Environmental Impact Assessment Process: Draft Scoping Report

Proposed Cecelia Park Residential Development, Bloemfontein, Free State Province

DETEA Reference: EMS/11(i)(ii)(vi)(xi),18(i),24,15/14/23

April 2015

Prepared for:

Mangaung Metropolitan Municipality
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Executive Summary

Introduction and Background

Mangaung Metropolitan Municipality is proposing to establish a new mixed use development called Cecilia Park. This newly proposed mixed use development will mostly consist of GAP housing, light industrial areas and commercial properties. The term GAP housing refers to income earners who earn too much to get a free house from the government and earn too little to get a bank bond. The main purpose of GAP housing is to provide households, earning between R 3 000 and R 15 000, the opportunity to also partake in the housing market by means of purchasing a house. Although the proposed development will mainly consist of GAP residential development, the outer part of the development will include light industrial areas, mainly to serve the Cecilia Park region. For this reason, the development can be seen as a mixed use development. The proposed development is proposed to be constructed on the following properties South of Langenhovenpark;

- Remainder of the Farm Cecilia no. 2352;
- Remaining Extent of the Farm Bloemfontein no. 645;
- Portion of the Farm Kwaggafontein no. 2300.

The development will also be designed to include approximately 10Ha open space. The role of these open spaces inside urban edges include, but is not limited to the following; to preserve ecological integrity, to serve as areas for recreational and sport activities, sacred spaces, etc.

Manguang Metropolitan Municipality will construct and provide all infrastructure for the above mentioned mixed use development. This include:

- The construction of roads;
- The provision of electricity;
- The provision of water;
- The provision of sewage pipelines;
- Zoning of properties, and
- Waste management.

Enviroworks, an Independent Environmental Assessment Practitioner, was appointed by Mzansi Africa Civils (The Project Manager) who was appointed by The Applicant (Mangaung Metropolitan Municipality) to undertake the required Scoping and Environmental Impact Assessment process, of which this Scoping Report constitutes the first phase of the process. During Scoping, the proposed project is examined in relation to the prevailing biophysical and socio-economic environment of the study area. Potential impacts on the environment that may

arise during the planning, construction, operation and decommissioning phases of the proposed mixed use development are identified, both by the Environmental Assessment Practitioner and as part of a transparent public consultation process, for further assessment in the following Impact Assessment Phase.

Project description

As mentioned above, the proposed project entails the development of residential and light industrial facilities. In other words, mixed use development with the aim of providing GAP housing to people earning an income between R3000 and R15000 per month.

This mixed use development will cover an area of approximately 130 Ha (hectares) and will consist of the following:

Usage:	Number of Erven:	Area (Ha)	Land Occupation (%)
Public Open Space	1 Stand	10,0716 Ha	7.8 %
Parks and Sports fields	7 Stands	7,4033 Ha	5.7 %
Residential A (Low Density)	21 Stands	18,2046 Ha	14.1 %
Residential B (Medium Density)	23 Stands	16,8258 Ha	13 %
Residential C (High Density)	12 Stands	9,4005 Ha	7.3 %
Mixed Use A (Residential, offices and commercial)	14 Stands	16,4616 Ha	12.7 %
Mixed Use B (Residential and offices)	14 Stands	17,4610 Ha	13.5 %

Mixed Use C (Offices, Showrooms and Light Industrial)	14 Stands	13,9384 Ha	10.8 %
Retail	4 Stands	8,6555 Ha	6.7 %
Services Provider	4 Stands	4,0521 Ha	3.1 %
Educational	3 Stands	4,0387 Ha	3.1 %
Community Facility	2 Stands	0,9342 Ha	0.7 %
Worship	3 Stands	1,3914 Ha	1.1 %
Roads	-	Approximately 0,5200 Ha	0.4 %
Total Mixed use development:	122 Stands	129,35336 Ha	100 %

Erven / Stand will then be sold to interested developers in order to develop stands to meet the set out zoning requirements.

Property Description

The newly proposed Cecelia Park development is located on the Remainder of the Farm Cecilia no. 2352; Remaining Extent of the Farm Bloemfontein no. 645; and a Portion of the Farm Kwaggafontein no. 2300 to the West of Bloemfontein. These properties fall within the Grassland Biome which is classified as the endangered Bloemfontein Dry Grassland vegetation type. The properties are underlain by sedimentary mudstone, intruded by dolerite dykes and sills.

A wetland is located to the north of the proposed development. The wetland is mostly artificial as it is fed by an existing storm water drainage running next to the proposed development in a North Western direction. The Department of Water Affairs will be consulted as development will occur within 500m from the wetland and the applicant will require General. No sensitive drainage lines were detected on or in the vicinity of the proposed development.

Also located on the property is an existing gravel quarry which is currently used by the Mangaung Metropolitan Municipality. The existing gravel quarry is located to the North Western

part of the proposed development. This gravel quarry covers an area of approximately 30 Ha and about 20 Ha will fall within the development footprint. A consultation meeting between the EAP and the Department of Economic Development, Tourism and Environmental Affairs (DETEA) and a telephonic conversation with the Free State Department of Minerals and Recourses (DMR) confirmed the following:

DMR confirmed that the gravel quarry is an illegal mining activity and no record of the activity exists with their offices. For this reason all mining activities related to the gravel quarry should be ceased. The DETEA confirmed that the gravel quarry and the rehabilitation thereof should be included in the Impact Assessment report. No construction activities may take place prior to the rehabilitation of the gravel quarry.

Legislative context

The proposed project constitutes the following listed activities in terms of National Environmental Management Act, 1998**:**

Government Notice 544 of 2010: Listing Notice 1 of the National Environmental Management Act, Act 1998 (Act 107 of 1998)

Activity 11(i)(ii)(vi)(xi): The construction of:

(i) canals;

(ii) channels;

(vi) bulk storm water outlet structures;

(xi) infrastructure or structures covering 50 square meters or more

where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

Activity 18(i): The infilling or depositing of:

any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 m^3 from:

(i) a watercourse

Activity 24: The transformation of:

land bigger than 1000 square meters in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule such land was zoned open space, conservation or had an equivalent zoning.

Government Notice 545 of 2010: Listing Notice 2 of the National Environmental Management Act, Act 1998 (Act 107 of 1998)

Activity 15: Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more.

In addition to the above mentioned National Environmental Management Act, the proposed project also constitutes the following legislation:

National Heritage Resources Act, 1999 (Act 25 of 1999)

Section 38(1): (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50 m in length;
(c) any development or other activity which will change the character of a site—
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof;
(d) the re-zoning of a site exceeding 10 000 m2 in extent.

National Water Act, Act 1998 (Act. 36 of 1998)

Section 21(c & i): (c) Impeding or diverting the flow of water in a watercourse

(i) Altering the bed, banks, course or characteristics of a watercourse.

Other Applicable Legislation which should be consulted by the construction team:
Constitution of the Republic of South Africa (Act 1808 of 1996)
National Building Regulations and Building Standards Act (Act 103 of 1997)
National Environmental Management Protected Areas Act (Act 57 of 2003)
Conservation of Agricultural Resources Act (Act 43 of 1993)
Occupational Health and Safety Act (Act 85 of 1993).

Report structure

This report is set out as followed:

- Firstly an **executive summary** of the overall project is given, followed by the **introduction** which provides background information on the project and describe the legal framework,
- This is followed by factual information on the **project proposal**, **alternatives** investigated and an explanation of the **public- and departmental participation** process followed,
- The **biophysical environment** and the **socio-economic** description is then provided,
- The **potential environmental impacts** during **pre-construction, construction and operational phases** are then **identified**,
- The **potential impacts to be investigated further** in the Impact Assessment Report are listed with a description of the **methodology** to be used in the assessment of the potential impacts and
- The **plan of study for Impact Assessment Report** sets out the proposed approach to the Environmental Impact Assessment report of the application.

Potential Environmental Impacts Identified

The Scoping Phase has identified potential impacts that will need further investigation to determine their significance.

At this preliminary stage, no “red flag” significant potential impacts on the environment were identified that are deemed too severe as to suggest that the proposed activity should not commence.

Public Participation

A twenty one (21) day initial public participation process was held between **19 November 2014** and **10 December 2014**, informing all potential stakeholders and organs of state of the proposed activity. During the initial public participation process, potential interested and affected parties were also informed by means of an advertisement in the Volksblad and Express newspapers on **Wednesday 19 November 2014**. Site notices were also placed on the proposed development site and Background Information Documents was hand delivered to surrounding landowners and properties within 500 meters from the site.

Interested and Affected Parties, Stakeholders and Organs of state will be informed of the Draft Scoping Report and will be provided with a 40 day commenting period on the Draft Scoping Report to raise any concerns or issues. A hard copy of the Draft Scoping report will be made available at the Langenhovenpartk library and the Langenhovenpark post office. The Draft

Scoping Report will also be accessible on the Enviroworks website (www.enviroworks.co.za) for review from **13 February 2015** to **25 March 2015** and a link to the document will be send to all relevant stakeholders; interested and affected parties and organs of state.

The EAP will present a Public Participation meeting on **26 February 2015 at 18:00, in the Bunga A auditorium, Braam Fischer Building** to provide I&Ap`s, stakeholders and organs of state background to the project and to provide them the opportunity to raise concerns and comments.

TABLE OF CONTENTS

ABBREVIATIONS

DETEA	-	Department of Economic Development, Tourism and Environmental Affairs – Free State Province
DMR	-	Department of Minerals and Resources
EMC	-	Environmental Management Committee
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
I&AP	-	Interested and Affected Party
IAR	-	Impact Assessment Report
IDP	-	Integrated Development Plan 2013
MMM	-	Mangaung Metropolitan Municipality
NEMA	-	National Environmental Management Act of 1998 as amended
NHRA	-	National Heritage Resources Act of 1999
NWA	-	National Water Act of 1998
PPP	-	Public Participation Process
SANRAL	-	South African National Roads Agency Limited
SDF	-	Spatial Development Framework 2014
SMME	-	Small, Medium and Micro Enterprises
SoER	-	State of Environment Report
SR	-	Scoping Report
StatsSA	-	Statistic South Africa
UNISA	-	University of South Africa

1 Introduction

1.1 Background

Mangaung Metropolitan Municipality is proposing to establish a new mixed use development covering an area of approximately 130 Ha and will be called Cecilia Park in Bloemfontein, Free State Province. This newly proposed mixed use development will mostly consist of GAP housing, light industrial areas and commercial properties. The term GAP housing refers to income earners who earn too much to get a free house from the government and earn too little to get a bank bond. The main purpose of GAP housing is to provide households, earning between R 3 000 and R 15 000, the opportunity to also partake in the housing market by means of purchasing a house. Although the proposed development will mainly consist of GAP residential development, the outer part of the development will include light industrial areas, mainly to serve the Cecilia Park region. For this reason, the development can be seen as a mixed use development. The proposed residential development is proposed to be constructed on the Remainder of the Farm Cecilia No. 2352; Remaining Extent of the Farm Bloemfontein No. 645; and Portion of the Farm Kwaggafontein No. 2300. These properties are located to the South of Langenhovenpark suburb in Bloemfontein and to the North of the N8 road, east of the N1.

1.2 Details on the project team

1.2.1 The Applicant

Description	
Organisation	Mangaung Metropolitan Municipality
Contact Person	Mr. Kaba Kabagambe
Address	Bram Fischer Building, cnr Nelson Mandela Road and Markgraaff Street, Bloemfontein
Telephone Number	051 405 8892
E-mail Address	kaba.kabagambe@mangaung.co.za

1.2.2 The Landowner

Description	
Organisation	Mangaung Metropolitan Municipality
Contact Person	Mr. Kaba Kabagambe
Address	Bram Fischer Building, cnr Nelson Mandela Road and Markgraaff Street, Bloemfontein
Telephone Number	051 405 8892
E-mail Address	kaba.kabagambe@mangaung.co.za

1.2.3 The Project Manager

Description	
Company	Mzansi Africa Africa Civils
Contact Person	Farai Gudza
Telephone Number	+27 (11) 886 3373
Facsimile Number	+27 (11) 886 3949
Email	Farai.Gudza@mzansiafrica.co.za
Address	16 Bond Street Office Park, Ferndale, South Africa, 2194

1.2.4 The Environmental Assessment Practitioner

Description	
Company	Enviroworks Environmental Consultants
Contact Person	Johan Botes
Telephone Number	+27(0) 51 436 0793
Facsimile Number	+27(0) 51 436 0791
Email	johan@enviroworks.co.za
Address	Suite 116, Private Bag X01, Brandhof, 9324

1.2.5 Specialist

Heritage Impact Assessment

Description	
Company	Paleo Field Services
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Email	lloyd.rossouw@gmail.com
Address	P.O. Box 38806, Langenhovenpark, Bloemfontein, 9330

Ecological and Wetland Impact Assessment

Description	
Company	Enviro-Niche Consulting
Contact	Prof. Johann Du Preez
Telephone Number	+27(0) 82 376 4404
Email	greenrsa@gmail.com
Address	P.O Box 11945, Universitas, Bloemfontein, 9321

Geohydrological Impact Assessment

Description	
Company	Tucana Solutions
Contact	Mr. Christiaan Vermaak
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Email	christiaan@tucanasolutions.co.za

Geo-technical survey

Description	
Company	SMEC
Contact	Mr. Richard Roberts
Telephone Number	012-481 3800
Address	VKE Centre, 230 Albertus Street, La Montagne, 0184, South Africa

1.3 Project description

Mangaung Metropolitan Municipality is proposing to establish a new mixed use development called Cecilia Park. This newly proposed mixed use development will mostly consist of GAP housing, light industrial areas and commercial properties. The main purpose of GAP housing is to provide households, earning between R 3 000 and R 15 000, the opportunity to also partake in the housing market by means of purchasing a house. Although the proposed development will mainly consist of GAP residential development, the outer part of the development will include light industrial areas, mainly to serve the Cecilia Park region. For this reason, the development can be seen as a mixed use development. The proposed development is proposed to be constructed on the following properties South of Langenhovenpark suburb in Bloemfontein, North of the N8 road and west of the N1;

- Remainder of the Farm Cecilia no. 2352;
- Remaining Extent of the Farm Bloemfontein no. 645;
- Portion of the Farm Kwaggafontein no. 2300.

The development will also be designed to include approximately 10 Ha open space. The role of these open spaces inside urban edges include, but is not limited to the following; to preserve ecological integrity, to serve as areas for recreational and sport activities, sacred spaces, etc.

The following roads will serves as access roads to the development:

- Du Plessis road connecting the Western Part of Langenhovenpark suburb to the R64, will be extended to serves as a bypass road connecting to the N8. This road will also serve as the boundary for the development;
- A road from the M14 (Totius Road) will be constructed to the center of the development;
- Eland street, adjacent to the N8 will serve as the southern entrance to the proposed development; and
- A new bridge is proposed to be constructed, crossing the N1 and connecting to De Bruin Street in Universitas.

Manguang Metropolitan Municipality will construct and provide all infrastructure for the above mentioned mixed use development after which Erven / Stands will be sold to interested developers in order to develop stands to meet the set out zoning requirements. The infrastructure to be developed by the Municipality will include:

- The construction of roads;
- The provision of electricity;
- The provision of water;
- The provision of sewage pipelines;
- Zoning of properties, and
- Waste management.

This mixed use development will cover an area of approximately 130 Ha (hectares) and will consist of the following:

Usage:	**Number of Erven:**	**Area (Ha)**	**Land Occupation (%)**
Public Open Space	1 Stand	10,0716 Ha	7.8 %
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Roads	-	Approximately 0,5200 Ha	0.4 %
Total Mixed use development:	122 Stands	129,35336 Ha	100 %

1.4 Project Need and Desirability

The Mangaung Metropolitan municipality, especially Bloemfontein, has a major backlog, with regards to housing, in comparison with other municipalities in the Free State. This is particularly due to the fact that most of the residents reside in Bloemfontein and is driven by the fact that Bloemfontein is seen as the economic hub with better working opportunities. According to Stats SA (Statistics South Africa), the 2011 census indicated that 84,4% of residents reside within formal settlements in the urban context. The 1996 census indicated that 71.3% of residents reside within formal settlements in the urban context. This shows a growth of 0.6% between 1996 and 2001 and a growth of 12.5% between 2001 and 2011 (MMM`s IDP, 2013).

According to the Mangaung Metropolitan Municipalitie`s Integrated Development Plan (MMM`s IDP) of 2013, the Western parts of Bloemfontein and the Langenhovenpark surroundings are over developed, mainly due to a lack in access roads to these areas and the increase in travel time from and to Mangaung's CBD (MMM`s IDP, 2013). More developments are planned within these areas and the population increase will lead to negative traffic impacts in the region. The Cecelia Park mixed use residential development will include the upgrading and the construction of new access roads, as described in Section 1.2.3, in the surroundings, improving travel experiences.

Also part of the Cecelia Park mixed use development, internal roads will allocate one lane per road for buss services. This will increase the flow of traffic and will enhance travel time and experiences.

One of the targets set out in the MMM`s IDP (2013) is to address the housing backlog in the area. For this reason old internal houses are being upgraded and the Cecelia Park mixed use development is therefore planned. The Cecelia Park mixed use development will include residential areas for low-, medium- and high income groups, which will effectively address housing backlogs on all levels.

The MMM`s IDP (2013) set target is to provide 20 000 housing opportunities within the next five years. The Cecelia park development forms part of this target and will contribute to housing shortages.

The MMM` Spatial Development Framework (SDF) of 2014, indicates that affordable housing development, such as the Cecelia Park development, should be implemented. Part of this, the MMM`s SDF stipulates that urban integration should be enhanced by rectifying past spatial imbalances. To achieve the above, the Cecelia Park development will include the upgrading, extension and building of new roads, linking the surrounding areas with the development which will enhance traffic flow and in such away overcoming spatial imbalances.

According to the Mangaung Metropolitan Municipality`s Integrated Development plan (IDP) of 2013, the municipalities primary task is to provide basic services to its clients, being households and businesses. Part of the Cecelia Park mixed use development, the MMM will develop the following basic services and infrastructure the service the Cecelia Park suburb:

- The provision of electricity;
- The provision of water;
- The provision of sewage pipelines;
- Zoning of properties, and
- Waste management.

The MMM`s IDP (2013) set target is to provide 20 000 housing opportunities within the next five years. The Cecelia park development forms part of this target and will contribute to housing shortages.

1.5 Locality

The properties to be affected by the newly proposed mixed use development will include the Remainder of the Farm Cecilia no. 2352; Remaining Extent of the Farm Bloemfontein no. 645;

and Portion of the Farm Kwaggafontein No. 2300. These properties are located South of Langenhovenpark suburb and to the North of the N8 and west of the N1. The figure below indicates the proposed development area.

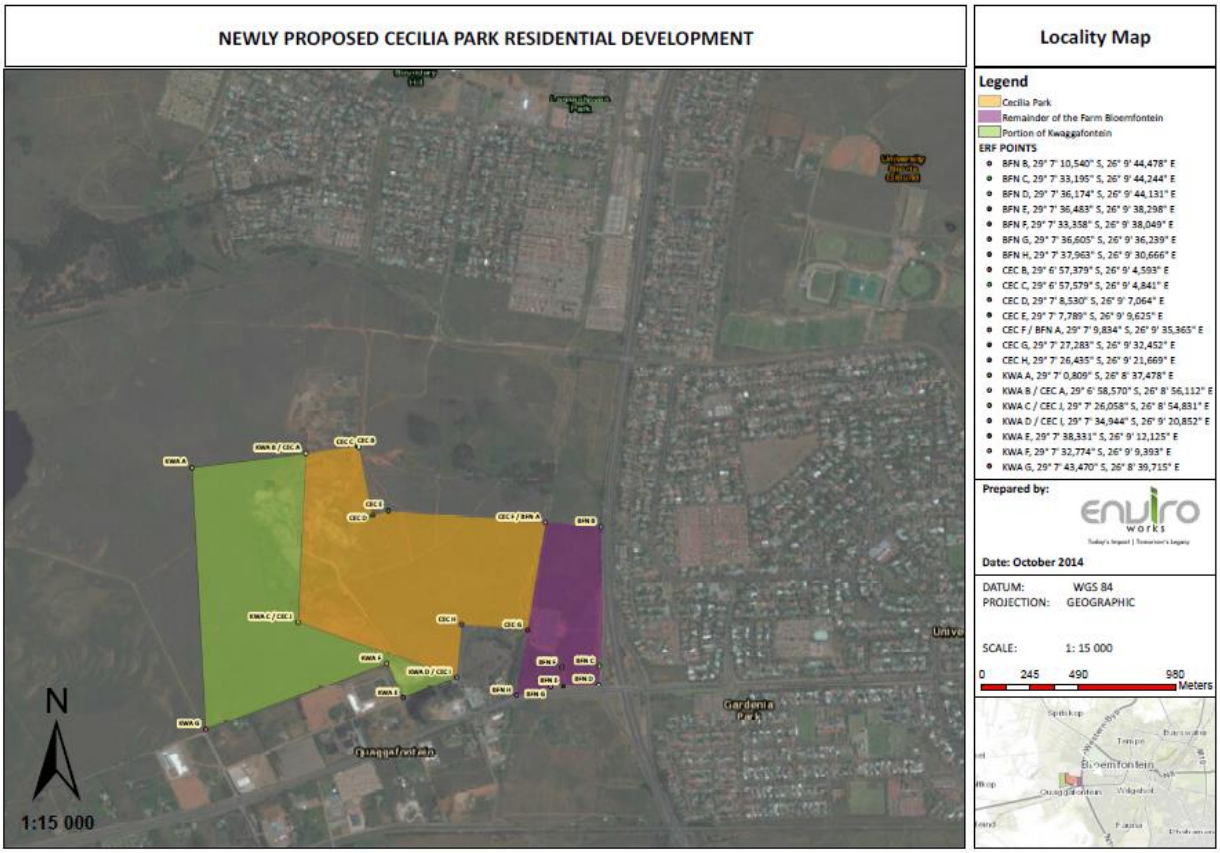


Figure 1: Locality Map indicating the Remainder of the Farm Cecilia no. 2352; Remaining Extent of the Farm Bloemfontein no. 645; and Portion of the Farm Kwaggafontein no. 2300.

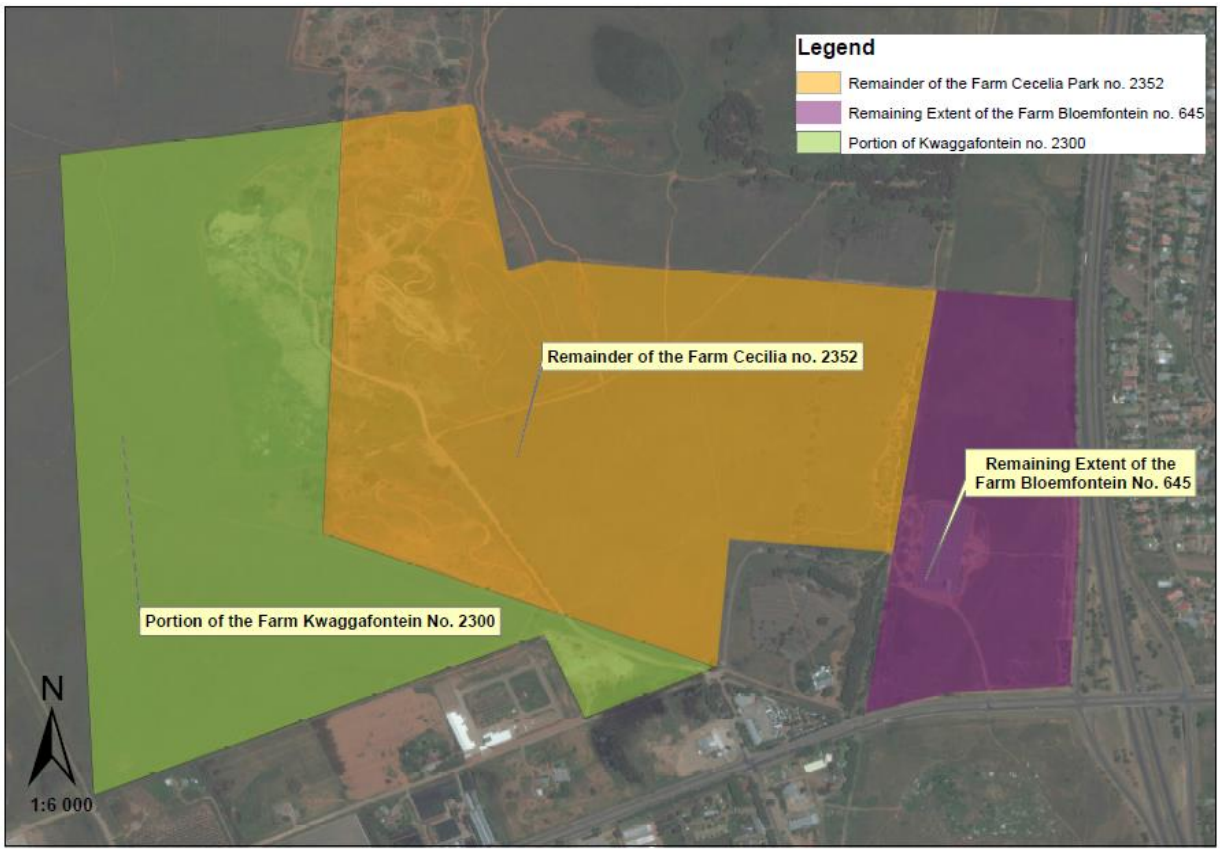
1.5.1 Site Coordinates

Remaining Extent of the Farm Bloemfontein no. 645						
Corner:	**Latitude (S):**			**Longitude (E):**		
BFN A	29°	7’	9.834”	26°	9’	35.365”
BFN B	29°	7’	10.540”	26°	9’	44.478”
BFN C	29°	7’	33.195”	26°	9’	44.244”
BFN D	29°	7’	36.174”	26°	9’	44.131”
BFN E	29°	7’	36.483”	26°	9’	38.298”
BFN F	29°	7’	33.358”	26°	9’	38.049”

BFN G	29º	7’	36.605”	26º	9’	36.239”
BFN H	29º	7’	37.963”	26º	9’	30.666”
Remainder of the Farm Cecilia no. 2352						
Corner:	**Latitude (S):**			**Longitude (E):**		
CEC A	29º	6’	58.570”	26º	8’	56.112”
CEC B	29º	6’	57.379”	26º	9’	4.593”
CEC C	29º	6’	57.579”	26º	9’	4.841”
CEC D	29º	7’	8.530”	26º	9’	7.064”
CEC E	29º	7’	7.789”	26º	9’	9.625”
CEC F	29º	7’	9.834”	26º	9’	35.365”
CEC G	29º	7’	27.283”	26º	9’	32.452”
CEC H	29º	7’	26.435”	26º	9’	21.669”
CEC I	29º	7’	34.944”	26º	9’	20.852”
CEC J	29º	7’	26.058”	26º	8’	54.831
Portion of the Farm Kwaggafontein no. 2300						
Corner:	**Latitude (S):**			**Longitude (E):**		
KWA A	29º	7’	0.809”	26º	8’	37.478”
KWA B	29º	6’	58.570”	26º	8’	56.112”
KWA C	29º	7’	26.058”	26º	8’	54.831”
KWA D	29º	7’	34.944”	26º	9’	20.852”
KWA E	29º	7’	38.331”	26º	9’	12.125”
KWA F	29º	7’	32.774”	26º	9’	9.393”
KWA G	29º	7’	43.470”	26º	8’	39715”

1.6 Property Description and Baseline Conditions

The newly proposed Cecelia Park development is located on the Remainder of the Farm Cecilia no. 2352; Remaining Extent of the Farm Bloemfontein no. 645; and a Portion of the Farm Kwaggafontein no. 2300 to the West of Bloemfontein, Free State Province.



These properties fall within the Grassland Biome which is classified as the endangered Bloemfontein Dry Grassland vegetation type. The properties are underlain by sedimentary mudstone, intruded by dolerite dykes and sills.

Typical vegetation types associated with the Bloemfontein Dry Grassland vegetation type include *Themeda triandra, Digitaria eriantha, D. argyrograpta, Eragrostis curvula, E. chloromelas, E. lehmanniana, Pogonarthria squarrosa, Anthephora pubescens, Aristida stipitata and Cymbopogon pospischilli.*

The Eastern part of the remainders of the farms Cecelia and Bloemfontein have been disturbed by means of previous farming, borrow pits, vehicle tracks, exotic trees and the dumping of solid waste. However, the western part of the farm Cecelia and the majority of the portion of the Farm Kwaggafontein are in pristine condition and sets a good example of the Bloemfontein Dry Grassland Vegetation type.

A wetland is located to the north of the proposed development. The wetland is mostly artificial as it is fed by an existing storm water drainage running next to the proposed development in a North Western direction. The Department of Water Affairs will be consulted as development will occur within 500m from the wetland and the applicant will require General Authorisation from

the Department of Water Affairs. No sensitive drainage lines were detected on or in the vicinity of the proposed development.

Also located on the property is an existing gravel quarry which is used by the Mangaung Metropolitan Municipality. The existing gravel quarry is located to the North Western part of the proposed development. This gravel quarry covers an area of approximately 30 Ha and about 20 Ha will fall within the development footprint. A consultation meeting between the EAP and the Department of Economic Development, Tourism and Environmental Affairs (DETEA) and a telephonic conversation with the Free State Department of Minerals and Recourses (DMR) confirmed the following:

DMR confirmed that the gravel quarry is an illegal mining activity and no record of the activity exist with their offices. For this reason all mining activities related to the gravel quarry should be ceased. The DETEA confirmed that the gravel quarry and the rehabilitation thereof should be included in the Impact Assessment report. No construction activities may take place prior to the rehabilitation of the gravel quarry.

1.7 Project Alternatives

In terms of Environmental Impact Assessment (EIA) regulation, the Environmental Assessment Practitioner (EAP) should investigate feasible and reasonable alternatives for the proposed project. In other words, different means of meeting the requirements for the activity. For this reason, the EAP identified the following Layout Alternatives.

1.7.1 Layout Alternatives

Alternative 1 (Preferred Alternative) - A1

The proposed Layout alternative 1, as indicated in the picture below, is regarded as the preferred layout, mainly due to its more traffic friendly design. One will note that roads are designed in a more curvature form, in order to minimise the negative impacts on traffic flow. Alternative 1 was also identified as the preferred alternative due to the fact that more green / open spaces are possible which can be used for recreational purposes, sport facilities, etc.

Advantages (A1):

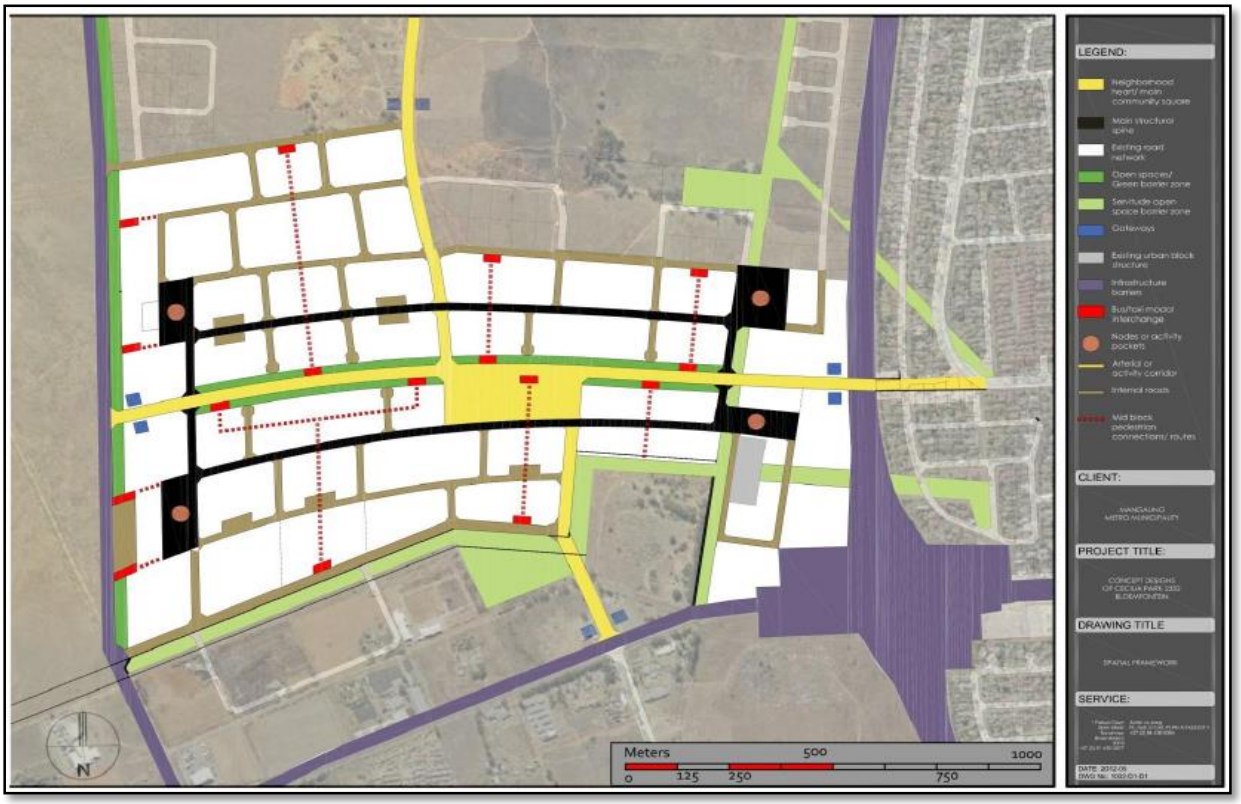
- The property includes more open / green spaces for sport and recreational activities; and
- Traffic flow will be enhanced due to better linkages of internal and external roads.

Disadvantages (A1):

- The property accommodates less stand and structures than alternative 2. Which means less housing opportunities.

Alternative 2 - A2

The proposed Layout alternative 2, as indicated in the picture below, differs from alternative one, in a way that roads are designed in a more rectangular way. As a result of this rectangular design, the traffic flow will not be as efficient as with Alternative 1. Alternative 2 does not include as much open / green spaces as Alternative 1, but can accommodate more housing units.



Advantages (A2):

- The property includes more housing units than alternative 1;

Disadvantages (A2):

- This alternative, does not include as much open / green spaces as alternative 2;
- The rectangular design will negatively impact on the flow of traffic.

1.7.2 No-Go Alternative

Should the proposed Cecelia Park mixed use development not take place, a shortage in housing will remain a matter of concern for the Mangaung Metropolitan Municipality. Informal housing will continue to arise which will have an impact on the economic growth of the area. The development of housing opportunities in the Magaung Metropolitan Municipality is of high priority, and is also indicated in the IDP and SDF.

The alternatives as described above will be assessed in the Impact Assessment Report to motivate the preferred alternative.

1.8 Legislation and Guidelines Considered in the Scoping Report

This process constitutes listed activities in terms of Section 24 of the National Environmental Management Act (NEMA), 107 of 1998, as amended, requiring that an Environmental Impact Assessment be undertaken in application for environmental authorization. In addition to the NEMA listed activities, the project will also trigger the National Water Act, 1998 and the Heritage Resources Act, 1999.

The proposed project constitutes the following listed activities in terms of National Environmental Management Act, 1998**:**

Government Notice 544 of 2010: Listing Notice 1 of the National Environmental Management Act, Act 1998 (Act 107 of 1998)

Activity 11(i)(ii)(vi)(xi): The construction of:

(i) canals;

(ii) channels;

(vi) bulk storm water outlet structures;

(xi) infrastructure or structures covering 50 square meters or more

where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

Activity 18(ii): The infilling or depositing of:

any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 m^3 from:

(ii) a watercourse

Activity 24: The transformation of:

land bigger than 1000 square meters in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule such land was zoned open space, conservation or had an equivalent zoning.

Government Notice 545 of 2010: Listing Notice 2 of the National Environmental Management Act, Act 1998 (Act 107 of 1998)

Activity 15: Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more.

In addition to the above mentioned National Environmental Management Act, the proposed project also constitutes the following legislation:

National Heritage Resources Act, 1999 (Act 25 of 1999)

Section 38(1): (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50 m in length;
(c) any development or other activity which will change the character of a site—
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof;
(d) the re-zoning of a site exceeding 10 000 m2 in extent.

National Water Act, Act 1998 (Act. 36 of 1998)

Section 21(c & i): (c) Impeding or diverting the flow of water in a watercourse

(i) Altering the bed, banks, course or characteristics of a watercourse.

According to these regulations, an environmental authorization process is a legal requirement for these scheduled activities. The objective of this study is to determine the environmental impacts of the proposed development.

The Department of Economic Development, Tourism and Environmental Affairs (DETEA) is the competent decision making authority for this project and needs to be satisfied that all the impacts on the physical, biological and social characteristics of the surrounding environment are identified and appropriately addressed.

This Draft Scoping Report (DSR) will be submitted to Interested and Affected Parties (I&AP's), stakeholders and organs of state to afford them an opportunity to comment in writing on the report before the Final Scoping Report (FSR) is submitted to the competent authority (DETEA) for their perusal and decision.

Other guidelines and documentation considered in the drafting of the Scoping Report includes the:

- Guidelines made available by the Department of Economic Development, Tourism and Environmental Affairs in terms of the above mentioned Regulations:
  - Guideline 3: General guide to the EIA Regulations
  - Guideline 4: Public participation
  - Guideline 5: Assessment of alternatives and impacts
  - Guideline 6: Environmental Management Frameworks
- Spatial Development Framework (SDF) of Mangaung Metropolitan Municipality, 2014/2015, and
- Integrated Development Plan (IDP) of Mangaung Metropolitan Municipality, 2013.

Other Applicable Legislation which should be consulted by the construction team:
Constitution of the Republic of South Africa (Act 1808 of 1996)
National Building Regulations and Building Standards Act (Act 103 of 1997)
National Environmental Management Protected Areas Act (Act 57 of 2003)
Conservation of Agricultural Resources Act (Act 43 of 1993)
Occupational Health and Safety Act (Act 85 of 1993).

2 SCOPING

The main purpose of the scoping process is to identify issues that may arise during the various phases of the proposed development. Section 28, Chapter 3 of Government Notice 543 of the National Environmental Management Act, 1998 (No. 107 of 1998) sets out the requirements for the content of a scoping report. Issues were identified through:

- Desktop review of the study areas and project activities;
- Review of available literature;
- Site investigations;
- A comprehensive public participation process, and
- Professional judgement.

The above methodologies identified impacts that require specialist investigation. As described in section 5 of this report. The proposed development will lead to vegetation losses and will also include linear activities exceeding 300 meters in length. Due to the above, the following specialist impact assessment studies will be conducted as part of the Environmental Impact Assessment report:

- **Paleo Field Services:** Heritage Impact Assessment
- **Enviro-Niche:** Ecological and Wetland Impact Assessment
- **Tucana Solutions:** Geohydrological Impact Assessment
- **SMEC:** Geo-technical survey

3 PUBLIC PARTICIPATION

A comprehensive public participation process (PPP) is being conducted in terms of Chapter 6 of Government Notice 543 of NEMA. The PPP is undertaken in a manner that ensures that all interested and affected parties are adequately informed of the proposed development and to ensure that everyone has the opportunity to raise their concerns and/or comments.

To date, the PPP process has included an advertisement, on-site notices and the delivery of Background Information Documents to adjacent landowners and properties within 500 meters of the proposed properties. Please find proof of the Public Participation Process attached as ***Appendix C.***

The proposed project was brought to the attention of the public by the following means:

- An advertisement was placed in two newspapers, namely, the Volksblad and the Express on Wednesday 19 November 2014, informing the public of the proposed project ***(Appendix C)***
- On-site notices were placed on 19 February 2014 at the following locations:
    - Remainder of the Farm Cecilia no. 2352; (In Eland Street)
    - Remaining Extent of the Farm Bloemfontein no. 645; (on the N1) and
    - Portion of the Farm Kwaggafontein no. 2300 (at the southwestern corner of the property)

The following surrounding landowners were informed of the project by means of a Background Information Document, and afforded the opportunity to comment on the project by means of an Interested and Affected Parties Comment Form:

Company / Organization / Ward:	Name and Surname:	Contact number:	Email:
Makro	J. le Roux	051 1011012	jleroux@makro.co.za
iTau	Karin Bezuidenhoud	051 8752786	karin@itau.co.za
MAN	Karel van Heerden	051 5032503	
Resident	Stefan Hatting	051 444 6365	
Cori Draft	Sarel Diederiks	082 689 5269	sareld@live.com
Mafunyane	George Barkhuizen	083 454 945	gbark@aimonline.co.za
Freight	Wouter Theron	076 302 0045	wouter@fastfrieght.co.za
KN Grain	Pieter Greyvenstein	082 7744382	pieterg@lantic.net
Desleys	D. Robertson	082 9997032	
	J. Viljoen	051 813 0100	rainier@pinnicle.co.za
BP Garage	M. MacKenzie	051 523 3970	bpcpm@vodamail.co.za
Stuck in the Mud	IB Oosthuizen	073 514 4567	bfn@sawall.co.za

The following governmental authorities, local authorities, parastatals, interested parties and institutions were contacted to inform them of the project and obtain their inputs:

Company / Organization / Ward	Contact Person
Mangaug Municipal Manager	Sibongile Mazibuko
Mangaung Municipal Environmental	Mpolokeng Kolobe
ESKOM	Xolisa Songcaka
Department of Water Affairs	Vernon Blair (Deputy Director)
Department of Water Affairs	Pius Lerotholi
Ward councilor (Ward 26)	Hendrik van Niekerk
Free State Department of Health	Dr. David Motau
SANRAL	Ms. Victoria Bota
Free State Department: Police, Roads and Transport	Mr. S. Msibi (HOD)
DETEA	Ms. Nthabeleng Mahase
Free State Department: Human Settlements	Mr Nthimotse Mokhesi (HOD)
Free State Department: Public Works	Mr. Maditse Wessels Seoke (HOD)
Free State Department: Social Development	Ms Matilda Gasela (HOD)
Free State Department: Sport, Arts, Culture and Recreation	Adv Tsoarelo Malakoane (HOD)
Central University of Technology	Ric Pengilly
Zoo Manager	Darrel Barnes
Heritage Free State	Ntando PZ Mbatha (Heritage Coordinator)
Centlec	Mamello Mpholo
Landowner (MMM)	Mr. Kaba Kabagambe

Please refer to the comments and response report attached as ***Appendix C5*** for comments received and responses from the EAP.

4 BROAD DESCRIPTION OF THE BIOPHYSICAL ENVIRONMENT

This section provides a brief overview of the baseline environmental characteristics of the study area.

4.1 Climate

The area falls within the summer rainfall region. The mean annual precipitation of the region is approximately 407mm. Most of the precipitation is in the form of convectional rain fall between December and January. Frost also occurs frequently in the area with an average of 43 days per year. The average temperature for Bloemfontein range from 16ºC in June and 29ºC in January with the average minimum temperature of 0ºC during July (Mucina & Rutherford, 2006).

4.2 Topography

The proposed site can be described as a plain landform, with a gradient between 1:50 to 1:20. The site is overlain with natural veld vegetation, scattered alien species, and a wetland just north of the proposed development and an unlicensed existing gravel quarry n the Northwestern corner of the development area. The property is located 1422 meters above mean sea level with a natural drainage pattern in a southwestern direction. The N8 is situated approximately 500 meters to the south of the site and the N1 approximately 500 meters east of the site, with open flat fields to the west of the proposed property (Vermaak, 2014).

4.3 Geology and soils

Bloemfontein is situated on the Adelaide Subgroup of the Beaufort Group. The Beaufort Group falls within the Karoo Super Group and consist of Blue-grey and purple mudstone interbedded with yellow sandstone and siltstone (Vermaak, 2014).

In the southeastern part of the basin, the late Permian Adelaide Subgroup comprises the Koonap, Middleton and Balfour Formations. In the west, the Abrahamskraal and Teekloof Formations are the approximate equivalents of the Koonap and Middleton Formations, respectively as indicated in Figure 3. The Middleton and Teekloof Formations are characterized by a greater relative abundance of red mudstone compared to the underlying and overlying units, in practice the boundaries are linked to specific sandstone-rich marker units, thus the arenaceous Poortjie and Oudeberg Members constitute the base of the Teekloof and Balfour Formations, respectively. In the northeastern region, the Normandien Formation is present (Vermaak, 2014).

The Adelaide Subgroup attains a maximum thickness of approximately 5000m in the southeast, which decreases rapidly to approximately 800m in the centre of the Basin and thereafter more

gradually to 100-200m in the extreme north. The Koonap Formation attains a maximum thickness of approximately 1300m, the Middleton 1600m and the Balfour 2000m. In the west, the Abrahamskraal and Teekloof Formations are up to 2500m and 1400m thick, respectively (Vermaak, 2014)

Towards the end of the Cape Orogeny thermal dome uplift developed beneath almost the entire South African continent. Dolerite represents the roots of the volcanic system and is presumed to be of the same age as the extrusive lavas. Extensive magnetic activity lead to dolerite dykes, inclined sheets and sills to intrude the sedimentary rocks of the Karoo Super group during the Jurassic period to the north of the compressional sphere of the Cape Fold Belt. The level of erosion that affected the Main Karoo basin has revealed the deep portions of the intrusive system, which displays a high degree of tectonic complexity. The Karoo intrusive can either occur as dykes, sills, or ring-complexes. The Karoo dolerite, which includes a wide range of petrological facies, consists of an interconnected network of dykes and sills and it is nearly impossible to single out any particular intrusive or tectonic event. It would appear that a very large number of fractures were intruded simultaneously by magma and that the dolerite intrusive network acted as a shallow stockwork-like reservoir (Vermaak, 2014).

4.4 Ground and surface water

A wetland is located to the north of the proposed development. The wetland is mostly artificial as it is fed by an existing storm water drainage running next to the proposed development in a North Western direction. The Department of Water Affairs will be consulted as development will occur within 500 meters from the wetland and the applicant will require a General. No sensitive drainage lines were detected on or in the vicinity of the proposed development.

4.5 Fauna and Avifauna

The following section will provide a brief description of fauna and avifauna species in the Central Free State as well as site specific fauna and avifauna for the proposed property.

4.5.1 General terrestrial fauna description

The following fauna species are typically found in the Free State:

Rabbits		
Family	***Common Name***	***Scientific Name***
Leporidae	Capehare	*Lepus capensis*
Pedetidae	Springhare	*Pedetes capensis*

Snakes		
Family	***Common Name***	***Scientific Name***
Viperidae	Puff adder	*Bitis arietans*
Colubridae	Mole Snake	*Pseudaspis cana*
Elapidae	Rinkhals	*Hemachatus haemachatus*
Mice		
Family	***Common Name***	***Scientific Name***
Cricetidae	Field Mouse	*Microtus arvalis*

4.5.2 General terrestrial avifauna description

The following avifauna species are typically found in the Free State:

Avifauna Species		
Family	***Common Name***	***Scientific Name***
Passeridae	House sparrow	*Passer domesticus*
Bostrychia	Hadeda	*Bostrychia hagedash*
Hirundo	Barn swallow	Hirundo rustica
Vanellus	Crowned lapwing	*Vanellus coronatus*
Falcon	Lanner falcon	*Falco biarmicus*
Numidia	Helmeted guineafowl	*Numida meleagris*
Sagittarius	Secretarybird	*Sagittarius serpentarius*
Burhinus	Spotted thick-knee	*Burhinus capensis*

4.5.3 Site specific terrestrial fauna description

During the initial site inspection, no fauna species were observed. The majority of the area is transformed by vehicle tracks whereby off-roading and 4X4 is taking place. A mining activity, is also taking place at the existing unlicensed gravel quarry. Due to this, it is expected that the majority of the fauna species migrated to nearby undisturbed areas.

4.5.4 Site specific terrestrial avifauna description

The following terrestrial avifauna species were observed during the initial site investigation:

Avifauna Species		
Family	***Common Name***	***Scientific Name***
Passeridae	House sparrow	*Passer domesticus*
Bostrychia	Hadeda	*Bostrychia hagedash*
Numidia	Helmeted guineafowl	*Numida meleagris*

4.6 Flora

The following section will provide a brief description of flora species in the Central Free State as well as site specific flora for the proposed property.

4.6.1 General flora description

The property is located in the Bloemfontein Dry Grassland Vegetation type. Typical vegetation types associated with the Bloemfontein Dry Grassland vegetation type include *Themeda triandra, Digitaria eriantha, D. argyrograpta, Eragrostis curvula, E. chloromelas, E. lehmanniana, Pogonarthria squarrosa, Anthephora pubescens, Aristida stipitata and Cymbopogon pospischilli.*

4.6.2 Site specific flora description

The following site specific flora species were observed during the initial site investigation (* indicates exotics): (du Preez, 2014)

Scientific name	Growth form
Aristida congesta	Grass
Aristida stipitata	Grass
Chloris virgata	Grass
Cymbopgon pospischillii	Grass
Cynodon dactylon	Grass
Digitaria argyrograpta	Grass
Digitaria eriantha	Grass
Eragrostis lehmanniana	Grass
Pogonarthria squarrosa	Grass
Themeda triandra	Grass
Tragus koeleroides	Grass
Felicia muricata	Karroid shrub
**Solanum elaegnifolium*	Dwarf shrub
Chrysocoma cilata	Dwarf shrub
Hertia pallens	Dwarf shrub
Lycium pillifolium	Dwarf shrub

**Salvia verbenaca*	Weed
**Schkuhria pinnata*	Weed
**Tagetes minuta*	Weed
Blepharis macrostegia	Forb
Gazania krebsiana	Forb
Nidorella resedifolia	Forb

4.7 Land use

"There has been a lot of recent building activity in Bloemfontein, mainly new residential township establishments in the Grasslands, Woodland Hills and Vista Park areas, offices and retail developments primarily in the suburbs to the western side of town, mixed land use development in the Estoire area and extensive retail development at the Loch Logan Waterfront as well as the expansion of high density walled townhouse complexes to the west of the N1. However there has been very limited investment in Thaba Nchu, Botshabelo, former Mangaung Township, and the CBD's. This has led to the deterioration of these areas and an under-utilisation of existing infrastructure in some areas. There are however improvement with new buildings being erected in the CBD eg newly completed public works building in President Brand Street, intermodal facility, department health building, and improvement to various buildings along Maitland and West-Burger Street" (extracted from the MMM`s IDP, 2013).

4.8 Social Economic characteristics of the area

The newly proposed Cecelia Park mixed use development falls within, Bloemfontein, Free State Province under the Mangaung Metropolitan Municipality. The population as provided by statistics South Africa for the greater Mangaung area, is approximately 747 431 (Statistics South Africa, 2011). The population had dramatically increased in the past 14 years with a growth rate of 16%. The region for the proposed extension forms part of the Central Free State.

Bloemfontein has developed around the Central Business District (CBD) in a sectorial form, with the majority of the poor and previously disadvantage communities living to the south-eastern region of the town. Except for the industrial area which flanks these settlements, the previous disadvantage areas offer very few job opportunities to these individuals and people need to travel up to 15 kilometres to get to the centre of town. Unemployment figures in the region is alarming, with 27.7% unemployment rate in Mangaung (Stats SA, 2011).

According to the Mangaung Local Municipality's 2013 Integrated Development Plan (IDP), the main issues affecting communities within the study area are the housing back lock and transportation. The Cecelia Park development will contribute to housing in the region and will

therefore contribute to the municipalities aim in providing 20 000 housing opportunities within the next 5 years. Cecelia Park will also contribute to efficient traffic flow in the Western Regions of the town, by means of the newly proposed roads.

4.9 Cultural, historical and archaeological aspects

The paleontological significance of the sedimentary bedrock in the region is considered high. However, the study area is in large part underlain by intrusive igneous dolerites which are considered to be of low paleontological significance. Potentially fossil-bearing bedrock within the study area is capped by a relatively thick mantle of geologically recent and paleontologically sterile, superficial deposits. The sedimentary bedrock component at Cecilia 2352 and Bloemfontein 654 is rated Generally Protected A (GP.A) (Russouw, 2014)

5 IDENTIFICATION, DESCRIPTION AND METHODOLOGY OF THE ENVIRONMENTAL IMPACTS

5.1 Identification of Environmental Impacts

The aim of the Scoping Report was to identify any potential biophysical and social impacts, associated with the proposed expansion. This took place within the framework of Enviroworks' professional assessment, as well as from the input of specialists and authorities. The Impacts were identified by means of:

- Desktop review study,
- Review of available literature,
- Site investigations,
- Specialist input,
    - Geohydrological Impact Assessment
    - Heritage Impact Assessment
    - Ecological and Wetland Impact Assessment
- Professional judgement.

A broad range of potential environmental impacts that may have a significant impact on the environment have been identified during the Scoping Process, and will be subject to further investigation as part of the Impact Assessment Phase. A summary of the potential environmental impacts that were identified is provided below, with further details of those impacts that require further investigation described in Section 5.2:

5.2 Description of Potential Impacts to be investigated further

The following Potential Impacts will be further investigated by means of the Methodology described in section 6.3 below.

- **Geology**

  Due to construction, disturbance in surface geology may occur as result of foundations.

- **Topography**

  Erosion during the clearing and construction phases of the project may lead to an impact on the topography. Building material may also alter the topography of the area.

- **Topsoil and Land use**

  During the construction phase of the project, soil recourses including essential top soil may be impacted on. Erosion of topsoil may occur as well as the compaction of soil.

- **Surface Water and Groundwater**

  Contamination of surface water may occur as a result of improper management of contaminants. Improper management of sanitation may result in the contamination of groundwater

- **Fauna**

  Impact on Fauna may occur as a result of the distraction of habitats during the construction phase and clearing phase of the project.

- **Flora**

  A loss in vegetation may occur during vegetation removal prior to construction activities taking place.

- **Noise**

  During the construction phase of the project, noise will be generated by construction vehicles, construction machinery and contractors.

- **Air quality**

  CO^2 Emissions from construction vehicles and machinery, as well as dust during the construction phase will have an impact on air quality.

- **Archaeology and Palaeontology**

  The possibility occur that the construction activity my lead to an impact on Archaeology and Palaeontology aspects.

- **Visual Impacts**

  The visual perspective of the property will be changed.

- **Traffic**

  The development will include the construction, expansion and lengthening of roads as mentioned in the report above. This will have an impact on traffic in the area.

- **Socio Economic**

  Socio Economic can be divide into the following two categories:

  Positive Socio Economic Impacts:

  - The proposed development will result in job creation during the construction phase of the project.
  - The proposed development will provide housing to residents during the operational phase and will contribute to MMM`s plan in providing 20 000 housing opportunities within 5 years.

  Negative Socio Economic Impacts:

  - An increase in criminal activities in the local regions of the proposed activity.
  - Safety impacts may occur as a result of improper safety management on site.

Cumulative Impacts

Cumulative Impacts include a potential change in surface and ground water source quality. This impact will be investigated further in the Impact Assessment Report.

Methodology adopted in the assessment of potential impacts

The impacts will be evaluated by applying the methodology as described in section 6.2 below. The impact is defined and the significance is rated from Low to High as indicated in the table below with an explanation of the impact magnitude and a guide that reflects the extent of the proposed mitigation measures deemed necessary.

6 PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT

The following Plan of Study for EIA sets out the proposed approach to the Environmental Impact Assessment phase of the application.

6.1 Description of the tasks to be undertaken during the Scoping and Environmental Impact Assessment Process

The tasks that have been undertaken are summarized below, with details of the tasks to be undertaken provided in more detail.

- **Scoping Phase**
  - A desktop review of available literature and site visits have been undertaken for the proposed project.
  - Specialists were appointed to investigate potential significant environmental impacts.
  - Authorities and I&AP's will be informed about the project to identify potential significant environmental impacts associated with the proposed project.

The Draft Scoping Report will be made available for comments to I&AP's /stakeholders and relevant Departments. The comments received on the Draft Scoping Report will be incorporated into the Final Scoping Report and Impact Assessment Report.

No environmental fatal flaws have been identified during the environmental scoping study, although a number of potentially significant environmental impacts have been identified that will be further investigated in the Impact Assessment Report.

- **Environmental Impact Assessment**

  An EIA will be undertaken to provide a comprehensive assessment of the identified potential significant environmental impacts and where impacts cannot be avoided altogether, appropriate mitigation measures will be proposed. The EIA will also be used to evaluate the proposed alternatives and to assist in identifying the alternative that will have the least impact on the environment.

  The EIA will adequately investigate and address all the significant environmental issues in order to provide the DETEA with sufficient information to make an informed decision regarding the proposed project.

6.2 Consultation with the Department of Economic Development, Tourism and Environmental Affairs (DETEA)

According to the requirements of the Act, a Plan of Study for Environmental Impact Assessment must be developed and submitted to the relevant department to be discussed and agreed upon with the consultant.

The following consultation has thus far been done with the DETEA :

- An application for the authorization of a listed activity in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010 was submitted on the 28 October 2014;
- The EAP presented the project to the EMC (Environmental Management Committee) and requested Environmental Advice from the DETEA on 08 December 2014 with regards to the gravel quarry on site.

DETEA will be provided with a copy of the Draft Scoping Report as well as the Plan of Study for Impact Assessment Report for their perusal. Comments on the Draft Scoping Report as well as any additional information that may be required will be incorporated into the Final Scoping Report, and will be investigated in the Impact Assessment Report. An Environmental Management Plan (EMP) for the Planning-, Construction-, Operational- and Decommissioning phases of the project will be submitted to DETEA, for approval.

6.3 Methodology

The impacts will be evaluated by applying the methodology as described below. The impact is defined and the significance is rated from Low to High as indicated in the table below with an explanation of the impact magnitude and a guide that reflects the extent of the proposed mitigation measures deemed necessary.

Significance	**Low**	**Low-Medium**	**Medium**	**Medium-High**	**High**
Impact Magnitude	Impact is of very low order and therefore likely to have very little real effect.	Impact is of low order and therefore likely to have little real	Impact is real, and potentially substantial in relation to other impacts. Can	Impact is real and substantial in relation to other impacts.	Impact is of the highest order possible. Unacceptable. Fatal flaw.

	Acceptable.	effect. Acceptable.	pose a risk to company	Pose a risk to the company. Unacceptable	
Action Required	Maintain current management measures. Where possible improve.	Maintain current management measures. Implement monitoring and evaluate to determine Potential increase in risk. Where possible improve	Implement monitoring. Investigate mitigation measures and improve management measures to Reduce risk, where possible.	Improve management measures to reduce risk.	Implement significant mitigation measures or implement alternatives.

Following is a short description of the assessment criteria as mentioned above:

The **Nature of impact** is a broad indication of what is being affected and how.

Severity relates to the nature of the event, aspect or impact to the environment and describes how severe the aspects impact on the biophysical and socio-economic environment.

Type of criteria	**1**	**2**	**3**	**4**	**5**
Quantitative	0-20%	21-40%	41-60%	61-80%	81-100%
Qualitative	Insignificant / Non-harmful	Small / Potentially harmful	Significant/ Harmful	Great/ Very harmful	Disastrous Extremely harmful
Social/ Community response	Acceptable / I&AP satisfied	Slightly tolerable / Possible objections	Intolerable/ Sporadic complaints	Unacceptable / Widespread complaints	Totally unacceptable / Possible legal action
Irreversibility	Very low cost to mitigate/ High potential to mitigate impacts to level of insignificance/ Easily reversible	Low cost to mitigate	Substantial cost to mitigate/ Potential to mitigate impacts/ Potential to reverse impact	High cost to mitigate	Prohibitive cost to mitigate/ Little or no mechanism to mitigate impact Irreversible
Biophysical (Air quality, water quantity and quality, waste production, fauna and flora)	Insignificant change / deterioration or disturbance	Moderate change / deterioration or disturbance	Significant change / deterioration or disturbance	Very significant change / deterioration or disturbance	Disastrous change / deterioration or disturbance

Extent refer to the spatial influence of an impact be local (extending only as far as the activity, or will be limited to the site and its immediate surroundings), regional (will have an impact on the region), national (will have an impact on a national scale) or international (impact across international borders);

Rating	Description
1: Low	Immediate, fully contained area
2: Low-Medium	Surrounding area
3: Medium	Within Business Unit area of responsibility
4: Medium-High	Within Mining Boundary area
5: High	Regional, National, International

Frequency refers to how often the specific activity, related to the event, aspect or impact, is undertaken.

Rating	Description
1: Low	Once a year or once/more during operation/LOM
2: Low-Medium	Once/more in 6 Months
3: Medium	Once/more a Month
4: Medium-High	Once/more a Week
5: High	Daily

Probability considers the likelihood of an impact/incident occurring over time.

Rating	Description
1: Low	Almost never / almost impossible
2: Low-Medium	Very seldom / highly unlikely
3: Medium	Infrequent / unlikely / seldom
4: Medium-High	Often / regularly / likely / possible

5: High	Daily / highly likely / definitely

Duration: Duration refers to the amount of time that the environment will be affected by the event, risk or impact, if no intervention e.g. remedial action takes place.

Rating	Description
1: Low	Almost never / almost impossible
2: Low-Medium	Very seldom / highly unlikely
3: Medium	Infrequent / unlikely / seldom
4: Medium-High	Often / regularly / likely / possible
5: High	Daily / highly likely / definitely

After following the above criteria, the impact significance will be evaluated using the following formula:

SP (significance points) = (magnitude + duration + extent + irreplaceable + reversibility) x probability

6.4 Particulars of the Public Participation Process to be followed

The following public participation process will be followed:

- A copy of the Draft Scoping Report will be available to the following commenting authorities for comments:

Company / Organization / Ward	Contact Person
Mangaug Municipal Manager	Sibongile Mazibuko
Mangaung Municipal Environmental	Mpolokeng Kolobe
ESKOM	Xolisa Songcaka
Department of Water Affairs	Vernon Blair (Deputy Director)
Department of Water Affairs	Pius Lerotholi
Ward councilor (Ward 26)	Hendrik van Niekerk
Free State Department of Health	Dr. David Motau
SANRAL	Ms. Victoria Bota
Free State Department: Police, Roads and Transport	Mr. S. Msibi (HOD)
DETEA	Ms. Nthabeleng Mahase
Free State Department: Human Settlements	Mr Nthimotse Mokhesi (HOD)
Free State Department: Public Works	Mr. Maditse Wessels Seoke (HOD)
Free State Department: Social Development	Ms Matilda Gasela (HOD)
Free State Department: Sport, Arts, Culture and Recreation	Adv Tsoarelo Malakoane (HOD)
Central University of Technology	Ric Pengilly
Zoo Manager	Darrel Barnes
Heritage Free State	Ntando PZ Mbatha (Heritage Coordinator)
Centlec	Mamello Mpholo
Landowner (MMM)	Mr. Kaba Kabagambe

The EAP will present a Public Participation meeting on **26 February 2015 at 18:00, in the Bunga A auditorium, Braam Fischer Building** to provide I&Ap`s, stakeholders and organs of state background to the project and to provide them the opportunity to raise concerns and comments.

The comments received on the Scoping Report will be incorporated into the Final Scoping Report that will be submitted to DETEA for approval.

On approval of the Final Scoping Report, an Impact Assessment Report will be compiled and made available for I&AP comment for a 30 day period. Comments on the Draft Impact Assessment Report will be incorporated into a Final Impact Assessment Report that will be submitted to DETEA for a Decision. The decision will be communicated to all registered I&APs within 14 days after Environmental Authorization has been granted. I&AP's will be afforded an opportunity to submit any appeals to the decision.

Specialist Studies to inform the EIA

Four specialist studies have been identified as necessary to inform the EIA Phase, as listed below:

- Heritage Impact Assessment - Paleo Field Services
- Geohydrological Impact Assessment - Tucana Solutions
- Ecologial and Wetland Impact Assessment - Enviro-Niche
- Geo-Technical Survey - SMEC

The specialists were given specific Terms of Reference to ensure that the studies are done according to environmental guidelines. The outcome of the specialist studies will be further communicated in the IAR.

7 WAY FORWARD

The abovementioned Plan of Study for IAR sets out the proposed approach to the Impact Assessment Report of the application.

Key dates associated with this proposed IAR report are outlined below:

October 2014 Submission of Application to DETEA

December 2014 Consultation with Department of Economic Development, Tourism and Environmental Affairs

February 2015 Circulation of the Draft Scoping Report to I&AP's for comments from 13 February to 25 March.

April 2015 Circulation of the Final Scoping Report to I&AP's for comments from 07 April 2015 to 28 April 2015.

May 2015 Submission of Final Scoping Report to DETEA.

Submission of Plan of Study for Impact Assessment Report to DETEA

June 2015 Circulation of the Draft Impact Assessment Report to the I&AP's for comments.

Water Use License Application Submission to the Free State Department of Water Affairs.

July 2015 Circulation of the Final Impact Assessment Report to the I&AP's for comments.

August 2015 Submission of the Final Impact Assessment Report to DETEA for approval.

The Draft Scoping report, Final Scoping Report, Draft Impact Assessment Report and the Final Impact Assessment report, together with all appendices, will be made available on the Enviroworks website (www.enviroworks.co.za) for review. Stakeholders and Interested and affected parties are also welcome to call or email the Environmental Assessment Practitioner (Mr Johan Botes) should any question arise.

I&APs are invited to submit comments on this Scoping Report to:

Description	
Consultant	Enviroworks Environmental Consultants
Contact Person	Johan Botes
Project Manager	Elbi Bredenkamp
Telephone Number	+27(0) 51 436 0793
Facsimile Number	+27(0) 51 436 0791

Email	johan@enviroworks.co.za
Address	Suite 116, Private Bag X01, Brandhof, 9324

8 LIST OF REFERENCES

- 2013, Integrated Development Plan of the Mangaung Local Municipality
- 2014, Spatial Development Framework of the Mangaung Local Municipality
- MUCINA, L. & RUTHERFORD, MC (eds) 2006. The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. *South African National Biodiversity Institute, Pretoria.*
- Statistics South Africa, 2011. Viewed on 26 January 2015 at: http://beta2.statssa.gov.za/?page_id=1021&id=mangaung-municipality

9 APPENDICES

Appendix A: Locality Maps

Appendix B: Photographs of the proposed area

Appendix C: Public Participation Process

Appendix D: Facility Illustrations

Appendix E: Curriculum Vitae of the Environmental Assessment Practitioner