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
- All relevant sections of the form have been completed.