

PREPARED FOR:
COSMOPOLITAN PROJECTS
TSHWANE (PTY) LTD



**SERVICES REPORT
FOR
TOWNSHIP
APPROVAL**

**ROADS AND STORMWATER
SYSTEMS**

APS #: 35370



ANDEON EXT 47

7 FEBRUARY 2022

Report No CC0771/00 Rev 00

REPORT INFORMATION

Location of Project: Andeon Extension 47
Description of Project: Roads and Stormwater Systems
APS Number #35370
Project Ref No: CC0771/00

Revision	Date	Prepared by	Approved by	Notes
00	7 Feb 22	A.Beck 	A.Beck 	For Township Approval



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Drawing List

Cosmopolitan Consult

Drawing No	Description	Rev
CPD ADN47/1	Proposed Township Andeon Ext 47	-

CivilCraft Consulting Engineers: Drawings

Drawing No	Description	Rev
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PART 1: SERVICES IMPACT ASSESSMENT

1.1. GENERAL INFORMATION

1.1.1 Scope of Report and APS number

Part 1 of the Report discusses the availability of Roads and Stormwater services to the proposed Andeon Extension 47. It also discusses whether upgrades to the Roads and Stormwater systems will be required for the proposed development. It must also be emphasized that the proposed Andeon Extension 47 will be developed as a Section 21 company development and a private body corporate will be appointed to maintain all the internal (private) roads and stormwater systems.

The APS application number for the proposed development is #APS: 35370, which was established with the Township Approval Phase.

1.1.2 Location of the Land Development Area

Please refer to the Locality Plan listed in Annexure A.

The proposed development is located to the west of Pretoria and is situated on Portion 183 of the farm Zandfontein No. 317-JR. Andeon Extension 47 is located to the north of Van der Hoff Road (R514) and to the south of John Vorster Drive (M80). The proposed development will be located to the east of Andeon Ext 18 and 38 (Westview) and will be bound by Mulder Street from the east, and Erma Street from the south. Mulder Street will provide the only access to the proposed development.

1.1.3 Developer and Consultants

- (i) The Developer is Cosmopolitan Projects Tshwane (Pty) Ltd
Reg No 2008/010750/07

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- (ii) The Civil Consultants are CivilCraft Consulting Engineers (Pty) Ltd,
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- (iv) The Town Planners are Cosmopolitan Consult (Pty) Ltd
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1.1.4 Township Information: Land use rights etc

Andeon Extension 47 will be developed as a medium density Residential 3 development. Please refer to the Proposed Township Layout (CPD ADN47/1), located in Annexure A.

Table 1: Zoning of Proposed Development.

ANDEON EXTENSION 47		
Use	No of Erven	Area (ha)
Residential 3	1	7.0327
Total Area Ext 47		7.0327

1.2 SERVICES IMPACT ASSESSMENT: EXISTING ROAD INFRASTRUCTURE

Please refer to Annexure A: CC0771/FIG3 for the General Layout of Roads and Stormwater Services as well as Annexure F: Figure 3, 0592/CL/01 and 0592/CL/02 for the existing road network and the proposed external road upgrades.

1.2.1 Access to Development and Internal roads

The proposed development will be located to the east of Andeon Ext 18 and 38 (Westview) and will be bound by Mulder Street from the east, and Erma Street from the south. Mulder Street will provide the only access to the proposed development.

The proposed development will be developed as a Section 21 Company development, which implies that a security-controlled access with sufficient stacking distance will be applied for each separate development entrance.

The Trip Generation of the proposed development given the directional splits of 25:75 and 70:30 for the AM and PM peaks respectively, is listed in Table 2 below:

Table 2: Estimated Development Trips.

Peak	Development Trips (vph)		
	IN	OUT	TOTAL
Weekday AM Peak hr	74	223	297
Weekday PM Peak hr	208	89	297

1.2.2 External Roads

The following information was extracted from the Traffic Impact Assessment (TIA) with regards to the existing road infrastructure bounding the proposed Andeon Extension 47 as well as the proposed access road:

- **Erma Street:** is classified as a Class 4a collector road which travels in an east-west direction along the southern boundary of the site. It is expected that some of the development's traffic would distribute westbound along Erma Street as there are a variety of businesses, mostly industrial, situated in this direction. This road comprises of a single carriageway road (one lane per direction) and currently the traffic volumes on this road,

past the site, are in the order of 910vph and 790vph (total both directions), during the weekday AM and PM peak hours, respectively.

- **Mulder Street:** *is classified as a Class 4a collector road which travels in a north-south direction along the eastern boundary of the site. It is proposed to provide the development's access at the existing T-intersection between Mulder Street and Boekenhoutkloof Street (See Section 3.2). It is expected that some of the development's traffic would distribute northbound along Mulder Street towards Bremer Street (R55) via Wilhelm Street, however, given the position of the site's access, it is anticipated that the majority of the development's traffic would rather opt to travel directly east from the site access to Bremer Street (R55) via Boekenhoutkloof Street and Market Street. This road comprises of a single carriageway road (one lane per direction) and currently the traffic volumes on this road, past the site, are in the order of 970vph and 780vph (total both directions), during the weekday AM and PM peak hours, respectively.*
- **Boekenhoutkloof Street:** *is viewed as an east-west Class 4b collector road which currently forms a priority stop-controlled T-intersection with Mulder Street (at the site's proposed access position). This road comprises of a single carriageway road (one lane per direction) and currently the traffic volumes on this road, at its intersection with Mulder Street, are in the order of 580vph and 530vph (total both directions), during the weekday AM and PM peak hours, respectively.*
- **Bremer Street (R55):** *is classified as a north-south Class 3 arterial road which is situated approximately 1.6km to the east site. Traffic from the proposed development can only access this road via Market Street and Wilhelm Street, however, Market Street is closer to the site and therefore it is expected that most of the traffic would instead travel via Boekenhoutkloof Street and Market Street to get to Bremer Street (R55). This road comprises of a dual carriageway road (two lanes per direction) and the current traffic volumes on this road, at its intersection with Market Street, is in the order of 3,600vph and 2,900vph, during the weekday AM and PM peak hours, respectively.*

The TIA refers to one access road to the proposed Andeon Extension 47. Please refer to drawing 0592/CL/01 in Annexure F for the proposed access road.

1.2.3 External Road Upgrades required for Andeon Ext 47

Please refer to extracts from the TIA in Annexure F for a comprehensive discussion on the access road and external road upgrades, etc. for the proposed development.

The following two external road upgrades are proposed for Andeon Ext 47:

- **Mulder Street / Boekenhoutkloof Street / Site Access Intersection:**

Please refer to drawing number 0592/CL/01 in Annexure F. This intersection is currently a priority stop-controlled T-intersection between Mulder Street (northern and southern approach) and Boekenhoutkloof Street (eastern approach), however, a western fourth leg will be added to this intersection to provide access to the development. It is also recommended to implement a single lane approach traffic circle with an approximate outside diameter between 25-30m as the intersection control. The developer would be responsible to implement the required access configuration.

- **Market Street / Bremer Street (R55) Intersection:**

Please refer to drawing number 0592/CL/02 in Annexure F. The following upgrades are required:

1. Extend the right turning auxiliary lane on the western approach of Market Street to 70m in total (52.5m straight with 17.5m taper).
2. Installation of right turning signal heads on the western and southern approaches of the intersection.
3. The implementation of updated signal timing plans (see Drawing No. 0592/CL/02).

In terms of bulk engineering contributions payable with respect to roads and stormwater, it is recommended that the bulk contributions be off set against the above-mentioned upgrades. It is argued that the proposed upgrades will improve the current traffic flow conditions in the area and should be viewed as beneficial to the road network.

1.2.4 Approval of TIA by CoT and GPDR

Please note that the TIA will be submitted, together with this Services Report, for approval from both the City of Tshwane (CoT) and the Gauteng Province Department of Roads and Transport (GPDR).

1.3 SERVICES IMPACT ASSESSMENT: EXISTING STORMWATER INFRASTRUCTURE

Please refer to CC0771/FIG3 for the Roads and Stormwater Layout and CC0771/FIG4 for the Stormwater Management Plan located in Annexure A. This information should be read in conjunction with the CoT Stormwater Master Plan, which needs to be provided by the CoT.

1.3.1 Existing External Stormwater

Andeon Extension 47 is located just east of the natural watershed between the Modderspruit (flowing in an eastern direction) and the Swartspruit (flowing in a western direction).

Therefore, the Modderspruit is located to the north of the proposed development, draining in an eastern direction.

There are two existing stormwater networks in the vicinity of the proposed development.

The first being the Armorflex stormwater channel on the eastern boundary of Andeon Extension 18 and 39 (Westview), which was designed by CivilCraft. Due to the alignment and positioning of the future PWV9 Freeway route, and the crossing of services through this route being avoided, this stormwater network will not be a viable drainage alternative and will therefore be excluded from this Report.

The second existing stormwater network, located in Mulder Street, was designed by Dhubecon Consulting Engineers. This network discharges run-off into an existing stormwater channel, which then discharges into the Modderspruit.

Table 3: Existing Stormwater Pipe Properties in Mulder Street.

Pipe Description	Location of Existing Stormwater Pipes	Pipe Capacity (l/s)	Site Runoff (Q ₂₀) (l/s)
1050mm ø	Eastern side of Mulder Street	2 087.00	1 393.00

As seen in Table 3 above, the capacity required to accommodate the run-off of the proposed development makes up 66.7% of the total capacity of the existing 1050mm diameter pipe. It is therefore apparent that the pipe under consideration does not have the required spare capacity to accommodate the run-off of the proposed development, combined with the current run-off in the pipe.

The above-mentioned 1050mm diameter stormwater pipe discharges into an existing stormwater channel, which then discharges into the Modderspruit.

The drainage capacity of this stormwater channel is calculated in **Section 1.3.3** of this Report.



Figure 1: Existing Stormwater Channel downstream (to the north) of the proposed Andeon Extension 47.

The run-off generated by the proposed development will be conveyed in a northern direction towards this existing stormwater channel.

The external stormwater upgrades to be implemented with the proposed development are comprehensively discussed in **Section 1.3.4** of this Report.

1.3.2 External Stormwater Management for Minor and Major Rainfall events

1.3.2.1 Run-off Calculations

Two different run-off determination methods were used to calculate the expected peak run-off discharge created by the catchment areas for Andeon Extension 47 namely the Rational Method and the Soil Conservation Service South Africa (SCS-SA) Method. Both these methods were used to validate the run-off results from the one method with reference to the other method.

The Rational Method:

$$Q = \frac{C \cdot I \cdot A}{0,36}$$

With.....

Q	=	Peak flow (ℓ/s) or (m ³ /s)
C	=	Run-off coefficient (dimensionless)
I	=	Rainfall Intensity (mm /h)
A	=	Catchment Area (km ²)

The SCS-SA Method:

The SCS-SA method is in principle based on the effect of different soil classifications and characteristics as well as the design rainfall distribution on the generated run-off per catchment area.

The soil grouping of the proposed development is classified by the presence of residual dolerite and shale resulting in insitu material being mostly clayey sand. This soil series has a SCS group classification of Soil Group B / C. Please refer to the characteristics of soil group B and C, as derived from the Drainage Manual 6th Edition, Chapter 3, listed below.

Soil Group B: *Moderately low stormflow potential. The soils of this group are characterized by moderate infiltration rates, effective depth and drainage. Permeability is slightly restricted (Final infiltration rate ≈ 13mm/hr. Permeability rate 3,8 to 7,6 mm/hr).*

Soil Group C: *Moderately high stormflow potential. The rate of infiltration is slow or deteriorates rapidly in this group. Permeability is restricted. Soil depth tends to be shallow (Final infiltration rate ≈ 6mm/hr. Permeability rate 1,3 to 3,8 mm/hr).*

To determine the design rainfall distribution which any selected rainfall event will produce, the Smithers and Schulze, 2000b SAWS Rainfall Stations was used. The Zandfontein rainfall station (Nr 0513162W) was selected, seeing that it is located within close proximity of the proposed development.

Table 4: Rainfall Distribution Data obtained from Zandfontein Rain Station.

Rainfall Station Details:			Average Measured Rainfall Depth for a 24 hour Storm Event					
Station Nr: 0513162W	MAP (mm)	Record Length (years)	2 Year (mm)	5 Year (mm)	10 Year (mm)	20 Year (mm)	50 Year (mm)	100 Year (mm)
Zandfontein	691	38	62.3	84.6	100.7	117	139.9	158.4

1.3.2.2 Pre-Development – Major Catchment Areas

When comparing the run-off results from the Rational Method to the run-off results listed for the SCS-SA Method, it is apparent that the Rational Method delivered higher overall run-off values, which indicates that these values should be used as design run-off. The results are tabulated below:

Table 5: Pre-Development Major Catchment Areas Run-off (CC0771/FIG4).

Catchment	Calculated Pre-Development Run-off in m ³ /s					
	Q ₂	Q ₅	Q ₁₀	Q ₂₀	Q ₅₀	Q ₁₀₀
SCS Method	0.105	0.246	0.370	0.511	0.724	0.907
Rational Method	0.341	0.542	0.739	1.023	1.684	2.472
Design (Rational)	0.341	0.542	0.739	1.023	1.684	2.472

1.3.2.3 Post-Development – Major Catchment Areas

As listed in **Section 1.3.2.1** of this Report, both the SCS-SA and Rational Method were used to determine the run-off for the post-development scenario of the proposed development. Table 6 below indicates a summary of run-off results obtained from both methods. The SCS-SA method delivered slightly higher run-off values for the post-development scenario. The results are tabulated below:

Table 6: Post-Development Major Catchment Areas Run-off (CC0771/FIG4).

Catchment	Calculated Post-Development Run-off in m ³ /s					
	Q ₂	Q ₅	Q ₁₀	Q ₂₀	Q ₅₀	Q ₁₀₀
SCS Method	0.575	0.906	1.145	1.393	1.746	2.030
Rational Method	0.577	0.869	1.079	1.332	1.796	2.263
Design (SCS)	0.575	0.906	1.145	1.393	1.746	2.030

All the run-off generated by the post-developed catchment area will be transported to the Modderspruit located to the north of the site via the existing stormwater channel.

1.3.2.4 Post Development – Minor Catchment Areas

The major catchment area for Andeon Extension 47 will be subdivided into smaller, minor catchment areas to represent the internal distribution of run-off accumulation within the stormwater system.

The minor catchment areas are defined to clearly indicate the area contributing towards a kerb inlet in order to determine the capacity to length of inlet and transition and pipe sizes. A principle of 80% affectivity for the kerb inlet and 80% full flow design for pipe capacity will apply.

Please note that this internal design and stormwater management will be finalized once the Site Development Plan (SDP) has been received. For the purpose of this Report, only the major catchment areas will be indicated.

1.3.3 Existing Roads and Stormwater Run-off Capacity

Due to insufficient capacity in the existing 1050mm diameter stormwater pipe, located in Mulder Street, the run-off created within Andeon Extension 47 representative of a 20-year recurrence (Q_{20}), will be transported directly to the existing stormwater channel located to the north of the proposed development. No run-off will thus be conveyed into an existing road network and therefore, the proposed development will have no impact on the existing roads run-off capacity.

The capacity of the existing stormwater channel however needs to be confirmed, as the run-off generated by the proposed development will discharge into this stormwater channel. Three separate sections of this channel were identified. Please refer to Drawing CC0771/FIG3, located in Annexure A, in conjunction with the capacity calculations below:

Section A-A.....

$$Q_{cap} = \frac{1 \cdot A^{\frac{5}{3}} \cdot \sqrt{S_o}}{n \cdot P^{\frac{2}{3}}}$$

$$Q_{cap} = 7.348 \text{ m}^3 / \text{s}$$

Section B-B.....

$$Q_{cap} = \frac{1 \cdot A^{\frac{5}{3}} \cdot \sqrt{S_o}}{n \cdot P^{\frac{2}{3}}}$$

$$Q_{cap} = 24.100 \text{ m}^3 / \text{s}$$

Section C-C.....

$$Q_{cap} = \frac{1 \cdot A^{\frac{5}{3}} \cdot \sqrt{S_o}}{n \cdot P^{\frac{2}{3}}}$$

$$Q_{cap} = 25.782 \text{ m}^3 / \text{s}$$

To design for the worst-case scenario, the capacity of the smallest channel section (Section A-A) will be compared to the total post-development run-off representative of the 20-year flood recurrence within this existing stormwater channel.

1.3.4 External Stormwater Upgrades

To confirm any external stormwater upgrades, the capacity of the existing networks needs to be compared the total run-off, including the post-development run-off of the proposed development.

As mentioned in **Section 1.3.3** of this Report, the run-off generated by the proposed development will discharge into the existing stormwater channel downstream of the proposed development. This existing stormwater channel currently conveys the run-off of an existing 1050mm diameter stormwater pipe that discharges into this channel. 80% full flow conditions are assumed for this existing pipe.

The total post-development run-off within this existing stormwater channel will thus consist of 80% full flow conditions in the existing 1050m diameter stormwater pipe, combined with the Q_{20} post-development run-off to be generated by the proposed Andeon Extension 47.

$$Q_{Design} = Q_{1050mm \text{ } \varnothing \text{ Pipe}} + Q_{20Post \text{ of Andeon Ext 47}}$$

$$Q_{Design} = 2.087m^3/s + 1.393/s$$

$$Q_{Design} = 3.480m^3/s$$

$$Q_{Cap} = 7.348m^3/s$$

$$Q_{Capacity} > Q_{Design}$$

It can therefore be concluded that when analysing the smallest section of the existing stormwater channel (Section A-A), sufficient spare capacity is available to accommodate the post-development run-off representative of the 20-year flood recurrence. To conclude, no external stormwater upgrades, apart from the Link Line between the proposed development and the existing stormwater channel, will be required for Andeon Ext 47.

It is however proposed that during the construction of the stormwater Link Line, the existing stormwater channel be cleared of overgrown vegetation.

1.4 SERVICES IMPACT ASSESSMENT: CONCLUSION

It can be concluded that external upgrades to the existing road network surrounding the development will have to be implemented with the proposed Andeon Extension 47. These upgrades will be discussed in detail in Part 2: Services Provision Details.

PART 2: SERVICES PROVISION DETAILS

2.1 GENERAL INFORMATION

2.1.1 Scope of Part 2

Part 1 of the Report discusses the availability of Roads and Stormwater services to the proposed Andeon Extension 47. It also discussed whether upgrades to the Roads and Stormwater systems will be required for the proposed development.

Part 2 of the Report discusses the design details and standards required for the internal systems, as well as the external upgrades.

2.2 SERVICE PROVISION DETAILS: ROADS

Please refer to CC0771/FIG3 for the Layout of the Roads and Stormwater Services, as well as CC0771/FIG5 for Boundary Road Contributions.

2.2.1 Site Investigation

As described in **Section 1.2.3**, two external road upgrades will have to be implemented with the proposed development. These external road upgrades, including all the internal (private) roads, will be designed according to the bearing capacity and properties of existing geology and soils on site. For this reason, a Geotechnical Report was prepared by Geo Buro Geotechnical Surveys in December 2021.

Please note that the following information was extracted from the Geotechnical Report. Please also refer to drawing number 9884-03 located in Annexure G for the geotechnical zoning map of the proposed development.

“Based on the soil profiles and the laboratory test results, the site is divided into three geotechnical zones:

- **Zone A** occupies the northern portion of the study area and a generalized description of the typical soil profile that may be encountered here is as follows:
 - 0,0 – 0,3: Moist, dark brown, soft, intact clay; Colluvium.
 - 0,3 – 1,8: Moist, yellow brown to reddish brown soft, intact gravelly clay; Slightly ferruginised residual diabase.
 - 1,8 – 3,4: Moist, yellow brown to dark yellow brown with black speckles, firm, intact silt; Residual diabase / dolerite.

- **Zone B** occupies the central portion of the study area and a generalized description of the typical soil profile that may be encountered here is as follows:
 - 0,0 – 0,4: Dry to slightly moist, grey, brown to orange, brown, loose, intact gravely silt; Colluvium with fine roots.
 - 0,4 – 2,2: Pinkish to purple, brown; medium to highly weathered, closely bedded and jointed soft rock shale; Silverton Shale.
- **Zone C** occupies the southern portion of the study area and a generalized description of the typical soil profile that may be encountered here is as follows:
 - 0,0 – 1,5: Moist, black, soft to firm, slickensideds clay; Residual.
 - 1,5 – 2,5: Moist to very moist, grey soft slickensided clay; Residual.
 - 2,5 – 3,0: Moist, light grey, loose to medium dense, jointed clayey gravel; Residual.”

2.2.2 Status of Existing Roads

Andeon Extension 47 is bound by the following existing roads:

- Erma Street: Located to the south; and
- Mulder Street: Located to the east.

Both the above-mentioned existing roads were designed by Dhubecon and constructed in 2014 – 2015. Due to the recent construction of these roads, the overall condition of these roads is within acceptable limits. Please refer to Annexure H for reference of these existing roads.

Given the fact that these surrounding roads fall within a road category 4a, the road layer works designed by Dhubecon consisted of the following layers:

20-30mm	Asphalt
150mm	G1 base course
150mm	C3 / C4 sub-base
150mm	G7 Upper selected layer* ¹
150mm	G8 / G9 Lower selected layer* ¹
150mm	Roadbed

Note: *1: These layers are subject to soil conditions on site.

2.2.3 Roads Master Plan

Please find included the Roads Master Plan under Annexure D.

2.2.4 Design Standards - Roads

The following specifications and standards will be used for the geometric, vertical and structural design of the roads:

- Guidelines for the Provision of Engineering Services and Amenities in Residential Township Development ("Red Book") issued by the National Housing Board.
- Geometric design standards of Accesses and Upgraded intersections: CoT standards.
- Draft UTG3: 1993 - Structural Design of Urban Roads.
- Standard Construction details and design standards for Roads and Stormwater drainage infrastructure, latest edition.
- Standard specifications for municipal civil engineering works, third edition 2005.

2.2.5 Classification of Roads

The two road upgrades proposed for Andeon Extension 47 is listed below:

Road / Intersection	Road Category ¹⁾	Traffic Class ²⁾	Road Class	Road Description	Road Reserve	Road width (m)	Construction Area
Mulder Str / Boekenhoutkloof Str / Site Access Intersection	UB / UB	E1	4a /4b	Rural Collector / Residential Collector	32m / 32m	7,4 / 7,4	+ - 830m ²
Market Str / Bremer Str Intersection	UB	E1	4b / 3	Residential Collector / District Distributor	16m / 32m	8,0 / 24,0	+ - 170m ²

1) Refer to Table 1 UTG 3 (1993)

2) Refer to Table 3 UTG 3 (1993)

2.2.6 Pavement Design

The following pavement designs are recommended in UTG3, and the proposed designs are as follows:

New Intersection: Mulder Str / Boekenhoutkloof Str / Site Access

UTG3

- 25mm Asphalt
- 125mm G2 or 150mm G3 Base
- 125mm C4 or 150mm G5 Subbase
- Selected layers G7-150mm
- Roadbed: Min G9 quality

Proposed Design

- 25mm Asphalt
- 150mm G2 Base
- 150mm C4 Subbase
- Selected layers G7-150mm
- Roadbed: Min G9 quality

Intersection Upgrade: Market Str / Bremer Str

<u>UTG3</u>	<u>Proposed Design</u>
- 25mm Asphalt	- 25mm Asphalt
- 125mm G2 or 150mm G3 Base	- 150mm G2 Base
- 125mm C4 or 150mm G5 Subbase	- 150mm C4 Subbase
- Selected layers G7-150mm	- Selected layers G7-150mm
- Roadbed: Min G9 quality	- Roadbed: Min G9 quality

Sidewalks (as discussed in the TIA listed in Annexure F)

- 60mm interlocking concrete pavers on 20mm sand (colour grey)
- 150mm subbase C4 compacted to 97% Mod AASHTO density
- 200mm roadbed G7 compacted to 93% Mod AASHTO Density

Private (Internal) Pavement Designs

- 25mm Asphalt
- 150mm G2 Base
- 150mm C4 Sub-base
- 150mm G7 Selected Layer
- 150mm Roadbed: Min G9 quality

2.2.7 Approval of TIA

Please note that the TIA will be submitted, together with this Services Report, for approval from both the City of Tshwane (CoT) and the Gauteng Province Department of Roads and Transport (GPDRT).

2.3 SERVICE PROVISION DETAILS: STORMWATER

Please refer to CC0771/FIG3 for the Roads and Stormwater Layout and CC0771/FIG4 for the Stormwater Management Plan listed in Annexure A.

2.3.1 Design Standards - Stormwater

All the internal and external stormwater systems will be designed and constructed to the standards and specifications as set out below:

- Standard Construction details and design standards for Roads and Stormwater drainage infrastructure, latest edition; and
- Standard specifications for municipal civil engineering works, third edition 2005.

2.3.2 Stormwater Masterplan

Please note that the Stormwater Master Plan was requested from the CoT and is currently still outstanding.

2.3.3 Servitudes

Please refer to drawing number CPD ADN47/1 (Proposed Township Layout) in Annexure A. Andeon Extension 47 will include two building lines (20m and 30m) as a result of the future proposed PWV9 route, which bounds the proposed development from the west. In future, the developer might apply for a building line relaxation. Furthermore, no registered servitudes are present on the site.

2.3.4 1:50 Year and 1:100 Year Flood lines

Andeon Ext 47 is located just west of the natural watershed between the Swartspruit and the Modderspruit. The proposed development is located approximately 640m south of the Modderspruit and will therefore not be affected by the 1:50 and 1:100-year flood lines.

2.4 COST ESTIMATE FOR ANDEON EXT 47

2.4.1 Roads and Stormwater Construction Costs (estimated)

Roads:

Description	Area ¹⁾ (m ²)	Rate ²⁾	Amount ²⁾
All Internal Roads (Private) (Developers Cost: No Bulk Contribution Off-Set)	24 615	R 730.00	R 17 968 950.00
Sub Total 1:			R 17 968 950.00
Mulder Str / Boekenhoutkloof Str / Site Access (Municipal) (Developers Cost: Bulk Contribution to be Off-Set)			
• New Road Section and Circle	Prov Sum	-	R 1 457 576.28
• Boundary Walkway	Prov Sum	-	R 874 399.05
Sub Total 2:			R 2 331 975.33
Market Street / Bremer Street (R55) Intersection (Municipal) (Developers Cost: Bulk Contribution to be Off-Set)			
• New Road Section including widenings and Traffic Signals	Prov Sum	-	R 600 522.53
Sub Total 3:			R 600 522.53
Total Roads:			R 20 901 447.86

- Notes:
1. The area includes traffic circles, bell mouths etc.
 2. The rates and amounts include Preliminary & General, Consulting fees and 15% VAT.

Stormwater:

Description	Unit	Qty	Rate ¹⁾	Amount
All Internal Stormwater (Private): (Developers Cost: No Bulk Contribution Off-Set)				
• 450mm dia pipes	m	850	R 1 600.56	R 1 360 476.00
• 525mm dia pipes	m	100	R 1 975.16	R 197 516.00
• 600mm dia pipes	m	50	R 2 302.47	R 115 123.50
• 675mm dia pipes	m	25	R 3 215.00	R 80 375.00
Sub Total 1:				R 1 753 490.50
All External Stormwater (Municipal): (Developers Cost: Partial Offset of Bulk Contributions)				
• 900mm dia pipes	m	365	R 4 463.23	R 1 629 078.95
• Reconstruction of Outlet Structure	Prov Sum	-	-	R 75 000.00
• External Stormwater Channel Maintenance	Prov Sum	-	-	R 20 000.00 ²⁾
Sub Total 2:				R 1 724 078.95
Stormwater Extension 47				R 3 477 569.45

Notes: 1. The rate includes Preliminary & General, Consulting fees and 15% VAT.

2. Maintenance of existing Stormwater channel to be off set against Bulk Contributions.

COMBINED ROADS AND STORMWATER:

The total estimated cost for construction of the Roads and Stormwater systems (inclusive of private and municipal services) is as follows:

Description of Private Infrastructure	Amount
Roads (Private)	R 17 968 950.00
Stormwater Systems (Private)	R 1 753 490.50
Total Cost (Incl P's & G's, Consulting Fees and 15% Vat)	R 19 722 440.50

Description of Municipal Infrastructure	Amount
Roads (Municipal)	R 2 932 497.86
Stormwater Systems (Municipal)	R 1 724 078.95
Total Cost (Incl P's & G's, Consulting Fees and 15% Vat)	R 4 656 576.81
Guarantee Amount (10% of Municipal Work)	R 465 657.68

2.4.2 Guarantee Amount

The guaranteed amount is shown in the table above and amounts to R 465 657.68 including VAT.

2.4.3 Bulk Service Contributions

Bulk Contributions for the development will be based on the zonings, density etc. as contained in the Draft Conditions of Establishment located in Annexure B. Please refer to the Bulk Service Contributions, dated 07 February 2022, in Annexure K.

CONTRIBUTIONS	CONTRIBUTIONS BY DEVELOPER
Total Development Charge for Roads	R 1 386 652.62
Development Charge Component for Watercourses	R 59 868.50
TOTAL (INCLUDING VAT):	R 1 446 521.12

The total Bulk Service Contributions payable (inclusive of both roads and stormwater) by the Developer to the CoT is therefore R 1 446 521.12 including VAT. Please also refer to **Section 2.4.5** of this Report for reference to the off setting of the Bulk Contributions.

2.4.4 Boundary Road Contributions

The Developer will be required to pay Boundary Road Contributions for half the width of the existing roads bounding the development.

Andeon Extension 47 has two boundary roads namely Erma Street and Mulder Street which bounds the development from the south and east respectively. Both these roads are classified as class 4b roads which implies that the normal boundary road contribution arrangement will be payable by the developer.

It must however be emphasized that the same Developer (Cosmopolitan Projects Tshwane) constructed and paid for both Erma Street and Mulder Street back in 2014. Therefore, it cannot be expected of this Developer to both construct the road and pay boundary road contributions for the same road.

No boundary road contributions are therefore payable by the Developer for Andeon Extension 47.

Road	Length (m)	Width (m)	Half the Road Area (m ²)	Rate	Amount (Including VAT)
Erma Street (South of development)	211	7,4	780.70	1 488.00	R 1 161 681.60
Mulder Street (East of development)	414	7,4	1 531.80	1 488.00	R 2 279 318.40
Total Ext 47 (Incl VAT):					R 3 441 000.00
Boundary Road Contribution Payable:					R 0.00

2.4.5 Reimbursements

Please refer to **Section 2.4.1** (Cost estimates) and **2.4.3** (Bulk Service Contributions) in conjunction with the discussion below.

Stormwater:

The total development charge component for watercourses, as confirmed in **Section 2.4.3** of this Report, is R 59 868.50 (daylights into a watercourse). Furthermore, the R 20 000.00 allocated for remedial work on the existing stormwater channel will be off-settable against the bulk contributions payable by the Developer.

Roads:

The total development charge for roads is R 1 386 652.62 as listed in Annexure K. Furthermore, no boundary road contributions will be payable by the Developer to the CoT due to the bounding roads being constructed by the same developer in 2014.

The construction of both the intersections of Mulder Street / Boekenhoutkloof Street, as well as the intersection upgrade of Market Street / Bremer Street, will alleviate the existing traffic conditions. The surrounding area will thus benefit from these external road upgrades, and the cost thereof is proposed to be off set against the bulk contributions payable by the developer.

Description	Total Cost (Including VAT)	To be Off set by Council	Owing by the Developer
Total Development Charge for Roads	-	R 0.00	R 1 386 652.62 ^{*1}
Development Charge Component for Watercourses	-	R 0.00	R 59 868.50 ^{*1}
Boundary Road Contributions:	-	R 0.00	R 0.00 ^{*2}
Boundary Service Contributions:	-	R 0.00	R 0.00 ^{*3}
External Stormwater (Municipal Link Line)	R 1 724 078.95	R 20 000.00 ^{*4}	R 0.00 ^{*4}
Mulder Street / Boekenhoutkloof Street Intersection (Including Traffic Circle)	R 2 331 975.33	R 2 331 975.33 ^{*5}	R 0.00 ^{*5}
Market Street / Bremer Street Intersection Upgrade	R 600 522.53	R 600 522.53 ^{*6}	R 0.00 ^{*6}
Contribution Payable	R 4 656 576.81^{*7}	R 2 952 497.86	R 1 446 521.12
Net Contribution Payable	R 4 656 576.81	R 0.00^{*8}	R 0.00^{*9}

- Notes:
- 1: Bulk Service Contributions to be off set. These amounts should be revised once the Services Agreement Stage is reached.
 - 2: No boundary road contribution for Erma Street or Mulder Street due to the same Developer constructing these roads in 2014.
 - 3: No boundary service contribution (insufficient capacity in stormwater pipes in the vicinity of the site).
 - 4: No reimbursement from or to CoT for Link Line, except for the existing stormwater channel maintenance (R 20 000.00).

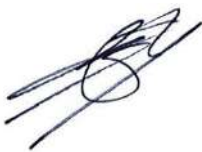
- 5: No reimbursement from or to CoT. Upgrade of public boundary road which will alleviate existing traffic conditions. Bulk Contributions to be Off-Set.
- 6: No reimbursement from or to CoT. Upgrade of public road which will alleviate existing traffic conditions. Bulk Contributions to be Off-Set.
- 7: Total cost of external municipal work. All internal (private) costs are excluded.
- 8: No reimbursement from the CoT. Full off set of Bulk Contributions.
- 9: No contributions payable by Developer, bulk contributions to be fully off set against external roads and stormwater upgrades.

Please refer to the table below for the summary of all roads and stormwater related reimbursements by the Developer to CoT and from CoT to the Developer.

The reimbursements of funds concluded that if all external upgrading, boundary road contributions and the off setting of bulk services contributions relative to both roads and stormwater infrastructure is taken into account, the CoT will not have to reimburse the Developer. The Developer will not be liable to pay any bulk contributions since external road upgrades (that will service the entire area) will be provided in lieu of these bulk contributions.

2.5 CONSTRUCTION

The construction of Civil Services to Andeon Extension 47 is planned to commence once the Township is approved, Services Agreements are in order and all Construction Drawings are approved. The estimated construction commencement date is March 2023 with an estimated construction period 5 months.



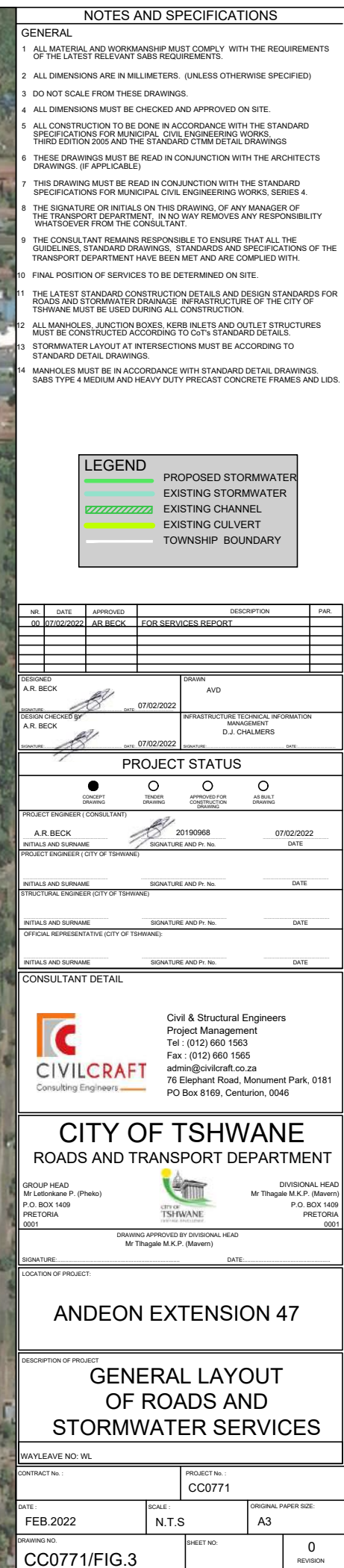
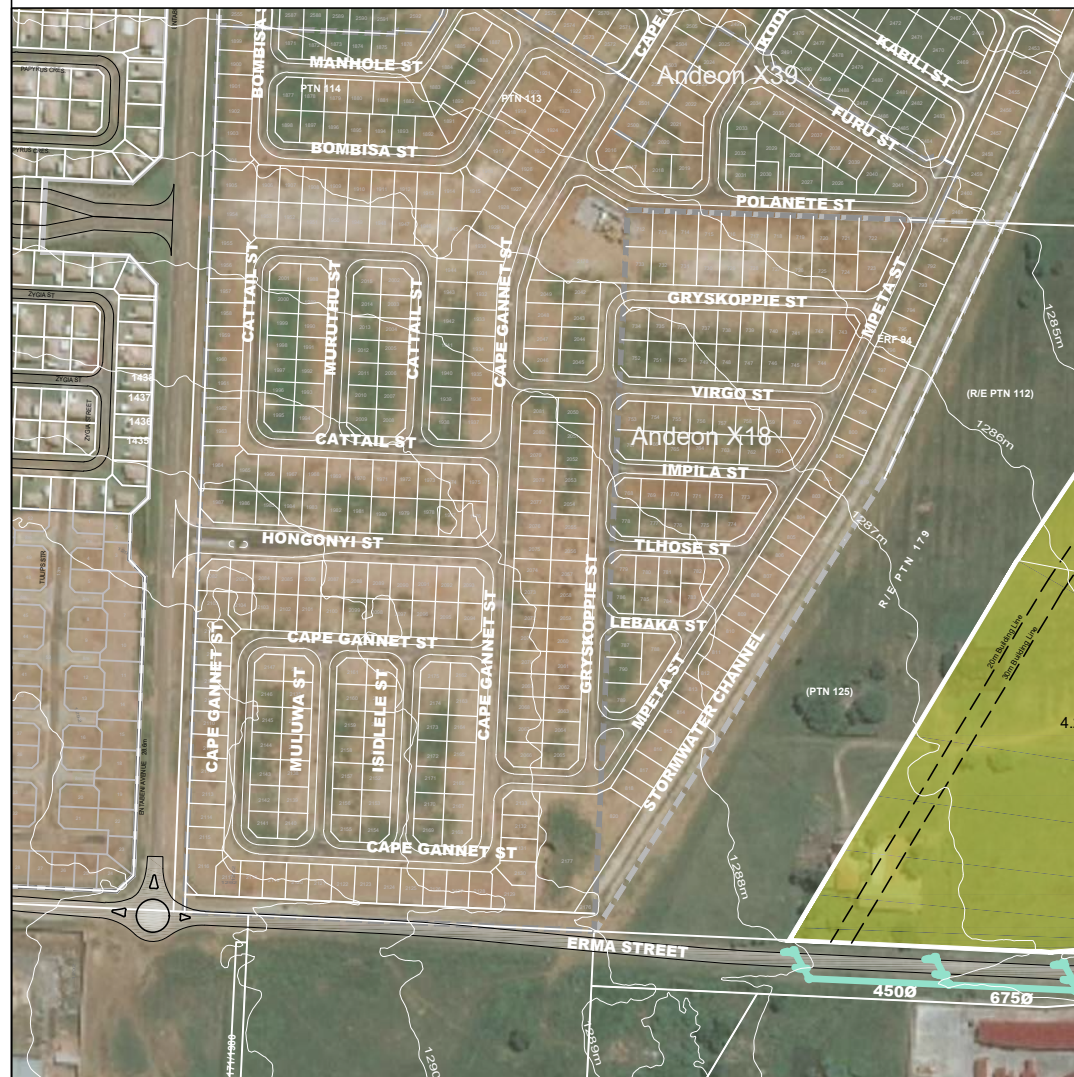
Compiled by Arno Beck Pr Eng
February 2022

ANNEXURE A:

Drawings

Cosmopolitan Consult Drawings	Description	Rev
CPD ADN47/1	Proposed Township Andeon Ext 47	-
CivilCraft Drawings	Description	Rev
Figure 1	Locality	00
CC0771/FIG3	General Layout of Roads and Stormwater Services	00
CC0771/FIG4	Stormwater Management Plan (Pre-and Post- Development Run-off)	00
CC0771/FIG5	General Layout Indicating Boundary Road Contributions	00







NOTES AND SPECIFICATIONS

GENERAL

- 1 ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
- 2 ALL DIMENSIONS ARE IN MILLIMETERS. (UNLESS OTHERWISE SPECIFIED)
- 3 DO NOT SCALE FROM THESE DRAWINGS.
- 4 ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
- 5 ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, THIRD EDITION 2005 AND THE STANDARD CTMM DETAIL DRAWINGS.
- 6 THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS. (IF APPLICABLE)
- 7 THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, SERIES 4.
- 8 THE SIGNATURE OR INITIALS ON THIS DRAWING, OF ANY MANAGER OF THE TRANSPORT DEPARTMENT, IN NO WAY REMOVES ANY RESPONSIBILITY WHATSOEVER FROM THE CONSULTANT.
- 9 THE CONSULTANT REMAINS RESPONSIBLE TO ENSURE THAT ALL THE GUIDELINES, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF THE TRANSPORT DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH.
- 10 FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.
- 11 THE LATEST STANDARD CONSTRUCTION DETAILS AND DESIGN STANDARDS FOR ROADS AND STORMWATER DRAINAGE INFRASTRUCTURE OF THE CITY OF TSHWANE MUST BE USED DURING ALL CONSTRUCTION.
- 12 ALL MANHOLES, JUNCTION BOXES, KERB INLETS AND OUTLET STRUCTURES MUST BE CONSTRUCTED ACCORDING TO COT'S STANDARD DETAILS.
- 13 STORMWATER LAYOUT AT INTERSECTIONS MUST BE ACCORDING TO STANDARD DETAIL DRAWINGS.
- 14 MANHOLES MUST BE IN ACCORDANCE WITH STANDARD DETAIL DRAWINGS. SABS TYPE 4 MEDIUM AND HEAVY DUTY PRECAST CONCRETE FRAMES AND LIDS.

LEGEND

- PROPOSED STORMWATER
- EXISTING STORMWATER
- EXISTING CHANNEL
- EXISTING CULVERT
- TOWNSHIP BOUNDARY

NR	DATE	APPROVED	DESCRIPTION	PAR
00	07/02/2022	A.R. BECK	FOR SERVICES REPORT	

DESIGNED
A.R. BECK
DATE: 07/02/2022

DRAWN
AVD
DATE: 07/02/2022

DESIGN CHECKED BY
A.R. BECK
DATE: 07/02/2022

INFRASTRUCTURE TECHNICAL INFORMATION
MANAGEMENT
D.J. CHALMERS
DATE:

PROJECT STATUS

CONCEPT
DRAWING

TENDER
DRAWING

APPROVED FOR
CONSTRUCTION
DRAWING

AS BUILT
DRAWING

PROJECT ENGINEER (CONSULTANT)
A.R. BECK
20190968
07/02/2022

INITIALS AND SURNAME
PROJECT ENGINEER (CITY OF TSHWANE)
SIGNATURE AND P. No.
DATE

INITIALS AND SURNAME
STRUCTURAL ENGINEER (CITY OF TSHWANE)
SIGNATURE AND P. No.
DATE

INITIALS AND SURNAME
OFFICIAL REPRESENTATIVE (CITY OF TSHWANE)
SIGNATURE AND P. No.
DATE

INITIALS AND SURNAME
SIGNATURE AND P. No.
DATE

CONSULTANT DETAIL

Civil & Structural Engineers
Project Management
Tel : (012) 660 1563
Fax : (012) 660 1565
admin@civildraft.co.za
76 Elephant Road, Monument Park, 0181
PO Box 8169, Centurion, 0046

CITY OF TSHWANE

ROADS AND TRANSPORT DEPARTMENT

GROUP HEAD
Mr Letlankane P. (Phelo)
P.O. BOX 1409
PRETORIA
0001

DIVISIONAL HEAD
Mr Thagale M.K.P. (Mavren)
P.O. BOX 1409
PRETORIA
0001

DRAWING APPROVED BY DIVISIONAL HEAD
Mr Thagale M.K.P. (Mavren)

SIGNATURE: _____ DATE: _____

LOCATION OF PROJECT:

ANDEON EXTENSION 47

STORMWATER MANAGEMENT PLAN (PRE- AND POST-DEVELOPMENT RUN-OFF)

WAYLEAVE NO.: WL

CONTRACT No.:
FEB.2022

PROJECT No.:
CC0771

DATE:
FEB.2022

SCALE:
N.T.S

ORIGINAL PAPER SIZE:
A3

DRAWING NO.:
CC0771/FIG.4

SHEET NO.:
0

REVISION:
0

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NOTES AND SPECIFICATIONS

GENERAL

1

ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.

2

ALL DIMENSIONS ARE IN MILLIMETERS. (UNLESS OTHERWISE SPECIFIED)

3

DO NOT SCALE FROM THESE DRAWINGS.

4

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ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, THIRD EDITION 2005 AND THE STANDARD CTMM DETAIL DRAWINGS

6

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10

FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

11

THE LATEST STANDARD CONSTRUCTION DETAILS AND DESIGN STANDARDS FOR ROADS AND STORMWATER DRAINAGE INFRASTRUCTURE OF THE CITY OF TSHWANE MUST BE USED DURING ALL CONSTRUCTION.

12

ALL MANHOLES, JUNCTION BOXES, KERB INLETS AND OUTLET STRUCTURES MUST BE CONSTRUCTED ACCORDING TO COT'S STANDARD DETAILS.

13

STORMWATER LAYOUT AT INTERSECTIONS MUST BE ACCORDING TO STANDARD DETAIL DRAWINGS.

14

MANHOLES MUST BE IN ACCORDANCE WITH STANDARD DETAIL DRAWINGS. SABS TYPE 4 MEDIUM AND HEAVY DUTY PRECAST CONCRETE FRAMES AND LIDS.

LEGEND:

BOUNDARY ROAD (ERMA STREET) : NO BOUNDARY ROAD CONTRIBUTIONS PAYABLE

BOUNDARY ROAD (MULDER STREET) : NO BOUNDARY ROAD CONTRIBUTIONS PAYABLE

NR.	DATE	APPROVED	DESCRIPTION	PAR.
00	07/02/2022	AR BECK	FOR SERVICES REPORT	

DESIGNED

A.R. BECK

SIGNATURE

DATE

07/02/2022

DRAWN

AVD

SIGNATURE

DATE

07/02/2022

DESIGN CHECKED BY

A.R. BECK

SIGNATURE

DATE

07/02/2022

INFRASTRUCTURE TECHNICAL INFORMATION MANAGEMENT

D.J. CHALMERS

SIGNATURE

DATE

PROJECT STATUS

CONCEPT DRAWING

TENDER DRAWING

APPROVED FOR CONSTRUCTION DRAWING

AS BUILT DRAWING

A.R. BECK

20190968

07/02/2022

INITIALS AND SURNAME

SIGNATURE AND P. No.

DATE

PROJECT ENGINEER (CITY OF TSHWANE)

SIGNATURE AND P. No.

DATE

INITIALS AND SURNAME

SIGNATURE AND P. No.

DATE

STRUCTURAL ENGINEER (CITY OF TSHWANE)

SIGNATURE AND P. No.

DATE

INITIALS AND SURNAME

SIGNATURE AND P. No.

DATE

OFFICIAL REPRESENTATIVE (CITY OF TSHWANE)

SIGNATURE AND P. No.

DATE

INITIALS AND SURNAME

SIGNATURE AND P. No.

DATE

CONSULTANT DETAIL

CIVILCRAFT

Consulting Engineers

Civil & Structural Engineers

Project Management

Tel : (012) 660 1563

Fax : (012) 660 1565

admin@civildraft.co.za

76 Elephant Road, Monument Park, 0181

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CITY OF TSHWANE

ROADS AND TRANSPORT DEPARTMENT

GROUP HEAD

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P.O. BOX 1409

PRETORIA

0001

DIVISIONAL HEAD

Mr Thagale M.K.P. (Mavern)

P.O. BOX 1409

PRETORIA

0001

DRAWING APPROVED BY DIVISIONAL HEAD

Mr Thagale M.K.P. (Mavern)

SIGNATURE

DATE

LOCATION OF PROJECT:

ANDEON EXTENSION 47

DESCRIPTION OF PROJECT

GENERAL LAYOUT INDICATING BOUNDARY ROAD CONTRIBUTIONS

WAYLEAVE NO.: WL

CONTRACT No.:

PROJECT No.:

CC0771

CC0771

DATE:

SCALE:

ORIGINAL PAPER SIZE:

FEB.2022

N.T.S

A3

DRAWING NO.

SHEET NO.

REVISION

CC0771/FIG.5

0

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ANNEXURE B:
Proposed Conditions of Establishment

STATEMENT OF THE CONDITIONS UNDER WHICH THE APPLICATION MADE BY DANKOSPACE PROPRIETARY LIMITED (REGISTRATION NUMBER: 2013/214420/07) (HEREINAFTER REFERRED TO AS THE TOWNSHIP OWNER) IN TERMS OF SECTION 16(4)(F)(I) OF THE CITY OF TSHWANE LAND USE MANAGEMENT BY-LAW, 2016 FOR THE ESTABLISHMENT OF A TOWNSHIP PORTION 183 (A PORTION OF PORTION 179) OF THE FARM ZANDFONTEIN 317-JR, GAUTENG PROVINCE HAS BEEN APPROVED

1. CONDITIONS TO BE COMPLIED WITH BY THE TOWNSHIP OWNER PRIOR TO THE OPENING OF THE TOWNSHIP REGISTER IN TERMS OF SECTION 16(7) AND (8), AND DECLARING THE TOWNSHIP A PROCLAIMED TOWNSHIP IN TERMS OF SECTION 16(9) OF THE CITY OF TSHWANE LAND USE MANAGEMENT BY-LAW 2016 (HEREINAFTER REFERRED TO AS THE "BY-LAW")

Proof of compliance of conditions in terms of this paragraph shall be to the satisfaction of the Municipality in terms of section 16(7)(a) of the By-law.

1.1 GENERAL

The township owner shall comply with the provisions of section 16(7) of the By-law and satisfy the City of Tshwane Metropolitan Municipality that –

1.1.1 Amendment Scheme

The relevant amendment scheme in terms of section 16(4)(d) of the By-law read with section 16(4)(g)(v) is in order and shall be published in terms of section 16(9)(a) and (b) in accordance with COT: F/28.

1.1.2 Name of Township, street names and numbering

The name of the township as well as the street names and numbers have been approved by the Municipality as indicated on the Layout Plan in accordance with Schedule 5 and section 42 of the By-law.

1.1.3 Geotechnical conditions in terms of section 28(12) to (14)

A geotechnical report has been submitted in order to determine the soil suitability of the land and indicating the various classes of soil according to the NHBRC classification on which the township is to be established and the said report shall be favourable. If it is determined that the property falls within a dolomitic area the applicant shall provide proof that a dolomitic stability and foundation investigation has been carried out and a report compiled from the results, indicating areas suitable for development and specifying conditions under which development may take place, has been submitted and accepted by the Municipality and the Council for Geoscience;

The Engineer Geologist has certified that he/she compared the final layout plan of the township with the geological report in conjunction with the consulting town planner and he/she is satisfied that buildings can be erected on every erf. If any special arrangements have to be made for any erf the township owner shall provide proof that these arrangement have been made to the satisfaction of the Municipality.

If required by the Municipality to do so, the township owners shall have the layout plan for the township vetted by the Council for Geoscience.

1.1.4 Engineering Services

- (i) Access is available to the township and that access to a public street system is available to all erven in the township whether by means of a private or public street in terms of section 28(5) of the By-law;
- (ii) The portions of the road reserves adjoining the proposed township, and which are required for the proper installation and maintenance of municipal services, shall be acquired by the township owner;
- (iii) Engineering Services read with Chapter 7 of the By-law: The township owner shall, at its (or his or her) costs provide such engineering services, social infrastructure and open spaces as the Municipality may deem necessary for the proper development of the land development area and/or land development application; provided that the Municipality may, for that purpose, enter into an engineering services agreement with the owner of the land development area, in terms of the By-law, other law and as may be required in accordance with section 49 of the Act;
- (iv) The township owner shall for the purpose of providing such engineering services reach agreement to the satisfaction of, and with the City of Tshwane on the availability and provision of engineering services for the township, which agreement shall indicate the standard of services to be provided and

obligations of the Township Owner and the City of Tshwane with regard to the provision of internal and external engineering services and the payment of engineering services contribution toward the provision of such services in terms of section 21(3) of the by-law and section 49 of Spatial Planning and Land Use Management Act, (Act 16 of 2013);

- (v) A transport infrastructure study shall be submitted to the satisfaction of the Municipality, if required to do so by the Municipality in terms of Schedule 6 paragraph 3.(9)(d);
- (vi) A detailed Public Transport Assessment shall be submitted by the township owner in compliance with Section 38 of the National Land Transport Act, 2009 (Act 5 of 2009), to the satisfaction of the Municipality, if required to do so by the Municipality read with Schedule 6 paragraph 3(16);
- (vii) The stormwater plan for this township must be integrated with the greater stormwater master plan for the total relevant catchment area, including adjoining areas. The low points in roads and the accumulation of stormwater in crescents, cul-de-sac's and lower lying erven must be drained to the satisfaction of the Municipality.

1.1.5 Department Mineral Resources

The comments of the Department: Mineral Resources was obtained.

1.1.6 EIA read with Schedule 6(18) of the By-law

A record of decision from the Gauteng Department of Agriculture and Rural Development shall be obtained in terms of the provisions of the Environmental Management Act, 1998 (Act. 107 of 1998) and conditions that may have been imposed in the record of decision shall be complied with at the cost of the township owner.

1.1.7 Electricity where limited capacity is available

The township lies within the priority area for the supply of electricity in bulk can be supplied, provided that the total expected load of _____ kVA is not exceeded. Capacity in this regard will be available for 12 months after approval of the township. This date may be amended with the written approval of the Services Infrastructure Department (Energy and Electricity Division) in terms of Chapter 7 of the By-law read with section 42 of SPATIAL PLANNING AND LAND USE MANAGEMENT ACT, (ACT 16 OF 2013). This may apply mutatis mutandis to other engineering services.

1.1.8 General Plan

- (a) General Plan in terms of section 16(6) of the By-law plus extensions of time in terms of section 16(6)(a) and section 16(8)(a) of the By-law read with Schedule 10.
- (b) The township owner shall comply with the provisions of section 16(6) and 29 (where applicable) of the By-law.

2. CONDITIONS OF ESTABLISHMENT RELATING TO THE TOWNSHIP WHICH SHALL REMAIN APPLICABLE TO THE TOWNSHIP AND ERVEN IN THE TOWNSHIP IN TERMS OF SECTION 16(4)(f) AND (g)(ii).

2.1 NAME

The name of the township is **ANDEON EXTENSION 47.**

2.2 DESIGN

The township consists of two erven as indicated on **Layout Plan CPD ADN47-1.**

2.3 PROVISION AND INSTALLATION OF ENGINEERING SERVICES

The Township Owner shall at his cost provide the township with such engineering services, social infrastructure and open spaces as the Municipality may deem necessary for the proper development of the township and comply with the engineering services agreement entered into between the township owner and the Municipality as required in terms of Section 21(3) of the By-law and in accordance with section 49 of the Spatial Planning and Land Use Management Act, 16 of 2013.

2.4 ACCEPTANCE AND DISPOSAL OF STORMWATER

The township owner shall arrange for the drainage of the township to fit in with that of the adjacent roads and all stormwater running off or being diverted from the roads and higher lying areas shall be received and

disposed of, to the satisfaction of the Municipality.

2.5 CONDITIONS IMPOSED BY THE GAUTENG PROVINCIAL GOVERNMENT: DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT (GDARD)

The township owner shall at his own costs comply with and strictly adhere to all the conditions and/or requirements imposed by the Department of Agriculture and Rural Development **if applicable** those by which exemption has been granted from compliance with the Environmental Impact Assessment Regulations, 2014, promulgated on 4 December 2014 in terms of section 21, 22 and 26 of the Environmental Conservation Act, (Act 73 of 1989) or the National Environmental Act, 1998 (Act 107 of 1998) as amended and the Regulations thereto, as the case may be for the development of this township.

2.6 CONDITIONS IMPOSED BY THE GAUTENG PROVINCIAL GOVERNMENT: DEPARTMENT OF ROADS AND TRANSPORT

- (i) Should the township not be proclaimed in terms of section 16(9) of the By-law before..... the application to establish the township, shall be resubmitted to the Department of Roads and Transport for reconsideration.
- (ii) If however, before the expiry date mentioned in (i) above, circumstances change in the opinion of the Municipality in such a manner that roads and/or PWV routes under the control of the said Department are affected by the proposed layout of the township, the township owner shall resubmit the application for the purpose of fulfilment of the requirements of the controlling authority in terms of the provisions of Section 48 of the Gauteng Transport Infrastructure Act, 2001 (Act 8 of 2001).
- (iii) The township owner shall comply with the conditions of the Department as set out in the Department's letter dated (insert date).
- (iv) The township owner shall at his own expense comply with all the conditions imposed, by which the Gauteng Department of Roads and Transport (hereafter referred to as Gautrans) has granted consent for the development.
- (v) Lines of no access will be applicable along PWV 9.
- (vi) A physical barrier, in compliance with EXECUTIVE COMMITTEE RESOLUTION NO. 1112 of 26 June 1978 and signed by the Deputy Director-General: Community Development and in accordance with the most recent standards of Gautrans will be erected along the lines of no access on the boundary of the development area fronting on provincial roads.
- (vii) In terms of EXECUTIVE COMMITTEE RESOLUTION NO 1112 of 26 June 1978 as signed by the Deputy Director-General: Community Development, the following building lines are applicable:

30m and 20m building line from PWV 9 affecting ERVEN 3846 and 3847, shall be applicable.
- (viii) The applicant shall arrange for the drainage of the development area to fit in with that of Provincial PWV 9 and for all stormwater running off.
- (ix) No advertisements that may be visible from Provincial Roads shall be displayed without the written approval of Gautrans and the Municipality.

2.7 ACCESS CONDITIONS

Access to or egress from the township shall be provided to the satisfaction of the Municipality.

3. CONDITIONS TO BE COMPLIED WITH BEFORE THE ERVEN IN THE TOWNSHIP BECOME REGISTRABLE WHICH SHALL BE READ WITH THE CONDITIONS OF ESTABLISHMENT INDICATED IN 2 ABOVE IN TERMS OF SECTION 16(10) OF THE BY-LAW AND SECTION 53 OF THE SPATIAL PLANNING AND LAND USE MANAGEMENT ACT, 16 OF 2013

3.1 REFUSE REMOVAL

- (a) The township owner shall at his own expense have all litter within the township area removed to the satisfaction of the City of Tshwane Metropolitan Municipality, when required to do so by the City of Tshwane Metropolitan Municipality.
- (b) The township owner shall provide sufficient refuse collection points in the township and shall make arrangements to the satisfaction of the Municipality for the removal of all refuse.

3.2 REMOVAL OR REPLACEMENT OF EXISTING SERVICES

If, by reason of the establishment of the township, it should be necessary to remove or replace any existing municipal, TELKOM and/or ESKOM services, the cost of such removal or replacement shall be borne by the

township owner. For purposes of removal or replacement the township owner shall, at its own costs, protect the services by means of the registration of servitudes in favour of the City of Tshwane, TELKOM and/or ESKOM should it be deemed necessary.

3.3 DEMOLITION OF BUILDINGS AND STRUCTURES

The township owner shall at its own costs cause all existing buildings/structures situated within the building line reserves, side spaces, or over common boundaries to be demolished to the satisfaction of the Municipality, when requested thereto by the Municipality or where buildings/structures are dilapidated.

3.4 CONSOLIDATION OF ERVEN

The township owner shall, at its own costs, after proclamation of the township but prior to the development of any erf/unit in the township, consolidate Erven 3846 and 3847 to the satisfaction of the Municipality.

The Municipality hereby grants approval for the consolidation of Erven 3846 and 3847 in terms of section 16(12)(d) of By-law read with section 15(6) of the By-law, which consolidation approval shall only come into operation on proclamation of the township and subject to the section 16(10) certification in term of the By-law by the City of Tshwane.

The Township Owner shall simultaneously with an application for a section 16(10) certification for the registration of erven in the township apply for a section 16(10) certification for purposes of the consolidation and shall comply with the conditions of the consolidation and the township for issuing of both certifications.

3.5 RESTRICTION ON REGISTRATION AND TRANSFER OF ERVEN FROM THE TOWNSHIP

In terms of section 16(10) of the By-law read with section 53 of Spatial Planning and Land Use Management Act, (Act 16 of 2013) no property(ies) or land and/or erf/erven and/or sections and/or units, sectional title schemes/registers or other registration transaction/s, in a land development area, which registration transactions results from a land development application(s), may be submitted by the applicant and/or owner, to the Registrar of Deed for registration, including transfer and the registration of a Certificate of Consolidated Title and/or Certificate of Registered in the name of the owner; prior to the Municipality certifying to the Registrar of Deeds that:

- (i) all engineering services have been designed and constructed to the satisfaction of the Municipality, including the provision of guarantees, and maintenance guarantees, for services having been provided to the satisfaction of the Municipality as may be required;
- (ii) all engineering services contributions and open spaces and parks contributions and/or development charges and/or other monies have been paid;
- (iii) all engineering services have been or will be protected to the satisfaction of the Municipality by means of servitudes;
- (iii) all conditions of the approval of the land development application have been complied with or that arrangements for compliance to the satisfaction of the Municipality have been made, which arrangements shall form part of an agreement read with Chapter 7 of the By-law, to the satisfaction of the Municipality;
- (iv) it is in a position to consider a final building plan; and
- (vi) all the properties have either been transferred in terms of subsection 16(11) hereof or shall be transferred simultaneously with the first transfer or registration of a newly created property or sectional title scheme.

3.6 PROVISION OF OPEN SPACES AND PARKS IN TERMS OF SECTION 47 OF THE BY-LAW

The township owner shall in terms of Section 47(7)(a) of the By-law secure open space of 18m² per dwelling-unit, in the township, by means of a servitude.

If at any time, the area of 18m² per dwelling-unit is not available for open space purposes, the developer or the successor in title shall in terms of the provision of Section 47(3) read with Schedule 16 of the By-law, pay an amount of money to the Municipality in lieu of the provision of land for the provision of open spaces and parks equal to 18m² per dwelling-unit read with Section 16(10) of the By-law.

The issuing of the Section 16(10) Certificate or approval of the Site Development Plan and/or building plans and/or occupation cannot take place, until and unless the provisions of open space are provided to the satisfaction of the Municipality and/or the amount of money is paid as stipulated above.

3.7 ESTABLISHMENT OF A NON PROFIT COMPANY IN TERMS OF SECTION 34 WITH SCHEDULE 19 OF THE BY-LAW

The township owner shall at his/her own cost establish a Non Profit Company ("NPC") in terms of Schedule 1 of the Companies Act, 2008 (Act 71 of 2008) as amended and as contemplated in Section 34 read with Schedule 19 of the By-law, with the main object of the Company being to retain and maintain the private engineering services in the township. The township owner shall further submit proof that such a Company has been duly registered, before a section 16(10) Certificate shall be issued in terms of the By-law.

Servitudes in favour of all the erven within the township shall be registered over any and all property owned or transferred to a NPC for purposes of access and engineering services.

4. DISPOSAL OF EXISTING CONDITIONS OF TITLE IN TERMS OF SECTION 16(4)(g)

All erven shall be made subject to existing conditions and servitudes in Deed of Transfer T93987/2021, if any.

4.1 The following conditions appear in Deed of Transfer number T93987/2021 in terms of which the land development area is held:

4.1.1 Conditions of title to be included in the township title – conditions that are applicable on the 2 stands in the township:

None

4.1.2 Conditions of title to be excluded from the township title – conditions that are not applicable on the 2 stands in the township

A. *Gedeelte 19 van die Westelike Gedeelte van die Plaas Zandfontein No 317 (voorheen No 93) Registrasie Afdeling JR, distrik Pretoria ('n gedeelte waarvan hiermee getranspoteer word) is spesiaal onderhewig aan die volgende kondisie:*

(a) "the said Portion 19 (a portion whereof is hereby transferred) shall be entitled to the rights of way as indicated on the General Plan of the Western Portion of the said farm filed in the Deeds Office of Pretoria"

5. CONDITIONS OF TITLE.

5.1 Conditions of Title imposed in favour of the Municipality in terms of the Section 16(4)(g) of the By-law.

5.1.1 ALL ERVEN

- (a) Each erf is subject to a servitude, 2m wide, in favour of the Municipality, for sewerage and other municipal purposes, along any boundary other than a street boundary and in the case of a panhandle erf, an additional servitude for municipal purposes 2m wide across the access portion of the erf, if and when required by the Municipality: Provided that the Municipality may dispense with any such servitude.
- (b) No building or other structure or any part of its foundation shall be erected within the aforesaid servitude area and no trees with large roots shall be planted within the area of such servitude or within 2m thereof.
- (c) The Municipality shall be entitled to deposit temporarily on the land adjoining the aforesaid servitude such material as may be excavated by it during the process of the construction, maintenance or removal of such sewerage mains and other works as it, in its discretion may deem necessary and shall further be entitled to reasonable access to the said land for the aforesaid purpose subject to any damage done during the process of the construction, maintenance or removal of such sewerage mains and other works being made good by the Municipality.

6. CONDITIONS CONTAINED IN THE AMENDMENT SCHEME IN TERMS OF SECTION 16(4)(G)(v) INCORPORATED THE TSHWANE TOWN PLANNING SCHEME 2008, (REVISED 2014) _____T.

6.1 ERVEN 3846 AND 3847, ANDEON EXTENSION 47.

1	Use Zone	3: RESIDENTIAL 3
2	Uses permitted	Duplex dwellings and Dwelling-units
3	Uses with consent	Table B, Column 4

4	Uses not permitted	Table B, Column 5
5	Definitions	Clause 5
6	Density	60 dwelling units per hectare
7	Coverage	60%
8	Height	4 storeys
9	Floor space ratio	1.0
10	Site development plan and landscape development plan	Clause 31
11	Street Building Lines	2.0m Along PWV 9: 20m single storey 30m double storey
	Building Restriction Areas	2.0m
13	Parking requirements	Demarcated parking spaces with a permanent dust-free surface, together with the necessary manoeuvring space, shall be provided and maintained on the erf to the satisfaction of the Municipality as follows for this Amendment Scheme: (1) One covered and paved space for each Dwelling-unit with three habitable rooms or less; (2) Two paved parking spaces for each Dwelling-unit with four habitable rooms or more; (3) One paved space per three Dwelling-units for visitors. Which may be relaxed with the permission of the Municipality.
14	Paving of traffic areas	All parts of the property upon which motor vehicles are allowed to move or park shall be provided with a permanent dust free surface, which shall be drained and maintained, to the satisfaction of the Municipality.
15	Access to the erf	Entrances to and exits from the erf shall be sited, constructed and maintained to the satisfaction of the Municipality.
16	Loading and off-loading facilities	Shall be provided on the erf to the satisfaction of the Municipality.
17	Turning facilities	Shall be provided on the erf to the satisfaction of the Municipality.
18	Physical barriers	Physical barrier/s shall be erected and maintained on the street boundary/ies of the erf (approved entrances and exits excluded) to the satisfaction of the Municipality.
19	Health measures	Clause 18(14)
20	Outdoor advertising	Advertisements and/or sign boards shall not be erected or displayed on the erf without the approval of the Municipality first being obtained in terms of municipal by-laws for outdoor advertising.
21	Detrimental Soil Conditions	Clause 19
22	Open Space	Clause 14(3)(a)

23 General:

- 1) In addition to the above conditions the erf and buildings thereon are further subject to the general provisions of the Tshwane Town-planning Scheme, 2008 (Revised 2014).

ANNEXURE C:
Title Deeds (Proof of Ownership)

A. VIR AKTEBESORGER SE GEBRUIK/FOR CONVEYANCER'S USE

(a) Gelyktydiges met ander registrasiekantore/deeltitels : Simult with other registries/sectional titles:

Kode/Code	Firma/Firm	Eiendom/Property	Kantoor/Office
1			
2			
3			
4			

(b) Kliënt afskrifte van aktes permanent in Aktekantoor gelasseer: Client copies of deed filed permanently in Deeds Office:

Aard en nommer van akte Nature and number of deed	Kode Code	Paras van ondersoekers Initials of examiners
	T.R.	

(c) Notas/Notes:

B. VIR AKTEKANTOOR GEBRUIK/FOR DEEDS OFFICE USE:

	Opmerkings/Remarks	Parasaf/Initials
Interdikte nagesien deur Interdicts checked by	(1) Dorpsproklameer (geproklameer) Township proclaimed (proclaimed)	
	(2) Begravingservas Burial services	
Datum Date	(3) Bepaling Endowment	
	(4) Voorwaardes Conditions	
	(5) Mikro Micro	
Interdikte nagesien deur Interdicts checked by	(6) Algemene plan General plan	
	(7) Titellakte Title deed	
Datum Date	(8) Verbands teen dorpsitel Bonds against township title	
	(9) Datum nagesien Date checked	

Kantoor instruksies/Office instructions:
Seksie/Section:

LOUW
Prokureurs / Attorneys
427
663 4292
663 8650

UITVOERING — EXECUTION Endorse title

A. VIR AKTEKANTOOR GEBRUIK/FOR DEEDS OFFICE USE:

(a) Datum van indiening/Date of lodgement

LODGED
2015-09-29
29 SEP 2015

LODGED
22 SEP 2015
PRETORIA DEEDS
LODGED

LODGED
21 SEP 2015
PRETORIA DEEDS
LODGED

(b)

R.C.C.
30-09-15

Onssoekers/Examiners	Kamers Rooms	Skakeling/Linking	Verwerp/Reject	Passer/Pass
Lorraine	704/11			
N.M. PHUNGO	731	2-2		

B. VIR AKTEBESORGER SE GEBRUIK/FOR CONVEYANCER'S USE:

Aard van akte byv.: Transport, Verband, ens.
Nature of Deed e.g.: Transfer, Bond, etc.

TRANSPORT

T 000085437 2015

Ver. No./Ref. No.: 19580

Skakeling/Linking: 2 2

GELYKTYDIGES/SIMULTS

Kode Code	Name van Partye/Names of Parties	Firma No. Firm No.	No. in stel/batch	Titellakte ens. binne Titles etc. within
1 K	Notariële Sesse Virgebruik	427	1	
2 T	Balwyle Mossy/Namagental	427	2	
3				
4				
5				
6				
7				
8				
9				
10				

DOCUMENTS:

NOTES:

RECEIVED
2015-09-29
DEEDS PRETORIA
RECEIVED

RECEIVED
2015-10-02
DEEDS PRETORIA
RECEIVED

Registrasie Versoek deur:
Registration requested by:

DATUM:
DATE:



GED 183 (Ged 179) PLAAS ZANDFOUNTEIN 317

(Kort beskrywing van eiendom (slegs para. 1 in Akte)/Brief description of property (only para. 1 in Deed))

427

LOUW Prokureurs
Lenchen Park 2
Lenchenlaan-Suid 2029
Centurion
Posbus 700
Pretoria
0001

SEËLREG	/
STAMP DUTY R	
FOOI	
FEES R	1160-00

Op gestel deur my

TRANSPORTBESORGER
JOHANNES CHRISTOFFEL LOUW

T 000085437 2015

TRANSPORTAKTE

HIERME WORD BEKEND GEMAAK DAT

JOHANNES CHRISTOFFEL LOUW

voor my verskyn het, REGISTRATEUR VAN AKTES te Pretoria, hy, die gesegde
Komparant synde behoorlik daartoe gemagtig kragtens 'n Volmag geteken te PRETORIA
op 20 APRIL 2015 en aan hom verleen deur

Die Eksekutrieses in die Boedel Wyle
IGNATIUS MASSYN
Boedelnommer 15615/2013

En genoemde komparant het verklaar dat sy prinsipaal die hiernaverreelde eiendom kragtens die bepalings van die testament van wyle IGNATIUS MASSYN gedateer 9 JANUARIE 2013 en geteken te PRETORIA wie oordele is op 12 SEPTEMBER 2013 en kragtens die Herverdelingsooreenkoms geteken te PRETORIA op 30 JUNIE 2014 aangegaan tussen die Erfgename en Transportnemer, in sy voornoemde hoedanigheid hierby sedeer en transporteer aan en ten gunste van

NAMAPENTA LANDGOED EIENDOMS DEPK
REGISTRASIENOMMER: 2014/094730/17

diese Opvolgers in titel of Regverkrygendes in volkome en vrye eiendom

GEDEELTE 183 ('n gedeelte van Gedeelte 179) van die plaas ZANDFONTEIN NO. 317
REGISTRASIE AFDELING JR. OORUTENG PROVINSIE

GROOT 7,0327 (SEWENOMMA NUL DRIE TWEE SEWE) Hektaar

AANVANKLIK GEREGISITEER kragtens Sertifikaat van Verenigde Titel T92896/2007 met kaart G. Nr. A 7496/1983 wat daarop betrekking het en gehou kragtens Sertifikaat van Geregistreerde Titel T92897/2007

- A. Gedeelte 19 van die Westelike Gedeelte van die Plaas Zandfontein No 317 (voorheen No 317) Registrasie Afdeling JR, distrik Pretoria ('n gedeelte waarvan hiermee getranspoteer word) is spesiaal onderhewig aan die volgende kondisie:
- (a) "the said Portion 19 (a portion whereof is hereby transferred) shall be entitled to the rights of way as indicated on the General Plan of the Western Portion of the said farm filed in Deeds Office Pretoria".
- B. Onderhewig aan 'n lewenslange vruggebruik ten gunste van **THERESA STEYN**, Identiteitsnommer **620219 0110 08 6** en **DINA STEENKAMP**, Identiteitsnommer **640707 0126 08 2** oor bogenoemde eiendom soos meer volledig blyk kragtens Notariële Akte van Sessie van Vruggebruik K
- C. ONDERHEWIG aan die volgende voorwaarde soos vervat in die Testament van wyle IGNATIUS MASSYN geteken te Pretoria, gedateer 9 Januarie 2013, wie oortede is op 12 September 2013 asook die herverdelingsooreenkoms gedateer 30 Junie 2014:

"8. Gades van begunstigdes verkry geen maritale reg en of reg op bemakings en erfenisse of die inkomste wat daarmee verdien word nie. Die gevolge van huwelike binne gemeenskap van goed en buite gemeenskap van goed met behoud van die aanwasbedeling word uitgesluit.

9. Indien 'n bevoordeelde, insolvent of in 'n insolvente toestand is wanneer hy/sy die erfenis in ontvangs moet neem, dan verbeur hy/of sy alle regte daarop en moet dit toegeken word aan my trustees. Skuldeisers kry geen reg daarop nie. Die trustees kry alle nie wat nodig mag wees om die bemakings/erfenisse te hou, te administreer, gelde te betê, eiendomme te bekom ensovoorts.

Insolvente bevoordeeldes verkry geen gevestigde reg op inkomstes en of kapitaal nie en my trustees verkry die uitsluitlike reg om enige bedrae wat hulle in hulle uitsluitlike diskresie mag goedvind, te betaal aan 'n insolvente bevoordeelde vir die onderhoude en ander benodigdhede van hom/haarself en hulle gesinne. Geen betalings mag egter aan buitestaanders en skuldeisers gemaak word nie.

Indien enigiets oor is na die afsterwe van 'n insolvente bevoordeelde dan moet dit aan sy/haarselfgename betaal of oorhandig word. Betalings mag nie aan 'n bevoordeelde se skuldeisers gemaak word vir skulde aangegaan sonder die trustees se goedkeuring nie.

10. Indien 'n bevoordeelde my vooroorly, dan sal bemakings en erfenisse wat hom/haar sal toekom indien hy/sy my oorleef het toekom en vererf aan sy/haar kinders per stirpes".

EN VERDER ONDERWERPE aan sodanige voorwaardes as in genoemde Akte/s vermeld staan of na verwys word.

WESHALWE die komparant afstand doen van al die regte en titel wat gemelde

Boedel Wyle IGNATIUS MASSYN

vooreen op genoemde eiendom gehad het en gevolglik ook erken het dat die boedel geheel en al van die besit daarvan onthef en nie meer daarop geregtig is nie, en dat hiens hierdie akte, bogenoemde

NAMAPENTA LANDGOED EIENDOMS BEPERK
REGISTRASIENOMMER: 2014/094736/07

diese Opvolgers in titel of Regverkrygendes, tans en voortaan daartoe geregtig is, ooreenkomstig plaaslike gebruik, behoudens die Regte van die Staat; en ten slotte erken dit dat die waardering die bedrag van **R3 000 000,00 (DRIE MILJOEN RAND)** beloop.

TEN BEWYSE WAARVAN ek, genoemde Registrateur, tesamen met die Kornparant hierdie Akte onderteken en dit met die Ampseël bekragtig het.

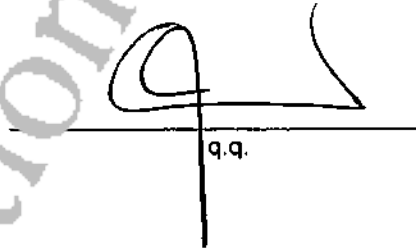
ALDUS GEDOEN EN VERLY op die Kantoor van die REGISTRATEUR VAN AKTES te Pretoria op hede die

30 09 15

In my teenwoordigheid:



REGISTRATEUR VAN AKTES



q.q.

427

LOUW Prokureurs
Lenchen Park 2
Lenchenlaan-Suid 2029
Centurion
Posbus 700
Pretoria
0001

118-13-16

Opgestel deur my



TRANSPORTBESORGER
JOHANNES CHRISTOFFEL LOUW

VOLMAG OM TRANSPORT TE GEE

Ons, die ondergetekendes

THERESA STEYN en DINA STEENKAMP, in ons hoedanigheid as Eksekutrises in die Boedel wyle IGNATIUS MASSYN, blykens Eksekuteursbrief Nummer 5615/2013 aan ons verleen deur die Meester van die Hooggeregshof van Suid-Afrika Noord-Gauteng Afdeling, te Pretoria op 17 Oktober 2013

benoem hiermee

JOHANNES CHRISTOFFEL LOUW

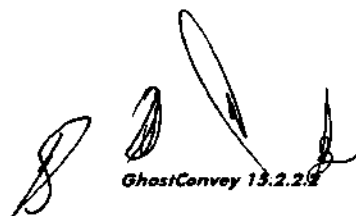
met mag van substitusie as ons ware en wettige gemagtigde en agent om in my naam en namens my te verskyn voor die REGISTRATEUR VAN AKTES te Pretoria, en daar en aldaar namens ons te verklaar dat:

AANGESIEN gemelde IGNATIUS MASSYN kragtens sy testament gedateer 9 JANUARIE 2013 en geteken te PRETORIA die hiernavermelde eiendom aan sy kleinkinders bemaak het onderhewig aan 'n vruggebruik ten gunste van sy dogters;

EN AANGESIEN gemelde IGNATIUS MASSYN oorlede is op 12 SEPTEMBER 2013;

EN AANGESIEN die hiernavermelde eiendom die oordragnemer toekom vanweë die bepaling van die Herverdelingsooreenkoms geteken te PRETORIA op 30 JUNIE 2014 aangegaan tussen die erfgename en die transportnemer;

SO IS DIT dat ek my genoemde Prokureur en Agent hiermee magtig om te sedeer en te transporteer aan en ten gunste van:



GhostConvey 13.2.23

**NAMAPENTA LANDGOED EIENDOMS BEPERK
REGISTRASIENOMMER: 2014/094736/07**

die volgende eiendom, naamlik:

**GEDEELTE 183 ('n gedeelte van Gedeelte 179) van die Plaas
ZANDFONTEIN 317
REGISTRASIE AFDELING JR, GAUTENG PROVINSIE**

GROOT 7,0327 (SEWE KOMMA NUL DRIE TWEE SEWE) Hektaar

**GEHOÛ KRAGTENS Sertifikaat van Geregistreerde Titel Nommer
T92897/2007**

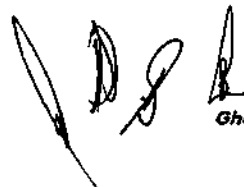
Onderhewig aan 'n lewenslange vruggebruik ten gunste van
THERESA STEYN, Identiteitsnommer: 620219 0110 08 6, Getroud
buite gemeenskap van goed en DINA STEENKAMP,
Identiteitsnommer: 640707 0120 08 2, getroud buite gemeenskap van
goed, oor bogenoemde eiendom soos meer volledig sal blyk uit
Notariële Akte van Sessie van Vruggebruik geregistreer staan te
word.

EN VERDER ONDERHEWIG aan die volgende bepalings van die testament
geteken te PRETORIA op 1 JANUARIE 2013:

"8. Gades van begunstigdes verkry geen maritale mag en of reg op
bemaakings en erfenisse of die inkomste wat daarmee verdien word
nie. Die gevolg van huwelike binne gemeenskap van goed en buite
gemeenskap van goed met behoud van die aanwasbedeling, word
uitgesluit.

9. Indien 'n bevoordeelde, insolvent of in 'n insolvente toestand is
wanneer hy/sy die erfenis in ontvangs moet neem, dan verbeur
hy/of sy alle regte daarop en moet dit toegeken word aan my
trustees. Skuldeisers kry geen reg daarop nie. Die trustees kry alle
magte wat nodig mag wees om die bemaakings/erfenisse te hou, te
administreer, gelde te belê, eiendomme te bekom ensovoorts.
Insolvente bevoordeeldes verkry geen gevestigde reg op inkomstes
en of kapitaal nie en my trustees verkry die uitsluitlike reg om enige
bedrae wat hulle in hulle uitsluitlike diskresie mag goedvind, te
betaal aan 'n insolvente bevoordeelde vir die onderhoud en ander
benodigdhede van hom/haarself en hulle gesinne. Geen betalings
mag egter aan buitestaanders en skuldeisers gemaak word nie.

Indien enigiets oor is by die afsterwe van 'n insolvente bevoordeelde
dan moet dit aan sy/haar erfgename betaal of oorhandig word.
Betalings mag nie aan 'n bevoordeelde se skuldeisers gemaak word
vir skulde aangegaan sonder die trustees se goedkeuring nie.



GhostConvey 15.2.2.2



10. Indien 'n bevoordeelde my vooroorly, dan sal berrakings en erfenisse wat hom/haar sou toekom indien hy/sy my oorleef het toekom en vererf aan sy/haar kinders per stirpes.


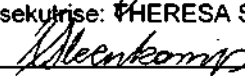
En erken hy dat die waarde van die eiendom die bedrag van **R3 000 000,00 (DRIE MILJOEN RAND)** beloop.

EN AFSTAND te doen van al die reg en aanspraak wat Boedel Wyle IGNATIUS MASSYN voorheen in en op die genoemde eiendom gehad het, die nodige aktes, stukke, en ander dokumente op te stel en te onderteken, en in die algemeen, ten einde bogemelde doeleindes uit te voer te doen of te laat doen al wat nodig is, net so volmaak en doeltreffend asof ons teenwoordig was en hierin gehandel het en bekragtig hiermee alles wat ons genoemde gemagtigde wettiglik uit krag hiervan doen of laat doen.

ALDUS GEDOEN EN GETEKEN te PRETORIA op 30 April 2015 in die teenwoordigheid van die ondergetekende getuies.

AS GETUIES:

1. 
2. _____


Eksekutrise: THERESA STEYN

Eksekutrise: DINA STEENKAMP

Reference Details

Transfer Duty Reference Number: TDE014167F

Details

Details of Seller / Transferor / Time Share Company

Surname / Registered Name MASSYN 15615/2013
ID Number 3901155040086
Company / CC / Trust Reg No.
Marital Notes if applicable UNMARRIED

Full Name LATE LATE IGNATIUS
Date of Birth (CCYYMMDD) 1938-11-15
Marital Status NOT MARRIED
Spouse Initials

Details of Purchaser / Transferee

Full Name NAMAPENTA LANDGOED EIENDOMS BEPERK
Company / CC / Trust Reg No. 201409473607

Surname / Registered Name NAMAPENTA LANDGOED EIENDOMS BEPERK
Marital Notes if applicable

Details of the Property

Date of Transaction/Acquisition (CCYYMMDD) 2013-09-12
Total Fair Value R 3000000.00

Total Consideration R 0.00

Calculation of Duty and Penalty / Interest

Transfer Duty Payable on Natural Person R 0.00

Property Description

1 GEDEELTE 183 (n gedeelte van Gedeelte 179) van die plaas ZANDFONTEIN 317 REGISTRASIE NO. 2012/123456789, GAUTENG PROVINSIE MEASURING 7,0327 (SEVEN COMMA ZERO THREE TWO SEVEN) HECTARE 5

Exemption Certificate

Exemption Certificate Details

Transfer Duty Reference No. TDE014167F

Exempt in terms of Section 9 of the Transfer Duty Act section 9(1)(e)

Exemptions allowed by another Act

Declaration by Conveyancer / Attorney

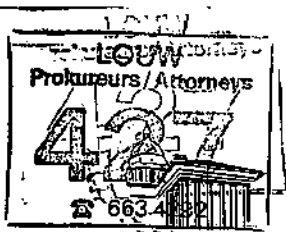
I certify that this is a true copy of the transfer duty declaration / receipt / exemption certificate drawn from the SARS eFiling site, which will be retained by me for 5 years from the date of registration of transfer.

Please ensure you sign over 2 copies of A's above

Date (CCYYMMDD)

20150612

For enquiries go to
www.sars.gov.za or call
0800 00 SARS (7277)



(3M)

Certificate Number: 00002111

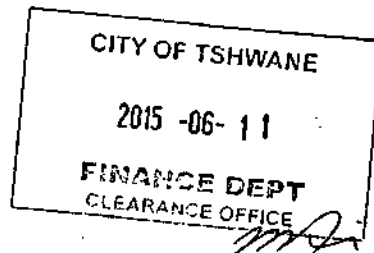
CITY OF TSHWANE METROPOLITAN MUNICIPALITY

**CITY OF
TSHWANE**
IGNITING EXCELLENCE

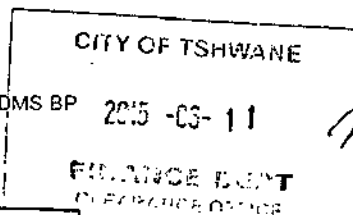
In terms of section 118 of the Local Government: Municipal Systems Act, (Act No. 32 of 2000), it is hereby certified that all amounts that become due to the City of Tshwane Metropolitan Municipality in connection with the undermentioned property situated within that municipality for municipal service fees, surcharges on fees, property rates and other Municipal taxes, levies and duties during the two years preceding the date of application for this certificate, have been fully paid:

DESCRIPTION OF PROPERTY:

Municipal Reference Number: 5007538063
Ervén: 00000
Portion: 183
Extension: 000
Zoning: 5-Farm - Within Services Plan 1144
Registration Division / Administrative District: CTMM
Suburb: ZANDFONTEIN 317-J
Town: Tshwane
Sectional Title Unit Number: 00000
Exclusive Use area and number as referred to registered plan: 09-SPMM
Real Right: Unregistered Properties - Not to Billed
Scheme Registration Number:
Sectional Title Scheme Name:
Registered Owner: MAMONTA

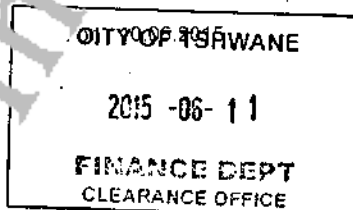


Purchaser Name: MAMONTA LANDGOED EDMS BP
Purchaser Identity Number: NONE



This certificate is valid until: 30.09.2015

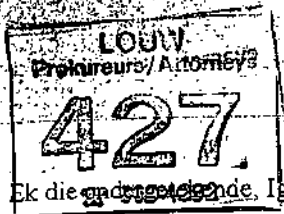
Given under my hand at Tshwane: 2015-06-11



Date Issued: 10.06.2015
Authorised official: MARTELIZP


MUNICIPAL MANAGER
City of Tshwane Metropolitan Municipality

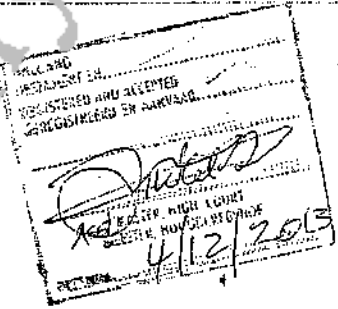
This certificate is being issued without prejudice to any rights of the Council.



W 15615/13

TESTAMENT VAN IGNATIUS MASSYN

Ek die ondergetekende, Ignatius Massyn, verly hiermee my laaste testament.



Ek herroep en kanselleer alle testamente wat vantevore deur my verly is.

Ek benoem my dogters, Theresa Steyn en Dina Steenkamp, om aangestel te word as die eksekuteurs van my boedel en as trustees van die trust wat ek hier kragtens skep. Ek verleen aan my eksekuteurs en trustees, die mag van assumpsie. Ek stel hulle vry van die verpligtinge om sekuriteit te verskaf aan die Meester van die Hoërhof. Vrystelling word ook verleen aan die eksekuteurs en trustees wat kragtens die mag van assumpsie aangestel word.

Ek bemaak my onroerende eiendom en belang in Beslote Korporasies, uitgesonder my belang in Delamo Investments, aan my kleinkinders, per capita, onderworpe aan die vruggebruik van my dogters, tot hulle afsterwe.

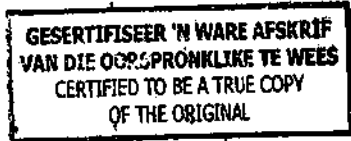
By die afsterwe van die eerste van my dogters, sal die kleinkinders, beide my dogters se kinders, geregtig wees op die inkomste wat hulle sou beval indien sy nie te sterwe gekom het nie. Hierdie bemakings is onderworpe aan die voorwaardes vervat in klousules 8 en 10.

Ek bemaak my belang in Delamo Investments BK, nr. 2004/005143/23 aan my kleindogters, Dinah Nel en Marisa Steenkamp, en as hulle my vooroorly, dan aan hulle afstammeling per stirpes en indien hulle nie afstammeling nalaat nie, dan aan die moeder van so 'n oorlede kleindogter. Hierdie bemaking is onderworpe aan die vruggebruik van my dogters. By afsterwe van 'n dogter gaan haar deel van die inkomste oor op my twee kleindogters of hulle afstammeling per stirpes. Die vruggebruik word beëindig by die afsterwe van die laaste van my dogters.

Getuie 1

Getuie 2

Testateur



JOHANNES CHRISTOFFEL LOUW
Kommissaris van Oorde/Commissioner of Oaths
Praktiserende Prokureur/Practising Attorney R.S.A.
LENCHENPARK II
LENCHENLAAN-SUID 2029 LENCHEN AVE. SOUTH
CENTURION R.S.A.

5
Uit die restant van my boedel moet administrasiekoste, kapitaalbelasting, boedelbelasting, inkomste belasting en alle bedrae wat deur my verskuldig mag wees, betaal word. Uit die restant wat oorbly na betaling van kostes en skulde moet die volgende betaal word:

a) 'n Bedrag van R1 000 000,00 (Een Miljoen Rand) aan my trustees om in trust te hou ten behoeve van my broer Jan Massyn en sy eggenote Fransien. Uit die rente verdienste van hierdie bedrag en uit die kapitaal indien nodig, moet 'n bedrag van R10 000,00 (Tien Duisend Rand) maandeliks betaal word aan genoemde Jan. Indien hy sy eggenote, Fransien, vooroorly dan moet 'n bedrag van R5 000,00 (Vyf duisend Rand) maandeliks aan hulle betaal word.

b) 'n Bedrag van R500 000,00 (Vyf Honderd Duisend Rand) aan my trustees om in trust te hou ten behoeve van my skoonsuster, Nellie Massyn. Uit die rente verdienste van hierdie bedrag en uit kapitaal indien nodig, moet 'n bedrag van R5 000,00 (Vyf Duisend Rand) maandeliks aan genoemde Nellie Massyn, betaal word.

Die maandeliks betalings hierbo vermeld in klousule 5(a) en 5(b) is betaalbaar tot die afsterwe van genoemde bevoorreedes of totdat die kapitaal bedrae ten volle aangewend is, welke gebeurtenis ookal die eerste plaasvind. Indien enigiets oorbly van die genoemde kapitaal bedrae by afsterwe van die genoemde bevoorreedes, dan moet dit betaal word aan my dogters.

6
Ek bemaak alle kontant wat oorbly na betaling van bogenoemde bemaakings, skuld en kostes aan my trustees om in trust te hou soos hieronder bepaal.

Die netto inkomste van die trust moet betaal word aan my dogters tot hul afsterwe by welke geleentheid die kapitaal bedrag betaal moet word aan my kleinkinders per capita. Die eerste oorbetalings van vyftig persent van die kapitaal aan kleinkinders gemaak te word by die afsterwe van die eerste van my dogters. Hierdie bemaaking is onderworpe aan die voorwaardes vervat in klousules 8 en 10.

7
Ek bemaak my reukende erfenisdom aan my dogters onderworpe aan die voorwaardes vervat in klousule

8
Gades van begunstigdes verkry geen maritale mag en of reg op bemaakings en erfenisse of die inkomste wat hulle verdien word nie. Die gevolge van huwelike binne gemeenskap van goed en buite gemeenskap van goed met behoud van die aanwasbedeling, word uitgesluit.

Getuie 1 

Getuie 2 


Testateur

Indien 'n bevoordeelde, insolvent of in 'n insolvente toestand is wanneer hy/sy die erfenis in ontvangs moet neem, dan verbeur hy/of sy alle regte daarop en moet dit toegeken word aan my, trustee. Skuldeisers kry geen reg daarop nie. Die trustee kry alle magte wat nodig mag wees om die bemakings/erfenisse te hou, te administreer, gelde te belê, eiendomme te bekom ensovoorts. Insolvente bevoordeelde verkry geen gevestigde reg op inkomste en of kapitaal nie en my trustee verkry die uitsluitlike reg om enige bedrae wat hulle in hulle uitsluitlike diskresie mag goedvind, te betaal aan 'n insolvente bevoordeelde vir die onderhoud en ander behodighede van hom/haarself en hulle gesinne. Geen betalings mag egter aan buitestaanders en skuldeisers gemaak word nie.

Indien enigiets oor is by die afsterwe van 'n insolvente bevoordeelde dan moet dit aan sy/haar erfgename betaal of oorhandig word. Betaling mag nie aan 'n bevoordeelde se skuldeisers gemaak word vir skulde aangegaan sonder die trustee se goedkeuring nie.

Indien 'n bevoordeelde my vooroorly, dan sal bemakings en erfenisse wat hom/haar sou toekom indien hy/sy my oorleef het toekom en vererf aan sy/haar kinders per stirpes.

My trustee kry in alle gevalle alle magte en regte wat nodig mag wees om die trustbates na behore te administreer. Dit sluit die mag van belegging en herbelegging, koop en verkoop van bates in asook alle magte wat nodig is om die algemeen daarmee te handel. Handeling is egter onderworpe aan die goedkeuring van die bevoordeelde.

Ek verleen aan my erfgename bevoordeelde die reg om herverdelingsooreenkomste aan te gaan met die doel om verdeling of herverdeling van bates te bewerkstellig en ek gee aan die Meester van die Hoër Hof en Registrateur van Aktes opdrag om uitvoering te gee aan die bepalings van sodanige ooreenkomste.

Indien registrasie van die name van meerdere erfgename nie moontlik is nie omrede statutêre beperkings of indien 'n erfgename sodanige opdragte gee, dan moet my eksekuteurs, beslote korporasies, maatskappye of trusts stig om die bemakings namens my erfgename in ontvangs te neem of om eiendomme te verkoop, wat die opdragte van my erfgename ookal mag wees.

Ek hou die reg uit om hierdie testament na goeddunke te wysig, te herroep of te vernietig.

Gedoen en geteken te Pretoria op hierdie 9 dag van JANUARIE 2013.

Getuie 1 [Handwritten Signature]

Getuie 2 [Handwritten Signature]

Testateur [Handwritten Signature]

15615/13

HERVERDELINGSOORENKOMS IN DIE BOEDEL VAN WYLE IGNATIUS
MASSYN, IDENTITEITSNOMMER: 390115 5040 08 2 IN 'EWE ONGETROUD,
OORLEDE TE WITBANK OP 12 SEPTEMBER 2013, BOEDELNOMMER:
15615/2013.

AANGEGAAN DEUR EN TUSSEN:

WILLEM JOHANNES STEYN
(IDENTITEITSNOMMER: 840701 5011 08 2)
Getroud buite gemeenskap van goedere

DINAH NEL
(IDENTITEITSNOMMER: 251103 0004 08 7)
Getroud buite gemeenskap van goedere

JAN ADRIAAN STEENKAMP
(IDENTITEITSNOMMER: 860427 5081 08 2)
Ongetroud

MARISA STEENKAMP
(IDENTITEITSNOMMER: 880609 0064 08 2)
Ongetroud

IGNATIUS LUDOLPH STEYN
(IDENTITEITSNOMMER: 940509 5038 08 1)
Ongetroud

(hierna gesamentlik na verwys as "DIE KLEINKINDERS")

EN

NAMAPENTA LANDGOED EIENDOMS BEPERK
REGISTRASIENOMMER: 2014/094736/07

(Hierna verteenwoordig deur Marisa Steenkamp in haar hoedanigheid as
Direkteur en bevoorigd daartoe gemagtig deur die Direksie van die maatskappy)

(Hierna genoem "DIE MAATSKAPPY")

EN

THERESA STEYN
(IDENTITEITSNOMMER: 620219 0110 08 6)
Getroud buite gemeenskap van goedere

en

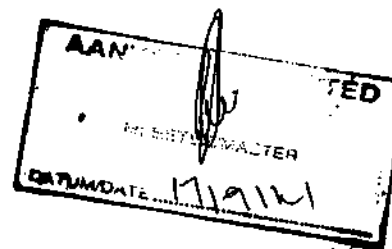
15615/13

DINA STEENKAMP
(IDENTITEITSNOMMER: 640707 0126 18 2)
Getroud buite gemeenskap van gaderende

(hierna gesamentlik na verwys as "DIE VRUGGEbruIKSTERS" en Eksekutrices in die boedel)

AANGESIEN wyle Ignatius Massyn die geregistreerde eienaar was van die volgende eiendomme:

Gedeelte 179 van die Plaas Zandfontein Nr. 317,
Registrasie Afdeling JR, Provinsie Gauteng
Groot: 4,5306 hektaar (VIER KOMA VEE DRIE NUL SES)
Gehou kragtens Sertifikaat van Vereninge Titel T92896/2007



En

Gedeelte 183 ('n gedeelte van gedeelte 179) van die Plaas Zandfontein Nr. 317,
Registrasie Afdeling JR, Provinsie Gauteng
Groot: 7,0327 hektaar (SEWVE KOMA NUL DRIE TWEE SEWE)
Gehou kragtens Sertifikaat van Geregistreerde Titel T92897/2007

(hierna gesamentlik na verwys as "DIE EIENDOMME")

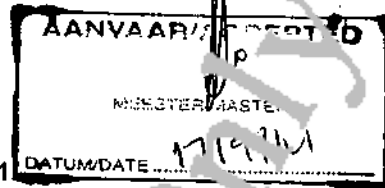
EN NADEMAAL gemelde Ignatius Massyn by sy testament gedateer te Pretoria op 9 Januarie 2013, gemelde eiendomme bemaak het aan sy bovermelde Kleinkinders onderworpe aan die vruggebruik ten gunste van die bovermelde Vruggebruiksters;

EN NADEMAAL die bovermelde bemaking vanweë die bepaling van Art 3 van die Wet op die Onderverdeling van Landbougrond, Wet 70 van 1970 onuitvoerbaar is;

EN NADEMAAL die kleinkinders gelyke aandeelhouders in die Maatskappy is.

NOU DERHALWE kom die partye soos volg ooreen:

Handwritten signatures and initials, including 'AS', 'AD', and 'AF', are visible at the bottom right of the page.



Bladsy 3

Die eiendomme word toegeken en oorgedra aan die Maatskappy onderhewig aan die vruggebruik ten gunste van die Vruggebruiksters en andersins verder onderhewig aan die terme vervat in die testament.

2.

Elke kleinkind verkry 'n leningsrekening in die Maatskappy onderhewig. Elke kleinkind se leningsrekening in die Maatskappy word oorbeteer met 'n bedrag gelykstaande aan 20% van die waarde van die blote eiendomme van die eiendomme.

Die boedel sal die koste verbonden aan die oordrag betaal.


GETEKEN te PRETORIA op nederste 30 DAG VAN Junie 2014

AS GETUIES:

1. 


WILLEM JOHANNES STEYN

2. 


DINAH NEL


JAN ADRIAAN STEENKAMP


MARISA STEENKAMP

Ignatius
IGNATIUS LUDOLPH STEYN

GETEKEN te PRETORIA op hede die 30^{ste} DAG VAN Junie 2014

AS GETUIES:

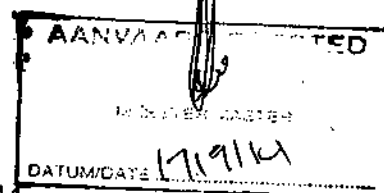
1. Balek Steenkamp
NMS: NAMAPENTA LANDGOED
(EDMS) BPK

2. Rooste

GETEKEN te PRETORIA op hede die 30^{ste} DAG VAN Junie 2014

1. Balek Steyn
THERESA STEYN

2. Rooste



GETEKEN te PRETORIA op hede die 30^{ste} DAG VAN Junie 2014

1. Balek Steenkamp
DINA STEENKAMP

2. Rooste

65M

**SERTIFIKAAT IN TERME VAN ARTIKEL 4(1) VAN DIE
BOEDELWET 66 VAN 1965, SOOS GEWIGSIG**

Ek, die ondergetekende, JOHANNES CHRISTOFFEL LOUW, 'n behoorlik toegelate Aktebesorger, sertifiseer hiermee dat die transport te openbare van die volgende eiendom, naamlik altesaam:

**GEDEELTE 183 ('n gedeelte van Gedeelte 175) van die plaas
ZANDFONTEIN NO. 317 REGISTRASIE AFDELING JR, GAUTENG
PROVINSIE**

GROOT 7,0327 (SEWE KOMMA EEN HUL DOME TWEE SEWE) Hektaar

GEHOU KRAGTENS Transportatiese Nommer T92897/2007

van

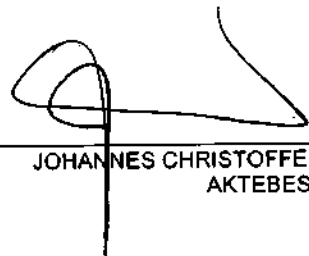
**DIE BOEDEL WYLE
IGNATIUS MASSYN
Nommer: 15615/2013**

aan

**NAMAPENTA LANDGOED EIGENDOMS BEPERK
Registrasienommer: 2013/094736/07**

ooreenkomstig die Likwidasië- en Distribusie-rekening is wat ter insae gelê het en dat geen beswaar daarteen ontvang is.

GETEKEN TE PRETORIA op 21 SEPTEMBER 2015



JOHANNES CHRISTOFFEL LOUW
AKTEBESORGER

PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01012 - AUSTIN JOEY

DATE : 20150922 TIME : 6 PAGE : 1

TRACK NUMBER 10011966460

BLACK-BOOKING ENQUIRY ON NAME - MASSYN IGNATIUS
ID NUMBER - 3901155040088
BIRTH DATE - 19390115
MARITAL STATUS - UNMARRIED
MAIDEN NAME -
TYPE OF PERSON - PRIVATE PERSON

PERSON NAME AND ID

CONTRACTS / ITERATIONS

NOTED ON SCAN/MICRO REF

MASSYN IGNATIUS

3901155040088 H0517 1992

0 1992010101873419

3901155040088 H4285 960-36-44/90000

0

3901155040088 K0774/15

0 19940101121404

*** PLEASE NOTE : THE INFORMATION APPEARING ON THIS PRINTOUT IS FURNISHED FOR PURPOSES OF INFORMATION ONLY.
FOR MORE DETAILED INFORMATION, PLEASE REFER TO THE REGISTERED SOURCE DOCUMENTS.

*** END OF REPORT ***

PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01812 AUSTIN JOEY

DATE : 20150922 TIME : 18 PAGE : 1

TRACK NUMBER 18011966460

BLACK-BOOKING ENQUIRY ON NAME - STEYN WILLEM JOHANNES
ID NUMBER - 8487015011082
BIRTH DATE - 19840701
MARITAL STATUS - MARRIED OUT
MAIDEN NAME -
TYPE OF PERSON - PRIVATE PERSON

PERSON NAME AND ID

CONTRACTS/TITLEDIC

NOTED ON SCAN/MICRO REF

STEYN WILLEM JOHANNES
STEYN WILLEM JOHANNES

8487015011082 H6555, 2009
1-3028, 089R-3 28/89-28/3/89

20091009, 20100203125151

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END OF RECORD

9/11

PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01812 - AUSTIN JOEY

DATE : 20150922 TIME : 2 PAGE : 1

TRACK NUMBER 10011966469

BLACK-BOOKING ENQUIRY ON NAME - NEL DINAH
ID NUMBER 8511030004087
BIRTH DATE 19851103
MARITAL STATUS MARRIED OUT
MAIDEN NAME
TYPE OF PERSON PRIVATE PERSON

OTHER REFERENCES LINKED TO THIS PERSON :
STEYN DINAH

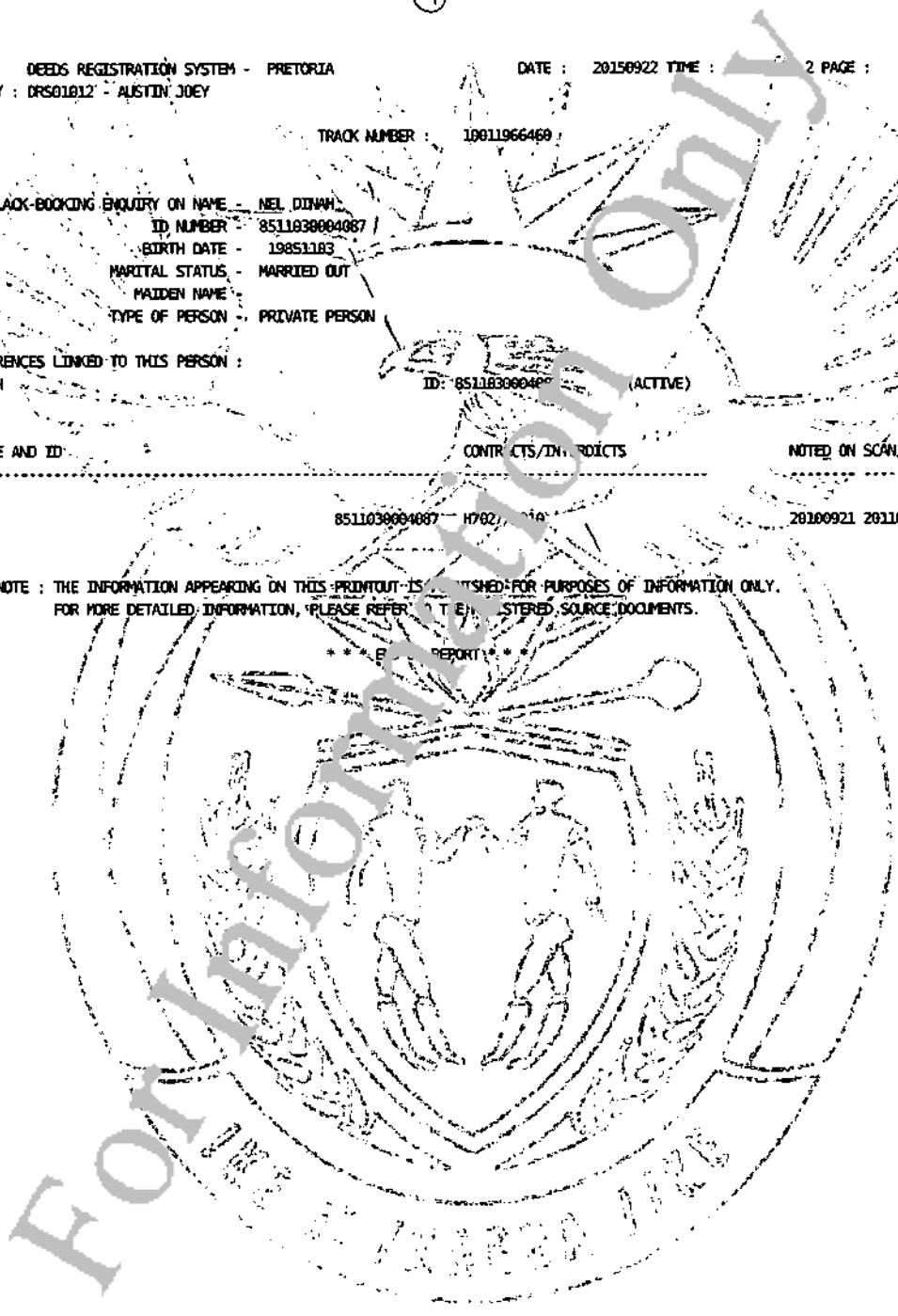
ID: 8511030004087 (ACTIVE)

PERSON NAME AND ID CONTR CTS/INT. OBJECTS NOTED ON SCAN/MICRO REF

NEL DINAH 8511030004087 H702/1010 20100921 20110129093545

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FOR MORE DETAILED INFORMATION, PLEASE REFER TO THE REGISTERED SOURCE DOCUMENTS.

*** E-REPORT ***



PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01012 - AUSTIN JOEY

DATE : 20150922 TIME : 0 PAGE : 1

TRACK NUMBER 10011966460

BLACK-BOOKING ENQUIRY ON NAME - STEENKAMP JAN ADRIAAN
ID NUMBER 8684275881082
BIRTH DATE 19860427
MARITAL STATUS UNMARRIED
MAIDEN NAME
TYPE OF PERSON PRIVATE PERSON

PERSON NAME AND ID

CONTRACTS/ITEROL

NOTED ON SCAN/MICRO REF

STEENKAMP JAN ADRIAAN
STEENKAMP JAN

8684275881082 87128 2014
7409115227088 53212 912-24 4/2012-20120381

28141185, 28141114674150
28128314

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END OF RECORD

PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01012 - AUSTIN JOEY

DATE : 20150922 TIME : 4 PAGE : 1

TRACK NUMBER 18011966460

BLACK-BOOKING ENQUIRY ON NAME - STEENKAMP, MARISA
ID NUMBER - 8806090064082
BIRTH DATE - 19880609
MARITAL STATUS - UNMARRIED
MAIDEN NAME -
TYPE OF PERSON - PRIVATE PERSON

OTHER REFERENCES LINKED TO THIS PERSON :
BOTH A MARISA

ID: 8806090064082 (ACTIVE)

PERSON HAS NO CONTRACTS/INTERDICTIONS

** PLEASE NOTE : THE INFORMATION APPEARING ON THIS PRINTOUT IS FURNISHED FOR PURPOSES OF INFORMATION ONLY
FOR MORE DETAILED INFORMATION, PLEASE REFER TO REGISTERED SOURCE DOCUMENTS

*** END OF REPORT ***

PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01812 AUSTIN JOEY

12/11
DATE : 20150922 TIME : 9 PAGE : 1

TRACK NUMBER 10011966460

BLACK-BOOKING ENQUIRY ON NAME : STEYN IGATZUS LUDOLPH
ID NUMBER 940509

BIRTH DATE :
MARITAL STATUS :
MAIDEN NAME :
TYPE OF PERSON :

PERSON DOES NOT EXIST

PERSON HAS NO CONTRACTS/INTERDICTIONS

** PLEASE NOTE : THE INFORMATION APPEARING ON THIS PRINTOUT IS FURNISHED FOR PURPOSES OF INFORMATION ONLY.
FOR MORE DETAILED INFORMATION, PLEASE REFER TO THE REGISTERED SOURCE DOCUMENTS.

*** END OF REPORT ***

13/11/11

PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01012 - AUSTIN JOEY

DATE : 20150922 TIME : 4 PAGE : 1

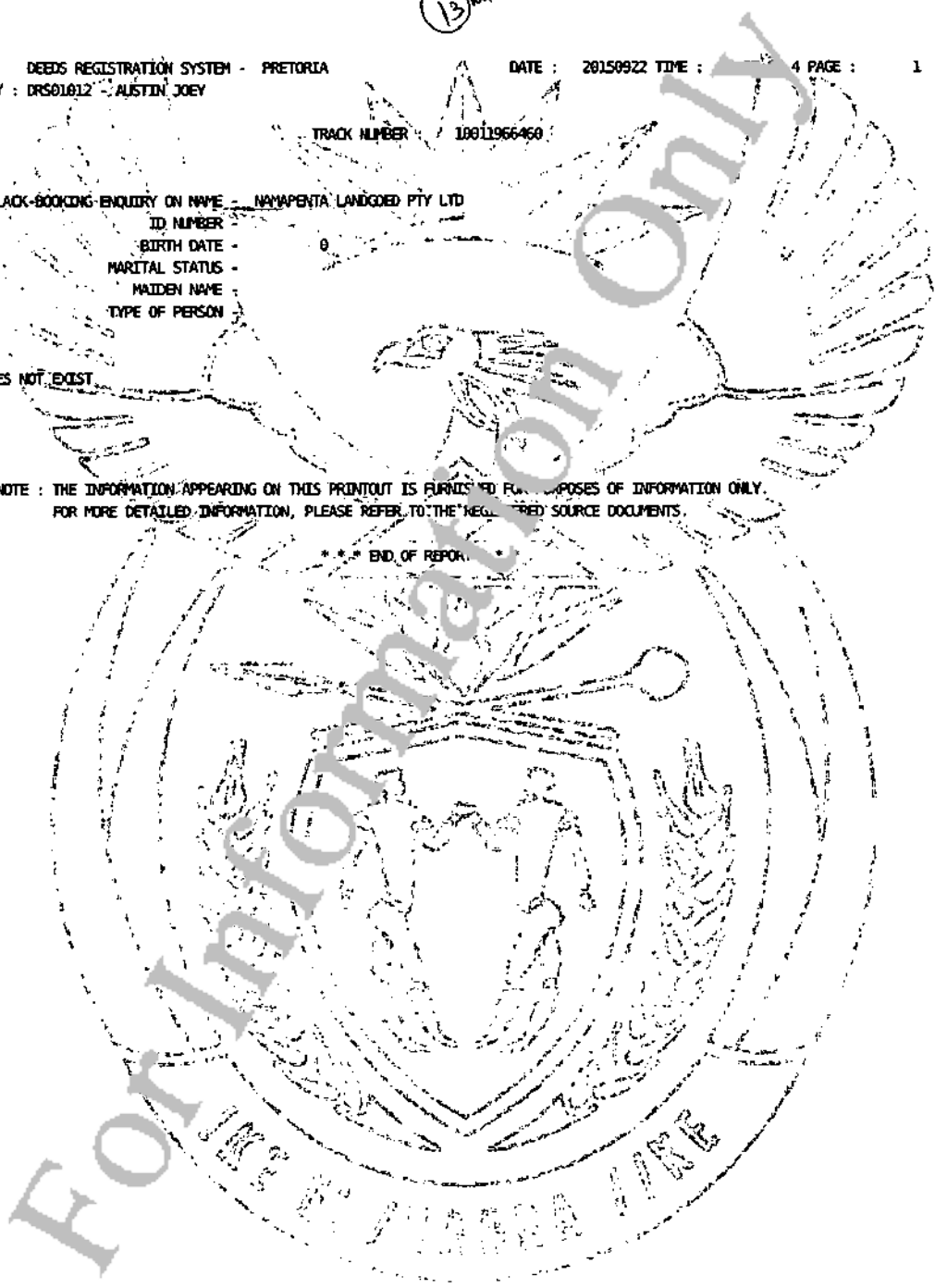
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BLACK-BOOKING-ENQUIRY ON NAME - NAMAPENTA LANDGOLD PTY LTD
ID NUMBER
BIRTH DATE
MARITAL STATUS
MAIDEN NAME
TYPE OF PERSON

PERSON DOES NOT EXIST

*** PLEASE NOTE : THE INFORMATION APPEARING ON THIS PRINTOUT IS FURNISHED FOR PURPOSES OF INFORMATION ONLY.
FOR MORE DETAILED INFORMATION, PLEASE REFER TO THE REGISTERED SOURCE DOCUMENTS.

*** END OF REPORT ***



PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01451 THOBANGALE MPH0

DATE : 20150923 TIME : 2 PAGE : 1

1474
TRACK NUMBER 18011966468

BLACK-BOOKING ENQUIRY ON NAME - STEYN, THERESA
ID NUMBER - 6282190118086
BIRTH DATE - 19620219
MARITAL STATUS - MARRIED OUT
MAIDEN NAME - MASSYN
TYPE OF PERSON - PRIVATE PERSON

PERSON NAME AND ID

CONTRACTS/TITLED

NOTED ON-SCAN/MICRO REF

STEYN THERESA

6282190118086 1733/1983

19680101183521

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END OF REPORT



IKHE F: /XARRA /KE

PROD DEEDS REGISTRATION SYSTEM - PRETORIA
PREPARED BY : DRS01451 - THOBAGALE MPHO

DATE : 20150923 TIME : 14:00 1 PAGE : 1

TRACK NUMBER 19811966468

BLACK-BOOKING ENQUIRY ON NAME - STEENKAMP DIINA
ID NUMBER - 6487878126082
BIRTH DATE - 19640707
MARITAL STATUS - MARRIED OUT
MAIDEN NAME - MASSYN
TYPE OF PERSON - PRIVATE PERSON

PERSON NAME AND ID

CONTRACTS/TERMS

NOTED ON-SCAN/MICRO REF

STEENKAMP DIINA

6487878126082

H5776/1984

0 1985 0105 0026

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END OF REPORT

!KE E: /XARRA /KE



**rural development
& land reform**

Department:
Rural Development & Land Reform
REPUBLIC OF SOUTH AFRICA

OFFICE OF THE REGISTRAR OF DEEDS, PRETORIA, PRIVATE BAG X 183, CORNER F. TETORIUS AND BOSMAN
STREETS, PRETORIA, 0001. TEL: (012) 338 7000, FAX: (012) 338 7103

EXAMINERS NOTES

1. Lodge a conveyancer's certificate in terms of Section 2(1) of the Administrations of Estates Act

Daan *R* *su*

**Lorraine
Mervis**

2. The redistribution must be accepted and registered by the Master (RCR 68/2010)

R

3. Further to note 2 the company Mampenta Landgoed as in the redistribution agreement does not appear in the will. The will only refers to Delamo Investments BK. What is the position?

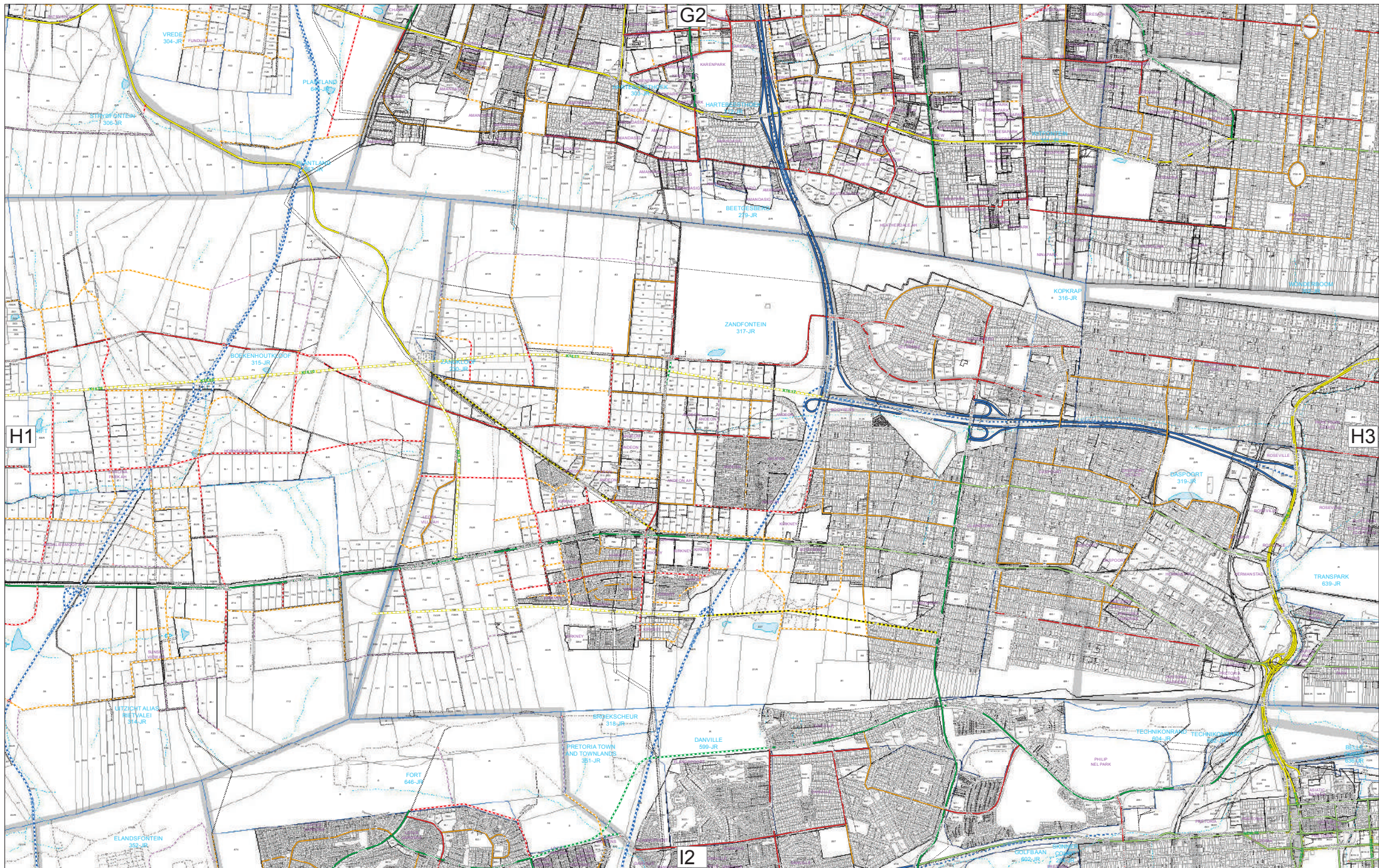
R

4. According to clause 5 (a) and (b), the trustees must keep an amount in trust for the brother and the sister in law. The trustees should therefore also be a party to the redistribution agreement.

R

**Lorraine
Mervis**

ANNEXURE D:
Approved Roads Master Plan



LEGEND

ROAD CLASSIFICATION

- U1_Primary metropolitan distributor (52-80M)
 ■ U2_Metropolitan distributor (48-62M)
 ■ U3A_District distributor (Limited Access) (32-40M)
 ■ U3_District distributor (32-40M)
 ■ U4(a)_Collector (25M)
 ■ U4(b)_Collector (20M)
 ■ Class5_Local street
 ■ Class6_Walkway
 ■ Corporate GIS Centrelines
 ■ Proposed U1_Primary metropol
 ■ Proposed U2_Metropolitan distri
 ■ Proposed U3_District distribut
 ■ Proposed U4(a)_Collector (25M)
 ■ Proposed U4(b)_Collector (20M)
 ■ Proposed_Class5_Local street
 ■ Proposed_Class6_Walkway

INTERCHANGES

- Existing Access
- Existing System
- Half Existing Access
- Proposed Access Int
- Proposed System Int

GENERAL MAP ELEMENTS
Grade-separated crossing

-  Grade-separated crossing, no access
 -  Out-de-Sac
 -  Partial/Marginal Access
 -  Landparcel
 -  Railway Lines
 -  Farm Boundary
 -  Urban edge 2010
 -  Metropolitan Municipality
- Tyrene

DISCLAIMER

THIS ROAD NETWORK PLAN IS A GUIDELINE PLAN ONLY AND THE CONTENTS THEREOF ARE SUBJECT TO CHANGE.
THE INDICATED ROAD ALIGNMENTS (AND INTERSECTION POINTS) ARE PRELIMINARY AND FOR PLANNING PURPOSES ONLY.
ANY INTERSECTION POINT WITH A PROVINCIAL ROUTE MUST BE CLARIFIED WITH THE GAUTENG DEPARTMENT OF ROADS AND TRANSPORT.

REMENTS TO ANY PROPOSED ROAD ALIGNMENT MUST BE OBTAINED FROM THE CITY OF TSHWANE (COT) INTEGRATED PLANNING MANAGEMENT SECTION. APPROVAL FOR ANY CHANGES MUST BE AGREED UPON BY THE PLANNING DEPARTMENT, ENVIRONMENTAL MANAGEMENT SERVICES DEPARTMENT AND THE GAUTENG DEPARTMENT OF ROADS AND TRANSPORT (IF APPLICABLE) AND ANY OTHER AFFECTED/CONCERNED PARTIES.

CITY OF TSHWANE

ROADS AND TRANSPORT DEPARTMENT
TRANSPORT AND INFRASTRUCTURE PLANNING DIVISION



1:12 500
(SCALED FOR AG)

A horizontal scale bar with tick marks at 400, 600, 800, and 1000 meters. The bar is divided into four equal segments, each representing 200 meters.

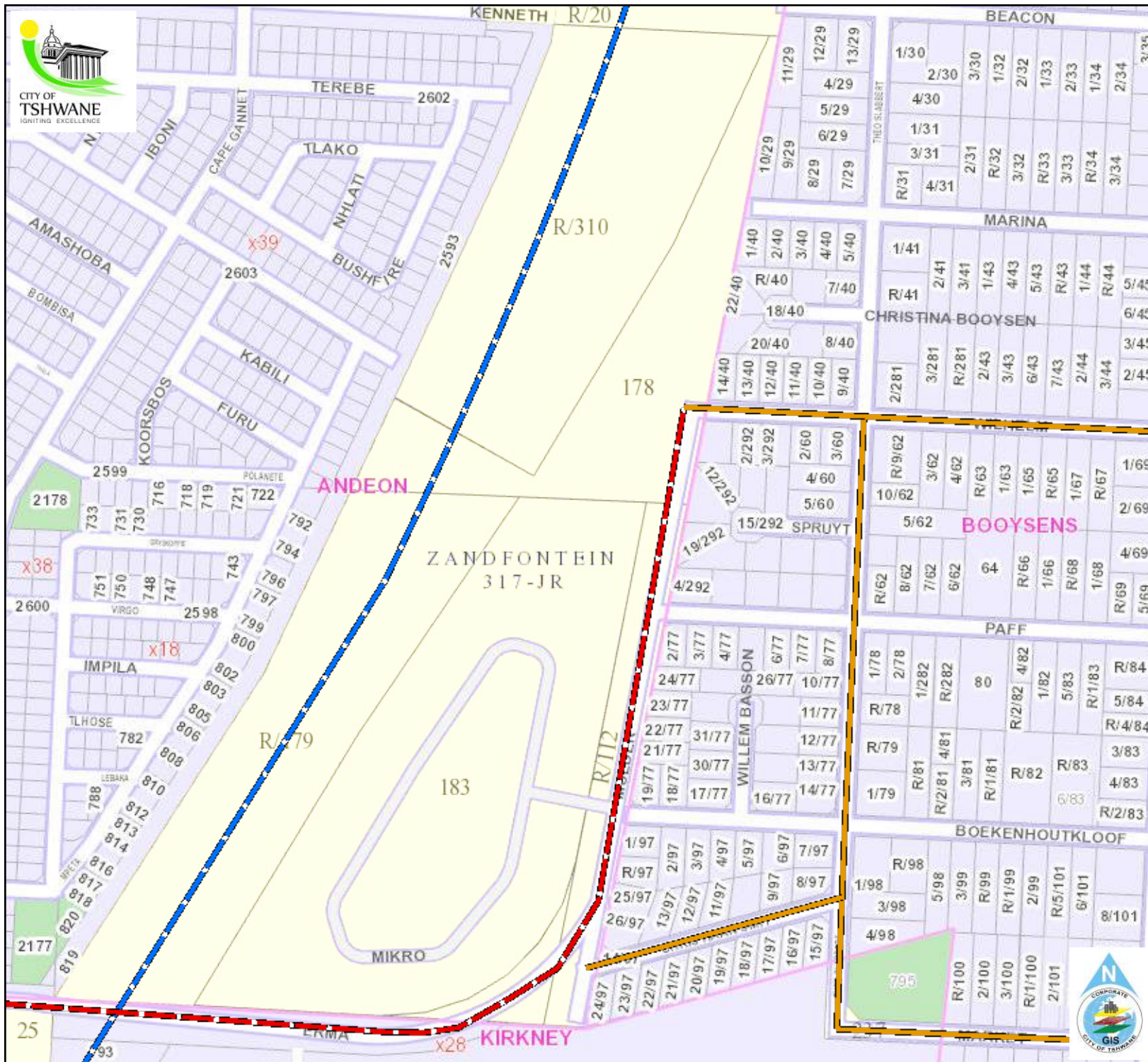


ROAD NETWORK PLAN

	Version Date: MARCH 2017	SCA 1:12
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MAPBOOK MARCH 2017	<div>H2</div> <div>CONTRACT NO: CB117/2011</div>
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43 of 75



ArcGIS Web Map

Legend

Road Master Plan

- U1 Class 1_Primary metropolitan distributor
- U2 Class 2_Metropolitan distributor
- U3/A Class 3/A_District distributor
- U3 Class 3_District distributor
- U4 Class 4(a)_Collector (non-residential)
- U4 Class 4(b)_Collector (Residential)
- Class 5(a)_Local street (Non-residential)
- Class 5(b)_Local street (Residential)
- De-Classification_U1
- De-Classification_U2
- De-Classification_U3
- De-Classification_U4(a)
- De-Classification_U4(b)
- De-Classification_U5(a)
- Proposed Class 3/A_District distributor
- Proposed_U1 Class 1_Primary metropolitan distributor
- Proposed_U2 Class 2_Metropolitan distributor
- Proposed_U3 Class 3_District distributor
- Proposed_U4 Class 4(a)_Collector (Non-residential)
- Proposed_U4 Class 4(b)_Collector (Residential)
- Proposed_Class 5(a)_Local street (Non-residential)
- Proposed_Class 5(b)_Local street (Residential)

Base map

- Tshwane Regions
- Wards
- Municipal Boundary
- Suburb Boundary
- Farm Boundary
- Open Space
- Dam
- River
- Freeway
- Main Road
- Street
- Main Railway
- Gautrain

Compiled & Issued by: Corporate GIS, (egis@tshwane.gov.za)
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Date: 2022/01/19

Meters
0 200

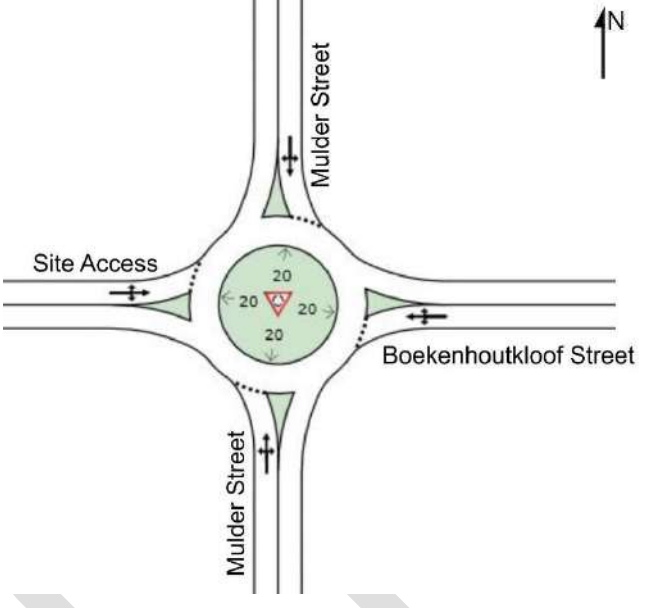
ANNEXURE E:
Approved Stormwater Master Plan

Awaiting

ANNEXURE F:

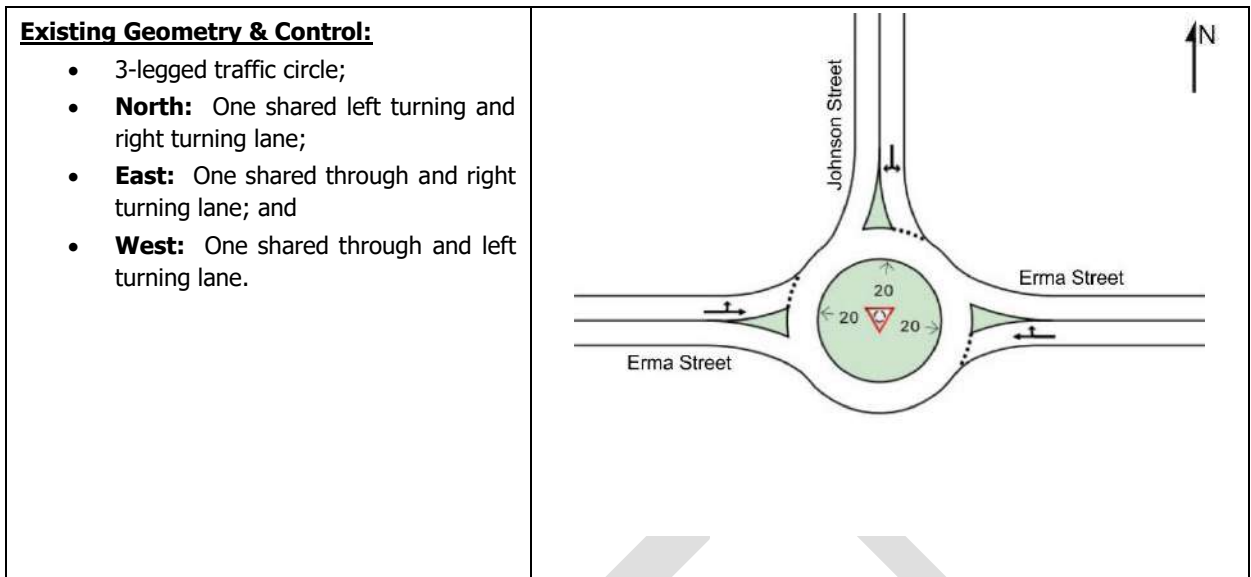
Extracts from the Traffic Impact Assessment (TIA)

5.1 MULDER STREET / BOEKENHOUTKLOOF STREET / SITE ACCESS

<p>Proposed Geometry & Control:</p> <ul style="list-style-type: none"> • 4-legged traffic circle • North: One shared through, left turning and right turning lane; • South: One shared through, left turning and right turning lane; • East: One shared through, left turning and right turning lane; • West: One shared through, left turning and right turning lane; 	
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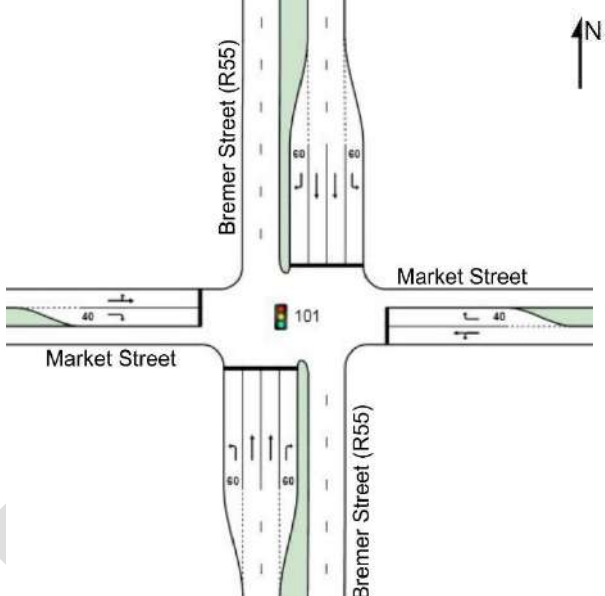
Analysis Results & Conclusion			Intersection: Mulder St / Boekenhoutkloof St / Site Access			
Detailed Results: Annexures B1.1 to B1.4						
Scenario	Geometry & Control	Peak	Overall			Comment
			LOS	Delay(s)	v/C _{max}	
Scenario 3	Proposed geometry	AM	A	8	0.54	Very good overall level of operation
Scenario 4	Proposed geometry	AM	A	8	0.62	Very good overall level of operation
Scenario 3	Proposed geometry	PM	A	7	0.42	Very good overall level of operation
Scenario 4	Proposed geometry	PM	A	7	0.49	Very good overall level of operation
Conclusion:		The proposed circle at the site access intersection will adequately provide sufficient capacity with minimal delays on all approaches while also providing traffic calming on Mulder Street. Furthermore, as discussed in Section 3.2, the shoulder site distance at the access is a concern due to the road curving in a western direction as you move southbound from the site access. Thus, the implementation of a traffic circle instead of a priority stop controlled intersection would be more beneficial as the shoulder site distance at a traffic circle becomes less relevant.				
Upgrade Required:		Yes, as per Drawing No. 0592/CL/01				
Upgrade Responsibility:		Developer				

5.2 ERMA STREET / JOHNSTON STREET



Analysis Results & Conclusion			Intersection: Erma St / Johnston St			
Detailed Results: Annexures B2.1 to B2.8						
Scenario	Geometry & Control	Peak	Overall			Comment
			LOS	Delay(s)	v/c _{max}	
Scenario 1	Existing geometry	AM	A	5	0.48	Very good overall level of operation
Scenario 2	Existing geometry	AM	A	5	0.56	Very good overall level of operation
Scenario 3	Existing geometry	AM	A	5	0.49	Very good overall level of operation
Scenario 4	Existing geometry	AM	A	5	0.58	Very good overall level of operation
Scenario 1	Existing geometry	PM	A	7	0.37	Very good overall level of operation
Scenario 2	Existing geometry	PM	A	7	0.43	Very good overall level of operation
Scenario 3	Existing geometry	PM	A	7	0.39	Very good overall level of operation
Scenario 4	Existing geometry	PM	A	7	0.45	Very good overall level of operation
Conclusion:		All approaches of this intersection operate with an overall level of service A during both peak hours with ample spare capacity and minimal delays experienced. No further upgrades are therefore warranted or required for this intersection.				
Upgrade Required:		None				
Upgrade Responsibility:		N/A				

5.3 MARKET STREET / BREMER STREET (R55)

<p>Existing Geometry & Control:</p> <ul style="list-style-type: none"> • 4-legged signalized intersection; • North: Two through lanes and one short left turning lane and one short right turning lane; • South: Two through lanes and one short left turning lane and one short right turning lane; • East: One shared through and left turning with a short right turning lane; and • West: One shared through and left turning lane with a short right turning lane; 	
---	--

Analysis Results & Conclusion			Intersection: Market St / Bremer St (R55)			
Detailed Results: Annexures B3.1 to B3.9						
Scenario	Geometry & Control	Peak	Overall			Comment
			LOS	Delay(s)	v/c _{max}	
Scenario 1	Existing geometry	AM	F	85	1.53	Very poor overall level of operation
Scenario 2	Existing geometry	AM	F	154	2.04	Very poor overall level of operation
Scenario 3	Existing geometry	AM	F	106	1.69	Very poor overall level of operation
Scenario 4	Existing geometry	AM	F	179	2.20	Very poor overall level of operation
Scenario 4	Proposed geometry and updated signal timing plans	AM	F	116	1.34	Very poor overall level of operation, however, significant improvement in capacity and delay.
Scenario 1	Existing geometry	PM	B	15	0.64	Good overall level of operation
Scenario 2	Existing geometry	PM	B	16	0.85	Good overall level of operation
Scenario 3	Existing geometry	PM	B	16	0.68	Good overall level of operation
Scenario 4	Existing geometry	PM	B	18	0.88	Good overall level of operation
Scenario 4	Proposed geometry and updated signal timing plans	PM	B	18	0.88	Good overall level of operation

Conclusion:	<p>This intersection is currently a 2-phase signalized intersection and this phasing operates well for all scenario's during the PM peak hour; however, regarding the AM peak hour, with reference to Figure 5, the existing right turning volumes at the western and southern approach of this intersection are significantly high (greater than 200vph) which already warrants dedicated phases for these movements to be installed (without even considering the additional development traffic).</p> <p>It can further be mentioned that the available road reserve to do geometric upgrades at this intersection is limited. In an east-west direction (Market Street), there is space at the western approach to do some geometric upgrades, however, at the eastern approach no additional lanes can be accommodated. Thus, the addition of any extra lanes at the western leg would consequently cause the eastern and western approaches to be misaligned and therefore not practical to implement.</p> <p>Due to the limited available space in the road reserve, it is recommended that no extra lanes be added at this intersection, however, it is proposed that the developer do a status quo upgrade by extending the existing right turning auxiliary lane on the western approach of Market Street. This lane is expected to accommodate the majority of the development's traffic and this specific right turning movement is already high during the peaks. It is proposed to extend this lane to have a straight distance of 52.5m with a 17.5m taper i.e the total lane length would be 70m (the existing straight length is approximately 25m thus the available straight distance would effectively be doubled). Furthermore, it is recommended to install right turning signal heads for the western and southern approaches of this intersection as well as to update the existing signal timing plans to have dedicated phases for both these approaches (refer to Drawing No. 0592/CL/02).</p> <p>These proposed upgrades will substantially improve the capacity and delays at this intersection. When comparing the analysis results for the AM peak hour of the upgraded geometry and signal timings using the Scenario 4 traffic volumes, which is the future 2027 base beak hour traffic with the additional development traffic (as per Figure 10), with the existing geometry analysed with the future 2027 peak hour volumes (Scenario 2 as per Figure 5), it is evident that the implementation of these upgrades would improve the intersection to be better off than what it will be in the future 2027 base scenario without any development traffic. These upgrades successfully mitigate the development's effect on this intersection and therefore no further upgrades than the above-mentioned should be the developer's responsibility.</p>
Upgrade Required:	Yes, as per Drawing No. 0592/CL/02
Upgrade Responsibility:	Developer

6. Road and/or Intersection Upgrades

Based on the estimated additional traffic generations that will result from the proposed development and the projected trip distribution onto the surrounding road network during the weekday AM and PM peak hours, the capacity analyses in Section 5, as well as site observations during the peaks, road and intersection upgrades will be required.

The following external road and intersection upgrades were identified:

❖ **Mulder Street / Boekenhoutkloof Street / Site Access Intersection:**

This intersection is currently a priority stop-controlled T-intersection between Mulder Street (northern and southern approach) and Boekenhoutkloof Street (eastern approach), however, a western fourth leg will be added to this intersection to provide access to the development. It is also recommended to implement a single lane approach traffic circle with an approximate outside diameter between 25-30m as the intersection control. The developer would be responsible to implement the required access configuration as discussed in Section 3.2 of this study (see also **Drawing No. 0592/CL/01**).

❖ **Market Street / Bremer Street (R55) Intersection:**

1. Extend the right turning auxiliary lane on the western approach of Market Street to 70m in total (52.5m straight with 17.5m taper).
2. Installation of right turning signal heads on the western and southern approaches of the intersection.
3. The implementation of updated signal timing plans (see also **Drawing No. 0592/CL/02**).

In the event of bulk engineering contributions payable with respect to roads and stormwater, it is recommended that the bulk contributions be off-set against the above-mentioned upgrades. It is argued that the proposed upgrades will improve the current traffic flow conditions in the area and should be viewed as beneficial to the road network.

8. Summary, Conclusions & Recommendations

Based on the content of this document, the following key conclusions and recommendations are relevant:

1. This Traffic Impact Assessment (TIA) has been undertaken as part of the township application for a proposed new residential development which is to be situated on Portion 183 of the Farm Zandfontein No. 317 – JR in Andeon. The site location is shown in attached **Figure 1** and **Figure 2** and falls under the jurisdiction of the City of Tshwane (CoT).
2. The subject site, as a whole, extends approximately 7ha and the proposed township will be known as Andeon Ext. 47. With reference to the town planner's proposed township layout plan enclosed in **Annexure A**, the subject site will be zoned 'Residential 3' with a proposed density of 60 units/ ha. Based on this density, the development has a permissible extent of 420 units.
3. Through correspondence with the developers, it is understood that the development will comprise of a mix of 300 apartments and 120 duplex units i.e. a total of 420 units are proposed which is in accordance with the township's proposed rights. Considering the type of units and the proposed density, the lower to middle income market is target, similar to that of the surrounding Andeon area.
4. **ACCESS:** As shown in attached **Figure 2** and **Drawing No. 0592/CL/01**, a single access to the development is proposed off Mulder Street (Class 4a road) at its existing T-intersection with Boekenhoutkloof Street. A fourth (western) leg will be added to this intersection for the access to the development.

With reference to **Figure 2**, the site aerial view indicates that as you move southbound past the site's access on Mulder Street, the road curves in a western direction into Erma Street. Due to this curve, the available shoulder sight distance at the access is restricted and therefore to address this, it is recommended that a traffic circle with an outside diameter between 25-30m be implemented at the Mulder Street and Boekenhoutkloof Street intersection. This upgrade would provide the necessary traffic calming along Mulder Street so that the shoulder sight distance at the access will not be a reason for concern anymore. It can be noted that the proposed traffic circle can be accommodated comfortably within the road reserve.

Two inbound lanes (one lane for visitors and one lane for residents) and two outbound lanes are recommended for the access geometry. Important to note is that the access will be security controlled and therefore adequate stacking distance should be provided to ensure that inbound vehicles queuing at the security gate do not impact on other traffic along the adjacent roads. It is recommended that a minimum stacking distance of 25m be provided. This is in line with the minimum required stacking distance for accesses off Class 4a roads, as per Table 30 of the *THM 16 (Vol 2)*.

5. In order to accommodate emergency and service vehicles, it is also necessary to ensure that at least one traffic lane (inbound or outbound) has a width of at least 3.5m wide with a total free-space of 4.5m and a height clearance of 5.2m, or as per the requirements of the local authority.
6. **TRIP GENERATIONS:** It is estimated that the proposed residential development, will generate a maximum of approximately **297vph** (total IN plus OUT) during both the weekday AM and PM peak hours.
7. **ROAD & INTERSECTION UPGRADES:** Based on the estimated additional traffic generations that will result from the proposed development and the projected trip distribution onto the surrounding road network during the weekday AM and PM peak hours, the capacity analyses in Section 5, as well as site observations during the peaks, road intersection upgrades will be required.

At the following key intersections, upgrades were identified as per Section 6:

❖ Mulder Street / Boekenhoutkloof Street / Site Access Intersection:

Refer to **Drawing No. 0592/CL/01.**

❖ Market Street / Bremer Street Intersection:

Refer to **Drawing No. 0592/CL/02.**

8. In the event of bulk engineering contributions payable with respect to roads and stormwater, it is recommended that the bulk contributions be off-set against the above-mentioned upgrades. It is argued that the proposed upgrades will improve the current traffic flow conditions in the area and should be viewed as beneficial to the road network.
9. **NON-MOTORISED & PUBLIC TRANSPORT:** On-site observations and the classified traffic surveys indicated that there is an existing public transport presence in the study area comprising mainly of minibus taxis. From the classified traffic surveys recorded at the intersection between Market Street and Bremer Street (R55) it was determined that approximately 3.5% of all the traffic accounted for during the survey was minibus taxis while at the intersection between Mulder Street and Boekenhoutkloof Street it was determined that 2% of all the traffic through this intersection were minibus taxis.

It is expected that most of the residents/ tenants of the proposed development will use their own private vehicles for commuting, instead of public transport, given the medium income target market. The proposed development will however create various employment opportunities for domestic workers, security staff, gardening and maintenance personnel, who are generally public transport users. It is expected that particularly minibus taxis would respond to this demand by providing more services in the area.

10. **PROPOSED FACILITIES:** In order to make provision for users of public transport, generated by the proposed development, the following facilities are proposed:
 - **Paved Sidewalks:** It is recommended that a new paved sidewalk of at least 1.8m wide be constructed along the eastern and southern boundary of the site (i.e. Mulder Street and Erma Street), starting from the gate house of the access. The proposed sidewalk is shown conceptually in attached **Drawing No. 0592/CL/01.**
 - **Public Transport Laybys:** It is recommended that a set of public transport laybys be constructed at the access intersection on Mulder Street and as shown conceptually in **Drawing No. 0592/CL/01.** These laybys can then be used by minibus taxis as well as refuse collection vehicles.

More details of the above would be submitted as part of the Site Development Plans and/or detail designs of the external roads.

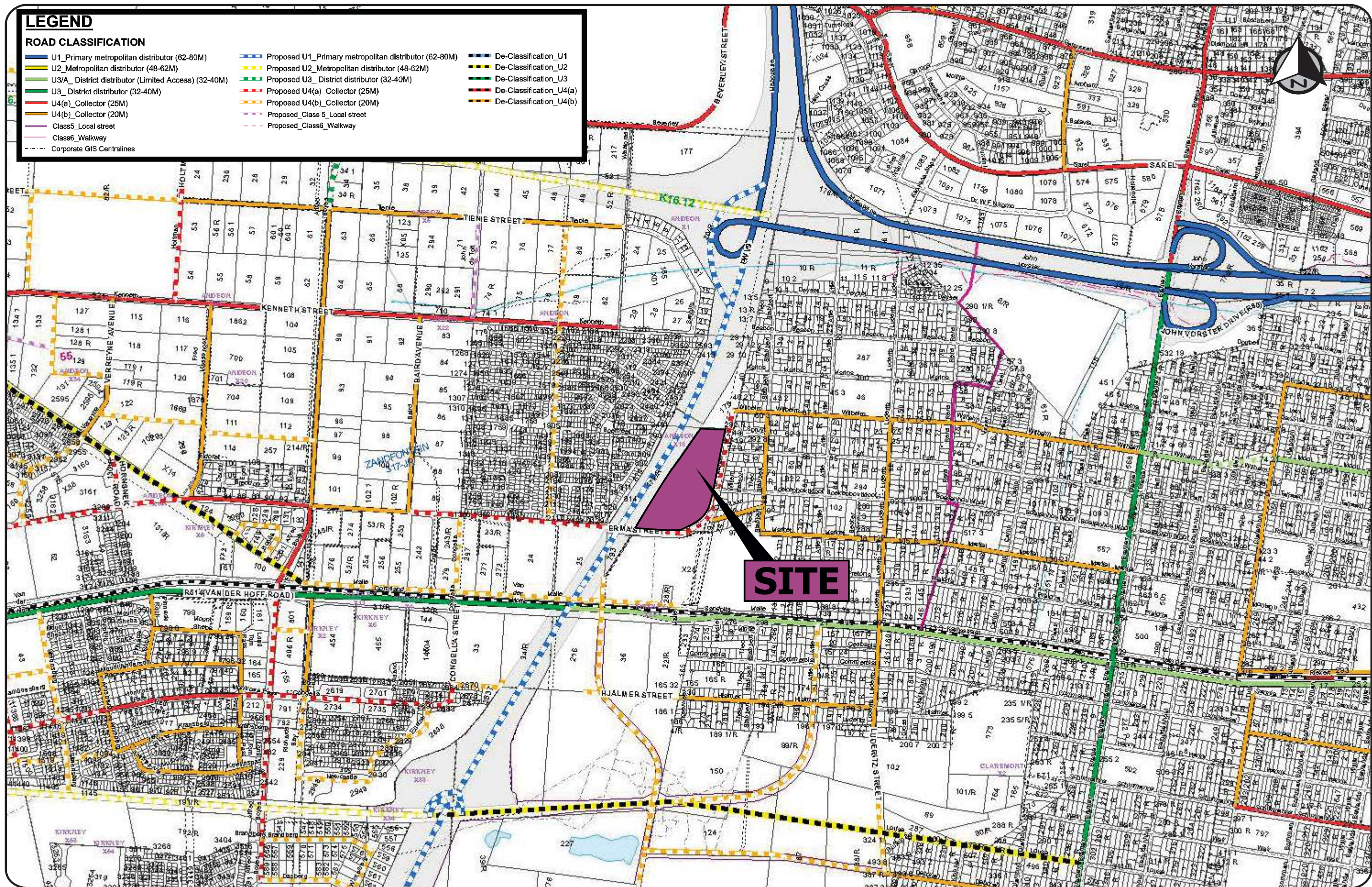
From a traffic engineering perspective, the proposed new residential development known as Andeon Ext. 47 is supported, provided that the proposed external upgrades, site access and NMT facilities as proposed in this TIA are being implemented to the relevant design standards of the City of Tshwane.

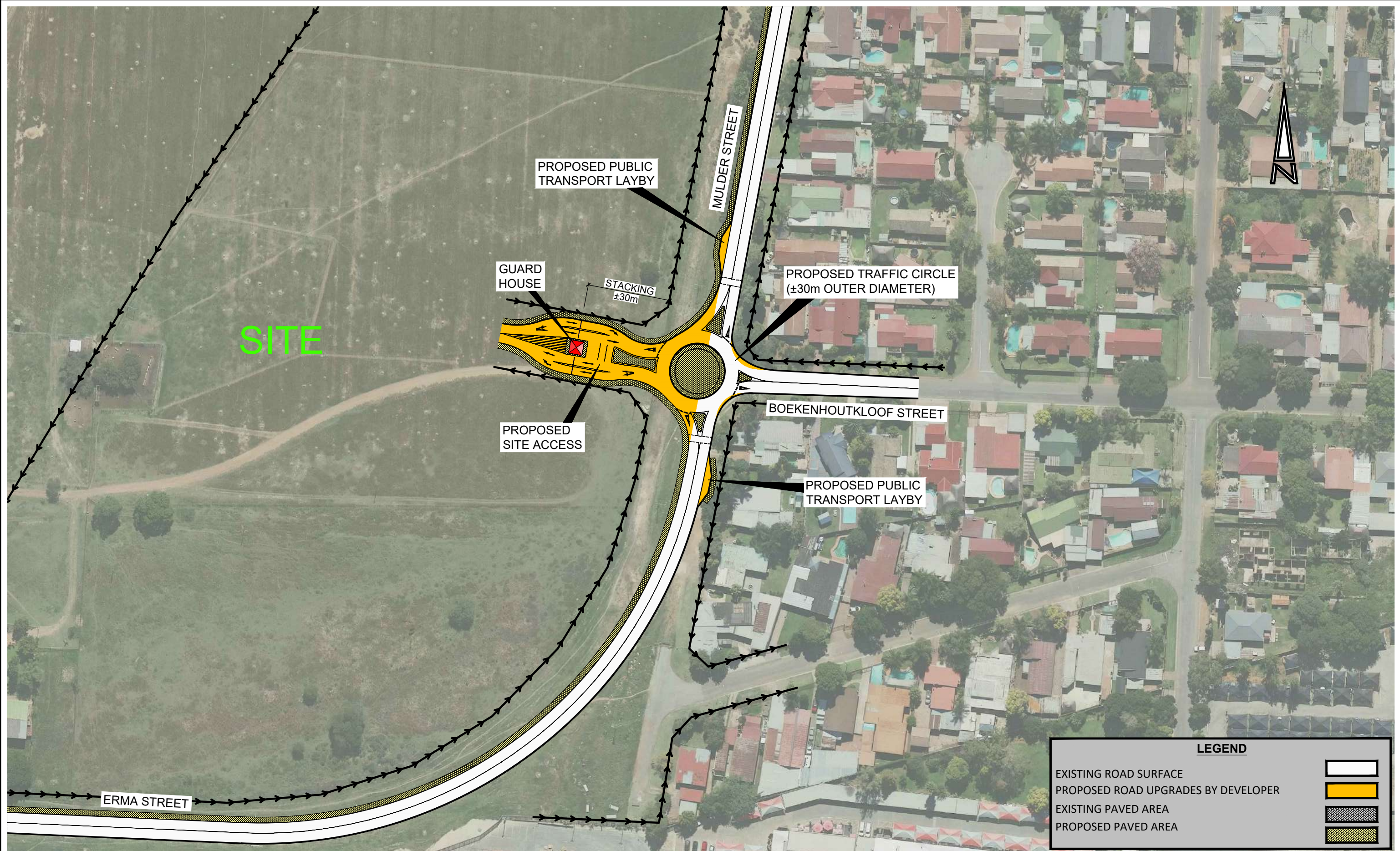


LEGEND

ROAD CLASSIFICATION

- | | | |
|---|---|-------------------------|
| U1_Primary metropolitan distributor (62-80M) | Proposed U1_Primary metropolitan distributor (62-80M) | De-Classification_U1 |
| U2_Metropolitan distributor (48-62M) | Proposed U2_Metropolitan distributor (48-62M) | De-Classification_U2 |
| U3/A_District distributor (Limited Access) (32-40M) | Proposed U3_District distributor (32-40M) | De-Classification_U3 |
| U3_District distributor (32-40M) | Proposed U4(a)_Collector (25M) | De-Classification_U4(a) |
| U4(a)_Collector (25M) | Proposed U4(b)_Collector (20M) | De-Classification_U4(b) |
| U4(b)_Collector (20M) | Proposed_Class 5_Local street | |
| Class5_Local street | Proposed_Class6_Walkway | |
| Class6_Walkway | | |
| Corporate GIS Centrelines | | |





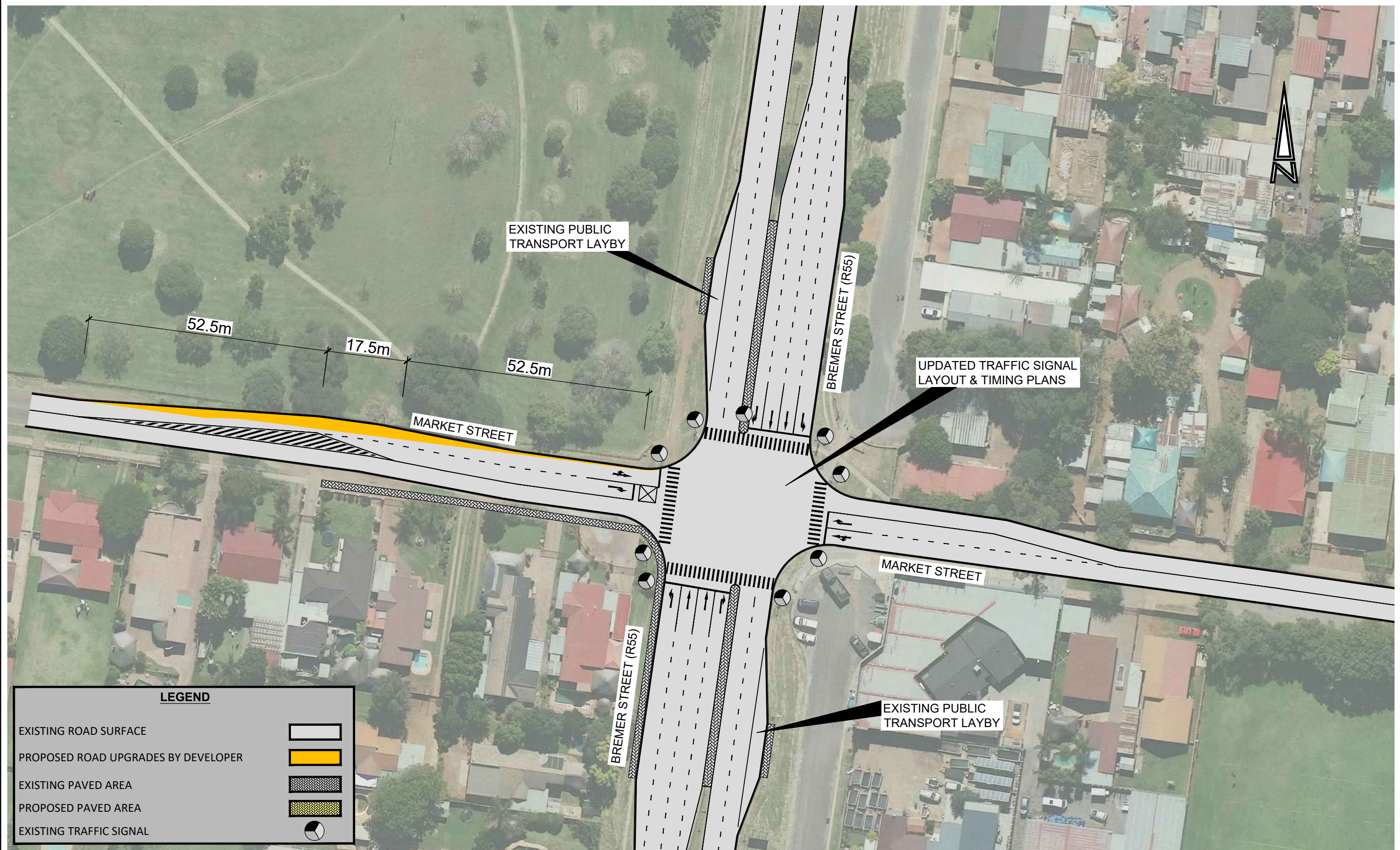
A	-	-	INITIAL ISSUE	-	-
REV	DATE	BY	DESCRIPTION	CHK	APD
DRAWING STATUS: TRAFFIC IMPACT ASSESSMENT					

Dhubecon Consulting Engineers
41 Via Aurelia Drive
Irene Corporate Corner
Irene, Centurion
Tel: 012 667 5531
Email: admin@dhubecon.co.za



PROJECT:	Andeon Ext. 47
TITLE:	Proposed Road & Site Access Upgrades: Mulder Street / Site Access & Boekenhoutkloof Street

SCALE:	1:1250	CHECKED:	R VAN DER WALT	APPROVED:	D HUNDERMARK
DESIGN:	-	DRAWN:	V MTHOMBENI	DATE:	2022/02/01
PROJECT No:	P0592	DRAWING No:	0592/CL/01	REV:	-



A	-	-	INITIAL ISSUE	-	-
REV	DATE	BY	DESCRIPTION	CHK	APD
DRAWING STATUS: TRAFFIC IMPACT ASSESSMENT					

Dhubecon Consulting Engineers
41 Via Aurelia Drive
Irene Corporate Corner
Irene, Centurion
Tel: 012 667 5531
Email: admin@dhubecon.co.za



PROJECT:	Andeon Ext. 47	SCALE :	1:750	CHECKED:	R VAN DER WALT	APPROVED:	D HUNDERMARK	
		DESIGN:	-	DRAWN:	V MTHOMBENI	DATE:	2022/01/31	
TITLE:	Proposed Intersection Upgrade: Bremer Street (R55) / Market Street	PROJECT No:	P0592	DRAWING No:		0592/CL/02	REV:	-

ANNEXURE G:

Extracts from Geotechnical Report

3. General geology

According to the available geology map, the entire site is underlain by shale of the Silverton Formation of the Pretoria Group of the Transvaal Supergroup. A dolerite intrusion is located on the northern part of the site.

The residual dolerite and shale materials are often deeply weathered and the residual materials generally have a high heave potential. The overlying colluvium may also be compressible. No water was encountered in any of the test pits

The in situ materials tend to weathered to clayey materials. Most of the materials classified as clayey sand (SC). The regional geology is indicated on 9884-02: Geology Map and the site specific geology on drawing below.



4. Available information

Maps

- The published geology map of Pretoria (Government Printer) at a scale of 1 : 250 000.
- Groundwater information from the Department of Water Affairs (DWA).

Publications

- SACS (Statigraphy of South Africa) Handbook 8, Part 1 Geological Survey (now the Council for Geoscience).
- Brink, A B A (1985). Engineering geology of Southern Africa (Volume 1). Building Publications.

5. Climate

The site lies within the Highveld climatic region, the climate being described as warm temperate with summer rainfall.

The average daily maximum temperature is in the order of 28°C in January and 18°C in July. The rainy season is from October to March, with an average rainfall of about 740mm. Thornwaite's classification indicates sub humid, warm conditions with deficient moisture in all seasons.

The Weinert N-value is in the region of 2,4 which indicates that predominantly chemical decomposition of the underlying rock has taken place.

6. Investigation methods

The available information such as the geology map was studied. Ten test pits were excavated by means of a TLB to depths ranging from 2,1m to 3,4m and the soil profiles were described by an engineering geologist. Thirteen disturbed and one undisturbed samples were

7. Foundation design and precautionary measures

The foundation design for each zone is summarised as follows and the preferred / recommended foundation system(s) is highlighted in grey

Zone A NHBRC Class H2

For the construction of single and double storey structures the following founding options can be considered:

Soil Raft	<ul style="list-style-type: none"> Remove in situ material to 1,0m beyond perimeter of the building to a depth of 1,5 times the width of the widest foundation or to a competent horizon and replace with material compacted to 93% MOD AASHTO density at -1% to +2% of optimum moisture content Normal construction with lightly reinforced strip foundations and light reinforcement in masonry
Stiffened strip footings, stiffened or cellular raft	<ul style="list-style-type: none"> Stiffened strip footings or stiffened or cellular raft with lightly reinforced or articulated masonry. Bearing pressure not to exceed 50 kPa Fabric reinforcement in floor slabs Site drainage and service/plumbing precautions
Deep strip foundations	<ul style="list-style-type: none"> Normal construction with drainage precautions
Compaction of in situ soils below individual footings	<ul style="list-style-type: none"> Founding on a competent horizon below the problem horizon at approximately 1,6m

Zone B NHBRC Class R/S1

For the construction of single and double storey structures the following founding options can be considered:

Modified normal	<ul style="list-style-type: none"> • Reinforced strip footings • Articulation joints at some internal and all external doors • Light reinforcement in masonry • Site drainage and service / plumbing precautions • Foundations pressure not to exceed 50kPa •
Compaction of in situ soils below individual footings	<ul style="list-style-type: none"> • Remove in situ material below foundations to a depth and width of 1,5 times the foundation width or to a competent horizon and replace with material compacted to 93% MOD AASHTO density at -1% to +2% of optimum moisture content • Normal construction with lightly reinforced strip foundations and light reinforcement in masonry
Soil Raft	<ul style="list-style-type: none"> • Remove in situ material to 1,0m beyond perimeter of the building to a depth of 1,5 times the width of the widest foundation or to a competent horizon and replace with material compacted to 93% MOD AASHTO density at -1% to +2% of optimum moisture content • Normal construction with lightly reinforced strip foundations and light reinforcement in masonry

Zone C NHBC Class H3

For the construction of single and double storey structures the following founding options can be considered:

Soil Raft	<ul style="list-style-type: none"> • Remove in situ material to 1,0m beyond perimeter of the building to a depth of 1,5 times the width of the widest foundation or to a competent horizon and replace with material compacted to 93% MOD AASHTO density at -1% to +2% of optimum moisture content
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Stiffened strip footings, stiffened or cellular raft	<ul style="list-style-type: none"> • Stiffened strip footings or stiffened or cellular raft with lightly reinforced or articulated masonry. • Bearing pressure not to exceed 50 kPa • Fabric reinforcement in floor slabs • Site drainage and service/plumbing precautions
Deep strip foundations Compaction of in situ soils below individual footings	<ul style="list-style-type: none"> • Normal construction with drainage precautions • Founding on a competent horizon below the problem horizon at approximately 2,5m
Piled construction	<ul style="list-style-type: none"> • Piled foundations with suspended floor slabs with or without ground beams • Site drainage and plumbing / service precautions
Split construction	<ul style="list-style-type: none"> • Combination of reinforced masonry and full movement joints • Suspended floors or fabric reinforced ground slabs acting independently from the building • Site drainage and plumbing / service precautions

Precautionary measures that must be implemented are as follows:

- The fall of the trenches shall be away from the buildings to improve drainage.
- The selection of piping materials shall take cognisance of corrosion (both external and internal).
- Water pipes shall have a minimum cover of 500mm.
- Wherever practical, service trenches shall not be excavated along the length of structures within the first 3,0m beyond the perimeter of structures.
- The ground immediately against the buildings shall be shaped to fall in excess of 75 mm over the first 1,0 m beyond the perimeter of the

building, from where it shall drain freely away from the structures. Apron slabs, where provided shall have the same fall.

8. Conclusions and recommendations

The regional geology is indicated on drawing number 9884-02: Geology Map. The available map and the test pits excavated on site showed that the site is underlain by residual shale with a dolerite intrusion in the northern part of the site.

The site is currently undeveloped and the planned development is a residential houses and / complexes.

According to the NHBRC the site is classified as follows:

Zone	NHBRC Class	Amount of movement due to heave mm	Competent founding level
A	H2	20mm	>2,5 to >3,4m
B	R/S1	<5mm	0,2m to 1m with avg 0,6m
C	H3	>30	2,5m+

The precautionary measures to reduce water ingress must be implemented as changes in moisture content can cause ground movement.

Excavations (for foundations and underground services) must be inspected on the site during construction.

No suitable construction materials were identified for use in layer works. All construction materials should be imported or additional testing be done on the in situ materials by stabilising with cement or by blending with coarser materials to improve the materials from G9 to say G6.

No excavation problems are foreseen. All excavations deeper than 1,5m must be shored. **In Zone C sidewall collapse occurred on the slickensides of the clay.**

A collapse potential test showed that the collapse potential of the near surface materials is considered to be insignificant.

The NHBRC will require a Construction report for enrolment of residential units.

9. Report provisions

The aim of the investigation was to estimate through site investigation; professional judgment and past experience the geotechnical conditions of the site, different soil horizons with their different geotechnical properties, areas subject to a perched water table, and areas of poor drainage, areas underlain by hard rock and to estimate their distribution. However, it is impossible to guarantee that isolated zones of different geotechnical conditions, foundation materials, blanketing layers or any other geotechnical problems have not been missed.

Zone	NHBRC Class	Amount of movement due to heave mm	Competent founding level
A	H2	20mm	>2,5 to >3,4m
B	R/S1	<5mm	0,2m to 1m with avg 0,6m
C	H3	>30	2,5m+



Geo Buro

Geotechnical Surveys

S P Kok
Engineering Geologist
Cell: 083 556 0968
spkok@telkomsa.net



Client:

Cosmopolitan
Projects

Site:
Portion 183
of the farm
Zandfontein 317 JR

Drawing No.
9884 -03:
Zonation
Map

ANNEXURE H:
Investigation Findings - Photos

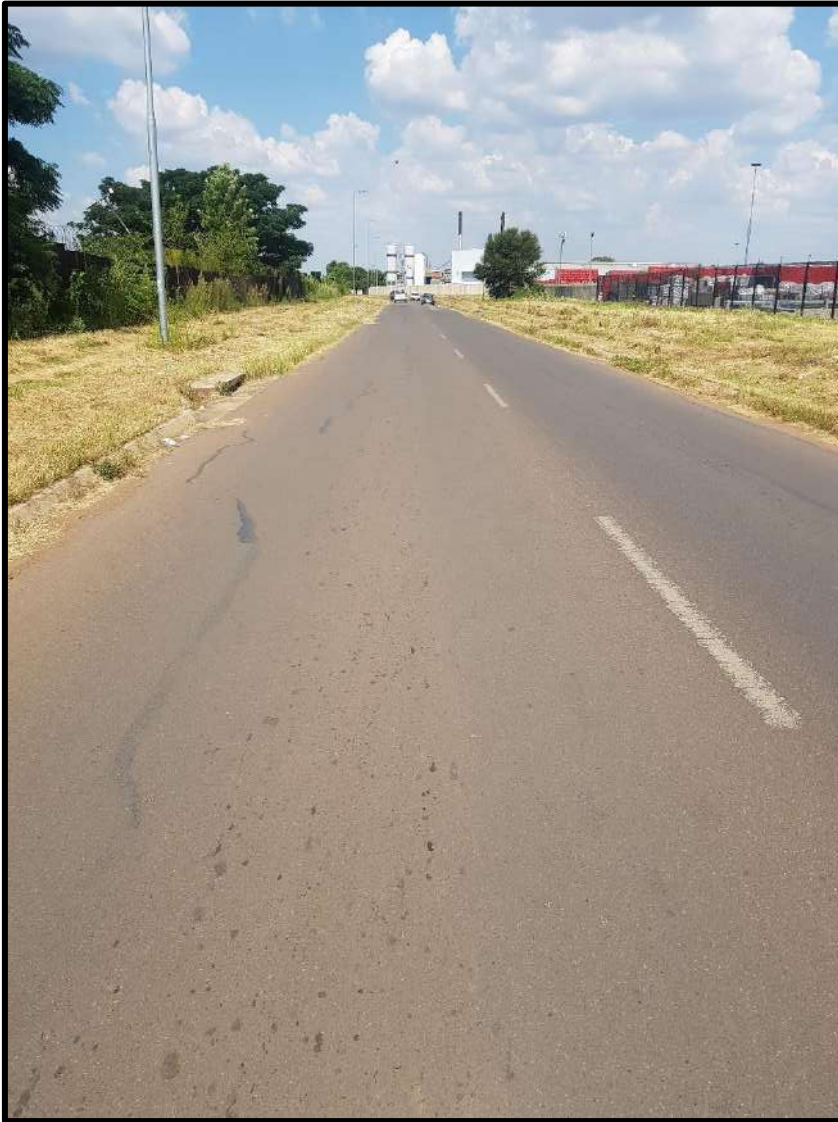


Figure 1: Erma Street South of Proposed Development.



Figure 2: Erma Street South of Proposed Development.

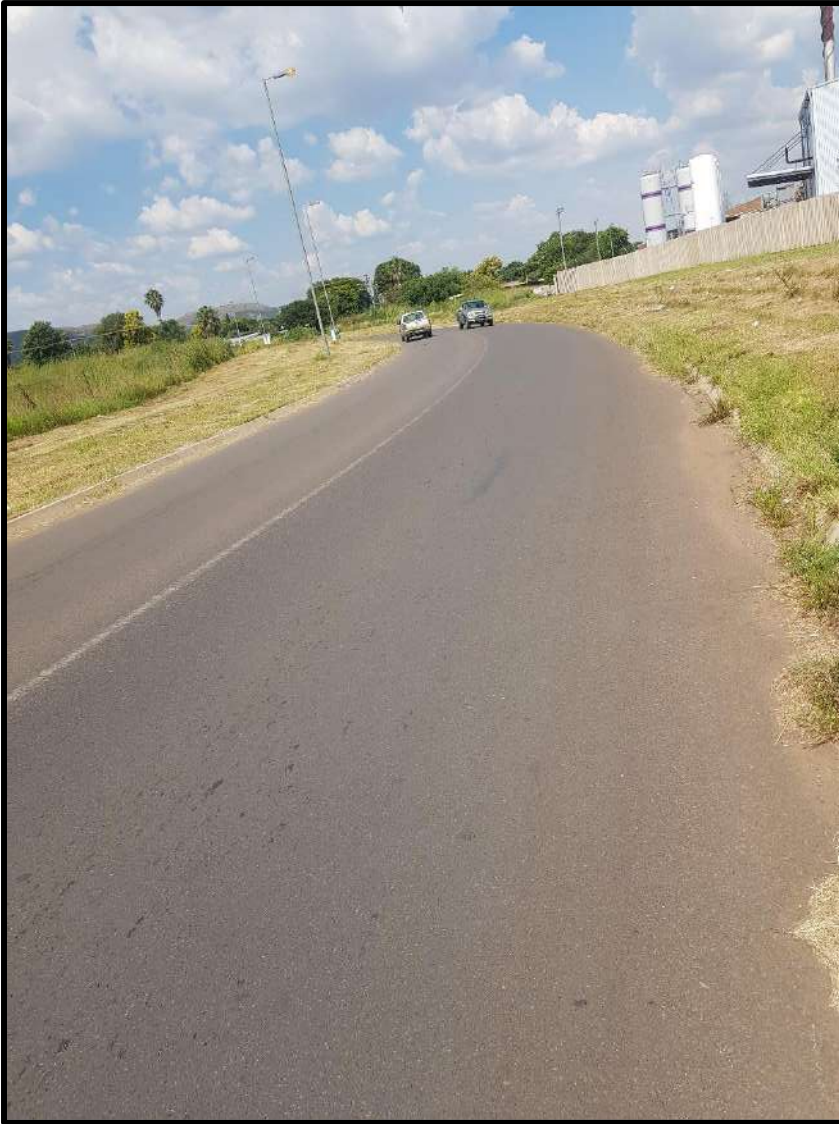


Figure 3: Erma Street / Mulder Street.

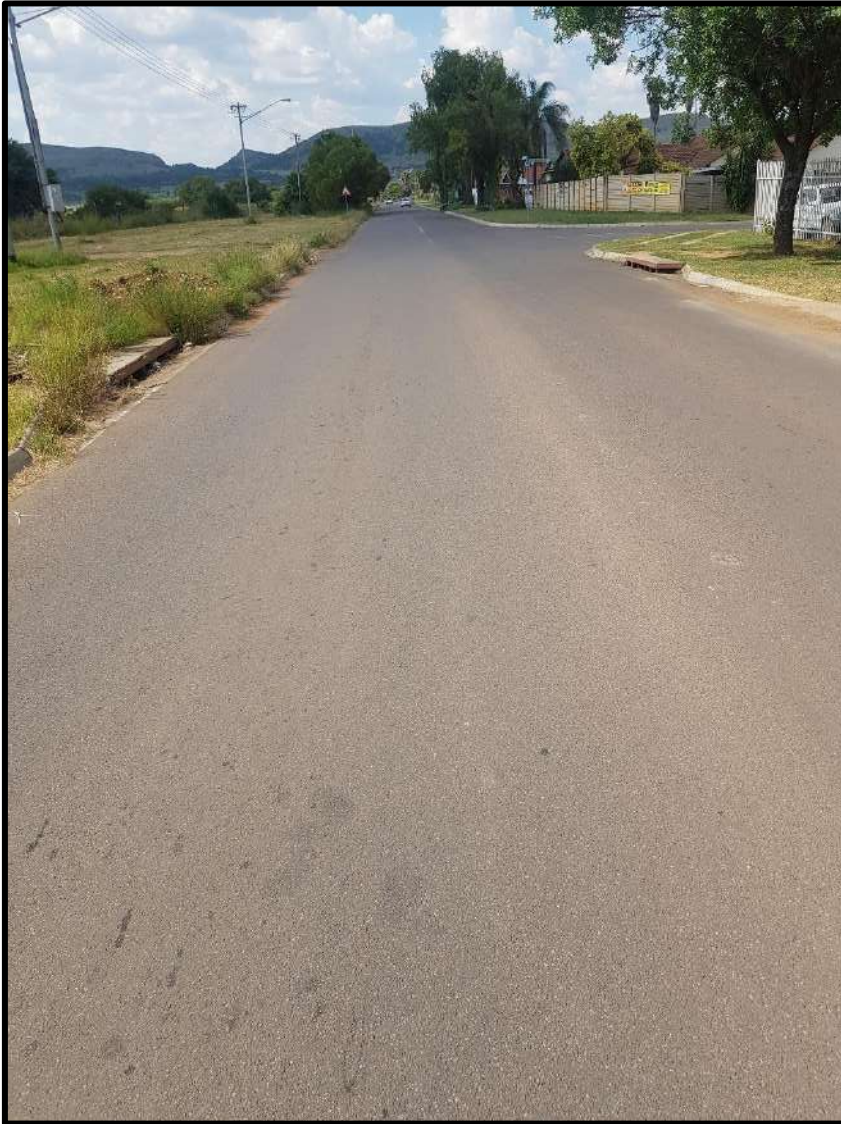


Figure 4: Mulder Street and Boekenhoutkloof Street Intersection.

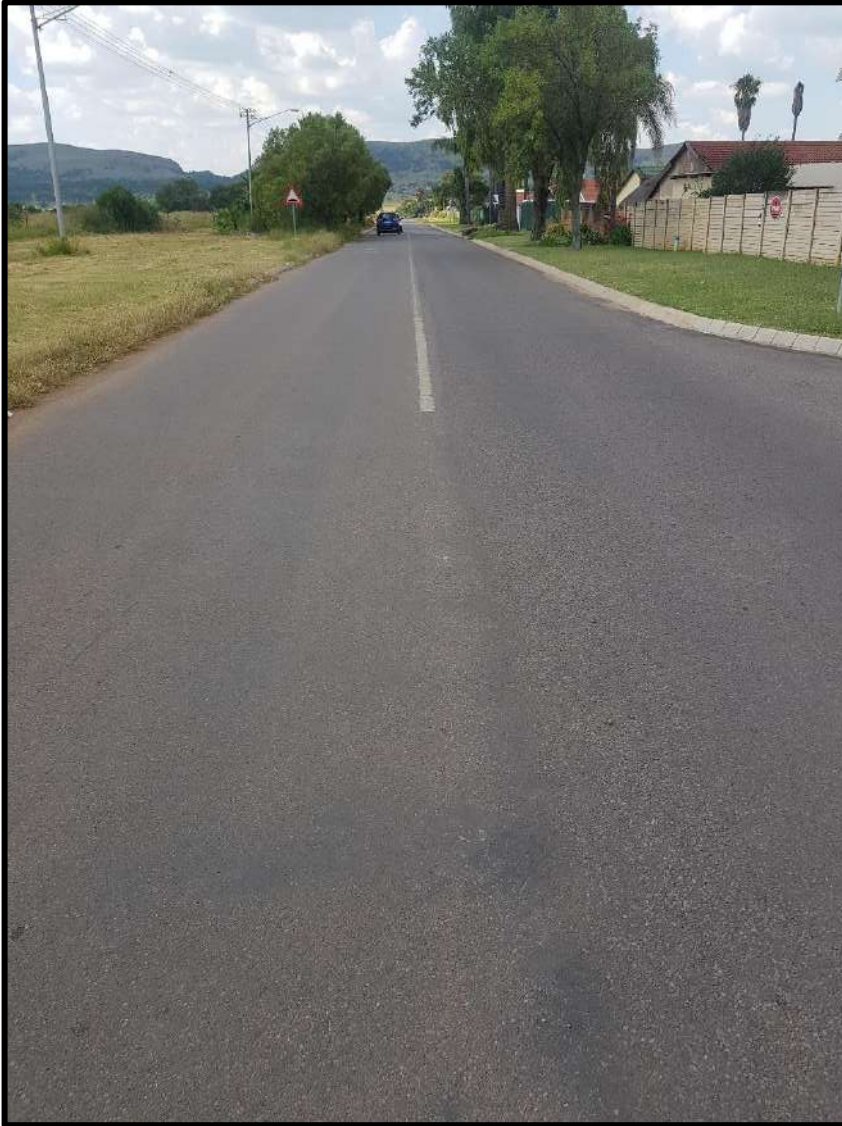


Figure 5: Mulder Street.

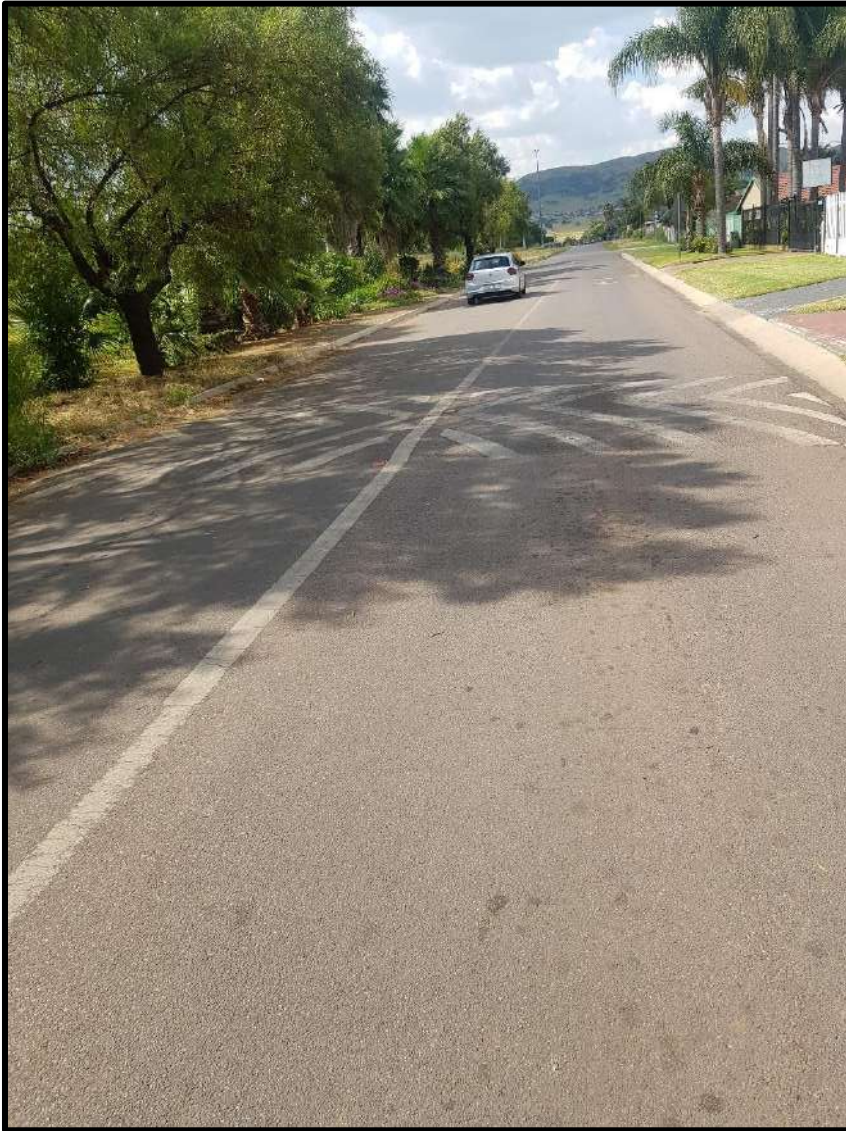


Figure 6: Mulder Street.



Figure 7: Mulder Street's Stormwater Network.

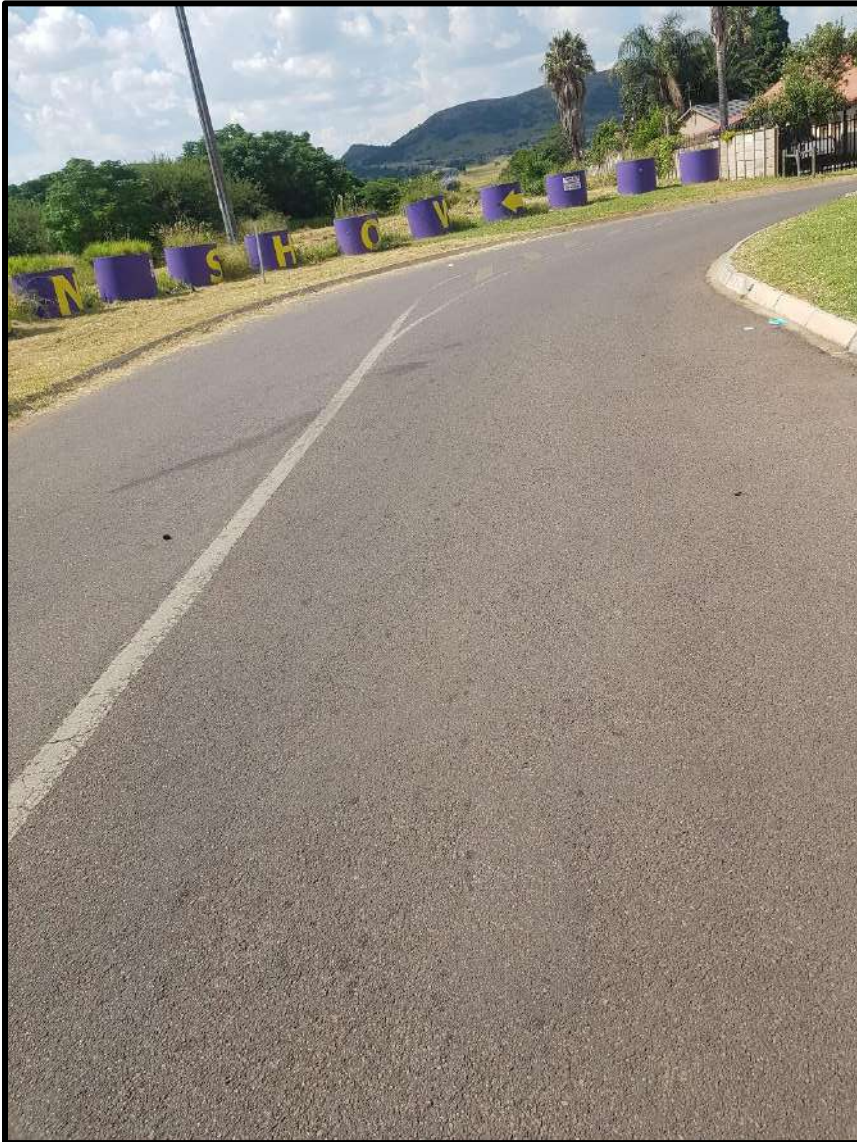


Figure 8: Intersection of Mulder Street and Wilhelm Street.



Figure 9: Existing Outlet Structure (1 050mm dia to be reconstructed).



Figure 10: Existing Stormwater Channel at Section A-A.



Figure 11: Existing Stormwater Channel at Section B-B.

ANNEXURE H: INVESTIGATION PHOTOS – SECTION C-C



Figure 12: Existing Stormwater Channel at Section C-C.



Figure 13: Existing Stormwater Channel at Section C-C.



Figure 14: Existing Stormwater Channel Daylight into Modderspruit.

ANNEXURE I:
Environmental Authorisation

Environmental Planning & Geographic Information Systems

ISQUARE INFORMATION SYSTEMS cc

Reg No: 2002/042164/23

VAT No: 422 020 2685

Address: 76/2 Maple Road, Midrand, 1684

Web: www.isquare.co.za

Ronel Dreyer (BL, 1990; ML, 1992)

Cell: 082 375 2015

Email: roneld@isquare.co.za



31 January 2022

Cosmopolitan Projects Tshwane (Pty) Ltd

Address: Building F, Hertford Office Park, 90 Bekker Road, Midrand, 1685

Tel: 011 541 3800

Cell: 082 323 4913

Attention: Mr Anton Mathey

Dear Sir,

ENVIRONMENTAL AUTHORISATION APPLICATION FOR THE PROPOSED RESIDENTIAL DEVELOPMENT ANDEON X47 ON PORTION 183 (A PORTION OF PORTION 179) OF THE FARM ZANDFONTEIN 317-JR, CITY OF TSHWANE METROPOLITAN MUNICIPALITY

ENVIRONMENTAL SUMMARY

ISQUARE Information Systems cc has been appointed by Cosmopolitan Projects Tshwane (Pty) Ltd as the Environmental Assessment Practitioner to undertake a Basic Assessment Process.

1. Environmental Authorisation Process

The Environmental Authorisation (EA) application will be submitted to the Gauteng Department of Agriculture and Rural Development (GDARD) in terms of the National Environmental Management Act, 1998 (Act No 107 of 1998) (NEMA) and the 2014 Environmental Impact Assessment (EIA) Regulations, as amended. The following activity is relevant:

Listing Notice 1: Activity 27: *"The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation except where such clearance of indigenous vegetation is required for (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan."*

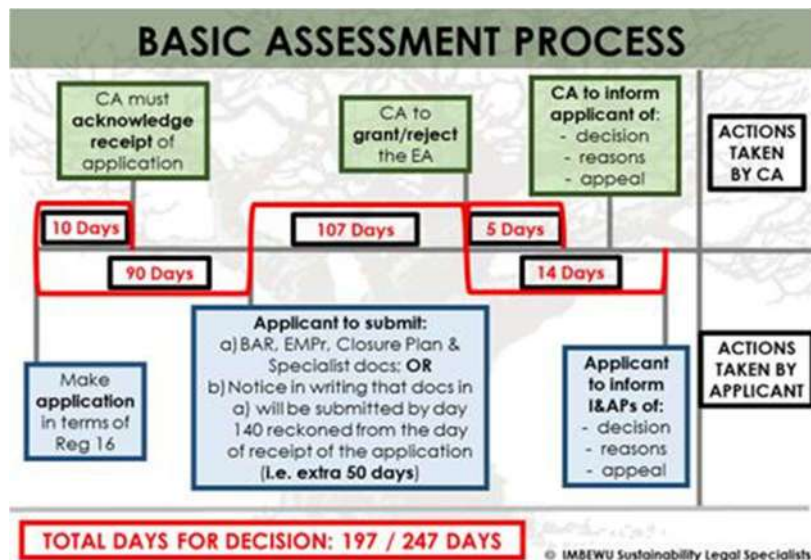
Listing Notice 3: Activity Nr 12: *"The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan."*

In order to obtain the necessary environmental authorization for the proposed project from the GDARD, the undertaking of a **Basic Assessment Process** will be required. The following activities will form an essential part of the environmental authorisation project:

- Application to the Department in terms of the EIA Regulations (2014 as amended);
- Undertake independent, comprehensive and technically sound investigations of all environmental issues associated with the project;
- Coordination and management of specialists;
- Liaison with GDARD during the Basic Assessment process;
- Regular feedback to the client in terms of progress and any findings; and
- Undertake a public participation process (PPP) to identify issues and concerns of key stakeholders and interested and affected parties (I&APs). The PPP will accommodate the consultation requirements of the proponent in accordance with the new EIA regulations.

Following submission of the final Basic Assessment Report (BAR), GDARD will then reach a decision as to whether, and under what conditions, the project may proceed, based on environmental considerations.

The authorisation can be obtained within a period from 197-247 days as per timeframe in the 2014 EIA Regulations, as amended. Note that this timeframe excludes the holiday season between 15 December 2021 and 3 January 2022.



2. Project Schedule

The following programme is pursued in this Environmental Impact Assessment process:

ACTIVITY	PLANNED
Project Management	Date completed
Date of Appointment	December 2021
Date of Site investigation	November 2021
Initial Advertising (Notification Phase)	Date Completed
Compilation of General Stakeholder (I&AP) and Landowner List	18 January 2022
Placement of on-site notices	19 January 2022
Placement of newspaper advertisement	24 January 2022
Notification letter distributed to I&APs and Landowner List	19 January 2022
Specialist Studies	Date completed
Fauna & Flora Assessment	November 2021
Heritage Impact Assessment & Paleontology Desktop Study	November 2021
Basic Assessment	Expected Date for Completion
Application and Draft Basic Assessment Report to I&APs and GDARD	March 2022
Final Basic Assessment Report for approval to GDARD	April 2022
Date of Environmental Authorisation issued and received	August 2022
Notification of EA to all I&APs with right to appeal	August 2022

We trust you find above in order. Please feel free to contact us should any clarification be required.

Kind regards

RONEL DREYER

ANNEXURE J:

Letter of Appointment of Consulting Engineer

Awaiting

ANNEXURE K:
Bulk Service Contributions



Tshwane Metropolitan Municipality

Development Charges for Roads

1. APPLICANT AND DEVELOPMENT PARTICULARS

Note: Only complete blue-coloured cells

Applicant name:	Cosmopolitan Projects Tshwane (Pty) Ltd	Mun Reference Num	Tshwane RoadCharge -Andeon Ext 47_R			
Applicant postal address:	-	Calculation Date:	7	2	2022	Day/Month/Year
Development physical address:	-	Region No:	3	Name:	Region 3	
Development description:	Andeon Ext 47	Vehicle Ownership Code (H/L/V)	High	Publ Trans (N/T)	Non	

2. PREVIOUSLY APPROVED LAND USE

Note: Only complete blue-coloured cells

Add/Remove rows as required

No	Code	Land use Description	Land-use Size		Base Size	Trip rate		Mix-Use potential	Mix-Use trips	% Trip Rate Reductions			% Heavy P _{HD}	E80 Axles E _{HD} / HV	Size Adj Factor F _T	Trip Len L _D /2 (km)	Trips generated		Capacity Comp Veh-km/hr	Strength Comp E80-km/day
			Units	Size A _D		AADT _D	Hour _D			Mix-Use	Low-veh	Transit					Trips/hr	Heavy /day		
1	210	Single Dwelling Units	D/Unit	1	1	4.000	0.900		0	10.0%	0.0%	0.0%	0.0%	0.000	100%	1.550	0.9	0.0	1.40	0.00
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				

Total previously approved

Calculations using rounded off factors

1.40 0.00

3. TOTAL LAND USE APPLIED FOR (INCLUDING PREVIOUSLY APPROVED)

Note: Only complete blue-coloured cells

Add/Remove rows as required

No	Code	Land use Description	Land-use Size		Base Size	Trip rate		Mix-Use potential	Mix-Use trips	% Trip Rate Reductions			% Heavy P _{HD}	E80 Axles E _{HD} / HV	Size Adj Factor F _T	Trip Len L _D /2 (km)	Trips generated		Capacity Comp Veh-km/hr	Strength Comp E80-km/day
			Units	Size A _D		AADT _D	Hour _D			Mix-Use	Low-veh	Transit					Trips/hr	Heavy /day		
1	220	Apartments and Flats	D/Unit	421	1	2.750	0.620		0	15.0%	0.0%	0.0%	0.0%	0.000	100%	1.000	261.0	0.0	261.00	0.00
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Total application

Calculations using rounded off factors

261.00 0.00

4. DEVELOPMENT CHARGE

Development charge: Roads				Road Unit Cost Rates			Veh-km/hr	E80-km/day
1	Incremental traffic load (Application - Previously approved)			Land	Capacity	Strength	259.60	0.00
2	Subtotals - Road charges			R216.00	R4 428.78	R788.26	R1 205 784.89	R0.00
3	Value added tax (VAT)						15.0%	R180 867.73
Total development charge for roads								R1 386 652.62



Tshwane Metropolitan Municipality

Development Charges for Stormwater
July 2021 - June 2022

1. APPLICANT AND DEVELOPMENT PARTICULARS

Note: Only complete blue-coloured cells

Applicant name:	Cosmopolitan Projects	Municipal APS number:	N/A
Development physical address:	Andeon Ext 47	Calculation date:	07 February 2022

2. LAND DEVELOPMENT AREA (LDA) - SITE DESCRIPTION

Total site or development area (m²) 70327.0

3. EXISTING LAND-USE (AS APPROVED)

					Multiple Erf Development					
					No	Code	Zone description			
							Land-use description	Zone area (m²)	Code units	No. units
					1	1	OPEN FIELD - UNDEVELOPED AREA - Relative flat area: max. gradient 3%	70327	Dwelling Units	1
					2					
					3					
					4					
					5					
					6					
					7					
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					

Combined C-factor for existing development: 0.15

Imperviousness for existing development: 10549

Total imperviousness (C*A) for existing development: 10549

3. TOTAL LAND USE APPLIED FOR (INCLUDING PREVIOUSLY APPROVED)												
					Multiple Erf Development							
					No	Code	Zone description					
							Land-use description	Zone area (m²)	Code units	No. units	C-factor	δ C * A
					1	2	OPEN FIELD - UNDEVELOPED AREA - Landirani 3% to 10%	7033	Dwelling Units	1	0.25	1758.175
					2	1101	ROAD RESERVE - MUNICIPAL ROADS	24614	m²	1	0.80	19691.56
					3	304	RESIDENTIAL - CLUSTER HOUSING	38680	Dwelling Units	421	1.00	38679.85
					4							
					5							
					6							
					7							
					8							
					9							
					10							
					11							
					12							
					13							
					14							
					15							
Combined C-factor for proposed development:												
Imperviousness for proposed development:											60130	
Total imperviousness (C*A) for proposed development:											60130	
4. DEVELOPMENT CHARGE												
Development charge: Stormwater								Stormwater Unit Cost Rates		Increment CxA		
1	Incremental run-off (new application minus current)							Stormwater network	Watercourses	49 581		
2	Subtotals - Stormwater charges							R9.30	R1.05	R513 158.54		
3	Value added tax (VAT)									15.0%	R76 973.78	
Total development charge for stormwater										R590 132.32		
-> Development charge component for stormwater systems -> Development charge component for watercourses										R530 263.82		
										R59 868.50		