

PROPOSED RETAIL CENTRE ON ERVEN 3456-3465 & 3504-3507 SEDGEFIELD

TRANSPORT IMPACT ASSESSMENT

FEBRUARY 2026

Liezl Stodart Pr Eng

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COVER PAGE

Certification

It is herewith certified that this Transport Impact Assessment has been prepared according to the requirements of the South African Traffic Impact and Site Traffic Assessment Manual.



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Application details:

a) Municipality name: Knysna Municipality

b) Type of assessment: Transport Impact Assessment

c) Particulars of the Site Development Plan: Shoprite Properties | Sedgefield
- Lower Ground Floor Level | SVA | Drawing no. A (10) 1000 Rev T10 | 2 February 2020
- Ground Floor Site Plan | SVA | Drawing no. A(10) 1002 Rev T1 | 22 January 2026
- Upper Bulkstore Floor Level | SVA | Drawing no. A(10) 1001 Rev T10 | 2 February 2020

d) Erf numbers: Erven 3456 – 3465 & 3504 – 3507 Sedgefield

e) Date of report: 18 February 2026

f) Name and address of the Assessor: Liezl Stodart Pr Eng, PO Box 359, Villiersdorp, 6848

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1. BACKGROUND

This transport impact assessment accompanies the land use planning application for Erven 3456-3465 and 3504-3507 Sedgefield. The site is located north of the N2, on the north-eastern corner of the Egret Road and Main Service Road intersection. The location is shown in ***Figure 1***, *Annexure B*. The property is currently zoned as Mixed Use 2 and the application is in line with this zoning. The combined size of the erven is approximately 12 006 m².

2. DEVELOPMENT PROPOSAL

The applicant plans to develop a 3993m² shopping centre with Checkers as the anchor tenant and a number of line shops as secondary tenants. The planned centre layout is shown in ***Figure 2*** (*Shoprite Properties | Sedgefield Ground Floor Site Plan*), *Annexure B*. Access to the public parking area and shops will be obtained from Egret Road, about 60 metres north of Main Service Road. The loading area will be located one level above the parking area and will have its own entrance about 30 metres further north.

3. STUDY AREA

The TMH16 document suggests that the primary study area should include Class 4 and 5 roads leading up to the nearest Class 2 or 3 road. The study area should not exceed a radius of 1,5 kilometres from the development. The following elements were included in the study area:

- The N2
- Main Service Road
- Egret Road
- Intersection between these two roads

4. EXISTING ROADS

Information on the transport infrastructure in the vicinity of the site was obtained through a site visit conducted on Saturday 20 September 2025. Please refer to the attached ***Photo Pages*** (*Annexure A*) for a photographic record of the existing roads.

N2 Section 8 (NR00208): The N2 through the urban Sedgefield area may be classified as a Class 2 Major Arterial. The Western Cape Road Network Information System (RNIS) website shows that the average daily traffic volume on the N2 is in excess of 12 000 vehicles (two-way). The cross-section through Sedgefield is a dual carriageway, but with no paved shoulders or sidewalks. Intersections either have stop streets on the intersecting roads with priority flow on the N2, or traffic signals.

Main Service Road: The service road runs parallel to the N2 eastbound carriageway. The road is about 5 metres wide and serves as an activity spine, with direct access to businesses, residential erven and parking areas. The service road carries between 50 and 100 vehicles per peak hour (two-way).

Egret Road is a Class 5 Residential Street, giving access to the forest and smallholdings on the hills north of Sedgefield. The street has one lane per direction and carries fewer than 50

vehicles (total two-way) per peak hour. The road verges are grassed, with no kerbs, stormwater infrastructure or sidewalks.

5. EXISTING TRAFFIC

Existing traffic volumes were obtained through traffic counts done at the N2 / Egret Road intersection on Friday 26 September and Saturday 27 September 2025. These days were selected to capture the weekday (Friday) morning school and commuter traffic peak hour and the Friday afternoon commuter and recreational / weekend traffic peak period. The counts were supervised by Elzé Engelbrecht. The date of the count can be classified as a "normal" day and no congestion was observed. Traffic count details are summarised in ***Table 1***.

Table 1: Traffic count details

Peak period	Peak hour	Light vehicles	Minibus taxis	Heavy vehicles
Friday morning	10:45 – 11:45	94%	2%	4%
Friday afternoon	15:00 – 16:00	96%	2%	3%

The intersection was analysed using SIDRA software. SIDRA calculates movement and intersection delays and assigns a service level based on the duration of the delay. A level of service A denotes an excellent service level with very little delay, whereas a level of service F represents very long delays and a breakdown in service. A level of service D is generally taken as the lowest acceptable standard.

The N2 / Egret Road intersection has free flow on the N2 and stop control on Egret Road. The analysis shows that the N2 approaches operate at good service levels, but that service levels on the Egret Road approaches are very poor (level of service F).

The Egret Road / Main Service Road intersection operates at good service levels. Existing traffic volumes and service levels are shown in ***Figure 3*** (*Annexure B*).

6. BACKGROUND TRAFFIC DEMAND ESTIMATION

The TMH16 Traffic Impact Assessment Manual suggests that background traffic demand should be estimated for the design horizon and the planning horizon. The design horizon is the year when the development will be completed and the planning horizon is the year when the entire area surrounding the application site will be developed. It is anticipated that the Sedgefield Checkers development will be completed within the next five years, which makes the design horizon 2031. The 2024 Sedgefield Local Spatial Development Framework shows that limited residential development will still be allowed north of the N2. The additional houses will not have a direct impact on the Checkers development area and therefore only the design horizon was analysed.

The existing traffic volumes on the N2 were increased by 1,7% per year (growth rate obtained from RNIS website) to calculate Year 2031 background traffic volumes. The N2 / Egret Road intersection was analysed again to determine the baseline state against which the development's traffic impact could be measured. The analysis shows that the N2 approaches

will continue to operate at good service levels, but delays on the Egret Road approaches will deteriorate even further.

The South African National Roads Agency (SANRAL) are currently upgrading some N2 intersections in Wilderness from priority (stop) control to roundabouts. In preliminary discussions about the Sedgefield Checkers application, SANRAL indicated that a similar roundabout will have to be provided at the N2 / Egret Road intersection if the capacity of the existing stop controlled intersection is exceeded. The analysis of this intersection with existing and anticipated Year 2031 background traffic volumes shows that the capacity is already being exceeded and that the roundabout should be implemented. The SIDRA analysis of the upgraded intersection with 2031 traffic volumes shows that the roundabout will operate at a level of service A during both the morning and afternoon peak hours. The results of the analysis are shown in ***Figure 4***.

7. ROUNDABOUT DESIGN

The new Wilderness roundabouts were used as template for the design of the proposed Sedgefield roundabout. The circle will have a central island with a 29-metre diameter and two 5-metre wide circulating lanes. The N2 approaches will have two entry and two exit lanes, while the Egret Road approaches will have one entry and one exit lane.

The proximity of the Main Service Road in the north and the Makou Street / Pelican Street / Egret Road intersection in the south pose some design challenges. The western approach of Main Service Road can be closed and a new street can be constructed in the Hamerkop Street road reserve. This configuration will serve the area west of Egret Road. On the eastern side, the Service Road serves only the Aviemore residential complex, but is also the complex's only access. There are no alternatives for access from the north, east or south which means that the Service Road entrance needs to be retained somehow.

A few design concepts were drafted and need to be finalised in conjunction with SANRAL. The main options are outlined below. The drawings are attached as ***Annexure C***.

- Option 1 (LS227-C-01): A refinement of the Option 1 discussed at the SANRAL meeting of 5 February 2026. It is our opinion that the exclusive access / egress for the Aviemore development at the eastern end of the service road can work well if we clearly distinguish the access though different coloured paving or similar;
- Option 1b (LS227-C-05): Mini-circle at Egret / Centre access. Aviemore entering traffic to make a U-turn at mini-circle and enter service road through left-in lane. Aviemore egress still at circle.
- Option 3 (LS227-C-03): N2 roundabout moved further south to accommodate Service Road intersection. Disadvantage of angled four-legged intersection just a few metres south of roundabout and significant realignment of N2;
- Option 3b (LS227-C-07): Similar to Option 3, but with short right turn lane into Service Road and access to restaurant parking on south-eastern N2/ Egret corner shown;
- Option 3c (LS227-C-08): Same as Option 3b in the north. Proposal for closure of two streets in the south.

The roundabout design consultation with SANRAL will continue as part of the comment and response process following the application submission.

8. TRIP GENERATION AND DISTRIBUTION

The development's trip generation potential was calculated using the trip generation rates for shopping centres as published in the COTO TMH17 Trip Data Manual, with the relevant size adjustment factor. The centre's gross lettable area was calculated using an 80% factor (floor area : lettable area) for the supermarket and a 90% factor for the remaining shops. The calculated GLA is 3 294m^2. Some of the generated trips will be new to the surrounding road network and others will be pass-by or diverted trips. The trip generation potential is summarised in ***Table 4***.

Table 4: Checkers Sedgefield generation potential

Land use	GLA (m^2)	Trip generation			Trips		
		Rate	% in	%out	Total	In	Out
Shopping centre	3294	**Friday morning**					
		2,45	65%	35%	81	53	28
		Friday afternoon					
		13,9	50%	50%	458	229	229
			Primary	58%	266	133	133
			Pass-by	13%	60	30	30
			Diverted	29%	133	66	66

The generated trips were distributed using the analogy method, i.e. based on observed existing trip generation patterns. ***Figure 5*** (*Annexure B*) shows how the development trips were assigned to the road network.

9. TRAFFIC IMPACT

The total traffic demand was calculated by adding development trips to Year 2031 background traffic volumes. The N2 / Egret Road intersection was analysed again to determine the traffic impact of the proposed development. The roundabout discussed in paragraph 6 will continue to operate at excellent service levels, with only a slight increase in afternoon peak hour delays. Total 2031 traffic volumes and service levels are shown in ***Figure 6***, Annexure B.

It can be concluded that the Erven 3456 – 3465 & 3504 – 3507 Sedgefield development will have a significant traffic impact which can be mitigated through the upgrading of the N2 / Egret Road intersection.

10. ACCESS, INTERNAL ROADS AND PARKING

The access to the Checkers parking area will be located about 60 metres north of Main Service Road. The spacing exceeds the 40-metre spacing required between unsignalised full intersections and high-volume driveways on Class 5 roads in suburban roadside environments. The access to the loading area, which will be a level above the parking area, will be 30 metres

further north. The closest intersections north of the loading area is the railway level crossing (25 metres) and the Sedgefield Cemetery access road (35 metres). The Checkers centre will attract very little traffic (and no delivery vehicles) from the north and therefore the spacing is deemed sufficient.

The Knysna Municipal Zoning Scheme prescribes a parking requirement of four parking bays per 100m^2 GLA for retail centres. This equates to a parking requirement of 132 bays for the calculated 3294m^2 GLA. The Site Plan shows that 164 bays will be provided (4 bays per 100m^2 3993m^2 floor area). The parking area access will have a 16-metre throat length. The access bellmouths should have 6-metre radii. Parking bay dimensions will comply with the minimum municipal standards.

11. PUBLIC AND NON-MOTORISED TRANSPORT

The pedestrian path through the parking area should extend all the way to Egret Road, and a sidewalk should be constructed along the eastern side of Egret Road down to the N2.

It is anticipated that some shopping centre employees and customers will make use of public transport. It is recommended that two bays close to the access should be reserved for minibus taxis.

12. CONCLUSIONS

It can be concluded that the Erven 3456 – 3465 & 3504 – 3507 Sedgefield retail development will have a significant traffic impact. Other findings are summarised below.

- The development site is located north of the N2, on the north-eastern corner of the Egret Road and Main Service Road intersection;
- The applicant plans to develop a 3993m^2 shopping centre with Checkers as the anchor tenant and a number of line shops as secondary tenants;
- The N2 / Egret Road and Egret Road / Main Service Road intersections will be directly affected by the development;
- Through traffic on the N2 currently experience good service levels, but excessive delays are experienced on the stop-controlled Egret Road approaches;
- The N2 / Egret Road intersection requires capacity improvements. A roundabout similar to those installed on the N2 through Wilderness is proposed;
- The roundabout will operate at good service levels with Year 2031 background traffic volumes;
- The roundabout design consultation with SANRAL is ongoing;
- The development has the potential to generate 81 trips during weekday morning peak hour and 458 trips - of which 266 will be primary trips - during the Friday afternoon peak hour;
- The N2 / Egret Road roundabout will continue to operate at good service levels with the addition of Checkers Centre trips;
- The shopping centre access off Egret Road complies with the Western Cape Access Management Guidelines' access spacing requirements;

- Parking provision will exceed the minimum requirement;
- A loading yard of sufficient size will be provided;
- The development should generate pedestrian trips and a few public transport trips.

13. RECOMMENDATIONS

The recommendations made in the transport impact assessment are summarised below.

- The capacity of the N2 / Egret Road intersection is already being exceeded and a roundabout should be implemented;
- The roundabout design will be finalised in conjunction with SANRAL;
- Bellmouths at the two entrances need to have a radius of at least six metres;
- The parking area access should have a throat length of at least 15 metres (3 car lengths) as shown on the SDP;
- The pedestrian path through the parking area should extend all the way to Egret Road, and a sidewalk should be constructed along the eastern side of Egret Road down to the N2.
- Two parking bays close to the access should be reserved for minibus taxis.

Annexure A: Photographic record of existing transport facilities

1. N2 / Egret Road Intersection

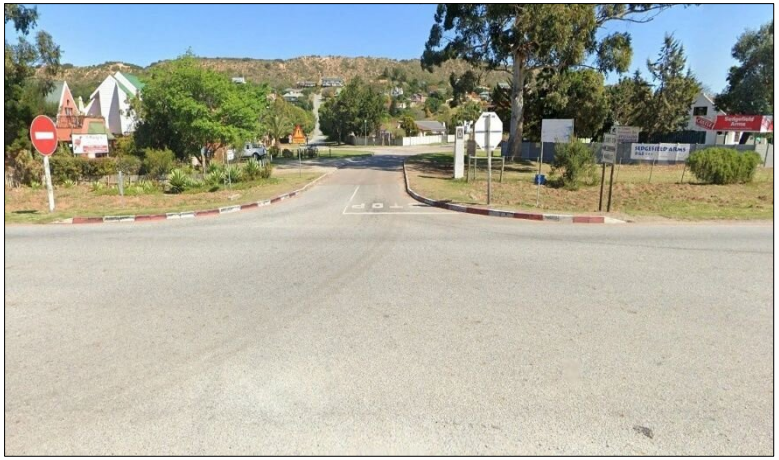
1a) Looking east along the N2



1b) Looking west along the N2



1c) Looking south towards Egret Road

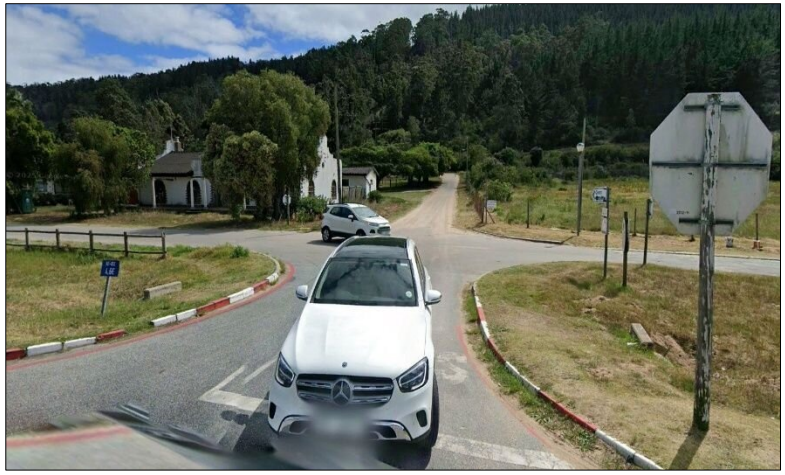


1d): Looking north towards Egret Road

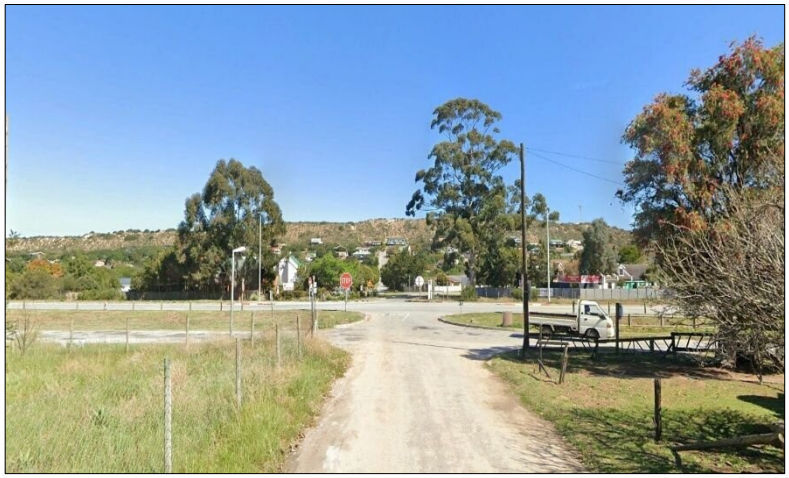


2. Egret Road

2a) Looking north from N2 intersection towards Egret Road



2b): Looking south from Egret Road towards N2 intersection



Annexure B: TIA Drawings

Figure 1: Erven 3456 -3465 & 3504 – 3507 Sedgefield (Sedgefield Checkers) | Locality Plan

Figure 2: Shoprite Properties | Sedgefield

- Lower Ground Floor Level | SVA | Drawing no. A (10) 1000 Rev T10 | 2 February 2020
- Ground Floor Site Plan | SVA | Drawing no. A(10) 1002 Rev T1 | 22 January 2026
- Upper Bulkstore Floor Level | SVA | Drawing no. A(10) 1001 Rev T10 | 2 February 2020

Figure 3: Existing 2025 traffic volumes and service levels

Figure 4: Year 2031 background traffic volumes and service levels

Figure 5: Distribution of trips generated by Sedgefield Checkers development

Figure 6: Total 2031 traffic volumes and service levels

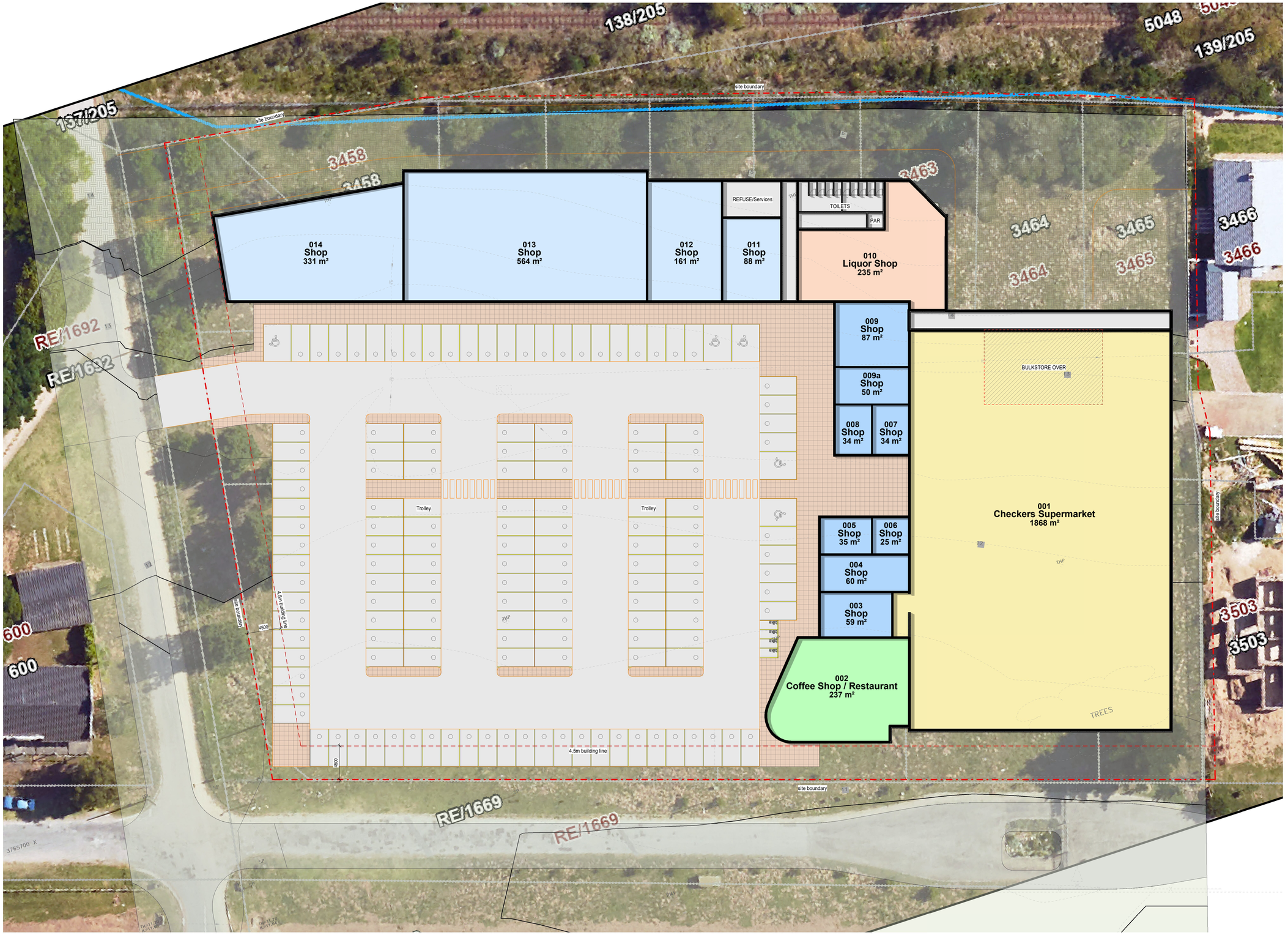


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ERVEN 3456 - 3465 & 3504 - 3507 SEDGEFIELD (SEDGEFIELD CHECKERS)
LOCALITY PLAN

FIGURE 1
2026-02-05



1 00 Ground Level

1 : 250

NOTES

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- All relevant details, levels, and dimensions must be checked on site before commencement of work. Any discrepancies to be reported to the Architects office immediately

REVISIONS

Rev	Date	Issued by	Description
T3	2025-09-16		Revised leasing and parking layout
T4	2025-09-18		Revised leasing layout
T5	2025-09-19		Revised leasing layout and parking
T6	2025-10-08		Revised leasing layout
T7	2025-11-10		Addition of Checkers layout
T8	2025-11-20		SDP submission
T9	2026-01-07	SVA	SDP Submission
T10	2026-01-08	SVA	SDP Submission

2. Area Schedule (GROSS LETTABLE AREA (GLA)) - Parking...

Level	Number	Name	Area	Parking Ratio	Parking Required
00 Ground Level	001	Checkers Supermarket	1868 m²	4	74.7
01 First Level	001	Checkers Bulk store	125 m²	4	5.0
00 Ground Level	002	Coffee Shop / Restaurant	237 m²	4	9.5
00 Ground Level	003	Shop	59 m²	4	2.4
00 Ground Level	004	Shop	60 m²	4	2.4
00 Ground Level	005	Shop	35 m²	4	1.4
00 Ground Level	006	Shop	25 m²	4	1.0
00 Ground Level	007	Shop	34 m²	4	1.4
00 Ground Level	008	Shop	34 m²	4	1.4
00 Ground Level	009	Shop	87 m²	4	3.5
00 Ground Level	009a	Shop	50 m²	4	2.0
00 Ground Level	010	Liquor Shop	235 m²	4	9.4
00 Ground Level	011	Shop	88 m²	4	3.5
00 Ground Level	012	Shop	161 m²	4	6.4
00 Ground Level	013	Shop	564 m²	4	22.5
00 Ground Level	014	Shop	331 m²	4	13.3
			3993 m²		159.7

2. Parking Provided Schedule

Type	Count
4 bike bays = 1 bay	7
Disabled Parking - 5000 x 3750	5
Parking Bay 5 x 2.5	152
	164

FOR INFORMATION

Client
Shoprite Properties

Project
Sedgefield

Drawing
Lower Ground floor level

Scale	Size	Date	Drawn
1 : 250	A1	2020/09/02	TL
Project No.	Drawing No.		Revision No.
CA00000-00	A(10)1000		T10

Date & Time printed: 08/01/2026 17:46:25

FIGURE 2a

SVA
LEAD BUILD DESIGN
3rd Floor, 19 Ninth Street
Houghton Estate / Rosebank
Johannesburg
2196
Tel +27 11 268 6090 | Fax +27 11 268 6091 |
email: sva-jhb@svarchitects.com



1 Ground Floor Site Plan
1 : 250

FIGURE 2b

F:\Shoprite Sedgefield C15\XXX.00P01 Drawings\00 Revit\Sedgefield 05 Maxed GLA.rvt

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REVISIONS

Rev	Date	Issued by	Description
T1	2026-01-22	SVA	Issued For Information

Key Plan

Signatures:
Engineer:

Signatures:
Architect:

FOR INFORMATION

CONSULTANTS

Project Manager

Quantity Surveyor

Structural Engineer

Civil Engineer

Mechanical Engineer

Electrical Engineer

Wet & Fire Services Engineer

Interior Designer

Landscape Architect

Lighting Specialist

Client

Project
Sedgefield

Drawing
Ground Floor Site Plan

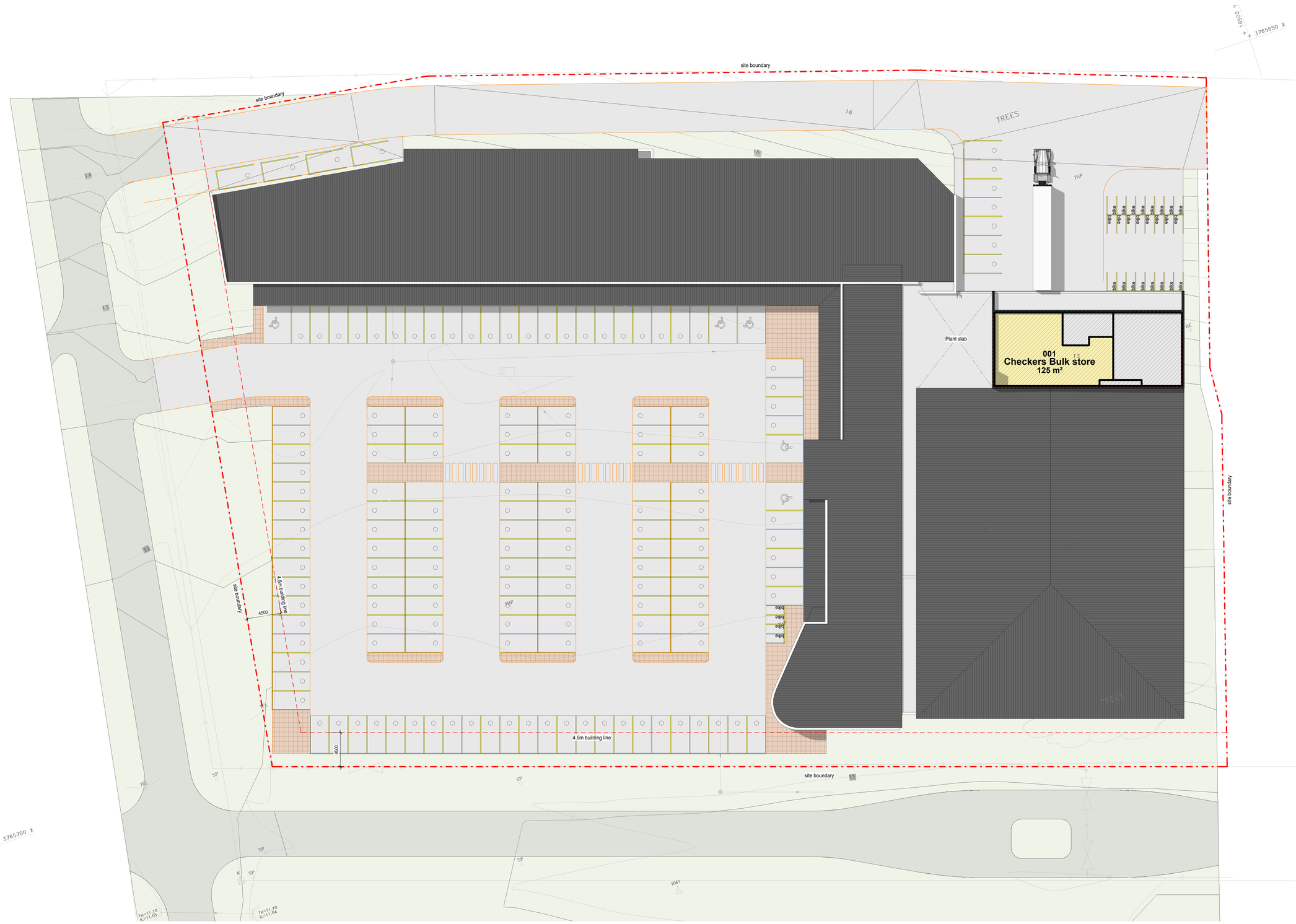
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Project No.	Drawing No.	Revision No.
CA00000-00	**A(10)1002**	**T1**

Date & Time printed: 22/01/2026 06:05:21

SVA
LEAD BUILD DESIGN

3rd Floor, 19 Ninth Street
Houghton Estate / Rosebank
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Tel +27 11 268 6090 | Fax +27 11 268 6091 |
email: sva-jhb@svaarchitects.com



1 01 First Level
1 : 250

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T3	2025-09-16		Revised leasing and parking layout
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T10	2026-01-08	SVA	SDP Submission

FOR INFORMATION

Client
Shoprite Properties

Project
Sedgefield

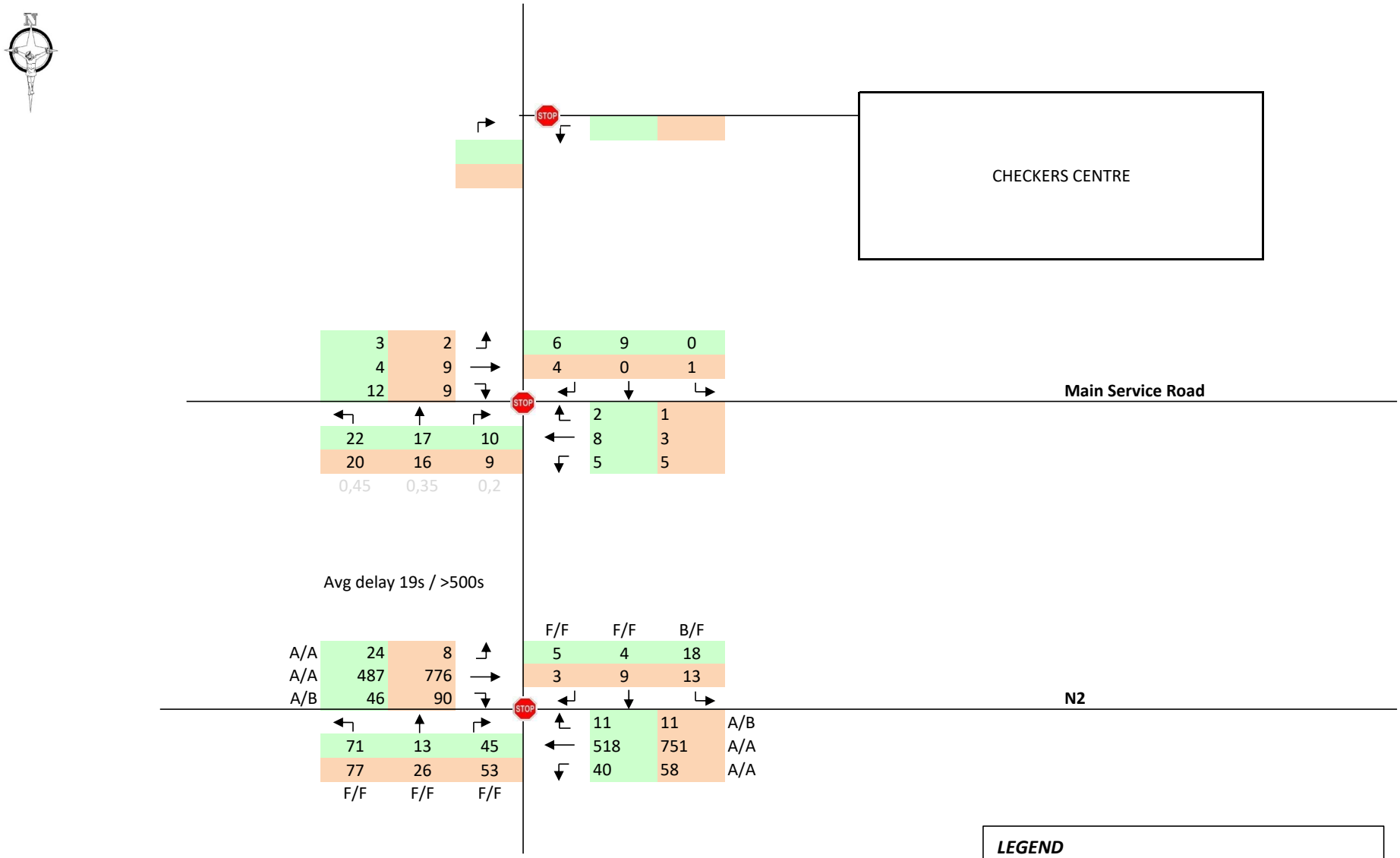
Drawing
Upper Bulkstore floor level

Scale	Size	Date	Drawn
1 : 250	A1	2020/09/02	Author
Project No.	**Drawing No.**		**Revision No.**
CA00000-00	**A(10)1001**		**T10**

Date & Time printed: 08/01/2026 17:47:25

FIGURE 2c

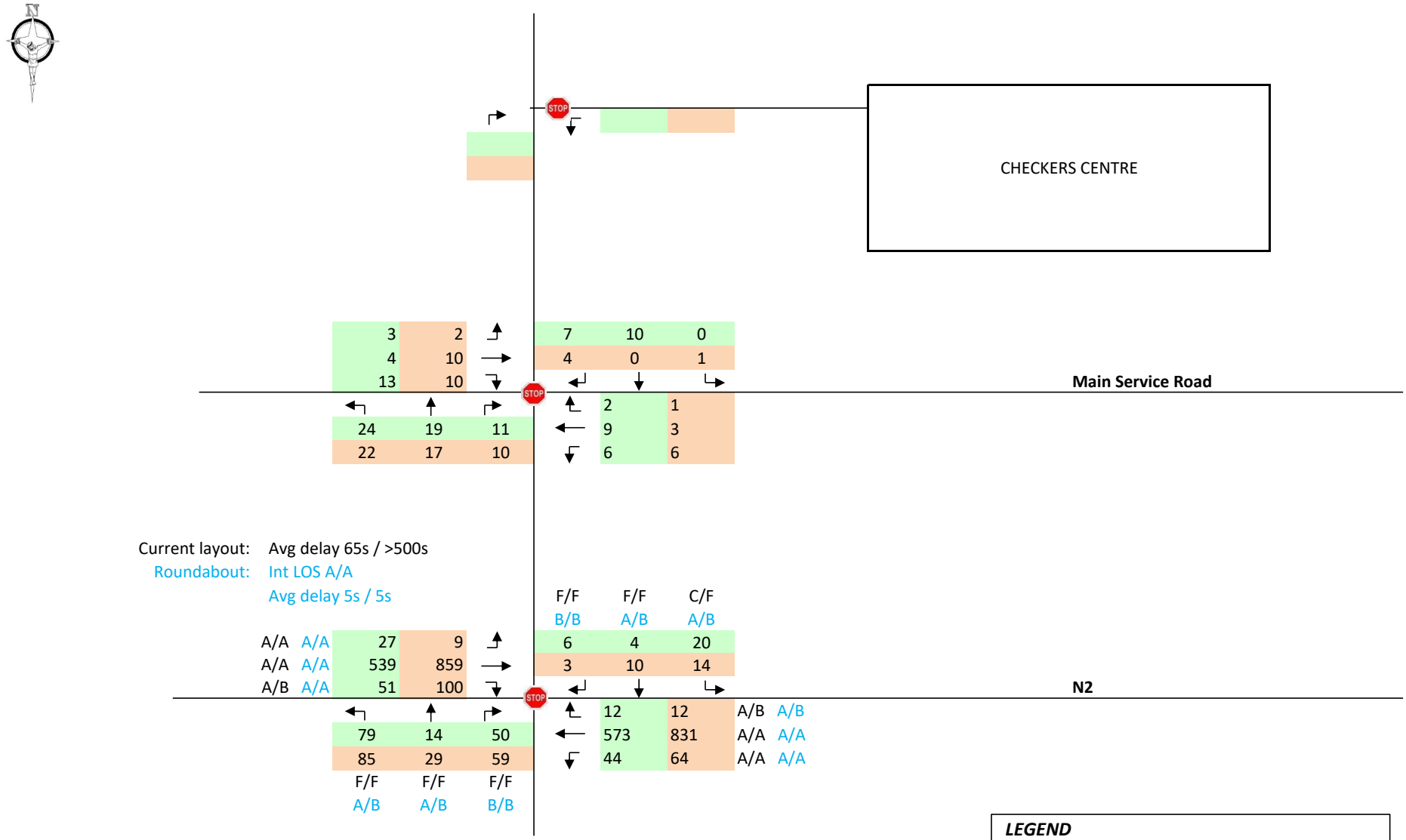
SVA
LEAD BUILD DESIGN
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EXISTING 2025 TRAFFIC VOLUMES AND SERVICE LEVELS

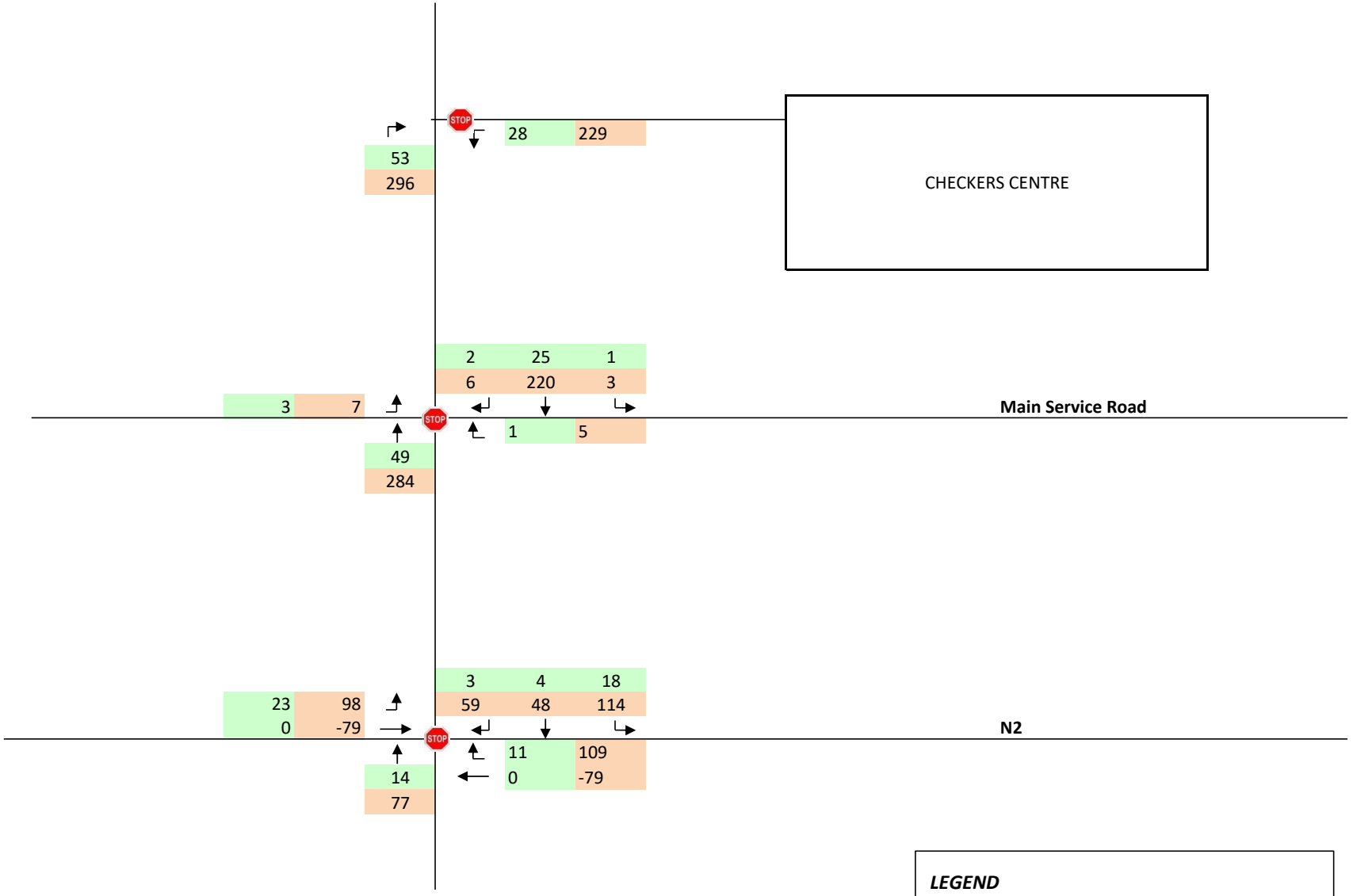
FIGURE 3
2026-02-18



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YEAR 2031 BACKGROUND TRAFFIC VOLUMES AND SERVICE LEVELS

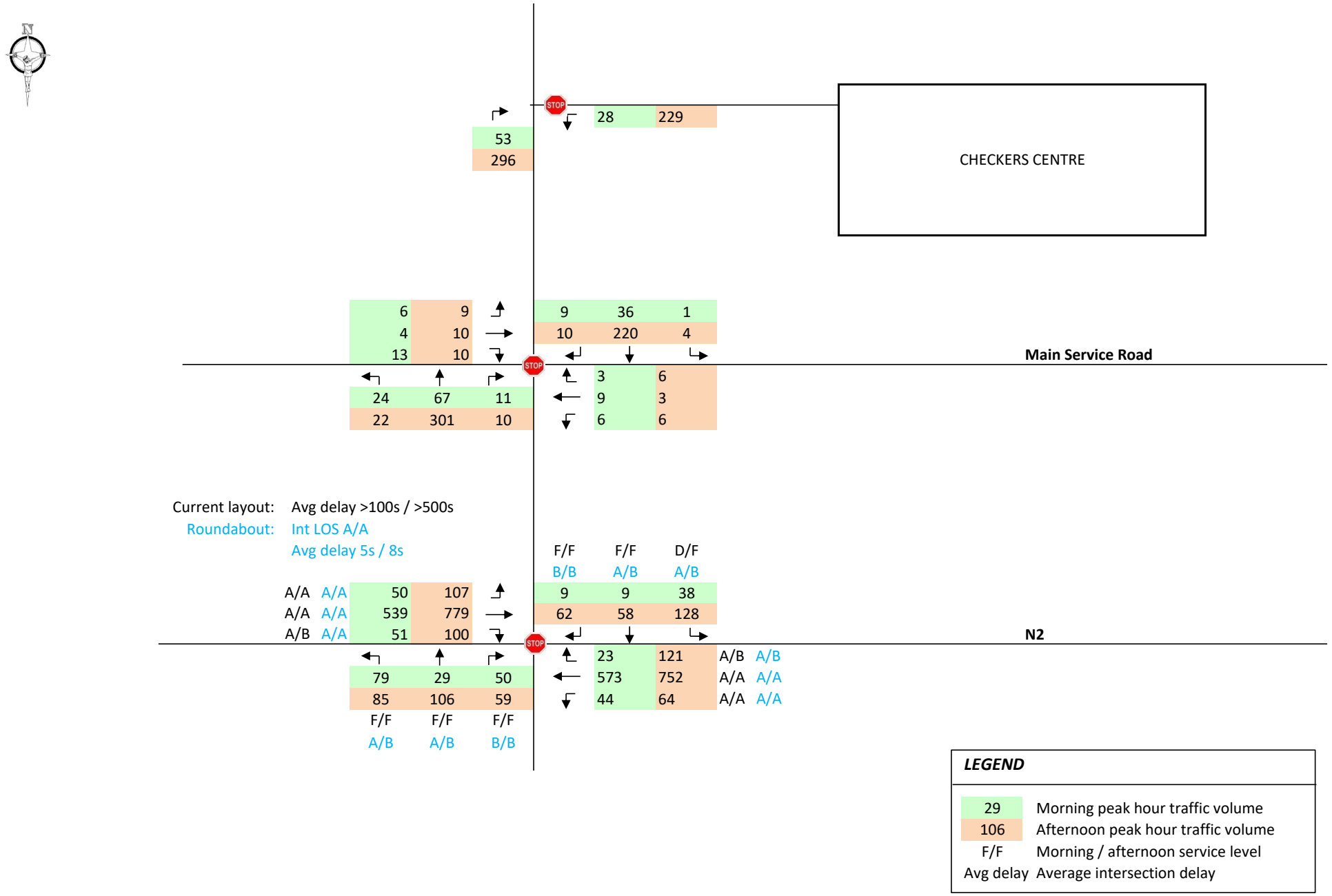
FIGURE 4
2026-02-12



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DISTRIBUTION OF TRIPS GENERATED BY SEDGEFIELD CHECKERS DEVELOPMENT

FIGURE 5
2026-02-12

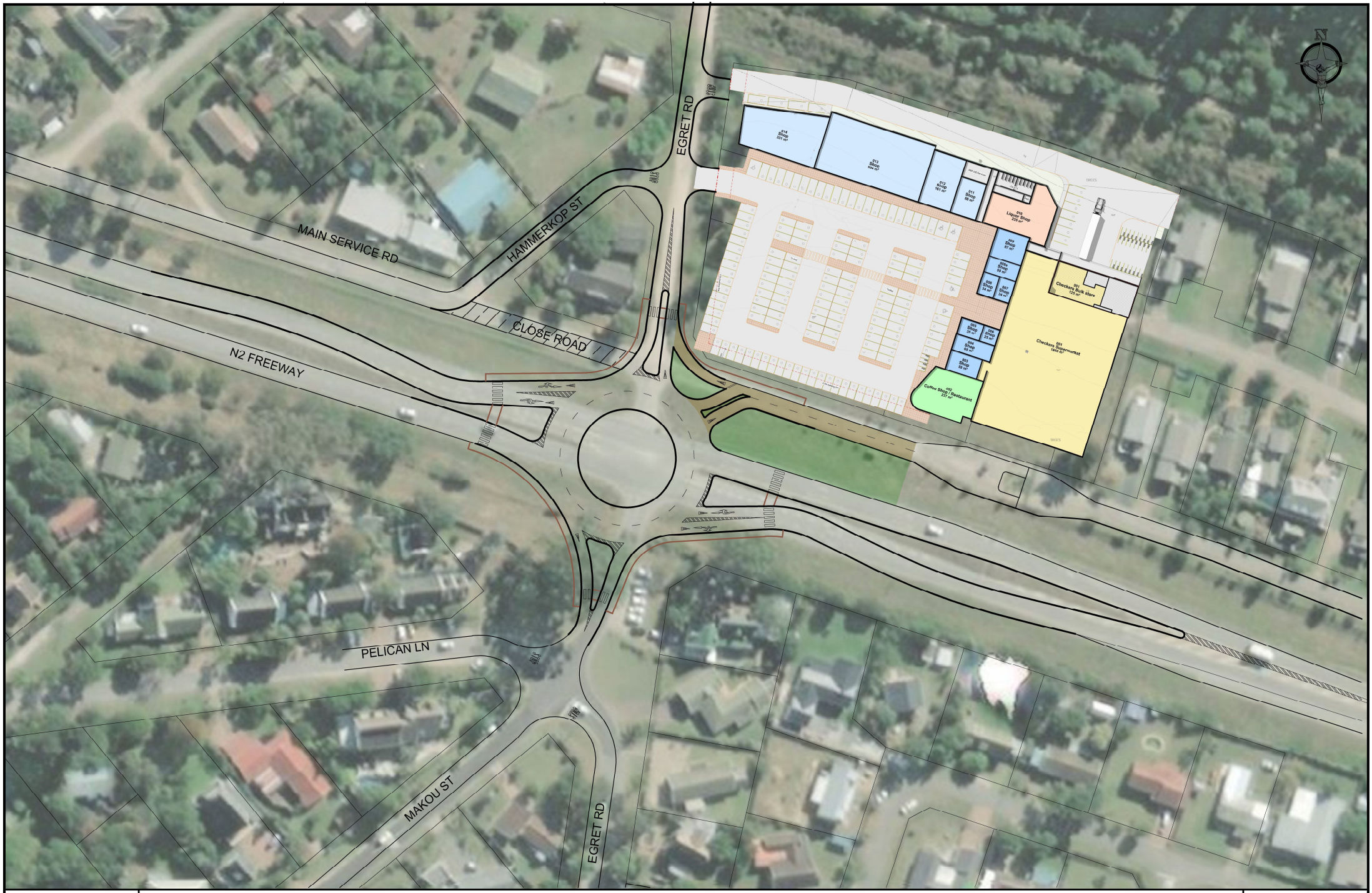


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TOTAL 2031 TRAFFIC VOLUMES AND SERVICE LEVELS

FIGURE 6
2026-02-12

Annexure C: Roundabout Drawings

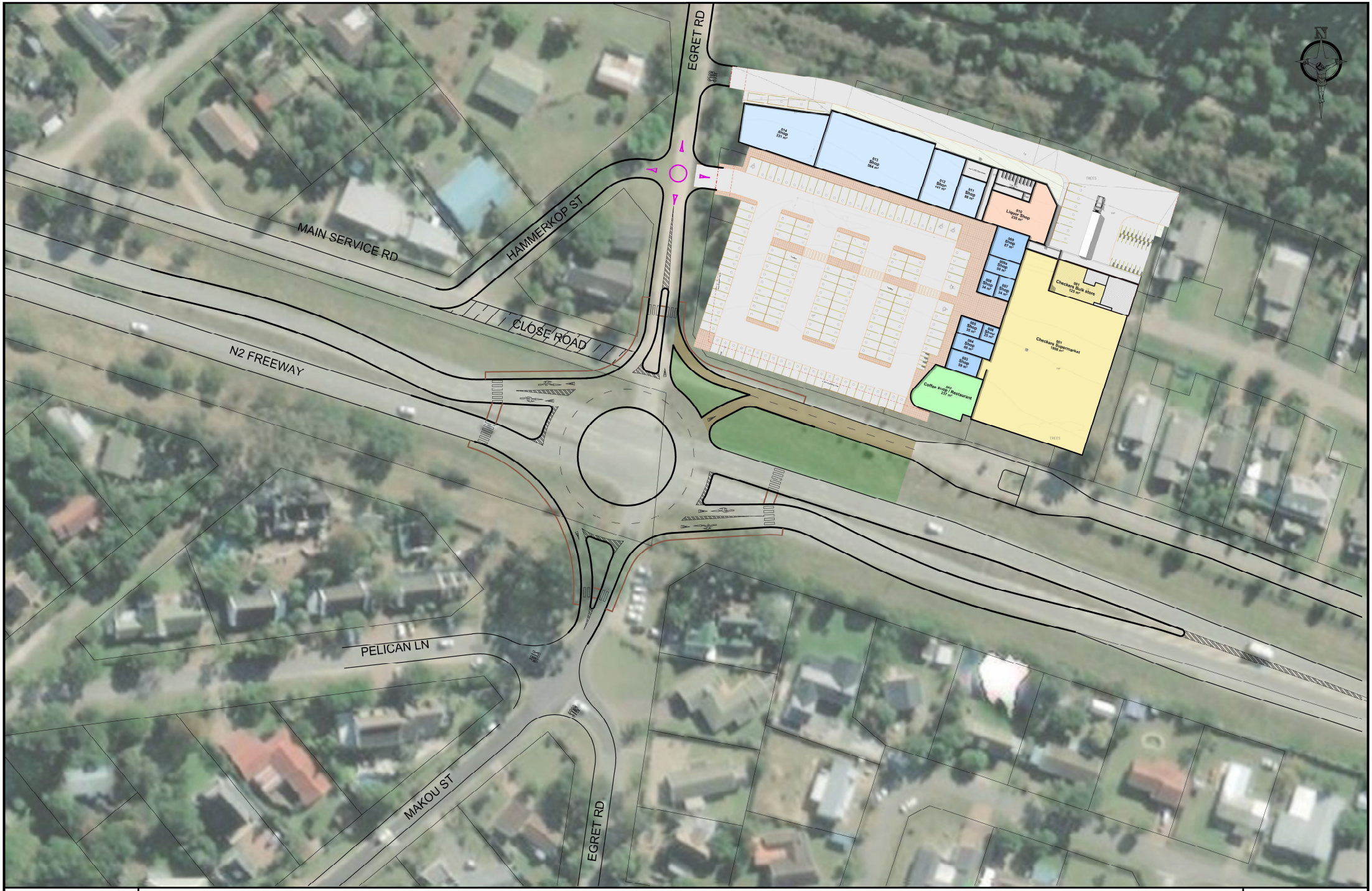


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SEDGEFIELD CHECKERS
PROPOSED N2 ROUNDABOUT - OPTION 1

DWG NO. LS227-C-01
Rev 01
2026-02-05

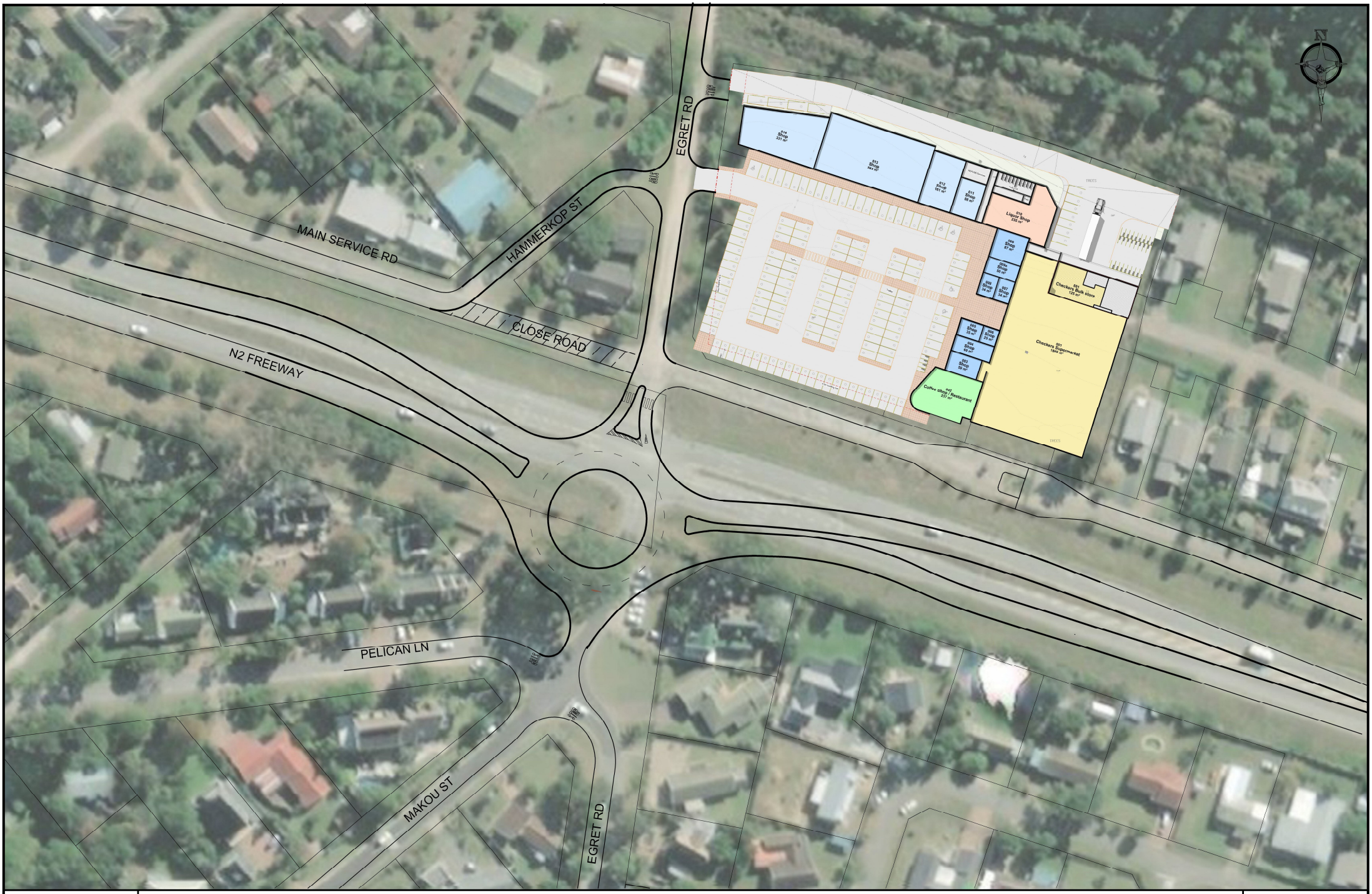


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SEDGEFIELD CHECKERS
PROPOSED N2 ROUNDABOUT - OPTION 1b

DWG NO. LS227-C-05
2026-02-11

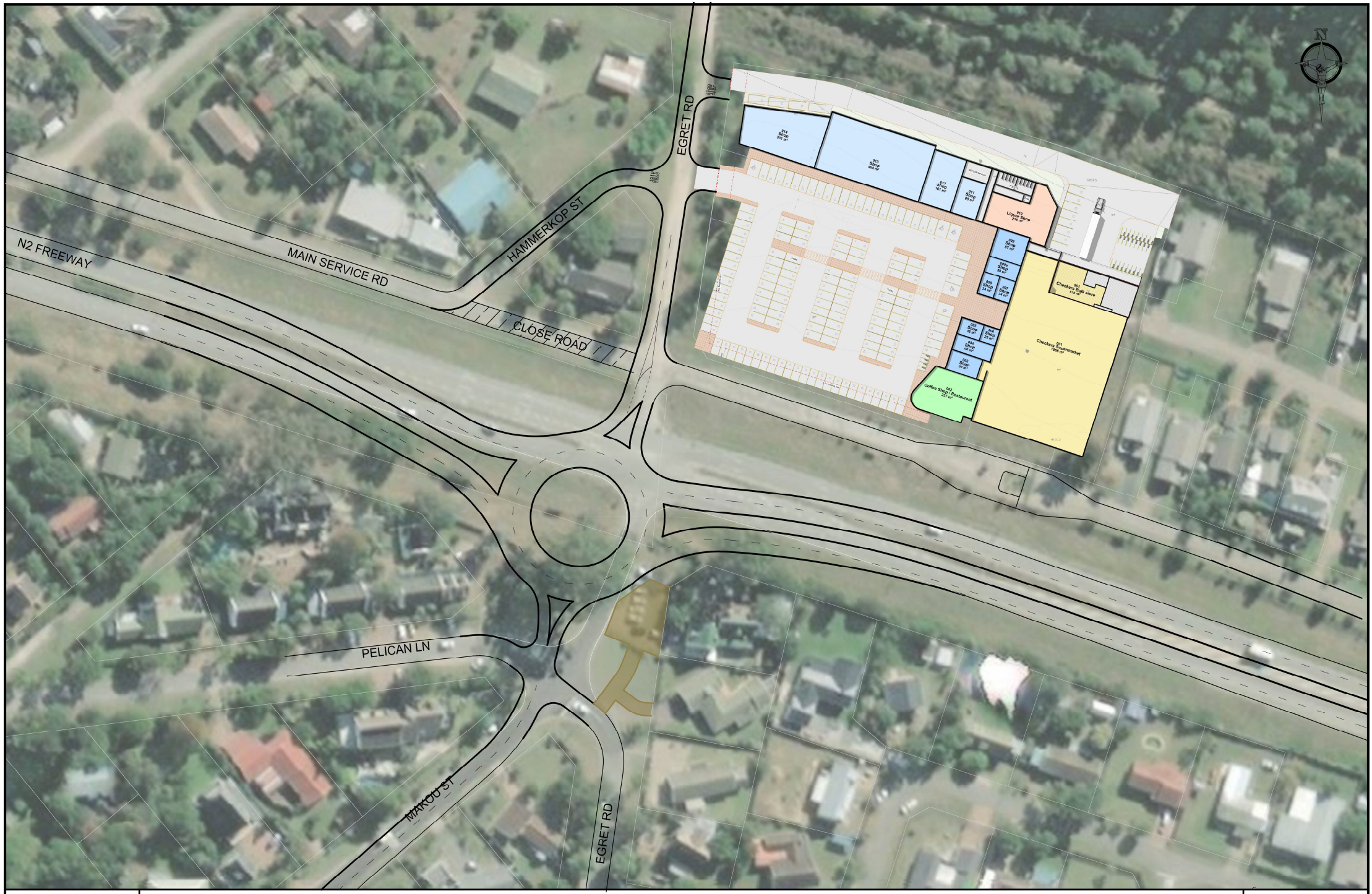


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SEDGEFIELD CHECKERS
PROPOSED N2 ROUNDABOUT - OPTION 3

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SEDGEFIELD CHECKERS
PROPOSED N2 ROUNDABOUT - OPTION 3b

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