Autumn Leaf Shopping Mall
Proposed township
Zeerust Extension 5

ENVIRONMENTAL IMPACT ASSESSMENT
DRAFT BASIC ASSESSMENT REPORT

DATE MAY 2017

Compiled by:

Setala Environmental
P.O. Box 36593
Menlopark, 0102
Contact person:
Ria Pretorius
Tel +27(0)82 568 6344
Fax +27(0)86 675 4026
Email ria@setalaenvironmental.co.za

Applicant:

Akani Properties (Pty) Ltd
7 Disa Street
Kempton Park, 1630
Contact person:
Ana Capelinha
Tel +27(0)11 578 5333
Fax +27(0) 11 578 5338
Email ana@akaniproperties.co.za

setala

Department:
Rural, Environment and Agricultural Development
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

AgriCentre Building
Cnr. Dr. James Moroka and Stadium Rd
Private Bag X2039,
Mmabatho 2735

Tel: +27 (18) 389 5156
Fax: +27(18) 389 5006
E-mail: oskosana@nwpg.gov.za
Enq: EIA Admin Officer

CHIEF DIRECTORATE: ENVIRONMENTAL SERVICES

DIRECTORATE: ENVIRONMENTAL QUALITY MANAGEMENT

(For official use only)

Provincial Reference Number:	
NEAS Ref Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This basic assessment report is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications.
2. This report format is current as of December 2014. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. 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.
4. Where applicable tick the boxes that are applicable in the report.
5. The use of "not applicable" in the report must be done with circumspection. An incomplete report or that does not meet the requirements in terms of Regulation 19 of the NEMA EIA Regulations, 2014, will be rejected to be revised and be resubmitted.
6. The report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The signature of the Environmental Assessment Practitioner (EAP) on the report must be an original.
9. The report must be compiled by an independent EAP.
10. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
11. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
12. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
13. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
14. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

Table of contents

Figures

Tables

Annexures

APPENDIX I PUBLIC PARTICIPATION

1. Proof of placement of advertisements
   a) Proof of newspaper ads
   b) Proof of site notices
2. Proof of written notification to key stakeholders
   a) Notification letters
   b) Invitation to information day – to follow
   c) Submission of draft BAR – to follow
3. Comments and Responses report
   a) Written comment received in the notification phase
4. Proof of written notification to authorities and organs of state
   a) Proof of notification
   b) Invitation to information day – to follow
   c) Submission of draft BAR – to follow
5. Registers
   a) Register of I&APs
   b) Register of landowners
6. Correspondence and minutes of meetings
   a) Attendance register of public information meeting – to follow

APPENDIX J ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)

APPENDIX K DETAILS OF EAP AND EXPERTISE

Acronyms

CBA	Critical Biodiversity Area
CBD	Central Business District
CMA	Catchment Management Agencies
CR	Critically Endangered
DAFF	Department of Agriculture, Forestry and Fisheries
DREAD	Department of Rural, Environment and Agricultural Development, North West Provincial Government
DMR	Department of Mineral Resources
DSOE	Desired State of the Environment
DWS	Department of Water and Sanitation
EAP	Environmental Assessment Practitioner
ECA	Environment Conservation Act, 1989 (Act No. 73 of 1989)
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EIS	Ecological Importance & Sensitivity
EMC	Environmental Management Class
EMPr	Environmental Management Programme
EN	Endangered
ESA	Ecological Support Area
FSR	Final Scoping Report
IDP	Integrated Development Plan
GIS	Geographic Information System
HGM	Hydrogeomorphic
HIA	Heritage Impact Assessment
I&APs	Interested and Affected Parties
IBA	Important Bird Areas
IEM	Integrated Environmental Management
LT	Least Threatened
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NEMWA	National Environmental Management Waste Act, 2008 (Act No. 59 of 2008)
NEMAQA	National Environment Management: Air Quality Act (No.39 of 2004)
NFEPA	National fresh water ecosystem priority areas
NHRA	National Heritage Resources Act
NPAES	National protected areas expansion strategy
NWA	National Water Act (Act 36 of 1998)
PDA	Primary Drainage Area
PES	Present Ecological State
PPP	Public Participation Process
PoS	EIA Plan of Study for Environmental Impact Assessment
QDA	Quaternary Drainage Areas
QDS	Quarter Degree Square
REMC	Recommended Ecological Management Class
SR	Scoping Report
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
SDF	Spatial Development Framework

SDI	Spatial Development Initiative
SEA	Strategic Environmental Assessment
SEMP	Strategic Environmental Management Plan
SWSA	Strategic water source areas of South Africa
VU	Vulnerable
WMA	Water Management Areas
WUL	Water Use Licence
WULA	Water Use Licence Application

Glossary of Terms

Activity (Development) – an action either planned or existing that may result in environmental impacts through pollution or resource use.

Alternative – a possible course of action, in place of another, of achieving the same desired goal of the proposed project. Alternatives can refer to any of the following but are not limited to: site alternatives, site layout alternatives, design or technology alternatives, process alternatives or a no-go alternative. All reasonable alternatives must be rigorously explored and objectively evaluated.

Applicant – the project proponent or developer responsible for submitting an environmental application to the relevant environmental authority for environmental authorisation.

Biodiversity – the diversity of animals, plants and other organisms found within and between ecosystems, habitats, and the ecological complexes.

Construction – means the building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.

Cumulative Impacts – 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 to produce a greater impact or different impacts.

Direct impacts – impacts that are caused directly by the activity and generally occur at the same time and at the same place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally quantifiable.

Ecosystem – a dynamic system of plant, animal (including humans) and micro-organism communities and their non-living physical environment interacting as a functional unit. The basic structural unit of the biosphere, ecosystems are characterised by interdependent interaction between the component species and their physical surroundings. Each ecosystem occupies a space in which macro-scale conditions and interactions are relatively homogenous.

Environment – In terms of the National Environmental Management Act (NEMA) (Act No 107 of 1998) (as amended), "Environment" means the surroundings within which humans exist and that are made up of:
a) the land, water and atmosphere of the earth;
b) micro-organisms, plants and animal life;
c) any part or combination of (i) of (ii) and the interrelationships among and between them; and
d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.

Environmental Assessment (EA) – the generic term for all forms of environmental assessment for projects, plans, programmes or policies and includes methodologies or tools such as environmental impact assessments, strategic environmental assessments and risk assessments.

Environmental Authorisation – an authorisation issued by the competent authority in respect of a listed activity, or an activity which takes place within a sensitive environment.

Environmental Assessment Practitioner – the individual responsible for planning, management and coordination of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instrument introduced through the EIA Regulations.

Environmental Impact – a change to the environment (biophysical, social and/ or economic), whether adverse or beneficial, wholly or partially, resulting from an organisations, activities, products or services.

Environmental Impact Assessment (EIA) – the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made.

Environmental Issue – a concern raised by a stakeholder, interested or affected parties about an existing or perceived environmental impact of an activity.

Environmental Management - ensuring that environmental concerns are included in all stages of development, so that development is sustainable and does not exceed the carrying capacity of the environment.

Environmental Management Programme - A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative environmental impacts are implemented during the life cycle of a project. The EMPr focuses on the construction phase, operation (maintenance) phase and decommissioning phase of the proposed project.

Expansion - means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased.

Fatal Flaw – issue or conflict (real or perceived) that could result in developments being rejected or stopped.

General Waste – household water, construction rubble, garden waste and certain dry industrial and commercial waste which does not pose an immediate threat to man or the environment.

Hazardous Waste – waste that may cause ill health or increase mortality in humans, flora and fauna.

Indirect impacts – indirect or induced changes that may occur as a result of the activity. These types if impacts include all of 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.

Integrated Environmental Management – a philosophy that prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development and decision-making process. The IEM philosophy (and principles) is interpreted as applying to the planning, assessment, implementation and management of any proposal (project, plan, programme or policy) or activity – at local, national and international level - that has a potentially significant effect on the environment. Implementation of this philosophy relies on the selection and application of appropriate tools for a

particular proposal or activity. These may include environmental assessment tools (such as strategic environmental assessment and risk assessment), environmental management tools (such as monitoring, auditing and reporting) and decision-making tools (such as multi-criteria decision support systems or advisory councils).

Mitigate – the implementation of practical measures designed to avoid, reduce or remedy adverse impacts or enhance beneficial impacts of an action.

No-Go Option – in this instance the proposed activity would not take place, and the resulting environmental effects from taking no action are compared with the effects of permitting the proposed activity to go forward.

Open Space – environmentally sensitive areas which are not suitable for development and consist of watercourses, buffers, floodplains, steep slopes, sensitive biodiversity and/or areas of cultural or heritage significance.

Registered Interested and Affected Party – an interested and affected party whose name is recorded in the register opened for that application in terms of regulation 42.

Rehabilitation – a measure aimed at reinstating an ecosystem to its original function and state (or as close as possible to its original function and state) following activities that have disrupted those functions.

Scoping – the process of determining the spatial and temporal boundaries (i.e. extent) and key issues to be addresses in an environmental assessment. The main purpose of scoping is to focus the environmental assessment on a manageable number of important questions. Scoping should also ensure that only significant issues and reasonable alternatives are examined.

Sensitive environment – any environment identified as being sensitive to the impacts of the development.

Significance – significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. magnitude, intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgements and science-based criteria (i.e. biophysical, social and economic).

Stakeholder engagement – the process of engagement between stakeholders (the proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities.

Sustainable Development – development which meets the needs of current generations without hindering future generations from meeting their own needs.

Watercourse – means:
a) a river or spring;
b) a natural channel or depression in which water flows regularly or intermittently;
c) a wetland, lake or dam into which, or from which, water flows; and
d) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse as defined in the National Water Act, 1998 (Act No. 36 of 1998) and a reference to a watercourse includes, where relevant, its bed and banks.

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.

SECTION A: ACTIVITY INFORMATION

1. Project description

1.1 Background

This EIA application is for the establishment of Autumn Leaf Mall and associated infrastructure on Portion 24 (a Portion of Portion 5) of the farm HAZIA 240 JP.

Akani Properties Pty (Ltd) (the applicant) appointed Setala Environmental as the independent Environmental Assessment Practitioner (EAP) to undertake the Environmental Impact Assessment (EIA) for the proposed Autumn Leaf Mall and associated infrastructure in Zeerust.

Zeerust is an established commercial town and a popular retail destination with shoppers traveling to the town from surrounding areas, including Botswana. Currently Zeerust has one formal retail shopping centre, managed by Akani Properties.

The proposed Autumn Leaf Shopping Mall project is located approximately 2km east of the Zeerust CBD, and falls within the Ramotshere Moiloa Local Municipality, North West Province. The Autumn Leaf Mall is proposed to be developed on an erf of approximately 28 hectares in extent.

This Basic Assessment will conform to the National Environmental Management Act 107 of 1998 and to the Environmental Impact Assessment Regulations published in GN R982/2014 - R985/2014 of 8 December 2014.
The Basic Assessment will provide information about the proposed Autumn Leaf Mall, a hotel with conference centre, free stander drive thru's, a Taxi rank, and a distribution centre, and its scope is restricted to these components of the project.

1.2 Project Locality

The proposed project (study site) is located approximately 2km east of the Zeerust CBD, and is situated within the Ramotshere Moiloa Local Municipality, North West Province.

The proposed project is set out in the Location Maps below.

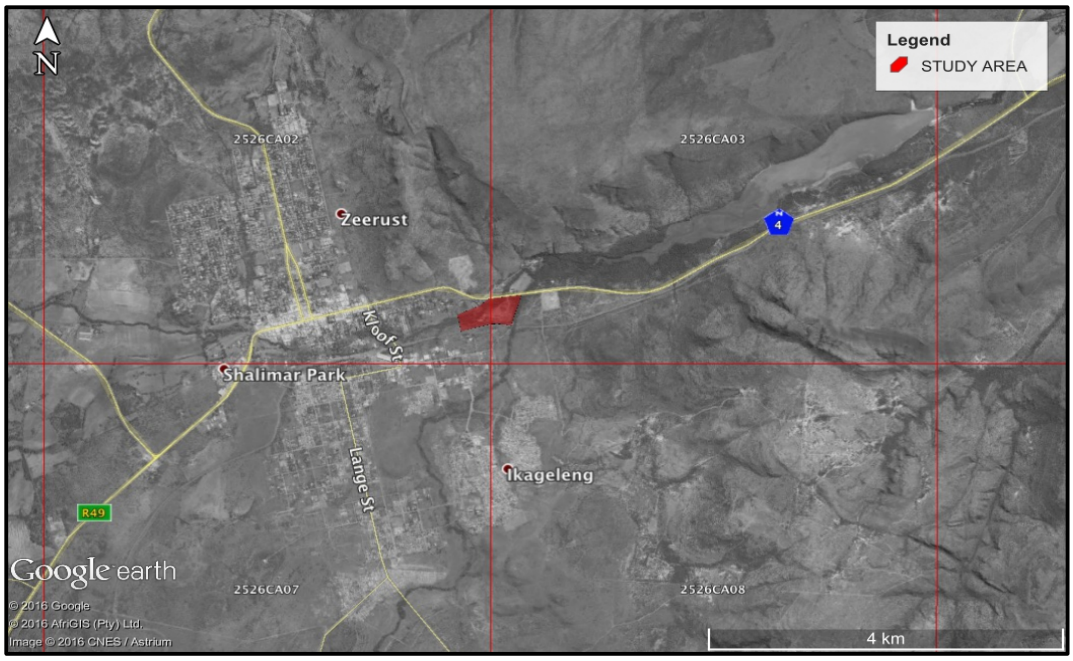


Figure 1: Site location (Google Earth)

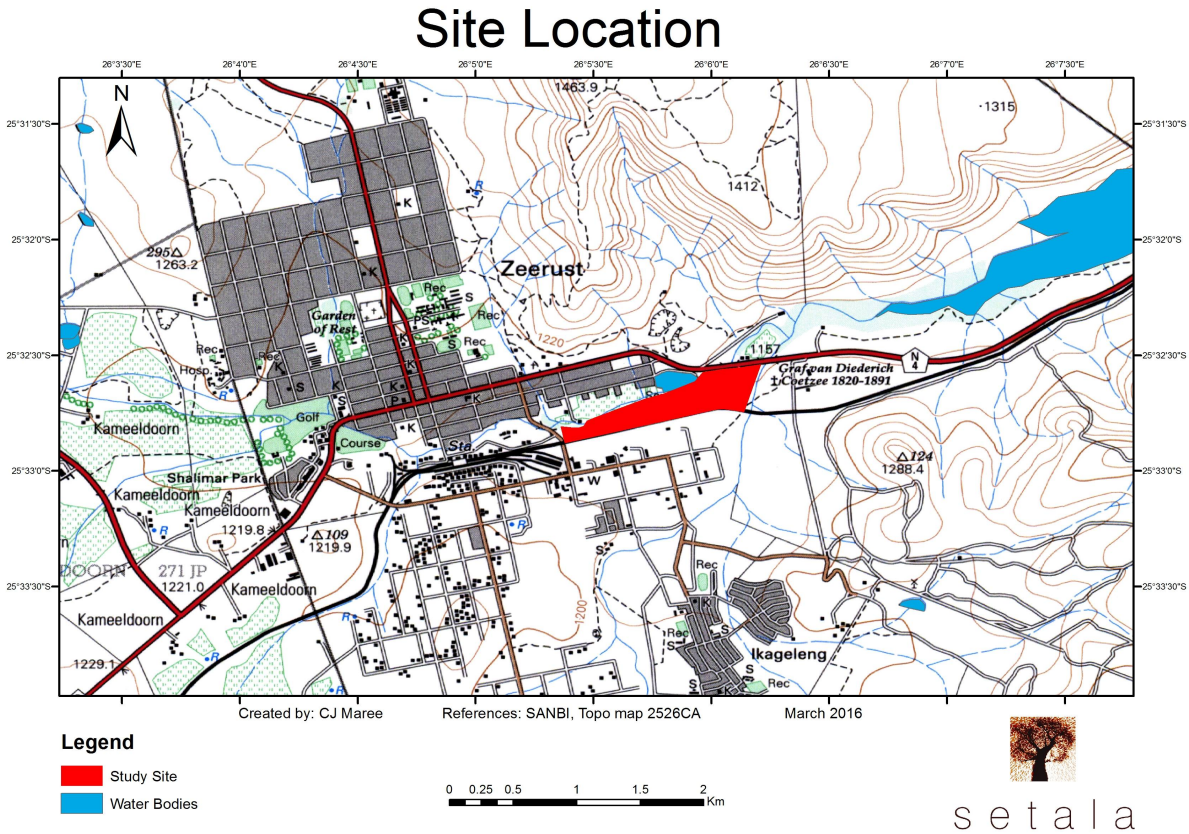


Figure 2 Site Location

The GPS coordinates of the main landmarks within the project area are as follows:

- Zeerust: 25°32'35.31"S; 26°04'43.38"E.
- Study site (Approximate centre point): 25°32'40.10"S; 26°05'59.95"E.
- Entrance into Site from National Road N4: 25°32'33.15"S; 26°06'6.69"E.
- 1:50 000 map grid references: 2526CA (2526CA02 & 2526CA03).

The site is bound by the N4, the Kareespruit, Portion 56 of Hazia 240-JP and Rudolf Street to the north, by River Avenue and the Klein-Marico River to the east, a Rail Way Line on Portion 48 of Hazia 240-JP to the south and by Kloof Street to the west.

Figure 3 Study area location (google earth)

1.3 Property description

The proposed project is located on Portion 24 (a Portion of Portion 5) of the farm HAZIA 240 JP, near Zeerust town situated in the Ramotshere Moiloa Local Municipality, North West Province.

Province	North West Province
District Municipality	Ngaka Modiri Molema District Municipality
Local Municipality	Ramotshere Moiloa Local Municipality
Ward Number(s)	Ward 15, 16 & 19
Farm name and number	HAZIA 240 JP
Portion number	Portion 24 (a Portion of Portion 5)
21 digit Surveyor General Code	T0JP00000000024000024

1.4 Topography

The topography of the region and study area is comprised of mountains and ridges to the north, east and southeast, with the town of Zeerust and the study area situated as such on the flat valley bottom plains. The Klein Marico Poort Dam lies in the valley within these mountainous areas, to the east of the study area.

The study area itself consists of flat to relatively flat plains, with no significant rises. The average height above sea level of the study area within the open areas varies from about 1 180m to 1 160m. There are also no rocky ridges, ravines, kloofs or valleys present. There is however, a stream with a lower, incised channel and floodplain, which lies lower than most of the study area.

The site slopes from west to north east with an average gradient of approximately 1.1%. The gradient of the site promotes effective drainage towards the low point on the north eastern corner of the site.

1.5 Surrounding land uses

The study site falls within the urban edge of Zeerust. The surrounding land uses varies around the proposed development site. Access to the site is provided from the N4 and Kloof Street. The site is located between three elements, namely two rivers, the N4 and the Transnet railway. To the north of the site is the wastewater treatment works (WWTW) of Zeerust and a residential area that compromises mostly out of single residential units as well as a few high density residential units. The residential area falls within the middle-income category. The Zeerust dumping site is situated to the north of the site opposite the National Route N4. A guest farm is situated immediately north of the study area, on the opposite side of the National Route N4. The Transnet railway is located immediately south of the development site. Other land-uses than the railway on the land south of the development site can be described as predominately light industrial and vacant stands. Some of the functions of the businesses in this area include: cash & carry; automotive industries and telecommunications. A Truck Stop is located to the east of the site along the N4.

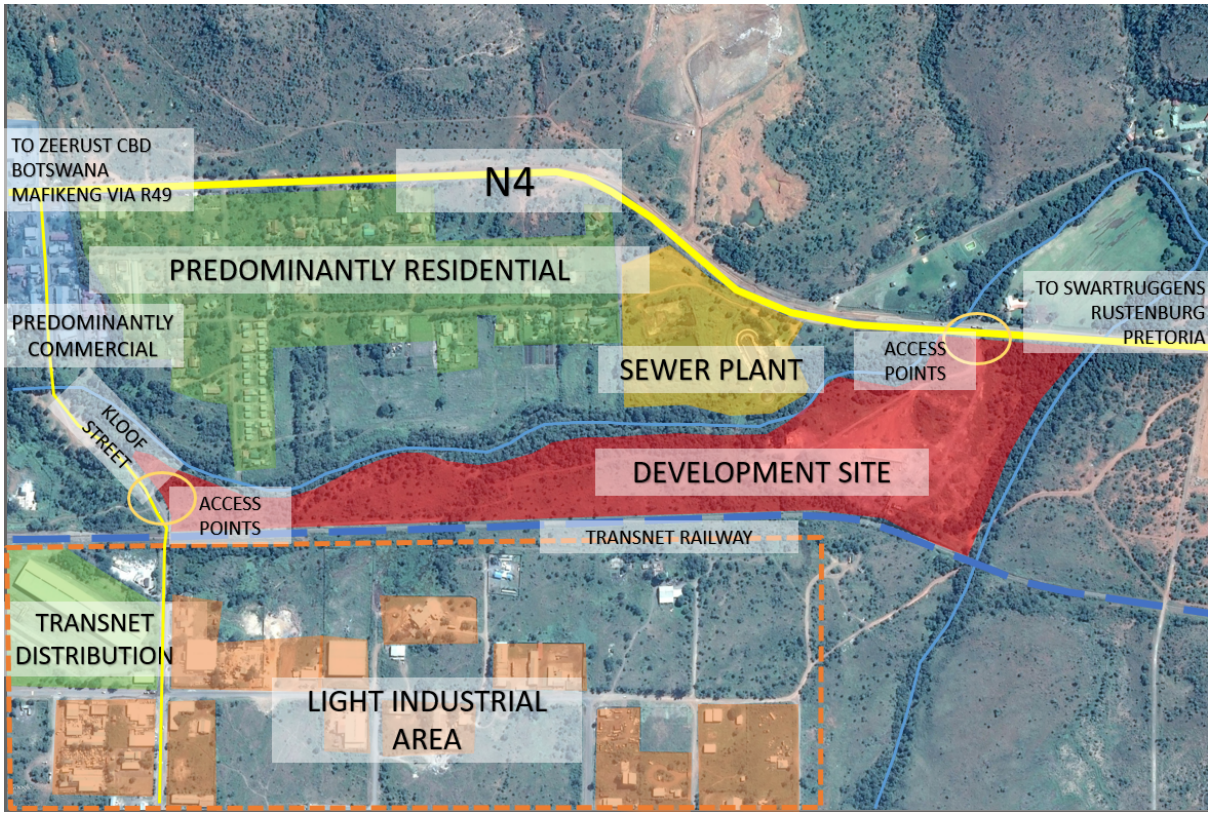


Figure 4 Immediate Surrounding Land-uses

The study site itself is situated on an old brickyard property in the extreme eastern edge of the town. This area is less densely urbanised with open bushveld, as well as two watercourses. Numerous large, alien weed tree species are present on the property. Presently the study area is a vacant lot, with no businesses or developments taking place. A number of derelict office buildings, factory buildings and vacant brickyard are on the site, which takes up a fair amount of the surface area of the study site.

1.6 Project description

This environmental application is for the proposed Autumn Leaf Shopping Mall, a hotel with conference centre, free stander drive thru's, a Taxi rank, and a distribution centre.

In addition, application is made in terms of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) and specifically in terms of Chapters 5 and 6 of the Ramotshere Moiloa Local Municipality Land Use Management By-law,2016 for township establishment. Proposed township to be known as **Zeerust Extension 5**. The property is at present zoned as "Special". The township application will be for:

(a) "Business 1" in terms of the Zeerust Town Planning Scheme, 1980, with an Annexure to permit a Shopping Mall including Places of refreshments; Cinema; Shops; Drive Thru Restaurants; Distribution Centre, a Hotel including conference facility; Lounge / Waiting Area; Day Spa; Gym uses compatible or approved by the Local Municipality.
(b) Special" for a Filling station to include a 24/7 Convenience shop with take-aways/Quick service restaurant (400m^2) Car wash, an ATM and uses compatible or approved by the Local Municipality.
(c) "Private Open Space".
(d) "Existing Public Roads".

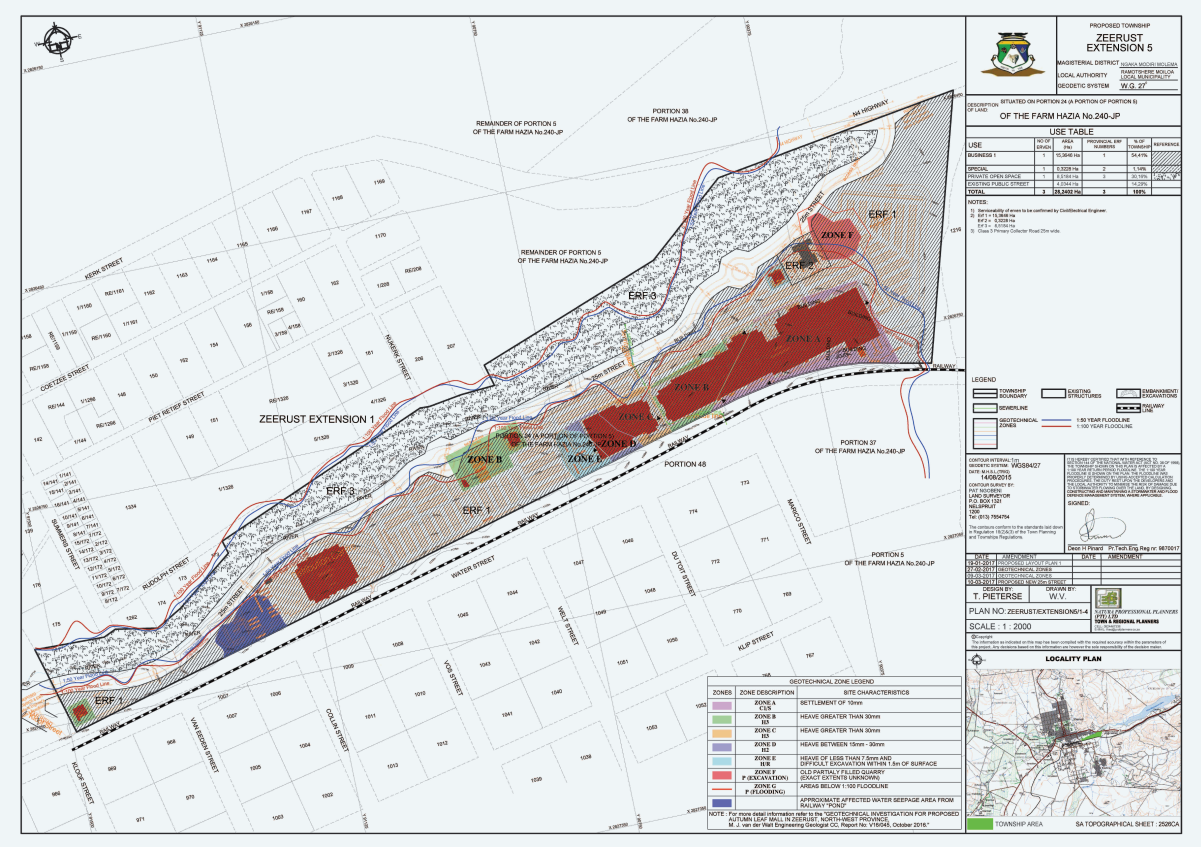


Figure 5 Layout Plan

The Layout Plan depicts the 3 erven, namely Business 1, Special, Private Open Space and the public road. In addition refer to the Site Development Plan in Appendix B.

The land uses will be as follows:

Table 1 Land Uses

Use	No of erven	Area (Ha)	Erf numbers	% of Township
Business 1	1	15, 3646 ha	1	54,41
Special	1	0,3228 ha	2	1,14
Private Open Space	1	8,5184 ha	3	30,16
Existing Public Street		4,0344 ha		14,29
TOTAL	3	28,2402 ha		100

The total site is 282 402 m² or 28.2402 hectares in size and has a coverage of 13% along with a Floor Space Ratio (FSR) of 0.14.

The shopping mall, hotel including conference facility, free stander drive thru's and the distribution centre are planned on Erf 1.

Associated infrastructure will include roads and civil services (water, sewer, storm water reticulation and electricity).

Development Criteria as per Site Development Plan:

Erf Size:	282 402 m^2
Building Lines:	5m / 10m
Coverage:	13% (36 227m^2)
FSR:	0.14 (40 348m^2)

ERF. 1

Zoning:	Business 1
Erf Size:	153 646 m^2
Coverage:	23% (35 483m^2)
FSR:	0.26 (40 047m^2)

The **business erf (Erf 1)** stretches from the entrance on the eastern side/N4 Toll road all along the proposed (25m) new class 3 public road to the new intersection with Kloof Straat on the western side of the proposed Zeerust Extension 5. The erf is directly adjacent south of the new 25 metres public road. The most southern boundary of the erf is the railway line reserve.

The proposed Autumn Leaf **Shopping Mall** is situated closest to the entrance from the N4 Toll road on the eastern side of Zeerust. The retail development is classified as a community centre with a GLA size smaller than 25 000m², although there is sufficient demand for the retail development of up to 29 000m². The size of Erf 1 is 15.3646 ha as indicated on the Layout plan.
There will be two anchor tenants and various line shops, as indicated below:

Anchor Tenant 1	3 003m2
Anchor Tenant	23 562m2
Line Shops	15 062m2
GLA:	*21 627m2*

Three **Drive-Thru's** are planned on the site, namely next to the Filling station site, between the shopping mall and distribution centre and another one west from the distribution centre, close to the Kloof Street entrance. These facilities are all located next to and south of the class 3 public road on the "Business1" zoned erf.

Free Stander 1	270m2
Free Stander 2	270m2
Free Stander 3	270m2
TOTAL GLA:	*22 437m2*

Parking is provided at a ratio of 6 parking bays per 100m². It translates to (22 437m2 /100 m2) x 6 = 1 346 Parking Bays required for the new Shopping Mall. The parking areas are well planned and accessible. They are located east, north and west of the shopping mall. The taxi drop-off area is situated next to the public street between the shopping mall and the distribution centre.
The proposed **Hotel** is relatively small with 28 units.

Hotel (28 Unit)	2 673m2
Conference Area	1 165m2
Waiting/Lounge area	436m2
Day Spa/Gym	552m2
TOTAL AREA:	*4 826m2*

Parking is provided at 6 parking bays per 100m2 and1 parking bay per room.
Total Parking bays required for new Hotel: (3 762 m2 /100 m2) x 6 = 226 Parking Bays (excluding 1 064m2 hotel rooms).
28 Hotel Rooms x 1 parking Bay per room = 28 Parking Bays
Total Parking Bays provided are: 1 551

The proposed **Distribution centre** is also located south of the class 3 public road, west of the shopping mall, closer to the Kloof Street entrance on the business zoned erf. The distribution centre will be developed in two phases as indicated below in line with the recommendations of the Market Feasibility Study.

Distribution Centre	4482m2 (Phase 1)
Distribution Centre	4838m2 (Phase 2)
Distribution Office	362m2
TOTAL AREA:	*9 501m2*

Parking will be provided at the following ratio:
Office - 4 parking Bays per100m2
Warehouse - 1 parking Bays per100m2
Total Parking bays required for new Distribution Centre:
(362m2 /100 m2) x 4 = 15 Parking Bays
(9 139m2 /100 m2) x 1 = 91 Parking Bays
Total provided: 67 Parking Bays

ERF. 2:

Zoning:	Special
Erf Size:	3 228 m^2
Coverage:	23% (744 m^2)
FSR:	0.09 (301 m^2)

The proposed **Hazia Filling Station** is situated closest to the entrance from the N4 Toll road on the eastern side of Zeerust next to the class 3 public road. The erf is zoned "Special" for a filling station and various related facilities. The building is 744m². The size of Erf 2 is 3 228m².

ERF. 3:

Zoning:	Private Open Space
Erf Size:	85 184 m^2

The **open space** area north of the proposed development is approximately 8.5184 ha in extent and will be zoned as "**Private Open Space**." Most of the land on Erf 3 is situated within 1:100 / 1:50 year's year flood areas. The engineer has also calculated the flood lines and issued a flood line certificate which is included in the services report herewith attached as Annexure G.

The class 3 **public road** (zoned as "Existing Public Streets" on the Layout Plan) that links the N4 with Kloof Street has a 25m road reserve and also forms a "buffer" between the shopping mall/filling station and the Private open space directly north and adjacent to the public road. The total area of the road reserve is approximately 4.0344 ha.

The layout for Zeerust Extension 5 and the zoning of specific portions of land has been designed with due consideration of all the physical, as well as other constraining factors. The planning of the layout for Zeerust X5 was also done hand in hand with the compilation of the draft Site Development Plan to ensure the best scenario outcome. Various specialist inputs were obtained and incorporated to ensure an optimal design of the layout, as well as the draft SDP for the actual development.

The registered owner as per Deed of Transfer T9890/1971 for Portion 24 (a portion of Portion 5) of the farm Hazia 240 Registration Division JP, North West Province, is Zeerust Modern Bricks (Pty) Ltd. After approval and proclamation of the township (to be known as Zeerust X5), the land owner will enter into sales agreements with the potential buyers to sell off proposed Erven 1 and 3 of Zeerust X 5.
Correspondingly, Erf 2 of Zeerust X 5 (proposed filling station erf) will be sold to Munghana Leisure and Tourism (Pty) Ltd, the applicant for Hazia Filling station. *The Hazia filling station project is thus not dealt with in this EIA application.*

1.7 Legal requirements

1.7.1 National Environmental Management Act

In terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) as amended and the EIA Regulations 2014, an application for environmental authorisation for certain listed activities must be submitted to the relevant authority, the Department of Rural, Environment and Agricultural Development, North West Provincial Government, (DREAD).

A Basic Assessment (BA) process for this proposed project is being undertaken by Setala Environmental. The listed activities for the proposed Autumn Leaf Shopping Mall project are the following:

Table 2 Listed activities

Listed Activity	Activity/Project Description
GN R983/2014 Activity 19 The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving – (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 of this Notice, in which case that activity applies (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.	To make provision for the excavation or infilling of more than 10 cubic metres of soil from a watercourse if required. Infilling and / or excavation within the 1:100 year flood lines will have to be done to construct the access roads along the periphery of the site. Parking bays and infrastructure within the 1:100 year flood lines will also require infilling and / or excavation.
GN R983/2014 Activity 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) the undertaking of a linear activity; or	The study area and the surrounding region fall within the Savanna Biome, which is also known as the Bushveld Biome. According to the vegetation classification of Mucina & Rutherford (2006) the study area is found in the veldtype known as Zeerust Thornveld. According to Mucina & Rutherford the

(f) maintenance purposes undertaken in accordance with a maintenance management plan.	conservation status of Zeerust Thornveld is Least Concerned (LT). There are areas of the property that have been left as 'wild veld', but there are no areas of pristine Zeerust Thornveld present. The vegetation of the study area is representative of Zeerust Thornveld with deciduous, open short thorny woodland in patches. The natural veld, where it occurs, is dominated by Acacia thorn tree species with an herbaceous layer of mainly grasses on deep, high base-status and some clay soils on plains and lowlands. The majority of the vegetation of the study area, especially the large, central area is disturbed. The construction of the proposed shopping mall and associated structures will entail the clearance of more that 1 hectares of indigenous vegetation, but less than 20 hectares. The total site is 28.2402 hectares in size of which the impacted study area for this application is 27.9174 ha. Of this area, 8.5184 ha will be kept as private open space. An area of 19.3990 wil thus be impacted on of which 5.663 ha is highly disturbed and denuded. As a result, less than 20 hectares of indigenous vegetation will be cleared.
GN R985/2014 Activity 4 The development of a road wider than 4 metres with a reserve less than 13,5 metres. (h) North West (iv)Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority;	According to the conservation plan of the North-West Province (2009), the area is within a Critical biodiversity area (CBA 1). This includes large areas of the Zeerust town as well. The main reason for the area being a Critical biodiversity area (CBA1) is the importance of the catchment and watercourses of the Marico Rivers in particular for the North-West Province. The watercourses in the region of Zeerust are seen as being under threat and therefore in need of conservation. It is envisaged to construct a double carriage link road of 25 metres wide from the N4 through the site to link up with Kloof Street.
GN R985/2014 Activity 6 The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more. (h) North West: (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority; (vi) Areas within a watercourse or wetland, or within 100 metres from the edge of a watercourse or wetland.	The development area is within a Critical biodiversity area (CBA 1). The development of the hospitality facility (hotel) sleeping more than the threshold will be within 100 metres from the edge of the floodline areas.
GN R985/2014 Activity 12 The clearance of an area of 300 square metres or more of indigenous vegetation. (h) North West: (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority; (vi) Areas within a watercourse or wetland, or within 100 metres from the edge of a watercourse or wetland.	More than 300 square metres of indigenous vegetation will be cleared for the development. The area is within a Critical biodiversity area (CBA 1). In addition the development will be within 100 metres from the floodlines.
GN R985/2014 Activity 14 The development of- (ii) Infrastructure or structures with a physical footprint of 10 square metres or more; Where such development occurs- (c) if no development setback has been adopted within 32 metres of a watercourse, measured from the edge of the watercourse (h) North West: (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority.	Infrastructure with a footprint of more that 10 square metres will be developed within 32 metres of a watercourse. The development area is within a Critical biodiversity area (CBA 1).

1.7.2 National Water Act

The National Water Act, 1998 (Act No. 36 of 1998) (NWA) regulates the use of water and the pollution of water resources. Section 19 of the NWA regulates pollution of a water resource and Section 21 of the NWA lists the water uses for which a water use licence (WUL) is required. A Water Use Licence Application (WULA) for the Water Uses as defined by Section 21(f) and (i) for the proposed development was submitted to the Department of Water and Sanitation (DWS).
The Development will therefore require authorisation for the following water uses:

- Section 21(f) - discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit, that is for the discharge of treated wastewater into the Klein-Marico River from a package sewage treatment plant with a maximum discharge of 500 m^3/day of treated effluent. (This sewage treatment plant is being installed to minimise the impact of an additional volume of untreated domestic wastewater, from the proposed development, being discharged from the Zeerust Waste Water Treatment Works which is currently not operational); and
- Section 21(i) water use - altering the bed, banks, course or characteristics of a watercourse, for the construction of paved roads and parking areas in the 1:100 flood line area. There will also be no new crossings and the development will use the existing N4 and other existing bridges to access the site. There is no Section 21 (c) water use, which is for, the impeding or diverting of the flow in the watercourse.

The Water Use Licence Application (WULA) Report has been completed in terms of the requirements of the National Water Act, 1998 (Act 36 of 1998) as amended (NWA), and external water use application guidelines and policies of the Department of Water and Sanitation (DWS) for a water use authorisation (Section 22 of the NWA) in terms of the procedures and requirements as laid out in terms of Section 40 of the NWA.

2. Feasible and reasonable alternatives

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—
(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by EIA Regulation, 2014 Appendix 1(h). Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.
The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, 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.

Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds using the Hartebeeshoek94 WGS84 co-ordinate system.

2.1 Site alternatives

List alternative sites, if applicable.

Site Alternatives	Description
Alternative Site 1 (preferred or only site alternative)	As mentioned, the registered owner of the property is Zeerust Modern Bricks (Pty) Ltd. After approval and proclamation of the township (to be known as Zeerust X5), the land owner will enter into sales agreements with the potential buyer, Akani Properties, to sell off proposed Erven 1 and 3 of Zeerust X 5. It is therefore not feasible to consider other sites in terms of location alternatives. Alternative locations are therefore currently not available and would involve the lease or purchase of other land / other sites. The development site lies on the N4; the main route between South Africa and Botswana. This route is also part of the Trans Kalahari Corridor, which extends from Walvis Bay in Namibia to Maputo in Mozambique. The R49 road is the main link between Zeerust and Mahikeng, it is believed that most of the buying power of Zeerust leaks to Mahikeng via this route since there is a lack of retail developments in Zeerust. The site is regarded as ideal for the development of a mall due to the location along the N4 Highway which will provide visibility and easy access to the mall. The direct access to the N4, will contribute positively to the accessibility of the site, while access from Kloof Street provides a good alternative access point from which residents of Zeerust can get easier access to the development site. Portion 24 (a Portion of Portion 5) of the farm Hazia 240 JP is thus the only site alternative. Layout and design alternatives will be considered.
Alternative Site 2	Not applicable
Alternative Site 3	Not applicable

Site Co-ordinates	Latitude (S):			Longitude (E):		
Alternative S1 (preferred or only site alternative)	25°	32'	40.10"	26°	05'	59.95"
Alternative S2 (if any)	°	'	"	°	'	"
Alternative S3 (if any)	°	'	"	°	'	"

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A.

Co-ordinates of the corners of the site (wider area) that is investigated		
Description (4 corners of site)	Lat (DDMMSS)	Long (DDMMSS)
North East	25°32'32.44"S	26° 6'12.70"E

North West	25°32'48.92"S	26° 5'21.00"E
South East	25°32'44.80"S	26° 6'8.26"E
South West	25°32'52.92"S	26° 5'22.14"E

This EIA will seek to authorise the total property. The maps attached in Appendix A indicate/highlight the whole area that was investigated to inform DREAD on the area that is part of the authorisation. The wider area that was investigated will allow future potential amendments to the EA should it be necessary (at a later stage).
Should small changes be done to the layout of the shopping mall after authorisation it will not be considered crucial and will not warrant a new application. In other words, small changes will be allowed e.g. the location of shops in the mall could change.

2.2 Lay-out alternatives

Alternatives	Description
Alternative 1 (preferred or only alternative)	Alternative 1 is the preferred alternative. As mentioned above, no off-site or other site alternatives have been investigated due to the fact that the said property is proposed to be purchased by the applicant/ developer, and is located within an urban area. However, layout design alternatives were assessed and a preferred alternative identified. The limitations inherent in this scenario are understood. The sensitive areas identified during field investigations are the Kareespruit (Stream) and the Klein-Marico River, as well as their associated riparian zones. The riparian zone needs to be viewed as being a part of the watercourse ecosystem. There are no other sensitive areas or habitats identified such as rocky outcrops (koppies) or areas of protected trees, etc. The watercourses, like all watercourses encountered, should be approached as sensitive. These areas were thus demarcated and rated as having a sensitivity rating of High. These areas should ideally be viewed during project planning and development as 'No-Go' zones. The layout options were investigated in terms of the layout for the proposed establishment so as to accommodate the riverine area. As the property is located between the Klein Marico River and the Karee Spruit it is therefore impacted by flood lines as indicated and endorsed by the relevant engineer on the below Site Development Plan. The flood line Assessment was conducted by Klunene Consulting Civil Engineers. (Appendix G refers) Layout Alternative 1 was in consideration of the flood lines and the sensitive areas of the two watercourses. Refer to App B for the Preferred Alternative 1.
Alternative 2	This layout Alternative (2) was without consideration of the flood lines and the sensitive areas of the two watercourses. As seen in the SDP in App B3 a huge portion of the development are in the flood

	line areas.
Alternative 3	N/A

2.3 Technology alternatives

Alternatives	Description
Alternative 1 (preferred or only alternative)	Due to the type of development no technology alternatives is available.
Alternative 2	N/A
Alternative 3	N/A

2.4 Other alternatives

(e.g. scheduling, demand, input, scale and design alternatives)

Alternatives	Description
Alternative 1 (preferred or only alternative)	Proposal with sustainable design principles. Sustainable design principles in terms of services will be implemented where feasibly possible. i.e. Solar panels.
Alternative 2	Proposal with conventional design principles. Only conventional design principles in terms of services will implemented.
Alternative 3	N/A

2.5 Activity alternative

Agricultural potential

More than 80% of the North West Province's economic activity is concentrated in the southern region between Potchefstroom and Klerksdorp and in the eastern region around Rustenburg. The fertile, mixed-crop farming lands are predominantly around Rustenburg and Brits, while the Marico region is more cattle country.

The true agricultural potential of a small study area is difficult to gauge accurately, as it is qualitative in nature rather than quantitative. Soil form and depth and chemical analyses need to be conducted to firstly determine the true potential of the soils. Added to this a person needs to consider the availability of irrigation water and annual rainfall figures, along with monthly temperature average which determine the length of the active growing season. All this data forms background information that must then be considered and interpreted in the context of potential and realistic land uses for the area. The resulting calculated or perceived agricultural potential does not automatically imply that this potential will be attained in all instances as management, technical skills, knowledge, equipment, irrigation systems, etc. vary considerably.

No agricultural activities are presently taking place within the study area. Historically, none or very low-level activities have taken place. The present size and setting of the land parcel does not lend itself to any commercial agricultural practices of any significant value. This is not to say that no agricultural activities, especially in terms of cultivation, are not possible on the study site.

Crop production

The soils found on the site are generally of medium/low to low agricultural potential (in terms of dryland and irrigated cropping) due to a number of reasons. These are:

- The soils are generally leached, sandy and gravelly, which are generally poor in nutrients.
- Although present, there is a lack of deep, nutrient-rich and well-drained soils ideal for cultivation.
- The lack of naturally good cultivation soils, within a small area, makes the agricultural potential of the study site, in terms of crop-yields and economic value low.
- Large areas in the centre of the study area have been badly degraded and compacted over the years from the brickyard and factory. Such soils take a number of years to recover and improve even when cultivated regularly.

Cattle production

The study area is too small for any meaningful commercial cattle production in terms of grazing lands. The area is hemmed in between various roads, railway lines and urban areas. The small size of the area and the low soil nutrient levels which limit good grass production, limits the carrying capacity of the site for meaningful economic cattle farming.

The study area as a unit has medium/low to low agricultural potential. Nearly all of the land in the study site has been calculated, as being 'low potential arable land' Due to the size of the study area and low richness of the soils the natural carrying capacity of the site is low in terms of grazing for cattle. The agricultural potential in terms of cattle farming is therefore 'low potential grazing land'.

Agriculture could therefore not be considered as an alternative for this property.

2.6 No-go alternative

The no-go alternative implies that the status quo remains and a new mall would not be developed. It is suggested that to maintain the status quo is not the best option for the macro environment.

According to Mucina & Rutherford (2006) the conservation status of Zeerust Thornveld is Least Concerned (LT). However, it needs to be kept in mind that those studies were conducted ten years ago. According to the North West Province Biodiversity Conservation Plan (NWBCP) (2009) the conservation status is Near Threatened (NT). NT is a more sensitive status than LT. The conservation status needs to be viewed not just nationally but also provincially and therefore the conservation status for the veld type in terms of the project should be taken to be Near Threatened (NT). The veldtype is therefore presently not threatened.

A potential fatal flaw (or flaws) from a biodiversity perspective is seen as an impact that could have a "no-go" implication for the project. A 'no-go' situation could arise if residual negative impacts (i.e. those impacts that still remain after implementation of all practical mitigatory procedures/actions) associated with the proposed project were to:

a) Conflict with international conventions, treaties or protocols (e.g. irreversible impact on a World Heritage Site or Ramsar Site);
b) Conflict with relevant laws (e.g. clearly inconsistent with NEMA principles, or regulations in terms of the Biodiversity Act, etc.);
c) Make it impossible to meet national or regional biodiversity conservation objectives or targets in terms of the National Biodiversity Strategy and Action Plan (BSAP) or other relevant plans and

strategies (e.g. transformation of a 'critically endangered' ecosystem);

d) Lead to loss of areas protected for biodiversity conservation;
e) Lead to the loss of fixed, or the sole option for flexible, national or regional corridors for persistence of ecological or evolutionary processes;
f) Result in loss of ecosystem services that would have a significant negative effect on lives (e.g. loss of a wetland on which local communities rely for water);
g) Exceed legislated standards (e.g. water quality), resulting in the necessary licences/approvals not being issued by the authorities (eg. WULA);
h) Be considered by the majority of key stakeholders to be unacceptable in terms of biodiversity value or cultural ecosystem services.

There are no issues with regard to the criteria listed above (a to h), as far as the proposed project is concerned. There are no fatal flaws and the project may go ahead. There are 'No-Go' areas within the study site and these are the watercourses. However, recommended mitigating measures must be implemented.

The do-nothing ("no go") option would entail not using the site and maintaining the site as is. From certain perspectives this is not a viable option as the site is situated within an urban area surrounded by either upcoming or already existing residential communities. By not developing the site, the site will be anomalous in the context of the surrounding urban residential land-uses, and some of the direct and indirect socio-economic benefits (i.e. job creation, etc.) will not materialise.
From an environmental perspective, the site has a certain degree of ecological sensitivity due to the presence of the two watercourses, however much of the ecological linkages between the site and surrounding natural areas have been lost due to the increase in development around the site. Not developing the site will assist in protecting the natural features on the site, however the development as proposed will maintain the watercourse areas as an undeveloped but importantly as an actively managed and controlled area.

The No-Go development alternative could therefore not be considered the responsible way to manage the site.

2.7 Motivation for preferred site, activity and technology alternative

The property is located adjacent to the N4 Toll Road between Groot Marico area and Zeerust Central Business District at the eastern entrance to Zeerust. The property enjoys good visibility and good access opportunities, which enhances the potential of the property for Business and/or Commercial purposes.

The North West Provincial Spatial Development Framework identified the following attributes, with specific relevance for the Ramotshere Moiloa local municipality and specifically relevant to Zeerust town:

- Zeerust is situated on the Platinum corridor, which intersects with the Western Frontier SDL
- Strengthening of Zeerust as a Regional Node in the North West Province
- Strengthening of Zeerust as one of the main centres to enhance corridor development (Western Frontier)

Ramotshere Moiloa Local Municipality (RMLM) area is characterised by occurrence of very low population, compared to municipalities like Rustenburg. However, 90 000 people (representing

65% of the total population) is concentrated in close proximity to the Platinum Highway and the Gaborone Road. The highest volume of traffic moves on the Platinum Highway and on the Zeerust – Gaborone Corridor. Zeerust is situated on the intersection of two development corridors of national importance namely the Western Frontier (Zeerust – Mafikeng – Vryburg – Taung) and the Platinum SDI (Pretoria – Rustenburg – Swartruggens – Zeerust – Lobatsi). The primary focus of the development corridors is to establish economic development along the major transport routes in order to promote economic growth and the creation of job opportunities. It does not only link with neighbouring provinces but also opens up international linkages with Botswana and Mozambique.

Botswana has become an important trade gateway between Gauteng and the West Coast via the Trans-Kalahari Corridor, a 1 900 kilometre road link from Johannesburg / Pretoria to the Port of Walvis Bay. Whether travelling through Gaborone or Lobatse, the route crosses into South Africa to the town of Zeerust in the North West. From Zeerust, the route moves east to Rustenburg, Sun City and then Pretoria or from Zeerust to Magaliesberg and the Cradle of Humankind.
South Africa and Botswana have signed a Memorandum of Agreement (MoA) that will see the two countries improve cooperation to stimulate economic growth and advance regional integration. The border post serves as a convenient, economic route between South Africa and Botswana, particularly to Zeerust in South Africa and Gaborone, Lobatse and Ramotswa in Botswana.
The Platinum Spatial Development (North West Province) initiative aims to "develop all areas on the N4 Highway that links South Africa's most densely populated areas with the town of Lobatse in Botswana. By developing nodes along the logistical corridor, the aim is to stimulate economic development. Zeerust stands to benefit from increased traffic along this route, which is ultimately intended to link Namibia and Mozambique." The international linkage between South Africa is very important for the economic survival of RMLM as most of the international traffic will have to travel through Zeerust. In essence, the more traffic will have to travel thought Zeerust, the more money will be spent in Zeerust which has been identified as one of the major economic nodes within RMLM.
Such a proposed development could serve as a powerful economic injection for Zeerust and help to further strengthen the role the town plays as an economic node for RMLM and Botswana and also to take advantage of the N4 Corridor which carries a high volume of traffic passing through Zeerust. To summarise, it is believed that the proposed facility will enhance the role of Zeerust as a regional shopping facility and in general contribute to offer a wider variety of products in town.

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

3 Physical size of the activity

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

Alternative:		Size of the activity:
Alternative A1[1] (preferred activity alternative)		35 483m^2
Alternative A2 (if any)		37 035 m^2
Alternative A3 (if any)		m^2

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

Alternative:		Size of the site/servitude:
Alternative A1 (preferred activity alternative)		282 402 m^2
Alternative A2 (if any)		282 402 m^2
Alternative A3 (if any)		

4 Site Access

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

Describe the type of access road planned:

Refer to the Layout Plan included in Appendix B and the Traffic Impact Assessment in Appendix G for details of the access roads. The proposed Autumn Leaf Mall will gain access from the N4 Platinum Highway and from Kloof Street.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

5 Locality map

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

- *an accurate indication of the project site position as well as the positions of the alternative sites, if any;*
- *indication of all the alternatives identified;*
- *closest town(s;)*
- *the accurate indication of the site in relation to closest protected environments or national parks (i.e. within 2.5 km)*
- *road access from all major roads in the area;*
- *road names or numbers of all major roads as well as the roads that provide access to the site(s);*
- *all roads within a 1km radius of the site or alternative sites; and*
- *a north arrow;*
- *a legend; and*
- *locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds using the Hartebeeshoek94 WGS84 co-ordinate system*

6 Layout/Route plan

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

- *the property boundaries and numbers of all the properties within 50 metres of the site;*
- *the current land use as well as the land use zoning of the site;*
- *the current land use as well as the land use zoning each of the properties adjoining the site or sites;*
- *the exact position of each listed activity applied for (including alternatives);*
- *servitude(s) indicating the purpose of the servitude;*
- *a legend; and*
- *a north arrow.*

7 Sensitivity map

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- *watercourses;*
- *the 1:100 year flood line (where available or where it is required by Department of Water and Sanitation);*
- *ridges;*
- *for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and*
- *cultural and historical features;*
- *areas with indigenous vegetation (even if it is degraded or infested with alien species); and*
- *critical biodiversity areas and ecological support area.*
- *protected areas (e.g Magaliesberg Protected Environment, Pilanesberg National Park etc.)*

The sensitivity map must also cover areas within 100m of the site and must be part of Appendix B.

8 Site photographs

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

9 Facility illustration

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix D 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.

10 Activity motivation

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES	**NO X**	Please explain
Application for township establishment Application is made in terms of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) and specifically in terms of Chapters 5 and 6 of the Ramotshere Moiloa Local Municipality Land Use Management By-law,2016 for township establishment. Proposed township to be known as Zeerust Extension 5. The property is at present zoned as "Special". The township application will be for: a) "Business 1" in terms of the Zeerust Town Planning Scheme, 1980, with an Annexure to permit a Shopping Mall including Places of refreshments; Cinema; Shops; Drive Thru Restaurants; Distribution Centre, a Hotel including conference facility; Lounge / Waiting Area; Day Spa; Gym uses compatible or approved by the Local Municipality. b) Special" for a Filling station to include a 24/7 Convenience shop with take-aways/Quick service restaurant (400m²) Car wash, an ATM and uses compatible or approved by the Local Municipality. c) "Private Open Space". d) "Existing Public Roads".			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	**YES X**	NO	Please explain
North West – Provincial Development Plan, 2030 The plan provides development guidelines and 8 development priorities on a macro level for the province as a whole. None of these priorities and/or development guidelines are restrictive on the proposed shopping mall and associated infrastructure. Appropriate processes are also followed with the township establishment application in terms of relevant legislation to ensure that there is compliance with policies and participation by all interested and affected parties/stakeholders.			
(b) Urban edge / Edge of Built environment for the area	**YES X**	NO	Please explain
The site is located within the new Zeerust Urban Edge according to the Ramotshere Moiloa Spatial Development Framework, SDF 2014 – 2015.			

(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	**YES X**	NO	Please explain
In terms of the Ramotshere Moiloa SDF 2014 - 2015, the subject property is located in an area which is situated within the Urban Development Boundary (UDB) [also known as an Urban Edge]. It is a demarcated line to manage, direct and control the outer limits of development around an urban area. The subject property is therefore within the urban edge and earmarked for mixed land uses. The mixed use areas proposed by Zeerust provide an interface or transitional area between commercial uses and residential areas. Proposed uses amongst other include shops, offices and residential. A need for a diversification of land uses exist in the area as identified in terms of the Council's forward planning policies. The subject site is therefore suitable for the proposed use. The application is thus in line with both the IDP and SDF for the Local Municipality as it is situated in the urban edge, in an area earmarked for "Mixed use" development. The property is situated in area earmarked for development in 5 – 10 years in terms of the SDF when it was compiled a few years ago. Specialist studies compiled by Urban-Econ Development Economists confirmed that there is indeed a need for the Shopping Mall as envisaged. The local municipality however in principle agreed to the development of a shopping centre on the same property (as already indicated above) and the application for township establishment is in the process of being finalized for submission to Ramotshere Moiloa Local Municipality for considered and approval.			
(d) Approved Structure Plan of the Municipality	YES X	NO	Please explain
The proposed development is in line with the Ramotshere Moiloa Spatial Development Framework, SDF 2014 – 2015. A need for a diversification of land uses exist in the area as identified in terms of the Council forward planning policies. The strengths that the site and proposed use thereon exhibit include: o No similar facility in the area o No formal retail competition o Very good accessibility o Highly visible o Commanding Site Topography which will definitely improve the aesthetics of the surrounding area and the gateway of Zeerust town o Strategic location of the site o Close to residential areas and will attract growth, infill and will highly densify the adjacent areas earmarked for low and medium residential density			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO X	Please explain
Although the site falls within a Critical Biodiversity Area (CBA) this is due to the importance of the catchment and watercourses of the Marico Rivers in particular for the North-West Province. The watercourses in the region of Zeerust are seen as being under threat and therefore in need of conservation. The 1:100 year flood line will be excluded from the proposed development and mitigation measures will be implemented to prevent pollution of the watercourses. Only parking and access roads will fall within the 1:100 year flood lines. A Water Use License Application was submitted for these activities.			

(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
N/A			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES X	NO	Please explain
The proposed development is in line with one of the objectives of the IDP and SDF i.e. to promote the local economic growth and investment including job creation for local residents.			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES X	NO	Please explain
There is a need for the proposed shopping mall development in the area. It will promote local economic growth by means of the provision of job opportunities during the construction and operational phases as well as rates and taxes payable to the local municipality.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix E.)	YES X	NO	Please explain
Adequate capacity was confirmed by the Municipality. Refer to App E for confirmation.			
6. 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 services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES X	NO	Please explain
Comment by the Municipality will be attached to the final Basic Assessment Report as Appendix I.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO X	Please explain
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES X	NO	Please explain
The locality of the site along the N4 is ideal for a shopping mall development in terms of visibility and accessibility.			

9. Is the development the best practicable environmental option for this land/site?	YES X	NO	Please explain
From an environmental perspective, the site has a certain degree of ecological sensitivity due to the presence of the two watercourses, however much of the ecological linkages between the site and surrounding natural areas have been lost due to the increase in development around the site. Not developing the site will assist in protecting the natural features on the site, however the development as proposed will maintain the watercourse areas as an undeveloped but importantly as an actively managed and controlled area. The water course areas are proposed to be zoned as private open space (erf 3). This will entail 8,5184 ha and approximately 30% of the township. Further, the site is situated within an urban area surrounded by either upcoming or already existing residential communities. The proposed development will have direct and indirect socio-economic benefits (i.e. job creation, etc.) to the surrounding communities and Zeerust.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES X	NO	Please explain
The proposed development will make a substantial contribution to the growth and development of Zeerust. The proposed Autumn Leaf Mall would contribute significantly to the local economy and the economic impact would be substantial. Economic growth trends in the Ramotshere Moiloa LM have been higher than the national average and appears to be more resilient to shocks to the economy. This indicate that the economy has growing potential and can be identified as having investment potential. In the Ramotshere Moiloa Local Municipality, the construction sector (3.8%) is the biggest in the secondary sector and 8th biggest sector in the Local Municipality. This sector would experience substantial growth through the construction of Autumn Leaf Mall. The construction sector employs only 0.1% of the workforce in Zeerust, this would increase the number of employed in this sector. The Wholesale and retail trade sector (15.1%) is the second biggest contributor to the Local Municipality's economy. This sector would benefit tremendously from the operation of Autumn Leaf Mall. Wholesale and retail trade employs the biggest share (20.1%) of the workforce, this would be beneficial for the Mall. The additional income generated by Autumn Leaf Mall would benefit the local population significantly. The additional income is expected to benefit the lower income households, which comprise a total of 54,4% of local households. The impact on employment would be positive, and although the impact is expected to be small; any contribution to more employment is an achievement in South Africa.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO X	Please explain
The proposed development is in line with the local municipality IDP and SDF.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO X	Please explain
The project will benefit the local communities by the provision of job opportunities during the construction and operational phases and the provision of additional shopping facilities.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO X	Please explain
The proposed development falls within the new Zeerust urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO X	Please explain
The development of Malls is not included in any of the SIPS projects.			

15. What will the benefits be to society in general and to the local communities?	Please explain
The proposed development will provide shopping facilities and job opportunities both during the construction and operational phases.	
16. Any other need and desirability considerations related to the proposed activity?	Please explain

A Retail Market Feasibility study has been conducted by Urban-Econ Development Economists. Refer to Appendix G

Summary of their findings regarding need and desirability considerations related to the project:

Hotel Recommendations

- ✓ There are several established guesthouses and lodges in Zeerust, that have shown significant growth between 2014 and 2015 of the total paid bednights.
- ✓ Due to the proximity of Botswana to Zeerust, there is disproportional number of international tourists visiting Zeerust (24%).
- ✓ It is highly recommendable that Zeerust's accommodation sector has the potential to increase supply.
- ✓ Furthermore, tourism demand is also expected to increase, not just for South Africa but for the North-West Province as well, alongside increase spending power of Domestic and International Travellers.
- ✓ The hotel should target the high-end market of accommodation in Zeerust, with a 3-star or 4-star rating from the Tourism Grading Council of South Africa.
- ✓ There is a total NED for 10 967 bednights annually in Zeerust, which results in 30 beds per day; and at a 70% occupancy rate, the NED for bednights is 14 257.

Conference Centre Recommendations

- ✓ The conference centre would not be a feasible option to develop on its own.
- ✓ The conference can alternatively be managed in conjunction with the hotel; it would add to the high-performance hospitality of the hotel.
- ✓ The facility must aim to attract a variety of users from local, regional and international regions.
- ✓ The facility can also be used for other uses such as banquets, weddings, public meetings, and performing arts.
- ✓ The conference centre needs to consider the critical success factors to be managed successful.

Distribution Centre Recommendations

- ✓ The distribution centre would be viable if it captures 5% of the market share, which translates to 6 025.5 TEU annually.
- ✓ The initial capacity of the Distribution centre should be 7 000 TEU annually, to allow for expansion of trade and market share.
- ✓ The development of the proposed distribution centre should be built in phases; this is highly recommended as the distribution centre grows in operations.
- ✓ Trade has shown consistent growth between South Africa and Botswana, and the value thereof has also grown.
- ✓ The distribution centre would contribute to the goals and objectives for NATMAP 2050, with increase in trade and economic growth.
- ✓ Appointment of a distribution centre company is highly advised to handle the management and operational aspects of the distribution centre.
- ✓ The distribution centre should also consider the critical success factors.

Retail Recommendations

- ✓ There is sufficient demand for the retail development of up to 30 000m².
- ✓ The proposed retail facility should focus on Food and non-alcoholic beverages, Alcoholic beverages, tobacco and narcotics, Clothing and footwear, Furnishings and household equipment, Recreational and culture, Personal care and Financial Services.
- ✓ There is a high demand for Recreational & culture, it is recommended that a recreational centre should be family-friendly and should be promoted in conjunction with the catering services.
- ✓ The success of the proposed Zeerust Multi-Use Development is dependent on the following factors: the management of the centre, unique features of the retail component of the development, creation of a destination, best staff appointment, positive consumer engagement, innovative retail experience, and building of loyalty from consumers and employees.

17. How does the project fit into the National Development Plan for 2030?	Please explain
The proposed development will provide job opportunities both during the construction and operational phases and will thus contribute to eliminate poverty in the community in line with the objectives of the National Development Plan 2030.	
18. Please describe how the general objectives of Integrated Environmental Management as set out in Section 23 of NEMA as amended have been taken into account.	

The proposed project has been undertaken according to Section 24 of the National Environmental Management Act (NEMA) (No 107 of 1998) and the following aspects of Section 23 have been considered:

- It was identified that the proposed activity will result in some negative environmental impacts during the construction. Thus an Application for the Environmental Authorisation is being lodged with the North West DREAD in April 2017 as the competent authority;
- An Environmental Basic Assessment Process is prescribed for the proposed project instead of a Full EIA (Scoping and EIA) process due to the nature of the proposed project being classified as less significant or detrimental to the environment when compared to other developments/projects that present significant detrimental impacts - thus requiring a Full EIA process to be undertaken prior to implementation of the project;
- Potential environmental impacts (including biodiversity and water bodies) and risks associated with the construction phase of the project have been identified and assessed according to their significance. Mitigation measures have been recommended for the more significant impacts;
- A Public Participation Process is being conducted for the project, where surrounding landowners, communities and the local authority (Interested and Affected Parties) are being consulted from the onset and throughout the Environmental Basic Assessment Process in order to receive their views on the proposed development;
- The Environmental Basic Assessment report together with the Environmental Management Programme will be submitted to the North West DREAD for review and approval prior to the implementation of the project; and
- The principles of NEMA such as the "polluter pays principle" have also been considered within the Environmental Management Programme for the project, where the applicant and its appointed Contractors will be responsible for avoiding negative impacts and where not possible, mitigating or rectifying any damages caused by the environment.

19. Please describe how the principles of environmental management as set out in Section 2 of NEMA as amended have been taken into account.
All efforts are being made to ensure that the project achieves sustainability, environmental justice and that the environmental rights of Interested and Affected Parties (local stakeholders, communities and the construction employees) are protected. This will be achieved by the applicant (Akani Properties) and its contractors through the implementation of the recommendations provided by the Basic Assessment specialist studies, the project's environmental management programme and Environmental Authorisation, once issued by the NW DREAD.

11 Applicable legislation, policies and/or guidelines

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

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management Act (Act No. 107 of 1998) (as amended)	Protection of the environment of the study area and surroundings.	National & Provincial	1998
National Environmental Management: Waste Act (Act 59 of 2008) (as amended)	Protection of the surrounding environment through efficient waste management by the appointed Contractor.	National & Provincial	2008
National Environmental Management: Air Quality Act (Act 39 of 2004)	Protection of the air quality of the study area through dust minimisation and the application of dust suppression measures.	National & Provincial	2004
National Water Act, 1998 (Act No. 36 of 1998)	Protection of water resources and where not possible relevant permits / licenses will be required.	National & Provincial	1998
National Heritage Resources Act (Act No 25 of 1999)	Protection of heritage resources surrounding the study area and those uncovered during the development phase by reporting to the nearest heritage authority.	National & Provincial	1999
National Environmental Management: Biodiversity Act (Act 10 of 2004)	Protection of biodiversity features and where not possible relevant permits will be required.	National & Provincial	2004
National Road Traffic Act (Act No 93 of 1996)	The contractor will obey traffic laws by driving at minimal speed approved by local authorities.	National & Provincial	1996
Occupational Health and Safety Act (Act No. 85 of 1993)	Protection of workers on site through the provision of Personal Protective Equipments; Training and other health and safety amenities.	National & Provincial	1993

Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) (as amended)	Eradication and control of classified invader plant species	National & Provincial	1983
All relevant Provincial regulations and Municipal bylaws	The Contractor will obey and abide by provincial and municipal bylaws which are related to the proposed project.	Provincial & Local	

12 Waste, effluent, emission and noise management

12.1 Solid waste management

Will the activity produce solid construction waste during the construction/ initiation phase?	**YES X**	NO
If YES, what estimated quantity will be produced per month?	It is not known at this stage	

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

Waste generated during the construction activities will be collected by the trucks of the appointed contractor and disposed of at the Zeerust landfill facility.

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

Waste generated will be disposed of at the Zeerust landfill facility.		
Will the activity produce solid waste during its operational phase?	**YES X**	NO
If YES, what estimated quantity will be produced per month?	It is not known at this stage	
How will the solid waste be disposed of (describe)?		
The collection of solid waste at the Autumn Leaf Shopping Mall should be carried out by the Local Municipality. If the Ramotshere Moiloa Local Municipality is not able to provide this service then a private company will be appointed by the management of the Autumn Leaf Mall for this purpose. A refuse area will be accommodated on site and waste will be disposed of at the municipal dumping site as per the requirements of the Municipal Health Bylaws.		
If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.		
Municipal dumping site		
Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?		
Not applicable		
If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the 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 NEM:WA?	YES	**NO X**
If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.		

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	**NO X**
If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.		

12.2 Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	**NO X**
If YES, what estimated quantity will be produced per month?	N/A	
Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	**NO X**
If YES, describe the type of effluent and the disposal mechanism/method Not applicable		
Will the activity produce effluent that will be treated and/or disposed of at another facility?	**YES X**	NO
If YES, provide the particulars of the facility:		

Facility name:	Zeerust Wastewater Treatment Works		
Contact person:	Mr. Victor Maboka		
Postal address:			
Postal code:			
Telephone:		Cell:	060 571 7475
E-mail:	mabokavictor@gmail.com	Fax:	

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

Not applicable

12.3 Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that exhaust emissions and dust associated with construction phase activities?	YES	**NO X**
If YES, is it controlled by any legislation of any sphere of government?	YES	**NO X**
If YES, the applicant must 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:		
Not applicable		

12.4 Waste Licence/Registration

Will any aspect of the activity produce waste that will require a waste licence/registration in terms of the NEM:WA?	YES	**NO X**

If YES, please submit evidence that an application for a waste licence/registration has been submitted to the competent authority

12.5 Generation of noise

Will the activity generate noise?	**YES X**	NO
If YES, is it controlled by any legislation of any sphere of government?	YES	**NO X**
If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.		
If NO, describe the noise in terms of type and level:		
The movements of construction vehicles, machinery and other construction activities will generate noise on site and affect nearby residents. However, the noise will be of a short term, temporary, localised nature and will only last during the construction phase of the project. Noise generated during the operational phase will mainly be the noise generated by the increased traffic and noise generated by the proposed facilities and activities (i.e. air conditioners, places of refreshment, compressors etc.). The noise level is anticipated to be less than 50dBA to the nearest sensitive receivers as required by SANS 10103 and thus authorisation will not be required for the noise impacts.		

13 Water use

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

Municipal X	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:	litres	
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water and Sanitation?	**YES X**	NO
If YES, please provide proof that the application has been submitted to the Department of Water and Sanitation.		

Proof that the application has been submitted to the Department of Water and Sanitation to be attached in Appendix L.

14 Energy efficiency

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

Energy Efficiency Applications

Some of the most common, cost effective energy efficiency applications are listed below.

Insulation

One of the best ways to make a building more efficient is to reduce the flow of heat into and out of the building. Ceiling and roof insulation serve to conserve heat in winter, and maintain cooler temperatures in summer. Climactic regions can make a difference in the level of insulation necessary for a comfortable living environment within a building.

Sky Lights

A skylight is a window placed in the roof of a building or in the ceiling of a room to admit light into the room. Designs include transparent roof plates, glass windows and plastic domes with a circular ducts connected to the room. Skylights should ideally be incorporated in the building design to keep the costs down, but can be retrofitted to existing buildings with significant contributions to increased light levels and accompanied energy savings.

CFL Bulbs

The use of energy efficient lighting is one of the best and most cost effective ways of reducing energy consumption. Efficient lighting will reduce energy consumption and in particular peak demand, which will improve energy security, Eskom also recognizes that efficient lighting will play a major role in its demand side management (DSM) process.

Renewable energy applications

Sustainable water and sanitation systems

Water efficiency measures can include low flow fixtures in sinks and showers, dual flush systems in toilets, rain water harvesting and water recycling. Dry or urine diversion toilets can also reduce water consumption in households by approximately 40%. Urine diversion toilets also produce compost, which can be used in agricultural production. Grey water recycling can be inexpensive and can provide nutrients for greening. On-site sewage systems such as vertically integrated wetlands, membrane filtration systems, biolytix systems and biogas digestors can provide nutrients for agriculture, recycled water for toilet flushing and energy for household use.

Waste Minimisation and Recycling

Waste separation and recycling can generate jobs as well as removing recyclable resources from landfill. Individuals and recycling cooperatives can collect and separate wastes and sell recyclable materials. Buyback centres can be established, where recyclers can buy recyclable materials for reprocessing. Organic materials can also be separated and made into compost, adding nutrients to soil for greening.

In order to ensure a more sustainable development, sustainable design is regarded as the preferred alternative.

Energy Use Alternatives

The following energy alternatives will be encouraged:

- Solar geysers
- Heat pumps
- Photovoltaic cells
- Gas stoves
- Gas push through geysers

The following measures are proposed:

- Low voltage or CFLs (compact fluorescent lights) and LEDs (light emitting diodes) should be incorporated into the architectural designs of the mall and incandescent light bulbs must be used.
- Low-energy lamps must also be used for exterior lighting
- Solar panels could be used for supplementary power supply
- The following is recommended for the hot water systems:
    - Geyser blankets could be installed
    - At least the first 1.5m of hot water outlet pipes could be insulated
    - A geyser-timer unit be installed.

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

The requirement for energy sufficiency and alternative energy sources will be communicated with the project architects during the design phase of the project.

Has a specialist been consulted to assist with the completion of this section?	YES	NO X
If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix F.		

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, as it appears on the Site Plan.

2. Paragraphs 1 - 6 below must be completed for each alternative.

Current land-use zoning as per local municipality IDP/records:	Special
	In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?	YES X	NO

Application is made in terms of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) and specifically in terms of Chapters 5 and 6 of the Ramotshere Moiloa Local Municipality Land Use Management By-law, 2016 for township establishment. Proposed township to be known as **Zeerust Extension 5**. The property is at present zoned as "Special". The township application will be for:

a) "Business 1" in terms of the Zeerust Town Planning Scheme, 1980, with an Annexure to permit a Shopping Mall including Places of refreshments; Cinema; Shops; Drive Thru Restaurants; Distribution Centre, a Hotel including conference facility; Lounge / Waiting Area; Day Spa; Gym uses compatible or approved by the Local Municipality.
b) Special" for a Filling station to include a 24/7 Convenience shop with take-aways/Quick service restaurant (400m²) Car wash, an ATM and uses compatible or approved by the Local Municipality.
c) "Private Open Space".
d) "Existing Public Roads".

1 Gradient of the site

Indicate the general gradient of the site.

Alternative S1:

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

Alternative S2 (if any):

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

Alternative S3 (if any):

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

2 Location in landscape

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

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

3 Groundwater, Soil and Geological stability of the site

Is the site(s) located on any of the following?

	Alternative S1:			Alternative S2 (if any):			Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	**YES X**	NO		YES	NO		YES	NO
Dolomite, sinkhole or doline areas	YES	**NO X**		YES	NO		YES	NO
Seasonally wet soils (often close to water bodies)	**YES X**	NO		YES	NO		YES	NO
Unstable rocky slopes or steep slopes with loose soil	**YES X**	NO		YES	NO		YES	NO
Dispersive soils (soils that dissolve in water)	YES	**NO X**		YES	NO		YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	**NO X**		YES	NO		YES	NO
Any other unstable soil or geological feature	YES	**NO X**		YES	NO		YES	NO
An area sensitive to erosion	YES	**NO X**		YES	NO		YES	NO

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

4 Groundcover

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

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

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

5 Surface water

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	**YES X**	NO	UNSURE
Non-Perennial River	YES	**NO X**	UNSURE
Permanent Wetland	YES	**NO X**	UNSURE
Seasonal Wetland	YES	**NO X**	UNSURE

Artificial Wetland	YES	**NO X**	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

Two rivers were identified during field investigations i.e. the Kareespruit (Stream) and Klein-Marico River. The Kareespruit flows into the Klein-Marico River, which in turn flows into the Klein Marico Poort Dam. The two watercourses in the study area are important in terms of water supply for irrigation and general human consumption. The watercourses, like all watercourses encountered, should be approached as sensitive. These areas were thus demarcated and rated as having a sensitivity rating of High. Refer to the Sensitivity Map attached in Appendix B.

6 Land use character of surrounding area

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

Natural area X	Dam or reservoir	Polo fields
Low density residential X	Hospital/medical centre	Filling station [H]
Medium density residential	School	**Landfill or waste treatment site X**
High density residential	Tertiary education facility	Plantation
Informal residential[A]	Church	Agriculture
Retail commercial & warehousing	Old age home	**River, stream or wetland [N] X**
Light industrial X	**Sewage treatment plant[A] X**	Nature conservation area [N]
Medium industrial [AN]	Train station or shunting yard [N]	Mountain, koppie or ridge [N]
Heavy industrial [AN]	**Railway line [N] X**	Museum
Power station	**Major road (4 lanes or more) [N] X**	Historical building [N]
Office/consulting room	Airport [N]	Protected Area [N]
Military or police base/station/compound	Harbour	Graveyard [N]
Spoil heap or slimes dam[A]	Sport facilities	Archaeological site [N]
Quarry, sand or borrow pit	Golf course	**Other land uses (describe): The grave of Diederick Coetzee, Truck Stop**

If any of the boxes marked with an "[N] "are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain

<u>Railway line</u> Will not impact / have an impact on the proposed mall development. <u>N4 Highway</u> Will provide visibility and accessibility to the mall. <u>River</u> The flood lines will have to be taken into consideration in the layout of the mall. <u>Grave of Diederick Coetzee</u> Will not impact / have an impact on the proposed Mall development.

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

Sewage Treatment Plant The Zeerust Waste Water Treatment Works (WWTW) is currently faulty and poor managed and could have a negative impact on the proposed mall in terms of odour. In addition, leaking sewage pipes is currently polluting the Kareespruit, which traverses the northern boundary of the site. However, the upgrading of the WWTW is listed as a priority project in the Ramotshere Moiloa Local Municipality Reviewed IDP 2015-2016. Once upgraded and properly managed the WWTW should not have a significant impact on the proposed development. Mitigation measures i.e. proper landscape around the facility may serve as a natural windbreaker and minimize potential odour dispersions, if present.

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

Not applicable

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	**YES X**	NO
Core area of a protected area?	YES	**NO X**
Buffer area of a protected area?	YES	**NO X**
Planned expansion area of an existing protected area?	YES	**NO X**
Existing offset area associated with a previous Environmental Authorisation?	YES	**NO X**

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix B (as part of sensitivity map).

7 Biodiversity

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult http://bgis.sanbi.org or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix B to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA) X	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	According to the conservation plan of the North-West Province (2009), the area is within a CBA 1 area. This includes large areas of the Zeerust town as well. The main reason for the area being a CBA1 area is the importance of the catchment and watercourses of the Marico Rivers in particular for the North-West Province. The watercourses in the region of Zeerust are seen as being under threat and therefore in need of conservation.

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0 %	The study area's natural environment is scattered due to the fact that the property was previously an industrial site where bricks were made and distributed. There are areas of the property that have been left as 'wild veld', but there are no areas of pristine Zeerust Thornveld present.
Near Natural (includes areas with low to moderate level of alien invasive plants)	30%	The riparian areas of the Kareespruit and Klein Marico river are slightly modified to fairly pristine and have a number of beautiful, large trees.
Degraded (includes areas heavily invaded by alien plants)	70%	The study area's natural environment is scattered due to the fact that the property was previously an industrial site where bricks were made and distributed. Most of the site is disturbed ground. The natural veld, where it occurs, is dominated by Acacia thorn tree species with an herbaceous layer of mainly grasses on deep, high base-status and some clay soils on plains and lowlands.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	%	

c) Complete the table to indicate:
(i) the type of vegetation, including its ecosystem status, present on the site; and
(ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems		
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)		
	Endangered			
	Vulnerable			
	Least Threatened X	**YES X**	NO	UNSURE

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

Vegetation

The study area and the surrounding region fall within the Savanna Biome, which is also known as the Bushveld Biome. According to the vegetation classification of Mucina & Rutherford (2006) the study area is found in the veldtype known as Zeerust Thornveld. According to Mucina & Rutherford the conservation status of Zeerust Thornveld is Least Concerned (LT).

The majority of the vegetation of the study area, especially the large, central area is disturbed. Until recently, the property was an active brick-making and distribution yard. The area is strewn with old,

broken bricks and imported soils and gravels. Areas have been cemented around factories and stores and generally left in a poor condition.
There are areas of the property that have been left as 'wild veld', but there are no areas of pristine Zeerust Thornveld present. The vegetation of the study area is representative of Zeerust Thornveld with deciduous, open short thorny woodland in patches. The natural veld, where it occurs, is dominated by Acacia thorn tree species with an herbaceous layer of mainly grasses on deep, high base-status and some clay soils on plains and lowlands.
The Kareespruit Stream and the Klein-Marico River border the study area. The vegetation within the riparian zones of the stream and river is that of Acacia, Combretum and Celtis woodland. The riparian zone of the Kareespruit (Stream) is slightly modified to fairly pristine and has a number of beautiful, large trees.
No red data species were observed during field investigations and none are expected to occur. No orange data plant species in terms of provincial lists were observed during field investigations either.
There are a number of alien plants in the study area. The herbaceous plants are especially prevalent in disturbed areas. Tree species such as syringa are also present. Alien plant species, some of which are invasive, occur scattered throughout the area, especially in disturbed areas.
No nationally or provincially protected tree species were found within the study area during field investigations.
The habitats identified were grouped into two main habitats of thornveld and watercourses. The watercourse habitat includes the associated riparian zones. No significant rocky outcrops (koppies) or rocky ridges are present.

Aquatic Ecosystem

Two rivers were identified during field investigations i.e. the Kareespruit (Stream) and Klein-Marico River. No other watercourses, including wetlands or farm dams are present on the study site. The Kareespruit flows into the Klein-Marico River and then in turn into the Klein Marico Poort Dam.
Both watercourses are perennial in nature. The Kareespruit is fed to a significant degree by a Waste Water Treatment Works (WWTW) situated on the northern side of the stream, as well as stormwater run-off. Water in the Kareespruit, which falls within the study area, is highly polluted by raw sewage leaking from the WWTW on the north side of the stream, which not only totally decimates the aquatic macro-invertebrate communities and ecosystems, but is also a serious human health hazard. The Klein-Marico River forms the eastern border of the study area and although also polluted is to a lesser degree than the Kareespruit.
All of the watercourses identified during field investigations in the study area were assessed based on the modified Habitat Integrity approach of Kleynhans (1996, 1999). The ratings for both the Kareespruit and the Klein-Marico were found to be that of Category C (Moderately modified).
The two watercourses in the study area are important in terms of water supply for irrigation and general human consumption. The water from both these watercourses in the vicinity of the study area supply water to the important Klein-Marico Poort Dam.

Ecological Sensitivity Analysis

Fatal flaws

There are no fatal flaws. However, development directly within the Kareespruit or Klein-Marico River would constitute a fatal flaw.

Priority areas

The study site is not situated within any priority areas. Priority areas include protected areas, important bird areas (IBA), wetlands and National protected areas expansion strategy (NPAES) focus areas.

North-West Province Biodiversity Conservation Plan

According to the conservation plan of the North-West Province (2009), the area is within a Critical biodiversity area (CBA 1). This includes large areas of the Zeerust town as well.

The main reason for the area being a CBA1 area is the importance of the catchment and watercourses of the Marico Rivers in particular for the North-West Province. The watercourses in the region of Zeerust are seen as being under threat and therefore in need of conservation.

Identified sensitive areas

The sensitive areas identified during field investigations are the Kareespruit (Stream) and the Klein-Marico River. As well as their associated riparian zones. The riparian zone needs to be viewed as being a part of the watercourse ecosystem. There are no other sensitive areas or habitats identified such as rocky outcrops (koppies) or areas of protected trees, etc.

There are no natural habitats or areas in a pristine condition. The watercourses, like all watercourses encountered, should be approached as sensitive. These areas were thus demarcated and rated as having a sensitivity rating of High. These areas should ideally be viewed during project planning and development as 'No-Go' zones. Refer to the Sensitivity Map attached in Appendix B.

8 Cultural/Historical Features

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:	YES	**NO X**
	Uncertain	
Not applicable		

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:
A Phase I **Heritage Impact Assessment** (HIA) study was done and no heritage resources as outlined in Section 3 of the National Heritage Resources Act 25 of 1999 were found in the project area. The report makes the following observations: Most sections of the project area are very accessible and the field survey was effective enough to cover significant sections of the project receiving environs. However, some portions of the proposed development site had limited access because of thick vegetation cover. • The project area is predominantly industrial, commercial agricultural. • Large sections of the proposed development site are severely degraded from existing developments such as clearing for brick moulding infrastructure, access roads, railway line, power lines and other industrial activities. Recommendations/Mitigation Should construction work begin for this project: • The construction teams should be inducted on the significance of archaeological resources that may be encountered during subsurface construction work before they work on the area in order to ensure appropriate treatment and course of action is afforded to any chance finds. • If archaeological materials are uncovered, work should cease immediately and the SAHRA be notified and activity should not resume until appropriate management provisions are in place. • If any evidence of archaeological sites or remains (eg, remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, or other categories of heritage

resources are found during the proposed activities, SAHRA APM Unit (Philip Hine, 021 462 4502) must be alerted immediately, and a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological significance, a Phase 2 rescue operation might be necessary. This report concludes that the impacts of the proposed development on the cultural and environmental values are not significant.
A desktop **Palaeontological Impact Assessment** has been conducted. Refer to Appendix G. <u>The report makes the following observations:</u> Fossils in South Africa mainly occur in rocks of sedimentary nature and not in rocks from igneous or metamorphic nature. Therefore, if there is the presence of Karoo Supergroup strata the palaeontological sensitivity can generally be LOW to VERY HIGH, and here locally HIGH for the Pretoria Group including the Time Ball Hill Formation. <u>Recommendation</u> The impact of the development on fossil heritage is HIGH and therefore a field survey or further mitigation or conservation measures may be necessary for this development (according to SAHRA protocol) if a fossil is found. A Phase 2 Palaeontological Impact Assessment and or mitigation may be recommended. The overburden and inter-burden must always be surveyed for fossils. Special care must be taken during the digging, drilling, blasting and excavating of foundations, trenches, channels and footings and removal of overburden not to intrude fossiliferous layers. The development may go ahead with caution; the Environmental Control Officer must familiarise him- or herself with the Time Ball Hill Formation. If a fossil is found during construction, construction must stop, the area must be fenced off and SAHRA/PHRA must be notified (Protocol for Finds and Management Plan is provided in the Palaeontological Impact Assessment Report).

Will any building or structure older than 60 years be affected in any way?	YES	**NO X**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	**NO X**
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.		

9 Socio-economic character

9.1 Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Ramotshere Moiloa Local Municipality is one of the local municipalities under Ngaka Modiri Molema District Municipality in the North West Province and one of the five local municipalities. The major towns are Groot Marico and Zeerust. According to Census 2011, the total population is 150,713.

The table below presents the population size and the expected growth up and to 2026.

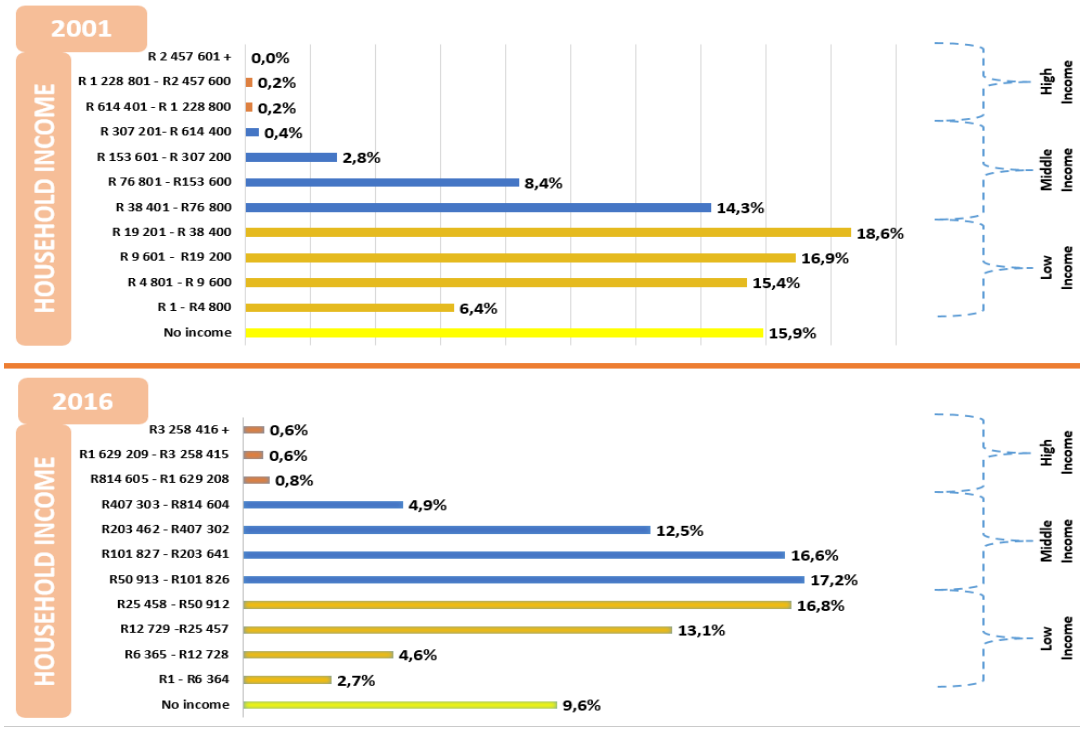
Table 3 Population total and projected growth

2016	2018	2020	2022	2024	2026
17 408	17 968	18 544	19 140	19 755	20 389

From the table depicting population and household growth it is visible that the current population of Zeerust is 17 408, while growth is calculated at 1.6% per annum. This would increase the population to 17 968 in 2018, to 18 544 in 2020 and eventually to 20 389 in 2026. This is the natural increase and does not consider external factors which could lead a higher growth and decrease in population and household size.

Economic profile of local municipality:

Figure 6 Household income in 2001 and 2016



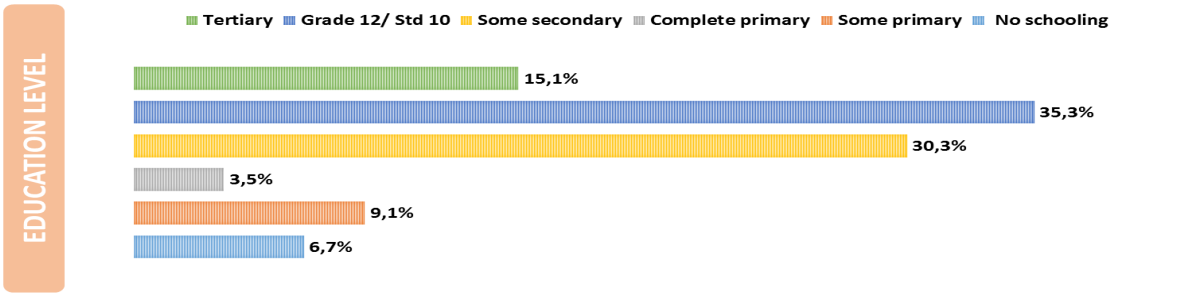
When comparing the 2001 and 2016 income brackets it is evident that there has been a major shift in the size within household income brackets. When one compares the household income brackets from 2016 to the household income brackets in 2000, the number of households earning no income have decrease to 9.6% in 2016 from 15.9% in 2001. The Low-income households have declined from 57,2% in 2001 to 37,2% in 2016. The Middle-income households has nearly doubled from 26,0% in 2001 to 51,1% in 2016, while High-income households remained small it also has increase to 2,1% in 2016 from 0,5% in 2001. The effect of households moving upwards in income brackets indicates growing wealth and expenditure power.

Level of unemployment:

From 2001 Employment, has increased from 42.0% to 45.4% in 2016. Furthermore, Unemployment has decrease to 14.8% in 2016 from 20.7% in 2001, Not economical active has increase to 39.8% from 37.3% in 2001. The large number of unemployed persons will be affected by the proposed development as this would lead to a reduction in the unemployment rate.

Level of education:
The figure below indicates the level of education in Zeerust.

Figure 7: Education Level of Zeerust



The education profile illustrates that Zeerust has a highly skilled labour market with half of the population consisting of Grade 12 to tertiary education. As indicated in the figure above approximately 50,4% of the population has Grade 12 or some form of Tertiary education, while only 19,3% of the population has an education less than just primary school. The employment opportunities which will be created by the mall would be beneficial for the education level of Zeerust. The employment opportunities would further help to provide education for Zeerust.
The education level suggests that the population is suitable for employment opportunities. Zeerust also has semi-skilled workforce, which is also needed in the proposed development.

9.2 Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 511 465 107	
What is the expected yearly income that will be generated by or as a result of the activity?	R 4.20 million	
Will the activity contribute to service infrastructure?	YES	NO X
Is the activity a public amenity?	YES	NO X
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	1 242.02	
What is the expected value of the employment opportunities during the development and construction phase?	R 188.90 million	
What percentage of this will accrue to previously disadvantaged individuals?	% not known	
How many permanent new employment opportunities will be created during the operational phase of the activity?	14.48	
What is the expected current value of the employment opportunities during the first 10 years?	R 42 million	
What percentage of this will accrue to previously disadvantaged individuals?	% not known	

10 Specialist(s) consultation

Has a specialist been consulted to assist with the completion of this section?	YES X	NO
If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix F. All specialist reports must be contained in Appendix G and must meet the requirement in Appendix 6 of EIA Regulations, 2014.		

SECTION C: IMPACT ASSESSMENT

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

1 Impacts from the planning and design, construction, operational, decommissioning and closure phases

(as well as proposed management of identified impacts and proposed mitigation measures)
Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

The methodology utilised in the rating of significance of impacts

It is evident that the biggest impact of the project on the environment is expected to occur during the construction phase. It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impact could be mitigated to acceptable measures.

The nature and extent of expected negative impacts are described directly under the heading for each impact.
Below this description for each impact, a table has been designed to facilitate evaluation of the expected negative impact in terms of significance (intensity), duration, probability and significance after mitigation.

The numerical values used for "Impact Severity" (significance / intensity) relates to the potential severity of the proposed project on the specific environmental component without any mitigation and is being evaluated and rated on a scale from 0 to 4 where the following values apply :
0 = no impact
1= low impact
2 = medium impact
3 = significant impact
4 = severe impact

The duration of the expected negative impact is supplied as either "temporary" - 0-3 years (generally during construction) or "permanent". The probability that the expected negative impact would occur if not mitigated is rated as "low", "medium" or "high". The negative impacts are also evaluated in terms of the effectiveness with which it could be mitigated: "Severity of Impact after Mitigation" is rated on a scale from 0 to 4, with a severe impact after mitigation receiving a rating of 4 (and can therefore influence the viability of the project) and no impact after mitigation receiving a rating of 0.

1.1 PLANNING AND DESIGN PHASE

ALTERNATIVE 1 (PROPOSAL)		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
Impact on the Natural Habitat and watercourses (Mall Layout) Insensitive layout can cause a negative impact on the natural habitat of not only the site itself, but also on the surrounding natural environment. The context of the development site within the macro area in terms of conservation areas also plays a major role when suitable areas for development are being considered. The development site (or parts thereof) could form part of important ecological corridors and such corridors could be destroyed if the functioning thereof is not being supported by the development proposal. <u>The development site</u> A Biodiversity Impact Assessment (Terrestrial Ecological and Aquatic (Wetland)) was conducted and concluded that the Kareespruit (Stream) and the Klein-Marico River as well as their associated riparian zones are regarded as sensitive. Thus from a conservation and ecosystem functioning point of view the two	NEGATIVE MEDIUM	• Any temporary storage or accommodation facilities to be setup during construction to be within disturbed areas only. • No temporary facilities or portable toilets to be setup within 50m of watercourses and riparian zones. • Do not remove any indigenous trees from the riparian zone. • Do not develop within the watercourse or riparian zone. • The 1:100 year flood lines had been determined and the riparian zones had been delineated. The water courses and riparian zones must be avoided where possible and viewed as sensitive. An application for a Water Use Licence has been submitted for construction activities within the 1:100 year floodline. • Ensure a proper Stormwater Management Plan is compiled and implemented. • The development as proposed will maintain the watercourse areas as an undeveloped but importantly as an actively managed and controlled area. The water course areas are proposed to be zoned as private open space (erf 3). This will entail 8,5184 ha and approximately 30% of the township.

watercourses and associated riparian zones are regarded as having high conservation value.		
Visual Impact (change of character and atmosphere of the area, change in land use) The visibility of the study area creates the opportunity to design a development that will enhance the "Sense of Place" of the study area and the surrounding area.	NEGATIVE MEDIUM	• The architectural styles and finishes must blend in tastefully with the surrounding environment, especially if one takes into consideration that the proposed development will be situated at the "entrance" into Zeerust. The strategic location of the site creates an opportunity to create a structure that will be regarded as a "Place-making Structure"/ Landmark. • Landscaping plays a crucial factor in reducing the visual impact of a development and proper planning is therefore required. The following guidelines should apply: • The general aim with landscaping should be to integrate it with the natural environment of the site and its surrounding area. Therefore, indigenous and generous landscaping, combined with the eradication of exotic vegetation, will conserve and enhance the natural character of the site and its surrounds. • The establishment of indigenous landscaped gardens and rehabilitation of the natural areas will contribute to the biodiversity of fauna in the area, which would add to the aesthetic experience of the site. More detail with regards to landscaping principles and recommendations are stipulated in the Environmental Management Plan.
Light Pollution • Wrong placement, excessive brightness and careless light direction of especially security lights could cause sky glow, glare and light trespass. There is a general perception that 'more and brighter are better', and that it will provide for improved security. This perception can have a severe negative	NEGATIVE MEDIUM	In order to minimise light pollution and light nuisance, the following design principles should be adhered to when the lighting plan is finalised: • All lighting should have a clear purpose - avoid use of lights simply to create a `presence' at night. Unnecessary, obtrusive light will not be allowed. • Mount lights below the roof height of buildings and perimeter fencing and direct light downwards, to where it is needed. Lights can also be

impact on the adjacent properties and surrounding area. • Drivers could be severely affected should lights within the development be too bright and incorrectly directed at roads. The glare of these lights might impair drivers' vision and cause dangerous driving conditions.		positioned so that they are shielded by buildings and trees in order to reduce overall visibility. • Avoid lights mounted on the side of buildings which shine directly out, dazzling adjacent residents as well as road users. • Fittings must be shielded or hooded to minimise sky glow by controlling upward light spillage. • Lights that minimise light spill are widely available and should be the only type of lights that are used. • Outside lighting should be designed to minimise impacts on fauna, reducing intensity of lights for nocturnal species and avoiding attraction / disruption of arthropod populations. Avoid fluorescent and mercury vapour lighting and use sodium vapour (yellow) lights.
INDIRECT IMPACTS		
No indirect impacts were identified during the planning and design phase.		
CUMULATIVE IMPACTS		
No cumulative impacts were identified during the planning and design phase.		

ALTERNATIVE 2		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
Impacts as described under Alternative 1 above are applicable to Alternative 2.		
INDIRECT IMPACTS		
No indirect impacts were identified during the planning and design phase.		
CUMULATIVE IMPACTS		

No cumulative impacts were identified during the planning and design phase.		

NO GO ALTERNATIVE		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
No direct impacts were identified during the planning and design phase.		
INDIRECT IMPACTS		
No indirect impacts were identified during the planning and design phase.		
CUMULATIVE IMPACTS		
No cumulative impacts were identified during the planning and design phase.		

1.2 CONSTRUCTION PHASE

ALTERNATIVE 1 (PROPOSAL)		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
Impact on the vegetation This impact is associated with disturbance to and/or destruction of the flora component. During construction the activities could cause a negative impact where insensitive clearing for construction and access purposes, etc. is required. Insensitive clearing can cause the	NEGATIVE MEDIUM	Detail mitigation measures are stipulated in the EMP and include the following: • Any temporary storage or accommodation facilities to be setup during construction to be within existing disturbed areas only. • No temporary facilities or portable toilets to be setup within 50m of watercourses and riparian zones. • Avoid impeding or diverting waterflow during construction phase. • Do not develop within the watercourse or riparian zone.

destruction of habitat. Not only does vegetation removal represent a loss of seed and organic matter, but it is also a loss of protection to plants and small animals. Insensitive vegetation clearance can also cause erosion. Pressure on the natural environment will occur as a result of an influx of labourers into the area that could involve the collection of firewood and medicinal plants, as well as uncontrolled veld fires. <u>The development site</u> The majority of the vegetation of the study area, especially the large, central area is badly disturbed and degraded. Until recently, the property was an active brick-making and distribution yard. There are no priority species, including red data species. There are no protected trees in the study area.		• Do not remove any indigenous trees from the riparian zone. • Ensure a proper Stormwater Management Plan is compiled and implemented. • No fires whatsoever may be made for the burning of vegetation and waste. Fire fighting equipment must be readily available on site. • The exact clearing areas must be identified and demarcated. • Alien vegetation shall be managed and Category 1, 2 and 3 plants shall be controlled to the extent necessary to prevent or to contain the occurrence, establishment, growth, multiplication, propagation, regeneration and spreading of such plants.
Impacts on fauna • Noise and vibration during construction • Loss of habitat • Poaching of wildlife <u>The Development site</u> No priority faunal species (which includes red data species) were encountered during field investigations		• Provide all equipment with standard silencers. • Maintain silencer units in vehicles and equipment in good working order • All earth moving vehicles and equipment must be regularly maintained to ensure their integrity and reliability. • All operations should meet the noise standard requirements of the Occupational Health and Safety Act (Act No. 85 of 1993). • No poaching of wildlife or selling of firewood will be allowed. • No animals or birds may be fed, disturbed, hunted or trapped.

Impact on Water Sources During construction, the risk of pollution of surface and groundwater can generally be related to diesel, oil and concrete spills that may result in a change in water quality with the associated negative impact on humans and the natural habitat. Groundwater pollution during the construction phase is also associated with poor construction techniques. Diesel, oil and lubricant spills are the main concern in respect of water pollution during construction together with organic pollution caused by inadequately managed facilities at the work sites. <u>The development site</u> The two watercourses and associated riparian zones are regarded as having high conservation value.	NEGATIVE SIGNIFICANT	Mitigation measures in the Environmental Management Plan include measures to ensure acceptable construction practices to minimise or avoid the risk of contamination of water sources. These include: Construction Site • No temporary facilities or portable toilets to be setup within 50m of watercourses and riparian zones. • Avoid impeding or diverting waterflow during construction phase. • Do not develop within the watercourse or riparian zone. • Do not remove any indigenous trees from the riparian zone. • Encourage the construction contractor to employ local people as far as is reasonably practical and encourage the contractor to transport them daily to and from site. This would reduce solid and liquid waste production and water demand at the site camp. • During and after construction, stormwater control measures should be implemented especially around stockpiled soil, excavated areas, trenches etc. so that export of soil into any watercourse is avoided. Diesel, hydraulic fluid and lubricants • Minimise on-site storage of petroleum products; • Ensure measures to contain spills readily available on site (spill kits). • All petrochemical leaks and spills must be appropriately contained and disposed of at a licensed waste disposal site. Construction Vehicles • All earth moving vehicles and equipment must be regularly maintained to ensure their integrity and reliability. No repairs may be undertaken beyond the contractor laydown area. • Should any transfer of vehicle fuel take place on site, it is important to demarcate a specific area for this purpose. This area should be covered

		with an impermeable layer to prevent any penetration of fuel and oil spillage into the soil. The area could also be sloped towards an oil trap or sump to ease collection of spilled substances. • All construction vehicles should be serviced on a regular basis to minimise the risk of oil spillage on site. • Servicing of vehicles or equipment must take place off-site at appropriate workshop facilities. • When not in use, construction vehicles must be parked in an area provided with an impermeable layer to prevent leaks and spills from penetrating the substrate. Construction site domestic waste and sewage • Minimise on-site accommodation. • Deposit solid waste in containers and dispose at municipal waste disposal sites regularly. • Dispose of liquid waste (grey water) with sewerage. • Install appropriate ablution facilities. • Preferably utilise municipal systems or chemical toilets. Construction site inert waste (waste concrete, reinforcing rods, waste bags, wire, timber etc) • Ensure compliance with stringent daily clean up requirements on site. • Dispose at municipal waste disposal sites. Construction site hazardous waste • All hazardous substances must be stored on an impervious surface in a designated bunded area, able to contain 110% of the total volume of materials stored at any given time. • Material safety data sheets (MSDSs) are to be clearly displayed for all hazardous materials.

		• The integrity of the impervious surface and bunded area must be inspected regularly and any maintenance work conducted must be recorded in a maintenance report. • Employees should be provided with absorbent spill kits and disposal containers to handle spillages. • Train employees and contractors on the correct handling of spillages and precautionary measures that need to be implemented to minimise potential spillages. • Employees should record and report any spillages to the responsible person. • An Emergency Preparedness and Response Plan will be developed and implemented should and incident occur. • Access to storage areas on site must be restricted to authorised employees only. • Contractors will be held liable for any environmental damages caused by spillages.
Geology Stability of structures and excavations and presence of shallow seepage <u>The Development site</u> The site is developable provided the foundation solutions in collaboration with the geotechnical engineer, quantity surveyor and the client are adhered to. The site is underlain predominantly by clay with an expected heave of ±30mm in some areas with the largest affected zone in the parking areas, drive thru's, and parts of the shopping	NEGATIVE MEDIUM	<u>Zone A</u> This zone is covered with a layer of fill 0.65m thick on average from the past operations with heaps of spoil from the demolished structures also evident. It is expected that a settlement of up to 10mm could possibly occur. Firm soils intermixed with rock is found at ± 1.5m – 2.5m below this filed layer. <u>Zone B</u> This zone is of concern as it poses a structural challenge in reducing the expected heave of in excess 30mm while still providing an economic solution. The geotechnical engineer stated that to reduce the expected heave on the surface bed in this zone, up to 1.5m of the current in-situ clay material (which is approximately 5-6m deep on average) needs to be removed and replaced with controlled engineered fill (G6 minimum) on which surface beds and pad footings may be founded, with minimal additional layerworks beneath

centre. There are small zones where the soil conditions are more favourable under the main shopping centre with a zone of clay and rock on the western end of the building. No heave is expected in this area but there is a possibility of up to 10mm settlement. On the eastern portion of the proposed centre there is a thin layer of fill underlain by rock between 1 and 2m below the surface with an expected heave of ± 8mm. Under the distribution centre there are numerous outcroppings of rock that will need to be excavated to achieve the required platform levels to the structure. The excavated rock may be crushed and used as part the sub base material of the proposed road if pre-approved by the civil engineer.		individual pad and strip footings. Part of the hotel and conference centre straddles this area and it is suggested that these bases to these supporting columns should be piled. <u>Zone C</u> This zone is on slightly higher lying ground and is covered by a layer of medium to highly expansive material, 2-3m thick, with an expected heave in excess of 30mm. As per zone B ±1.5m of the current in-situ clay material needs to be removed and replaced with controlled engineered fill (G6 minimum) on which surface beds and pad footings may be founded, with minimal additional layerworks beneath individual pad and strip footings. <u>Zone D</u> This zone rests on slightly higher lying ground and is covered by a layer of medium to highly expansive soil 0.75m thick on average with an expected heave of 15-30mm. Due to the height of this area it is possible that most of this layer would be removed during the cut and fill operations on the site. It is noted that this layer is not suitable as fill material but it may be used as part of landscaping with the approval of the landscape architect. <u>Zone E</u> This zone is covered by abundant hard rock outcrops with a layer of medium expansive soil 0.6m thick on average with hard excavation expected at ± 1.5m below the current natural ground level. The excavated rock may be crushed and used as part the sub base material of the proposed road if pre-approved by the civil engineer. The clay material is expected to have ± 8mm of heave within the top 0.6m. Strip footings and column bases may be founded below the expansive soil horizon on engineered fill. <u>Zone F</u> This zone consists of an old quarry approximately 6-8m deep that has been partially filled with uncontrolled fill. The fill is to be removed and then the quarry be rehabilitated with engineered fill.

		Zone G This zone is characterised by the lower lying areas below the 1:100 year flood line. Parts of the shopping centre to the west of the existing sewer line is within this zone. It is strongly recommended that the civil engineer designs berms or a similar suitable solution to ensure a favourable realignment of the 100 year flood line away from all structures concerned. Distribution centre This area is characterised by hard rock boulders and outcrops. This will need to be excavated to achieve the required platform levels to the structure. The excavated rock may be crushed and used as part the sub base material of the proposed road if pre-approved by the civil engineer. Parking, Drive Thru's, Taxi Drop-off These areas are covered with a medium to highly expansive soil with an expected heave potential of 15 to 30mm to be expected. It is suggested that raft foundations should be considered for the structures in these areas due to the small floor areas being considered. Material usage The site soils are not suitable for layer works due to the expansive nature of the soil and should only be considered for landscaping. Excavated rock could be crushed and used as part of the layer works of the roadways. Water Table No water seepage was noted in the majority of the test pits but there is evidence of a perched water table during the wet season. It was noted that precautions would have to be taken to prevent ponding of surface water especially in the lower lying areas of the site and subsoil drawing should be considered to intersect the potential perched water table during the wet season. Seepage was encountered due west of the distribution centre. This seepage is due to water seeping through the railway layer works as a result of a small "pond" of water standing south of the railway line. This will have to be

		addressed up stream by a sub-soil drainage system designed by the civil engineer. <u>Excavation stability</u> To provide a safe working environment all excavations deeper than 1.5m should be temporarily supported or battered back at an acceptable slope to prevent collapse into the excavation by a competent geotechnical contractor. This must be taken into account in the excavation of the old quarry in zone F.
Topographical Impacts Alteration of topography due to stockpiling of soil, building material and debris and waste material on site.	NEGATIVE MEDIUM	• All stockpiles must be restricted to designated areas and are not to exceed a height of 2 metres. • Stockpiles created during the construction phase are not to remain during the operational phase. • The contractor must be limited to clearly defined access routes to ensure that sensitive and undisturbed areas are not disturbed.
Impact of erosion Unnecessary clearing of vegetation can result in exposed soil prone to erosive conditions. Insufficient soil coverage after placing of topsoil especially during construction where large surface areas are applicable could also cause erosion. To cause the loss of soil by erosion is an offence under the law. <u>The development site</u> The site has a slight to moderate slope and is prone to erosion.	NEGATIVE MEDIUM	A combination of erosion prevention principles is discussed in detail in the EMP. These include the use of mulch / fertiliser, matting, vegetation, retaining walls, topsoil coverage, diversion channels and berms, etc. Other factors which should be taken into account during the planning phase are the following: • Unnecessary clearing of flora resulting in exposed soil prone to erosive conditions should be avoided. • Land disturbance must be minimized in order to prevent erosion and run-off - this includes leaving exposed soils open for a prolonged period of time. As soon as vegetation is cleared (including alien) the area must be re-vegetated if it is not to be developed on in future. • Large exposed areas during the construction phases should be limited. Where possible areas earmarked for construction during later phases should remain covered with vegetation coverage until the actual construction phase. This will prevent unnecessary erosion and siltation in these areas.

		• The total area of exposed soil must be reduced during the rainy season. • Specifications for topsoil storage and replacement to ensure sufficient soil coverage as soon as possible after construction must be implemented. • All embankments must be adequately compacted and planted with grass to stop any excessive soils erosion and scouring of the landscape. • Any inlet to the piped stormwater system shall be fitted with a screen, or grating to prevent debris and refuse from entering the stormwater system. This must be done immediately on installation of the piped system. • A storm water management plan must be compiled for the construction and operational phases of the proposed development. • Storm water diversion measures are recommended to control peak flows during thunder storms.
Soils and Agricultural Impacts Removal and compaction of soil during construction activities Erosion, degradation and loss of topsoil due to construction activities as well as surface and stormwater run-off. <u>The development site</u> The study area as a unit has medium/low to low agricultural potential.	NEGATIVE MEDIUM	• Strip topsoil prior to any construction activities. • Reuse topsoil to rehabilitate disturbed areas. • Topsoil must be kept separate from overburden and must not be used for building purposes or maintenance or access roads. • Minimise the clearance of vegetation to avoid exposure of soil. • Protect areas susceptible to erosion with mulch or a suitable alternative. • Implement the appropriate topsoil and stormwater runoff control management measures as per the EMPr to prevent the loss of topsoil. • Topsoil should only be exposed for minimal periods of time and adequately stockpiled to prevent the topsoil loss and run-off.
Air Quality Impacts Dust and emissions during construction generated by debris handling and debris piles, truck transport, bulldozing, general	MEDIUM	• Dust must be suppressed on the construction site and during the transportation of material during dry periods by the regular application of water. Water used for this purpose must be used in quantities that will not result in the generation of run-off. • Loads could be covered to avoid loss of material in transport, especially if

construction.		material is transported off site. • Dust and mud should be controlled at vehicle exit and entry points to prevent the dispersion of dust and mud beyond the site boundary. • Facilities for the washing of vehicles should be provided at the entry and exit points. • A speed limit of 40 km/hr should be set for all vehicles travelling over exposed areas. • During the transfer of materials, drop heights should be minimised to control the dispersion of mater being transferred. • The height of all stockpiles on site should be a maximum of 2m. • Use of dust retardant road surfacing if required due to the exceedance of Air Quality Guidelines.
Impacts associated with construction activities such as noise, and safety The negative impact of noise, generally associated with construction activities, are temporary, occurring mostly during the construction phase. In terms of safety, it should be noted that the project involves deep excavations and open trenches. Excavations and open trenches can act as a trap for children (and also snakes, small mammals and lizards). <u>The development site</u> The impact should be considered in context with the nature of the surrounding area. Noise pollution exists due to the N4 adjacent to the site. The noise impact is therefore not expected	NEGATIVE MEDIUM	<u>Noise mitigation measures</u> • All construction activities should be undertaken according to daylight working hours between the hours of 07:00 – 17:00 on weekdays and 7:30 –13:00 on Saturdays. • No construction activities may be undertaken on Sunday. • Provide all equipment with standard silencers. • Maintain silencer units in vehicles and equipment in good working order. • All earth moving vehicles and equipment must be regularly maintained to ensure their integrity and reliability. • Construction staff working in area where the 8-hour ambient noise levels exceed 60 dBA must have the appropriate Personal Protective Equipment (PPE). • All operations should meet the noise standard requirements of the Occupational Health and Safety Act (Act No. 85 of 1993). <u>Safety mitigation measures</u> • The area affected by construction must be fenced prior to any activities taking place.

to be significant.		• All excavated areas must be clearly marked and barrier tape must be placed around them for safety purposes. • A Fire Management Plan has to be identified during the pre-construction phase and must be implemented throughout the construction and operation phases of the development
Traffic (construction vehicles) The construction phase is likely to generate additional traffic in terms of construction vehicles and heavy vehicles delivering materials to the site.	NEGATIVE MEDIUM	• The heavy construction vehicles should avoid the local roads during peak traffic times and large deliveries should also be scheduled outside the peak traffic times • Signs should be erected in the vicinity of the site and N4 junction. • Construction vehicles are to avoid main roads during peak traffic hours. • All vehicles entering the Site are to be roadworthy. • When using heavy or large vehicles / equipment, "spotters" are to be present to assist the driver with his blind spots. • Any incident or damage to a vehicle must be reported immediately.

Traffic (road network)
 	
The proposed development would have a significant impact on the current road network when developed to its full potential
	NEGATIVE HIGH	• A new road link (a public road) is proposed to form the northern boundary of the site and will connect N4 Platinum Highway and Kloof Street.
		• The proposed road link would result in automatic diversion of the background traffic.
		• The proposed Autumn Leaf Mall will gain access as follows;
		  o Access from the N4 Platinum Highway and Kloof Street to the new road link.
		  o Access from the newly proposed road link.
		• Necessary road and intersections upgrades would be required in support of the proposed development.

Impact of Labourers An uncontrolled influx of labourers with resulting increase in crime and squatting would place pressure on the natural environment	NEGATIVE MEDIUM	• Mitigation measures to counter impact on the natural environment and limit potential for crime during the construction phase should include specifications in terms of control of construction workers (i.e. provision of

(placement of snares, removal of trees for firewood, careless waste disposal, etc.). This could be severe, resulting in permanent damage to the environment if not mitigated properly.		toilet and cooking facilities, provision of either accommodation facilities or transport facilities, implementation of Environmental Educational Programmes, etc.). • Accommodation for labourers must either be limited to guarding personnel on the construction site (with labourers transported to and from existing neighbouring towns) or a separate fenced and controlled area where proper accommodation and relevant facilities are provided. • Part of the adjudication process for the successful contractor to undertake the civil works must be the use of casual and unskilled labour to stimulate local job creation through the use of labour intensive methods where possible. • If possible all labour should be sourced locally. • Contractors and their families may not stay on site. • No informal settlements will be allowed
Security and social life Contractors, the influx of people and potential job creation will result in the proliferation of social ills and issues such as crime, prostitution, the spread of HIV/AIDS, informal settlements etc.	NEGATIVE MEDIUM	• The developers need to be actively involved in the prevention of social ills associated with contractors. • If possible all labour should be sourced locally. • Contractors and their families may not stay on site. • No informal settlements will be allowed. • Contractors must be educated about the risk of prostitution and spread of HIV and AIDS. • Strict penalties will be built into tenders to deal with issues such as petty crime, stock theft, fence cutting, trespassing etc. • No poaching of wildlife or selling of firewood will be allowed.
Safety Public safety during construction.	NEGATIVE MEDIUM	• Members of the public adjacent to the construction site should be notified of construction activities in order to limit unnecessary disturbance or interference. • Construction activities will be undertaken during daylight hours and not on Sundays.

Safety Construction staff safety during construction.	NEGATIVE MEDIUM	• Ensure the appointment of a Safety Officer to continuously monitor the safety conditions during construction. • All construction staff must have the appropriate PPE. • The construction staff handling chemicals or hazardous materials must be trained in the use of the substances and the environmental, health and safety consequences of incidents. • Report and record any environmental, health and safety incidents to the responsible person.
Impact on Cultural Heritage Resources No heritage resources were identified during the site visits. There is however always a probability that archaeological resources might be identified during excavations.	NEGATIVE LOW	• The construction teams should be inducted on the significance of archaeological resources that may be encountered during subsurface construction work before they work on the area in order to ensure appropriate treatment and course of action is afforded to any chance finds. • If archaeological materials are uncovered, work should cease immediately and the SAHRA be notified and activity should not resume until appropriate management provisions are in place. • If any evidence of archaeological sites or remains (eg, remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, or other categories of heritage resources are found during the proposed activities, SAHRA APM Unit (Philip Hine, 021 462 4502) must be alerted immediately, and a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological significance, a Phase 2 rescue operation might be necessary.
Existing services and infrastructure Damage to the existing services and infrastructure during the construction phase and	NEGATIVE LOW	• Determine areas where services will be upgraded and relocated well in advance; • Discuss possible disruptions with affected parties to determine most convenient times for service disruptions and warn affected parties well in

disruptions in services (i.e. electricity, water, damage to Telkom cables) during the construction phase.		advance of dates that service disruptions will take place
Waste Management Builder's and domestic waste The construction phase will create large quantities of builder's and domestic waste to be accommodated by local legal landfill sites.	NEGATIVE MEDIUM	• Prevent unhygienic usage on site and pollution of the natural assets. • Develop a central waste temporary holding site to be used during construction. (Near the access entrance). This site should comply with the following: • Skips for the containment and disposal of waste that could cause soil and water pollution, i.e. paint, lubricants, etc.; • Small lightweight waste items should be contained in skips with lids to prevent wind littering; • Bunded areas for containment and holding of dry building waste. • These areas shall be predetermined and located in areas that is already disturbed. • These areas shall not be in close proximity of the watercourses.
Sewage waste Generation and disposal of sewage waste of temporary construction toilets.	NEGATIVE MEDIUM	• On-site chemical toilets will be provided for domestic purposes during construction phase. • The contractors will be responsible for the maintenance of the chemical toilets. • No temporary facilities or portable toilets to be setup within 50m of watercourses and riparian zones. • No French drain systems may be installed. • Should any spills or incidents occur; the material will be cleaned up immediately and disposed off appropriately. • All incidents must be reported to the responsible site officer as soon as it occurs.
Visual Impact Site clearing and removal of vegetation could	NEGATIVE LOW	• Phased, rather than indiscriminate clearing of the site to be undertaken. • The architectural and landscape architectural guidelines for the proposed development will be developed to allow for a positive

partially alter the landscape as viewed from the surrounds of the site, with the emergence of exposed areas of bare soil.		aesthetic influence on the surrounding environment. The guidelines will include aspects of finishes, lights pollution, colours to blend into the surrounding colours, heights of buildings, and roof finishes. Aesthetics and contextual appropriateness is to be a major aspect of these guidelines.
Economic impacts Positive economic impacts are anticipated. The proposed Autumn Leaf Mall would contribute significantly to the local economy and the economic impact would be substantial. Economic growth trends in the Ramotshere Moiloa LM have been higher than the national average and appears to be more resilient to shocks to the economy. This indicate that the economy has growing potential and can be identified as having investment potential. In the Ramotshere Moiloa Local Municipality, the construction sector (3.8%) is the biggest in the secondary sector and 8th biggest sector in the Local Municipality. This sector would experience substantial growth through the construction of Autumn Leaf Mall. The construction sector employs only 0.1% of the workforce in Zeerust, this would increase the number of employed in this sector. The Wholesale and retail trade sector (15.1%) is the second biggest contributor to the Local Municipality's economy. This sector would benefit tremendously from the operation of	POSITIVE SIGNIFICANT	Employment opportunities will be generated. • All labour (skilled and unskilled) and contractors should be sourced locally where possible. • A labour and recruitment policy must be developed, displayed and implemented by the contractor. • Recruitment at the construction site will not be allowed. • Where possible, labour intensive practices (as opposed to mechanised) should be practiced. • The principles of equality, BEE, gender equality and non-discrimination will be implemented.

Autumn Leaf Mall. Wholesale and retail trade employs the biggest share (20.1%) of the workforce, this would be beneficial for the Mall. The additional income generated by Autumn Leaf Mall would benefit the local population significantly. The additional income is expected to benefit the lower income households, which comprise a total of 54,4% of local households. The impact on employment would be positive, and although the impact is expected to be small; any contribution to more employment is an achievement in South Africa.		
INDIRECT IMPACTS		
CUMULATIVE IMPACTS		
Visual Impact The development of the site would contribute to the cumulative effects of the gradual transformation of the area from an area with rural / part-natural landscape components to an area dominated by urban development. It should be noted that this cumulative visual change in the landscape is not necessarily negative as the area is located on the margin of an urban area, Zeerust Town, however this may be perceived as detracting from the aesthetics of the area in which rural / part natural components of the landscape (including 2 watercourses are visible).		Refer to activity / phase specific mitigation measures above

ALTERNATIVE 2		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
Impact as described under Alternative 1 above are applicable to Alternative 2		
DIRECT IMPACTS		
No indirect impacts were identified during the construction phase.		

NO GO ALTERNATIVE		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
All the impacts outlined above will not apply to the No-Go alternative as the status quo will apply and the environment will remain as it is currently. However, it is important to note that the benefits associated with the development will also not materialise, and it must be noted that the majority of the impacts identified for the development were mitigated to a negative low or positive impact once the measures for mitigation were applied, indicating that maintaining the status quo is to lose the opportunity of a beneficial development with negligible environmental impacts.		
DIRECT IMPACTS		
No indirect impacts were identified during the construction phase.		

CUMULATIVE IMPACTS		
No cumulative impacts were identified during the construction phase.		

1.3 OPERATIONAL PHASE

ALTERNATIVE 1		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
Impact on the natural habitat Due to the present degraded state of the development site, the removal of alien invasive plants coupled with indigenous landscaping as proposed will have a positive effect on the biodiversity of not only the site itself, but also its surrounds.	POSITIVE SIGNIFICANT	Landscaping guidelines as stipulated in the EMPr must be followed during the operational phase of the project.
Impacts on fauna • Noise associated with the development • Loss of habitat	NEGATIVE MEDIUM	• Provide all equipment with standard silencers. • Maintain silencer units in vehicles and equipment in good working order. • All earth moving vehicles and equipment must be regularly maintained to ensure their integrity and reliability. • All operations should meet the noise standard requirements of the Occupational Health and Safety Act (Act No. 85 of 1993).
Impact on water resources The proposed development could have a negative impact on water resources. Increased coverage of paved/hardened surfaces may	NEGATIVE SIGNIFICANT	Stormwater Management are addressed in the Environmental Management Programme (EMPr). Development is only allowed outside the 1:100 year flood line area except for the entrance and exit roads, parking bays, and civil services. A WULA was submitted to apply for construction of the latter in the flood line area.

increase the volume and velocity of stormwater runoff.		
Hydrogeology Impacts Leaks of untreated water from pipelines may occur and impact on the groundwater quality.	NEGATIVE LOW	Any leaks should be fixed immediately and areas rehabilitated as needed.
Traffic impact The proposed development could have a significant impact on the current road network when developed to its full potential.	NEGATIVE MEDIUM	• On-site parking to be provided in accordance with the requirements of Zeerust Town Planning Scheme, 1980. • The local municipality to consider undertaking Road Master Planning in support of the developments in the town of Zeerust in general. • The local municipality to rehabilitate Klip Street to the acceptable conditions. • The local municipality to budget to upgrade those intersections which do not have sufficient spare capacity to accommodate the existing and future background traffic. • The developer of Autumn Leaf Mall to fund the upgrading of new roads and intersections as well as the intersections upgrades required to accommodate the anticipated development traffic impact as discussed above. • The payable bulk services contributions (where applicable) be offset against construction of necessary road / intersections upgrading. • Paved (or dust free) pedestrians` walkways be provided on the site frontages along the newly proposed development to the appropriate design standards of the local municipality. • A new road link is proposed to form the northern boundary of the site and will connect N4 Platinum Highway and Kloof Street. • The proposed road link would result in automatic diversion of the background traffic. • The proposed Zeerust Extension 5 will gain access from the newly

		proposed road link. • The proposed N4 / New Road Link Intersection to be constructed to the appropriate design standards of SANRAL. • The proposed N4 / New Road Link Intersection will trigger a need to widen the bridge. • The proposed development should be supported from traffic and transportation engineering perspective and be approved by the roads authorities, namely; SANRAL, local municipality and Bakwena Platinum Corridor Concessionaire.
Lighting pollution	NEGATIVE MEDIUM	• Security lighting must be carefully planned. These lights must not spill into the eyes of oncoming traffic and must not shine into adjacent properties; • Interior lighting must be subtle and in order to prevent it from lighting up the sky and from using energy, the implementation of movement switches (especially for large glassed interior areas that are highly visible) should be considered; • Exterior lighting, especially the lighting in the vicinity of the open space areas must be designed to shine downwards and the bulbs to be used should rather be "dim" that bright; • Prevent the implementation of exterior advertising signs and name boards that will flicker into the eyes of surrounding neighbours and into the eyes of oncoming traffic; • Obtain the necessary approvals for the erection of advertising and other signs.
Socio-Economic Impact The Wholesale and retail trade sector (15.1%) is the second biggest contributor to the Local Municipality's economy. This sector would benefit tremendously from the operation of	POSITIVE HIGH	

Autumn Leaf Mall. Wholesale and retail trade employs the biggest share (20.1%) of the workforce, this would be beneficial for the Mall. The additional income generated by Autumn Leaf Mall would benefit the local population significantly. The additional income is expected to benefit the lower income households, which comprise a total of 54,4% of local households. The impact on employment would be positive, and although the impact is expected to be small; any contribution to more employment is an achievement in South Africa. POSITIVE IMPACT		
Impact of the development on the sustainability of the CBD in Zeerust According to the Socio-economic Impact Assessment conducted by Urban-Econ, the Living Standards Measure (LSM) profile of Zeerust suggest that the CBD caters well for the lower LSM segment, which leads the higher LSM segments travelling to other retail experiences outside of Zeerust. The higher LSM segments would be the key target market for the new development to reduce the effect on the CBD. It is expected that the proposed mall would have some effects on the CBD in terms of the jobs losses and tenants moving. Jobs losses in the	NEGATIVE LOW	No Mitigation

CBD is a possibility, but due to the growth in demand for retail space as indicated in the market study, the net effect of job losses in the CBD would be absorbed by new jobs created in the new shopping centre. It is expected that there will be a surplus of jobs created. Due to growing demand projections, it is expected that the market would partially normalised in 7 years if market entry is in 2019, and fully normalised by 2031. This calculation is based on the number of years the demand in the market would reach the demand levels similar levels as the current supply gap in 2017. The retail development is classified as a community centre with a GLA size smaller than 25 000m². The role is to offer a larger variety of convenience products with more depth and variety of merchandise thus not direct competing with the CBD, but complementing the CBD due to differences in hierarchy. If there's a duplication of some of the retail facilities that are present in the CBD, these would be done considering the feasibility study that indicates where the tenant opportunities lie. The proposed tenant mix for Autumn Leaf Mall include tenant brands which are not present in Zeerust. These includes a large supermarket chain, liquor store, large discount retailer, pharmacy, cell phone stores, as well as financial institutions and brands currently		

without a presence in Zeerust. The proposed tenant mix opens more opportunities in the market and would attract more buying power to Zeerust. The mall would serve a larger catchment area and provide services for more households than just the immediate area (Zeerust). The proposed layout of the Autumn Leaf Mall provides space for various land-uses, the development is an inward retail experience which shelter consumers from weather events. The development provides sufficient parking for consumers visiting the retail development are well as the other land-uses, which would attract consumer who would normally travel outside of Zeerust for their shopping needs as the CBD of Zeerust lacks sufficient parking. Overall the economic impacts of the mall would contribute to the economic competitiveness of the town and the region by retaining Zeerust's consumer spending in the area which is currently leaking to nearby markets such as Mafikeng and also assist in attracting more consumers to Zeerust.		
Noise Impact Noise caused by restaurant, places of amusement, events (especially after hours) and noise caused by air conditioners, compressors	NEGATIVE LOW	All operations should meet the noise standard requirements of the Occupational Health and Safety Act (Act No. 85 of 1993).

etc.		
Availability of civil services The availability of bulk water, sewer and electricity has been confirmed.	POSITIVE HIGH	
Energy Energy consumption	NEGATIVE HIGH	• It is recommended that renewable energy options and/or alternative energy sources be used. • Sustainable design principles must be implemented
Waste Impact Contamination of the surface and site with general waste. General waste produced on site includes: • Office waste (e.g. food waste, paper, plastic); • Operational waste (clean steel, wood, glass); and • General domestic waste (food, cardboards, paper, bottles, tins).	NEGATIVE MEDIUM	• An adequate number of general waste receptacles, including bins must be arranged around the site to collect all domestic refuse, and to minimise littering. • Bins must be provided on site for use by employees. • Bins should be clearly marked and lined for efficient control and safe disposal of waste. • Different waste bins, for different waste streams must be provided to ensure correct waste separation. • A fenced area must be allocated for waste sorting and disposal on the site. • General waste produced on site is to be collected in skips for disposal at the local municipal waste site. • Hazardous waste is not to be mixed or combined with general waste earmarked for disposal at the municipal landfill site. • Under no circumstances is waste to be burnt or buried on site. • Waste bins should be cleaned out on a regular basis to prevent any windblown waste and/or visual disturbance. • All general waste must be removed from the site at regular intervals and disposed of in suitable waste receptacle. • Waste will be collected by an accredited waste company and disposed of at an appropriate and licensed waste disposal facility.

Contamination of the surface and site with hazardous waste. Hazardous waste produced on site include: • Oil and other lubricants, diesel, paints, solvent; • Containers that contained chemicals, oils or greases; and • Equipment, steel, other material (rags), soils, gravel and water contaminated by hazardous substances (oil, fuel, grease, chemicals or bitumen).	NEGATIVE MEDIUM	• Hazardous waste is to be disposed at a Permitted Hazardous Waste Landfill Site. • The Environmental Manager must have as part of his/her records the waste manifest for each batch based disposal. • Hazardous waste bins must be clearly marked, stored in a contained area (or have a drip tray) and covered (either stored under a roof or the top of the container must be covered with a lid). • A hazardous waste disposal certificate must be obtained from the waste removal company as evidence of correct disposal. • In the case of a spill of hydrocarbons, chemicals or bituminous, the spill should be contained and cleaned up and the material together with any contaminated soil collected and disposed of as hazardous waste to minimize pollution risk.
Impact from WWTW Odours from the WWTW could have a negative impact on the mall	NEGATIVE MEDIUM	Once upgraded and properly managed the WWTW should not have a significant impact on the proposed development. Mitigation measures i.e. proper landscape around the facility may serve as a natural windbreaker and minimize potential odour dispersions, if present.
INDIRECT IMPACTS		
Impact from faulty WWTW The Zeerust Sewer Treatment Plant (WWTW) is currently only 15% efficient due to maintenance constraints. Ngaka Modiri Molema District Municipality is to upgrade the plant from a 3.5ML a 17 ML Treatment plan, and are at Tender stage. Once the treatment plant is upgraded it will have sufficient capacity to support the proposed development.	NEGATIVE LOW	As the upgrades to the WWTP does not have a specified date, an alternative solution is for the development to install an **onsite sewer package plant** until such upgrades on the WWTP have been completed. An application for a water use licence has been submitted the Department of Water and Sanitation.

Impact from proposed Filling station (Erf 2)	NEGATIVE LOW	
Traffic impact The petroleum filling station's contribution to the cumulative **traffic impact** is minor. It is expected that the filling station will intercept traffic driving to and from the development and will not generate any additional trips.		No mitigation
Health and safety impact Petroleum and diesel fuel are considered dangerous substances as they are volatile and could potentially ignite under specific circumstances. Therefore, there is a risk of fire or explosions on site, which would pose a threat to on-site employees and surrounding land users and occupiers. However, this impact is highly unlikely to occur as there are numerous imbedded mitigation measures to minimize the risk of fires and explosions.		The underground storage tank installation must comply with SANS 10089 part 1 (storage of dangerous goods in underground storage tanks).
Soil and Groundwater Contamination There is potential for soil and/ or groundwater contamination during the operational phase, as a result of accidental spills or leaks from the underground fuel storage and handling infrastructure, including pipework and underground storage tanks.		The underground storage tank installation must comply with SANS 10089 part 1 (storage of dangerous goods in underground storage tanks).

In the absence of the correct design standards, groundwater contamination could potentially arise during the operational phase of the proposed development. One mechanism through which contamination could occur could be as a result of the establishment of seasonal perched groundwater conditions. Such occurrence could render the submerged petroleum storage tanks buoyant, and could result in a rupture to the underground storage tank (UST) or the connecting ancillary infrastructure. Unmitigated the potential impact on groundwater aquifers would have a negative impact of very high significance. However if the underground storage tanks are designed and installed in accordance with the SABS Standards, and, if the findings and recommendations of the specialist investigations are adequately incorporated into the engineering design of the proposed development, the potential of UST rupture becomes highly unlikely. SABS Standards make provision for the anchoring of USTs to prevent tank buoyancy. Therefore, the potential impact under these conditions is expected to be of very low significance. When petroleum filling stations are designed		

and installed according to the correct standards, ground water contamination concerns are more focused on potential leaks from pipe fittings/valves and spillages which may occur from time to time, during the transfer of petroleum products to the underground storage tanks, and to a lessor extent, during the filling of motor vehicles. By implementing the recommended mitigation measures, the potential groundwater impact associated with the proposed development will have a low significance.		
CUMULATIVE IMPACTS		
Municipal Infrastructure The extra pressure that this development could place on the existing municipal infrastructure for waste and sewage disposal as well as water provisions could be significant when seen together with other developments within the greater municipal area.	NEGATIVE LOW	The availability of bulk water, sewer and electricity had been confirmed. If the upgrades on the WWTP have not been completed in time, then the **onsite sewer package plant** will be constructed.
Traffic The proposed development together with other developments in the region could have a significant impact on the current road network.	NEGATIVE MEDIUM	• The local municipality should consider undertaking Road Master Planning in support of the developments in the town of Zeerust in general. • The local municipality to rehabilitate Klip Street to the acceptable conditions. • Intersections which do not have sufficient spare capacity to accommodate the existing and future background traffic should be upgraded. • The upgrading of new roads and intersections as well as the intersections upgrades required to accommodate the anticipated development traffic impact should be conducted.

Noise Noise pollution from vehicles, noise associated with human habitation as well as domestic animals, dogs etc.	NEGATIVE MEDIUM	• All operations should meet the noise standard requirements of the Occupational Health and Safety Act (Act No. 85 of 1993).

ALTERNATIVE 2		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
Impacts described under Alternative 1 above are applicable to Alternative 2		
DIRECT IMPACTS		
Impacts described under Alternative 1 above are applicable to Alternative 2		
CUMULATIVE IMPACTS		
Impacts described under Alternative 1 above are applicable to Alternative 2		

NO GO ALTERNATIVE		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
All the impacts outlined above will not apply to the No-Go alternative as the status quo will apply and the environment will remain as it is currently. However, it is important to note that the benefits associated with the development will also not materialise, and it must be noted that the majority of the impacts identified for the development were mitigated to a negative		

low or positive impact once the measures for mitigation were applied, indicating that maintaining the status quo is to lose the opportunity of a beneficial development with negligible environmental impacts.		
DIRECT IMPACTS		
No indirect impacts were identified during the planning and design phase.		
CUMULATIVE IMPACTS		
No cumulative impacts were identified during the planning and design phase.		

1.4 DECOMMISSIONING AND CLOSURE PHASE

Due to the permanent nature of this development proposal, decommissioning is highly unlikely and decommissioning therefore does not form part of this project proposal.

2. Environmental impact statement

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

PLANNING & DESIGN PHASE

Impact Description	Impact Severity Degree (0 - 4)	Extent Local / Regional / National	Duration Temporary / Permanent	Probability Probability it would occur: low / medium / high	Severity of Impact After Mitigation
Impact on Natural Habitat and watercourses	2	Local	Permanent	Medium	1
Visual Impact	2	Local	Permanent	Medium	1
Light Pollution	2	Local	Permanent	Medium	1

CONSTRUCTION PHASE

Impact Description	Impact Severity Degree	Extent Local / Regional / National	Duration Temporary / Permanent	Probability Probability it would occur: low / medium / high	Severity of Impact After Mitigation
Impact on Natural Habitat	2	Local	Temporary	High	1
Impact on Water Resources	3	Local	Temporary	High	1
Geology: Stability of structures, stability of excavations and perched water table	2	Local	Temporary	Medium	1
Impact on Erosion	2	Local	Temporary	High	1
Impact on Agriculture	2	Local	Permanent	Low	1
Impact on Air Quality/dust	2	Local	Temporary	Medium	1
Impact of Noise	2	Local	Temporary	Medium	1
Traffic Impact (construction)	2	Local	Temporary	Medium	1
Traffic Impact (roads)	3	Local	Temporary	High	2
Impact of Labourers	2	Local	Temporary	Low	1
Impact on Safety	2	Local	Temporary	Medium	1
Impact on Cultural Heritage Resources	1	Local	Temporary	Low	1

Existing Services and Infrastructure	1	Local	Temporary	Low	1
Waste Management	2	Local	Temporary	Low	1
Visual Impact	1	Local	Permanent	Medium	1
Economic Impacts This will be a POSITIVE impact	3	Local	Temporary	High	

OPERATIONAL PHASE

Impact Description	Impact Severity Degree	Extent Local / Regional / National	Duration Temporary / Permanent	Probability Probability it would occur: low / medium / high	Severity of Impact After Mitigation
Impact on Natural Habitat This will be a POSITIVE impact	3	Local	Permanent	High	
Impact on water resources	3	Local	Permanent	High	2
Traffic impact	2	Local	Permanent	Medium	1
Lighting pollution	2	Local	Permanent	Medium	1
Socio-Economic Impacts This will be a POSITIVE impact	3	Local	Permanent	High	
Impact on the sustainability of Zeerust CBD	1	Local	Permanent	Low	1
Noise impacts	1	Local	Permanent	Medium	1
Availability of civil services This will be a POSITIVE impact	3	Local	Permanent	High	
Impact from WWTW	2	Local	Permanent	Medium	1
Impact from proposed Filling station on erf2	2	Local	Permanent	Low	1

NO-GO (Compulsory)
All the impacts outlined above will not apply to the No-Go alternative as the status quo will apply and the environment will remain as it is currently. However, it is important to note that the benefits associated with the development will also not materialise, and it must be noted that the majority of the impacts identified for the development were mitigated to a negative low or positive impact once the measures for mitigation were applied, indicating that maintaining the status quo is to lose the opportunity of a beneficial development with negligible environmental impacts.

Alternative 1 (preferred/proposed alternative)
This alternative was in consideration of the flood lines and sensitive water course areas. It is the preferred alternative from an environmental perspective as the majority of the development falls within transformed degraded vegetation outside the 1:100 year flood line areas and will result in insignificant environmental impacts. Only access roads, parking bays and civil services fall within the 1:100 year flood line areas.

Alternative 2
This option is the least preferred. The layout was without consideration of the flood lines and the sensitive areas of the two watercourses. A huge portion of the development is within the 1:100 year flood line areas resulting in significant environmental impacts.

A complete impact assessment which include process undertaken to identify, assess and rank the impacts, the activity will impose on the site through the life of the activity in terms of EIA Regulation 2014, Appendix 1(i) and (j) of GN R.982 must be included as Appendix H.

SECTION D: PUBLIC PARTICIPATION

Public participation plays an important role in the compilation of environmental reports as well as the planning, design, and ultimately the implementation of the project. Public participation is a process leading to informed decision-making, through joint effort by the proponent, technical experts, governmental authorities, and systematically identified I&APs.

Setala has taken cognisance of the requirements for public participation in terms of the current 2014 EIA Regulations, and has ensured that the public participation principles are upheld. A successful Public Participation Programme (PPP) is one that is inclusive, actively engages the public and provides ample opportunity for the public to participate in the process. This document provides an overview of the PPP undertaken as part of the BA process for the proposed project.

The purpose of the PPP is to ensure that the issues, inputs and concerns of Interested and Affected Parties (I&APs) are taken into account during the decision-making process. This requires the identification of I&APs (including authorities and the public), communication of the process and findings to these I&APs and the facilitation of their input and comment on the process and environmental impacts, including issues and alternatives that are to be investigated. The steps taken during the execution of the PPP undertaken for this project are detailed in the section that follows.

1 Advertisement and notice

Publication name	Zeerust News
Date published	24-02-2017 (monthly edition)
Publication name	Beeld
Date published	03-02-2017
Site notice position	1. On the billboard at the entrance to the site 2. At the proposed entrance in Kloof street
Date placed	03-02-2017

(Refer to Appendix I1a: Proof of newspaper advertisements)
(Refer to Appendix I1b: Proof of site notices)

2 Determination of appropriate measures

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN R.982.

2.1 Public notification

A consultation process was undertaken with the intent of informing key community stakeholders, comprising the Municipal structures and the local communities (directly affected people) about the proposed development and the Basic Assessment process underway.

2.1.1 Identification of Interested and Affected Parties

- The PPP for the project was initiated with the development of a comprehensive I&AP database. The list of I&APs was updated on a regular basis during the course of the project. Refer to Appendix I5a: Register of Interested and Affected Parties for a complete list.

2.1.2 Background Information Document

- A comprehensive background information document was compiled with the main aim to identify issues, and potential impacts associated with this project. It included a description of the status quo of all relevant environmental components as well as the proceedings of the PPP and communication with registered Interested & Affected Parties (I&APs).
- On 03-02-2017 the documentation was submitted for comment to all I&APs.
- The due date for comment was 07-03-2017. This allowed for a comment period of more than 30 days.
- Copies of the notification to key stakeholders are included as Appendix I2a and to authorities and organs of state in Appendix I4a.

2.1.3 Landowner notification

The landowners throughout a project area in general play an important roll in assisting with the identification of project alternatives. Only one landowner, Akani Properties, is directly affected by this project.

2.2 Meetings and site visits

2.2.1 Public meeting/ Open day

- Notification of an information meeting/ open day was submitted to all I&APs on 17-05-2017. The meeting to be conducted on 08-06-2017 at Avanti, 1 km out of Zeerust on the N4 towards Mafikeng, GPS Coordinates: S: 25 33' 24.717" E: 26 4' 6.232".
- The purpose of this meeting will be to furnish all interested parties with information regarding the extent of the project, the proposed alternatives, and the extent of the Environmental Impact Assessment Process.
- The information meeting will be conducted in the format of an open day with an invitation for attendance between 13h00 to 16h00. Project posters with information and layout maps will be presented at the open day. (Attendance register to follow, attached as Appendix I6a).
- Copies of the notification to key stakeholders to follow, attached in Appendix I2b and to authorities and organs of state in Appendix I4b.

2.2.2 Focus group meetings / One-on-one meetings

Key stakeholders were identified at the beginning of the PPP, these included: Key stakeholders, commenting authorities and landowner(s).

- A site visit was conducted with the client and landowner in March 2016. (Refer to Appendix I5b for the register of property owners).

2.3 Distribution of Draft Basic Assessment Report for comment

On 17-05-2017 notification of the availability of the Draft Basic Assessment Report (BAR) was submitted to all I&APs. (Proof will be included in Appendices I2b and I4b of the final BAR).
The Draft BAR is available for comment on the Setala website. The comment period is more than 30 days, until 19-06-2017.
Copies of the draft BAR were submitted to the following key stakeholders:

- North West Provincial Government, Department of Rural, Environment and Agricultural Development: Environmental Services, Environmental Quality. Agri centre Building, Cnr Dr James Moroka Drive & Stadium Road, MMABATHO, 2735. For Attention: Mrs Ellis Thebe, Tel 018 389 5156.
- South African Heritage Resource Agency, 111 Harrington Street, CAPE TOWN, 8000. For Attention: Philip Hine. Tel 021 462 4502 - (submitted via SAHRIS).
- The Department of Water and Sanitation, North West Regional Office, Quaternary Drainage Area A31D, Crocodile West and Marico WMA3. Water Quality office, Old Rustenburg Road, HARTBEESPOORT, 0216. For Attention: Clement Makwela Tel 012 253 1026.
- Ramotshere Moiloa Local Municipality. C/O President & Coetzee Street, ZEERUST, 2865. For Attention Mr T Selaka, Community Development Services, Environmental Management. Cc Mr T Phakalane, The Municipal Manager. Cc Mrs B Seabi, Olebogeng Gasealahwe, Planning and Local Economic Development.

3 Issues raised by Interested and Affected Parties

Summary of main issues raised by I&APs	Summary of response from EAP
South African National Roads Agency registered as I&AP	Noted
NWK Ltd registered as I&AP	Noted
Eskom North West Operating Unit is not affected	Noted
Bakwena Platinum Corridor Concessionaire registered as I&AP	Noted
Environamic registered as I&AP	Noted
Andre du Toit Town and Regional Planners registered as I&AP	Noted

4 Comments and response report

The Public Participation Programme allowed for informed and responsible decision-making by all interested and affected parties. A summary of I&AP comments and the consultant's responses to these comments are provided below. The original I&AP comments are included in Appendix I3.

<u>List of authorities from whom comments have been received:</u>

- South African National Roads Agency registered as I&AP
- Eskom North West Operating Unit is not affected
- Bakwena Platinum Corridor Concessionaire registered as I&AP

<u>Key stakeholders from whom comments have been received:</u>

- NWK Ltd registered as I&AP

- Environamic registered as I&AP
- Andre du Toit Town and Regional Planners registered as I&AP

4.1 Comments received in the notification phase

This section of the report synthesises the issues and concerns identified by interested and affected parties and various stakeholders during the public participation process and can be summarised as follows:
(The original I&AP comments are included in Appendix I3a)

South African National Roads Agency
06-02-2017
Comment: Registered as I&AP

NWK Ltd
13-02-2017
Comment: Registered as I&AP

Eskom North West Operating Unit
21-02-2017
Comment: NWOU is not affected

Bakwena Platinum Corridor Concessionaire
27-02-2017
Comment: Registered as I&AP

Environamic
27-02-2017
Comment: Registered as I&AP

Andre du Toit Town and Regional Planners
28-02-2017
Comment: Registered as I&AP

5 Authority participation

Proof that the Authorities and Organs of State received written notification of the proposed activities is attached as Appendix I4a. In addition, refer to Appendix I5a: Register of Interested and Affected Parties for a complete list of authorities and organs of state that were notified.

6 Consultation with other stakeholders

A list of registered I&APs is included as Appendix I5a.
Copies of any correspondence and minutes of any meetings are included in Appendix I6.

7 Conclusion of public participation programme

In short, the study approach followed by the Consultants, entailed the following steps:

- The first phase of the Public Participation Programme (PPP) commenced on 03-02-2017 allowing for a 30-day comment period. It included the identification of key stakeholders, the distribution of information letters (BID) with a request for registration and comment, as well as advertising of the project in the local and regional press and on site.
- In addition, notification of an information meeting on 08-06-2017 was submitted to all I&APs on 17-05-2017. The purpose of this meeting is to furnish all interested parties with information regarding the extent of the project, the proposed alternatives, and the extent of the Environmental Impact Assessment Process.
- Written comment was received in the notification phase from:
  - South African National Roads Agency registered as I&AP
  - Eskom North West Operating Unit is not affected
  - Bakwena Platinum Corridor Concessionaire registered as I&AP
  - NWK Ltd registered as I&AP
  - Environamic registered as I&AP
  - Andre du Toit Town and Regional Planners registered as I&AP
- A draft Basic Assessment Report was compiled with the main aim to identify issues, potential impacts and potential alternatives associated with this project. It included a description of the status quo of all relevant environmental components as well as the proceedings of the PPP and communication with registered Interested & Affected Parties (I&APs).
- On 17-05-2017 the draft Basic Assessment Report was distributed for comment.
- The due date for comment to the draft Basic Assessment Report is 19-06-2017. This allows for a comment period of more than 30 days.
- Subsequently the final BAR will be submitted to NWREAD. The final BAR will include all concerns raised to the draft BAR and the responses thereto. The Consultants (EAPs) will ensure that all concerns raised are addressed in appropriate detail in the final Basic Assessment Report.

SECTION E: RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	YES X	NO

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

Not applicable

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

This EIA will seek to authorise the total property. The maps attached in Appendix A indicates/highlights the whole area that was investigated to inform DREAD on the area that is part of the authorisation. The wider area that was investigated will allow future potential amendments to the EA should it be necessary (at a later stage). Should small changes be done to the layout of the shopping mall after authorisation it will not be considered crucial and will not warrant a new application. In other words, small changes will be allowed e.g. the location of shops in the mall could change.

The EMPr that meet the requirements of EIA Regulation,2014, Appendix 4, must be attached as Appendix J.

Is an EMPr attached?	YES X	NO

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix K

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix F

Any other information relevant to this application and not previously included must be attached in Appendix L.

SECTION F: AFFIRMATION BY EAP

I, MM Pretorius of Setala Environmental 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

2017-05-17

_____

DATE