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Roads and Transport
Traffic Engineering
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Date: 21 January 2025

Our Ref: UDS640/Reports/TIS

ASLA Devco (Pty) Ltd.
25 Jan Conradie Crescent
ASLA Park
Strand
7140

ATTENTION: Ms Belinda Munsamy-Swartland

Dear Madam,

**APPLICATION FOR REZONING AND SUBDIVISION OF ERVEN 182 AND 184, NUWERUS:
TRAFFIC IMPACT STATEMENT**

This company was appointed by *ASLA Devco (Pty) Ltd.* to prepare a Traffic Impact Statement (TIS) for the Nuwerus Integrated Residential Development Programme (IRDP) Housing Project proposed on Erven 182 and 184.

1 BACKGROUND AND LOCALITY

The subject erven are located in the northwest of the small town of Nuwerus within the Matzikama Municipality, south of the cemetery. The proposed development encompasses two application areas. Application Area A (the eastern area of the proposed development, situated to the north of Olyf Street) overlays the full extent of Erf 182, while Application Area B (the western area of the proposed development, located to the north of the existing erven on Arcarcia Street) overlays only a portion of Erf 184. See the attached **Locality Plan**.

Apart from the existing sports facilities, the application areas are currently undeveloped. Erf 182 is presently zoned as Single Residential Zone 1, without subdivision, while Erf 184 is split into three different zonings – Agricultural Zone 1, Open Space Zone 1 and Undetermined Zone.

This TIS accompanies the Application for Subdivision of Erf 182 and Rezoning and Subdivision of Erf 184, Nuwerus.



A Level 1 Contributor to B-BBEE

2 PROPOSED DEVELOPMENT

2.1 Development Proposal

As mentioned, the proposed development pertains to the Nuwerus IRDP Housing Project and consists of two application areas. The subdivision is indicated on the attached (DRAFT) **Layout Plan**, dated 26 March 2024 and prepared by *Urban Dynamics South Cape Town and Regional Planners*.

The proposed land uses for the newly subdivided erven and their respective sizes/capacities are as listed below.

- A. Application Area A (± 0.92 ha): 31x Single Residential Zone 1 erven (± 150 m² each)
- B. Application Area B (± 2.52 ha): 60x Single Residential Zone 1 erven (± 150 m² each), 2x Community Facility erven (± 432 m² and ± 434 m²) and 1x Business erf (± 338 m²)

Total (± 3.45 ha): 91x Single Residential Zone 1 erven (± 150 m² each), 2x Community Facility erven (± 432 m² and ± 434 m²) and 1x Business erf (± 338 m²).

The specific land uses of the Community Facility erven and Business erf are not yet known at this stage.

2.2 Access to the Property

The subject application areas currently obtain access via unsurfaced extensions of Arcarcia Street and Jakaranda Street.

As indicated in **Figure 1** and on the attached **Layout Plan**, four future access points from/to the existing public road network are proposed. These are as listed below.

1. Access to/from Application Area A via Olyf Street
2. Access to/from Application Area A via Arcarcia Street
3. Access to/from Application Area B via Jakaranda Street
4. Access to/from Application Area B via Arcarcia Street

Several of the Residential erven in the south of Application Area A will have direct access via either Olyf Street or Arcarcia Street.

Further details of the proposed accesses are discussed in **Section 4**.

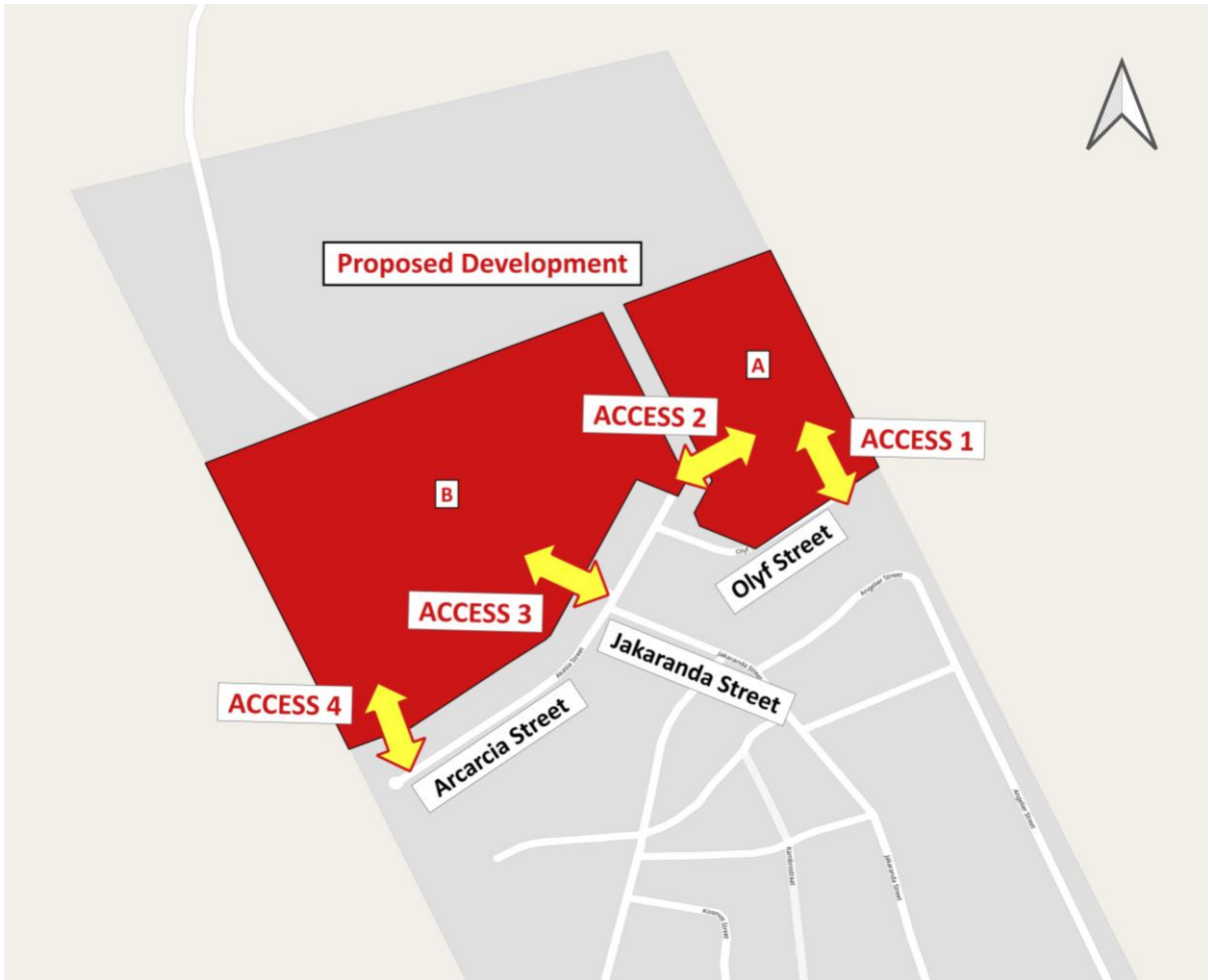


Figure 1: Access Points to Proposed Development

3 TRAFFIC

The trip generation rates for the Single Dwelling Unit land use, as published in the *TMH17 South African Trip Data Manual*, were applied to determine the number of potential new peak-hour trip ends that could be generated by the proposed development’s residential erven. These rates, along with their inbound and outbound splits, are presented in **Table 1**.

Table 1: Applicable Weekday Peak-Hour Trip Generation Rates

Land Use	AM Peak Hour Trips		PM Peak Hour Trips	
	Total	Split (IN/OUT)	Total	Split (IN/OUT)
Single Dwelling Unit	1.0 per unit	25:75	1.0	70:30

The trip generation adjustment factor for *Very Low Vehicle Ownership* (70% reduction), as also provided in the *TMH17*, was deemed to be applicable to the residential erven based on a 2017 study conducted by *GIBB (Pty) Ltd* on behalf of *Communicare*, which evaluated bespoke trip generation and parking ratios for *Communicare’s* social housing developments.

The trip generation rates and inbound/outbound splits in **Table 1**, combined with the aforementioned and presented adjustment, thus result in the total potential additional peak-hour trips given in **Table 2**.

Table 2: Potential New Peak-Hour Trip Generation of the Proposed Development's Residential Erven

Land Use	AM Peak Hour			PM Peak Hour		
	Total	IN	OUT	Total	IN	OUT
Single Dwelling Unit – 91 units	27	7	20	27	19	8

In summary, a total of 27 potential additional peak-hour trip ends could be generated by the proposed development's residential erven during both the AM (7 inbound; 20 outbound) and PM (19 inbound; 8 outbound) weekday peak hours. As stated above, these trip ends incorporate the application of the *Very Low Vehicle Ownership* (70% reduction) trip generation adjustment factor.

As stated in **Section 2.1**, the specific land uses for the Community Facility erven and the Business erf have not yet been determined. However, considering that the adjustment factors for *Mixed-use Development* and at least *Low Vehicle Ownership* would be applicable, these erven, regardless of their precise land use, are not expected to significantly increase the overall trip generation of the proposed development during the peak hours. To elaborate on the application of the Mixed-Use Development adjustment factor, it is anticipated that the referred additional facilities will primarily cater to the new residents and will, therefore, predominantly be accessed on foot.

According to the *Manual for Traffic Impact Studies (Department of Transport, 1985)*, Traffic Impact Statements are warranted for a trip generation threshold of 50 to 150 new peak-hour trip ends. Since the potential new peak-hour trip ends presented in **Table 2** do not surpass this threshold, and given that Nuwerus has been identified as having a very low composite growth potential (as per the Western Cape Government *Growth Potential Study* published in 2014), no traffic analyses were conducted at the intersections surrounding the proposed development.

No road network upgrades are considered necessary to accommodate the proposed development.

4 GEOMETRY

As previously mentioned, access to the proposed application areas will be obtained from several existing access roads. These are all single carriageways (i.e. 1 lane per direction), classified as Class 5 local streets and with road reserves of ±10 m. While the town's gravel roads have recently been upgraded to surfaced roads, the streets in the immediate vicinity of the proposed development remain unsurfaced. Since surfaced streets are proposed (and also advised) for the new development, the remaining gravel sections of Arcarcia Street, Jakaranda Street and Olyf Street that serve as links to the proposed development should be surfaced as part of the development's construction.

For the new proposed local streets (surfaced) in the development areas, a road reserve of 10 m (typical for Class 5B local residential streets, according to the *TRH26 South African Road Classification and Access Management Manual*) is shown on the **Layout Plan**. A few acceptable narrower road widths of 6 m and 8 m are planned for the culs de sac. The intersections that form the access points to the development areas as well as those within the new local street network will be sign-controlled (i.e. stop or yield). Further elements of the streets, such as cross sections, right of way, kerb radii and sight distances are not included on the **Layout Plan**. These are expected to be specified in the final road designs and will require separate assessment and approval based on the applicable standards.

Since each proposed access to the application areas will be a public street, i.e. not controlled by way of access-boom/gate, stacking is not anticipated at these points. While access control types have not

yet been confirmed for the non-residential (i.e. Community Facility and Business) erven, their anticipated low traffic volumes are not expected to cause any stacking issues.

It is recommended that street lighting be provided for both Application Areas.

According to the *Matzikama Integrated Waste Management Plan* (3rd Generation; February 2019), Nuwerus currently does not receive regular municipal waste collection services due to its remote location. Should this situation change in the future, the proposed road reserves offer sufficient space for kerbside refuse collection.

5 PARKING

The attached **Layout Plan** does not contain details related to parking. The proposed development's parking bays should be clearly indicated on the subsequent building plans and comply with the requirements set out in the latest *Matzikama Integrated Zoning Scheme By-law*.

Currently, 1 (one) bay is required for a dwelling house/shelter on an erf smaller than 250 m². The parking requirements for the Community Facility erven and Business erf will need to be assessed once their specific land uses have been determined.

6 PUBLIC- AND NON-MOTORISED TRANSPORT

Currently, there are no formal public transport facilities or services available in Nuwerus. The absence of a long-distance minibus taxi or bus route connecting the town to its nearest urban centres, namely Vanrynsdorp, Lutzville and Vredendal, represents a general issue affecting all the outlying settlements within the Matzikama municipality, which is a matter to be administered by the local authorities.

The municipality's Local Integrated Transport Plan (LITP) identified the primary transport-related needs for Nuwerus as the surfacing of existing gravel roads and the provision of sidewalks and pedestrian crossings. While this report strongly supports the general implementation of Non-Motorised Transport (NMT) facilities, these are not deemed a prerequisite for the proposed development. However, a sidewalk along the Community Facility erven and Business erf could be considered.

7 CONCLUSIONS

The following can be summarised/concluded from the report:

- 1) This TIS accompanies the Application for Subdivision of Erf 182 and Rezoning and Subdivision of Erf 184, Nuwerus.
- 2) The proposed development refers to the Nuwerus IRDP Housing Project and consists of two application areas (± 3.45 ha) with a total of 91x Single Residential Zone 1 erven (± 150 m² each), 2x Community Facility erven (± 432 m² and ± 434 m²) and 1x Business erf (± 338 m²).
- 3) Four future access points from/to the existing public road network (Olyf Street, Jakaranda Street and Arcarcia Street) are proposed for the development.
- 4) With the application of the *Very Low Vehicle Ownership* (70% reduction) trip generation adjustment factor, the proposed development's residential erven have the potential to generate a total of 27 trip ends during both the AM (7 inbound, 20 outbound) and PM (19 inbound, 8 outbound) weekday peak hours.
- 5) While the specific land uses of the Community Facility erven and Business erf are not yet known at this stage, these are not expected to contribute a significant number of additional trip ends to the overall peak-hour trip generations of the proposed development.
- 6) No road network upgrades are considered necessary to accommodate the proposed development.

- 7) A road reserve width of 10 m (typical for Class 5B local residential streets) is proposed for the internal streets of the new development. A few acceptable narrower road widths of 6 m and 8 m are planned for the culs de sac.
- 8) Surfaced internal streets are proposed for the development. The remaining gravel sections of Arcarcia Street, Jakaranda Street and Olyf Street leading to/from the proposed development should be surfaced as part of the development's construction.
- 9) The intersections that form the access points to the development areas as well as those within the new local street network will be sign-controlled (i.e. stop or yield).
- 10) Further elements of the streets, such as cross sections, right of way, kerb radii and sight distances are expected to be specified in the final road designs and will require separate assessment and approval based on the applicable standards.
- 11) It is recommended that street lighting be provided throughout the proposed development.
- 12) According to the *Matzikama Integrated Waste Management Plan* (3rd Generation; February 2019), Nuwerus currently does not receive regular municipal waste collection services. Should this situation change in the future, the proposed road reserves offer sufficient space for kerbside refuse collection.
- 13) The parking requirements set forth by the Matzikama Municipality stipulate that each dwelling house/shelter must have 1 (one) off-street parking bay. The parking requirements for the Community Facility erven and Business erf will need to be evaluated once their specific land uses have been established.
- 14) The provision for additional public transport and/or NMT is not considered necessary for the proposed development. However, a sidewalk along the Community Facility erven and Business erf could be considered.

8 RECOMMENDATIONS

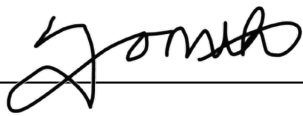
From the discussions provided in this report, it is recommended that the proposed development on Erven 182 and 184, Nuwerus, indicated on the attached (DRAFT) **Layout Plan**, be supported from a traffic impact perspective, on the following conditions:

- 1) That, in addition to the internal streets within the proposed development, the unsurfaced sections of Jakaranda Street, Arcarcia Street, and Olyf Street leading to/from the proposed development be surfaced.
- 2) That, the provision of street lighting within the proposed development be considered.
- 3) That, a sidewalk along the Community Facility erven and Business erf be considered.

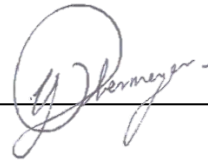
We trust that the Traffic Impact Statement will be to your satisfaction and will gladly provide any additional information required on request.

Please take note of the following included attachments: **Locality Plan** and **Layout Plan**.

Yours faithfully,



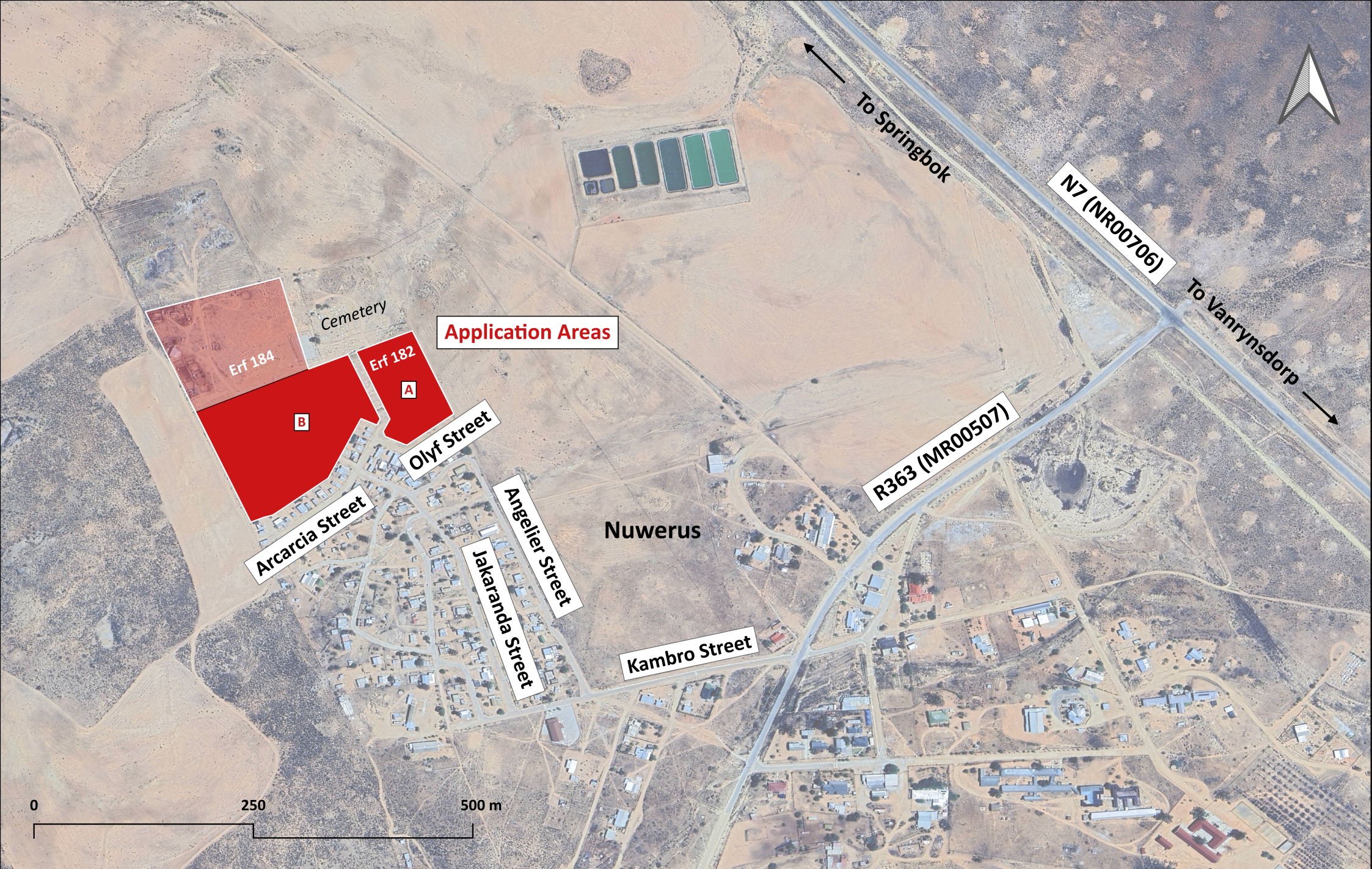
Compiled by: Dominique ter Huurne
(PhD (Civil Eng), MPhil)



Yolandi Obermeyer (BEng)

UDS AFRICA





Application Areas

Erf 184

B

Erf 182

A

Cemetery

Arcarcia Street

Olyf Street

Angelier Street

Jakaranda Street

Kambro Street

Nuwerus

R363 (MR00507)

N7 (NR00706)

To Springbok

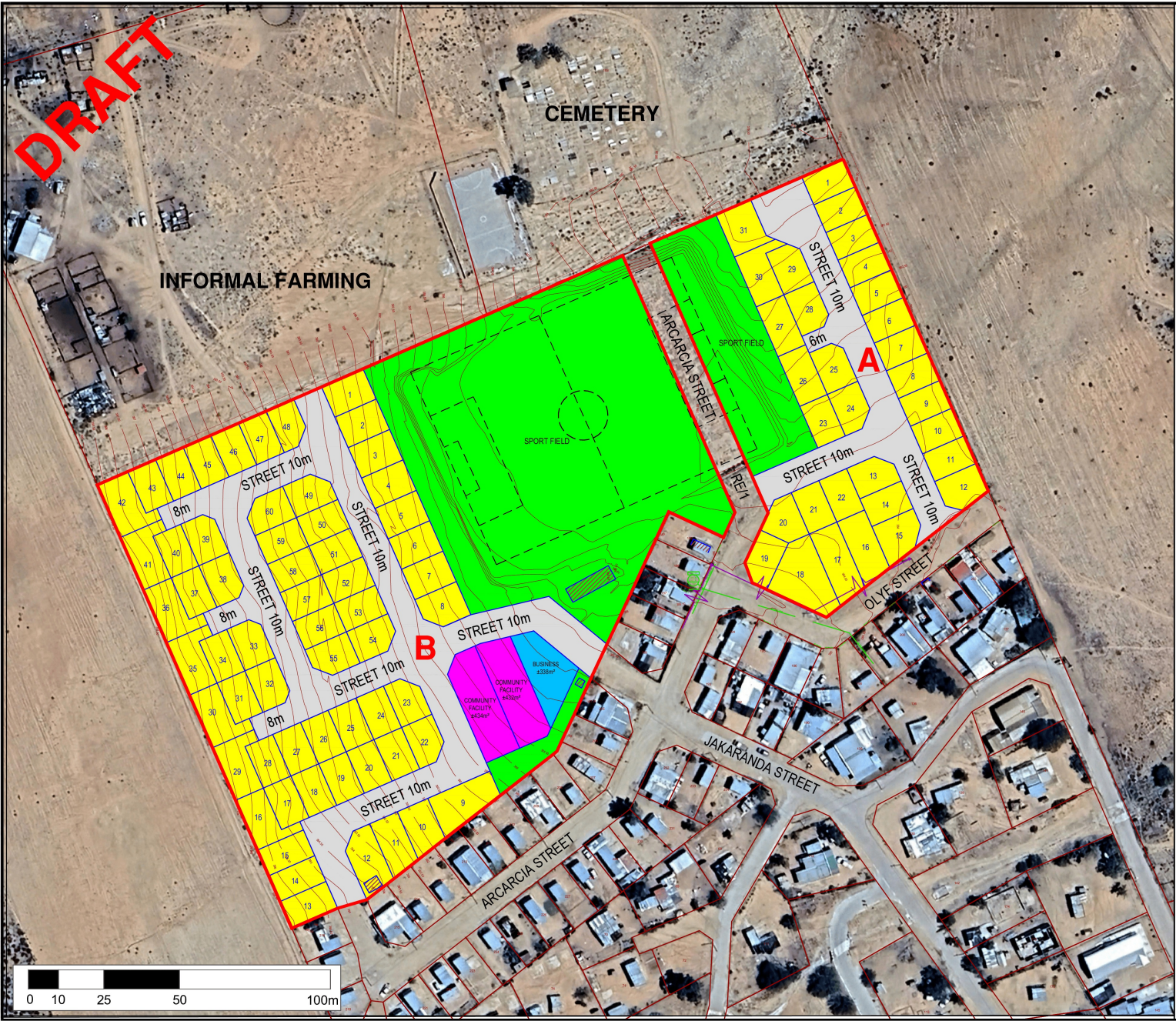
To Vanrynsdorp

0 250 500 m



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Locality Plan



NIEUWE RUST

ERVEN 182 & 184

PROPOSED LAYOUT PLAN

- Application Areas = ±3.45ha
 A = ±0.92ha
 B = ±2.52ha
- Cadastral Boundaries
- Proposed Layout = 91 units
 (10m x 15m = ±150m²)
 A = 31 units
 B = 60 units
- Existing Structures
- Contour Lines (0.5m intervals)
- Existing Sport Field

PLEASE NOTE:
 All boundary line positions, distances and property sizes need to be verified by a Professional Land Surveyor.

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	DATE 26 March 2024	COPYRIGHT RESERVED	CLIENT
	SCALE See Linescale		
	PLAN NO. 1		
FILE NAME:			

URBAN DYNAMICS south cape
TOWN & REGIONAL PLANNERS

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