

1. INTRODUCTION

The project applicant, Ivy Jewel 35 (Pty) Ltd., intends to develop a residential area on Portion 52 of the farm Rondebosch 403 JS, Middelburg. The site is 48.4292 ha in extent and is situated adjacent to the Middelburg-Belfast (R104) provincial road on the outskirts of Middelburg.

The Minister of Environmental and Water Affairs listed in terms of Sections 24(2) and 24D of the National Environmental Management Act, 1998 (Act No. 107 of 1998), a number of activities that require an environmental impact assessment (either a Basic Assessment or a full Environmental Impact Assessment) before undertaking these activities.

The proposed development would involve the following listed activities as indicated in the original application form:

GN R544 – LISTING NOTICE 1 (REQUIRES A BASIC ASSESSMENT)	
Listed Activity	Description
Listed activity 9	The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water – (i) with an internal diameter of 0.36 metres or more; or (ii) with a peak throughput of 120 litres per second or more, Excluding where: a. such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or b. where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.
Listed activity 11	The construction of: (i) canals; (ii) channels; (iii) bridges; (iv) dams; (v) weirs; (vi) bulk storm water outlet structures; (vii) marinas; (viii) jetties exceeding 50 square metres in size; (ix) slipways exceeding 50 square metres in size; (x) buildings exceeding 50 square metres in size; or (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.
Listed activity 18	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from (i) a watercourse (ii) the sea (iii) the seashore (iv) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation, removal or moving (i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or (ii) occurs behind the development setback line.
Listed activity 55a	The construction of facilities for the treatment of effluent, waste water, or sewage with a daily throughput capacity of greater than 2000 cubic metres but less than 15000 cubic metres.

GN R545 – LISTING NOTICE 2 (REQUIRES A FULL EIA)	
Listed Activity	Description
Listed 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

GN R545 – LISTING NOTICE 2 (REQUIRES A FULL EIA)	
Listed Activity	Description
	except where such physical alteration takes place for: (i) linear development activities; or (ii) agriculture or afforestation where activity 16 in this Schedule will apply (listed activity 15 of Listing Notice 2). Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more except where such physical alteration takes place for: (i) linear development activities; or (ii) agriculture or afforestation where activity 16 in this Schedule will apply (listed activity 15 of Listing Notice 2).

GN R546 – LISTING NOTICE 3 (REQUIRES A BASIC ASSESSMENT)	
Listed Activity	Description
	Listing Notice No. 3 becomes applicable if the site is located within a specific geographical area (e.g. endangered ecosystems or critical biodiversity areas). In general, the proposed site is indicated as: Heavily Modified, Moderately Modified – old lands, Other Natural Areas in terms of Mpumalanga Biodiversity Sector Plan (2013). <i>However, a small portion of the site (adjacent to the provincial road) is indicated as Critical Biodiversity Area (CBA): Irreplaceable in terms of the Mpumalanga Biodiversity Sector Plan (2013). Listing Notice No. 3 would thus be applicable in terms of the following listed activities:</i>
Listed Activity 12	The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.
Listed Activity 13	The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for: (1) the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental: Waste Act, 2008, in which case the activity is regarded to be excluded from this list. (2) the undertaking of a linear activity falling below the thresholds mentioned in Listing Notice 1 in terms of GN No. 544 of 2010.

In order to obtain environmental authorisation, a Scoping Report and an Environmental Impact Assessment Report must be compiled as described in Regulations 26 to 35 of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of Section 24(5), 24M and 44 of the National Environmental Management Act, 1998 (Act 107 of 1998).

Clean Stream Environmental Services was appointed as independent environmental consultant to conduct the required environmental impact assessment and compile the necessary documentation. Subsequently, Clean Stream Environmental Services compiled a draft and final scoping report:

Title:	Scoping Report: The development of a residential area on Portion 52 of the farm Rondebosch 403 JS, Middelburg.
Report compiled by:	Ivy Jewel 35 (Pty) Ltd.
Report prepared for:	Clean Stream Environmental Services
Report dated:	March 2015 (draft) and April 2015 (final)
Report number:	EIA 2014/01
DARDLEA ref. no:	17/2/3 N-404

The scoping report was submitted to the authorities (i.e. Department of Agriculture, Rural Development, Land and Environmental Affairs (DARDLEA), Department of Water Affairs, Steve Tshwete Local Municipality and Mpumalanga Tourism and Parks Agency) for evaluation. In addition, the draft and final scoping report were made available to interested and affected parties (I&AP's) and stakeholders for comment as indicated in Section 4 of this document. Based on the findings of the scoping phase and the comments received from the authorities, stakeholders and I&AP's (see Section 4 of this document), it was decided to commission the required specialist studies and continue with the full environmental impact assessment phase.

The aim of the environmental impact assessment phase was as follows:

- To supplement information contained in the Scoping Report regarding the natural and social environments of the site to be affected by the proposed development;
- To assess the potential impacts of the proposed development on the environment;
- To identify and recommend mitigation measures to minimize the potential impact of the development on the environment;
- To compile an Environmental Management Plan (EMP), which will include the recommended mitigation measures;
- To provide the Department of Agriculture, Rural Development, Land and Environmental Affairs with sufficient information to make an informed decision regarding the proposed development.

2. DESCRIPTION OF THE ACTIVITY

2.1 Details of the project applicant and environmental consultant

Name and address of applicant: Ivy Jewel 35 (Pty) Ltd. P.O. Box 4753 Middelburg 1050	
Contact person:	Ms. Estelle Gous
Telephone number:	(013) 282 0238
Cell number:	083 304 2277
e-mail address:	estelle@mailfx.co.za

Name and address of environmental consultant: Clean Stream Environmental Services P.O. Box 647 Witbank 1035	
Contact persons:	Mrs. A. Erasmus <i>Pr. Sci. Nat.</i> Ms. R. Janse van Rensburg
Cell number:	083 271 8260
Telephone number:	(013) 697 5021
Fax number:	(013) 697 5021
e-mail address:	adie@cleanstreams.co.za riana@cleanstreams.co.za

A copy of the completed application form and the declaration of independence by the applicant and environmental consultant are provided in Appendix 1.

A copy of the Curriculum Vitae of both Mrs. A. Erasmus and Ms. R. Janse van Rensburg are provided in Appendix 2 together with a list of projects completed to date.

2.2 Nature of the activity/development

The project applicant, Ivy Jewel 35 (Pty) Ltd., intends to develop a residential area on Portion 52 of the farm Rondebosch 403 JS, Middelburg. The site is 48.4292 ha in extent and is situated adjacent to the Middelburg-Belfast (R104) provincial road on the outskirts of Middelburg (Figure 3.1).

The proposed development would involve the following listed activities as identified in terms of Section 24(2) and 24D of the National Environmental Management Act, 1998 as indicated in the original application form:

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Listed activity 55a	The construction of facilities for the treatment of effluent, waste water, or sewage with a daily throughput capacity of greater than 2000 cubic metres but less than 15000 cubic metres.

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2.3 Reason for project

The extension possibilities of Middelburg are restricted due to mining activities and topographical factors. According to Urban Dynamics Inc. (2009), the future direction of development would be to the northern, north eastern and eastern side of Middelburg.

According to the Steve Tshwete Local Municipality Spatial Development Framework (2010), the site has been earmarked for residential development. The proposed development can be viewed as a natural extension to the existing residential areas (Hlalamnandi and Nasaret). In addition, the main industrial area of Middelburg (Figure 4.1) is located in close proximity of the site, which would give people the opportunity to reside closer to the workplace.

The development is intended as a mostly residential development that will cater for clustered Residential Type 3 accommodation by means of contractor's accommodation as well as Residential Type 1 accommodation for the medium income market.

2.4 Detailed description of the development and all relevant components

Ivy Jewel 35 (Pty) Ltd. (represented by Ms. E. Gous) plans to develop a residential area on Portion 52 of the farm Rondebosch 403 JS, Middelburg (Figure 4.1). The development will be known as Middelburg Extension 44. The said site is 48.4292 ha in extent and is situated east of Middelburg X22 and north of Nasaret (Figure 4.1).

A copy of the Township Establishment Memorandum compiled by Urban Dynamics Inc. (2009) is provided in Appendix 3.

Figure 2.1 provides an indication of the original layout plan designed by Urban Dynamics Inc. (2009) and included in the scoping report.

RESIDENTIAL SITES
 THE AVERAGE SIZE OF RESIDENTIAL SITES ARE 323,86m²
 THE BUILDING SIZE OF RESIDENTIAL SITES ARE 15m X 20m
 MINIMUM WIDTH OF PARALLEL ACCESS IS 4m

ROADS
 RESERVE WIDTHS OF ALL INTERNAL STREETS ARE INDICATED ON THE PLAN
 SPLAYS ON ALL STREETS ARE 5m X 5m UNLESS OTHERWISE INDICATED
 THE WIDTH OF ALL TURNING CIRCLES SHOULD NOT BE LESS THAN 18m IN DIAMETER
 MAXIMUM SLOPE ON ROADS 1:6
 MINIMUM SLOPE ON ROAD 1:150

CONTOURS / CO-ORDINATES
 CONTOURS ARE BASED ON STANDARDS Laid DOWN IN REGULATION 21(2) OF THE
 TOWN PLANNING AND TOWNSHIPS ORDINANCE (TLO) 25 OF 1995 AS AMENDED
 THE CO-ORDINATE REFERENCE ARE BASED ON LD 25° SYSTEM
 CONSTANTS Y : N.A. X : N.A.
 DATE PLANE : SEA LEVEL
 BASE PLAN MAPPING WAS DONE BY A.D.C. GEOMATICS

DIMENSIONS AND SIZES
 ALL DIMENSIONS SHOWN ON THE PLAN
 ARE APPROXIMATE AND SCALE IN METRES

LAND SURVEYOR
 FIRM : JOHAN MEBING LAND SURVEYORS

CIVIL ENGINEER
 FIRM : NRP CONSULTING ENGINEERS

ELECTRICAL ENGINEER
 FIRM : ROY ELECTRICAL ENGINEERS

FLOODWATER
 IT IS CERTIFIED THAT THE PROJECT AREA NOT AFFECTED BY FLOODWATERS
 IN TERMS OF THE SPECIFICATIONS Laid DOWN BY CLAUSE 144 OF THE
 WATERACT (ACT 36 OF 1998)

CIVIL ENGINEER (PRINT): C.J. POTGIETER PR.ENG. REG.No. 965396
 (SIGN): _____

FIRM : NRP CONSULTING ENGINEERS

GEOLOGICAL
 THIS IS TO CERTIFY THAT THE TOWNSHIP LAYOUT ON THIS PLAN
 IS IN ACCORDANCE WITH THE PROVISIONS AND RECOMMENDATIONS
 AS SET OUT IN THE ENGINEERING GEOLOGICAL REPORT

ENGINEERING GEOLOGIST (PRINT): P.G. HANSMAYER
 (SIGN): _____

FIRM : ENGEOLAB CC

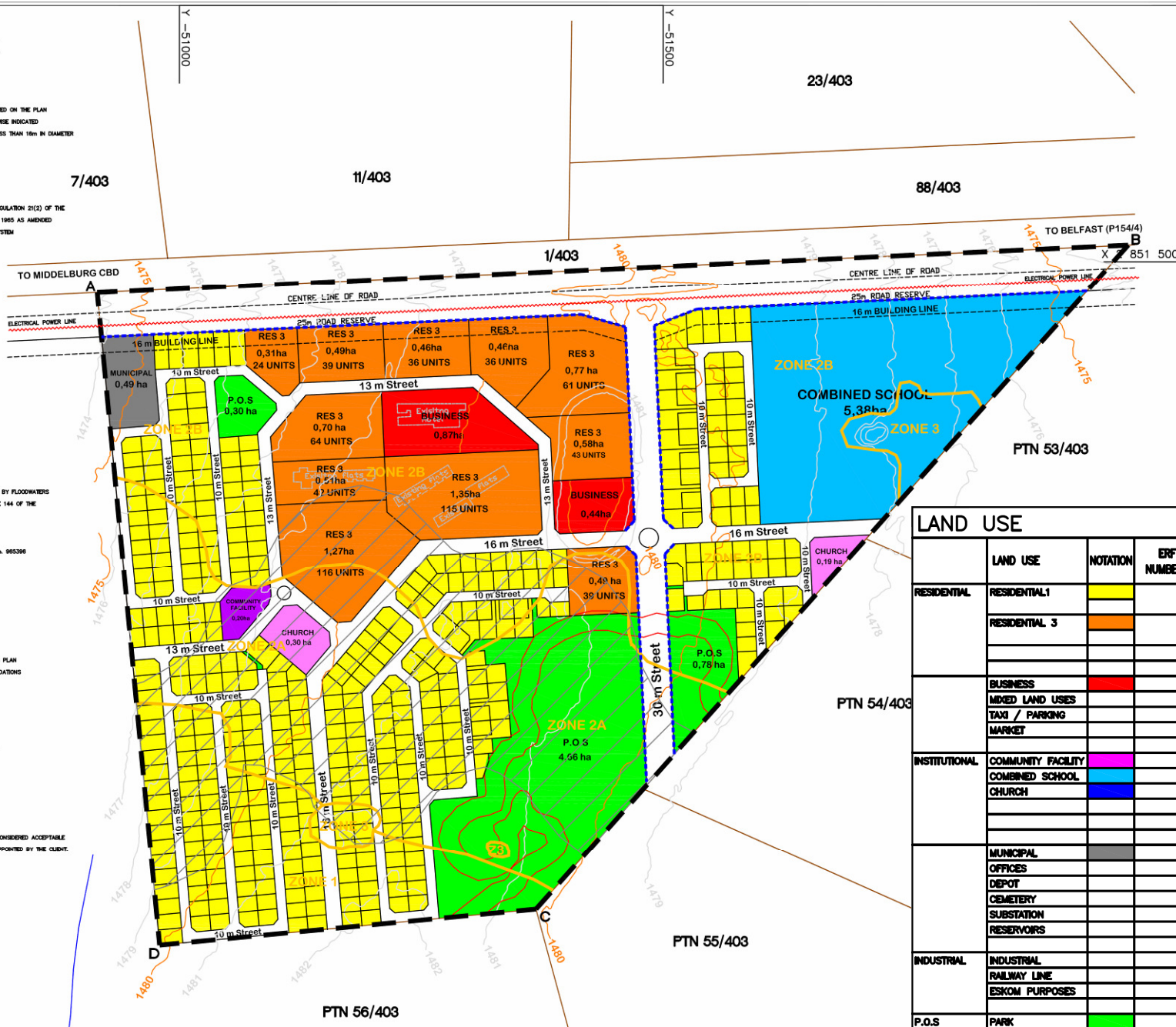
CIVIL ENGINEER'S CONSENT
 IT IS HEREBY CERTIFIED THAT THE LAYOUT HAS BEEN CONSIDERED ACCEPTABLE
 BY JAP POTGIETER BEING THE CONSULTING ENGINEER APPOINTED BY THE CLIENT.

(PRINT): C.J. POTGIETER PR.ENG. REG.No. 965396
 (SIGN): _____

FIRM : NRP CONSULTING ENGINEERS

DATE: _____

ZONE	NHRRC CLASS	GEOTECHNICAL ASPECTS
1	C,H,P,R	Normal construction, provide Subsurface drainage
2A	H1,P,R	Modified normal construction; Provide subsurface drainage; Alternatively deep foundations on bedrock
2B	C2,P,R	Modified normal construction; Provide subsurface drainage
3	P	Proposed no development or alternatively rehabilitated for development
		Seepage zone



PROJECT
MIDDELBURG EXTENSION 44
 SITUATED ON PORTION 52 OF THE FARM RONDEBOSCH 403
 LOCAL AUTHORITY : STEVE TSHWETE LOCAL MUNICIPALITY
 DISTRICT : NKANGALA DISTRICT MUNICIPALITY

LOCALITY SCALE 1 : 50 000

Figure 2.1:
Original layout
plan (taken from
Urban Dynamics
Inc., 2009)

LAND USE								
	LAND USE	NOTATION	ERF NUMBERS	NO. OF STANDS	AVERAGE SIZE	% OF AREA	AREA OF STANDS	
RESIDENTIAL	RESIDENTIAL 1			433	323.86m ²	28.95%	14,02ha	
	RESIDENTIAL 3			11	6552.64m ²	15.34%	7,43ha	
MIXED LAND USES	BUSINESS			2	6550m ²	2.70%	1,31ha	
	TAXI / PARKING							
	MARKET							
INSTITUTIONAL	COMMUNITY FACILITY			1	2074.6m ²	0.43%	0,21ha	
	COMBINED SCHOOL			1	53778m ²	11.11%	5,38ha	
	CHURCH			2	5003.78m ²	1.03%	0,50ha	
MUNICIPAL OFFICES	DEPOT							
	CEMETERY							
	SUBSTATION							
	RESERVOIRS							
					1	4931.42m ²	1.02%	0,49ha
INDUSTRIAL	INDUSTRIAL							
	RAILWAY LINE ESKOM PURPOSES							
P.O.S	PARK			5	23.02m ²		11,15ha	
	URBAN AGRICULTURE							
UNDETERMINED	UNDETERMINED							
STREET	INTERNAL					13.01%	6,30ha	
	EXTERNAL (LINK)					3.36%	1,64ha	
TOTAL				456		100%	48,43ha	



According to Urban Dynamics Inc. (2009), the proposed development would comprise of a total of 456 stands, including the following:

- ◆ 433 X 'Residential 1' stands (average stand size of 320m²);
- ◆ 11 X 'Residential 3' stands for higher density development such as flats. Approximately 615 units are proposed at an average density of 80 units/ha.
- ◆ 2 X business stands. The one business stand has been provided to accommodate the existing business on the property. The other business stand is located near the main access road and will serve as a suburban shopping centre.
- ◆ 1 X community facility to cater for the needs of the community;
- ◆ 2 X church sites;
- ◆ 1 X combined school. According to Urban Dynamics, the estimated population required for the establishment of a high school is between 6000 and 10 000 people. The estimated population of the area would be approximately 4 000, indicating that the provision of a combined school would suffice.
- ◆ 1 X municipal. An area of 0.49 ha has been set aside to accommodate a sewage package plant. The sewage package plant is proposed as an interim measure until the municipality has installed the sewer line planned for the area.

As indicated in Figure 2.1, public open spaces would be provided in close proximity to the higher density Residential 3 stands in order to provide some open areas and to prevent storm water accumulation in the street reserves. A large public open space would also be provided in the southern portion of the site to accommodate a wetland (Figure 2.1).

The development would also include internal and external streets (i.e. a district distributor road, local distributor roads and direct access roads) (Figure 2.1).

2.5 Services required

A concept and viability report with regards to service provision for the proposed development was prepared by Afri-Infra Group (Pty) Ltd (referred to as Afri-Infra, 2015). A copy of the said report is provided in Appendix 16.

It should be noted that the link services (roads and electricity), internal reticulation (water, sewer, electricity, streets and street lighting) and storm water control measures of the development will be done by the developer to the satisfaction of the Steve Tshwete Local Municipality. After installation, the services will be handed over to and maintained by the Steve Tshwete Local Municipality.

2.5.1 Electricity

Current situation:

The said site is currently supplied with electricity from Eskom.

Proposed development situation:

Urban Dynamics Inc. (2009) indicated that the development will be supplied with electricity from the medium voltage distribution network (11 kV) of the Steve Tshwete Local Municipality. The developer will be responsible for the

installation of the internal bulk electrical infrastructure after which the municipality will take over and maintain the installed infrastructure. The usage of this development is estimated at 3.7 MVA.

According to Urban Dynamics Inc (2009), the supply voltage will be by means of 11 kV overhead bundle conductors.

The internal reticulation will consist of an overhead 11 kV bundle conductor reticulation and 100/231V aerial bundle conductors on 9m wooden poles. The LV panels (separate from the transformers) will be installed directly below each transformer. Each stand will be provided with prepaid metering.

Street lighting will consist of 70W HPS street light fittings on 9m wooden poles provided as part of the internal reticulation of the development.

Table 2.1 provides the design parameters with regards to the proposed internal electrical reticulation system.

Table 2.1: Design parameters – internal electrical reticulation system (taken from Urban Dynamics Inc., 2009)

Supply voltage	11 kV
Transformer capacity	100 kVA and 200 kVA (11kV/420V/241V)
Medium voltage	11 kV
Frequency	50 Hz
Transformer earth	10ohm
Earthing	Earth spikes and trench earth
Symmetrical fault level	250 MVA
Impulse withstand required	95 kV
One minute power frequency withstand voltage	18 kV
Normal low voltage	400V/231V
After diversity maximum demand	3.5 kVA
Earthing	Earth wire with cables from mini-sub
Declared voltage	231 V
Voltage regulation limits assumed voltage drop in system for low voltage design:	
• 11 kV network	4%
• Low voltage	10%

2.5.2 Water

Current situation:

Water is obtained from boreholes on site. According to the applicant, the smaller borehole supplies 2000 l per day. The main borehole supplies 3000 – 4000 l per hour. In other words, between 72 000 and 96 000 l per 24 hours.

Water is stored in 7 x 10 000 l JoJo tanks that form part of the installed potable water gravity feed system.

The showers and basins in all units and the centralised washing area are supplied with potable water. The washing area was centralised in order to try and reduce pollution of water. In addition, the applicant installed a sieve in

order to remove big items from the wash water and avoid blockages of the system.

According to the applicant, the current daily potable water usage is between 50 kl to 120 kl per day. The current daily potable water supply to the existing development is between 70 kl to 120 kl per day. Currently, water is trucked to the development on a daily basis.

Proposed development situation:

According to Afri-Infra (2015), a potable water connection is available on the newly installed Rockdale bulk supply pipeline located towards the south eastern side of the site. This pipeline is supplied from the 20 MI Rockdale Reservoir Complex located next to the N4 national road, which in turn is supplied by the Vaalbank Water Treatment Works.

Afri-Infra (2015) indicated that an 800m long, 160mm diameter uPVC bulk connection pipeline from the Rockdale bulk supply line to the proposed development is proposed.

According to Afri-Infra (2015), the design of the new Rockdale bulk supply line allowed for the supply of water to the proposed development. However, the following must still be confirmed:

- If sufficient pressure is available in the bulk supply pipeline to enable smooth operation of an internal water network;
- If the bulk supply pipeline has a valve chamber and connection point available for connection of the internal network onto the bulk supply.

Within the proposed development, an internal water network with individual house connections, isolation valves and fire hydrants is proposed. According to Afri-Infra (2015), this network will be designed to supply a sufficient amount of water at an acceptable pressure as indicated in Table 2.2.

Table 2.2 provides the design parameters with regards to the proposed water supply system.

Table 2.2: Design parameters – water supply system (taken from Afri-Infra, 2015)

Annual average daily demand (AADD)	700l hh/d (Res 1), 600 l hh/d (Res 3)
Population growth yield	N/A
Design period	N/A
Reservoir storage capacity	N/A
Peak factor	2 to 4
Fire risk category	Low risk Group 1
Minimum design fire flow	900 l/min = 15 l/s
Maximum hydrant to discharge	1 off
Duration of fire flow	2 hours
Fire hydrant spacing	240m
Bulk main material	uPVC
Minimum pipe class	Class 12
Minimum allowable pressure	20-24m
Maximum allowable pressure	60m
Minimum allowable pressure during fire flow	7m
Valves	Class 12, to SANS standards

Valve spacing	600m, max. 4 valves to be closed to isolate a section of pipe. Not more than 30 household isolated.
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Afri-Infra (2015) indicated that a pressure of 30m is required at the Rockdale bulk supply pipeline connection point for the designed system to adhere to minimum pressure requirements as specified.

Table 2.3 provides the estimated daily water demand as calculated for the proposed development.

Table 2.3: Estimated daily water demand (taken from Afri-Infra, 2015)

DESCRIPTION	UNIT	QUANTITY	LITRES/ UNIT/ DAY	AVERAGE DEMAND		PEAK FACTOR	PEAK l/s
				l/d	l/s		
Residential 1	Erven	501	700	350 700	4.06	4.0	16.24
Residential 3	Units	600	600	360 000	4.17	4.0	16.67
Business (FSR of 0.6)	100m ²	96	800	76 800	0.89	2.0	1.78
Community facility (FSR of 0.6)	100m ²	10.8	400	4 320	0.05	2.0	0.10
Combined school (5.47 ha)	No.	1	40000	40 000	0.46	4.0	1.85
Church (FSR of 0.6)	100m ²	29	300	8 640	0.10	2.0	0.20
TOTAL				840 460	9.73		36.84
Summer peak			1.20	1 008 552	11.68		48.52
Fire flow			2.00	900.00	108 000	1.25	15.00
TOTAL				1 116 552	12.93		63.52

Figure 2.2 provides a layout plan indicating the proposed position of the new connection line, bulk supply line and internal water network for the proposed development.

2.5.3 Sewage

Current situation:

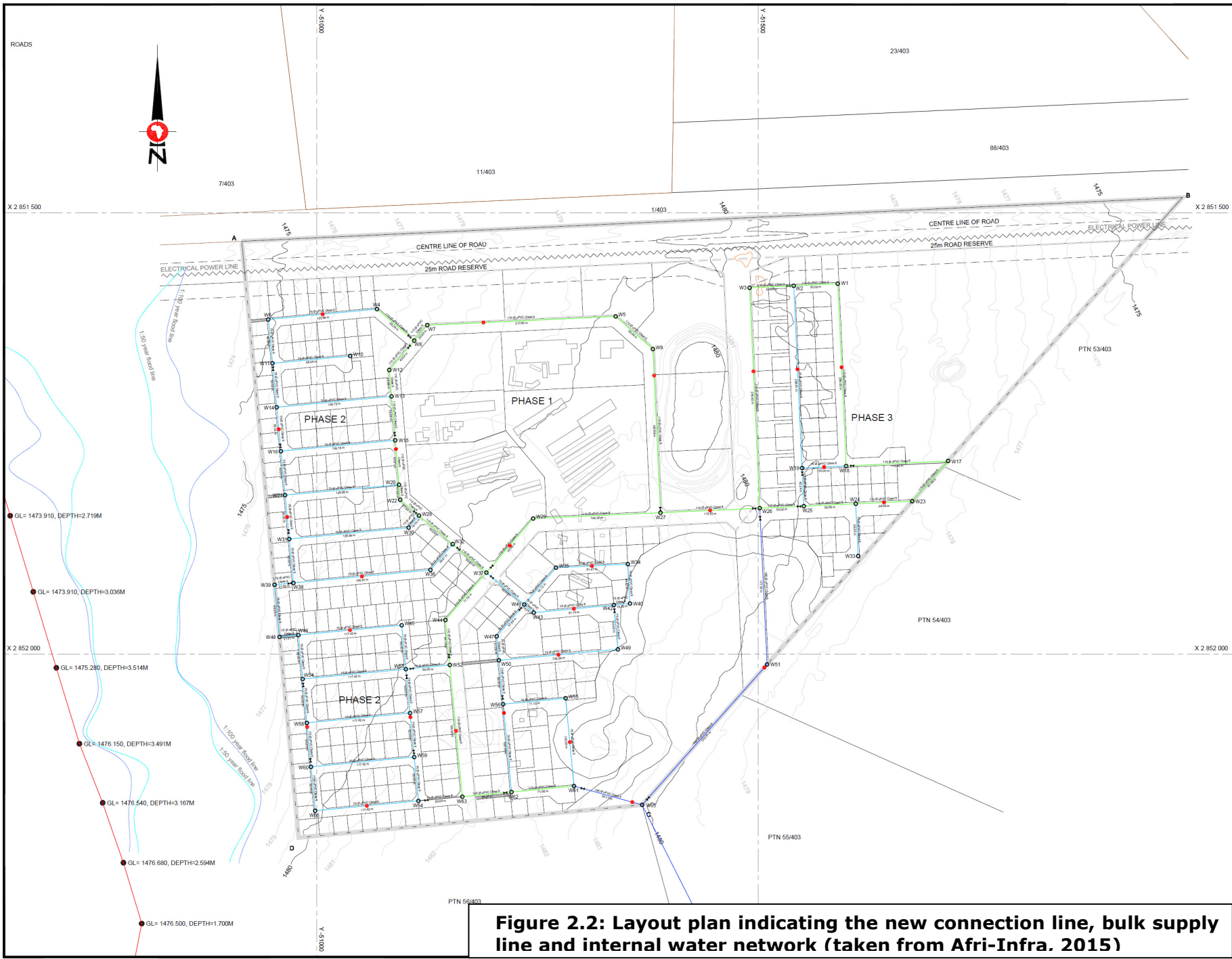
Septic tanks are currently utilized for sewage disposal at the various buildings as indicated in Figure 2.3.

According to the applicant, all grey and black water has been rerouted to one central, low point (Figure 2.3) where it flows into separate septic/conservancy tanks. The total capacity of the septic/conservancy tanks is 56 000 litres.

The Steve Tshwete Local Municipality empties the tanks 3 days a week, i.e. 3 or 4 loads at a time (1 load = 7000 litres).

The grey water flows into 2 x 6kl septic/conservancy tanks from where it is pumped into a 10kl JoJo tank via a Cloreman Mach 1 filter and strainer. It is then pumped through various screen filters into 9 x 10 000kl JoJo tanks.

This water is then pumped via a ring feed to toilets of 60 units. The applicant is in the process of connecting the toilets of the remaining units to this system. The fire hydrants will also be connected to this system.



ROADS



7/403

11/403

23/403

88/403

X 2 851 500

X 2 851 500

X 2 852 000

X 2 852 000

PTN 56/403

PTN 55/403

PTN 54/403

PTN 53/403

Figure 2.2: Layout plan indicating the new connection line, bulk supply line and internal water network (taken from Afri-Infra. 2015)

NOTAS/NOTES

LEGENDE/LEGEND

- 75mm Ø uPVC PIPE
- 110mm Ø uPVC PIPE
- 160mm Ø uPVC PIPE
- FIRE HYDRANT
- ⊥ VALVE

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WYSIGINGS/AMENDMENTS

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IVY JEWEL GROUP (PTY) LTD
 CORNER OF EKSTEEN AND WATERBOSLUJULI STREETS
 25 TOWN SQUARE BUILDING
 MIDDELBURG
 1050
 TEL: (013) 282 0238
 FAX: (013) 282 0238
 CELL: 303 304 2777
 E-MAIL: info@ivyjewel.co.za
 info@ivyjewel.co.za

PROJEK/PROJECT
ENGINEERING SERVICES FOR THE RESIDENTIAL DEVELOPMENT OF PTN 52 OF FARM RONDEBOSCH 403JS / MIDDELBURG EXT.44

TEKENING TITEL/DRAWING TITLE
WATER LAYOUT

AFRI-INFRA GROUP (Pty) Ltd
 CONSULTING ENGINEERS AND PROJECT MANAGERS
 P.O. BOX 1858
 MIDDELBURG, 1050
 MIDDELBURG OFFICE PARK,
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ONTWERP INGENIEUR GEPROEF	B.C.L.	TEKENING INGENIEUR GEPROEF	E.J.

GOEDGEKEUR DEUR/APPROVED BY

FOR AFRI-INFRA GROUP (PTY) LTD. DATE

KONTRAK NR./CONTRACT NO.
 --

LEER NR./FILE NO.
 --

SKAAL/SCALE 1:2000	SHEET SIZE A1
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DATUM/DATE
 APRIL 2015

TEKENING NR./DRAWING NO.
 2014/15/L04 REV.A



Figure 2.3: Location of septic tanks (indicated by red dots) on site

The applicant plans to install water meters in order to record the volume of grey water re-used in the toilets. This will also provide updated information with regards to the amount of potable water required by the development.

Proposed development situation:

Afri-Infra (2015) indicated that a full waterborne sewer system is proposed for the development that will connect to an existing municipal outfall sewer approximately 350m west of the site by means of a 250mm diameter connector outfall sewer. According to Afri-Infra (2015), it is assumed that the existing municipal outfall sewer has sufficient capacity to accommodate the additional flow (i.e. based on the current drainage area).

It is proposed that the existing onsite septic/conservancy tanks will be decommissioned and connected to the proposed waterborne sewer network. The said septic tanks will however remain in use during the development of Phase 1.

In view of the local watershed present on site, a pump station (with a delivery capacity of approximately 10 l/s at a duty point of 15.3m, and a rising main of 550m long, 110mm diameter) will be constructed at the low point of the eastern drainage area in order to pump the sewage across the watershed into the western drainage area's reticulation. According to Afri-Infra (2015), this will only be required during Phase 3 of the development.

Table 2.4 provides the design parameters with regards to the proposed waterborne sewer system.

Table 2.4: Design parameters – waterborne sewer system (taken from Afri-Infra, 2015)

Annual average daily yield	600l hh/d (Res 1), 500 l hh/d (Res 3)
Population growth yield	N/A
Design period	N/A
Reservoir storage capacity	N/A
Peak factor	1.0 to 2.5
Infiltration	15%
Pipes	PVC Class 34 Minimum diameter: 160 mm Slopes: as per Red Book
Full flow	70% Minimum velocity: 0.7 m/s

Table 2.5 provides the estimated daily sewage yield as calculated for the proposed development.

Table 2.5: Estimated daily sewage yield (taken from Afri-Infra, 2015)

DESCRIPTION	UNIT	QUANTITY	LITRES/ UNIT/ DAY	AVERAGE YIELD		PEAK FACTOR	PEAK l/s
				l/d	l/s		
Residential 1	Erven	412	600	301 600	3.48	2.5	8.70
Residential 3	Units	600	500	300 000	3.47	2.5	8.68
Business (FSR of 0.6)	100m ²	96	800	76 800	0.89	1.0	0.89
Community facility (FSR of 0.6)	100m ²	10.8	900	9 720	0.11	1.0	0.11
Combined school (5.47 ha)	100m ²	2.2	600	1 313	0.02	2.5	0.04
Church (FSR of 0.6)	100m ²	29	300	8 640	0.10	1.0	0.10
TOTAL (DRY WEATHER)				698 073	8.07		18.52
Infiltration – extraneous flow		15%		104 711	1.21		2.78
TOTAL (WET WEATHER)				802784	9.28		21.3

Figure 2.4 provides a layout plan indicating the proposed sewer reticulation.

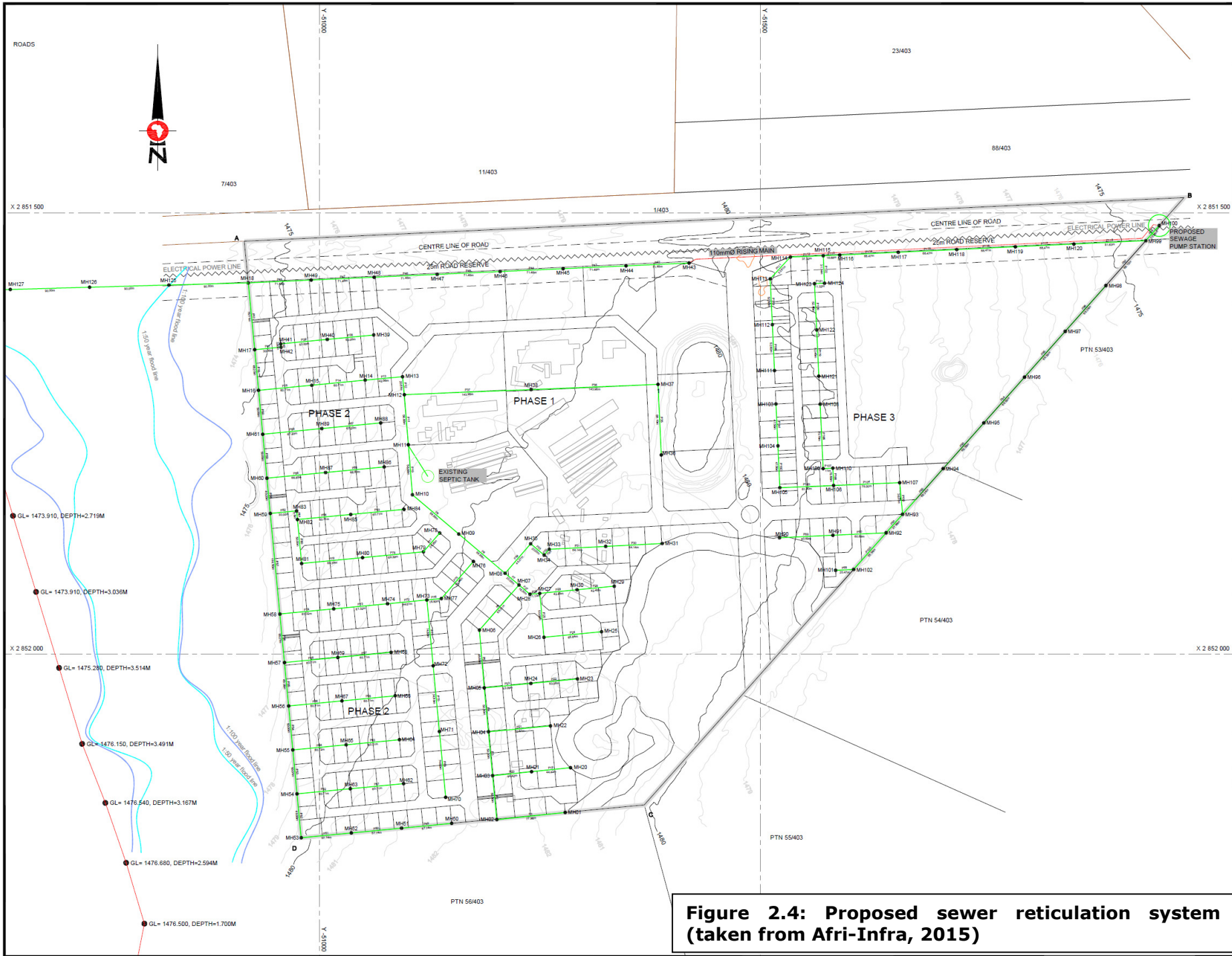


Figure 2.4: Proposed sewer reticulation system (taken from Afri-Infra, 2015)

NOTES

LEGEND

- 100mm Ø uPVC PIPE
- MH

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PROJECT
 ENGINEERING SERVICES FOR THE RESIDENTIAL DEVELOPMENT OF PTN 52 OF FARM RONDEBOSCH 403JS / MIDDELBURG EXT.44

DRAWING TITLE
 SEWER LAYOUT

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CHECKED BY: S.C.L.	CHECKED BY: E.J.

APPROVED BY

AFRI-INFRA GROUP (PTY) LTD	DATE
CONTRACT NUMBER	---
FILE NUMBER	---
SCALE	SHEET SIZE
1:2000	A1
DATE	DRAWING NUMBER
APRIL 2015	2014/15/L05 REV.A

2.5.4 Waste Disposal

The refuse will be collected by the Steve Tshwete Local Municipality's refuse removal unit and will be disposed of at the Middelburg Rietfontein Waste Disposal Site. The applicant indicated that recycling would also be encouraged on site in order to reduce the amount of waste to be disposed of.

2.5.5 Access road

The proposed development would mainly be accessed from the northern boundary of the site via a new access road, which would connect to the R104 provincial road between Belfast and Middelburg (Figure 2.1).

According to Urban Dynamics Inc. (2009), the existing access road to Towers will be upgraded to be 7.4m wide with a 30m road reserve. The intersection of the R104 and the new access road will be provided with signage and road markings as required by the Department of Roads and Transport and the Steve Tshwete Local Municipality. The road will be sealed with hot-mix asphalt and will have 20-25 mm thick precast concrete kerbs.

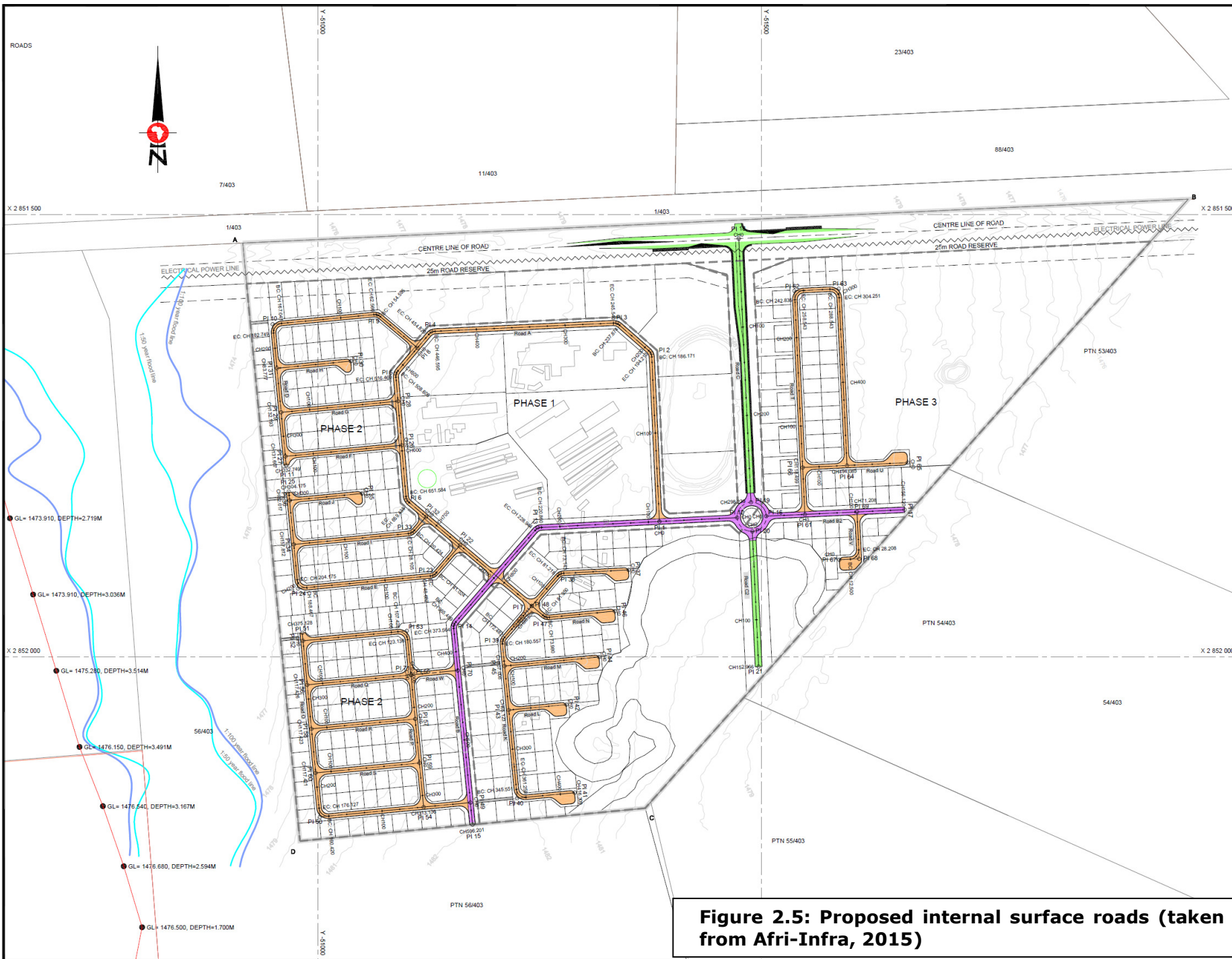
Table 2.6 provides the design parameters with regards to the internal surface roads (either segmented paving blocks or asphalt) with either camber or crossfall depending on the road reserve width and topography.

Table 2.6: Design parameters – roads (taken from Afri-Infra, 2015)

Design speed	50 km/h
Ceiling speed	40 km/h
Stopping sight distance	60 m
Design flood	1:25 years (surface run off)
Minimum gradients	0.67%
Minimum cross-fall	3%
Vertical alignment:	
• Maximum gradient	10.0%
• Minimum gradient	0.67%
• Minimum K-value	Crest and sag curves: 10
Cross section design:	
• Lanes	Two lane, two way
• Lane width	2.25 m, 3 m and 3.7 m

The roads will be classed as Class 4, Class 5a and Class 5b roads in terms of the applicable road reserve width.

Figure 2.5 provides a layout plan indicating the internal surface roads.



NOTES

LEGEND

- 7.4m ROAD - 450m
- 6.0m ROAD - 752m
- 5.5m ROAD - 4528m

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PROJECT
ENGINEERING SERVICES FOR THE RESIDENTIAL DEVELOPMENT OF PTN 52 OF FARM RONDEBOSCH 403JS / MIDDELBURG EXT.44

DRAWING TITLE
ROADS LAYOUT

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APPROVED BY

FOR AFRI-INFRA GROUP (PTY) LTD: DATE: CONTRACT NUMBER: -- FILE NUMBER: -- SCALE: 1:2000 SHEET SIZE: A1 DATE: MARCH 2015 DRAWING NUMBER: 2014/15-L03 REV.A

Figure 2.5: Proposed internal surface roads (taken from Afri-Infra, 2015)

2.5.6 Storm water control measures

Afri-Infra (2015) indicated that the proposed development site fails outside of the 1:50 and the 1:100 floodlines as indicated in Figure 2.2 and 2.4.

The site is however characterised by a local watershed that causes surface run-off to drain respectively towards the east and the west.

Afri-Infra (2015) indicated that the western portion of the proposed storm water drainage system will drain towards a well defined drainage area located in close proximity to the western boundary of the site. The eastern portion of the proposed storm water drainage system will drain towards the R104 provincial road and the Klein Olifants River.

Figure 2.6 provides a layout plan indicating the proposed storm water system.

According to Afri-Infra (2015), the stormwater infrastructure will be designed for the 1:5 and 1:25 year return periods to cater for the minor and major system respectively. Infrastructure will consist of a piped conduit system, associated kerb and grid inlets and outlet structures. Drainage outlets will be properly safeguarded to prevent erosion and unnecessary damage to the drainage area and associated wetland area.

Table 2.7 provides the design parameters with regards to the storm water system.

Table 2.7: Design parameters – storm water (taken from Afri-Infra, 2015)

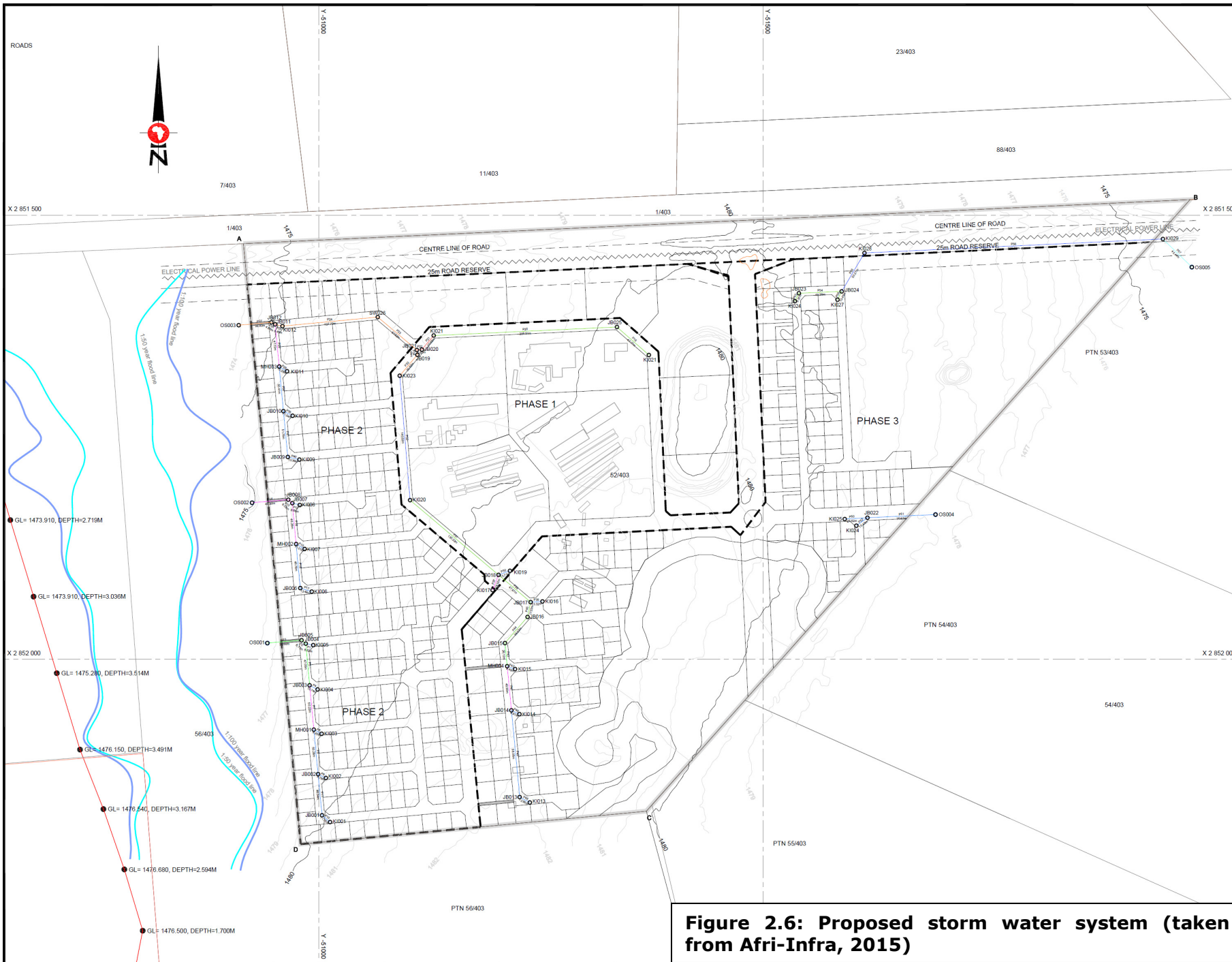
Flow velocities in pipes	Chosen to be between 0.7 m/s and 2.2 m/s
All pipework	Will be laid on an improved bedding material
Pipe material	Concrete class 75D
Calculations	Based on Manning's formula with N= 0.013 gravity conditions pipelines with maximum 80% full flow
Design flood – minor system	1:5 years
Design flood – major system	1:25 years
Minimum gradients	0.67%

According to Afri-Infra (2015), the combined road and channel system must have enough capacity for the post-development 1:25 year discharge throughout the development. At all low points, provision must be made for the minimum 1:25 year event.

2.5.7 Fire fighting

All fire-fighting controls would have to be in accordance with the National Building Regulations, the SANS Code of Practice (related to Community Protection against Fire) and with "Red Book" standards.

According to Afri-Infra (2015), 30 fire hydrants will be provided with a fire flow of 15l/s. Further information is provided in Table 2.2.



NOTES

LEGEND

- 450mm Ø uPVC PIPE
- 525mm Ø uPVC PIPE
- 600mm Ø uPVC PIPE
- 675mm Ø uPVC PIPE
- 750mm Ø uPVC PIPE
- 900mm Ø uPVC PIPE
- 1050mm Ø uPVC PIPE
- 1200mm Ø uPVC PIPE

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PROJECT
ENGINEERING SERVICES FOR THE RESIDENTIAL DEVELOPMENT OF PTN 52 OF FARM RONDEBOSCH 403JS / MIDDELBURG EXT.44

DRAWING TITLE
STORMWATER LAYOUT

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FOR AFRI-INFRA GROUP (PTY) LTD: DATE: APRIL 2015
 CONTRACT NUMBER: --
 FILE NUMBER: --
 SCALE: 1:2000 SHEET SIZE: A1
 DRAWING NUMBER: 2014/15/L02 REV.A

Figure 2.6: Proposed storm water system (taken from Afri-Infra, 2015)

2.6 Applicable legislation, policies and/or guidelines

Table 2.8 provides an indication of legislation, policies and/or guidelines applicable to the said project.

Table 2.8: Applicable legislation, policies and/or guidelines

Title of legislation, policy or guideline:	Administering authority:	Aim of legislation, policy or guideline
The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)	Department of Justice and Constitutional Development	To establish a Constitution with a Bill of Rights for the RSA. It sets out of a number of fundamental environmental rights (Section 24).
Development Facilitation Act, 1995 (Act 67 of 1995) and amendments	Department of Rural Development and Land Reform	To provide for planning and development.
Environment Conservation Act, 1989 (Act 73 of 1989) and amendments	Department of Agriculture, Rural Development, Land and Environmental Affairs	To control environmental conservation.
National Environmental Management Act, 1998 (Act 107 Of 1998) and amendments	Department of Agriculture, Rural Development, Land and Environmental Affairs	To provide for the integrated management of the environment.
National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) and amendments	Department of Agriculture, Rural Development, Land and Environmental Affairs	To reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) and amendments	Department of Agriculture, Rural Development, Land and Environmental Affairs	To provide for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; the establishment and functions of a South African Biodiversity Institute; and for matters connected therewith.
National Environmental Management: Waste Act, 2008 (Act 59 of 2008) and amendments	Department of Agriculture, Rural Development, Land and Environmental Affairs	To reform the law regulating waste management in order to protect health and the environment by providing for the prevention of pollution and ecological degradation and for securing ecologically sustainable development.
Environmental Impact Assessment Regulations, 2010 (Government Gazette No. 33306 of 18 June 2010) and amendments	Department of Agriculture, Rural Development, Land and Environmental Affairs	Regulations pertaining to environmental impact assessments.
National Water Act, 1998 (Act 36 of 1998) and amendments	Department of Water and Sanitation	To control water management aspects.
National Veld and Forest Fire Act, 1998 (Act 101 of 1998) and amendments	Department of Agriculture, Forestry and Fisheries	To prevent and combat veld, forest and mountain fires throughout South Africa.
National Heritage Resources Act, 1999 (Act 25 of 1999) and amendments	South African Heritage Resources Agency	This legislation aims to promote good management of the national estate, and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed to future

Title of legislation, policy or guideline:	Administering authority:	Aim of legislation, policy or guideline
Protection of Personal Information Act, 2013 (Act 4 of 2013)	Department of Justice and Constitutional Development	generations. The purpose of this act is to give effect to the constitutional right to privacy by safeguarding personal information and to regulate the manner in which personal information may be processed.
Promotion of Access to Information Act, 2000 (Act 2 of 2000) and amendments	Department of Justice and Constitutional Development	To give effect to the constitutional right of access to any information held by the State and any information that is held by another person and that is required for the exercise or protection of any rights; and to provide for matters connected therewith.
Promotion of Administrative Justice Act, 2000 (Act 3 of 2000) and amendments	Department of Justice and Constitutional Development	The Act aims to make the administration (e.g. Government and Parastatals) effective and accountable to people for its actions.
Conservation of the Agricultural Resources Act, 1983 (Act 43 of 1989) and amendments	Department of Agriculture, Forestry and Fisheries	To provide control over the utilization of the natural resources of the Republic in order to promote the conservation of soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.
Occupational Health and Safety Act, 1993 (Act 85 of 1993) and amendments	Department of Labour	To provide for the health and safety of persons at work and for the health and safety of persons in connection with the activities of persons at work and to establish an advisory council for occupational health and safety.
Health Act, 1977 (Act 63 of 1977) and amendments	Department of Health	To promote public health.
Mpumalanga Nature Conservation Act, 1998 (Act 10 of 1998) and amendments	Mpumalanga Tourism and Parks Agency	To control nature conservation.
National Building Regulations and Standards Act, 1977 (Act 103 of 1977) and amendments	Department of Trade and Industry	To provide for the promotion of uniformity in the law relating to the erection of buildings in the areas of jurisdiction of local authorities; for the prescribing of building standards; and for matters connected therewith.
Various by-laws of the Steve Tshwete Local Municipality, e.g.: <ul style="list-style-type: none"> o Integrated waste management; o Noise and control; o Standard drainage; o Water services, etc. 	Steve Tshwete Local Municipality	To regulate land use with the Steve Tshwete Local Municipal area.
Integrated Development Plan for the Steve Tshwete Local Municipality	Steve Tshwete Local Municipality	Broad spatial framework guidelines for the Steve Tshwete Local Municipality.
Spatial Development Framework for the Steve Tshwete Local Municipality	Steve Tshwete Local Municipality	Spatially based policy guidelines whereby changes, needs and growth in the region can be managed to benefit the whole community.
Integrated Environmental Management Guideline Series (Guideline 5 – 10 October 2012) – Companion to the Environmental Impact Assessment Regulations, 2010	Department of Economic Development, Environment and Tourism	To provide clarity on the processes to be followed when applying for an environmental authorisation in terms of the EIA Regulations and gives a comprehensive interpretation of the listed activities.
Nkangala District Municipality Climate Change Response Strategy	Nkangala District Municipality	A strategy in response to climate change.
Nkangala District Municipality Integrated Waste Management Strategy	Nkangala District Municipality	A strategy dealing with waste.

2.7 Phases of development

2.7.1 Estimated start and completion dates of construction

Construction will commence after all the relevant approvals have been obtained.

According to Afri- Infra (2015) the proposed development can be divided into the following three (3) phases as indicated in Table 2.9:

- Phase 1 will consist of the Towers Development (an old hotel and landmark in the area) as well as various complexes providing contractors' accommodation to seasonal and contract workers in the area.
- Phase 2 will consist of residential stands that will be serviced and sold to private owners.
- Phase 3 will consist of residential stands that will be serviced and sold to private owners.

Table 2.9: Proposed development phases (taken from Afri-Infra, 2015)

TYPE	LAND USE	NO OF STANDS	TOTAL AREA OF STANDS
PHASE 1 LAND USE			
Residential	Residential 3	4	4.84 ha
	Business	1	1.02 ha
PHASE 2 LAND USE			
Residential	Residential 1	344	Average 323.86m ² /stand
	Residential 3	5	3.61 ha
Business	Business	1	0.55 ha
Institutional	Church	1	0.17 ha
Public Open Space	Park	3	Approximately 0.42
PHASE 3 LAND USE			
Residential	Residential 1	257	Average 323.86m ² /stand
Institutional	Community facility	1	0.18 ha
	Combined school	1	5.48 ha
	Church	2	0.31 ha
Public Open Space	Park	2	Approximately 0.91 ha

Figure 7.1 provides a schematic representation of the above-mentioned phasing of the development.

2.7.2 Construction phase

The construction phase would involve the provision of services (water, sewage, electricity, roads, etc.) and the construction of the various buildings on the said erven.

A contractor will be responsible for the construction of all infrastructure as well as the overall management of the construction site and construction activities. The contractor will be responsible for providing suitable accommodation for construction personnel.

Once the stands are serviced and sold, individual contractors will be utilized for the construction of the various houses.

2.7.3 Operational phase

The operational phase would involve the utilization of the area for residential, business and institutional purposes.

2.7.4 Decommissioning phase:

If the situation of decommissioning does arise, an Environmental Management Plan (EMP) will need to be compiled in order to manage the activities associated with the decommissioning of the site.

3. FINDINGS OF THE SCOPING PHASE

This section provides:

- ◆ A summary of the findings of the scoping phase;
- ◆ An indication of additional studies required;
- ◆ An indication of additional public participation required.

3.1 Summary of findings

Through the scoping phase, it was determined that the main issues of concern were with regards to the following potential impacts:

- Surrounding landowners/users in terms of:
 - Security (people and wildlife);
 - Type of development – design of residential area; building regulations/standards; fencing of development; etc.
 - Size of population and services provided (e.g. school; community facility);
 - Fencing of area;
- Services (water, sewage, electricity, traffic, transport);
- Possible sewage pollution;
- Storm water run off from site;
- Traffic – additional traffic on R104 provincial road;
- Traffic – public transport, pedestrians, walk and cycle ways;
- Wetlands;
- Heritage and palaeontological features;
- Spatial planning.

3.2 Additional studies required

In view of the above-mentioned issues of concern, the following specialist studies were recommended as part of the EIA phase:

- Heritage Impact Assessment;
- Paleontological Impact Assessment;
- Wetland delineation study;
- Traffic study;
- Services report.

Heritage Impact Assessment

A Heritage Impact Assessment (as required in terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999)) was conducted in order to determine whether any sites of archaeological and/or cultural interest are located on or near the said site. Dr. Anton van Vollenhoven, an accredited archaeologist, conducted the said assessment.

The scope of work entailed the following:

- Identification of objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property.
- Obtaining background information on the area to be developed.

- Assessing the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value.
- Describing the possible impact of the proposed development on the identified cultural remains, according to a standard set of conventions.
- Recommending suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development.
- Reviewing applicable legislative requirements.

Results of this study are provided in Section 5.13.1 and Appendix 14 of this EIA Report.

Palaeontological Desktop Impact Assessment:

A Palaeontological Desktop Impact Assessment (as required in terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) was conducted by Dr. Heidi Fourie, an accredited palaeontologist.

The scope of work entailed the following:

- Documentation of palaeontological resources in the area to be developed by utilizing geological maps, scientific literature, institutional fossil collections, satellite images, aerial maps and topographical maps;
- An assessment of observed or inferred palaeontological heritage within the proposed development site;
- Recommendations (if any) for protection, mitigation or monitoring of palaeontological resources identified.

Results of this study are provided in Section 5.13.2 and Appendix 14 of this EIA Report.

Wetland delineation study

A wetland delineation study was undertaken by Retief Grobler of Imperata Consulting in order to determine the current status of the wetland identified by Wetland Consulting Services (2009).

The scope of work included the following:

- Delineation and assessment of wetlands and other watercourses present within the study area, including the delineation of wetlands within a 500m radius around the site ((i.e. a desktop assessment with limited field verification).
- Watercourse identification based on definitions specified in the National Water Act, 1998 (NWA), Act No. 36 of 1998.
- Description and classification of delineated wetlands areas into corresponding hydro-geomorphic (HGM) units according to Ollis *et al.* (2013).
- Assessment of the Present Ecological State of the identified watercourses within the site and wetlands located within a 500m radius of the property (desktop approach).
- Assessment of the Ecological Importance and Sensitivity (EIS) of the identified wetlands present within the study area and located within a 500m radius of the property (desktop approach).
- Identification of potential project-related impacts and recommendation of appropriate mitigation measures.

Results of this study are provided in Section 5.9 and Appendix 13 of this EIA Report.

Traffic study

A traffic study was conducted by J. Makala and E.D. Kotze of WSP SA Civil and Structural Engineers (Pty) Ltd as part of the town planning process.

The objective of the traffic impact study was to:

- ◆ Determine the impact that the additional traffic generated by the proposed development will have on the surrounding road network (e.g. R104 provincial road; the gravel access road, etc.);
- ◆ Determine the expected modal split, trip generation, distribution and assignment;
- ◆ Determine the access position and configuration to the proposed site;
- ◆ Determine the required road upgrading (if necessary) to accommodate the proposed development trips;
- ◆ Comment on the public transport issues.

This study was reviewed as part of the EIA phase in order to determine if the issues raised by interested and affected parties were addressed in this study.

Results of this study are provided in Section 5.16 and Appendix 15 of this EIA Report.

Services (water, sewage, electricity, storm water, etc.)

The engineering firm, Afri-Infra (Pty) Ltd., was appointed to compile a concept and viability report (preliminary design stage) with regards to the provision of water, electricity and the disposal of waste (solid and liquid) for the proposed development.

Results of this study are provided in Section 2.5 and Appendix 16 of this EIA Report.

3.3 Additional public participation

The following additional public participation was recommended in the Plan of Study for EIA:

7.1 Evaluation of the Scoping Report

The draft Scoping Report (dated: March 2015) will be submitted to the Department of Agriculture, Rural Development, Land and Environmental Affairs for evaluation purposes. A hard copy of the document will also be forwarded to the following authorities for evaluation (40-day period):

- Department of Water and Sanitation;
- Mpumalanga Tourism and Parks Agency;
- Steve Tshwete Local Municipality.

An electronic copy of the Scoping Report will be made available during the above-mentioned period to the interested and affected parties and stakeholders consulted and/or registered as part of the scoping process.

The various departments, stakeholders and interested and affected parties will be requested to forward any comments on the report to the consultant

within the 40 day period provided. A register will be kept of all comments received in terms of the evaluation of the report. These comments will then be included and addressed in a final Scoping Report.

The final Scoping Report will once again be made available to interested and affected parties and stakeholders for comment (21-day period), where after it will be submitted to the Department of Agriculture, Rural Development, Land and Environmental Affairs.

A hard copy of the Draft and Final Scoping Reports will be left at the Gerard Sekoto Public Library and the onsite office. An electronic version will be made available on the company website (www.cleanstreams.co.za) and on cd (on request).

The Environmental Impact Report will be compiled once the Final Scoping Report has been approved by the Department of Agriculture, Rural Development, Land and Environmental Affairs.

7.2 Informing Interested and Affected Parties

The following interested and affected parties and stakeholders will be notified by means of facsimile, email, etc. of the availability of the reports for evaluation:

INTERESTED AND AFFECTED PARTY LIST	
Organisation / Property	Name
Government Departments	
Department of Agriculture, Rural Development, Land and Environmental Affairs – Witbank	O. Fakude
Department of Water and Sanitation – Bronkhorstspuit	B. Mnguni
Department of Agriculture, Rural Development and Land Administration – Directorate: Land Use and Soil Management – Ermelo	J. Venter
Department of Agriculture, Forestry and Fisheries – Pretoria	F. Mashabela
Department of Co-operative Governance and Traditional Affairs (COGTA)	M. Loock
Department of Mineral Resources – Witbank	M. Mokonyane
Department of Roads and Transport	M. Sibanyoni; B. Viljoen
Department of Culture, Sports and Recreation	S. Singh
Mpumalanga Provincial Heritage Resources Authority	B. Moduka
Department of Rural Development and Land Reform	G.N. Mathonsi
South African Heritage Resources Agency	N. Khumalo; C. Scheermeyer
Other Organisations	
Mpumalanga Tourism and Parks Agency	F. Krige
South African National Roads Agency	M. Yorke-Hart
Trans African Concessions	R. Nkosi

INTERESTED AND AFFECTED PARTY LIST	
Organisation / Property	Name
Eskom (Transmission; Mpumalanga Land and Rights)	E. Lennox; L. Motsisi; M. Moloko
Middelburg Chamber of Commerce and Industry	A. Ott
Telkom	B. Tsatsi
Transnet	P. Mnisi; T. Mavulwana
Wildlife and Environment Society of South Africa – Witbank	L. Betha
Transvaal Landbou Unie	D. du Plessis
Mpumalanga Agriculture	H. Laas
Distrikslandbou Unie Middelburg	J.P.J. Schmahl
Municipalities	
Nkangala District Municipality	S. Links
Steve Tshwete Local Municipality	M. Mahamba
Ward Councilor	B.D. Skosana; D.M. Longman
ADJACENT LANDOWNERS/USERS IDENTIFIED	
Portion 2 (Figure 4.2)	Little Olifants Estate (Pty) Ltd. (B. Kane-Berman)
Portion 6 (Figure 4.2)	Zowitzky Trust (Mr. Zowitzky)
Portion 7 (Figure 4.2)	CSP Landgoed cc. (D. Martin)
Portion 11 (Figure 4.2)	G.L.P. Joubert
Portion 13 (Figure 4.2)	Portion 13/Middelburg x34, 35 and 36 – Crosspoint Trading 36 (Pty) Ltd (R. Noble)
Portion 14 (Figure 4.2)	M.C. de Klerk
Portion 19 (Figure 4.2)	Richard Prinsloo Investment Trust (R. Prinsloo)
Portions 23 and 51 (Figure 4.2)	J.C. Weilbach
Portion 47 (Figure 4.2)	Riverside Estate (R. Joubert)
Portion 50 (Figure 4.2)	M.J. Hamersma
Portion 53 (Figure 4.2)	Bill & Febe Wilson Familie Trust (B. Wilson)
Rents part of Portion 53 (Figure 4.2)	Mlaki Business Enterprise (Thalita Mathebula)
Rents part of Portion 53 (Figure 4.2)	Bhaneelog (R. de Villiers)
Rents part of Portion 53 (Figure 4.2)	Bhao Bhao Tree Transport (G. Burger)
Portion 54 (Figure 4.2)	Off-Road Racing Middelburg cc (W. van Wyk)
Portion 55 (Figure 4.2)	F.G. Wesson
Portion 56 (Figure 4.2)	H.A. Mahomed
Portion 58 (Figure 4.2)	Pot 58 Middelburg cc. (R. Prinsloo)
Portion 59 (Figure 4.2)	Protuss Inv. (Pty) Ltd. (R. Prinsloo)

INTERESTED AND AFFECTED PARTY LIST	
Organisation / Property	Name
Portion 60 (Figure 4.2)	J.J. Mokwena
Portion 61 (Figure 4.2)	M. Singleton (R. Spencer)
Portion 62 (Figure 4.2)	W.J.E. Hoole
Portion 85 (Figure 4.2)	Nogwatsha Communal Property Association (P. Shabangu)
Portion 88 (Figure 4.2)	N.J. Smit

Further issues of concern will be documented and addressed during the EIA phase.

7.3 Evaluation of the Environmental Impact Report (EIR)

A copy of the draft and final Environmental Impact Reports will be made available for evaluation purposes. A period of 40 days will be provided for the evaluation of the draft report, whereas a period of 21 days will be provided for the evaluation of the final report.

7.4 Informing Interested and Affected Parties of the Record of Decision

On receipt of the Environmental Authorisation and Record of Decision (positive or negative decision), all identified interested and affected parties (see Section 4 of this report) will be informed by means of facsimile, e-mail or telephonically that the Environmental Authorisation and Record of Decision with regards to the project have been issued. Information w.r.t. the appeal procedure will also be provided.

An advertisement in this regard will also be placed in the Middelburg Observer, in order to inform I&APs of the decision.

A copy of the Environmental Authorisation and Record of Decision will be made available on the company website (www.cleanstreams.co.za).

Comments received in terms of the above-mentioned public participation process are included and addressed in Section 4 of this EIA Report.

4. DESCRIPTION OF PUBLIC PARTICIPATION PROCESS

4.1 Advertising of the project

4.1.1 Press advertising

A block advert (150mm x 95mm), according to the Environmental Impact Assessment Regulations, 2010, was placed in the Middelburg Observer on Friday, 31 October 2014. A copy of the adverts is provided in Appendix 4.

4.1.2 On-site advertising

Notices according to the Environmental Impact Assessment Regulations, 2010, were placed at the following locations:

- At the entrance to the site adjacent to the Middelburg-Belfast (R104) provincial road (A1 size; Figure 4.1, Photo 1 and 2);
- On the northeastern corner of the site adjacent to the Middelburg-Belfast (R104) provincial road and the gravel access road to the southern properties (A3 size; Figure 4.1, Photo 3);
- Along the eastern boundary of the site adjacent to the gravel access road to the southern properties (A3 size; Figure 4.1, Photo 4);
- On the north western corner of the site adjacent to the Middelburg-Belfast (R104) provincial road (A3 size; Figure 4.1, Photo 5)
- Gerard Sekoto Public Library (A3 size; Figure 4.1; Photo 6);
- A copy of the notice was also loaded onto the company website: www.cleanstreamsa.co.za.

These notices were displayed from Friday, 31 October 2014, for the duration of the scoping phase. A copy of the notice is provided in Appendix 4.

As indicated in Section 5, no alternative site was identified for this proposed development. No notices were thus placed on an alternative site.

4.1.3 Informing I&APs via the internet

Interested and affected parties were also informed via the above-mentioned adverts and notices that a copy of the following documentation could be downloaded from the Clean Stream Environmental Services website (www.cleanstreamsa.co.za) from Friday, 31 October 2014:

- ◆ Copy of the notice;
- ◆ Background Information Document (BID) (Appendix 5).

This information was available on the website for the duration of the scoping phase. A copy of the webpage printouts is provided in Appendix 4.

4.1.4 Feedback from advertising process

No persons registered as interested and affected parties in terms of the advertising process (site and newspaper advertising) within the 30 day registration period provided.

An email (dated: 3 December 2014; Appendix 4) was forwarded to the Department of Agriculture, Rural Development, Land and Environmental Affairs (DARDLEA) w.r.t. the advertising of the project.

4.1.5 Public meeting

As indicated in Section 4.1.4, no interested and affected parties registered in terms of the above-mentioned advertising process. A public meeting was therefore not required as part of this project.



Photo 1 and 2: Notice placed at the entrance to the site (i.e. Copper Towers) adjacent to the Middelburg-Belfast (R104) provincial road.



Photo 3 and 4: Notice placed on the northeastern corner and along the eastern boundary adjacent to the Middelburg-Belfast (R104) provincial road and the gravel access road to the southern properties.



Photo 5 and 6: Notice placed on the north western corner of the site adjacent to the Middelburg-Belfast (R104) provincial road and on notice board at the Gerard Sekoto Public Library.

Figure 4.1: Placement of notices

4.2 Relevant authorities

4.2.1 Department of Agriculture, Rural Development, Land and Environmental Affairs (DARDLEA)

The Department of Agriculture, Rural Development, Land and Environmental Affairs was consulted with regards to the proposed development.

The following documentation (Appendix 1) was submitted to the Department (Witbank Office) on 14 October 2014:

- Application for authorisation in terms of the National Environmental Management Act, 1998 (Act. No. 107 of 1998), (as amended) and the Environmental Impact Assessment Regulations, 2010.

Subsequently, a letter was received from the Department (dated: 27 October 2014; Ref: 17/2/3N-404; Appendix 1) acknowledging receipt of the application form.

A pre-application meeting and site visit were held on Tuesday, 3 February 2015, which was attended by the following persons:

- ❖ Mrs. A. Erasmus – Clean Stream Environmental Services;
- ❖ Ms. R. van Rensburg – Clean Stream Environmental Services;
- ❖ Ms. O. Fakude – Department of Agriculture, Rural Development, Land and Environmental Affairs.

The following issues of concern were raised by the Department:

ISSUES RECORDED
• Services – will the development connect to municipal services? A services report must be included in the EIA.
• Services – when will the municipal sewer line be installed? When will the development connect to this sewer line?
• What arrangements have been made with the people currently residing on site (i.e. old houses)?
• Once the Environmental Authorisation is received, when will construction commence?

An email (dated: 3 February 2015; Appendix 1) was forwarded to the Department confirming the issues raised during the site visit. Subsequently, an email from the Department (dated: 5 February 2015; Appendix 1) was received indicating agreement with the issues recorded on site.

4.2.2 Department of Water and Sanitation

A Background Information Document and comment sheet (email dated: 11 November 2014; Appendix 6) were sent to the Department of Water and Sanitation (official – B. Mnguni) in order to obtain the Department's concerns with regards to the proposed project.

An email from the Department (dated: 11 December 2014; Appendix 6) was received indicating the following:

'Apologies for the late response to your e-mail. Kindly note that the Department shall comment on the reports (BA, EIA and Scoping). Attached is a list of the Upper Olifants Environmental Officers' e-mail address and the Quaternary Codes that they are responsible for'.

4.2.3 Department of Agriculture, Rural Development and Land Administration - Directorate: Land Use and Soil Management

A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 6) to the Department of Agriculture, Rural Development and Land Administration – Directorate: Land Use and Soil Management (official – Mr. J. Venter) in order to obtain the Department’s concerns with regards to the proposed project. **To date, no comments have been received.**

4.2.4 Department of Agriculture, Forestry and Fisheries

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were forwarded to the Department of Agriculture, Forestry and Fisheries (official – F. Mashabela) in order to obtain the Department’s concerns with regards to the proposed project. **To date, no comment has been received.**

4.2.5 Department of Co-operative Governance and Traditional Affairs (COGTA)

A Background Information Document and comment sheet were forwarded (email dated: 11 November 2014; Appendix 6) to the Department of Co-operative Governance and Traditional Affairs (COGTA) (official – M. Loock) in order to obtain the Department’s concerns with regards to the proposed project. **To date, no comment has been received.**

4.2.6 Department of Mineral Resources

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Department of Mineral Resources (official – M. Mokonyane) in order to obtain the Department’s concerns with regards to the proposed project. **To date, no comment has been received.**

4.2.7 Department of Roads and Transport

A Background Information Document and comment sheet (e-mail dated: 11 November 2014 and 18 November 2014; Appendix 6) were sent to the Department of Roads and Transport (officials – M. Sibanyoni; B. Viljoen) in order to obtain the Department’s concerns with regards to the proposed project.

Subsequently, a completed comment sheet (dated: 18 November 2014; Appendix 6) was received indicating the following:

<p><i>'The (R104) P154-4 are in a poor condition creating potholes and poor riding condition.'</i></p>
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4.2.8 Department of Culture, Sports and Recreation

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Department of Culture, Sports and Recreation (Director – Mr. S. Singh) in order to obtain the Department’s concerns with regards to the proposed project. **To date, no comment has been received.**

4.2.9 Mpumalanga Provincial Heritage Resources Authority

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Mpumalanga Provincial Heritage Resources Authority (official - B. Moduka) in order to obtain the Department's concerns with regards to the proposed project. **To date, no comment has been received.**

4.2.10 Department of Rural Development and Land Reform (Commission on Restitution of Land Rights)

An email (dated: 11 November 2014; Appendix 6) was forwarded to the Department of Rural Development and Land Reform (officials – ND Nkambule; GN Mathonsi; T. Mkhabela) with regards to any land claims registered against the farm Rondebosch 403 JS. Subsequently, a letter (dated: 12 November 2014; Appendix 6) was received indicating that a claim has been lodged against the mentioned farm. Currently, the said claim is being researched.

4.2.11 South African Heritage Resources Agency (SAHRA)

The Background Information Document (Appendix 4) was loaded onto the SAHRIS website on Tuesday, 11 November 2014 (Appendix 6). Subsequently, a letter (dated: 9 December 2014; Ref: 6754; Appendix 6) was received indicating the following:

SAHRA APM Unit requests that a Heritage Impact Assessment must be conducted for this site, the heritage impact assessment report should be conducted by a suitably qualified archaeologist. The Heritage Impact Assessment (HIA) report should follow the SAHRA HIA minimum standards. This HIA report should include:

- *A PIA desktop study, as the development location is located in a moderate palaeontologically sensitive zone.*
- *AIA assessing the impacts the development may have on archaeological resources that may be present in the development area.*
- *A Built environment assessment, as buildings over 60 years are generally protected from damage and destruction by the NHRA (25 of 1999).*
- *An assessment of any burial grounds that might be damaged during construction of the residential development.*

SAHRA awaits these studies before further comment can be issued for this case.

4.3 Surrounding land owners/users

A Deeds search was conducted via the WinDeed system of the Deeds Office of South Africa. The Deeds Search Template provides information pertaining to land ownership, size and land value of each of the properties.

Figure 4.2 provides an indication of the location of the surrounding landowners in relation to the proposed site.

A Background Information Document and comment sheet were forwarded to the surrounding landowners and users. Comments received are indicated in this section of the report.

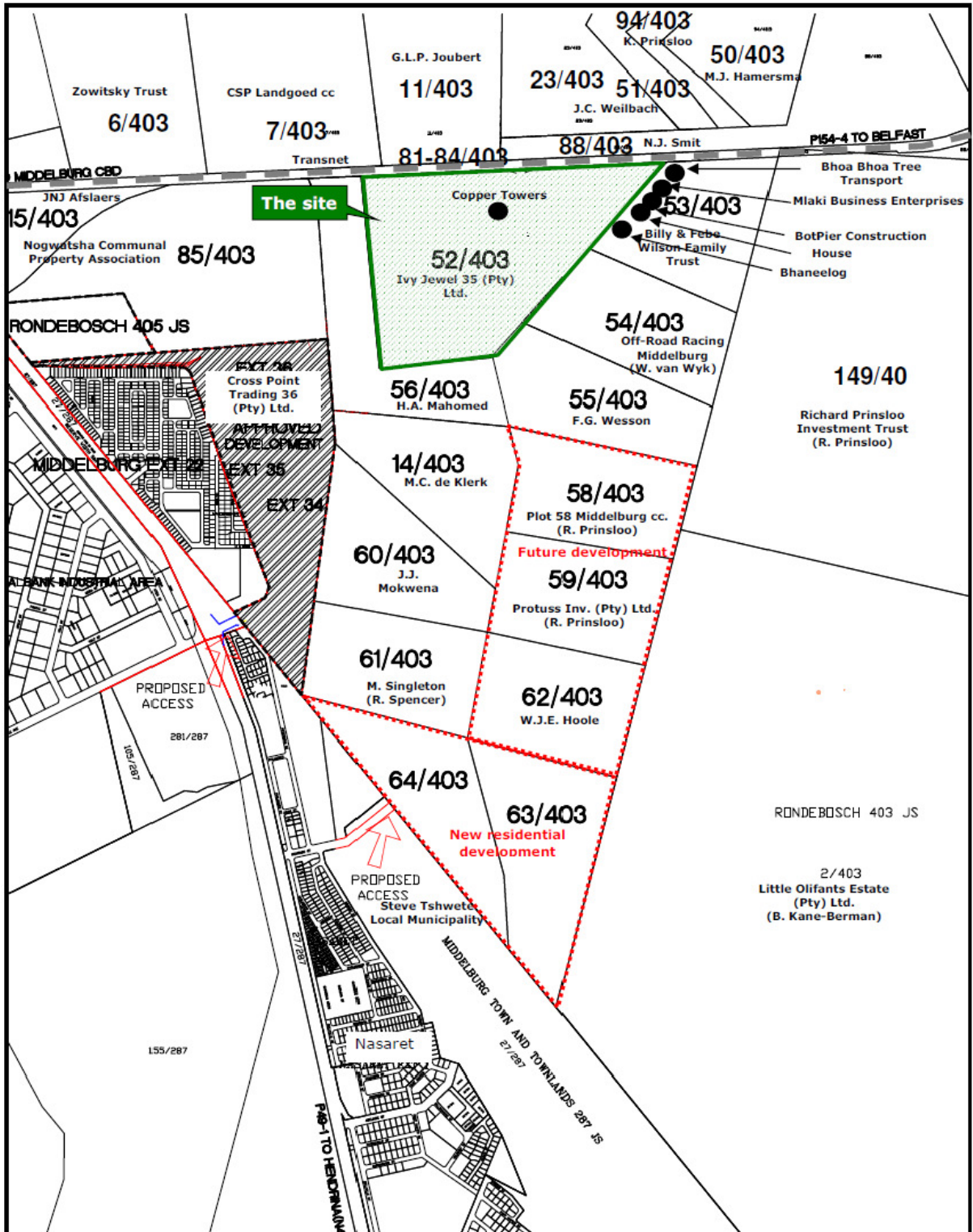


Figure 4.2: Surrounding landowners/users

4.3.1 Portion 2 - Little Olifants Estate (Pty) Ltd. (Figure 4.2)

According to the Deeds search, the owner of Portion 2 of the farm Rondebosch 403 JS (located south east of the said site; Figure 4.2) is registered in the name of Little Olifants Estate (Pty) Ltd.

A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 8) to one of the Directors, Mr. B.

Kane-Berman, in order to inform him of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.2 Portion 6 - Zowitsky Trust (Figure 4.2)

According to the Deeds search, Portion 6 of the farm Rondebosch 403 JS is registered to Zowitsky Trust. Portion 6 is located north west of the proposed site (Figure 4.2).

A Background Information Document and comment sheet were forwarded (e-mail dated: 20 November 2014; Appendix 8) to Mr. Zowitsky in order to inform him of the proposed development and obtain any issues of concern.

Subsequently, a completed comment sheet (dated: 20 November 2014; Appendix 8) was received indicating that his comments were the same as that of Dave Martin (see Section 4.3.3).

4.3.3 Portion 7 – CSP Landgoed cc (Figure 4.2)

Portion 7 of the farm Rondebosch 403 JS belongs to CSP Landgoed cc. A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 8) to the owner, Mr. D. Martin, in order to inform him of the proposed development and obtain any issues of concern.

A completed comment sheet (dated: 20 November 2014; Appendix 8) was received indicating the following issues of concern:

- | |
|---|
| <ul style="list-style-type: none">• <i>Security – both for ourselves, as well as wildlife. People will try hunt, snare and fish on our property as well as use it as a thoroughfare.</i>• <i>Sewage – already have sewage leaks from Nazareth.</i> |
|---|

4.3.4 Portion 11 – Ms. G.L.P. Joubert (Figure 4.2)

According to the Deeds search, the owner of Portion 11 of the farm Rondebosch 403 JS (located north of the said site; Figure 4.2) is registered in the name of Ms. G.L. Joubert.

A Background Information Document and comment sheet were delivered on 19 November 2014. The proposed project was discussed with Mrs. Joubert Greeff and a completed comment sheet (dated: 19 November 2014; Appendix 8) obtained indicating 'No objections'. Mrs. Joubert Greeff indicated that she would like to sell the said property.

4.3.5 Portion 13 – (Middelburg X34, 35 and 36; Figure 4.2)

Portion 13 of the farm Rondebosch 403 JS was approved for development in 2008. The development will be known as Middelburg X34, 35 and 36. The development was initiated by Sydom Investments (Pty) Ltd. but was taken over by Crosspoint Trading 36 (Pty) Ltd.

A Background Information Document and comment sheet were forwarded (e-mail dated: 14 November 2014; Appendix 8) to the developer (contact person: Ms. R. Noble) in order to inform them of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.6 Portion 14 - Mr. M.C. de Klerk (Figure 4.2)

Portion 14 of the farm Rondebosch 403 JS belongs to Mr. M.C. de Klerk. A Background Information Document and comment sheet were delivered (19 November 2014) to Mr. de Klerk in order to inform him of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.7 Portions 23 and 51 – J.C. Weilbach (Figure 4.2)

Portions 23 and 51 of the farm Rondebosch 403 JS belongs to Mr. J.C. Weilbach. A Background Information Document and comment sheet were forwarded (facsimile dated: 14 November 2014; Appendix 8) to Mr. Weilbach in order to inform him of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.8 Portion 47 – Riverside Estate (Yburten cc)

A Background Information Document and comment sheet were forwarded (email dated: 14 November 2014; Appendix 8) to Mr. R. Joubert of Riverside Estate (located north of the site) in order to inform him of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.9 Portion 50 – M.J. Hamersma (Figure 4.2)

Portion 50 of the farm Rondebosch 403 belongs to Mr. M.J. Hamersma. A Background Information Document and comment sheet were emailed (dated: 11 November 2014; Appendix 8) to Mr. Hamersma. Subsequently, an email (dated: 30 November 2014; Appendix 8) was received indicating the following issues of concern:

ISSUES RECORDED
<ul style="list-style-type: none"> • Design of residential area: Anything is better than the mess of undesirable elements currently living on the Towers site. A well designed and populated residential area will be great.
<ul style="list-style-type: none"> • Building regulations: As a natural extension to Hlalamnandi and Nasaret, the number of people per site must be controlled. In Hlalamnandi many of the houses added shack-like structures to rent out, and it will overload ...
<ul style="list-style-type: none"> • Impact on services: ...and it will overload the planned infrastructure like sewerage, water, electricity and transport. There are 260 units planned to back onto the R104. This seems a lot
<ul style="list-style-type: none"> • Size of population: What is the planned number of residents in the area – in the high density stands and in the single home stands? The number of units on Residential 3 stands adds up to 615 (or roughly 1200 adults and 1200 children). This is a total population of 4132 residents. It is our contention that the site, the infrastructure and the provisions for traffic to and from the site is too small for this high number of residents.
<ul style="list-style-type: none"> • Impact on services (including traffic): ... This is a total population of 4132 residents. It is our contention that the site, the infrastructure and the provisions for traffic to and from the site is too small for this high number of residents.
<ul style="list-style-type: none"> • Building standards: Can it be assumed that the buildings to be erected will be of the standard of Hlalamnandi, or will buildings of the standard of Rockdale Ext 24 be erected too?
<ul style="list-style-type: none"> • School: When will the school be constructed – is the Dept of Education of Mpumalanga involved in the plans? The plans for Portion 58 also names a school, and there are schools already in Nasareth and Ext 24.

ISSUES RECORDED
<ul style="list-style-type: none"> • Wall: There must be a wall (not a concrete fence) between the R104 and the units facing that road, to prevent pedestrians and informal trade from encroaching on the road reserve.
<ul style="list-style-type: none"> • Sewerage: The plans for sewerage must be very well designed as the run-off pipe recently constructed passes through a wetland and must not be allowed to block or overflow.
<ul style="list-style-type: none"> • Traffic and public transport: Experience from Hlalamnandi shows that public transport and taxis pick up and drop off passengers on the main road. Provision should be made for pickup and drop-off inside the residential area to avoid pedestrians on the main road.
<ul style="list-style-type: none"> • Main access: Portion 58 also applied for development of a residential area. Will the main access through town be via the R104, or through the developments currently taking place on Portion 63/64?
<ul style="list-style-type: none"> • Walk- and cycle ways: Provision must be made for safe walk- and cycle way (5m wide on the side of the R104) towards the industrial area and town, as many residents will prefer this mode of transport rather than private and public transport.
<ul style="list-style-type: none"> • Pedestrian crossing(s): Provision must also be made for these pedestrians to cross the R104 and/or N11 somewhere. Keep in mind too that until a school is actually established many pedestrians will be schoolchildren making their way to Middelburg Combined School, on the R104 and on the eastern side via the developments on portion 63.
<ul style="list-style-type: none"> • Community facility: Even though a stand of 0.21 ha is set aside for 'Community Facility' there is no undertaking from any institution to establish satellite police, town council or civil defence offices. This site is 2 km from the edge of town – virtually in a rural area – and since all amenities are provided separately from any other part of town it requires close maintenance and supervision.
<ul style="list-style-type: none"> • Political: Has any provision been made to provide the area with its own ward councilor? Has the IEC and ward demarcation commission been contacted in this regard? Currently this area falls in the ward of Dennesig, on the other side of town – which makes no sense.
<ul style="list-style-type: none"> • Spatial Planning: What are the spatial development plans for areas north of the R104? There are at least the portions 5,6,7,11,42,47,23,50,52,9,94 which may have future development plans. It goes without saying that some of the infrastructure (road, sewerage, water and electricity provision) of these areas will be shared with that of the Towers development. In this line, the spatial development of the areas north of the R104 must be taken into account as far as infrastructure, sense of place, population density, natural habitat and the preservation and future use of the Little Olifants area are concerned. Furthermore, the plans for Portion 58 also provides for a school, and so did portion 63. Surely nothing will come of these schools as Middleburg Combined School already exists in Nasareth, and there is a school in Extension 24? It is contended by us that a proper spatial development plan for the area east of Middelburg must be developed, with all the engineering, traffic and land use well coordinated and designed.

4.3.10 Portion 53 – Billie & Febe Wilson Familie Trust (Figure 4.2)

Portion 53 of the farm Rondebosch 403 JS is registered to Billy & Febe Wilson Familie Trust. A Background Information Document and comment sheet were subsequently e-mailed (dated: 11 November 2014; Appendix 8) to Mr. Wilson. **To date, no comment has been received.**

Mr. Wilson rents the section of his property located adjacent to the gravel road to other businesses. A Background Information Document and comment sheet were delivered (19 November 2014) and emailed (19 November 2014; Appendix 8) to the following businesses:

- Mlaki Business Enterprise (Thalita Mathebula) – trucking business;
- Bhaneelog (R. de Villiers);
- BotPier Construction cc (Pierre Botha);
- Bhao Bhao Tree Transport (Gert Burger) – transport business.

To date, no comment has been received.

4.3.11 Portion 54 – Off-Road Racing Middelburg cc. (Mr. W. van Wyk; Figure 4.2)

Portion 54 is registered to Off-Road Racing Middelburg cc. belonging to Mr. W. van Wyk. The site is currently used for light industrial activities and includes workshops and associated offices.

A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 8) to Mr. Van Wyk in order to inform him of the proposed development and obtain any issues of concern.

To date, no comment has been received.

4.3.12 Portion 55 - Mr. F.G. Wesson (Figure 4.2)

Mr. F.G. Wesson is the registered owner of Portion 55 of the farm Rondebosch 403 JS (Figure 4.2).

A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 8) to Mr. Wesson in order to inform him of the proposed development and obtain any issues of concern.

To date, no comment has been received.

4.3.13 Portion 56 - Mr. H.A. Mahomed (Figure 4.2)

Mr. H.A. Mahomed is the registered owner of Portion 56 of the farm Rondebosch 403 JS (Figure 4).

A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 8) to Mr. Mahomed in order to inform him of the proposed development and obtain any issues of concern.

To date, no comment has been received.

4.3.14 Portions 19, 58 and 59 – Mr. R. Prinsloo (Figure 4.2)

Companies (Richard Prinsloo Investment Trust, Plot 58 Middelburg cc., Protuss Inv.) belonging to Mr. R. Prinsloo own Portions 19, 58 and 59 as indicated in Figure 4.2.

A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 8) to Mr. Prinsloo in order to inform him of the proposed development and obtain any issues of concern. Subsequently, an email (dated: 11 November 2014; Appendix 8) was received requesting to be registered as an Interested and Affected Party. Mr. Prinsloo also enquired if the development and rezoning would be dealt with by Urban Dynamics.

4.3.15 Portion 60 - Mr. J.J. Mokwena (Figure 4.2)

Portion 60 of the farm Rondebosch 403 JS is registered to Mr. J.J. Mokwena. A Background Information Document and comment sheet were delivered (handed to his wife on 19 November 2014) in order to inform him of the

proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.16 Portion 61 - Mr. R. Spencer (Figure 4.2)

According to the Deeds search, Portion 61 of the farm Rondebosch 403 JS is registered in the name of Michelle Singleton.

A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 8) to Mr. Spencer in order to inform him of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.17 Portion 62 - Mr. W.J.E. Hoole (Figure 4.2)

Portion 62 is registered to Mr. W.J.E. Hoole. A Background Information Document and comment sheet were emailed (dated: 14 November 2014; Appendix 8) to Mrs. J. Hoole in order to inform them of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.18 Portions 15 and 85 - Nogwatsha Communal Property Association (Figure 4.2)

Portions 15 and 85 of the farm Rondebosch 403 JS is registered to the Nogwatsha Communal Property Association and is located west of the proposed site (Figure 4.2). JNJ Afslalers operate from the said property.

A Background Information Document and comment sheet were delivered (19 November 2014) to Mr. Phillip Shabangu in order to inform him of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.3.19 Portion 88 - Mr. N.J. Smit (Figure 4.2)

Portion 88 of the farm Rondebosch 403 JS is registered to Mr. N.J. Smit. A Background Information Document and comment sheet were delivered (19 November 2014) and emailed (Elmarie van den Berg; 19 November 2014; Appendix 8) in order to inform Mr. Smit of the proposed development and obtain any issues of concern. **To date, no comment has been received.**

4.4 Consultation with other stakeholders

As indicated in this section, various stakeholders were identified and contacted in order to obtain their concerns with regards to the proposed development.

4.4.1 Steve Tshwete Local Municipality

A Background Information Document and comment sheet were forwarded (e-mail dated: 14 November 2014; Appendix 7) to the Steve Tshwete Local Municipality (M. Mahamba) in order to obtain their concerns with regards to the proposed project. **To date, no comment has been received.**

4.4.2 Ward Councilors - Ward 8 and Ward 10

The Ward Councilors for Ward 8 and Ward 10 (B.D. Skosana; D.M. Longman) were provided with a Background Information Document (emails dated: 18 November 2014; Appendix 7) in order to obtain issues of concern and/or objections on behalf of the residents of the area. **To date, no comment has been received.**

4.4.3 Mpumalanga Tourism and Parks Agency (MTPA)

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Mpumalanga Tourism and Parks Agency (MTPA) (F. Krige) in order to obtain their concerns with regards to the proposed project. **To date, no comment has been received.**

4.4.4 South African National Roads Agency Limited (SANRAL)

A Background Information Document and comment sheet (facsimile dated: 11 November 2014; Appendix 6) were sent to the South African National Roads Agency (M. Yorke-Hart) in order to obtain their issues of concern since the proposed development would be located a few kilometers northeast of the N11 national road. **To date, no comment has been received.**

4.4.5 Trans African Concession (Pty) Ltd. (TRAC)

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to Trans African Concessions (R. Nkosi) in order to obtain their issues of concern since the N4 national road is located a few kilometers south of the site. **To date, no comment has been received.**

4.4.6 Eskom

A Background Information Document and comment sheet were forwarded (e-mail dated: 11 November 2014; Appendix 6) to Eskom (Transmission – E. Lennox and L. Motsisi; Mpumalanga Land and Rights – M. Moloko) in order to obtain their concerns with regards to the proposed project.

Subsequently, an email from Eskom (Transmission Division) (dated: 12 November 2014; Appendix 7) was received indicating the following:

'I refer to your e-mail dated 11 November 2014 and wish to inform you that the Transmission Division of Eskom is not affected by this application. Your application is herewith also forwarded to Eskom's Distribution Mpumalanga OU (The Land Development Manager, P.O. Box 223, WITBANK, 1035) for comments and direct reply to you. The contact person is Mr. Milton Moloko who can be contact at Tel. No. +27 76 571 7451.'

A letter from the Eskom Land Development and Environmental Manager (dated: 14 November 2014; Appendix 7) was subsequently received indicating the following:

'This application affects our Eskom Distribution's Rockdale-Doornkop 22kV, and Rockdale-Middelburg 22kV feeder. However Eskom Distribution has no objection to the principle of the above mentioned application provided that the following conditions are adhered to:-'

Twelve (12) conditions are indicated in the said letter (Appendix 7) that must be adhered to by the developer.

4.4.7 Middelburg Chamber of Commerce and Industry

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Middelburg Chamber of Commerce and Industry (A. Ott) in order to obtain their issues of concern. **To date, no comment has been received.**

4.4.8 Telkom

A Background Information Document and comment sheet (e-mail dated: 14 November 2014; Appendix 7) were sent to Telkom (Baarata Tsatsi) in order to obtain their issues of concern.

Subsequently, an email (dated: 25 November 2014; Appendix 7) and a letter were received from Telkom (dated: 24 November 2014; Appendix 7) indicating that Telkom does not have any objections to the proposal. The following was also indicated:

"Telkom has taken note of the proposed establishment of the FARM RONDEBOSCH 403 JS, MIDDELBURG and would like to point out that in the event that construction at the development site necessitates the deviation or removal of Telkom's telecommunication facilities:

- The land developer should request Telkom in good time for the deviation or removal of the Telkom telecommunication facilities.*
- The cost for such deviation or removal shall be for the account of the land developers.*

In the event that the Land Developers decide to install underground pipes for telecommunication service purposes for practical and aesthetic purposes, the cost for such conduit-pipes will be for the township developer's account. Alternatively, Telkom in its sole discretion will determine the most suitable and cost effective means to provide the telecommunication facilities at the Land Development.

Should the Land development project be approved, the Land developer should without delay, inform the Telkom Access Network Engineering Department officer Baarata Tsatsi telephone number 013 249 6267 for Telkom to proceed with the detail telecommunication infrastructure planning.

Please note that Telkom will only commence with the provision of telecommunication facilities (cabling) once Telkom has determined the demand for telecommunication services at the development and the project has been proved to be viable."

4.4.9 Transnet

A railway line is located north of the proposed site on the opposite side of the R104 provincial road (Figure 4.2). A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to Transnet (officials – P. Mnisi; T. Mavulwana) in order to obtain their issues of concern. **To date, no comment has been received.**

4.4.10 Wildlife and Environment Society of South Africa

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Wildlife and Environment Society of South Africa (L. Betha) in order to obtain their issues of concern. **To date, no comment has been received.**

4.4.11 Transvaal Landbou Unie

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Transvaal Landbou Unie (D. du Plessis) in order to obtain their issues of concern. **To date, no comment has been received.**

4.4.12 Mpumalanga Agriculture

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to Mpumalanga Agriculture (H. Laas) in order to obtain their issues of concern. **To date, no comment has been received.**

4.4.13 Distrikslandbou Unie Middelburg

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Distrikslandbou Unie Middelburg (JPJ Schmahl) in order to obtain their issues of concern. **To date, no comment has been received.**

4.4.14 Nkangala District Municipality

A Background Information Document and comment sheet (e-mail dated: 11 November 2014; Appendix 6) were sent to the Nkangala District Municipality (Development and Planning – S. Links) in order to obtain their issues of concern. **To date, no comment has been received.**

4.5 Evaluation of draft and final scoping reports

4.5.1 Availability of draft Scoping Report for review

The Draft Scoping Report (dated: March 2015) was submitted to the Department of Agriculture, Rural Development, Land and Environmental Affairs on 13 March 2015 (letter dated: 12 March 2015; Appendix 9).

The Draft Scoping Report was also provided to the following authorities for evaluation purposes:

- Department of Water Affairs – couriered 18 March 2015 (letter dated: 17 March 2015; Appendix 9);
- Mpumalanga Tourism and Parks Agency – couriered 18 March 2015 (letter dated: 17 March 2015; Appendix 9);
- Steve Tshwete Local Municipality – delivered 17 March 2015 (letter dated: 17 March 2015; Appendix 9).

The other government departments, stakeholders and interested and affected parties were informed that the document was available for evaluation purposes by means of e-mail, facsimile and phone calls. An example of the e-mails forwarded (dated: 13 and 17 March 2015) is provided in Appendix 9.

A copy of the Draft Scoping Report was made available from 13 March 2015 to 24 April 2015 at the Gerard Sekoto Public Library and the site office on Portion 52 Rondebosch 403 JS. A copy of the notice displayed at the library and the register is provided in Appendix 9.

In addition, a copy of the document was provided on the Clean Stream Environmental Services website (www.cleanstreamsa.co.za) for download and evaluation purposes. A copy of the webpage printouts are provided in Appendix 9.

The following interested and affected parties/stakeholders/government departments were notified of the said report:

INTERESTED AND AFFECTED PARTY LIST	
Organisation / Property	Name
Government Departments	
Department of Agriculture, Rural Development, Land and Environmental Affairs – Witbank	O. Fakude
Department of Water and Sanitation – Bronkhorstspruit	B. Mnguni; S. Maliaga
Department of Agriculture, Rural Development and Land Administration – Directorate: Land Use and Soil Management – Ermelo	J. Venter
Department of Agriculture, Forestry and Fisheries – Pretoria	F. Mashabela
Department of Co-operative Governance and Traditional Affairs (COGTA)	M. Loock
Department of Mineral Resources – Witbank	M. Mokonyane
Department of Public Works, Roads and Transport	M. Sibanyoni; B. Viljoen
Department of Culture, Sports and Recreation	S. Singh
Mpumalanga Provincial Heritage Resources Authority	B. Moduka
Department of Rural Development and Land Reform	G.N. Mathonsi
South African Heritage Resources Agency	N. Khumalo; C. Scheermeyer
Other Organisations	
Mpumalanga Tourism and Parks Agency	F. Krige
South African National Roads Agency	M. Yorke-Hart
Trans African Concessions	R. Nkosi
Eskom (Transmission; Mpumalanga Land and Rights)	E. Lennox; L. Motsisi; M. Moloko
Middelburg Chamber of Commerce and Industry	A. Ott
Telkom	B. Tsatsi
Transnet	P. Mnisi; T. Mavulwana
Wildlife and Environment Society of South Africa – Witbank	L. Betha
Transvaal Landbou Unie	D. du Plessis
Mpumalanga Agriculture	H. Laas
Distrikslandbou Unie Middelburg	J.P.J. Schmahl
Municipalities	
Nkangala District Municipality	S. Links
Steve Tshwete Local Municipality	M. Mahamba
Ward Councilor	B.D. Skosana; D.M. Longman
ADJACENT LANDOWNERS/USERS IDENTIFIED	
Portion 2 (Figure 4.2)	Little Olifants Estate (Pty) Ltd. (B. Kane-Berman)

INTERESTED AND AFFECTED PARTY LIST	
Organisation / Property	Name
Portion 6 (Figure 4.2)	Zowitzky Trust (Mr. Zowitzky)
Portion 7 (Figure 4.2)	CSP Landgoed cc. (D. Martin)
Portion 11 (Figure 4.2)	G.L.P. Joubert
Portion 13 (Figure 4.2)	Portion 13/Middelburg x34, 35 and 36 - Crosspoint Trading 36 (Pty) Ltd (R. Noble)
Portion 14 (Figure 4.2)	M.C. de Klerk
Portion 19 (Figure 4.2)	Richard Prinsloo Investment Trust (R. Prinsloo)
Portions 23 and 51 (Figure 4.2)	J.C. Weilbach
Portion 47 (Figure 4.2)	Riverside Estate (R. Joubert)
Portion 50 (Figure 4.2)	M.J. Hamersma
Portion 53 (Figure 4.2)	Bill & Febe Wilson Familie Trust (B. Wilson)
Rents part of Portion 53 (Figure 4.2)	Mlaki Business Enterprise (Thalita Mathebula)
Rents part of Portion 53 (Figure 4.2)	Bhaneelog (R. de Villiers)
Rents part of Portion 53 (Figure 4.2)	Bhao Bhao Tree Transport (G. Burger)
Rents part of Portion 53 (Figure 4.2)	BotPier Construction cc (P. Botha)
Portion 54 (Figure 4.2)	Off-Road Racing Middelburg cc (W. van Wyk)
Portion 55 (Figure 4.2)	F.G. Wesson
Portion 56 (Figure 4.2)	H.A. Mahomed
Portion 58 (Figure 4.2)	Pot 58 Middelburg cc. (R. Prinsloo)
Portion 59 (Figure 4.2)	Protuss Inv. (Pty) Ltd. (R. Prinsloo)
Portion 60 (Figure 4.2)	J.J. Mokwena
Portion 61 (Figure 4.2)	M. Singleton (R. Spencer)
Portion 62 (Figure 4.2)	W.J.E. Hoole
Portions 15 and 85 (Figure 4.2)	Nogwatsha Communal Property Association (P. Shabangu)
Portion 88 (Figure 4.2)	N.J. Smit

4.5.2 Comments received on draft Scoping Report

4.5.2.1 Interested and Affected Parties

No comment was received on the Draft Scoping Report from any of the adjacent landowners or other interested and affected parties (see Section 4.3).

An e-mail (dated: 15 March 2015; Appendix 9) was received from Mr. J. Martin indicating that he had provided comment on a previous occasion. Clean Stream Environmental Services acknowledged (e-mail dated: 16 March 2015; Appendix 9) that comment was received from Mr. Martin on 20 November 2014 and that his issues were indicated in Section 4.3.3 of the Draft Scoping Report.

4.5.2.2 Government Departments/relevant authorities/stakeholders

Department of Agriculture, Rural Development, Land and Environmental Affairs

A letter was received from the Department of Agriculture, Rural Development, Land and Environmental Affairs (dated: 1 April 2015; Ref: 17/2/3 N-404; Appendix 9) accepting the Draft Scoping Report and Plan of Study for EIA.

The Department indicated that Clean Stream Environmental Services may proceed with the Environmental Impact Report.

Department of Public Works, Roads and Transport

A completed comment sheet (dated: 16 March 2015; Appendix 9) was received from the Department of Public Works, Roads and Transport (Mr. B. Viljoen) indicating the following:

- *Building restriction of 95 m on all roads;*
- *Apply for any services within the area/building restriction;*
- *The road reserve is 40 m wide.*

The applicant was informed of the conditions stipulated by the Department of Public Works, Roads and Transport.

South African Heritage Resources Agency

The Draft Scoping Report was loaded onto the South African Heritage Resources Information System (SAHRIS) on 13 March 2015 for review. A copy of the webpage printout is provided in Appendix 9.

Subsequently, a letter (dated: 22 April 2015; Appendix 9) was received from the South African Heritage Resources Agency indicating the following:

"Thank you for noting our Notification of Intent to Develop letter in the Draft Basic Assessment Report. SAHRA notes that the relevant and qualified heritage specialist have been hired to conduct the Heritage Impact Assessment and the Palaeontological Desktop Assessment for the proposed development."

"SAHRA will comment further on this proposed development once the heritage documents are submitted to the case. SAHRA awaits these studies before further comment can be issued for this case."

The Heritage Impact Assessment and Palaeontological study will be loaded onto the SAHRIS website once completed.

Eskom Distribution

An e-mail was received from Mr. E. Lennox (dated: 17 March 2015; Appendix 9) requesting a copy of the layout plan. Clean Stream Environmental Services indicated (e-mail dated: 17 March 2015; Appendix 9) to Mr. Lennox that comment was received from Eskom Transmission on 11 November 2015.

Subsequently, Mr. Lennox indicated (e-mail dated: 17 March 2015; Appendix 9) that Eskom has no further comment.

4.5.3 Availability of final Scoping Report for review

The above-mentioned comments on the draft Scoping Report were included in Section 8 and Appendix 9 of the Final Scoping Report that was submitted (letter dated: 7 May 2015; Appendix 10) to DARDLEA on 8 May 2015

The Final Scoping Report (dated: April 2015) was made available to interested and affected parties, stakeholders and authorities for comment.

Interested and affected parties (see Interested and Affected Parties List provided in Section 4.5.1) were notified by means of facsimile, email and phone of the availability of the report for comment. An example of the e-mails forwarded (dated: 6 May 2015) is provided in Appendix 10. The interested and affected parties were requested to forward any comments on the report to Clean Stream Environmental Services within 21 days (i.e. 7 May 2015 to 28 May 2015).

A copy of the Final Scoping Report was made available from 7 May to 28 May at the site office on Portion 52 Rondebosch 403 JS. A copy of the notice displayed at the site office and the register is provided in Appendix 10.

In addition, a copy of the document was provided (from 7 May to 28 May 2015) on the Clean Stream Environmental Services website (www.cleanstreams.co.za) for download and evaluation purposes. A copy of the webpage printouts are provided in Appendix 10.

4.5.4 Comments received on final Scoping Report

4.5.4.1 Interested and Affected Parties

The following comment was received from Mr. D. Martin (email dated: 11 May 2015; Appendix 10):

'I refer to the above final scoping report received on 7 May 2015. I have read through the report but do not find any actions to address the valid comments I and other landowners raised? Can you please indicate what has been done to address these issues and I would also like to raise a new concern regarding the run off water from the proposed site – will this change the current flow pattern into and through our farm dam? I look forward to your reply.'

A response (email dated: 11 May 2015; Appendix 10) was forwarded to Mr. Martin providing an overview of the purpose of a Scoping Report as well as the scoping process. The following was also indicated:

'We can unfortunately not address your issues at this stage in the process. Your issues (including your new concern regarding the run-off water) has been noted and will be addressed in the draft EIA'.

4.5.4.2 Government Departments/relevant authorities/stakeholders

Department of Agriculture, Rural Development, Land and Environmental Affairs

A letter was received from the Department of Agriculture, Rural Development, Land and Environmental Affairs (dated: 9 May 2015; Ref: 17/2/3 N-404; Appendix 10) accepting the Final Scoping Report and Plan of Study for EIA.

The Department indicated that Clean Stream Environmental Services may proceed with the Environmental Impact Report.

4.5.5 Other comments received

The Steve Tshwete Local Municipality approved (letter dated: 14 December 2009; Appendix 10) the establishment of Middelburg Extension 44 on Portion 52 of the farm Rondebosch 403 JS subject to the following conditions:

- *that proclamation of the township be done only after the bulk infrastructure has been upgraded and a positive record of decision for the environmental impact assessment has been issued;*
- *that an additional church site be provided;*
- *that stands measuring 300 m² be reserved for affordable housing scheme;*
- *that the density for the 'Residential 3' development be limited to 60 dwelling units per hectare;*
- *that the Senior Manager: Town Planning Service and Senior Manager: Civil Engineer Services be allowed to discuss amendments of the township layout plan as and when necessary;*
- *that the precautionary measures recommended by the geologists be adhered to;*
- *that the traffic impact study required by the South African National Roads Agency and TRAC be conducted and submitted to Council for scrutiny;*
- *that the conditions imposed by the respective Departments and stakeholders be adhered to;*
- *that the application must either make provision for the existing Eskom power lines or reroute the power lines;*
- *that due to inadequate bulk water and sewerage supply the erection of top structures be prohibited until the bulk services are in place;*
- *that all engineering services be designed by a professional engineer according to the requirements of the relevant guidelines;*
- *that the model for pro-rata financial contributions which was developed by the consultants be re-evaluated and formally be submitted for consideration and approval for Council and that an appropriate contribution be made by the applicant;*
- *that the development be responsible for the installation of all internal electrical networks to the specifications of the Town Electrical Engineer;*
- *that the areas created for storm water not be zoned 'public open space' since that gives an incorrect perspective of the square metres available for park development but be zoned 'institutional' or 'community facility'.*
- *That contributions by developers be properly calculated in accordance with the design capacity, of the specific service, and pro-rata contributions to such capacity be payable prior to the commencement of development.*

It should be noted that Condition 1.5 (dealing with the density for the Residential 3 development) of the above-mentioned approval was withdrawn by the Steve Tshwete Local Municipality (letter dated: 19 April 2010; Appendix 10).

Based on the above-mentioned, the Steve Tshwete Local Municipality in principle approved the proposed development on the said property.

4.6 Public participation during the EIA phase

During the EIA phase, comments received during the scoping phase were investigated and feedback is provided in this EIA Report.

The draft Environmental Impact Report (dated: October 2015) will be submitted to the Department of Agriculture, Rural Development, Land and Environmental Affairs for evaluation purposes. A hard copy of the document will also be forwarded to the following authorities for evaluation (40-day period):

- Department of Water and Sanitation;
- Mpumalanga Tourism and Parks Agency;
- Steve Tshwete Local Municipality.

A copy of the draft Environmental Impact Report (EIR) will also be made available to the interested and affected parties and stakeholders consulted and/or registered as part of the process.

A hard copy of the draft EIR will be left at the Gerard Sekoto Public Library as well as at the site office on Portion 52 Rondebosch 403 JS. An electronic version will be made available on the company website (www.cleanstreams.co.za) and on cd (on request).

The various departments, stakeholders and interested and affected parties will be requested to forward any comments on the report to the consultant within the 40 day period provided. A register will be kept of all comments received in terms of the evaluation of the report. These comments will then be included and addressed in the final EIR.

The final EIR will once again be made available to interested and affected parties and stakeholders for comment (21-day period), where after it will be submitted to the Department of Agriculture, Rural Development, Land and Environmental Affairs for decision making.

A copy of the draft and final Environmental Impact Reports will be made available for evaluation purposes. A period of 40 days will be provided for the evaluation of the draft report, whereas a period of 21 days will be provided for the evaluation of the final report.

On receipt of the Environmental Authorisation and Record of Decision (positive or negative decision), all identified interested and affected parties (see Section 4 of this report) will be informed by means of facsimile, e-mail or telephonically that the Environmental Authorisation and Record of Decision with regards to the project have been issued. Information w.r.t. the appeal procedure will also be provided.

An advertisement in this regard will also be placed in the Middelburg Observer, in order to inform I&APs of the decision.

A copy of the Environmental Authorisation and Record of Decision will be made available on the company website (www.cleanstreams.co.za).

4.7 Summary of issues

Table 4.1 provides a summary of all the comments received during the Scoping and EIA phases of the project as well as a response to these comments.

Through the Scoping and EIA phases, it was determined that the main issues of concern were with regards to the following potential impacts:

- Surrounding landowners/users in terms of:
 - Security (people and wildlife);
 - Type of development – design of residential area; building regulations/standards; fencing of development; etc.
 - Size of population and services provided (e.g. school; community facility);
 - Fencing of area;
- Services (water, sewage, electricity, traffic, transport);
- Possible sewage pollution;
- Storm water run off from site;
- Traffic – additional traffic on R104 provincial road;
- Traffic – public transport; pedestrians; walk and cycle ways;
- Wetlands;
- Heritage and palaeontological features;
- Spatial planning.

No objections in terms of the development were received.

The developer will have to comply with the conditions set by the Steve Tshwete Local Municipality and Eskom.

Table 4.1: Summary of issues of concern raised by interested and affected parties (I&AP's), stakeholders and authorities		
Issue	I&AP, Stakeholders, Authority	Response
OVERALL RESIDENTIAL DEVELOPMENT		
Design of residential area: Anything is better than the mess of undesirable elements currently living on the Towers site. A well designed and populated residential area will be great.	M Hamersma	Noted.
Building regulations: As a natural extension to Hlalamnandi and Nasaret, the number of people per site must be controlled. In Hlalamnandi many of the houses added shack-like structures to rent out, and it will overload ...	M Hamersma	As an approved township, the bylaws of the Steve Tshwete Local Municipality (including building regulations) will have to be adhered to by the developer as well as the residents. The STLM will have to regularly monitor the said development to ensure compliance.
Building standards: Can it be assumed that the buildings to be erected will be of the standard of Hlalamnandi, or will buildings of the standard of Rockdale Ext 24 be erected too?	M Hamersma	As indicated in Section 2.3, the development is intended for the medium income market. The buildings will be of the standard of Hlalamnandi.
Size of population: What is the planned number of residents in the area – in the high density stands and in the single home stands? The number of units on Residential 3 stands adds up to 615 (or roughly 1200 adults and 1200 children). This is a total population of 4132 residents. It is our contention that the site, the infrastructure and the provisions for traffic to and from the site is too small for this high number of residents.	M Hamersma	According to Urban Dynamics, the estimated population would be approximately 4000 (i.e. based on the original layout plan, Figure 2.1). A concept and viability report (i.e. a services report) with regards to service provision for the proposed development was prepared by Afri-Infra Group (Pty) Ltd. The results of the said study are provided in Section 2.5 and Appendix 16 of this report.
PROVISION OF COMMUNITY SERVICES		
School: When will the school be constructed – is the Dept of Education of Mpumalanga involved in the plans? The plans for Portion 58 also names a school, and there are schools already in Nasareth and Ext 24.	M Hamersma	The school will be constructed as part of Phase 3. According to Urban Dynamics, the estimated population will be approximately 4000 indicating that the provision of a combined school would suffice. The estimated population required for a high school is between 6000 and 10 000 people. A copy of the townplanning application was forwarded to the Department of Education (Mpumalanga) for comment and input. The Department of Education will be involved in further discussions with regards to the said school.
Community facility: Even though a stand of 0.21 ha is set aside for 'Community Facility' there is no undertaking from any institution to establish satellite police, town council or civil defence offices. This site is 2 km from the edge of town – virtually in a rural area – and since all amenities are provided separately from any other part of town it requires close maintenance and supervision.	M Hamersma	Agreed. As indicated in Section 6.2.4, provision is made for Institutional stands (i.e. 3 churches, a combined school and a community facility – Layout Plan no. 4 (Figure 6.3). It is possible that the proposed community facility (moved to the centre of the development in order for it to be more accessible to all residents) could include a satellite police station, municipal offices, etc. The applicant/developer will however have to discuss this issue with the South African Police Service and the STLM.
IMPACT ON SERVICES (WATER, SEWERAGE, ELECTRICITY, ETC.)		
Telkom does not have any objections to the proposal.	Telkom	Noted.
Services: Will the development connect to municipal services? A services report must be included in the EIA.	Department of Agriculture, Rural Development, Land and Environmental Affairs	Yes. A concept and viability report (i.e. a services report) with regards to service provision for the proposed development was prepared by Afri-Infra Group (Pty) Ltd. The results of the said study are provided in Section 2.5 and Appendix 16 of this report.
Services: When will the municipal sewer line be installed? When will the development connect to this sewer line?	Department of Agriculture, Rural Development, Land and Environmental Affairs	As indicated in Section 6.3.2.1, the existing onsite septic/conservancy tanks will be decommissioned and connected to the proposed waterborne sewer network. The said septic tanks will however remain in use during the development of Phase 1. During the course of Phase 1, the development will thus connect to the municipal sewer, which has already been installed.
Impact on services:and it will overload the planned infrastructure like sewerage, water, electricity and transport. There are 260 units planned to back onto the R104. This seems a lot	M Hamersma	A concept and viability report (i.e. a services report) with regards to service provision for the proposed development was prepared by Afri-Infra Group (Pty) Ltd. The results of the said study are provided in Section 2.5 and Appendix 16 of this report. Section 9.4 provides further information regarding service provision.
Impact on services (including traffic): ... This is a total population of 4132 residents. It is our contention that the site, the infrastructure and the provisions for traffic to and from the site is too small for this high number of residents.	M Hamersma	
Sewage: Already have sewage leaks from Nasareth.	D Martin	Noted.
Sewerage: The plans for sewerage must be very well designed as the run-off pipe recently constructed passes through a wetland and must not be allowed to block or overflow.	M Hamersma	Agreed. A concept and viability report (i.e. a services report) with regards to service provision for the proposed development was prepared by Afri-Infra Group (Pty) Ltd. The results of the said study are provided in Section 2.5 and Appendix 16 of this report. Design details are provided in this report.
STORM WATER MANAGEMENT		
The run off water from the proposed site – will this change the current flow pattern into and through our farm dam?	D Martin	This is possible. However, a storm water management plan incorporating the recommendations of Grobler (2015) must be developed for the said site. See Section 9.4 for further details regarding the need for a storm water management plan.
IMPACT ON ROADS AND TRAFFIC		
Traffic and public transport: Experience from Hlalamnandi shows that public transport and taxis pick up and drop off passengers on the main road. Provision should be made for pickup and drop-off inside the residential area to avoid pedestrians on the main road.	M Hamersma	A traffic impact study was conducted by WSP SA Civil and Structural Engineers (Pty) Ltd (referred to as Makala and Kotze, 2009). The results of the said study are provided in Section 5.16 and Appendix 15. The following upgrades were recommended to be implemented by the developer:
Main access: Portion 58 also applied for development of a residential area. Will the main access through town be via the R104, or through the developments currently taking place on Portion 63/64?	M Hamersma	<ul style="list-style-type: none"> R104(154-4) provincial road/gravel access (site access) to be upgraded as recommended by Makala and Kotze (2009); Cowen Ntuli/N11 (P49-1) intersection to be upgraded as recommended by Makala and Kotze (2009). A sidewalk (1.5m wide) to be provided along the access road and the R104 provincial road to the proposed mini-bus-taxi laybys.
Walk- and cycle ways: Provision must be made for safe walk- and cycle way (5m wide on the side of the R104) towards the industrial area and town, as many residents will prefer this mode of transport rather than private and public transport.	M Hamersma	
Pedestrian crossing(s): Provision must also be made for these pedestrians to cross the R104 and/or N11 somewhere. Keep in mind too that until a school is actually established many pedestrians will be schoolchildren making their way to Middelburg Combined School, on the R104 and on the eastern side via the developments on portion 63.	M Hamersma	See Section 9.4 for further details.
Impact on services (including traffic): ... This is a total population of 4132 residents. It is our contention that the site, the infrastructure and the provisions for traffic to and from the site is too small for this high	DMartin	

Table 4.1: Summary of issues of concern raised by interested and affected parties (I&AP's), stakeholders and authorities		
Issue	I&AP, Stakeholders, Authority	Response
number of residents.		
Wall: There must be a wall (not a concrete fence) between the R104 and the units facing that road, to prevent pedestrians and informal trade from encroaching on the road reserve.	M Hamersma	The applicant/developer indicated that a wall will be erected adjacent to the R104 provincial road.
Provincial road: Building restriction of 95 m on all roads; Apply for any services within the area / building restriction; The road reserve is 40 m wide.	Department of Public Works and Transport	Noted. The applicant will comply with these conditions in terms of the overall development of the area.
Provincial road: The (R104) P154-4 are in a poor condition creating potholes and poor riding condition.		Noted.
ESKOM POWER LINES		
Eskom power lines: I refer to your e-mail dated 11 November 2014 and wish to inform you that the Transmission Division of Eskom is not affected by this application. Your application is herewith also forwarded to Eskom's Distribution Mpumalanga OU (The Land Development Manager, P.O. Box 223, WITBANK, 1035) for comments and direct reply to you. The contact person is Mr. Milton Moloko who can be contact at Tel. No. +27 76 571 7451.	Eskom (Transmission Division)	Noted.
Eskom power lines: This application affects our Eskom Distribution's Rockdale-Doornkop 22kV, and Rockdale-Middelburg 22kV feeder. However Eskom Distribution has no objection to the principle of the above mentioned application provided that the following conditions are adhered to:-	Eskom (Distribution)	Noted. The applicant will have to comply with the said conditions as indicated in Section 8.5.2 (EMP) of this report.
IMPACT ON ARCHAEOLOGICAL/PALAEONTOLOGICAL/CULTURAL FEATURES		
SAHRA APM Unit requests that a Heritage Impact Assessment must be conducted for this site, the heritage impact assessment report should be conducted by a suitably qualified archaeologist. The Heritage Impact Assessment (HIA) report should follow the SAHRA HIA minimum standards. This HIA report should include: <ul style="list-style-type: none"> • A PIA desktop study, as the development location is location in a moderate palaeontologically sensitive zone. • AIA assessing the impacts the development may have on archaeological resources that may be present in the development area. • A Built environment assessment, as buildings over 60 years are generally protected from damage and destruction by the NHRA (25 of 1999). • An assessment of any burial grounds that might be damaged during construction of the residential development. 	South African Heritage Resource Agency (SAHRA)	A Phase I Heritage Impact Assessment was conducted by Dr. A. van Vollenhoven as indicated in Section 5.13.1. A copy of the report is provided in Appendix 14. A Palaeontological Impact Assessment was conducted by Dr. H. Fourie as indicated in Section 5.13.2. A copy of the report is provided in Appendix 14.
SOCIO-ECONOMIC IMPACT		
What arrangements have been made with the people currently residing on site (i.e. old houses)?	Department of Agriculture, Rural Development, Land and Environmental Affairs	The residents are currently renting the houses from the developer and will be provided with ample warning when they need to vacate their houses for construction purposes.
Security - both for ourselves as well as wildlife. People will try hunt, snare and fish on our property as well as use it as a thoroughfare.	D Martin	Noted. As part of the Environmental Awareness Training (Section 8), the construction workers will be informed that poaching of animals (including fishing) on site and on adjacent properties will not be allowed.
Political: Has any provision been made to provide the area with its own ward councilor? Has the IEC and ward demarcation commission been contacted in this regard? Currently this area falls in the ward of Dennesig, on the other side of town – which makes no sense.	M Hamersma	The issue of a separate ward councillor for the area has not been discussed with the STLM as this falls outside of the scope of the EIA. This issue would have to be taken up with the STLM who is responsible for demarcating wards and appointing ward councillors.
SPATIAL PLANNING		
Spatial Planning: What are the spatial development plans for areas north of the R104? There are at least the portions 5,6,7,11,42,47,23,50,52,9,94 which may have future development plans. It goes without saying that some of the infrastructure (road, sewerage, water and electricity provision) of these areas will be shared with that of the Towers development. In this line, the spatial development of the areas north of the R104 must be taken into account as far as infrastructure, sense of place, population density, natural habitat and the preservation and future use of the Little Olifants area are concerned. Furthermore, the plans for Portion 58 also provides for a school, and so did portion 63. Surely nothing will come of these schools as Middleburg Combined School already exists in Nasareth, and there is a school in Extension 24? It is contended by us that a proper spatial development plan for the area east of Middelburg must be developed, with all the engineering, traffic and land use well coordinated and designed.	M Hamersma	Section 5.6, Section 5.17 and Figure 5.26 provide an indication of the current land use and proposed land use for the said site and immediate surroundings in terms of the Steve Tshwete Spatial Development Framework (2010). This is the latest information that is available for this area. A proper spatial development plan for the area east of Middelburg that includes engineering, traffic and land use is not within the scope of this EIA and would have to be commissioned by the Steve Tshwete Local Municipality. For each new development, the need for a school needs to be determined based on the number of persons to be accommodated within the said development. Townplanners refer to specific guidelines in this regard when planning developments.
REZONING		
Will the development and rezoning would be dealt with by Urban Dynamics?	R. Prinsloo	The rezoning application was compiled and submitted by Urban Dynamics as indicated in Section 2.4 and Appendix 3. The overall development will be done by the applicant, Ivy Jewel 35 (Pty) Ltd. It is currently not know who will be responsible for the actual construction. It is possible that a project manager will be appointed to manage the overall construction process.
COMMENCEMENT OF DEVELOPMENT		
Once the Environmental Authorisation is received, when will construction commence?	Department of Agriculture, Rural Development, Land and Environmental Affairs	This will depend on meeting conditions set by the Steve Tshwete Local Municipality (letter dated: 14 December 2015; Appendix 10) and the availability of funding.