

**APPLICATION FOR REZONING FROM
SINGLE RESIDENTIAL ZONE 1 TO
BUSINESS ZONE II FOR THE
DEVELOPMENT OF SHOPS AND CONSENT
USE FOR A SERVICE STATION ON ERF
7379, PACALTS DORP – GEORGE LOCAL
MUNICIPALITY**

MOTIVATION REPORT

MAY 2026

APPLICATION FOR REZONING FROM SINGLE RESIDENTIAL ZONE 1 TO BUSINESS ZONE II FOR THE DEVELOPMENT OF SHOPS AND CONSENT USE FOR A SERVICE STATION ON ERF 7379, PACALTS DORP – GEORGE LOCAL MUNICIPALITY

MAY 2026

Prepared for:

PACALTSPROPDEV (PTY) LTD

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PLANS

Plan No. 1: Regional Locality Plan

Plan No. 2: Local Locality Plan

Plan No. 3: Zoning Plan

Plan No. 4: Plan Site Development Plan

SECTION A: INTRODUCTION

Tshani Consulting C.C. has been appointed by PACALTSPROPDEV (PTY) LTD to submit a SPLUMA application, on their behalf, to George Local Municipality for Rezoning from Residential Zone 1 to Business Zone II and consent for a Service Station on Erf 7379, George (herein referred to as "The Site"). A Company Resolution and Power of Attorney in favour of Tshani Consulting CC is attached in Appendix 1 & 2.

This document serves as a motivation prepared by Tshani Consulting CC and the application complies with the Regulations of the George Local Municipality Land Use Planning By-law, 2015 and is applied for in terms of:

- Chapter 3: Section 15(2)(a): "a rezoning of land"
- Chapter 3: Section 15(2)(o): "a consent use contemplated in the zoning scheme"

Existing Zone Regulations:

In terms of George Municipal Integrated Zoning Scheme By-Law, 2017, the following uses are permitted under the zone "Single Residential Zone 1":

Primary: Dwelling house.

Special Consent: Creche, Guest house, Halfway house, Home care facility, House shop, Place of instruction, Second dwelling.

SECTION B: THE SITE

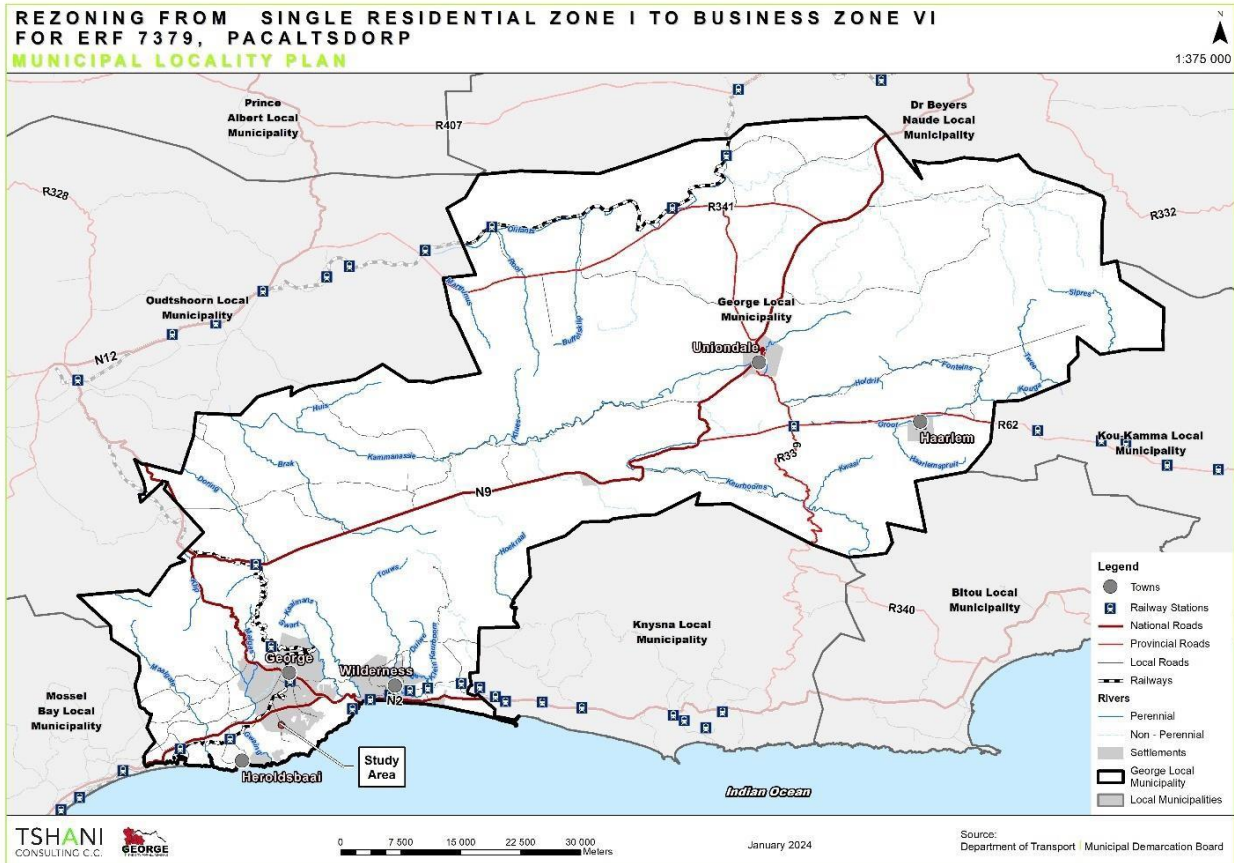
This section aims to highlight the site context in terms of its location, ownership details, as well as existing services, zoning and surrounding land uses of the property.

B1. LOCALITY & ACCESS

The site is located within the Western Cape province and falls under the jurisdiction of the George Local Municipality. George Local Municipality is surrounded by the following Local Municipalities:

- Dr Beyers Naude Local Municipality to the North,
- Kou-Kamma Local Municipality to the East,

- Bitou Local Municipality to the Southeast,
- Knysna Municipality to the South,
- Mossel Bay Local Municipality to the Southwest, and
- Oudtshoorn Local Municipality to the west (Refer to Plan 1: Municipal Locality Plan).



Plan No. 1: Municipal Locality Plan

The subject site is located in Pacaltsdorp which is in the south of George Local Municipality. The area is accessed via the N2 which bisects George from Knysna to Mossel Bay Local Municipalities.

The suburb of Pacaltsdorp is surrounded by the following areas: -

- George to the North
- Tyolora to the East
- Seaview to the South, and
- Delville park to the West



Plan No. 2: Regional Locality Plan

The site, Erf 7379, Pacaltsdorp is located on Beach Road and is accessed via Church Street and Mission Street as it is a corner property.

Beach Road links directly to the N2 or becomes York Street which links Pacaltsdorp to Central George to the North.. (Refer to Plan 2: Local Locality Plan).



Plan No. 3: Local Locality Plan

B2. OWNERSHIP & PROPERTY DESCRIPTION

The Site, Erf 7379, Pacaltsdorp is owned by PACALTSPROPDEV (PTY) LTD and is registered under Title Deed Number: T54409/2018, refer to attached Title Deed in Appendix 3.

PROPERTY DESCRIPTION: -

Erf Number	Township	Size
7379	Pacaltsdorp	4 663m ²

The total area of the site measures 4663m² (Four Thousand, Six Hundred and Sixty Three Square Meters) in extent. (Refer to attached Title Deed in Appendix 3).

B3. SERVITUDES

The site is subject to no servitudes. (Refer to attached SG Diagram in Appendix 4).

B4. TITLE DEED RESTRICTIONS

There are no restrictive conditions in the Title Deed which negatively impact or prevent the proposed rezoning from taking place (Refer to Title Deed in Appendix 3).

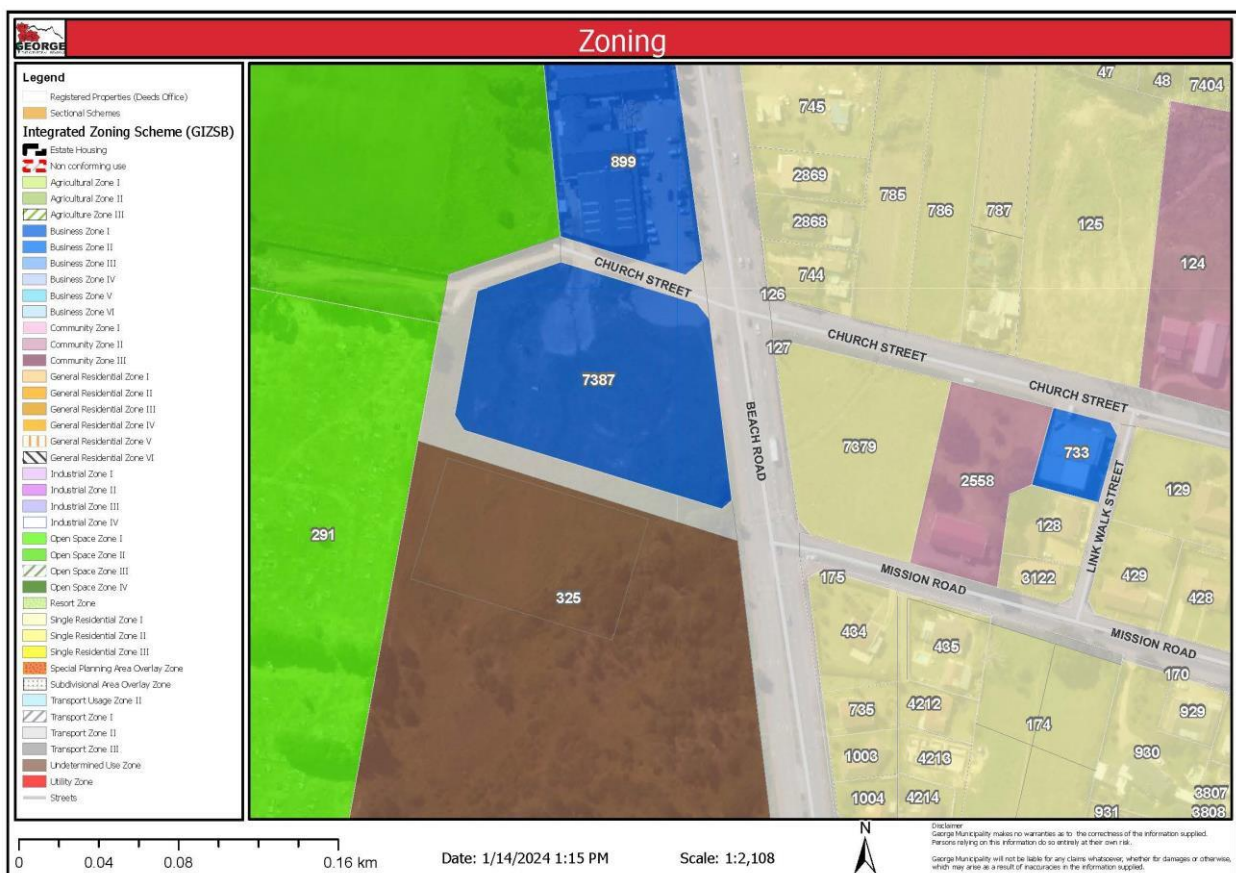
B5. BONDHOLDERS CONSENT

The site is not subject to a bond

B6. ZONING

The Site, Erf 7379, Pacaltsdorp is zoned as Single Residential Zone 1 as per the George Integrated Zoning Scheme By-Law (Refer to Plan No. 4: Zoning Plan).

- Located North, East of the property are Single Residential Zone zonings, Community Zone II, Business Zone II and Open Space 1.
- Located West of the property are Business Zone 1 zones, Open Space Zone II and Southward are Single Residential Zone 1 zones (Refer to Plan No. 5: Land Use Plan).



Plan No. 4: Zoning Plan

APPLICATION FOR REZONING TO BUSINESS ZONE II AND CONSENT USE FOR SERVICE STATION ON ERF 7379, PACALTS DORP

B7. EXISTING AND ADJACENT LAND USES

Erf 7379, Pacaltsdorp is currently Vacant while the land uses of properties adjacent to the subject property indicate a variety of uses including Residential, Places of Worship, Shops, Cemetery.

B8. EXISTING SERVICES

This section highlights the existing infrastructural services available within the property as well as their condition.

It should also be acknowledged that the properties are located in a developed suburb with all the necessary municipal services such as water, electricity, roads and sewer.

B8.1 WATER

The property are currently served by an existing municipal water connection.

B8.2 SEWERAGE

There is an existing municipal sewer connection currently servicing the property.

B8.3 ELECTRICITY

The property is serviced with electricity, supplied by the George Local Municipality.

B8.4 ACCESS

The site can be accessed directly via Church Street and Mission Street.

B8.5 ROADS

The existing roads in the area are in a fairly good condition and are tarred.

SECTION C: PLANNING APPLICATION

The following section highlights the compliance and reasons that the rezoning should be approved in terms of this motivation from Single Residential Zone 1 to Business Zone II for the proposed development. It then outlines the existing development and discusses the land use parameters applicable for Business Zone II.

C1. REZONING MOTIVATION

The following are motivating factors for the Rezoning from Single Residential Zone 1 to Business Zone II to be approved: -

- Sound town planning principles have been considered in terms of land use parameters.
- No restrictive conditions which oppose the development are present.
- No environmental issues.
- Allows the owner to utilize the property for additional income.

Erf 7379, Pacaltsdorp is 4663m² in extent and zoned Single Residential Zone 1. It was zoned to Business Zone 1 which lapsed. The newly proposed zoning is Business Zone II and it is proposed to develop an anchor shop and drive-thru with a service station on it with associated convenience shops as well as. With the rezoning to Business Zone II for Shops and consent use service station will be included as the Centre will be home to convenience shops as well as an anchor shop with drive-thru. The proposed Shopping Centre will also hugely benefit and formalise the local, convenient shopping within the Pacaltsdorp area as the area has been in need of economic stimulus and will now have it and will share it with its immediate surrounding areas. The development will definitely allow for the community to have close, safe, convenient and easy access shopping facility.

The following are also some of the benefits of the development:-

- The centre will address a gap in the local area retail hierarchy,
- Increased one-stop shopping convenience,
- Creation of jobs,
- Reduces travels cost due to proximity of the proposed development to the community,
- Decreases travel time and distance to access shopping facilities,
- It will address a gap in the retail for convenience in terms of shopping daily necessities,

- It will contribute to the creation of a well-balanced and supplying retail environment, catering to the demands of the local market,
- The project will contribute to the expansion of the local municipal tax base,
- The investment will increase the product line and service range within the market,
- It will improve the overall quality of lives.

SUITABILITY OF THE SITE

The subject property poses no environmental concerns. It is also ideally situated to benefit from the buying power provided by the surrounding households and users of the surrounding roads. It is noteworthy that public transport is within proximity to the site. Thus, the proposed development will benefit from the traffic (pedestrian as well as motor vehicle) generated by the public. The result is ease of access to and from the development even if people other than the residents of surrounding settlements wish to use the proposed facility. It therefore stands to argue that the subject property is well suited for the proposed development with its mixed use along its route.

EFFECT TO SITE AND SURROUNDING AREA

The proposed development will not alter the aesthetics of the area but will contribute to the stimulating growth factor that it's expected to bring. This development will stand at the forefront of attracting new investment into the area of Pacaltsdorp and associated positive spin-offs that will accompany its existence. It is further agreed that the development will be non-obtrusive in its nature with no environmental effect on the surrounding environment. The existing development will also have no effect on the service provision to its located as well as its surrounding areas (including water, electricity and sewerage provision). In addition to the providing of the service station, the proposed shopping constituent will encourage financial investors to invest in the area, resulting in an uplift of the town area.

CHARACTER AND STREETSCAPE INTEGRATION

In addition to the broader built environment considerations, the proposed development has also been assessed in relation to the existing character and streetscape qualities of the surrounding Pacaltsdorp area, particularly along the Beach Road, Church Street, and Mission Street interfaces. The surrounding urban context is characterised by predominantly low-rise development, visually permeable streetscapes, modest building forms, and a mixture of residential, community, commercial, and open space uses. Existing development patterns within the area generally consist of single-storey structures with varying setbacks, interspersed with vegetation, informal

landscape elements, and open spatial conditions which collectively contribute to the established character of the precinct.

The proposed development has been consciously designed to align with these contextual characteristics through the adoption of a single-storey built form with low horizontal massing and articulated building components. The proposed site coverage of approximately 23%, substantially lower than the permissible 75% coverage in terms of the George Integrated Zoning Scheme By-Law, ensures that significant portions of the site remain available for meaningful landscaping, visual buffering, and streetscape enhancement. This reduced development footprint further limits the visual dominance typically associated with commercial developments and allows the proposal to integrate more comfortably into the surrounding urban fabric.

The 3D concept illustrations prepared for the development further demonstrate that the scale and configuration of the proposed buildings are moderate and contextually proportioned relative to surrounding development patterns. The visual permeability between structures, combined with landscaped perimeter treatments, internal planting islands, and setback planting opportunities, enables the development to maintain an open and softened visual character along its interfaces. The proposed landscape interventions, including indigenous tree planting, landscaped berms, green buffer edges, and structured streetscape planting, are specifically intended to soften the commercial appearance of the development and reinforce the vegetated and open-edge qualities that characterise portions of Pacaltsdorp.

Furthermore, the proposal responds positively to the objectives of the Draft Pacaltsdorp: Guidelines for Heritage Precinct by promoting a gateway landscape treatment along Beach Road while avoiding excessive building height, bulky massing, or visually intrusive architectural forms. The restrained architectural expression, combined with landscape-led design interventions, ensures that the development will not detract from the existing character of the area but rather contribute toward the visual upgrading, greening, and strengthening of this important nodal entrance into Pacaltsdorp.

The development therefore represents a context-sensitive proposal that supports economic growth and urban activity while protecting and reinforcing the existing character of the area.

C2. LAND USE PARAMETERS

The following land use parameters, as stipulated in the George Local Municipality: Integrated Zoning Scheme By-Law, 2017 for Business Zone II will be applicable:

LAND USE PARAMETERS	
BUSINESS ZONE II	
Primary Use	Shop
Consent Uses	Service Station
F.A. R	1
Coverage	75%
Building Line (street)	0m
Side Space	0m
Rear Space	0m
Height	12m

Coverage

Coverage means the area of a site covered by buildings as seen vertically from above and is expressed as a percentage of the area of the site. In terms of the George Municipal Integrated Zoning Scheme By-Law, 2017, the permitted coverage for Business Zone II 75%.

The actual coverage of the proposed development in the Site Development Plan No. 4, in comparison to the permissible coverage, as stipulated in the George Municipal Integrated Zoning Scheme By-Law, is reflected in the table below:

COMBINED EXTENT OF SITE	STIPULATED COVERAGE	PERMISSIBLE COVERAGE	ACTUAL COVERAGE (m ²)	ACTUAL COVERAGE (%)	IN COMPLIANCE
4663 m ²	75%	3497.25 m ²	1060 m ²	23%	✓

In view of the above, the actual coverage (23 %), complies with the permissible coverage, as stipulated in the George Municipal Integrated Zoning Scheme By-Law, 2017.

Height

Height means the height of a building in floors or storeys; and is expressed as a number.

For the purpose of this application, height will refer to the number of storeys. The proposed development is 1 storey in height. The permitted height for Business Zone 12m to the top of the building therefore a 1 storey building is compliant.

Floor Area Ratio

Floor area ratio is the ratio of a building's total floor area to the size of the piece of land upon which it is built. It is often used as one of the regulations in city planning along with the building-to-land ratio. The terms can also refer to limits imposed on such a ratio through zoning.

The zoning of Business Zone II depicts F.A.R is 1.

PROPERTY DESCRIPTION	AREA (m ²)	STIPULATED F.A.R	BUILDING AREA	ACTUAL F.A.R	IN COMPLIANCE
Erf 7379, Pacaltsdorp	4663 m ²	1	1060 m ²	0.3	✓

Parking

Using the town planning method of calculation, the parking requirements for the Proposed Development are represented in the table below, in terms of the George Municipal Integrated Zoning Scheme By-Law, 2017 regulations:

LAND USE	GLA	PARKING REQUIREMENT	PARKING BAYS REQUIRED	PROVIDED
Petrol Filling Station	256 m ²	4 bays / 100 m ²	10 bays	58 Shared Parking Bays
Shops	804 m ²	4 bays / 100 m ²	33 bays	

The parking requirement for a Petrol Filling Station and Shops are 4 parking bays per 100 m². The existing development requires 43 parking bays in terms of parking calculations however 58 parking bays have been provided thus exceeding the requirements.

C3. SPECIALIST STUDIES

TRAFFIC IMPACT ASSESSMENT

SMEC South Africa (Pty) Ltd was appointed by Pacaltspropdev (Pty) Ltd. to conduct a Traffic Impact Assessment for the proposed mixed-use development on Erf 7379 Pacaltsdorp, George. The site measures approximately 4 663 square metres in extent and will comprise of a filling station with convenience store, retail anchor tenant and line shops.

The subject site is proposed to be served by two accesses, as follows (refer to Figure 5):

- Access 1: High-volume driveway along Church Street, approximately 88 metres downstream of Beach Road; and
- Access 2: High-volume driveway along Mission Street, approximately 55 metres upstream of Beach Road.

It is anticipated that the development would generate 121, 207 and 205 new vehicular trips during the Weekday AM, Weekday PM and Saturday Morning Peak Hours respectively.

The following transport improvements are proposed as part of the development:

2021 Base Year:

- Access 1: High-volume driveway along Mission Street, approximately 55 metres upstream of Beach Road; and
- Access 2: High-volume driveway along Church Street, approximately 88 metres downstream of Beach Road; and
- Pedestrian walkways along Church Street and Mission Street, linking to Beach Road.

2026 Design Year:

- Intersection upgrades might be required at the Beach Road and Mission Street intersection. The type and extent of intersection upgrades will be based on intersection configurations along Beach Road at that point in time. If a signalised intersection is implemented along Beach Road to the north of this location, it would allow for platooning of vehicles from the north, therefore no upgrades would be required to this intersection. Should the current intersection configurations along Beach Road remain as-is, it might be deemed necessary to convert Church Street to a left-in, left-out

intersection along the east and west approaches, following a road safety investigation at that point in time.

It is recommended that cost contributions with relation to roads be determine by the Municipality as part of the developer's bulk contribution.

This Traffic Impact Assessment is supported from a traffic engineering perspective, provided that the required improvements be implemented in accordance with appropriate design standards. (Please refer to Appendix 5: Traffic Impact Assessment)

WETLAND VERIFICATION REPORT

Confluent Environmental was requested by Cape EAPrac to verify the presence of a possible watercourse on Erf 7379, Pacaltsdorp, George. A filling station and associated buildings and infrastructure are planned for the property. The property occurs within the urban extent of the city of George. The scope of work for this report is guided by the legislative definitions as specified by the National Water Act (NWA).

The study determined that there is no natural watercourse present on Erf 7379 and it is the opinion of this specialist that the further development of the property is acceptable from a freshwater ecosystem perspective. (Please refer to Appendix 6: Wetland Verification Report)

BULK SERVICES AND STORMWATER MANAGEMENT PLAN

DVP Incorporated Consulting Engineers were appointed by the client, Pacaltsprodev (Pty) Ltd to compile a Services Report for submission to the local authority. As part of this process, the availability of existing municipal infrastructure in relation to the proposed development must be investigated.

This report is aimed at outlining the design philosophy that will be applied when designing the internal engineering services for the proposed development. It is also aimed at providing relevant data so that the local authority can comment on their ability to accommodate the additional loads generated by the proposed development on existing infrastructure.

From their analysis of the existing and planned future civil engineering infrastructure, the report indicats that the planned development can be adequately serviced. (Please refer to Appendix 7: Bulk Services Report and Stormwater Management Plan)

SECTION D: DESIRABILITY

D1. BUILT ENVIRONMENT

The term-built environment is used when referring to those surroundings created:

- * *for humans,*
- * *by humans, and*
- * *to be used for human activity.*

Examples would include cities, buildings, urban spaces, walkways, roads, parks, etc.

The surrounding built environment in relation to Erf 7379 consists of:

- * Predominantly commercial and office use to the north, east and west of the site.

The surrounding built environment will not be negatively affected by the proposed development on the site, as the proposed development on the site will be in compliance with land use restrictions contained in George Municipal Integrated Zoning Scheme By-Law, 2017 and proposed in this report.

D2. VIEWS

The word "View" has many meanings assigned to it; however, for the purpose of this application "View" is defined as "referring to whatever lies open to sight".

In terms of this application, it is important to understand what impact the existing offices and restaurant have on the views of the surrounding properties. Firstly, it is to be made known that the area does not have any significant views, such as a "view to the ocean" that could be obscured by the building.

As mentioned, the Development is double storey in height, and would not obstruct the surrounding properties in any significant way. The views of the surrounding site owners will not be impeded upon.

SECTION E: POLICY ALIGNMENT

E1. SPATIAL PLANNING LAND USE MANAGEMENT ACT NO. 16 OF 2013

The spatial planning and land use management act aims to achieve the following through land use management and the objects of this act are to:

- (a) Provide for a uniform, effective and comprehensive system of spatial planning and land use management for the republic;
- (b) Ensure that the system of spatial planning and land use management promotes social and economic inclusion;
- (c) Provide for development principles and norms and standards;
- (d) Provide for the sustainable and efficient use of land;
- (e) Provide for cooperative government and intergovernmental relations amongst the national, provincial and local spheres of government; and
- (f) Redress the imbalances of the past and to ensure that there is equity in the application of spatial development planning and land use management systems.

The following principles apply to spatial planning, land development and land use management:

- (a) The principle of spatial justice, whereby:

I. Past spatial and other development imbalances must be redressed through improved access to and use of land;

II. Spatial development frameworks and policies at all spheres of government must address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas and areas characterized by widespread poverty and deprivation;

III. Spatial planning mechanisms, including land use schemes, must incorporate provisions that enable redress in access to land by disadvantaged communities and persons;

IV. Land use management systems must include all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas, informal settlements and former homeland areas;

V. Land development procedures must include provisions that accommodate access to secure tenure and the incremental upgrading of informal areas; and

VI. A municipal planning tribunal considering an application before it, may not be impeded or restricted in the exercise of its discretion solely on the ground that the value of land or site is affected by the outcome of the application;

proposal is aligned to spatial justice in that it seeks to address the past land development imbalances. The site is located in a residential area which were areas neglected previously.

(b) The principle of spatial sustainability, whereby spatial planning and land use management systems must:

I. Promote land development that is within the fiscal, institutional and administrative means of the republic;

II. Ensure that special consideration is given to the protection of prime and unique agricultural land;

III. Uphold consistency of land use measures in accordance with environmental management instruments;

IV. Promote and stimulate the effective and equitable functioning of land markets;

V. Consider all current and future costs to all parties for the provision of infrastructure and social services in land developments;

VI. Promote land development in locations that are sustainable and limit urban sprawl; and

VII. Result in communities that are viable;

The proposal complies with this principle in that it takes into account the environmental matters and against the urban sprawl phenomenon.

(c) The principle of efficiency, whereby:

I. Land development optimizes the use of existing resources and infrastructure;

II. Decision-making procedures are designed to minimize negative financial, social, economic or environmental impacts; and

III. Development application procedures are efficient and streamlined and timeframes are adhered to by all parties;

(d) the principle of spatial resilience, whereby flexibility in spatial plans, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks; and

(e) The principle of good administration, whereby:

I. All spheres of government ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems as embodied in this act;

II. all government departments must provide their sector inputs and comply with any other prescribed requirements during the preparation or amendment of spatial development frameworks;

III. The requirements of any law relating to land development and land use are met timeously;

IV. The preparation and amendment of spatial plans, policies, land use schemes as well as procedures for development applications.

E2. GEORGE MUNICIPALITY INTEGRATED DEVELOPMENT PLAN

"To deliver affordable quality service; develop and grow George; keep George clean, safe and green; ensure good governance and human capital in George and to participate in George."

(George Municipality IDP 2022/2027)

The George Municipality's Integrated Development Plan 2022/2027 is the business plan that will guide development and growth of the George Municipal area over the next 5 years.

The Spatial Development Framework (SDF) is the primary spatial response to the development context, needs and development vision of the Municipality. It is the primary level of translation of social, economic and environmental development and management.

The strategic objectives of George Municipality include to develop and grow George

This application is in line with the vision of the Executive Mayor as it is also a way of promoting growth and development to existing areas within George Municipality.

E3. GEORGE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2023/2027

The SDF is a primary spatial response to the development context, needs and development vision of the municipality. It is a key land use management tool at a strategic level that has an important role to play in guiding and managing Municipal decisions relating to the use, development and planning of land. It is a legislative requirement and should resonate with the national and provincial spatial development priorities.

The SDF is also a transformation tool. With its focus on spatial restructuring, it guides the location of future development in a manner that addresses the imbalances of the past. It enables the municipality to manage its land resources in a developmental and sustainable manner. It provides an analysis of the spatial needs and issues and provides strategies and programs to address these challenges.

In response to the trends and challenges present in the George Local Municipality, the municipality developed a vision to "Develop George as a resilient regional development anchor of excellence for prosperity, inclusive-and smart growth. The primary levers for achieving SPLUMA principles for the municipality include:

- Growth management – compact urban form
- Settlement restructuring – integrated human settlements
- Public transport and supporting road infrastructure
- Adequate bulk services (water and sanitation)
- Understanding the space economy and supporting economic growth
- Sustainable public finances

In non-contradiction nor totally perfect alignment with these levers, the proposed development will improve the municipality's significance.

SECTION F: APPLICATION FORMS

The Application form for the Rezoning from Single Residential 1 to Business Zone II in terms of the George Municipal Land Use Planning By-Law, 2015 has been completed (refer to attached Application Form in Appendix 8)

SECTION G: CONCLUSION

This application is based purely on sound town planning principles and has no significant negative impacts associated to it; therefore, it is recommended that George local Municipality supports and approves the following Application:

Rezoning from Single Residential 1 to Business Zone II.

Based on the following reasons:

- The application complies with the legislative framework at all three spheres of government;
- The application is based on sound town planning principles;
- The application will have not had any negative impact to the surrounding environment;
- Socio economic factors: the application looked at the aspects of economy, employment, especially to the local unemployed youth;
- Location: the proposal developments will bring convenience in the area, as currently these services are not rendered in the area;

APPENDICES

APPENDIX 1: COMPANY RESOLUTION



Date: 12/07/2023

Our Reference: 9390499296

JOHANNA ETRICIA VAN JAARSVELD
E-mail: JANINE@JEOAUDITORS.CO.ZA
Basket: JEOVEN

RE: Amendment to Company Information

Company Number: 2018/269339/07
Company Name: PACALTSPROPDEV (PTY) LTD

We have received a COR39 (Notice of change of company directors) from you dated 12/07/2023.

The COR39 was accepted and placed on file.

The following change was effected to Director/Secretary/Officer:

Director WILLIAM ADRIAAN ONDENDAAL was added

The following change was effected to Director/Secretary/Officer:

Director JACOBUS JOHANNES ODENDAAL - Change was made.

- Director / member status changed from Active to Resigned.
- Residential address changed from UNIT 3 to LOT 1397.
- Residential address changed from 42 SMITH STREET to PEN VALLEY GOLF ESTATE.
- Residential address changed from PARK RYNIE to PENNINGTON.
- Business address changed from UNIT 3 to LOT 1397.
- Business address changed from 42 SMITH STREET to PEN VALLEY GOLF ESTATE.
- Business address changed from PARK RYNIE to PENNINGTON.
- Postal address changed from UNIT 3 to PO BOX 1.
- Postal address changed from 42 SMITH STREET to PENNINGTON.
- Postal address changed from PARK RYNIE to PENNINGTON.

The following change was effected to Director/Secretary/Officer:

Director LUYOLO LENNOX MAKALA - Change was made.

Yours truly

Commissioner: CIPC

Please Note:

The attached certificate can be validated on the CIPC web site at www.cipc.co.za.
The contents of the attached certificate was electronically transmitted to the South African Revenue Services.



The Companies and Intellectual Property Commission
of South Africa
P.O. BOX 429, PRETORIA, 0001, Republic of South Africa. Docex 256, PRETORIA.
Call Centre Tel 086 100 2472, Website www.cipc.co.za



**Certificate issued by the Companies and Intellectual Property
Commission on Thursday, July 13, 2023 06:10
Certificate of Confirmation**



Registration number	2018 / 269339 / 07
Enterprise Name	PACALTSPROPDEV (PTY) LTD
Enterprise Shortened Name	None provided.
Enterprise Translated Name	None provided.
Registration Date	04/05/2018
Business Start Date	04/05/2018
Enterprise Type	Private Company
Enterprise Status	In Business
Financial year end	February
Main Business/Main Object	BUSINESS ACTIVITIES NOT RESTRICTED.
Postal address	UNIT 3 42 SMITH STREET PARK RYNIE KWA-ZULU NATAL 4182
Address of registered office	UNIT 3 42 SMITH STREET PARK RYNIE KWA-ZULU NATAL 4182



The Companies and Intellectual Property Commission
of South Africa
P.O. BOX 429, PRETORIA, 0001, Republic of South Africa. Docex 256, PRETORIA.
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Commission on Thursday, July 13, 2023 06:10
Certificate of Confirmation**



Registration number **2018/269339/07**

Enterprise Name **PACALTSPROPDEV (PTY) LTD**

Auditor
Name **J E ODENDAAL AND PARTNERS**
Postal Address **POSBUS 12109
GARDEN ROUTE MALL
6546**

Designated Auditor
Name **VAN JAARVELD JOHANNA ETRICIA**
Postal Address

Active Directors / Officers

Surname and first names	ID number or date of birth	Director type	Appoint-ment date	Addresses
ONDENDAAL, WILLIAM ADRIAAN	8906105048086	Director	30/05/2023	Postal: PO BOX 1, PENNINGTON, PENNINGTON, KWA-ZULU NATAL, 4184 Residential: 1342 PEN CIRCLE, PEN VALLEY GOLF ESTATE, PENNINGTON, KWA-ZULU NATAL, 4184
MAKAULA, LUYOLO LENNOX	6807106281084	Director	14/09/2018	Postal: 25 WALLY HAYWARD DRIVE, ASHBURTON, PIETERMARITZBURG, KWA-ZULU NATAL, 3201 Residential: 25 WALLY HAYWARD DRIVE, ASHBURTON, PIETERMARITZBURG, KWA-ZULU NATAL, 3201



The Companies and Intellectual Property Commission
of South Africa
P.O. BOX 429, PRETORIA, 0001, Republic of South Africa. Docex 256, PRETORIA.
Call Centre Tel 086 100 2472, Website www.cipc.co.za



**ROUND ROBIN RESOLUTION OF THE DIRECTORS OF
PACALTSPROPDEV (PTY) LTD
(REG NO. 2018/269339/07)
(the "Company")**

At a meeting held at Park Rynie on the 5th day in the month of
February 2024.

RESOLVED THAT: We, the Directors of PACALTSPROPDEV (Pty) Ltd are the registered owners of:

- **Erf 7379, Pacaltsdorp**

1. A Rezoning and Consent Use Application to be submitted to the George Local Municipality for the above-mentioned property.
2. Permission to conduct any other legislative requirement necessary.
3. We hereby nominate and appoint:

William Adriaan Ondendaal Hereby authorised to sign all necessary documentation and papers to enable the above application to be proceeded with.

All Directors to sign:



Date 2024-03-05

Name: William Adriaan Ondendaal



Date 2024-03-05

Name: Luyolo Lennox Makaula

Date _____

Name: _____

APPENDIX 2: POWER OF ATTORNEY

APPENDIX 3: TITLE DEED

CONVEYANCER'S CERTIFICATE

I, the undersigned,

ROBIN PETER WESTLEY
LPCM Number 65337

Conveyancer of Umhlanga, KwaZulu-Natal, duly sworn and admitted, do hereby certify that:

1. I have studied original Deed of Transfer Number T54409/2018 (the "Title Deed").
2. In terms of the Title Deed, Pacaltspropdev (Proprietary) Limited, Registration Number 2018/269339/07 (the "Owner"), is the registered owner of:

Erf 7379 Pacaltsdorp

In the Municipality of and Division of George

Province of the Western Cape

In extent 4 664 (Four Thousand Six Hundred and Sixty Four) Square Metres (the "Property").

3. The following are all the legal encumbrances in the Title Deed:

3.1 Restrictive Conditions

There are no restrictive conditions of title pertaining to the property.

3.2 Servitudes

There are no restrictive conditions of title pertaining to the property.

3.3 Mortgage Bond

There are no mortgage bonds registered over the property.

4. There are no restrictive conditions in the Title Deed which preclude or limit the Owner from undertaking a proposed development on the Property comprising a petrol filling station and shops.

SIGNED AT UMHLANGA THIS 1ST DAY OF JULY 2026.



CONVEYANCER
ROBIN PETER WESTLEY
LPCM Number 65337

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 geliasseer: Client copies of deed filed permanently in Deeds Office:

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

(c) Notas/Notes:

B. VIR AKTEKANTOOR GEBRUIK / FOR DEEDS OFFICE USE:

Interdike nagesien deur Interdicts checked by	Opmerkings Remarks	Paraaf Initials
BLACKBOOK 21 NOV 2018 YOLANDI OLIVIER Datum Date	(1) Dorp goedgekeur (geproklameer) Township approved (proclaimed) (2) Begiftigingswra Endowment erven (3) Begiftiging Endowment (4) Voorwaardes Conditions (5) Mikro Micro (6) Algemene plan General plan (7) Titellakte Title deed (8) Verbanne teen dorpsitel Bonds against township title (9) Datum nagesien Date checked	

Kantoor instruksies / Office instructions:

Seksie/Section: **Dade page VA 429/2007**

Kort beskrywing van eiendom/Brief description of property

Kant Rek Nr. Ref. No. / Verw. Nr. **BLA6710375 JTGJ**

63 HG

T (021) 464 4700

A. VIR AKTEKANTOOR GEBRUIK / FOR DEEDS OFFICE USE:

Datum van indiening / Date of lodgement

LODGED
2018-11-13
INGEDIEN

RCC 04/01/2018

Onssoekers / Examiners	Kamers	Skakeling / Linking	Reject	Passer
1. H. Zitha	1254	21		
2. Desiree Kleingeld				
3. Roch 1431				

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

Aard van Akte / Nature of deed **Toneel**
African Dune Investments
t.g.v./i.f.o. **Pacaltsprop**

T 000054409 / 2018

Skakeling / Linking	Titellaktes / Title deeds within
21	T 21961/2009 No 2.

GELYKTYDIGES / SIMULS

No. in stel / batch	Kode / Code	Name van Partye / Names of Parties	Naam van Firma / Name of Firm	Firma
1.	T	African Dune/Pacaltsprop	Herold Gie	63
2.	PC	African Dune/Neobank	STBB	11
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

HANDED IN FOR EXECUTION
21 NOV 2018
CAPE TOWN
HANDED IN FOR EXECUTION



63

BRAAM SWART & PARTNERS
36 CATHEDRAL STREET
GEORGE
6530

Fee endorsement		Office fee
Purchase price/Vat	Amount	
	1,325,000.00	1098.00
Mortgage capital Amount		R
Reason for exemption		Sum of Lt. o
		section Act

Prepared by me,

Linda Carol Jordaan
CONVEYANCER
~~LINDA CAROL JORDAAN~~
TARRYN LYNN GRAVENOR

DATA / VERIFY

23 NOV 2018

LINDA NCAPAI

T 000054409 / 2018

DEED OF TRANSFER

BE IT HEREBY MADE KNOWN:

THAT

ANJA HAUPT

appeared before me, REGISTRAR OF DEEDS at CAPE TOWN, he/she, the said
Apparar, being duly authorised thereto by a Power of Attorney granted to him/her by

AFRICAN DUNE INVESTMENTS 204 (PROPRIETARY) LIMITED
Registration Number 2008/001237/07

dated **13 AUGUST 2018**

and signed at **GEORGE**

DATA / CAPTURE
22 NOV 2018
GONCALVES BEI LINDA

BRAAM SWART & PARTNERS

AND the said Appearer declared that his/her principal had on **2 AUGUST 2018** truly and legally sold by Private Treaty and that he/she, the said Appearer in his/her capacity aforesaid, did, by these presents cede and transfer to and on behalf of:

PACALTSPROPDEV (PTY) LTD
Registration Number 2018/269339/07

its successors in title or assigns in full and free property:

ERF 7379 PACALTS DORP, IN THE MUNICIPALITY AND
 DIVISION OF GEORGE, PROVINCE WESTERN CAPE

IN EXTENT: 4664 (FOUR THOUSAND SIX HUNDRED AND SIXTY FOUR)
 SQUARE METRES

^{Registered}
 FIRST TRANSFERRED by Certificate of Consolidated Title No T4330/2007 with
 diagram No. SG 5136/2006 relating thereto and held by Deed of Transfer No T
 21961/2009

I. AS REGARDS the whole of the property:

SUBJECT to the conditions referred to in Deed of Transfer No. T
 2305/1907.

II. AS REGARDS the figure A g h j F and j h m k on diagram S.G. No. 5
 136/2006 annexed to Certificate of Consolidated Title, No T4330/2007:

A. SUBJECT FURTHER to the conditions contained in Deed of Transfer
 No. T53110/1986 and imposed by the Municipality of Pacaltsdorp (now
 known as the Municipality of George) at the instance of the Administrator of
 the Province of the Cape of Good Hope in terms of Section 9 of Ordinance
 No. 33 of 1934 when approving the subdivision of Erf 127 Pacaltsdorp:-

"Die eienaar van hierdie erf is verplig om sonder betaling van vergoeding
 toe te laat dat hoofgasleidings, elektrisiteits-, telefoon en televisiekabels
 en/of drade, hoof- en ander waterpype en die rioolvuil en dreinerings,
 insluitende stormwater van enige ander erf of erwe, oor hierdie erf gevoer
 word en dat bopgrondse installasies soos mini-substasies, meter kiosks en
 dienspale daarop geïnstalleer word, indien dit deur die plaaslike owerheid
 of 'n ander statutêre owerheid nodig geag word, en wel op die wyse en
 plek wat van tyd tot tyd redelikerwys vereis word. Dit sluit die reg op
 toegang te alle redelike tye tot die eiendom in met die doel om enige

werke met betrekking tot bogenoemde aan te lê, te wysig, te verwyder of te inspekteer.

Die eienaar van hierdie erf is verplig om sonder vergoeding op die erf die materiaal te ontvang of uitgrawings op die erf toe te laat al na vereis word, sodat die volle breedte van die straat gebruik kan word en die wal veilig en behoorlik skuins gemaak kan word weens die verskil tussen die hoogte van die straat soos finaal aangelê en die erf, tensy hy verkies om steunmure te bou tot genoeë van en binne 'n tydperk wat die plaaslike owerheid bepaal."

- III. AS REGARDS the figure g r n m h on Diagram S.G. No. 5136/2006 annexed to Certificate of Consolidated Title No. T 4330/2007:

SUBJECT FURTHER to the conditions contained in Deed of Transfer No. T 53111/1986 and imposed by the Municipality of Pacaltsdorp (Now known as the Municipality of George) at the instance of the Administrator of the Province of the Cape of Good Hope in terms of Section 9 of Ordinance No. 33 of 1934 when approving the subdivision of Erf 127 Pacaltsdorp, as more fully set out in II above.

- IV. AS REGARDS the figure r B s q on Diagram S.G. No. 5136/2006 annexed to Certificate of Consolidated Title No. T4330/2007:

SUBJECT FURTHER to the conditions contained in Deed of Transfer No. T 53112/1986 and imposed by the Municipality of Pacaltsdorp (Now known as the Municipality of George) at the instance of the Administrator of the Province of the Cape of Good Hope in terms of Section 9 of Ordinance No. 33 of 1934 when approving the subdivision of Erf 127 Pacaltsdorp, as more fully set out in II above

- V. AS REGARDS the figure q s C p on Diagram S.G. No. 5136/2006 annexed to Certificate of Consolidated Title No. T4330/2007:

SUBJECT FURTHER to the conditions contained in Deed of Transfer No. T 53113/1986 and imposed by the Municipality of Pacaltsdorp (Now known as the Municipality of George) at the instance of the Administrator

of the Province of the Cape of Good Hope in terms of Section 9 of Ordinance No. 33 of 1934 when approving the subdivision of Erf 127 Pacaltsdorp, as more fully set out in II above

VI AS REGARDS the figure k n p D E on Diagram S.G. No. 5136/2006 annexed to Certificate of Consolidated Title No. T4330/2007:

SUBJECT FURTHER to the conditions contained in Deed of Transfer No. T 53114/1986 and imposed by the Municipality of Pacaltsdorp (Now known as the Municipality of George) at the instance of the Administrator of the Province of the Cape of Good Hope in terms of Section 9 of Ordinance No. 33 of 1934 when approving the subdivision of Erf 127 Pacaltsdorp, as more fully set out in II above.



H.#

WHEREFORE the Appearer, renouncing all the right, title and interest which the said

AFRICAN DUNE INVESTMENTS 204 (PROPRIETARY) LIMITED

Registration Number: 2008/001237/07

heretofore had to the premises, did, in consequence also acknowledge him, to be entirely dispossessed of, and disentitled to, the same; and that, by virtue of these presents, the said

PACALTSPROPDEV (PTY) LTD

Registration Number: 2018/269339/07

its successors in title or assigns now is and henceforth shall be entitled thereto, conformably to local custom, the State, however, reserving its rights, and finally acknowledging the purchase price of the property hereby transferred to be the sum of **R1 725 000.00 (ONE MILLION SEVEN HUNDRED AND TWENTY FIVE THOUSAND RANDS).**

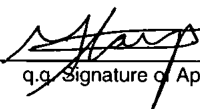
IN WITNESS WHEREOF I, the said Registrar of Deeds together with the Appearer, have subscribed to these presents, and have caused the Seal of Office to be affixed thereto.

THUS DONE AND EXECUTED at the Office of the REGISTRAR OF DEEDS at **CAPE TOWN** on **22 November 2018.**



In my presence:


 Registrar of Deeds


 q.q. Signature of Appearer

H. H.



63

Counter-signed by me,

CONVEYANCER

LINDA CAROL JORDAAN
TARRYN LYNN GRAVENOR

Prepared by me,

ATTORNEY

ABRAHAM CHRISTOFFEL SWART

POWER OF ATTORNEY TO TRANSFER

I, the undersigned,

SEBASTIANO MICHELE ANTONIO MORETTI

In my capacity as a Director duly authorised thereto by
virtue of a Resolution of the Directors of
AFRICAN DUNE INVESTMENTS 204 (PTY) LTD
Registration Number 2008/001237/07

do hereby nominate, constitute and appoint:

LINDA CAROL JORDAAN and/or RICHARD JAMES SOMERSET MOFFAT and/or
DAVID ERIC LOTZ and/or TARRYN LYNN GRAVENOR and/or REKHA JAGA
and/or ANJA HAUPT and/or PETER JOHN SMITH and/or PETER MICHAEL DAVIS

with power of substitution, to be my lawful attorney and agent, in my name, place and
stead to appear at the office of the Registrar of Deeds at CAPE TOWN, and then and
there as to act as my attorney and agent and to pass transfer to:

PACALTSPROPDEV (PTY) LTD
Registration Number 2018/269339/07

of the following property, namely:

ERF 7379 PACALTS DORP, IN THE MUNICIPALITY AND
DIVISION OF GEORGE, WESTERN CAPE PROVINCE

IN EXTENT: 4664 (FOUR THOUSAND SIX HUNDRED AND SIXTY FOUR)
SQUARE METRES

HELD BY DEED OF TRANSFER T21961/2009

sold to them by me by Private Treaty on 2 AUGUST 2018, for the sum of

R1 725, 000.00 (ONE MILLION SEVEN HUNDRED AND TWENTY FIVE THOUSAND
RANDS)

which has been duly secured; and generally for effecting the purposes aforesaid, to do whatsoever shall be requisite as fully and effectually, to all intents and purposes as I might or could do, if personally present and acting therein; hereby ratifying, allowing and confirming and promising and agreeing to ratify, allow and confirm all and whatsoever my said Attorney and Agent or substitute, shall in my name lawfully do or cause to be done, by virtue of these presents.

Signed at GEORGE
on 13 AUGUST 2018 in the presence of the undersigned witnesses.

As Witnesses

1. 



SÉBASTIANO MICHELE
ANTONIO MORETTI
(for AFRICAN DUNE INVESTMENTS
204 (PTY) LTD)

2. 



63

2

SARS

Transfer Duty
Declaration

TDREP

Reference Details

Transfer Duty Reference Number: TDE02D9C63

Details	
Details of Seller / Transferor / Time Share Company	
Surname / Registered Name	AFRICAN DUNE INVESTMENTS 204 (PTY) LTD
Company / CC / Trust Reg No.	200800123707
Full Name	
Marital Status	
Details of Purchaser / Transferee	
Full Name	
Company / CC / Trust Reg No.	201826933907
Surname / Registered Name	
Marital Status if applicable	
Details of the Property	
Date of Transaction/Acquisition (CCYYMMDD)	
2018-08-02	
Total Fair Value	R 1725000.00
Total Consideration	R 1725000.00
Calculation of Duty and Penalty / Interest	
Transfer Duty Payable on Natural Person	R 0.00
Property Description	
1 ERF 7379 PACALTSDOORP IN THE MUNICIPALITY AND DIVISIO N OF GEORGE, PROVINCE OF THE WESTERN CAPE, IN EXTENT: 4664 (FOUR THOUSAND SIX HUNDRED AND SIXTY FOUR) SOUA RE METRES	

Receipt	
Receipt Details	
Transfer Duty Reference Number	TDE02D9C63
Receipt Amount	R 0
Receipt No.	

Declaration by Conveyancer / Attorney	
TARRYN LYNN GRAVENOR	
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 the 2 lines of 17's above 4dc59aefbd3c5e00310704 8bad2006846d3066708	
Date (CCYYMMDD)	20181112
For enquiries go to www.sars.gov.za or call 0800 00 SARS (7277)	

63

3



GEORGE LOCAL MUNICIPALITY

CERTIFICATE IN TERMS OF SECTION 118 OF THE LOCAL GOVERNMENT: MUNICIPAL SYSTEMS ACT, 2000 (ACT No. 32 OF 2000)
(AS PRESCRIBED IN TERMS OF SECTION 120 OF ACT No. 32 OF 2000)

ISSUED BY GEORGE LOCAL MUNICIPALITY

In terms of section 118 of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000), it is hereby certified that all amounts that became due to George Local 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 (see definition of property in section 1 of Act 32 of 2000)

21 Digit Code (or Municipal Reference Number): MIQUETTE SASS
Erven: 7379
Portion:
Extension: PACALTS DORP
Zoning:
Registration division / Administrative District: SITUATED IN THE MUNICIPALITY AND DIVISION OF GEORGE,
WESTERN CAPE PROVINCE
Suburb:
Town:
Sectional Title unit number:
Exclusive use area and number as referred to on the registered plan:
Real right:
Scheme registration number:
Sectional Title Scheme Name:
Registered owner: AFRICAN DUNE INVESTMENTS 204 (PTY) LTD
(2008/001237/07)
Name and Identity/ Registration Number of all purchaser/s: PACALTS PROPDEV (PTY) LTD (2018/269339/07)

This Certificate is valid until:

05/01/2019

Given under my hand at

GEORGE

on 06/11/2018

Digitally signed by George Municipality

Signee: Miquette Sass

Sign date: 06/11/2018 12:15:36.700 PM

Expiration date: 04/04/2020 10:09:15 AM

MUNICIPAL MANAGER
George Local Municipality

Date issued: 06/11/2018

Authorised Officer: Miquette Sass

Certificate By Conveyancer:

I TARRYN LYNN GRAVENOR (full name and surname) hereby certify that this is a print-out of a data message in respect of the original clearance certificate electronically issued by the George Local Municipality.

Conveyancer

Date

12/11/2018

21 Digit Code (or Municipal Reference Number): MIQUETTE SASS

Page 1 of 1

Certificate number: GEO10003406

4

PRINT
PREPARED BY :

DEEDS REGISTRATION SYSTEM - CAPE TOWN
DRS08234 - LEBUW DIPONTSHENG

DATE : 20181113 TIME : 11:17:04.2 PAGE : 1

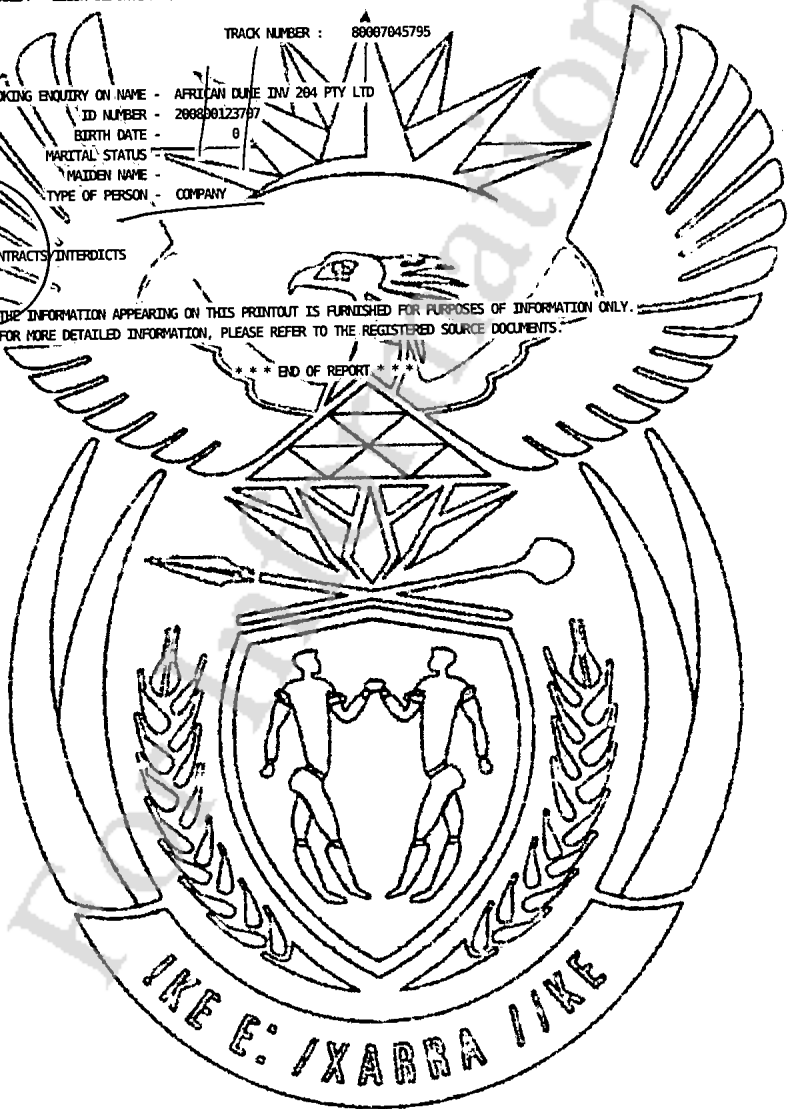
TRACK NUMBER : 88087045795

BLACK-BOOKING ENQUIRY ON NAME - AFRICAN DUNE INV 204 PTY LTD
ID NUMBER - 268800123797
BIRTH DATE - 0
MARITAL STATUS -
MAIDEN NAME -
TYPE OF PERSON - COMPANY

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 ***



PROD DEEDS REGISTRATION SYSTEM - CAPE TOWN
PREPARED BY : DRS68234 - LEBUW DIPONTSHENG

TRACK NUMBER : 88087045795

PROPERTY DETAILS PRINT FOR PORTION 0

ERF NO 7379
TOWNSHIP PACALTSODORP
REG DIV GEORGE-RO

PROVINCE WESTERN CAPE
PREV DESCRIPTION T4338/2007
DIAGRAM DEED NO 4664 SQM
EXTENT PACALTSODORP MUN
CLEARANCE

ORIGIN REASON
CONSOLIDATE FROM PACALTSODORP 3115, 0
CONSOLIDATE FROM PACALTSODORP 3116, 0
CONSOLIDATE FROM PACALTSODORP 3117, 0
CONSOLIDATE FROM PACALTSODORP 3118, 0
CONSOLIDATE FROM PACALTSODORP 3119, 0
CONSOLIDATE FROM PACALTSODORP 3120, 0

NO INTERDICTS

DOCUMENTS
812996/2009
VA429/2007
can be used
to our
holder & share
NEEDBANK LTD
K1889/19865

AMOUNT R1560000.00
O/P/A
SCAN/MICRO REF
20090908133949 0519
20070523115883 0125

OWNER DETAILS

FULL NAME & SHARE
AFRICAN DUNE INV 204 PTY LTD

PURCH DATE 200808121
AMOUNT/REASON R1350000.00
O/P/A IDENTITY 2008080123787
TITLE DEED T21961/2009
MICROFILM REF 20090908133506

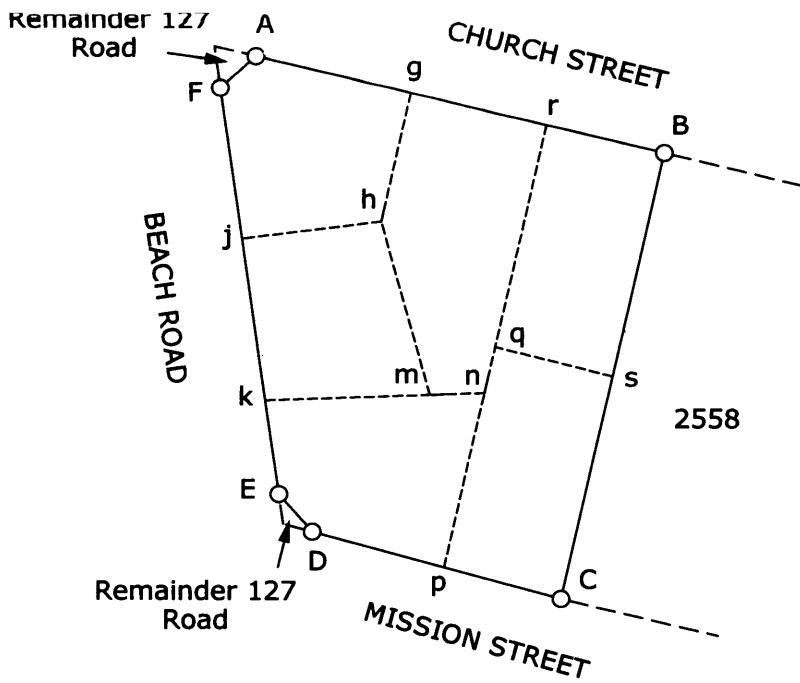
* O/P/A - 0 - MULTIPLE OWNER P - MULTIPLE PROPERTY A - MULTIPLE OWNER AND PROPERTY

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END OF REPORT

KEE: /XARRA /KE

APPENDIX 4: SG DIAGRAMS

		S.G. No. 5136/2006 Approved <i>[Signature]</i> Surveyor-General 21-8-2006
Components: 1) The figure A g h j F being Erf 3115 Pacaltsdorp, vide Diagram No. 2724/1986, annexed to Deed of Transfer No. T 53110/1986. 2) The figure g r n m h being Erf 3116 Pacaltsdorp, vide Diagram No. 2725/1986, annexed to Deed of Transfer No. T 53111/1986. 3) The figure r B s q being Erf 3117 Pacaltsdorp, vide Diagram No. 2726/1986, annexed to Deed of Transfer No. T 53112/1986. 4) The figure q s C p being Erf 3118 Pacaltsdorp, vide Diagram No. 2727/1986, annexed to Deed of Transfer No. T 53113/1986. 5) The figure k n p D E being Erf 3119 Pacaltsdorp, vide Diagram No. 2728/1986, annexed to Deed of Transfer No. T 53114/1986. 6) The figure j h m k being Erf 3120 Pacaltsdorp, vide Diagram No. 2729/1986, annexed to Deed of Transfer No. T 53110/1986. The figure A B C D E F represents 4664 square metres of land, being ERF 7379 PACALTSDORP and comprises 1), 2), 3), 4), 5) and 6) above situate in the Municipality and Administrative District of George Province of the Western Cape Compiled in July 2006 by me <i>[Signature]</i> J H Bailey PLS 0019 Professional Land Surveyor		
This diagram is annexed to No. <i>14330/2007</i> Dated i.f.o. Registrar of Deeds	The original diagrams are as quoted above	File No. S/110/2 Compiled Comp. ALNC-1243 (M4465) LPI C0270007

APPENDIX 5: TRAFFIC IMPACT ASSESSMENT



C1827

Traffic Impact Assessment

Proposed Mixed-Use Development, Erf 7379 Pacaltsdorp

Reference No. C1827

Prepared for Pacaltspropdev (Pty) Ltd

21 April 2021

Document Control

Document	Proposed Mixed-Use Development, Erf 7379 Pacaltsdorp
File Location	P:\\ZAGRFPV001
Project Name	TIA Erf 7379, Pacaltsdorp
Project Number	C1827
Revision Number	3

Revision History

Revision No.	Date	Prepared By	Reviewed By	Approved for Issue By
0	08 Feb 2021	Emile Jordaan	Andre Delport	Emile Jordaan
1	15 Feb 2021	Emile Jordaan	Andre Delport	Emile Jordaan
2	26 Mar 2021	Emile Jordaan	Willem Annandale	Emile Jordaan
3	21 April 2021	Emile Jordaan	Willem Annandale	Emile Jordaan

Issue Register

Distribution List	Date Issued	Number of Copies
Pacaltspropdev (Pty) Ltd	21 April 2021	1

SMEC Company Details

Approved by	Emile Jordaan		
Address	13 Progress Street, Dormehlsdrift, George, 6529		
Telephone	044 873-5029	Facsimile	044 873-5086
Email	george@smec.com	Website	www.george.com
Signature			

The information within this document is and shall remain the property of: SMEC - George

Important Notice

This report is confidential and is provided solely for the purposes of a Traffic Impact Assessment. This report is provided pursuant to a Consultancy Agreement between SMEC South Africa (Pty) Ltd. ("SMEC") and Pacaltspropdev (Pty) Ltd, under which SMEC undertook to perform a specific and limited task for Pacaltspropdev (Pty) Ltd. This report is strictly limited to the matters stated in it and subject to the various assumptions, qualifications and limitations in it and does not apply by implication to other matters. SMEC makes no representation that the scope, assumptions, qualifications and exclusions set out in this report will be suitable or sufficient for other purposes nor that the content of the report covers all matters which you may regard as material for your purposes.

This report must be read as a whole. The executive summary is not a substitute for this. Any subsequent report must be read in conjunction with this report.

The report supersedes all previous draft or interim reports, whether written or presented orally, before the date of this report. This report has not and will not be updated for events or transactions occurring after the date of the report or any other matters which might have a material effect on its contents or which come to light after the date of the report. SMEC is not obliged to inform you of any such event, transaction or matter nor to update the report for anything that occurs, or of which SMEC becomes aware, after the date of this report.

Unless expressly agreed otherwise in writing, SMEC does not accept a duty of care or any other legal responsibility whatsoever in relation to this report, or any related enquiries, advice or other work, nor does SMEC make any representation in connection with this report, to any person other than Pacaltspropdev (Pty) Ltd. Any other person who receives a draft or a copy of this report (or any part of it) or discusses it (or any part of it) or any related matter with SMEC, does so on the basis that he or she acknowledges and accepts that he or she may not rely on this report nor on any related information or advice given by SMEC for any purpose whatsoever.

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2.2	Public Transport Facilities	3
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ABBREVIATIONS & SYMBOLS

ABBREVIATION / SYMBOL	DESCRIPTION
AMP	Arterial Management Plan
CBD	Central Business District
CITP	Current Integrated Transport Plan
COTO	The Committee of Transport Officials South African
GIPTN	George Integrated Public Transport Network
George LM	George Local Municipality
GLA	Gross Lettable Area
HA	Hectares
HCM	Highway Capacity Manual
LOS	Level of Service
LSDF	Local Spatial Development Framework
NMT	Non-Motorised Transport
SDP	Site Development Plan
SMEC	Snowy Mountains Engineering Corporation
SQM	Square Metres
STA	Site Traffic Assessment
SU+T	Single Unit plus Trailer
TIA	Traffic Impact Assessment
TMH	Technical Methods for Highways
VPH	Vehicles Per Hour
WCG	Western Cape Government
~	Approximately Equal
±	Plus or Minus

1 Introduction

SMEC South Africa (Pty) Ltd was appointed by Pacaltspropdev (Pty) Ltd. to conduct a Traffic Impact Assessment for the proposed mixed-use development on Erf 7379 Pacaltsdorp, George. The site is bounded by Church Street to the north, Mission Street to the south, and Beach Road to the west. A locality plan is shown in Figure 1.



Figure 1 Locality Plan

The site measures approximately 4 663 square metres in extent and will comprise of a filling station with convenience store, retail anchor tenant and line shops. The proposed Spatial Development Plan is shown in Figure 2.

The purpose of the Traffic Impact Assessment is to quantify the anticipated impact of the development traffic, and recommend remedial measures as required. The study was conducted in accordance with The Committee of Transport Officials South African Traffic Impact and Site Traffic Assessment Manual (COTO, TMH 16 Volume 1).



Figure 2 Spatial Development Plan

2 Background Information

2.1 Existing Roads

Beach Road provides connectivity between the suburb of Pacaltsdorp and employment opportunities in Tamsui Industria and the George CBD. As such, Beach Road is classified as a Class 3 Minor Arterial within the George Roads Master Plan. In the vicinity of the site it comprises of a divided dual carriageway road with two lanes per direction, with no turning lanes provided at intersections. It experiences moderate traffic flows during peak hours and operates at an acceptable Level of Service.

Mission Street is also a Class 4 Minor Collector, serving the surrounding residential area. The road comprises of one lane per direction in the vicinity of the subject site. It experiences low traffic flows during peak hours and operates at an acceptable Level of Service.

Church Street is a Class 4 Minor Collector, serving the surrounding residential area. The road comprises of one lane per direction in the vicinity of the subject site. It experiences low traffic flows during peak hours and operates at an acceptable Level of Service.

2.2 Public Transport Facilities

Pacaltsdorp is well served by the existing Go George service, with routes running along Beach Road onto York Street, linking the local workforce with employment opportunities. The existing GIPTN is shown in Figure 3.

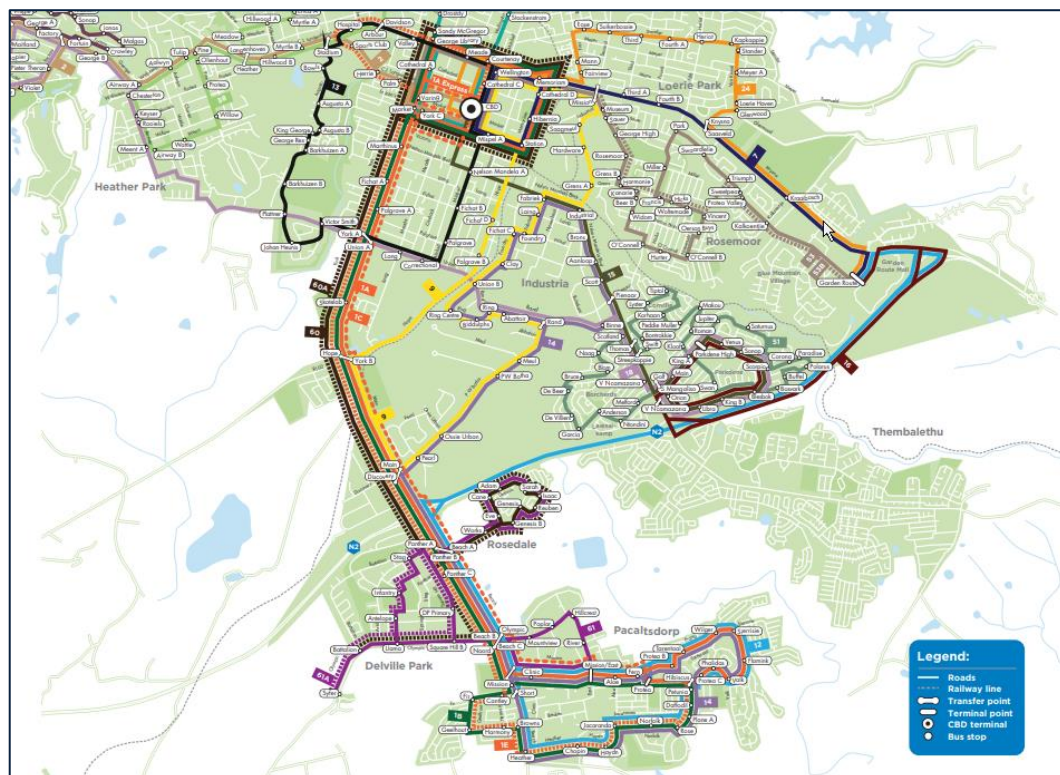


Figure 3 Existing GIPTN Routes (George LM)

2.3 Non-Motorized Transport Facilities

The George CIP (Iliso 2014/15) provides a snapshot of the existing NMT network within George. There are formal pedestrian walkways along the full extent of Beach Road. Kerb drops are in place for pedestrians along the full length of the route. The planned NMT Network is shown in Figure 4.

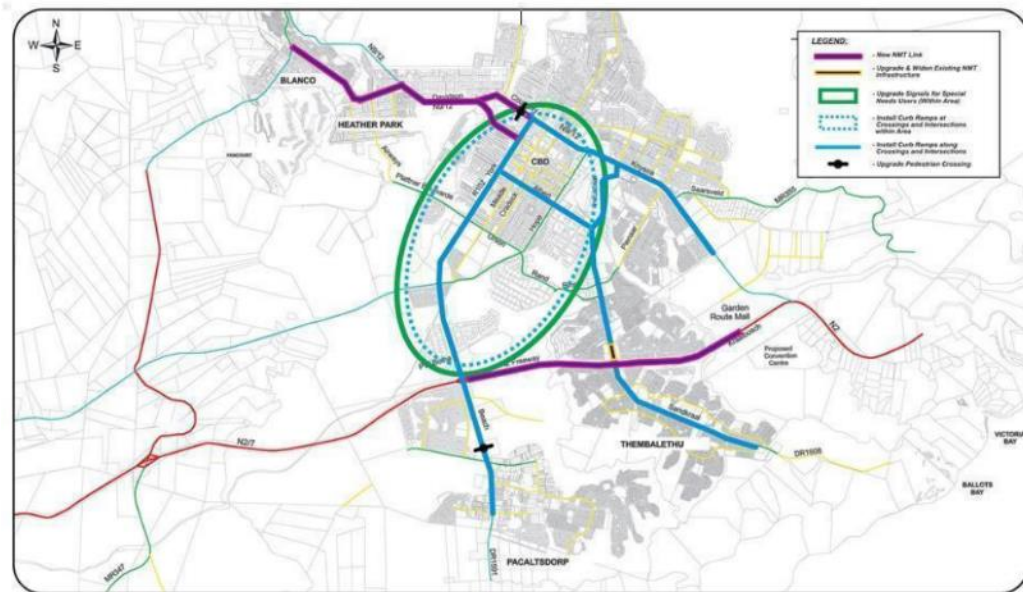


Figure 4 Planned NMT Infrastructure Projects (Iliso)

2.4 Site Access

The access spacing requirements were derived from the WCG Access Management Guidelines (2020).

The minimum spacing of signalized intersections along a Class 3 road within a suburban roadside environment is 540 metres ($\pm 7.5\%$), therefore the intersection of Beach Road and Church Street would not be signalized in future.

The minimum spacing of a high-volume driveway along a Class 4 road within a suburban roadside environment, downstream of a signalised full intersection is 115 metres.

The minimum spacing of a high-volume driveway along a Class 5 road within a suburban roadside environment, upstream of an unsignalised full intersection is 95 metres.

The subject site is proposed to be served by two accesses, as follows (refer to Figure 5):

- Access 1: High-volume driveway along Mission Street, approximately 55 metres upstream of Beach Road; and
- Access 2: High-volume driveway along Church Street, approximately 88 metres downstream of Beach Road.

Note should be taken that although the site accesses do not conform to the requirements of the WCG Access Management Guidelines, these accesses were approved prior to the latest access spacing requirements being adopted. Refer to Appendix A.

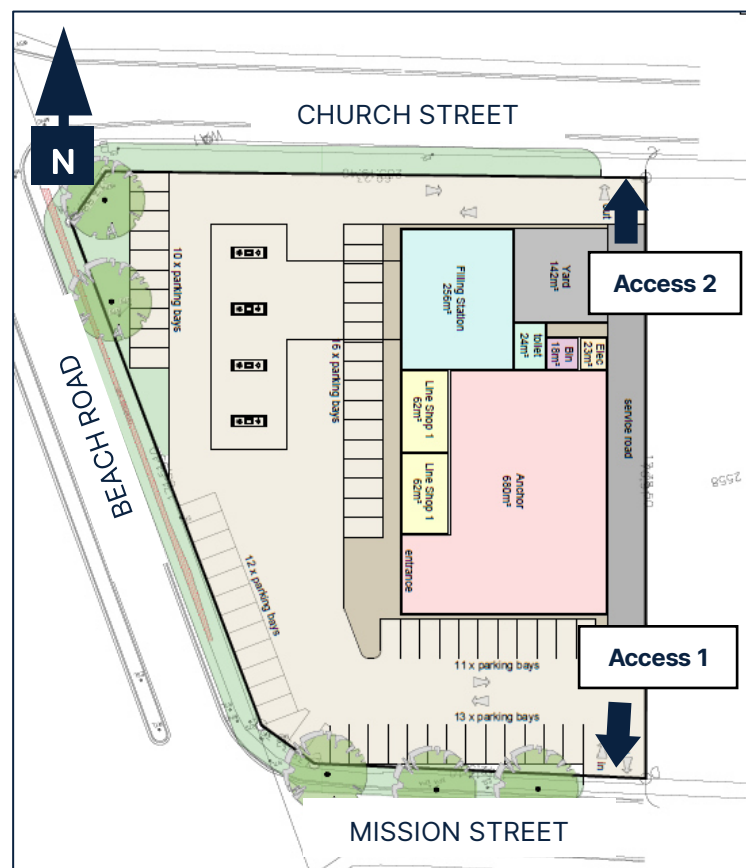


Figure 5 Proposed Site Access

2.5 Arterial Management Plan

An Arterial Management Plan (AMP) was undertaken by Nadeson Consulting Engineers, dated May 2020. The report points out the substandard spacing of 100 metres along Beach Road, measured between Church Street and Mission Street (as opposed to the 180 metres required). The AMP recommends that this variance should be allowed, as a CBD area is envisaged along both Church Street and Mission Street, as per the Pacaltsdorp / Hans-Moes-Kraal Local Spatial Development Framework. Refer to Figure 6.

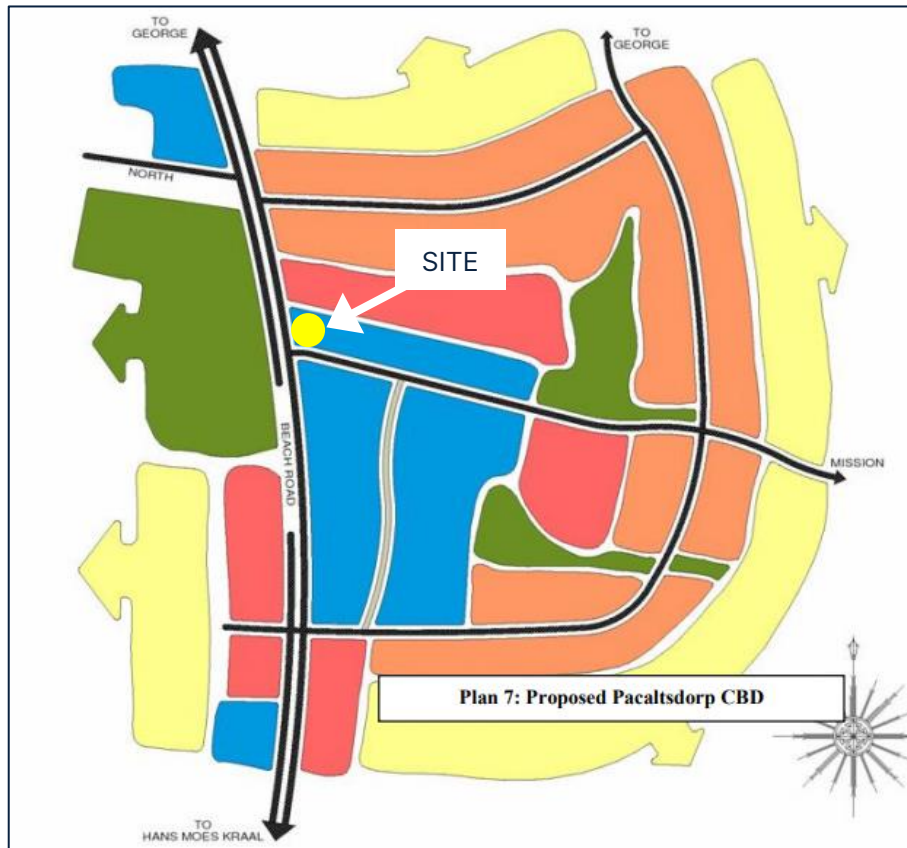


Figure 6 Planned Pacaltsdorp CBD (George LM)

3 Other Planning Authorities

Beach Road falls under the jurisdiction of the Western Cape Department of Transport. As such, they would need to be included in the approval process.

4 Traffic Demand Estimation

4.1 Assessment Years

A base year assessment is undertaken to identify shortcomings in the road-based capacity in the short term, if any. In addition thereto, it is required to grow traffic flows to an acceptable horizon year in order to ensure that the proposed road network would be able to operate satisfactorily once the development traffic is added to the surrounding road network.

TMH 16 Volume 1 Version 1.0, states that transportation improvements for developments must be designed for a horizon year of 5 years. Hence, a 2021 Base Year and a 2026 Design Year was used for this TIA.

4.2 Assessment Hours

The assessment has been undertaken considering the peak periods during which the combined effect of background and development traffic would result in the highest traffic demand. Hence, it was deemed suitable to assess the Weekday AM, Weekday PM and Saturday Morning Peak Hours.

4.3 Traffic Counts

Taking into consideration the location and extent of the proposed development with relation to the surrounding road network, the following traffic count surveys were undertaken as part of this project assignment:

- Counting Station 1: Intersection of Beach Road and Church Street;
- Counting Station 2: Intersection of Beach Road and Mission Street; and
- Counting Station 3: Intersection of Beach Road and Heather Street.

Traffic count locations are shown in Figure 7.



Figure 7 Traffic Count Locations

Details of the traffic survey are provided below:

- Date counted October 2020 and March 2021
- Day Weekday during National State of Disaster Lockdown Level 1 and
Weekend during National State of Disaster Lockdown Level 1
- Congestion levels Low
- Enumerator SMEC

The detailed traffic count data is provided in Appendix B.

A common peak hour was identified for the intersections under discussion, as follows:

- Weekday AM Peak Hour 6h45 – 7h45
- Weekday PM Peak Hour 16h15 – 17h15
- Saturday Peak Hour 13h30 – 14h30

The 2021 Base Year traffic flows are shown in Figure 8.

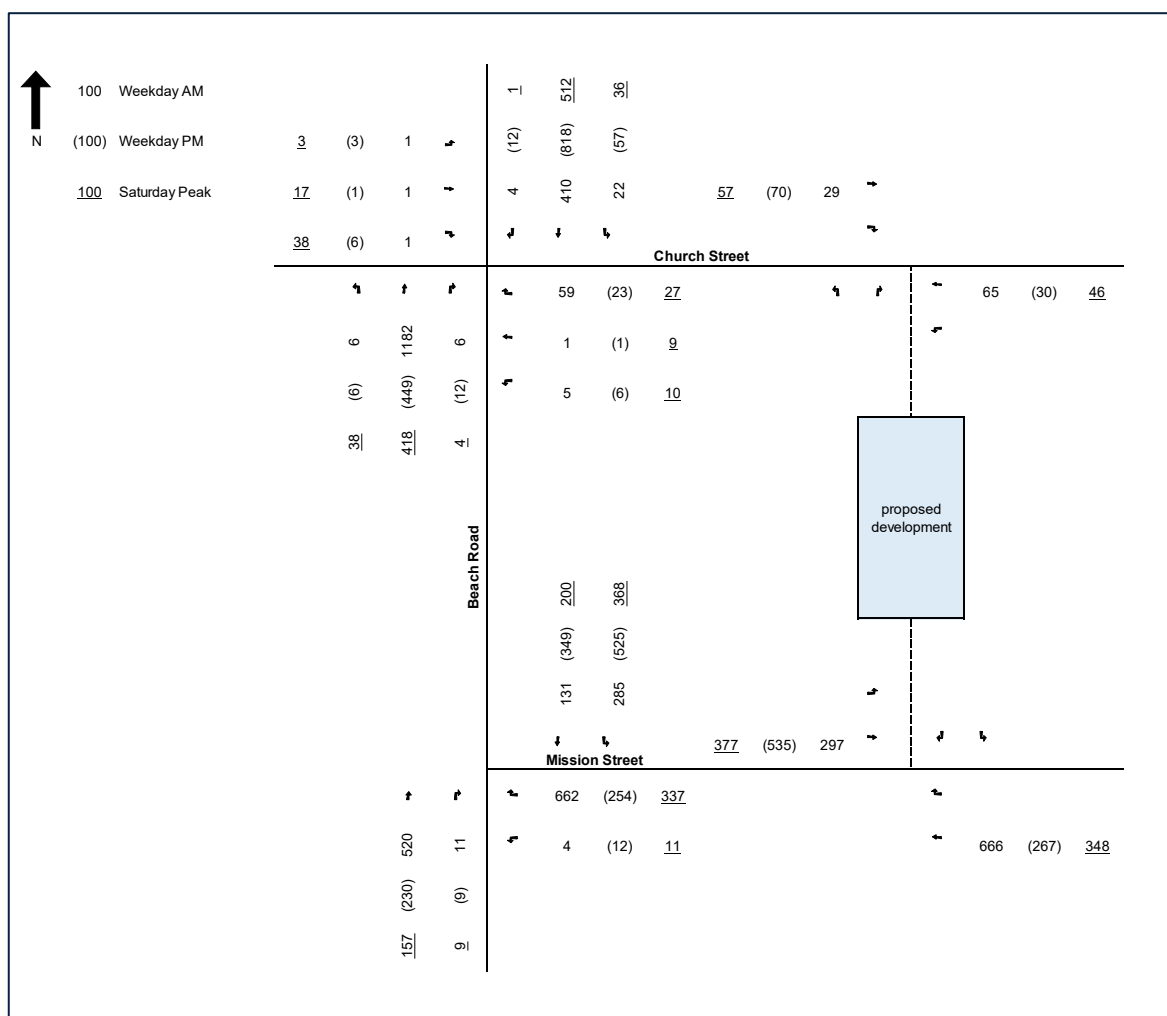


Figure 8 2021 Base Year Traffic Flows

4.4 Traffic Growth Rates

A traffic growth rate is applied to background traffic in order to determine the anticipated growth in this traffic besides that relating to planned and new developments. The Committee of Transport Officials Trip Data Manual (COTO, TMH 17 Volume 1 Version 1.01) provides typical growth rates to be used for growth areas based on the existing/anticipated rate of growth. Refer to Table 1.

Table 1 Typical Growth Rates

Development Area	Growth Rate
Low Growth Areas	0% - 3%
Average Growth Areas	3% - 4%
Above Average Growth Areas	4% - 6%
Fast Growing Areas	6% - 8%
Exceptionally High Growth Areas	> 8%

Taking into consideration the nature and extent of development within this area, an annual compounded traffic growth rate of 3.0% was applied to the 2020 background traffic in order to derive the 2021 Base Year as well as 2026 Design Year traffic flows.

As a result of the National State of Disaster Lockdown Level 1, an intersection was identified for which historic 2019 traffic count data is available. The intersection of Beach Road and Heather Street was also counted in 2020, thereby providing an indication in the change in traffic flows as a result of the National Lockdown. It was found that 2020 traffic flows along Beach Road were higher in 2020 compared to 2019, therefore no adjustment was made to 2020 traffic count data.

The 2026 Forecast Year traffic flows are shown in Figure 9.

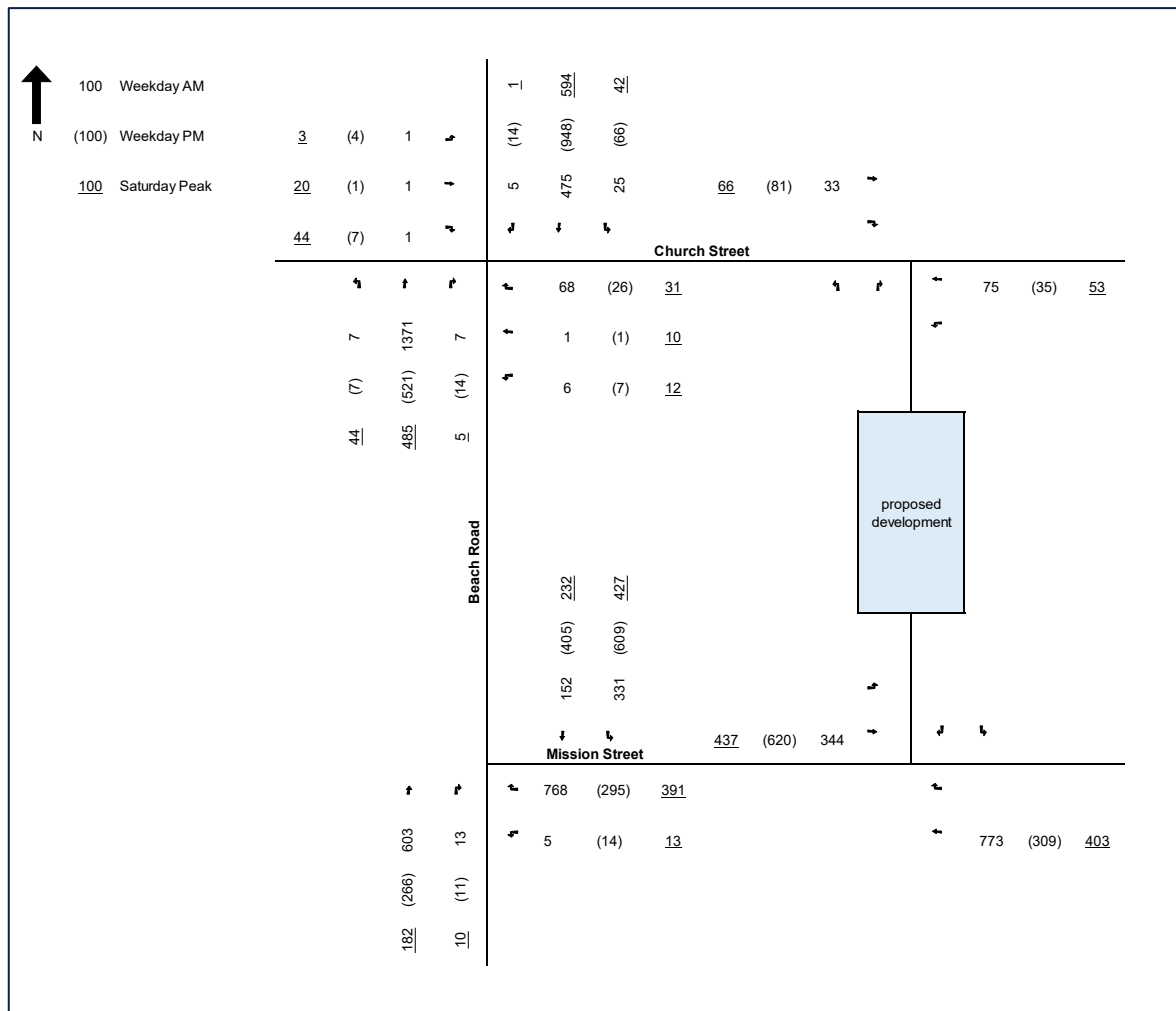


Figure 9 2026 Forecast Year Traffic Flows

5 Trip Generation, Distribution and Traffic Assignment

5.1 Trip Generation

The Trip Generation Rates for the land use types forming part of the development were obtained from the COTO TMH 17 South African Trip Data Manual dated September 2012.

The trip generation potential of the development is shown in Table 2.

Table 2 Trip Generation

Land Use	GLA (sqm)	Trip Generation Rates (per 100 sqm GLA)			Traffic generation (vph)					
					Weekday AM		Weekday PM		Saturday	
		Weekday AM	Weekday PM	Saturday	IN	OUT	IN	OUT	IN	OUT
Retail	936	0.6	3.4	4.5	21	11	91	91	121	121
Fast Food	124	45.0	50.0	30.0	31	25	34	28	19	19
Filling Station		3%	3%	3%	23	23	20	20	23	23
Retail New					12	7	53	53	60	60
Retail Pass-By					8	4	35	35	42	42
Retail Diverted					6	3	26	26	46	46
ALL Trips					75	60	145	139	163	163
ALL New Trips					66	55	107	100	102	102
					121		207		205	

It is anticipated that the development would generate 121, 207 and 205 new vehicular trips during the Weekday AM, Weekday PM and Saturday Morning Peak Hours respectively.

5.2 Trip Distribution

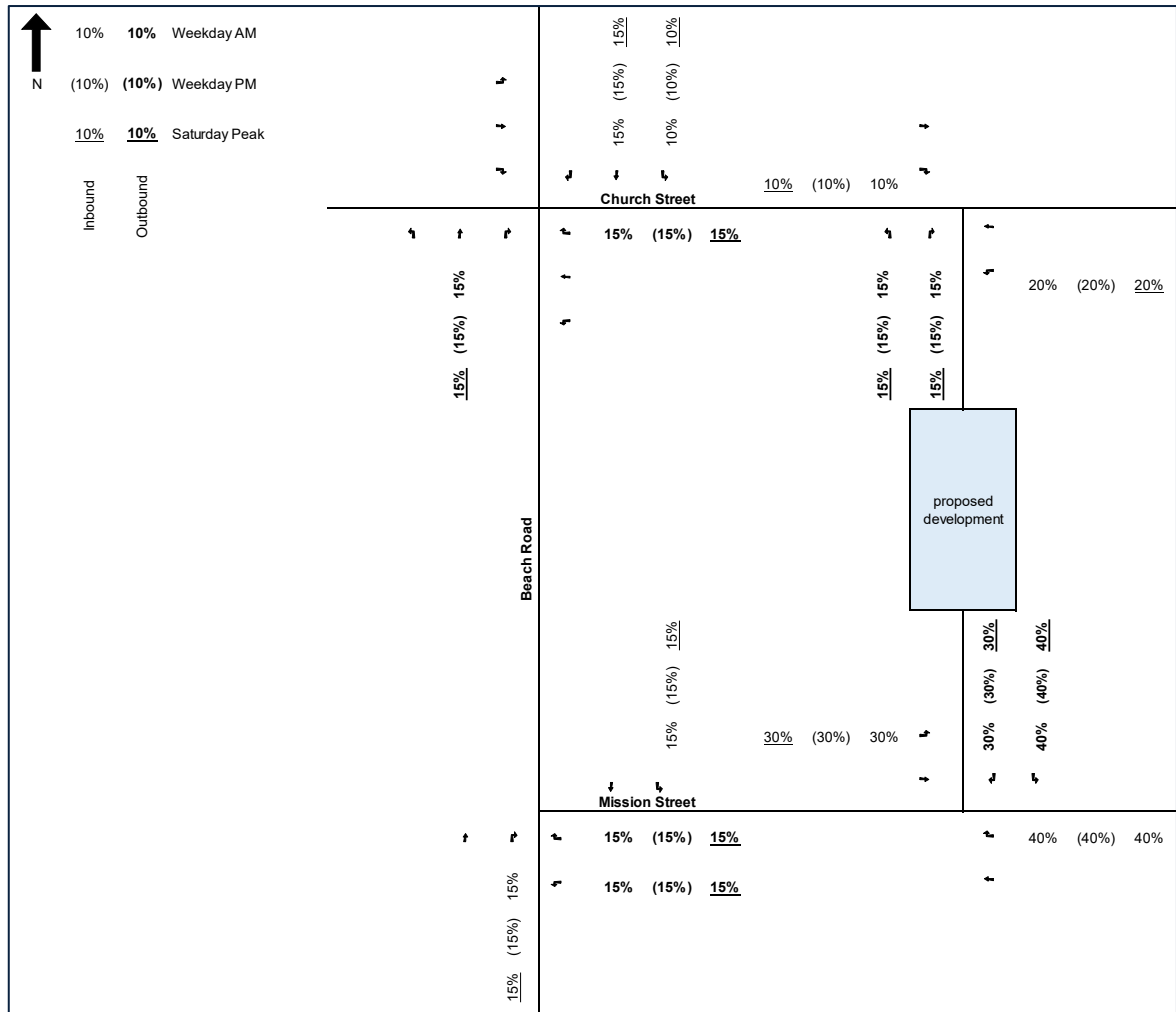
Trip distribution was estimated manually, based on existing traffic flows, the land use of the surrounding areas and the proposed access configuration. Refer to Figure 10.

5.3 Traffic Assignment

Traffic assignment involves determining the amount of traffic that will use specific routes in the network. The traffic assignment is made with consideration to logical routings, available roadway capacity, right-turn movements, travel times and other factors. Refer to Figure 11.

The 2021 Base + Development Trips are shown in Figure 12.

The 2026 Base + Development Trips are shown in Figure 13.



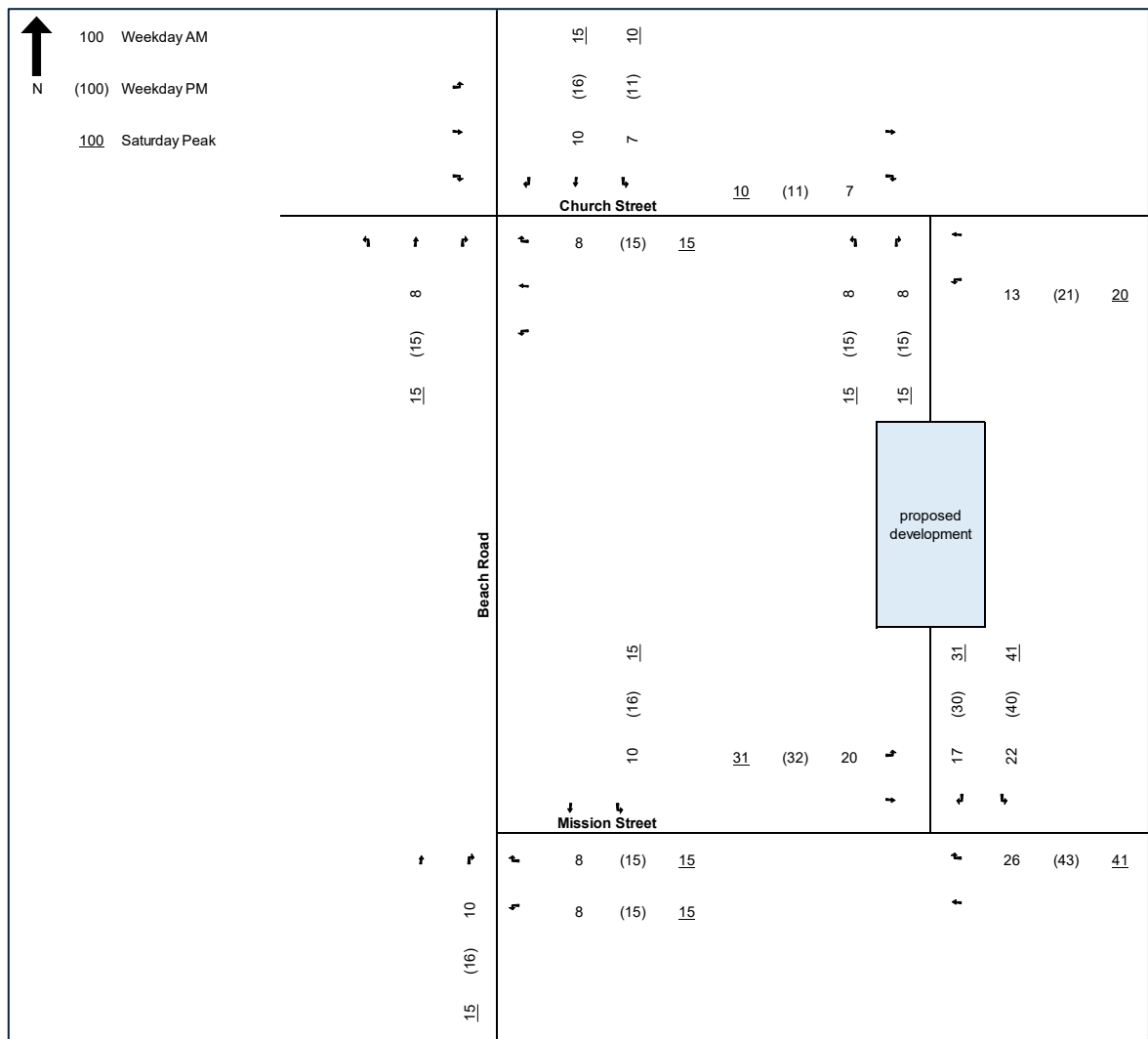
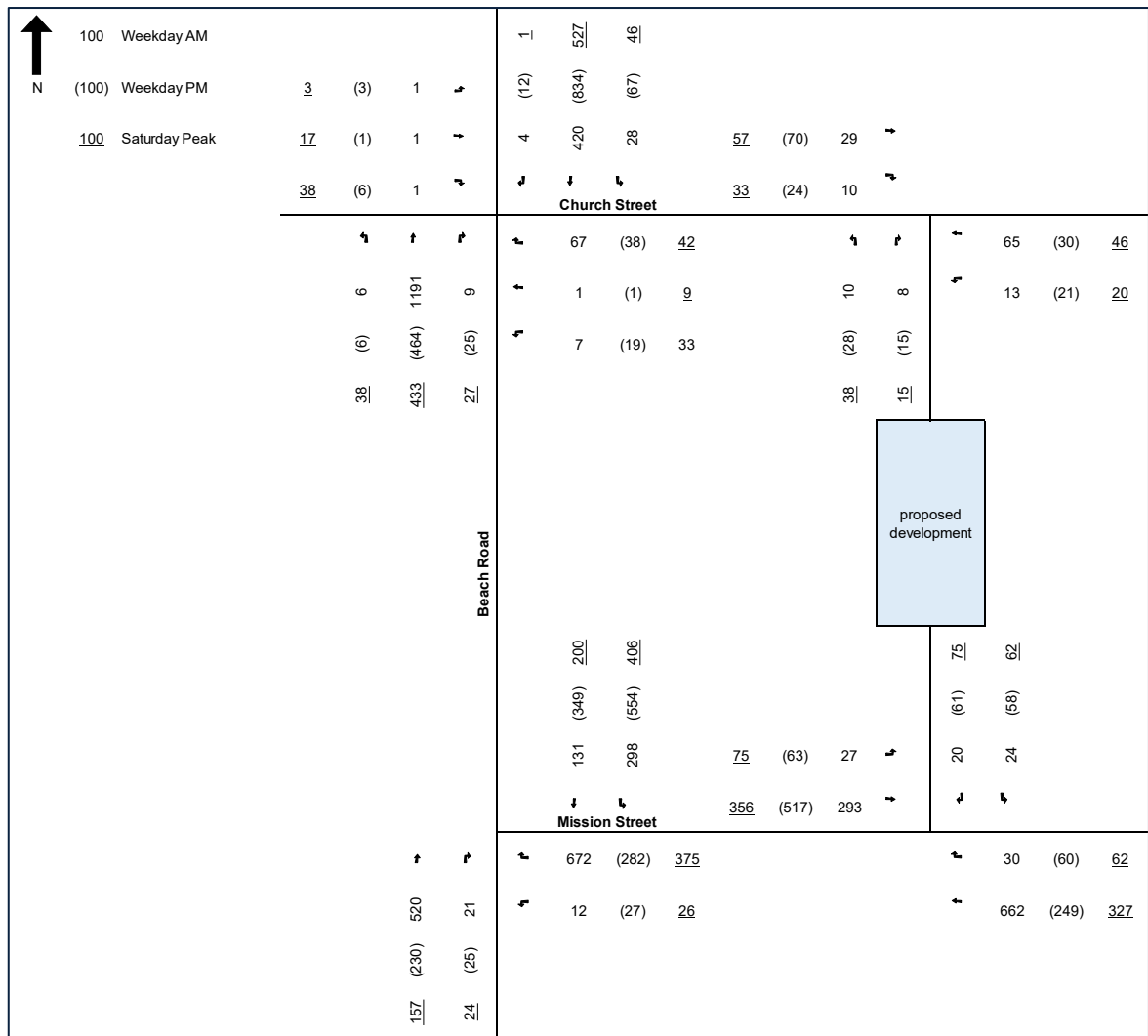
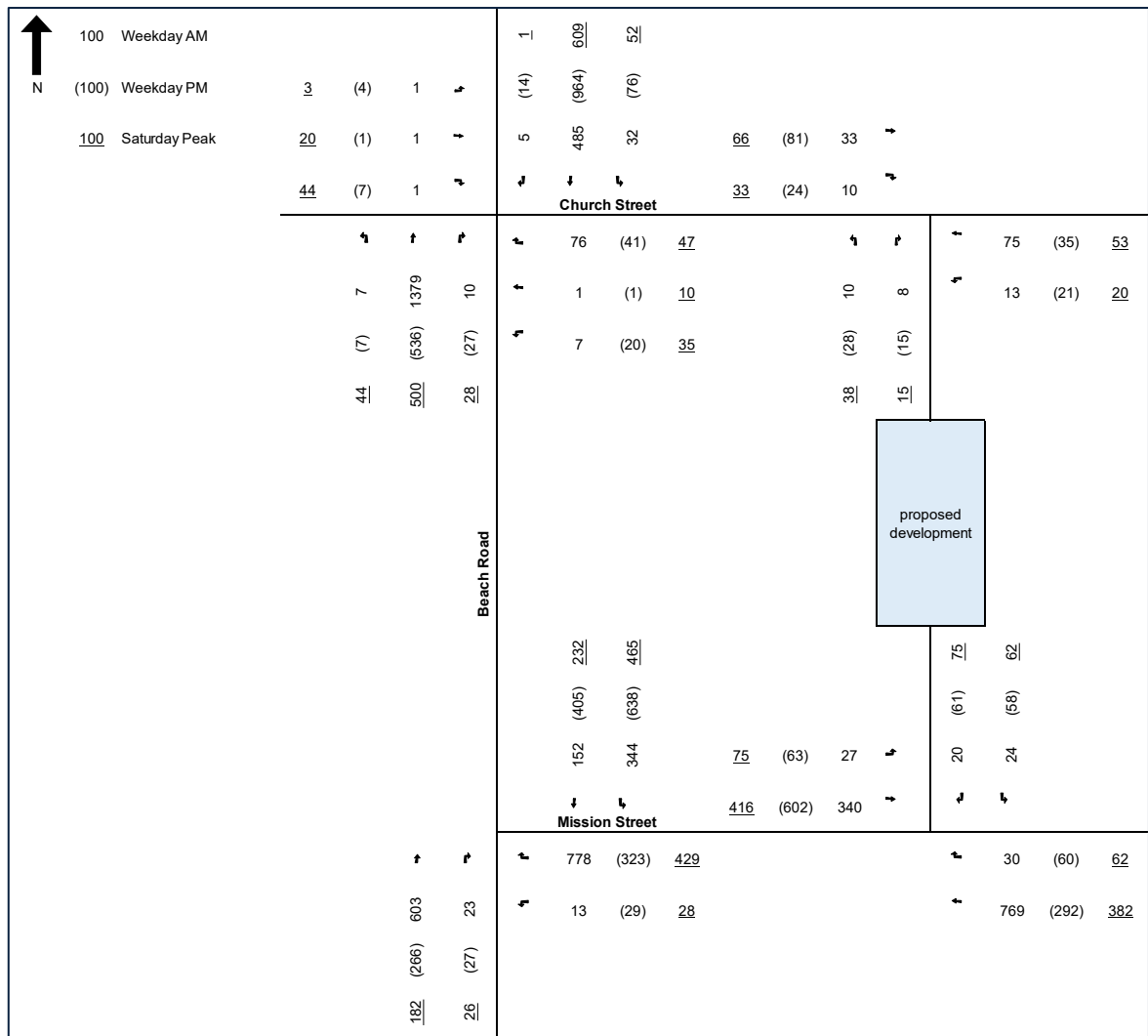


Figure 11 Traffic Assignment (New Trips)





6 Traffic Analysis

Intersection capacity analyses were undertaken to determine the anticipated operational performance of the site accesses and surrounding road network, taking into consideration the phased implementation of the development and associated development trips. The state-of-the-art traffic engineering software package, SIDRA Intersection 8.0 software, was used. The intersections analysed for each phase of the development are listed below:

- Beach Road and Mission Street;
- Beach Road and Church Street;
- Mission Street and Access 1; and
- Church Street and Access 2.

The following scenarios were analysed as part of this project assignment:

- 2021 Background Traffic;
- 2021 Background + Development Traffic; and
- 2026 Background + Development Traffic.

The operational performance of an intersection is typically quantified in terms of Level of Service as defined by the US Highway Capacity Manual (HCM). These definitions relate average delays at intersections (for individual turning movements, for each approach and for the overall intersection) to a level of service ranging from A to F, as are shown in Table 3.

Table 3 Intersection-Based Level of Service Criteria

Level of Service	Control Delay per Vehicle in Seconds (d)	
	Signals and Roundabouts	Stop Signs and Yield Signs
A	$d \leq 10$	$d \leq 10$
B	$10 < d \leq 20$	$10 < d \leq 15$
C	$20 < d \leq 35$	$15 < d \leq 25$
D	$35 < d \leq 55$	$25 < d \leq 35$
E	$55 < d \leq 80$	$35 < d \leq 50$
F	$80 < d$	$50 < d$

The following sub-sections set out the intersection capacity analyses of the proposed development.

Detailed Sidra outputs are contained in Appendix C.

6.1 Beach Road and Mission Street

The intersection of Beach Road and Mission Street is a signalised T-junction. The north approach has a shared left-and-through lane plus an exclusive through lane; the east approach has shared left-and-right-turn lane; and the south approach has an exclusive through-lane plus a shared through-and-right-turn lane. Refer to Figure 14.

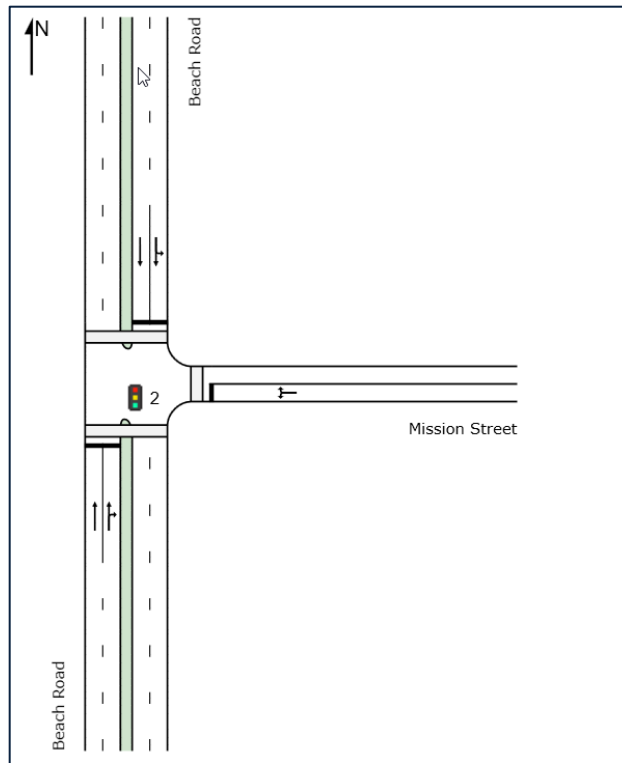


Figure 14 Beach & Mission: Existing Layout

2021 Background Traffic

Taking into consideration the 2021 Base Year traffic flows, the intersection currently operates at an overall Level of Service C, B and C during the Weekday AM, Weekday PM and Saturday Peak Hours, with an average delay of approximately 26, 18 and 22 seconds respectively.

It is concluded that the existing intersection configuration is able to accommodate the 2021 Background Traffic at an acceptable Level of Service.

2021 Background + Development Traffic

Taking into consideration the 2021 Background Traffic plus the anticipated development traffic flows, the intersection is anticipated to continue to operate at an overall Level of Service C, B and C during the Weekday AM, Weekday PM and Saturday Peak Hours, with an average delay of approximately 26, 19 and 23 seconds respectively.

It is concluded that the existing intersection configuration would be able to accommodate the 2021 Background plus Development Traffic at an acceptable Level of Service.

2026 Background + Development Traffic

Taking into consideration the 2026 Background Traffic plus the anticipated development traffic flows, the intersection is anticipated to operate at an overall Level of Service C during the Weekday AM, Weekday PM and Saturday Peak Hours, with an average delay of approximately 30, 20 and 23 seconds respectively.

It is concluded that the existing intersection configuration would be able to accommodate the 2026 Background plus Development Traffic at an acceptable Level of Service.

6.2 Beach Road and Church Street

The existing intersection of Beach Road and Church Street is an unsignalised intersection with stop control along the east and west approaches. The north approach has a shared left-and-through lane plus a shared through-and-right-turn lane; the east approach has a single lane serving all movements; the south approach has a shared left-and-through lane plus a shared through-and-right-turn lane; and the west approach has a single lane serving all movements. Refer to Figure 15.

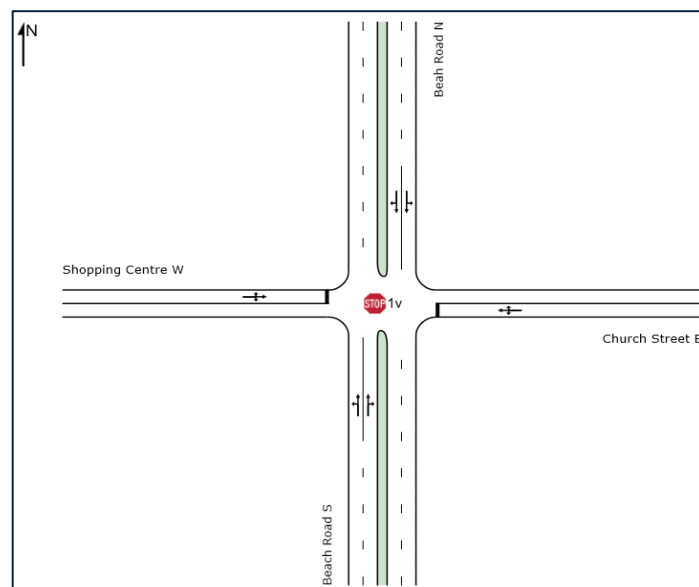


Figure 15 Beach & Church: Existing Layout

2021 Background Traffic

Taking into consideration the 2021 Base Year traffic flows, the priority-controlled side road currently operates at Level of Service F, F and D during the Weekday AM, Weekday PM and Saturday Peak Hours, with an average delay of approximately 1173, 92 and 33 seconds respectively.

It is however anticipated that the close proximity of the signalised intersection of Beach Road and Mission Street to the south of this intersection leads to the platooning of vehicles from the south, thereby allowing side road traffic along Church Street to join onto Beach Road. It is our submission that the existing intersection configuration is able to accommodate the 2021 Background Traffic at an acceptable Level of Service.

2021 Background + Development Traffic

Taking into consideration the 2021 Background Traffic plus development traffic flows, the priority-controlled side road is anticipated to continue to operate at Level of Service F, F and E during the Weekday AM, Weekday PM and Saturday Peak Hours, with an average delay of approximately 1508, 164 and 38 seconds respectively.

It is concluded that intersection upgrades might be required to accommodate the 2021 Background plus Development Traffic at an acceptable Level of Service.

2026 Background + Development Traffic

Taking into consideration the 2026 Background Traffic plus the development traffic flows, the priority-controlled side road is anticipated to operate at Level of Service F during the Weekday AM, Weekday PM and Saturday Peak Hours, with an average delay of approximately 5008, 545 and 79 seconds respectively.

It is our submission that intersection upgrades might be required to accommodate the 2026 Background plus Development Traffic at an acceptable Level of Service. The type and extent of intersection upgrades will be based on intersection configurations along Beach Road at that point in time. If a signalised intersection is implemented along Beach Road to the north of this location, it would allow for platooning of vehicles from the north, therefore no upgrades would be required to this intersection. Should the current intersection configurations along Beach Road remain as-is, it might be deemed necessary to convert Church Street to a left-in, left-out intersection along the east and west approaches, following a road safety investigation at that point in time.

6.3 Mission Street and Access 1

The proposed Access 1 along Mission Street is planned as an unsignalised T-junction with stop control along the access road. All approaches will comprise of one lane per direction. Refer to Figure 16.

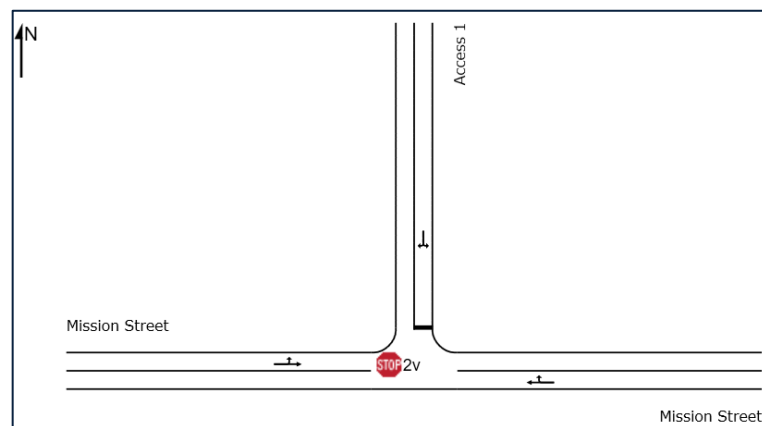


Figure 16 Mission & Access 1: Proposed Layout

2021 Background + Development Traffic

Taking into consideration the 2021 Background Traffic plus development traffic flows, the priority-controlled side road is anticipated to operate at an overall Level of Service C during the Weekday AM, Weekday PM and Saturday Peak Hours, with an average delay of approximately 15 seconds.

It is concluded that the proposed intersection configuration would be able to accommodate the 2021 Background plus Development Traffic at an acceptable Level of Service.

2026 Background + Development Traffic

Taking into consideration the 2026 Background Traffic plus the anticipated development traffic flows, the priority-controlled side road is anticipated to operate at an overall Level of Service C during the Weekday AM Weekday PM and Saturday Peak Hours, with an average delay of approximately 19 seconds.

It is concluded that the proposed intersection configuration would be able to accommodate the 2026 Background plus Development Traffic at an acceptable Level of Service.

6.4 Church Street and Access 2

The proposed Access 2 along Church Street is planned as an unsignalised T-junction with stop control along the access road. All approaches will comprise of one lane per direction. Refer to Figure 17.

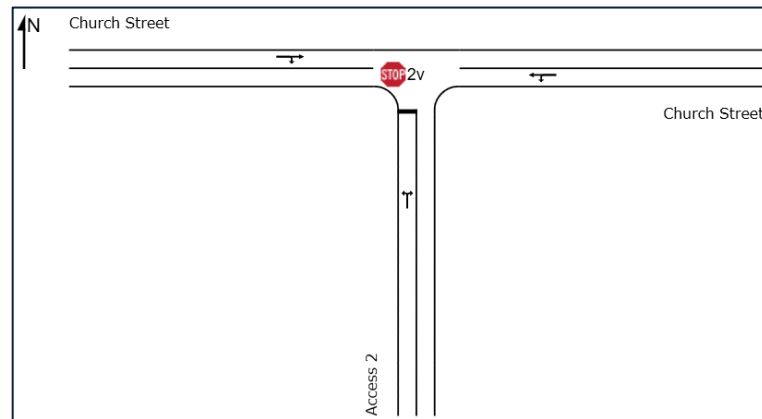


Figure 17 Church & Access 2: Proposed Layout

2021 Background + Development Traffic

Taking into consideration the 2021 Background Traffic plus development traffic flows, the priority-controlled side road is anticipated to operate at an overall Level of Service A during the Weekday AM Weekday PM and Saturday Peak Hours, with an average delay of approximately 2 seconds.

It is concluded that the proposed intersection configuration would be able to accommodate the 2021 Background plus Development Traffic at an acceptable Level of Service.

2026 Background + Development Traffic

Taking into consideration the 2026 Background Traffic plus the anticipated development traffic flows, the priority-controlled side road is anticipated to operate at an overall Level of Service A during the Weekday AM Weekday PM and Saturday Peak Hours, with an average delay of approximately 2 seconds.

It is concluded that the proposed intersection configuration would be able to accommodate the 2026 Background plus Development Traffic at an acceptable Level of Service.

7 Other Road Users

7.1 Public Transport

The provision for Public Transport facilities is a particularly important requirement for a mixed-use development. There are existing bus stops located along Beach Road in close proximity to the site. Refer to Figure 18.



Figure 18 Existing Public Transport Stops

It is our submission that the existing bus stops located along Beach Road would be adequate to serve the proposed development, therefore no further provision would need to be made for public transport.

7.2 Non-Motorised Transport

On-site provision would need to be made for pedestrian movements in the form of walkways from the site access along the access road up to the retail component, where pedestrian movements are expected. Pedestrian walkways would also need to be provided in order to link the site accesses to the existing pedestrian walkways along Beach Road. This is deemed sufficient provision for non-motorised transport. Refer to Figure 19.



Figure 19 Proposed Pedestrian Walkways

8 Proposed Improvements

The following transport improvements are proposed as part of the development:

2021 Base Year:

- Access 1: High-volume driveway along Mission Street, approximately 55 metres upstream of Beach Road; and
- Access 2: High-volume driveway along Church Street, approximately 88 metres downstream of Beach Road; and
- Pedestrian walkways along Church Street and Mission Street, linking to Beach Road.

2026 Design Year:

- Intersection upgrades might be required at the Beach Road and Mission Street intersection. The type and extent of intersection upgrades will be based on intersection configurations along Beach Road at that point in time. If a signalised intersection is implemented along Beach Road to the north of this location, it would allow for platooning of vehicles from the north, therefore no upgrades would be required to this intersection. Should the current intersection configurations along Beach Road remain as-is, it might be deemed necessary to convert Church Street to a left-in, left-out intersection along the east and west approaches, following a road safety investigation at that point in time.

9 Site Impact Assessment

This report does not include a Site Traffic Assessment, as the building plans are not yet finalised. Reference is however made to general design criteria to be considered in compilation of the site development plan.

9.1 Internal Operations

Provision should be made for an ease of circulation as part of the internal layout of the planned development. No security-controlled access should be provided to the development.

9.2 Parking

Parking provision is an important consideration of any development and would ultimately ensure that vehicular traffic is accommodated on-site in its entirety. Insufficient parking provision would have dire consequences on the operational performance of the site and surrounding public roads, as well as on road safety.

The George Town Planning Scheme was used to ascertain the parking standards to be adhered to, based on the site-specific land use rights, as follows:

- A minimum of 8 parking bays plus 4 bays per 100 sqm GLA would be required for the filling station, thus totalling 14 parking bays. One of these parking bays would need to be accessible to the physically disabled.
- A minimum of 6 parking bays per 100 sqm GLA would typically be required for the retail component, thus totalling 48 parking bays. One of these parking bays would need to be accessible to the physically disabled.

Taking the above into consideration, a total of 62 parking bays would be required on the subject site.

9.3 Loading

A service lane is provided along the eastern boundary of the site, to service the retail component of the development. The George Town Planning Scheme was used to ascertain the loading standards to be adhered to, based on the site-specific land use rights, as follows:

- A total of 2 loading bays would be required on the subject site.
- The turning path of the appropriate design vehicle would need to be tested to ensure that the site development plan would be able to accommodate for truck turning movements on site.
- The filling station forecourt would need to be accessible to a fuel bowser to access the fuel filling points. The design vehicle would be a Single Unit plus Trailer (SU+T), with a turning radius of 12.8 metres.

9.4 Throat Length

Adequate throat length provision is essential in ensuring sufficient operation of a development access and preventing possible spill-back onto the surrounding public road.

The WCG Access Management Guidelines (2020) sets out minimum requirements pertaining to access throat lengths for driveways serving private commercial or residential developments. Based on this, the following are required:

- An egress throat length of 15 metres is required along a Class 4 road; and
- An ingress throat length of 15 metres is required along a Class 4 road.

The Site Development Plan would need to make suitable provision for throat lengths for both the ingress and egress movements at both the development accesses.

10 Development Cost Contribution

George Municipality has implemented a policy of developer cost contributions with relation to roads payable by new developments. This is to ensure that the road capacity requirements to serve the fast-growing nature of George and surrounds are implemented as and when development takes place.

It is recommended that cost contributions with relation to roads be determined by the Municipality as part of the developer's bulk contribution.

11 Conclusion and Recommendations

SMEC South Africa (Pty) Ltd was appointed by Pacaltspropdev (Pty) Ltd. to conduct a Traffic Impact Assessment for the proposed mixed-use development on Erf 7379 Pacaltsdorp, George. The site measures approximately 4 663 square metres in extent and will comprise of a filling station with convenience store, retail anchor tenant and line shops.

The subject site is proposed to be served by two accesses, as follows (refer to Figure 5):

- Access 1: High-volume driveway along Church Street, approximately 88 metres downstream of Beach Road; and
- Access 2: High-volume driveway along Mission Street, approximately 55 metres upstream of Beach Road.

It is anticipated that the development would generate 121, 207 and 205 new vehicular trips during the Weekday AM, Weekday PM and Saturday Morning Peak Hours respectively.

The following transport improvements are proposed as part of the development:

2021 Base Year:

- Access 1: High-volume driveway along Mission Street, approximately 55 metres upstream of Beach Road; and
- Access 2: High-volume driveway along Church Street, approximately 88 metres downstream of Beach Road; and
- Pedestrian walkways along Church Street and Mission Street, linking to Beach Road.

2026 Design Year:

- Intersection upgrades might be required at the Beach Road and Mission Street intersection. The type and extent of intersection upgrades will be based on intersection configurations along Beach Road at that point in time. If a signalised intersection is implemented along Beach Road to the north of this location, it would allow for platooning of vehicles from the north, therefore no upgrades would be required to this intersection. Should the current intersection configurations along Beach Road remain as-is, it might be deemed necessary to convert Church Street to a left-in, left-out intersection along the east and west approaches, following a road safety investigation at that point in time.

It is recommended that cost contributions with relation to roads be determine by the Municipality as part of the developer's bulk contribution.

This Traffic Impact Assessment is supported from a traffic engineering perspective, provided that the required improvements be implemented in accordance with appropriate design standards.

Appendix A ailed Access Approval

PACALTSPROPDEV (PTY) LTD

Co. Reg. No.: 2018/269339/07

Unit 3, 42 Smith Street, Park Rynie, KZN, 4182

Tel: 031-7093171; Email: drnhw@telkomsa.net

Date: 2February2019

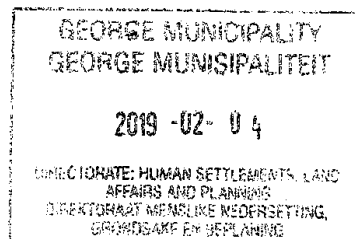
TO:

Deputy Director: Planning

George Municipality

P.O. Box 19

George, 6530



Dear Sir

APPLICATION OF EXTENSION OF APPROVAL: ERF 7379, PACALTS DORP, BUSINESS ZONE 1

We hereby request a further extension in terms of Section 15(2)(i) of the Land Use Planning By-Law of the George Municipality, 2015, to the extension granted in terms of SPLUMA to DELplan on behalf of the previous owners of Erf 7379, Pacaltsdorp (your letter reference 171/7379), for a further 36 months.

Our motivation for the request is as follows:

1. Pacaltspropdev (Pty) Ltd (hereinafter the "New Owner"), a newly formed company with the sole intent to develop Erf 7379, Pacaltsdorp for commercial purposes, purchased the property on 22 November 2018 (date of transfer).
2. The process to implement a commercial/retail development is driven by supply and demand forces, most notably demand from local residents for an additional supermarket and convenience shopping centre. Research was conducted in Pacaltsdorp, including a household survey prior to the purchase of the property, and recorded a high demand for an additional supermarket, mostly notably the Shoprite (although not exclusively) brand.
3. Shoprite indicated and confirmed its interest to establish a shop in Pacaltsdorp, however, due to current economic conditions will only be in a position to value market potential in 2019.
4. The downward slide in the South African economy since 2014 (based on a decline in GDP and wide spread labour unrest) is well documented by StatsSA and other economist and South Africa has unfortunately experienced recessionary conditions in the first quarter of 2017 and a further technical recession in the fourth quarter of 2018. It is expected that these conditions will endure until the end of 2019, after which an upturn, in line with historic trends, is anticipated to take effect.

- 1 -

PACALTSPROPDEV (PTY) LTD

Co. Reg. No.: 2018/269339/07

Unit 3, 42 Smith Street, Park Rynie, KZN, 4182

Tel: 031-7093171; Email: drnhw@telkomsa.net

Date: 2February2019

TO:
Deputy Director: Planning
George Municipality
P.O. Box 19
George, 6530

Dear Sir

**APPLICATION OF EXTENSION OF APPROVAL: ERF 7379, PACALTSDORP,
BUSINESS ZONE 1**

We hereby request a further extension in terms of Section 15(2)(i) of the Land Use Planning By-Law of the George Municipality, 2015, to the extension granted in terms of SPLUMA to DELplan on behalf of the previous owners of Erf 7379, Pacaltsdorp (your letter reference 171/7379), for a further 36 months.

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3. Shoprite indicated and confirmed its interest to establish a shop in Pacaltsdorp, however, due to current economic conditions will only be in a position to value market potential in 2019.
4. The downward slide in the South African economy since 2014 (based on a decline in GDP and wide spread labour unrest) is well documented by StatsSA and other economist and South Africa has unfortunately experienced recessionary conditions in the first quarter of 2017 and a further technical recession in the fourth quarter of 2018. It is expected that these conditions will endure until the end of 2019, after which an upturn, in line with historic trends, is anticipated to take effect.

- 1 - |

5. The New Owner is of the opinion that this property offers the best opportunity as a strategic location for a commercial/retail shopping centre development for the Pacaltsdorp community and that it is a matter of implementing the development at an appropriate time when confidence returns to the retail industry.
6. Reverting the zoning to residential status will serve no development purpose as this site, due to its location, is not considered suitable for a quality residential development compared to other residential developments taking place in and around Pacaltsdorp. It will serve the community better as a business site creating employment and opportunities for entrepreneurs in due course.
7. An extension of time will allow us to finalize the necessary arrangements in terms of design and prepare the required building plans to meet Municipal requirements.

Your kind and positive consideration to the above request is awaited.

Yours truly



Dr Neville Warrington
Director
On behalf of Pacaltspropdev (Pty) Ltd



**MENSLIKE NEDERSETTINGS, GRONDSAKE EN BEPLANNING
HUMAN SETTLEMENTS, LAND AFFAIRS AND PLANNING**

OUR REF: 171/7379
YOUR REF: Erf 7379, Pacaltsdorp
ENQUIRIES: Marisa Arries
TEL: 044-801 9473
FAX: 086 570 1900
EMAIL: marisa@george.org.za
DATE: 11 August 2017

DELplan

2017-08-14

URBAN AND REGIONAL PLANNING

DELPLAN
PO BOX 9956
GEORGE
6530

**APPLICATION FOR EXTENSION OF APPROVAL AND AMENDMENT OF
CONDITION OF APPROVAL: ERF 7379, PACALTSDORP**

Your application in the above refers.

The Deputy Director: Planning (Authorised Official) has, under delegated authority, WW.1.33 of 29 July 2015 decided that the following applications on Erf 7379, Pacaltsdorp:

1. Extension of approval in terms of Section 15 (2)(i) of the Land Use Planning By-Law for the George Municipality, 2015 for the following on Erf 7379, Pacaltsdorp:
 - a) Rezoning of Erf 7379, Pacaltsdorp in terms of Section 17 of the Land Use Planning Ordinance, 1985 (Ordinance 15 of 1985) from Residential Zone 1 to Business Zone 1;
 - b) Consent Use in terms of Regulation 4.6 of the Section 8 Zoning Scheme Regulations for a supermarket;
2. Removal of Condition b) and d) in terms of Section 15 (2)(h) of the Land Use Planning By-Law for the George Municipality, 2015 from the conditions of approval dated 24 April 2013 on Erf 7379, Pacaltsdorp;

BE APPROVED in terms of Section 60 of said By-law for the following reasons:

REASONS FOR DECISION

- a. The proposed development will not detract from the surrounding land use character.
- b. The circumstances in terms of the zoning scheme have not changed and therefore there is no reason to not permit the extension;
- c. There have been no material changes in circumstances or in legislation or policy requirements regarding the property;
- d. The removal of the applicable conditions will ensure compliance with legislation.

Subject to the following conditions imposed in terms of Sections 66 of the said By-law, namely:

CONDITIONS

1. That in terms of Section 17 (5) of the Land Use Planning By-Law for the George Municipality, 2015, the rezoning shall lapse if not implemented by 4 February 2019;
2. All other conditions in the approval letter dated 24 April 2013 must be complied with;
3. This approval shall be taken to cover only the Rezoning and Consent Use applied for as indicated on the Site Development Plan (Drawing description Erf 7379, Pacaltsdorp, George), dated April 2012, drawn by DELplan Urban and Regional Planning attached as "Annexure A" which bears Council's stamp and shall not be construed as to depart from any other Council requirements or legal provision;
4. All other requirements comply with the Section 8 Zoning Scheme Regulations, 1988;
5. A building plan be submitted for approval in accordance with the National Building Regulations (NBR);
6. The above approval will be considered as implemented on the issuing of an occupation certificate for the abovementioned structures.

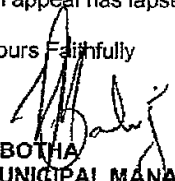
You have the right to appeal to the Appeal Authority against the decision of the Authorised Employee, in terms of Section 79(2) of the George Municipality's By-law on Municipal Land Use Planning.

- A detailed motivated appeal with reasons should be directed to and received by the Appeal Authority, P O Box 19, George on or before 1 SEPTEMBER 2017.
- An appeal that is not lodged within the set date or that does not comply with Section 80 of the George Municipality's By-law on Municipal Land Use Planning will be deemed invalid.

Kindly note that no appeal right exists in terms of Section 62 of the Local Government Municipal Systems Act, No 32 of 2000.

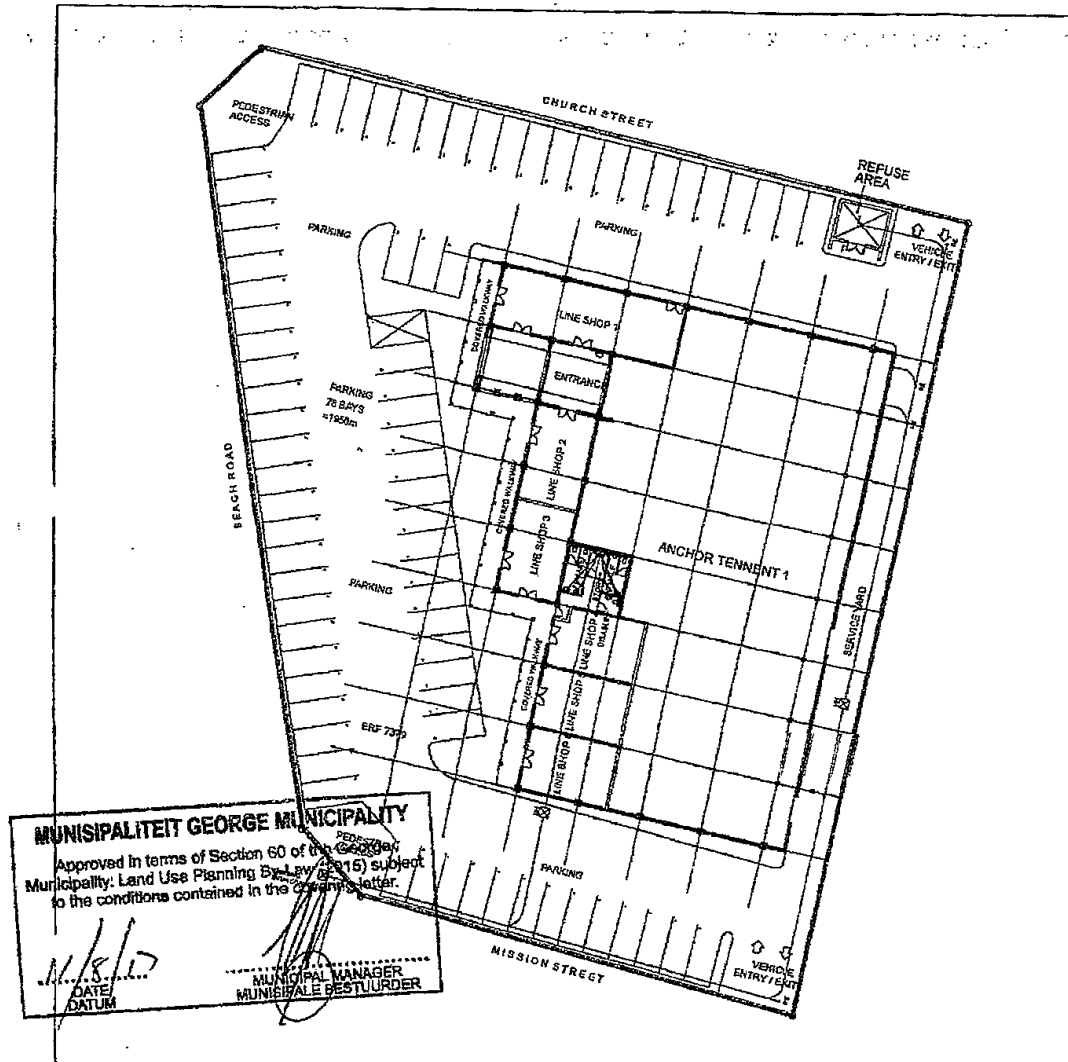
Kindly note that in terms of Section 80(14) of the George Municipality's By-law on Municipal Land Use Planning, the above decision is suspended until such time as the period for lodging an appeal has lapsed, any appeal has been finalised and you have been advised accordingly.

Yours Faithfully


T BOTHA
MUNICIPAL MANAGER

G:\Michelle\Wansal\approvals_2017\modderivier209_117(consent use_approval)\jf. olivier.doc

"Annexure A"



LEGEND:  A4 Scale:	PROJECT: Proposed development for African Dune Investments 204 (Pty) Ltd	PROJEK:
	DESCRIPTION: Erf 7379, Pacaltsdorp, George	BESKRYWING:
	TITLE: Site development plan	TITEL:
	DESIGNED: ONTWERP: Surveyor General	DRAWN: GETEKEN: MV


DELplan
URBAN & REGIONAL PLANNING
Tel: 044 873 4565 ■ Email: planning@delplan.co.za
www.delplan.co.za

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KOPIEREG:
Die kopiereg van hierdie tekening behoort aan DELplan Urban & Regional Planning. Moenie daarvan afskaal nie, maar verwys na afstande soos aangedui. Alle afmetings moet deur 'n Professionele Landmeter nagegaan en bevestig word. Enige teenstrydighede moet asseblief dadelik aan DELplan gemeld word.

Appendix B Detailed Traffic Counts

Beach Road and Church Street

VERKEERSTELLING TE:		Pacaltsdorp				AANTAL VOERTUIG:				9940		LEËR NO.		C1827	
STASIE		1													
DATUM		13 October 2020				TIPE VERKEER :				Light					
KWARTIER VOLUMES															
KWARTIER EINDIG	Beach Road			Church Street			Beach Road			Church Road Sentrum			TOTAAL	BEW. UUR VOLUME	
	Links	NOORD Deur	Regs	Links	OOS Deur	Regs	Links	SUID Deur	Regs	Links	WES Deur	Regs			
06h15	0	28	0	1	0	3	1	54	1	0	0	0	88		
06h30	1	37	2	1	0	4	1	102	1	1	0	0	150		
06h45	6	55	1	1	1	6	1	199	1	1	0	0	272		
07h00	2	48	1	1	0	14	0	273	1	0	0	1	341	851	
07h15	4	134	2	1	0	26	5	339	2	0	1	0	514	1277	
07h30	8	92	0	1	0	10	0	262	0	0	0	0	373	1500	
07h45	7	88	1	2	0	7	1	245	3	0	0	0	354	1582	
08h00	4	118	1	1	2	6	4	161	3	0	0	0	300	1541	
08h15	4	42	0	2	1	4	0	94	0	0	0	0	147	1174	
08h30	3	45	0	0	0	3	0	95	1	0	0	0	147	948	
08h45	7	68	0	1	1	5	1	85	2	0	0	1	171	765	
09h00	5	59	0	0	1	3	1	80	3	0	0	0	152	617	
09h15	5	73	0	2	0	4	0	77	0	0	0	1	162	632	
09h30	8	68	0	1	0	4	0	95	0	0	0	0	176	661	
09h45	4	59	0	3	1	5	3	87	3	1	0	0	166	656	
10h00	6	71	0	1	0	5	0	94	1	0	1	0	179	683	
10h15	5	61	1	0	0	2	1	73	2	0	2	0	147	668	
10h30	6	46	0	1	1	1	0	87	1	0	0	1	144	636	
10h45	6	61	0	1	0	1	3	64	1	0	0	3	140	610	
11h00	3	63	0	0	1	2	3	86	0	0	0	0	158	589	
11h15	3	66	0	0	0	0	1	79	1	0	0	0	150	592	
11h30	7	75	0	0	0	5	4	90	1	0	0	0	182	630	
11h45	4	55	0	1	0	3	1	83	0	0	2	2	151	641	
12h00	3	68	0	1	0	1	0	77	2	1	0	0	153	636	
12h15	7	55	1	0	0	2	3	93	2	1	0	3	167	653	
12h30	7	55	0	0	0	1	5	62	1	0	1	0	132	603	
12h45	3	77	0	1	0	1	2	99	2	0	1	2	188	640	
13h00	4	38	0	0	0	0	2	83	2	2	0	1	132	619	
13h15	9	98	1	2	0	0	1	93	1	0	0	2	207	659	
13h30	2	56	0	0	0	2	4	61	0	0	1	2	128	655	
13h45	4	73	1	1	0	3	1	99	1	0	1	1	185	652	
14h00	7	52	0	0	0	4	0	89	3	1	0	1	157	677	
14h15	8	90	0	3	0	2	4	105	0	0	2	0	214	684	
14h30	10	83	2	1	0	7	2	102	1	2	0	0	210	766	
14h45	14	81	0	1	0	2	0	82	1	0	0	0	181	762	
15h00	4	56	0	1	0	1	2	77	2	0	0	2	145	750	
15h15	3	58	0	1	0	2	2	69	1	0	1	1	138	674	
15h30	6	92	0	0	0	0	0	77	1	0	0	1	177	641	
15h45	11	90	2	0	0	5	2	85	0	1	1	2	199	659	
16h00	4	102	0	0	0	6	3	91	0	1	0	0	207	721	
16h15	14	105	1	0	0	9	0	71	1	0	1	2	204	787	
16h30	8	151	0	2	0	5	4	103	0	1	3	1	278	888	
16h45	14	135	6	2	1	7	3	106	1	0	1	3	279	968	
17h00	11	175	1	1	0	2	2	98	0	0	0	2	292	1053	
17h15	12	239	2	1	0	9	1	109	9	2	0	1	385	1234	
17h30	17	209	1	2	0	4	0	89	2	1	0	0	325	1281	
17h45	8	156	0	1	0	1	1	104	0	1	0	0	272	1274	
18h00	16	97	0	0	0	6	0	99	1	0	2	0	221	1203	
TOTAAL	314	4003	27	43	10	205	75	5127	62	17	21	36	9940		

VERKEERSTELLING TE:		Pacaltsdorp				AANTAL VOERTUIG:				647		LEER NO.		C1827	
STASIE		1				TIPE VERKEER :				Heavy					
DATUM		13 October 2020													
KWARTIER VOLUMES															
KWARTIER EINDIG	Beach Road			Church Street			Beach Road			Church Road Sentrum			TOTAAL	BEW. UUR VOLUME	
	Links	NOORD Deur	Regs	Links	OOS Deur	Regs	Links	SUID Deur	Regs	Links	WES Deur	Regs			
06h15	0	6	0	0	0	0	0	6	0	0	0	0	12		
06h30	0	4	0	0	0	0	0	5	0	0	0	0	9		
06h45	0	9	0	0	0	0	0	9	0	0	0	0	18		
07h00	0	6	0	0	0	0	0	9	0	0	0	0	15	54	
07h15	0	4	0	0	0	0	0	9	0	0	0	0	13	55	
07h30	0	14	0	0	0	0	0	8	0	0	0	0	22	68	
07h45	0	3	0	0	0	0	0	12	0	0	0	0	15	65	
08h00	1	4	0	0	0	0	0	7	0	0	0	0	12	62	
08h15	0	11	0	0	0	0	0	13	0	0	0	0	24	73	
08h30	0	9	0	0	0	0	0	9	0	0	0	0	18	69	
08h45	0	6	0	0	0	0	0	11	0	0	0	0	17	71	
09h00	0	10	0	0	0	0	0	9	0	0	0	0	19	78	
09h15	0	9	0	0	0	0	0	5	0	0	0	0	14	68	
09h30	1	4	0	0	0	0	0	13	0	0	0	0	18	68	
09h45	0	3	0	0	0	0	0	8	0	0	0	0	11	62	
10h00	0	9	0	0	0	0	0	7	0	0	0	0	16	59	
10h15	0	3	0	0	0	0	0	9	0	0	0	0	12	57	
10h30	1	8	0	0	0	1	0	2	0	0	0	0	12	51	
10h45	0	5	0	0	0	0	0	4	0	0	0	0	9	49	
11h00	0	3	0	0	0	0	0	7	0	0	0	1	11	44	
11h15	0	6	0	0	0	0	0	5	0	0	0	0	11	43	
11h30	0	6	0	0	0	0	0	6	0	0	0	0	12	43	
11h45	0	3	0	0	0	0	0	6	0	0	0	0	9	43	
12h00	0	3	0	0	0	0	0	6	0	1	0	0	10	42	
12h15	0	7	0	0	0	0	0	4	0	0	0	0	11	42	
12h30	0	2	0	0	0	0	0	8	0	0	0	0	10	40	
12h45	0	5	0	0	0	0	0	6	0	0	0	0	11	42	
13h00	0	4	0	0	0	0	0	2	0	0	0	0	6	38	
13h15	0	8	0	0	0	0	0	4	0	0	0	0	12	39	
13h30	1	4	0	0	0	0	0	4	0	1	0	0	10	39	
13h45	0	3	0	0	0	0	0	8	0	0	0	0	11	39	
14h00	0	6	0	0	0	0	0	4	0	0	0	0	10	43	
14h15	0	4	0	0	0	0	0	5	0	0	0	0	9	40	
14h30	0	5	0	0	0	0	0	6	0	0	0	0	11	41	
14h45	0	9	0	0	0	0	0	7	0	0	0	0	16	46	
15h00	0	3	0	0	0	0	0	6	0	0	0	0	9	45	
15h15	0	6	0	0	0	0	0	6	0	0	0	0	12	48	
15h30	0	12	0	0	0	0	0	9	0	0	0	0	21	58	
15h45	1	7	0	0	0	0	0	9	0	0	0	0	17	59	
16h00	0	8	0	0	0	0	0	8	0	0	0	0	16	66	
16h15	0	9	2	0	0	0	0	8	0	0	0	0	19	73	
16h30	1	4	0	0	0	0	0	10	0	0	0	0	15	67	
16h45	0	12	0	0	0	0	0	6	0	0	0	0	18	68	
17h00	0	2	0	0	0	0	0	10	0	0	0	0	12	64	
17h15	0	8	0	0	0	0	0	6	0	0	0	0	14	59	
17h30	0	5	0	0	0	0	0	8	0	0	0	0	13	57	
17h45	0	9	1	0	0	0	0	5	0	0	0	0	15	54	
18h00	0	3	0	0	0	0	0	7	0	0	0	0	10	52	
TOTAAL	6	293	3	0	0	1	0	341	0	2	0	1	647		

Beach Road and Mission Street

VERKEERSTELLING TE: Pacaltsdorp				AANTAL VOERTUIG: 9546				LEËR NO.				C1827		
STASIE : 1				TIPE VERKEER : Light										
DATUM : 13 October 2020														
KWARTIER VOLUMES														
KWARTIER EINDIG	Beach Road			Mission Street			Beach Road			0			TOTAAL	BEW. UUR VOLUME
	Links	NOORD Deur	Regs	Links	OOS Deur	Regs	Links	SUID Deur	Regs	Links	WES Deur	Regs		
06h15	26	3	0	2	0	43	0	13	1	0	0	0	88	
06h30	32	6	0	1	0	73	0	31	0	0	0	0	143	
06h45	35	21	0	0	0	123	0	78	2	0	0	0	259	
07h00	42	8	0	0	0	166	0	108	4	0	0	0	328	818
07h15	78	57	0	0	0	176	0	170	4	0	0	0	485	1215
07h30	75	18	0	1	0	153	0	103	1	0	0	0	357	1423
07h45	62	28	0	3	0	142	0	107	2	0	0	0	344	1514
08h00	73	46	0	2	0	85	0	83	2	0	0	0	291	1477
08h15	33	11	0	0	0	60	0	32	2	0	0	0	138	1130
08h30	40	5	0	0	0	63	0	35	2	0	0	0	145	318
08h45	46	23	0	3	0	40	0	48	4	0	0	0	164	738
09h00	38	20	0	4	0	52	0	32	2	0	0	0	148	595
09h15	47	30	0	4	0	44	0	33	1	0	0	0	159	616
09h30	42	28	0	0	0	54	0	41	5	0	0	0	170	641
09h45	36	26	0	2	0	44	0	43	2	0	0	0	153	636
10h00	41	31	0	1	0	51	0	44	0	0	0	0	168	656
10h15	44	17	0	4	0	44	0	32	2	0	0	0	143	640
10h30	34	13	0	2	0	52	0	36	3	0	0	0	140	610
10h45	31	32	0	5	0	39	0	29	2	0	0	0	138	583
11h00	37	29	0	4	0	53	0	36	1	0	0	0	160	581
11h15	47	19	0	1	0	46	0	35	1	0	0	0	143	587
11h30	51	24	0	3	0	47	0	43	1	0	0	0	175	622
11h45	37	19	0	2	0	46	0	37	1	0	0	0	142	626
12h00	43	28	0	2	0	51	0	28	2	0	0	0	154	620
12h15	47	11	0	1	0	53	0	45	4	0	0	0	161	632
12h30	51	4	0	1	0	39	0	101	2	0	0	0	138	655
12h45	47	33	0	4	0	16	0	15	3	0	0	0	118	631
13h00	25	14	0	1	0	75	0	12	2	0	0	0	123	606
13h15	75	27	0	4	0	45	0	50	3	0	0	0	204	643
13h30	49	9	0	3	0	34	0	31	3	0	0	0	129	580
13h45	57	18	0	2	0	60	0	41	1	0	0	0	179	641
14h00	45	8	0	2	0	52	0	40	1	0	0	0	148	660
14h15	75	18	0	2	0	76	0	33	0	0	0	0	204	660
14h30	64	20	0	2	0	71	0	34	2	0	0	0	193	724
14h45	65	17	0	1	0	61	0	22	1	0	0	0	167	712
15h00	57	2	0	0	0	52	0	29	1	0	0	0	141	705
15h15	47	13	0	0	0	35	0	37	1	0	0	0	133	634
15h30	58	35	0	1	0	54	0	24	2	0	0	0	174	615
15h45	80	12	0	0	0	58	0	29	3	0	0	0	182	630
16h00	42	30	0	5	0	70	0	24	4	0	0	0	175	664
16h15	107	30	0	4	0	37	0	35	7	0	0	0	220	751
16h30	118	36	0	3	0	66	0	41	1	0	0	0	265	842
16h45	92	48	0	2	0	54	0	56	2	0	0	0	254	314
17h00	132	46	0	1	0	50	0	50	1	0	0	0	280	1013
17h15	140	101	0	6	0	54	0	65	5	0	0	0	371	1170
17h30	178	33	0	2	0	68	0	23	2	0	0	0	306	1211
17h45	138	19	0	2	0	63	0	42	2	0	0	0	266	1223
18h00	84	13	0	2	0	63	0	37	3	0	0	0	202	1145
TOTAAL	2943	1139	0	37	0	3053	0	2205	103	0	0	0	9546	

VERKEERSTELLING TE:		Pacaltsdorp				AANTAL VOERTUIG:				638		LEËR NO.		C1827	
STASIE :		1				TIPE VERKEER :				Heavy					
DATUM :		13 October 2020													
KWARTIER VOLUMES															
KWARTIER EINDIG	Beach Road			Mission Street			Beach Road			0			TOTAAL	BEW. UUR VOLUME	
	Links	NOORD Deur	Regs	Links	OOS Deur	Regs	Links	SUID Deur	Regs	Links	WES Deur	Regs			
06h15	4	2	0	0	0	6	0	0	0	0	0	0	12		
06h30	4	0	0	0	0	4	0	1	0	0	0	0	9		
06h45	6	3	0	0	0	6	0	3	0	0	0	0	18		
07h00	6	0	0	0	0	7	0	2	0	0	0	0	15	54	
07h15	3	1	0	0	0	5	0	4	0	0	0	0	13	55	
07h30	11	3	0	0	0	7	0	1	0	0	0	0	22	68	
07h45	2	1	0	0	0	7	0	3	0	0	0	0	13	63	
08h00	6	0	0	1	0	9	0	0	0	0	0	0	16	64	
08h15	4	5	0	0	0	3	0	10	0	0	0	0	22	73	
08h30	7	2	0	0	0	9	0	0	0	0	0	0	18	69	
08h45	5	1	0	0	0	8	0	2	0	0	0	0	16	72	
09h00	3	7	0	1	0	5	0	5	0	0	0	0	21	77	
09h15	4	5	0	0	0	5	0	1	0	0	0	0	15	70	
09h30	3	1	0	0	0	6	0	6	0	0	0	0	16	68	
09h45	1	2	0	0	0	5	0	3	0	0	0	0	11	63	
10h00	9	0	0	0	0	6	0	1	0	0	0	0	16	58	
10h15	1	2	0	0	0	8	0	1	0	0	0	0	12	55	
10h30	3	5	0	1	0	1	0	1	0	0	0	0	11	50	
10h45	5	0	0	0	0	3	0	1	0	0	0	0	9	48	
11h00	3	1	0	0	0	6	0	1	0	0	0	0	11	43	
11h15	5	1	0	0	0	4	0	1	0	0	0	0	11	42	
11h30	4	2	0	0	0	5	0	1	0	0	0	0	12	43	
11h45	2	1	0	0	0	6	0	0	0	0	0	0	9	43	
12h00	2	1	0	0	0	5	0	1	0	0	0	0	9	41	
12h15	3	4	0	0	0	4	0	0	0	0	0	0	11	41	
12h30	2	0	0	0	0	7	0	1	0	0	0	0	10	39	
12h45	4	1	0	0	0	5	0	1	0	0	0	0	11	41	
13h00	3	1	0	0	0	2	0	0	0	0	0	0	6	38	
13h15	5	3	0	0	0	3	0	1	0	0	0	0	12	39	
13h30	4	0	0	0	0	3	0	1	0	0	0	0	8	37	
13h45	3	0	0	0	0	5	0	3	0	0	0	0	11	37	
14h00	5	1	0	0	0	4	0	0	0	0	0	0	10	41	
14h15	1	3	0	0	0	2	0	3	0	0	0	0	9	38	
14h30	2	3	0	0	0	3	0	3	0	0	0	0	11	41	
14h45	6	3	0	0	0	5	0	2	0	0	0	0	16	46	
15h00	1	2	0	0	0	3	0	3	0	0	0	0	9	45	
15h15	4	2	0	0	0	3	0	3	0	0	0	0	12	48	
15h30	6	6	0	0	0	7	0	2	0	0	0	0	21	58	
15h45	6	1	0	0	0	4	0	5	0	0	0	0	16	58	
16h00	8	0	0	0	0	6	0	2	0	0	0	0	16	65	
16h15	8	1	0	0	0	6	0	2	0	0	0	0	17	70	
16h30	3	1	0	0	0	7	0	3	0	0	0	0	14	63	
16h45	6	6	0	0	0	1	0	5	0	0	0	0	18	65	
17h00	1	1	0	0	0	5	0	5	0	0	0	0	12	61	
17h15	6	2	0	0	0	6	0	0	0	0	0	0	14	58	
17h30	2	3	0	0	0	5	0	3	0	0	0	0	13	57	
17h45	7	2	0	0	0	4	0	1	0	0	0	0	14	53	
18h00	2	1	0	0	0	2	0	5	0	0	0	0	10	51	
TOTAAL	201	93	0	3	0	238	0	103	0	0	0	0	638		

Beach Road and Heather Street

VERKEERSTELLING TE:			Pacaltsdorp			AANTAL VOERTUIG:			2363			LEËR NO.			C1827		
STASIE			1			TIPE VERKEER :			Light								
DATUM			15 October 2020														
KWARTIER VOLUMES																	
KWARTIER EINDIG	Beach Road			Heather Road			Beach Road			0			TOTAAL	BEW. UUR VOLUME			
	Links	NOORD Deur	Regs	Links	OOS Deur	Regs	Links	SUID Deur	Regs	Links	WES Deur	Regs					
06h15	3	2	0	1	0	8	0	12	1	0	0	0	27				
06h30	3	3	0	1	0	4	0	8	0	0	0	0	19				
06h45	2	6	0	1	0	18	0	20	1	0	0	0	48				
07h00	3	11	0	2	0	27	0	26	0	0	0	0	63	163			
07h15	6	3	0	2	0	22	0	24	1	0	0	0	58	194			
07h30	2	16	0	0	0	21	0	27	0	0	0	0	66	241			
07h45	4	13	0	2	0	25	0	23	0	0	0	0	73	266			
08h00	6	16	0	2	0	14	0	26	0	0	0	0	64	261			
08h15	8	17	0	4	0	11	0	27	2	0	0	0	69	272			
08h30	9	10	0	2	0	4	0	11	0	0	0	0	36	242			
08h45	8	10	0	3	0	9	0	19	1	0	0	0	50	219			
09h00	7	12	0	1	0	4	0	5	0	0	0	0	29	184			
09h15	7	13	0	0	0	6	0	25	0	0	0	0	51	166			
09h30	4	5	0	1	0	6	0	16	2	0	0	0	34	164			
09h45	2	15	0	1	0	6	0	13	0	0	0	0	37	151			
10h00	5	16	0	1	0	13	0	14	2	0	0	0	51	173			
10h15	6	14	0	3	0	7	0	15	3	0	0	0	48	170			
10h30	5	10	0	0	0	9	0	12	4	0	0	0	40	176			
10h45	6	13	0	1	0	4	0	12	2	0	0	0	38	177			
11h00	5	11	0	2	0	8	0	11	0	0	0	0	37	163			
11h15	4	14	0	1	0	1	0	5	2	0	0	0	27	142			
11h30	4	22	0	0	0	3	0	12	0	0	0	0	41	143			
11h45	7	16	0	0	0	9	0	22	1	0	0	0	55	160			
12h00	7	7	0	1	0	1	0	15	1	0	0	0	32	155			
12h15	8	13	0	1	0	10	0	13	0	0	0	0	45	173			
12h30	8	19	0	0	0	7	0	14	1	0	0	0	49	181			
12h45	5	16	0	1	0	7	0	15	0	0	0	0	44	170			
13h00	17	24	0	2	0	17	0	29	4	0	0	0	93	231			
13h15	1	7	0	1	0	4	0	7	1	0	0	0	21	207			
13h30	2	8	0	1	0	4	0	9	0	0	0	0	24	182			
13h45	13	18	0	1	0	10	0	14	1	0	0	0	57	195			
14h00	8	16	0	1	0	5	0	18	2	0	0	0	50	152			
14h15	6	8	0	0	0	9	0	13	0	0	0	0	36	167			
14h30	6	20	0	1	0	5	0	13	1	0	0	0	46	183			
14h45	8	20	0	0	0	6	0	11	1	0	0	0	46	178			
15h00	10	15	0	0	0	7	0	9	1	0	0	0	42	170			
15h15	7	17	0	1	0	8	0	9	2	0	0	0	44	178			
15h30	9	20	0	1	0	7	0	9	0	0	0	0	46	178			
15h45	8	11	0	1	0	12	0	19	2	0	0	0	53	185			
16h00	9	12	0	0	0	2	0	13	1	0	0	0	37	180			
16h15	16	19	0	2	0	7	0	21	1	0	0	0	66	202			
16h30	18	20	0	1	0	3	0	7	1	0	0	0	50	206			
16h45	15	15	0	1	0	10	0	14	0	0	0	0	55	208			
17h00	26	25	0	1	0	10	0	15	4	0	0	0	81	252			
17h15	15	26	0	0	0	6	0	21	0	0	0	0	68	254			
17h30	22	32	0	1	0	10	0	14	0	0	0	0	79	283			
17h45	22	27	0	1	0	5	0	13	2	0	0	0	70	296			
18h00	20	21	0	0	0	9	0	10	2	0	0	0	62	279			
TOTAAL	402	704	0	51	0	420	0	736	50	0	0	0	2363				

VERKEERSTELLING TE:		Pacaltsdorp		AANTAL VOERTUIG:		191		LEËR NO.		C1827				
STASIE		1		TIPE VERKEER :		Heavy								
DATUM		15 October 2020												
KWARTIER VOLUMES														
KWARTIER EINDIG	Beach Road			Heather Road			Beach Road			0			TOTAAL	BEW. UUR VOLUME
	Links	NOORD Deur	Regs	Links	OOS Deur	Regs	Links	SUID Deur	Regs	Links	WES Deur	Regs		
06h15	1	0	0	0	0	1	0	1	0	0	0	0	3	
06h30	2	0	0	1	0	1	0	2	0	0	0	0	6	
06h45	1	3	0	0	0	1	0	0	0	0	0	0	5	
07h00	0	1	0	1	0	2	0	0	0	0	0	0	4	18
07h15	2	1	0	0	0	0	0	0	0	0	0	0	3	18
07h30	1	0	0	1	0	1	0	1	0	0	0	0	4	16
07h45	1	1	0	0	0	0	0	4	0	0	0	0	6	17
08h00	1	0	0	1	0	1	0	1	0	0	0	0	4	17
08h15	2	2	0	0	0	0	0	1	0	0	0	0	5	19
08h30	1	0	0	0	0	0	0	1	0	0	0	0	2	17
08h45	2	0	0	0	0	1	0	2	0	0	0	0	5	16
09h00	1	0	0	0	0	1	0	0	0	0	0	0	2	14
09h15	0	1	0	0	0	1	0	1	0	0	0	0	3	12
09h30	0	1	0	0	0	0	0	0	0	0	0	0	1	11
09h45	1	3	0	0	0	1	0	1	0	0	0	0	6	12
10h00	0	1	0	0	0	0	0	1	0	0	0	0	2	12
10h15	0	1	0	0	0	1	0	2	0	0	0	0	4	13
10h30	2	1	0	0	0	0	0	0	0	0	0	0	3	15
10h45	0	2	0	0	0	1	0	1	0	0	0	0	4	13
11h00	0	2	0	0	0	0	0	4	1	0	0	0	7	18
11h15	1	0	0	0	0	1	0	1	0	0	0	0	3	17
11h30	0	0	0	0	0	0	0	1	0	0	0	0	1	15
11h45	1	1	0	1	0	1	0	0	0	0	0	0	4	15
12h00	1	3	0	0	0	0	0	0	0	0	0	0	4	12
12h15	2	1	0	1	0	1	0	1	0	0	0	0	6	15
12h30	1	1	0	0	0	0	0	3	0	0	0	0	5	19
12h45	0	2	0	0	0	1	0	3	0	0	0	0	6	21
13h00	1	1	0	0	0	0	0	2	0	0	0	0	4	21
13h15	0	0	0	0	0	0	0	0	0	0	0	0	0	15
13h30	0	1	0	0	0	0	0	0	1	0	0	0	2	12
13h45	3	0	0	0	0	1	0	0	0	0	0	0	4	10
14h00	1	0	0	0	0	0	0	1	0	0	0	0	2	8
14h15	1	2	0	0	0	1	0	2	0	0	0	0	6	14
14h30	0	2	0	0	0	1	0	0	0	0	0	0	3	15
14h45	2	0	0	0	0	0	0	2	0	0	0	0	4	15
15h00	0	3	0	0	0	1	0	1	0	0	0	0	5	18
15h15	1	1	0	0	0	0	0	2	0	0	0	0	4	16
15h30	0	2	0	0	0	0	0	2	0	0	0	0	4	17
15h45	1	2	0	0	0	0	0	0	0	0	0	0	3	16
16h00	1	1	0	0	0	1	0	0	0	0	0	0	3	14
16h15	0	3	0	0	0	2	0	4	0	0	0	0	9	19
16h30	1	1	0	0	0	1	0	6	0	0	0	0	9	24
16h45	1	2	0	0	0	0	0	1	0	0	0	0	4	25
17h00	0	0	0	0	0	1	0	0	1	0	0	0	2	24
17h15	1	0	0	0	0	0	0	3	0	0	0	0	4	19
17h30	1	0	0	0	0	3	0	1	0	0	0	0	5	15
17h45	2	1	0	0	0	0	0	0	1	0	0	0	4	15
18h00	0	0	0	0	0	2	0	0	0	0	0	0	2	15
TOTAAL	41	50	0	6	0	31	0	59	4	0	0	0	191	

Appendix C Detailed SIDRA Output

Beach Road and Mission Street

MOVEMENT SUMMARY

 **Site: 2 [Beach& Mission - 2021 Base AM]**

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	547	6,0	0,605	29,6	LOS C	10,4	76,3	0,94	0,79	0,94	40,3
3	R2	12	6,0	0,605	35,6	LOS D	9,5	69,6	0,94	0,79	0,94	38,9
Approach		559	6,0	0,605	29,7	LOS C	10,4	76,3	0,94	0,79	0,94	40,2
East: Mission Street												
4	L2	4	6,0	0,662	18,1	LOS B	18,7	137,9	0,74	0,82	0,74	45,1
6	R2	697	6,0	0,662	18,1	LOS B	18,7	137,9	0,74	0,82	0,74	44,8
Approach		701	6,0	0,662	18,1	LOS B	18,7	137,9	0,74	0,82	0,74	44,8
North: Beach Road												
7	L2	300	6,0	0,651	35,4	LOS D	10,8	79,6	0,95	0,84	0,96	37,2
8	T1	138	6,0	0,284	26,5	LOS C	4,4	32,5	0,85	0,68	0,85	41,8
Approach		438	6,0	0,651	32,6	LOS C	10,8	79,6	0,92	0,79	0,93	38,5
All Vehicles		1698	6,0	0,662	25,7	LOS C	18,7	137,9	0,85	0,80	0,85	41,5

MOVEMENT SUMMARY

 **Site: 2 [Beach& Mission - 2021 Base PM]**

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	242	6,0	0,134	10,2	LOS B	2,7	19,7	0,53	0,45	0,53	51,2
3	R2	9	6,0	0,134	17,0	LOS B	2,3	16,6	0,57	0,48	0,57	48,4
Approach		252	6,0	0,134	10,5	LOS B	2,7	19,7	0,54	0,45	0,54	51,1
East: Mission Street												
4	L2	13	6,0	0,552	32,8	LOS C	9,5	70,2	0,91	0,82	0,91	38,2
6	R2	267	6,0	0,552	32,8	LOS C	9,5	70,2	0,91	0,82	0,91	38,0
Approach		280	6,0	0,552	32,8	LOS C	9,5	70,2	0,91	0,82	0,91	38,0
North: Beach Road												
7	L2	553	6,0	0,545	18,0	LOS B	13,8	101,9	0,69	0,79	0,69	45,2
8	T1	367	6,0	0,344	10,7	LOS B	7,9	58,2	0,59	0,51	0,59	51,0
Approach		920	6,0	0,545	15,1	LOS B	13,8	101,9	0,65	0,68	0,65	47,3
All Vehicles		1452	6,0	0,552	17,7	LOS B	13,8	101,9	0,68	0,67	0,68	45,7

MOVEMENT SUMMARY

Site: 2 [Beach& Mission - 2021 Base Saturday]

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	165	6,0	0,120	16,0	LOS B	2,3	17,1	0,66	0,53	0,66	47,3
3	R2	9	6,0	0,120	23,2	LOS C	1,9	14,3	0,69	0,56	0,69	44,7
Approach		175	6,0	0,120	16,4	LOS B	2,3	17,1	0,66	0,53	0,66	47,1
East: Mission Street												
4	L2	12	6,0	0,497	25,1	LOS C	10,8	79,4	0,80	0,81	0,80	41,5
6	R2	355	6,0	0,497	25,0	LOS C	10,8	79,4	0,80	0,81	0,80	41,3
Approach		366	6,0	0,497	25,0	LOS C	10,8	79,4	0,80	0,81	0,80	41,3
North: Beach Road												
7	L2	387	6,0	0,495	23,7	LOS C	11,1	81,4	0,78	0,80	0,78	42,2
8	T1	211	6,0	0,255	15,9	LOS B	5,3	38,9	0,68	0,57	0,68	47,5
Approach		598	6,0	0,495	21,0	LOS C	11,1	81,4	0,74	0,72	0,74	43,9
All Vehicles		1139	6,0	0,497	21,6	LOS C	11,1	81,4	0,75	0,72	0,75	43,5

MOVEMENT SUMMARY

Site: 2 [Beach& Mission - 2021 Base+Dev AM]

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	547	6,0	0,651	30,8	LOS C	11,3	83,5	0,96	0,82	0,97	39,7
3	R2	22	6,0	0,651	37,9	LOS D	9,4	69,3	0,97	0,82	0,99	37,9
Approach		569	6,0	0,651	31,1	LOS C	11,3	83,5	0,96	0,82	0,97	39,6
East: Mission Street												
4	L2	13	6,0	0,679	18,4	LOS B	19,6	144,1	0,75	0,83	0,75	45,0
6	R2	707	6,0	0,679	18,3	LOS B	19,6	144,1	0,75	0,83	0,75	44,7
Approach		720	6,0	0,679	18,3	LOS B	19,6	144,1	0,75	0,83	0,75	44,7
North: Beach Road												
7	L2	314	6,0	0,681	36,1	LOS D	11,5	84,8	0,96	0,85	0,99	36,9
8	T1	138	6,0	0,284	26,5	LOS C	4,4	32,5	0,85	0,68	0,85	41,8
Approach		452	6,0	0,681	33,2	LOS C	11,5	84,8	0,93	0,80	0,95	38,3
All Vehicles		1741	6,0	0,681	26,3	LOS C	19,6	144,1	0,87	0,82	0,88	41,2

MOVEMENT SUMMARY

Site: 2 [Beach& Mission - 2021 Base+Dev PM]

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	242	6,0	0,188	12,5	LOS B	3,9	28,8	0,59	0,50	0,59	49,5
3	R2	26	6,0	0,188	24,8	LOS C	2,1	15,4	0,72	0,63	0,72	43,2
Approach		268	6,0	0,188	13,7	LOS B	3,9	28,8	0,60	0,51	0,60	48,8
East: Mission Street												
4	L2	28	6,0	0,588	31,7	LOS C	11,0	80,9	0,90	0,83	0,90	38,6
6	R2	297	6,0	0,588	31,6	LOS C	11,0	80,9	0,90	0,83	0,90	38,4
Approach		325	6,0	0,588	31,6	LOS C	11,0	80,9	0,90	0,83	0,90	38,5
North: Beach Road												
7	L2	583	6,0	0,603	19,8	LOS B	15,8	116,5	0,75	0,81	0,75	44,2
8	T1	367	6,0	0,360	11,9	LOS B	8,4	61,5	0,63	0,54	0,63	50,1
Approach		951	6,0	0,603	16,8	LOS B	15,8	116,5	0,70	0,71	0,70	46,3
All Vehicles		1544	6,0	0,603	19,4	LOS B	15,8	116,5	0,73	0,70	0,73	44,8

MOVEMENT SUMMARY

Site: 2 [Beach& Mission - 2021 Base+Dev Saturday]

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	165	6,0	0,166	17,5	LOS B	3,3	24,1	0,69	0,57	0,69	46,3
3	R2	25	6,0	0,166	29,9	LOS C	1,7	12,8	0,79	0,67	0,79	40,5
Approach		191	6,0	0,166	19,2	LOS B	3,3	24,1	0,70	0,58	0,70	45,4
East: Mission Street												
4	L2	27	6,0	0,555	25,0	LOS C	12,6	93,1	0,81	0,82	0,81	41,6
6	R2	395	6,0	0,555	25,0	LOS C	12,6	93,1	0,81	0,82	0,81	41,3
Approach		422	6,0	0,555	25,0	LOS C	12,6	93,1	0,81	0,82	0,81	41,4
North: Beach Road												
7	L2	427	6,0	0,562	25,1	LOS C	12,9	94,6	0,82	0,82	0,82	41,6
8	T1	211	6,0	0,263	16,7	LOS B	5,4	39,8	0,70	0,58	0,70	47,1
Approach		638	6,0	0,562	22,3	LOS C	12,9	94,6	0,78	0,74	0,78	43,2
All Vehicles		1251	6,0	0,562	22,7	LOS C	12,9	94,6	0,78	0,74	0,78	42,9

MOVEMENT SUMMARY

Site: 2 [Beach& Mission - 2026 Base+Dev AM]

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	635	6,0	0,770	34,6	LOS C	14,7	107,9	0,99	0,92	1,12	38,1
3	R2	24	6,0	0,770	42,0	LOS D	11,5	84,9	1,00	0,92	1,15	36,4
Approach		659	6,0	0,770	34,8	LOS C	14,7	107,9	0,99	0,92	1,12	38,1
East: Mission Street												
4	L2	14	6,0	0,786	21,2	LOS C	26,2	193,2	0,84	0,87	0,87	43,5
6	R2	819	6,0	0,786	21,1	LOS C	26,2	193,2	0,84	0,87	0,87	43,2
Approach		833	6,0	0,786	21,1	LOS C	26,2	193,2	0,84	0,87	0,87	43,2
North: Beach Road												
7	L2	362	6,0	0,786	39,8	LOS D	14,5	106,8	0,99	0,91	1,13	35,6
8	T1	160	6,0	0,330	26,8	LOS C	5,2	38,2	0,86	0,70	0,86	41,6
Approach		522	6,0	0,786	35,9	LOS D	14,5	106,8	0,95	0,85	1,05	37,2
All Vehicles		2014	6,0	0,786	29,4	LOS C	26,2	193,2	0,92	0,88	1,00	39,8

MOVEMENT SUMMARY

Site: 2 [Beach& Mission - 2026 Base+Dev PM]

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	280	6,0	0,232	12,9	LOS B	5,0	36,6	0,61	0,52	0,61	49,2
3	R2	28	6,0	0,232	29,1	LOS C	2,2	16,0	0,79	0,68	0,79	40,9
Approach		308	6,0	0,232	14,4	LOS B	5,0	36,6	0,62	0,53	0,62	48,3
East: Mission Street												
4	L2	31	6,0	0,670	32,7	LOS C	13,0	95,4	0,93	0,84	0,94	38,2
6	R2	340	6,0	0,670	32,6	LOS C	13,0	95,4	0,93	0,84	0,94	38,0
Approach		371	6,0	0,670	32,6	LOS C	13,0	95,4	0,93	0,84	0,94	38,1
North: Beach Road												
7	L2	672	6,0	0,694	20,9	LOS C	19,6	144,4	0,81	0,84	0,81	43,6
8	T1	426	6,0	0,418	12,4	LOS B	10,1	74,3	0,65	0,57	0,65	49,8
Approach		1098	6,0	0,694	17,6	LOS B	19,6	144,4	0,75	0,73	0,75	45,8
All Vehicles		1777	6,0	0,694	20,2	LOS C	19,6	144,4	0,76	0,72	0,77	44,3

MOVEMENT SUMMARY

Site: 2 [Beach& Mission - 2026 Base+Dev Saturday]

Beach Road / Mission Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road												
2	T1	192	6,0	0,201	17,8	LOS B	4,0	29,6	0,70	0,58	0,70	46,1
3	R2	27	6,0	0,201	32,0	LOS C	1,8	13,6	0,83	0,69	0,83	39,5
Approach		219	6,0	0,201	19,6	LOS B	4,0	29,6	0,72	0,59	0,72	45,2
East: Mission Street												
4	L2	29	6,0	0,633	25,9	LOS C	15,0	110,8	0,85	0,84	0,85	41,2
6	R2	452	6,0	0,633	25,8	LOS C	15,0	110,8	0,85	0,84	0,85	40,9
Approach		481	6,0	0,633	25,8	LOS C	15,0	110,8	0,85	0,84	0,85	41,0
North: Beach Road												
7	L2	489	6,0	0,644	26,0	LOS C	15,4	113,4	0,86	0,84	0,86	41,1
8	T1	244	6,0	0,305	17,0	LOS B	6,4	47,2	0,71	0,60	0,71	46,9
Approach		734	6,0	0,644	23,0	LOS C	15,4	113,4	0,81	0,76	0,81	42,9
All Vehicles		1434	6,0	0,644	23,4	LOS C	15,4	113,4	0,81	0,76	0,81	42,5

Beach Road and Church Street

MOVEMENT SUMMARY

 Site: [Beach&Church - 2021 Base AM]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	6	6,0	0,326	5,6	LOS A	0,0	0,0	0,00	0,01	0,00	57,9
2	T1	1244	6,0	0,326	0,1	LOS A	0,1	0,9	0,01	0,01	0,01	59,9
3	R2	6	6,0	0,326	9,1	LOS A	0,1	0,9	0,02	0,01	0,02	57,5
Approach		1257	6,0	0,326	0,1	NA	0,1	0,9	0,01	0,01	0,01	59,8
East: Church Street E												
4	L2	5	6,0	3,301	1122,4	LOS F	23,8	175,5	1,00	1,50	3,16	2,7
5	T1	1	6,0	3,301	1161,6	LOS F	23,8	175,5	1,00	1,50	3,16	2,7
6	R2	62	6,0	3,301	1177,1	LOS F	23,8	175,5	1,00	1,50	3,16	2,7
Approach		68	6,0	3,301	1172,7	LOS F	23,8	175,5	1,00	1,50	3,16	2,7
North: Beach Road N												
7	L2	23	6,0	0,126	5,6	LOS A	0,0	0,0	0,00	0,06	0,00	57,6
8	T1	432	6,0	0,126	0,7	LOS A	0,3	2,3	0,05	0,04	0,05	58,9
9	R2	4	6,0	0,126	21,6	LOS C	0,3	2,3	0,10	0,01	0,10	56,0
Approach		459	6,0	0,126	1,1	NA	0,3	2,3	0,05	0,04	0,05	58,8
West: Shopping Centre W												
10	L2	1	6,0	0,095	13,2	LOS B	0,2	1,8	0,96	1,00	0,96	21,7
11	T1	1	6,0	0,095	131,7	LOS F	0,2	1,8	0,96	1,00	0,96	21,7
12	R2	1	6,0	0,095	178,5	LOS F	0,2	1,8	0,96	1,00	0,96	21,6
Approach		3	6,0	0,095	107,8	LOS F	0,2	1,8	0,96	1,00	0,96	21,6
All Vehicles		1787	6,0	3,301	45,5	NA	23,8	175,5	0,06	0,07	0,14	32,9

MOVEMENT SUMMARY

 Site: 1v [Beach&Church - 2021 Base PM]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	6	6,0	0,137	5,6	LOS A	0,0	0,0	0,00	0,01	0,00	57,9
2	T1	473	6,0	0,137	0,6	LOS A	0,4	3,0	0,07	0,02	0,07	59,0
3	R2	13	6,0	0,137	13,7	LOS B	0,4	3,0	0,16	0,04	0,16	55,8
Approach		492	6,0	0,137	1,0	NA	0,4	3,0	0,07	0,02	0,07	58,9
East: Church Street E												
4	L2	6	6,0	0,508	36,2	LOS E	1,7	12,3	0,95	1,07	1,22	23,9
5	T1	1	6,0	0,508	88,4	LOS F	1,7	12,3	0,95	1,07	1,22	23,9
6	R2	24	6,0	0,508	106,3	LOS F	1,7	12,3	0,95	1,07	1,22	23,9
Approach		32	6,0	0,508	91,7	LOS F	1,7	12,3	0,95	1,07	1,22	23,9
North: Beach Road N												
7	L2	60	6,0	0,246	5,6	LOS A	0,0	0,0	0,00	0,08	0,00	57,4
8	T1	861	6,0	0,246	0,1	LOS A	0,2	1,5	0,02	0,05	0,02	59,4
9	R2	13	6,0	0,246	8,9	LOS A	0,2	1,5	0,05	0,02	0,05	57,2
Approach		934	6,0	0,246	0,6	NA	0,2	1,5	0,02	0,05	0,02	59,3
West: Shopping Centre W												
10	L2	3	6,0	0,139	9,7	LOS A	0,4	2,9	0,87	0,93	0,87	31,9
11	T1	1	6,0	0,139	64,4	LOS F	0,4	2,9	0,87	0,93	0,87	31,9
12	R2	6	6,0	0,139	73,7	LOS F	0,4	2,9	0,87	0,93	0,87	31,8
Approach		11	6,0	0,139	53,6	LOS F	0,4	2,9	0,87	0,93	0,87	31,8
All Vehicles		1467	6,0	0,508	3,1	NA	1,7	12,3	0,07	0,07	0,07	57,0

MOVEMENT SUMMARY

STOP Site: 1v [Beach&Church - 2021 Base Saturday]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	40	6,0	0,127	5,6	LOS A	0,0	0,0	0,00	0,10	0,00	57,2
2	T1	440	6,0	0,127	0,1	LOS A	0,1	0,5	0,02	0,05	0,02	59,4
3	R2	4	6,0	0,127	9,2	LOS A	0,1	0,5	0,03	0,01	0,03	57,4
Approach		484	6,0	0,127	0,6	NA	0,1	0,5	0,02	0,05	0,02	59,2
East: Church Street E												
4	L2	11	6,0	0,287	12,4	LOS B	1,0	7,6	0,80	1,00	0,93	39,0
5	T1	9	6,0	0,287	34,6	LOS D	1,0	7,6	0,80	1,00	0,93	39,0
6	R2	28	6,0	0,287	39,2	LOS E	1,0	7,6	0,80	1,00	0,93	38,8
Approach		48	6,0	0,287	32,5	LOS D	1,0	7,6	0,80	1,00	0,93	38,9
North: Beach Road N												
7	L2	38	6,0	0,150	5,6	LOS A	0,0	0,0	0,00	0,08	0,00	57,4
8	T1	539	6,0	0,150	0,0	LOS A	0,0	0,1	0,00	0,04	0,00	59,6
9	R2	1	6,0	0,150	8,5	LOS A	0,0	0,1	0,01	0,00	0,01	57,6
Approach		578	6,0	0,150	0,4	NA	0,0	0,1	0,00	0,04	0,00	59,5
West: Shopping Centre W												
10	L2	3	6,0	0,418	15,9	LOS C	1,6	11,9	0,88	1,06	1,14	35,8
11	T1	18	6,0	0,418	38,9	LOS E	1,6	11,9	0,88	1,06	1,14	35,8
12	R2	40	6,0	0,418	43,8	LOS E	1,6	11,9	0,88	1,06	1,14	35,7
Approach		61	6,0	0,418	40,9	LOS E	1,6	11,9	0,88	1,06	1,14	35,7
All Vehicles		1172	6,0	0,418	3,9	NA	1,6	11,9	0,09	0,14	0,11	56,2

MOVEMENT SUMMARY

STOP Site: 1v [Beach&Church - 2021 Base+Dev AM]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	6	6,0	0,330	5,6	LOS A	0,0	0,0	0,00	0,01	0,00	57,9
2	T1	1254	6,0	0,330	0,1	LOS A	0,2	1,4	0,01	0,01	0,02	59,8
3	R2	9	6,0	0,330	9,3	LOS A	0,2	1,4	0,03	0,01	0,03	57,4
Approach		1269	6,0	0,330	0,2	NA	0,2	1,4	0,01	0,01	0,02	59,8
East: Church Street E												
4	L2	7	6,0	4,068	1464,8	LOS F	29,5	216,9	1,00	1,51	3,18	2,1
5	T1	1	6,0	4,068	1498,9	LOS F	29,5	216,9	1,00	1,51	3,18	2,1
6	R2	71	6,0	4,068	1512,8	LOS F	29,5	216,9	1,00	1,51	3,18	2,1
Approach		79	6,0	4,068	1508,1	LOS F	29,5	216,9	1,00	1,51	3,18	2,1
North: Beach Road N												
7	L2	29	6,0	0,130	5,6	LOS A	0,0	0,0	0,00	0,07	0,00	57,4
8	T1	442	6,0	0,130	0,7	LOS A	0,3	2,4	0,05	0,04	0,05	58,8
9	R2	4	6,0	0,130	22,1	LOS C	0,3	2,4	0,10	0,01	0,10	56,0
Approach		476	6,0	0,130	1,2	NA	0,3	2,4	0,04	0,04	0,04	58,7
West: Shopping Centre W												
10	L2	1	6,0	0,103	13,3	LOS B	0,3	2,0	0,96	1,00	0,96	20,7
11	T1	1	6,0	0,103	142,3	LOS F	0,3	2,0	0,96	1,00	0,96	20,7
12	R2	1	6,0	0,103	192,3	LOS F	0,3	2,0	0,96	1,00	0,96	20,6
Approach		3	6,0	0,103	116,0	LOS F	0,3	2,0	0,96	1,00	0,96	20,6
All Vehicles		1827	6,0	4,068	65,8	NA	29,5	216,9	0,07	0,08	0,16	27,5

MOVEMENT SUMMARY

Site: 1v [Beach&Church - 2021 Base+Dev PM]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	6	6,0	0,157	5,6	LOS A	0,0	0,0	0,00	0,01	0,00	57,9
2	T1	488	6,0	0,157	1,2	LOS A	0,8	6,0	0,13	0,04	0,13	58,3
3	R2	26	6,0	0,157	14,1	LOS B	0,8	6,0	0,33	0,09	0,33	53,9
Approach		521	6,0	0,157	1,9	NA	0,8	6,0	0,14	0,04	0,14	58,1
East: Church Street E												
4	L2	20	6,0	0,951	107,9	LOS F	5,0	36,7	0,97	1,33	2,19	16,3
5	T1	1	6,0	0,951	169,6	LOS F	5,0	36,7	0,97	1,33	2,19	16,3
6	R2	40	6,0	0,951	191,4	LOS F	5,0	36,7	0,97	1,33	2,19	16,2
Approach		61	6,0	0,951	163,7	LOS F	5,0	36,7	0,97	1,33	2,19	16,2
North: Beach Road N												
7	L2	71	6,0	0,253	5,6	LOS A	0,0	0,0	0,00	0,09	0,00	57,3
8	T1	878	6,0	0,253	0,1	LOS A	0,2	1,6	0,02	0,05	0,03	59,4
9	R2	13	6,0	0,253	9,1	LOS A	0,2	1,6	0,05	0,02	0,05	57,2
Approach		961	6,0	0,253	0,6	NA	0,2	1,6	0,02	0,05	0,02	59,2
West: Shopping Centre W												
10	L2	3	6,0	0,160	10,0	LOS B	0,4	3,3	0,90	0,95	0,90	30,1
11	T1	1	6,0	0,160	72,0	LOS F	0,4	3,3	0,90	0,95	0,90	30,0
12	R2	6	6,0	0,160	83,9	LOS F	0,4	3,3	0,90	0,95	0,90	29,9
Approach		11	6,0	0,160	60,6	LOS F	0,4	3,3	0,90	0,95	0,90	30,0
All Vehicles		1554	6,0	0,951	7,9	NA	5,0	36,7	0,11	0,11	0,15	53,0

MOVEMENT SUMMARY

Site: 1v [Beach&Church - 2021 Base+Dev Saturday]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	40	6,0	0,148	5,6	LOS A	0,0	0,0	0,00	0,08	0,00	57,3
2	T1	456	6,0	0,148	0,5	LOS A	0,5	3,5	0,09	0,08	0,09	58,7
3	R2	28	6,0	0,148	9,5	LOS A	0,5	3,5	0,20	0,08	0,20	55,8
Approach		524	6,0	0,148	1,4	NA	0,5	3,5	0,09	0,08	0,09	58,4
East: Church Street E												
4	L2	35	6,0	0,493	18,5	LOS C	2,2	15,9	0,78	1,07	1,17	36,8
5	T1	9	6,0	0,493	45,6	LOS E	2,2	15,9	0,78	1,07	1,17	36,8
6	R2	44	6,0	0,493	51,9	LOS F	2,2	15,9	0,78	1,07	1,17	36,6
Approach		88	6,0	0,493	38,1	LOS E	2,2	15,9	0,78	1,07	1,17	36,7
North: Beach Road N												
7	L2	48	6,0	0,157	5,6	LOS A	0,0	0,0	0,00	0,10	0,00	57,2
8	T1	555	6,0	0,157	0,0	LOS A	0,0	0,1	0,00	0,04	0,00	59,6
9	R2	1	6,0	0,157	8,7	LOS A	0,0	0,1	0,01	0,00	0,01	57,6
Approach		604	6,0	0,157	0,5	NA	0,0	0,1	0,00	0,05	0,00	59,4
West: Shopping Centre W												
10	L2	3	6,0	0,496	20,5	LOS C	1,9	14,2	0,91	1,08	1,25	32,8
11	T1	18	6,0	0,496	47,1	LOS E	1,9	14,2	0,91	1,08	1,25	32,8
12	R2	40	6,0	0,496	54,4	LOS F	1,9	14,2	0,91	1,08	1,25	32,6
Approach		61	6,0	0,496	50,5	LOS F	1,9	14,2	0,91	1,08	1,25	32,7
All Vehicles		1278	6,0	0,496	5,8	NA	2,2	15,9	0,14	0,18	0,18	54,5

MOVEMENT SUMMARY

STOP Site: 1v [Beach&Church - 2026 Base+Dev AM]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	7	6,0	0,383	5,7	LOS A	0,0	0,0	0,00	0,01	0,00	57,9
2	T1	1452	6,0	0,383	0,1	LOS A	0,3	2,0	0,02	0,01	0,02	59,8
3	R2	11	6,0	0,383	10,6	LOS B	0,3	2,0	0,03	0,01	0,04	57,3
Approach		1469	6,0	0,383	0,2	NA	0,3	2,0	0,02	0,01	0,02	59,8
East: Church Street E												
4	L2	7	6,0	11,733	4972,3	LOS F	53,3	392,4	1,00	1,25	2,11	0,7
5	T1	1	6,0	11,733	4998,2	LOS F	53,3	392,4	1,00	1,25	2,11	0,7
6	R2	80	6,0	11,733	5010,9	LOS F	53,3	392,4	1,00	1,25	2,11	0,7
Approach		88	6,0	11,733	5007,6	LOS F	53,3	392,4	1,00	1,25	2,11	0,7
North: Beach Road N												
7	L2	34	6,0	0,156	5,6	LOS A	0,0	0,0	0,00	0,07	0,00	57,5
8	T1	511	6,0	0,156	1,6	LOS A	0,8	5,6	0,07	0,04	0,07	57,9
9	R2	5	6,0	0,156	31,7	LOS D	0,8	5,6	0,15	0,01	0,15	54,2
Approach		549	6,0	0,156	2,2	NA	0,8	5,6	0,07	0,04	0,07	57,8
West: Shopping Centre W												
10	L2	1	6,0	0,254	66,2	LOS F	0,6	4,6	0,99	1,01	1,02	9,8
11	T1	1	6,0	0,254	365,1	LOS F	0,6	4,6	0,99	1,01	1,02	9,8
12	R2	1	6,0	0,254	505,7	LOS F	0,6	4,6	0,99	1,01	1,02	9,8
Approach		3	6,0	0,254	312,3	LOS F	0,6	4,6	0,99	1,01	1,02	9,8
All Vehicles		2111	6,0	11,733	211,0	NA	53,3	392,4	0,07	0,07	0,12	12,6

MOVEMENT SUMMARY

STOP Site: 1v [Beach&Church - 2026 Base+Dev PM]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	7	6,0	0,189	5,6	LOS A	0,0	0,0	0,00	0,01	0,00	57,9
2	T1	564	6,0	0,189	1,7	LOS A	1,2	9,1	0,15	0,04	0,15	57,7
3	R2	28	6,0	0,189	17,5	LOS C	1,2	9,1	0,41	0,09	0,42	52,4
Approach		600	6,0	0,189	2,5	NA	1,2	9,1	0,16	0,04	0,17	57,5
East: Church Street E												
4	L2	21	6,0	1,891	492,3	LOS F	15,4	113,3	1,00	1,65	3,49	5,6
5	T1	1	6,0	1,891	548,3	LOS F	15,4	113,3	1,00	1,65	3,49	5,6
6	R2	43	6,0	1,891	571,3	LOS F	15,4	113,3	1,00	1,65	3,49	5,6
Approach		65	6,0	1,891	545,4	LOS F	15,4	113,3	1,00	1,65	3,49	5,6
North: Beach Road N												
7	L2	80	6,0	0,293	5,6	LOS A	0,0	0,0	0,00	0,08	0,00	57,3
8	T1	1015	6,0	0,293	0,2	LOS A	0,3	2,4	0,03	0,05	0,03	59,3
9	R2	15	6,0	0,293	10,3	LOS B	0,3	2,4	0,06	0,02	0,06	57,1
Approach		1109	6,0	0,293	0,7	NA	0,3	2,4	0,03	0,05	0,03	59,2
West: Shopping Centre W												
10	L2	4	6,0	0,337	35,1	LOS E	0,9	7,0	0,95	1,01	1,06	19,8
11	T1	1	6,0	0,337	147,3	LOS F	0,9	7,0	0,95	1,01	1,06	19,8
12	R2	7	6,0	0,337	170,0	LOS F	0,9	7,0	0,95	1,01	1,06	19,8
Approach		13	6,0	0,337	123,1	LOS F	0,9	7,0	0,95	1,01	1,06	19,8
All Vehicles		1787	6,0	1,891	22,1	NA	15,4	113,3	0,11	0,11	0,21	43,0

MOVEMENT SUMMARY

STOP Site: 1v [Beach&Church - 2026 Base+Dev Saturday]

New Site
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Beach Road S												
1	L2	46	6,0	0,171	5,6	LOS A	0,0	0,0	0,00	0,08	0,00	57,3
2	T1	526	6,0	0,171	0,6	LOS A	0,6	4,3	0,10	0,08	0,10	58,6
3	R2	29	6,0	0,171	10,6	LOS B	0,6	4,3	0,21	0,07	0,21	55,6
Approach		602	6,0	0,171	1,5	NA	0,6	4,3	0,10	0,08	0,10	58,3
East: Church Street E												
4	L2	37	6,0	0,791	48,8	LOS E	4,4	32,0	0,89	1,28	1,91	26,0
5	T1	11	6,0	0,791	89,4	LOS F	4,4	32,0	0,89	1,28	1,91	26,0
6	R2	49	6,0	0,791	100,0	LOS F	4,4	32,0	0,89	1,28	1,91	25,9
Approach		97	6,0	0,791	79,4	LOS F	4,4	32,0	0,89	1,28	1,91	26,0
North: Beah Road N												
7	L2	55	6,0	0,181	5,6	LOS A	0,0	0,0	0,00	0,09	0,00	57,2
8	T1	641	6,0	0,181	0,0	LOS A	0,0	0,1	0,00	0,04	0,00	59,6
9	R2	1	6,0	0,181	9,5	LOS A	0,0	0,1	0,01	0,00	0,01	57,6
Approach		697	6,0	0,181	0,5	NA	0,0	0,1	0,00	0,05	0,00	59,4
West: Shopping Centre W												
10	L2	3	6,0	0,847	63,5	LOS F	4,1	30,1	0,98	1,23	1,93	21,4
11	T1	21	6,0	0,847	103,5	LOS F	4,1	30,1	0,98	1,23	1,93	21,4
12	R2	46	6,0	0,847	115,4	LOS F	4,1	30,1	0,98	1,23	1,93	21,4
Approach		71	6,0	0,847	109,6	LOS F	4,1	30,1	0,98	1,23	1,93	21,4
All Vehicles		1466	6,0	0,847	11,3	NA	4,4	32,0	0,15	0,20	0,26	50,4

Beach Road and Access 1

MOVEMENT SUMMARY

STOP Site: 2v [Mission&Access 1 - 2021 Base+Dev AM]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Mission Street												
5	T1	697	6,0	0,379	0,2	LOS A	0,4	3,3	0,06	0,03	0,07	59,5
6	R2	32	6,0	0,379	7,6	LOS A	0,4	3,3	0,06	0,03	0,07	56,9
Approach		728	6,0	0,379	0,5	NA	0,4	3,3	0,06	0,03	0,07	59,4
North: Access 1												
7	L2	25	6,0	0,118	9,7	LOS A	0,4	2,8	0,56	0,92	0,56	47,5
9	R2	21	6,0	0,118	22,0	LOS C	0,4	2,8	0,56	0,92	0,56	47,1
Approach		46	6,0	0,118	15,3	LOS C	0,4	2,8	0,56	0,92	0,56	47,3
West: Mission Street												
10	L2	28	6,0	0,180	5,6	LOS A	0,0	0,0	0,00	0,57	0,00	53,8
11	T1	308	6,0	0,180	5,0	LOS A	0,0	0,0	0,00	0,57	0,00	53,5
Approach		337	6,0	0,180	5,0	NA	0,0	0,0	0,00	0,57	0,00	53,5
All Vehicles		1112	6,0	0,379	2,5	NA	0,4	3,3	0,07	0,23	0,07	56,9

MOVEMENT SUMMARY

STOP Site: 2v [Mission&Access 1 - 2021 Base+Dev PM]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Mission Street												
5	T1	262	6,0	0,207	1,4	LOS A	0,9	6,3	0,32	0,14	0,32	57,3
6	R2	63	6,0	0,207	9,2	LOS A	0,9	6,3	0,32	0,14	0,32	54,9
Approach		325	6,0	0,207	2,9	NA	0,9	6,3	0,32	0,14	0,32	56,8
North: Access 1												
7	L2	61	6,0	0,289	12,6	LOS B	1,1	8,2	0,69	1,04	0,81	47,3
9	R2	64	6,0	0,289	19,1	LOS C	1,1	8,2	0,69	1,04	0,81	46,8
Approach		125	6,0	0,289	16,0	LOS C	1,1	8,2	0,69	1,04	0,81	47,0
West: Mission Street												
10	L2	66	6,0	0,327	5,6	LOS A	0,0	0,0	0,00	0,57	0,00	53,7
11	T1	544	6,0	0,327	5,0	LOS A	0,0	0,0	0,00	0,57	0,00	53,5
Approach		611	6,0	0,327	5,1	NA	0,0	0,0	0,00	0,57	0,00	53,5
All Vehicles		1061	6,0	0,327	5,7	NA	1,1	8,2	0,18	0,49	0,19	53,6

MOVEMENT SUMMARY

STOP Site: 2v [Mission&Access 1 - 2021 Base+Dev Saturday]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Queue Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m				km/h
East: Mission Street												
5	T1	344	6,0	0,237	0,7	LOS A	0,7	5,5	0,23	0,11	0,23	58,2
6	R2	65	6,0	0,237	8,0	LOS A	0,7	5,5	0,23	0,11	0,23	55,7
Approach		409	6,0	0,237	1,9	NA	0,7	5,5	0,23	0,11	0,23	57,8
North: Access 1												
7	L2	65	6,0	0,280	10,9	LOS B	1,1	8,1	0,59	1,00	0,67	48,3
9	R2	79	6,0	0,280	16,7	LOS C	1,1	8,1	0,59	1,00	0,67	47,9
Approach		144	6,0	0,280	14,1	LOS B	1,1	8,1	0,59	1,00	0,67	48,1
West: Mission Street												
10	L2	79	6,0	0,244	5,6	LOS A	0,0	0,0	0,00	0,57	0,00	53,7
11	T1	375	6,0	0,244	5,0	LOS A	0,0	0,0	0,00	0,57	0,00	53,4
Approach		454	6,0	0,244	5,1	NA	0,0	0,0	0,00	0,57	0,00	53,5
All Vehicles		1007	6,0	0,280	5,1	NA	1,1	8,1	0,18	0,44	0,19	54,2

MOVEMENT SUMMARY

STOP Site: 2v [Mission&Access 1 - 2026 Base+Dev AM]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Queue Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m				km/h
East: Mission Street												
5	T1	809	6,0	0,438	0,2	LOS A	0,6	4,3	0,07	0,02	0,08	59,5
6	R2	32	6,0	0,438	8,3	LOS A	0,6	4,3	0,07	0,02	0,08	56,9
Approach		841	6,0	0,438	0,5	NA	0,6	4,3	0,07	0,02	0,08	59,4
North: Access 1												
7	L2	25	6,0	0,161	10,1	LOS B	0,5	3,6	0,67	0,93	0,67	45,5
9	R2	21	6,0	0,161	29,4	LOS D	0,5	3,6	0,67	0,93	0,67	45,1
Approach		46	6,0	0,161	18,9	LOS C	0,5	3,6	0,67	0,93	0,67	45,3
West: Mission Street												
10	L2	28	6,0	0,207	5,6	LOS A	0,0	0,0	0,00	0,57	0,00	53,8
11	T1	358	6,0	0,207	5,0	LOS A	0,0	0,0	0,00	0,57	0,00	53,5
Approach		386	6,0	0,207	5,0	NA	0,0	0,0	0,00	0,57	0,00	53,5
All Vehicles		1274	6,0	0,438	2,6	NA	0,6	4,3	0,07	0,22	0,08	56,9

MOVEMENT SUMMARY

STOP Site: 2v [Mission&Access 1 - 2026 Base+Dev PM]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Mission Street												
5	T1	297	6,0	0,236	1,8	LOS A	1,1	7,9	0,34	0,13	0,35	56,9
6	R2	63	6,0	0,236	10,3	LOS B	1,1	7,9	0,34	0,13	0,35	54,6
Approach		360	6,0	0,236	3,3	NA	1,1	7,9	0,34	0,13	0,35	56,5
North: Access 1												
7	L2	61	6,0	0,360	14,7	LOS B	1,4	10,4	0,77	1,06	0,98	45,3
9	R2	64	6,0	0,360	23,9	LOS C	1,4	10,4	0,77	1,06	0,98	44,9
Approach		125	6,0	0,360	19,4	LOS C	1,4	10,4	0,77	1,06	0,98	45,1
West: Mission Street												
10	L2	66	6,0	0,375	5,7	LOS A	0,0	0,0	0,00	0,57	0,00	53,7
11	T1	634	6,0	0,375	5,0	LOS A	0,0	0,0	0,00	0,57	0,00	53,5
Approach		700	6,0	0,375	5,1	NA	0,0	0,0	0,00	0,57	0,00	53,5
All Vehicles		1185	6,0	0,375	6,0	NA	1,4	10,4	0,18	0,49	0,21	53,3

MOVEMENT SUMMARY

STOP Site: 2v [Mission&Access 1 - 2026 Base+Dev Saturday]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Mission Street												
5	T1	402	6,0	0,271	0,8	LOS A	0,9	6,5	0,23	0,10	0,24	58,2
6	R2	65	6,0	0,271	8,6	LOS A	0,9	6,5	0,23	0,10	0,24	55,7
Approach		467	6,0	0,271	1,9	NA	0,9	6,5	0,23	0,10	0,24	57,8
North: Access 1												
7	L2	65	6,0	0,334	12,0	LOS B	1,4	10,0	0,67	1,04	0,84	46,9
9	R2	79	6,0	0,334	20,1	LOS C	1,4	10,0	0,67	1,04	0,84	46,5
Approach		144	6,0	0,334	16,4	LOS C	1,4	10,0	0,67	1,04	0,84	46,7
West: Mission Street												
10	L2	79	6,0	0,278	5,6	LOS A	0,0	0,0	0,00	0,57	0,00	53,7
11	T1	438	6,0	0,278	5,0	LOS A	0,0	0,0	0,00	0,57	0,00	53,4
Approach		517	6,0	0,278	5,1	NA	0,0	0,0	0,00	0,57	0,00	53,5
All Vehicles		1128	6,0	0,334	5,2	NA	1,4	10,0	0,18	0,43	0,21	54,2

Beach Road and Access 2

MOVEMENT SUMMARY

STOP Site: 2v [Church&Access 2 - 2021 Base+Dev AM]

Beach Road / Mission Street

Site Category: (None)

Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Access 2												
1	L2	11	6,0	0,017	8,5	LOS A	0,1	0,4	0,17	0,90	0,17	51,6
3	R2	8	6,0	0,017	8,2	LOS A	0,1	0,4	0,17	0,90	0,17	51,1
Approach		19	6,0	0,017	8,4	LOS A	0,1	0,4	0,17	0,90	0,17	51,4
East: Church Street												
4	L2	14	6,0	0,042	5,6	LOS A	0,0	0,0	0,00	0,10	0,00	57,2
5	T1	68	6,0	0,042	0,0	LOS A	0,0	0,0	0,00	0,10	0,00	59,1
Approach		82	6,0	0,042	0,9	NA	0,0	0,0	0,00	0,10	0,00	58,8
West: Church Street												
11	T1	31	6,0	0,022	5,0	LOS A	0,0	0,0	0,00	0,58	0,00	53,4
12	R2	11	6,0	0,022	5,5	LOS A	0,0	0,0	0,00	0,58	0,00	53,2
Approach		41	6,0	0,022	5,1	NA	0,0	0,0	0,00	0,58	0,00	53,4
All Vehicles		142	6,0	0,042	3,1	NA	0,1	0,4	0,02	0,34	0,02	56,1

MOVEMENT SUMMARY

STOP Site: 2v [Church&Access 2 - 2021 Base+Dev PM]

Beach Road / Mission Street

Site Category: (None)

Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Access 2												
1	L2	29	6,0	0,039	8,4	LOS A	0,1	1,0	0,10	0,94	0,10	51,6
3	R2	16	6,0	0,039	8,4	LOS A	0,1	1,0	0,10	0,94	0,10	51,0
Approach		45	6,0	0,039	8,4	LOS A	0,1	1,0	0,10	0,94	0,10	51,4
East: Church Street												
4	L2	22	6,0	0,028	5,6	LOS A	0,0	0,0	0,00	0,24	0,00	56,0
5	T1	32	6,0	0,028	0,0	LOS A	0,0	0,0	0,00	0,24	0,00	57,8
Approach		54	6,0	0,028	2,3	NA	0,0	0,0	0,00	0,24	0,00	57,1
West: Church Street												
11	T1	74	6,0	0,053	5,0	LOS A	0,0	0,0	0,00	0,58	0,00	53,4
12	R2	25	6,0	0,053	5,5	LOS A	0,0	0,0	0,00	0,58	0,00	53,2
Approach		99	6,0	0,053	5,1	NA	0,0	0,0	0,00	0,58	0,00	53,4
All Vehicles		198	6,0	0,053	5,1	NA	0,1	1,0	0,02	0,57	0,02	53,8

MOVEMENT SUMMARY

STOP Site: 2v [Church&Access 2 - 2021 Base+Dev Saturday]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Access 2												
1	L2	40	6,0	0,047	8,5	LOS A	0,2	1,3	0,14	0,92	0,14	51,6
3	R2	16	6,0	0,047	8,5	LOS A	0,2	1,3	0,14	0,92	0,14	51,1
Approach		56	6,0	0,047	8,5	LOS A	0,2	1,3	0,14	0,92	0,14	51,4
East: Church Street												
4	L2	21	6,0	0,036	5,6	LOS A	0,0	0,0	0,00	0,18	0,00	56,5
5	T1	48	6,0	0,036	0,0	LOS A	0,0	0,0	0,00	0,18	0,00	58,4
Approach		69	6,0	0,036	1,7	NA	0,0	0,0	0,00	0,18	0,00	57,8
West: Church Street												
11	T1	60	6,0	0,051	5,0	LOS A	0,0	0,0	0,00	0,58	0,00	53,4
12	R2	35	6,0	0,051	5,5	LOS A	0,0	0,0	0,00	0,58	0,00	53,1
Approach		95	6,0	0,051	5,2	NA	0,0	0,0	0,00	0,58	0,00	53,3
All Vehicles		220	6,0	0,051	4,9	NA	0,2	1,3	0,03	0,54	0,03	54,1

MOVEMENT SUMMARY

STOP Site: 2v [Church&Access 2 - 2026 Base+Dev AM]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Access 2												
1	L2	11	6,0	0,017	8,6	LOS A	0,1	0,4	0,19	0,90	0,19	51,6
3	R2	8	6,0	0,017	8,3	LOS A	0,1	0,4	0,19	0,90	0,19	51,1
Approach		19	6,0	0,017	8,5	LOS A	0,1	0,4	0,19	0,90	0,19	51,4
East: Church Street												
4	L2	14	6,0	0,047	5,6	LOS A	0,0	0,0	0,00	0,09	0,00	57,3
5	T1	79	6,0	0,047	0,0	LOS A	0,0	0,0	0,00	0,09	0,00	59,2
Approach		93	6,0	0,047	0,8	NA	0,0	0,0	0,00	0,09	0,00	58,9
West: Church Street												
11	T1	35	6,0	0,024	5,0	LOS A	0,0	0,0	0,00	0,58	0,00	53,5
12	R2	11	6,0	0,024	5,5	LOS A	0,0	0,0	0,00	0,58	0,00	53,2
Approach		45	6,0	0,024	5,1	NA	0,0	0,0	0,00	0,58	0,00	53,4
All Vehicles		157	6,0	0,047	3,0	NA	0,1	0,4	0,02	0,33	0,02	56,2

MOVEMENT SUMMARY

STOP Site: 2v [Church&Access 2 - 2026 Base+Dev PM]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Access 2												
1	L2	29	6,0	0,039	8,4	LOS A	0,1	1,1	0,11	0,94	0,11	51,5
3	R2	16	6,0	0,039	8,5	LOS A	0,1	1,1	0,11	0,94	0,11	51,0
Approach		45	6,0	0,039	8,4	LOS A	0,1	1,1	0,11	0,94	0,11	51,4
East: Church Street												
4	L2	22	6,0	0,030	5,6	LOS A	0,0	0,0	0,00	0,22	0,00	56,2
5	T1	37	6,0	0,030	0,0	LOS A	0,0	0,0	0,00	0,22	0,00	58,0
Approach		59	6,0	0,030	2,1	NA	0,0	0,0	0,00	0,22	0,00	57,3
West: Church Street												
11	T1	85	6,0	0,060	5,0	LOS A	0,0	0,0	0,00	0,58	0,00	53,5
12	R2	25	6,0	0,060	5,5	LOS A	0,0	0,0	0,00	0,58	0,00	53,2
Approach		111	6,0	0,060	5,1	NA	0,0	0,0	0,00	0,58	0,00	53,4
All Vehicles		215	6,0	0,060	5,0	NA	0,1	1,1	0,02	0,56	0,02	54,0

MOVEMENT SUMMARY

STOP Site: 2v [Church&Access 2 - 2026 Base+Dev Saturday]

Beach Road / Mission Street
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Access 2												
1	L2	40	6,0	0,048	8,5	LOS A	0,2	1,3	0,15	0,92	0,15	51,5
3	R2	16	6,0	0,048	8,6	LOS A	0,2	1,3	0,15	0,92	0,15	51,0
Approach		56	6,0	0,048	8,5	LOS A	0,2	1,3	0,15	0,92	0,15	51,4
East: Church Street												
4	L2	21	6,0	0,040	5,6	LOS A	0,0	0,0	0,00	0,16	0,00	56,7
5	T1	56	6,0	0,040	0,0	LOS A	0,0	0,0	0,00	0,16	0,00	58,5
Approach		77	6,0	0,040	1,5	NA	0,0	0,0	0,00	0,16	0,00	58,0
West: Church Street												
11	T1	69	6,0	0,057	5,0	LOS A	0,0	0,0	0,00	0,58	0,00	53,4
12	R2	35	6,0	0,057	5,5	LOS A	0,0	0,0	0,00	0,58	0,00	53,1
Approach		104	6,0	0,057	5,2	NA	0,0	0,0	0,00	0,58	0,00	53,3
All Vehicles		237	6,0	0,057	4,8	NA	0,2	1,3	0,04	0,52	0,04	54,3

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APPENDIX 6: WETLAND VERIFICATION ASSESSMENT

WATERCOURSE VERIFICATION

Erf 7379, Pacaltsdorp, George.

Prepared for Cape EAPrac

by

Dr. James M. Dabrowski

(Confluent Environmental)



DECLARATION OF SPECIALIST INDEPENDANCE

- I consider myself bound to the rules and ethics of the South African Council for Natural Scientific Professions (SACNASP);
- At the time of conducting the study and compiling this report I did not have any interest, hidden or otherwise, in the proposed development that this study has reference to, except for financial compensation for work done in a professional capacity;
- Work performed for this study was done in an objective manner. Even if this study results in views and findings that are not favourable to the client/applicant, I will not be affected in any manner by the outcome of any environmental process of which this report may form a part, other than being members of the general public;
- I declare that there are no circumstances that may compromise my objectivity in performing this specialist investigation. I do not necessarily object to or endorse any proposed developments, but aim to present facts, findings and recommendations based on relevant professional experience and scientific data;
- I do not have any influence over decisions made by the governing authorities;
- I undertake to disclose all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by a competent authority to such a relevant authority and the applicant;
- I have the necessary qualifications and guidance from professional experts in conducting specialist reports relevant to this application, including knowledge of the relevant Act, regulations and any guidelines that have relevance to the proposed activity;
- This document and all information contained herein is and will remain the intellectual property of Confluent Environmental. This document, in its entirety or any portion thereof, may not be altered in any manner or form, for any purpose without the specific and written consent of the specialist investigators.
- All the particulars furnished by me in this document are true and correct.



Specialist: Dr. James Dabrowski (Ph.D., Pr.Sci.Nat. Water Resources)

Date: 23 April 2021

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1. INTRODUCTION

Confluent Environmental was requested by Cape EAPrac to verify the presence of a possible watercourse on Erf 7379, Pacaltsdorp, George. A filling station and associated buildings and infrastructure are planned for the property. The property occurs within the urban extent of the city of George. The scope of work for this report is guided by the legislative definitions as specified by the National Water Act (NWA).

1.1 Definitions

The Department of Water & Sanitation (DWS) is the custodian of South Africa's water resources and therefore assumes public trusteeship of water resources, which includes watercourses, surface water, estuaries, or aquifers.

A watercourse means:

- A river or spring;
- A natural channel in which water flows regularly or intermittently;
- A wetland, lake or dam into which, or from which, water flows; and
- Any collection of water which the Minister may, by notice in the Gazette, declare to be watercourse, and
- A reference to a watercourse includes, where relevant, its bed and banks.

For the purposes of this assessment, a wetland area is defined according to the NWA (Act No. 36 of 1998) as:

“Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil”.

Wetlands must therefore have one or more of the following attributes to meet the NWA wetland definition (DWAF, 2005):

- A high water table that results in the saturation at or near the surface, leading to anaerobic conditions developing in the top 50 cm of the soil;
- Wetland or hydromorphic soils that display characteristics resulting from prolonged saturation, i.e. mottling or grey soils; and
- The presence of, at least occasionally, hydrophilic plants, i.e. hydrophytes (water loving plants).

1.2 Scope of Work

The objectives of this assessment included the following:

- A desktop and site assessment to verify the presence of a wetland on Erf 7379.

2. APPROACH

The following rationale was adopted to determine the presence of a watercourse on the site:

- Interrogation of available desktop resources including:
 - DWS spatial layers;
 - National Freshwater Ecosystem Priority Areas (NFEPA) spatial layers (Nel et al., 2011);
 - National Wetland Map 5 and Confidence Map (CSIR, 2018) – the latest national wetland inventory map for South Africa;
 - Western Cape Biodiversity and Spatial Plan (WCBSP) for George (CapeNature, 2017).
- A site visit was undertaken, during which time the following activities were undertaken:
 - Identification and classification of watercourses within the footprint of the site according to methods detailed in Ollis et al. (2013);
 - Soil augering to confirm the presence of soil indicators (DWAF, 2005) that may indicate the presence of a wetland (if applicable); and
 - Identification of hydrophilic plant species that may indicate the presence of wetland plant species (if applicable).

3. DESKTOP SURVEY

The site falls within Primary Catchment K (Kromme) and in quaternary catchment K30C (Figure 1). According to geospatial data sources, no watercourses (i.e. wetlands or streams) are indicated to occur within the footprint of the property (Figure 2). Furthermore, the site does not fall within a sub-quaternary catchment (SQC) that has been categorised as a Freshwater Ecosystem Priority Area (FEPA) or a Strategic Water Source Area (SWSA). The property is bordered by Church Street to the north, Beach Road to the west and Mission Street to the south (Figure 3).

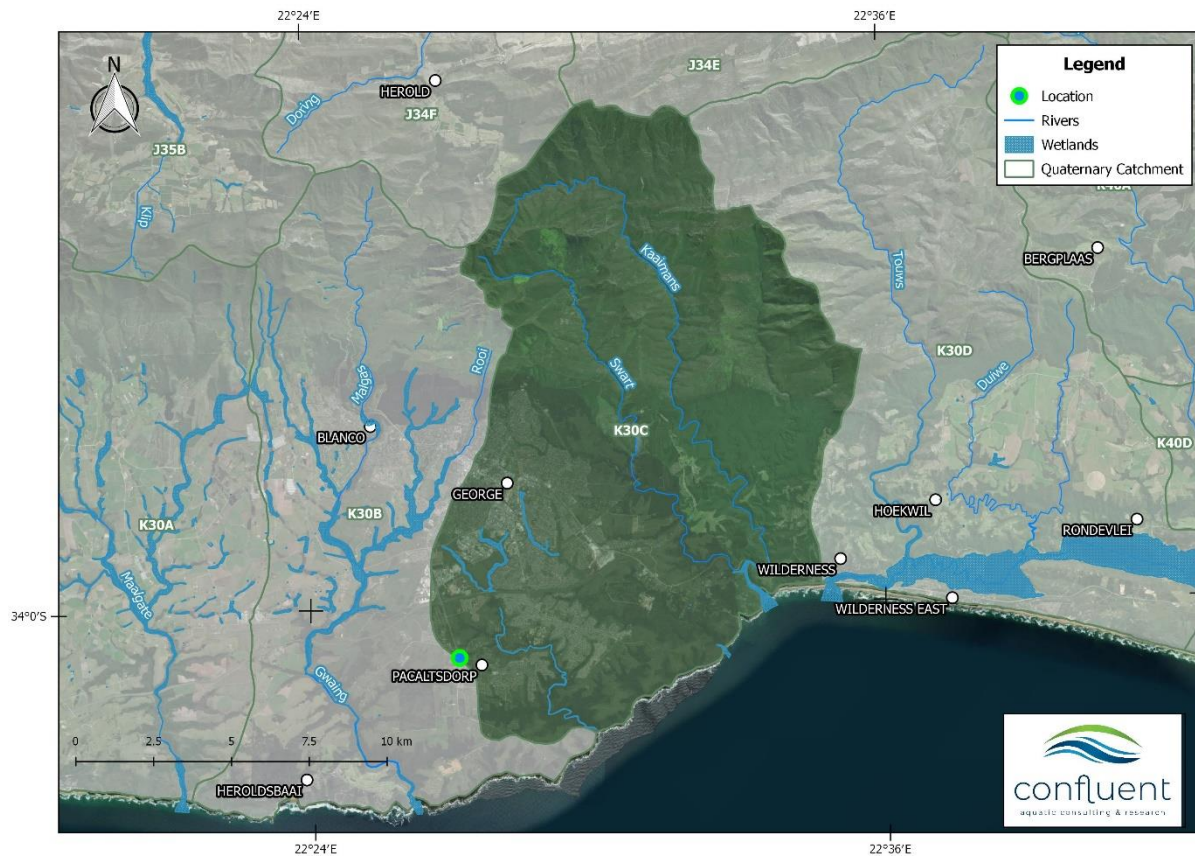


Figure 1: Location of the property.



Figure 2: Location of the property in relation to mapped freshwater features.

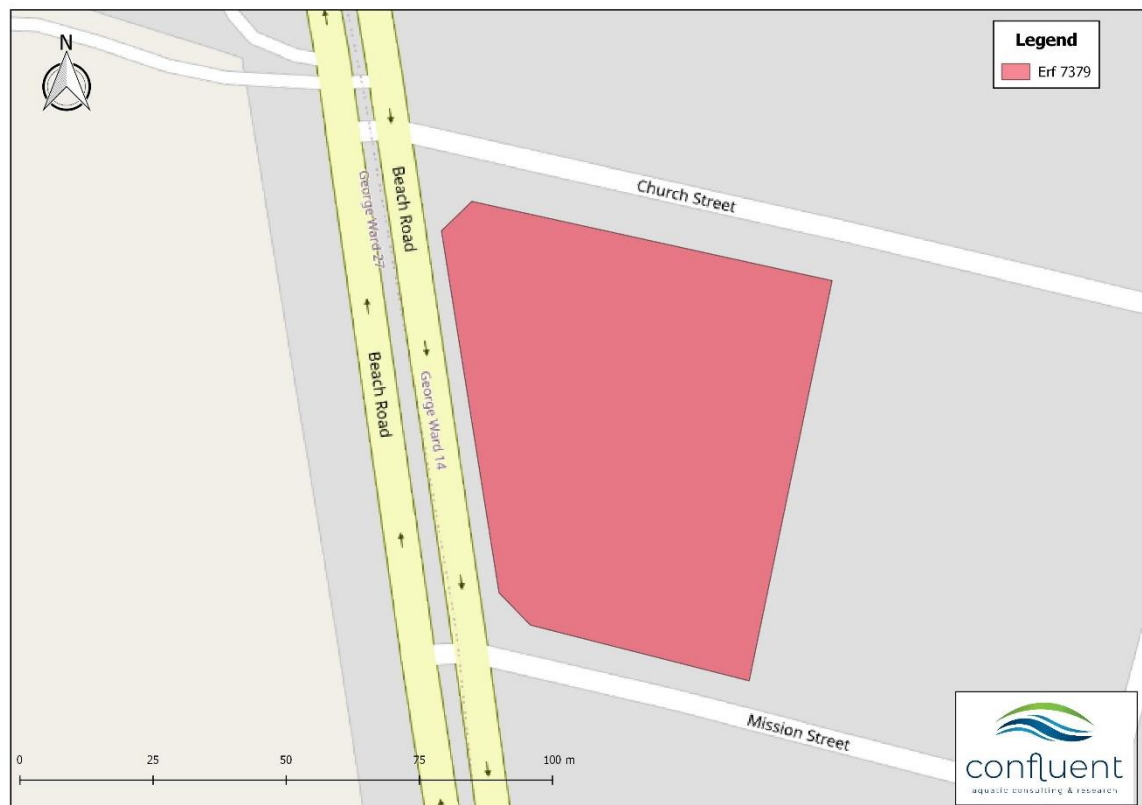


Figure 3: Location of property in relation to roads in Pacaltsdorp.

4. SITE VISIT

The site visit was undertaken on the 23rd of April 2021. The property consists of vacant land, which is crossed by several footpaths. Evidence of dumping and grazing by cattle was visible. The property slopes gently downwards from the south-east and north-west to form a natural low point drainage area that runs diagonally from the north-east to the south-west along the property. The visit confirmed the presence of an excavated linear, earthen drainage canal that runs along this low point (Figure 4). The canal receives stormwater from a headwall located along Church Street and conveys it through the property under Beach Road via a culvert and towards a natural watercourse west of Beach Road. There were no indicators of wetland conditions (i.e. wetland plant species or hydromorphic soils) on the slopes leading down towards the canal. There were some wetland plant species associated with the ditch, including *Arundo donax* at the headwall outlet from Church Street and some *Cyperus sp.* The canal is however clearly artificial (as could be seen by the placement of excavated soil along the length of the canal) and provides no natural freshwater habitat or ecological function. Photographs of the site can be viewed in Figure 5.



Figure 4: Location of stormwater canal.



Figure 5: Photographs showing stormwater headwall discharging into Erf 7397 from Church Street (A); excavated stormwater canal running from Church Street along Erf 7397 towards Beach Road (B) and stormwater inlet on Church Street (C).

5. CONCLUSION

There is no natural watercourse present on Erf 7379 and it is the opinion of this specialist that the further development of the property is acceptable from a freshwater ecosystem perspective.

6. REFERENCES

- CapeNature (2017). *2017 WCBSP George [Vector] 2017*. Available from the Biodiversity GIS website, downloaded on 26 March 2019
- Council for Scientific and Industrial Research (CSIR). (2018). National Wetland Map 5 and Confidence Map [Vector] 2018. Available from the Biodiversity GIS website, downloaded on 30 September 2020.
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- Nel, J.L., Driver, A., Strydom, W.F., Maherry, A., Peterson, C., Hill, L., Roux, D.J., Nienaber, S., van Deventer, H., Swartz, E. and Smith-Adao, L.B. (2011). Atlas of freshwater ecosystem priority areas in South Africa: Maps to support sustainable development of water resources. Water Research Commission Report No. TT 500/11.
- Ollis, D., Snaddon, K., Job, N., & Mbona, N. (2013). Classification system for wetlands and other aquatic ecosystems in South Africa. South African National Biodiversity Institute.

APPENDIX 7: BULK SERVICES AND STORMWATER MANAGEMENT PLAN



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Civil Services report for Proposed Development of Erf 7379, Pacaltsdorp

Alaine Peo

14 November 2023



Directors: Henk Roux Pr Eng

•

Stephen Brand Pr Eng

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2. Introduction

We as DVP Incorporated Consulting Engineers were appointed by the client, Pacaltsprodev (Pty) Ltd to compile a Services Report for submission to the local authority. As part of this process, the availability of existing municipal infrastructure in relation to the proposed development must be investigated.

This report is aimed at outlining the design philosophy that will be applied when designing the internal engineering services for the proposed development. It is also aimed at providing relevant data so that the local authority can comment on their ability to accommodate the additional loads generated by the proposed development on existing infrastructure.

3. References for Design Criteria

Various recognised design standard documents and guidelines have been used as the design criteria and standards for the provision of internal engineering services for the proposed development.

These include:

- Guidelines for the Provision of Engineering Services for Residential Townships (Blue Book)
- The Neighbourhood Planning and Design Guide (Red Book)
- Guidelines for Urban Stormwater Management (UTG4)
- Structural Design of Urban Roads (UTG3)
- Geometric Design of Urban Collector Roads (UTG5)
- Guidelines of Road Construction Materials (TRH14)
- Structural Design of Interurban and Rural Roads (TRH4)
- George Municipality: Stormwater By-law
- George Municipality: By-law Relating to Streets, Sidewalks and Public Places
- George Municipality: Public Transport By-law
- George Municipality: Water and Sanitation By-law
- George Municipality: Water Services By-law to Restrict the Use of Water

All materials, techniques and measurement will be according to the latest relevant SABS specifications, specifically the SABS1200, ***The Standardised Specification for Civil Engineering Construction***

4. Proposed development

The Proposed development will consist of a filling station combined with a Drive through and a line shop of which the total GLE calculates to 863m².

The resultant area comprises of a yard area, electrical room, Refuse room, toilets, roads, and parking's.

A comprehensive geotechnical investigation must be done for input from structural and civil engineer.

There are currently no structures on the site.

The site is covered with medium to sparse grass.

6. Stormwater

Municipal Stormwater System

The site is intersected by a stormwater furrow, which descends from the northern boundary to the western boundary. This watercourse enters the site from the northern direction via a stormwater pipe beneath Church Street and subsequently departs from the site to the west through another box culvert positioned beneath Beach Road. Further to the west, the watercourse discharges into Erf 7387.

Notably, the elevation at the northern culvert is 200.90, whereas at the western culvert, is 199.45. The overall length of the stormwater furrow spans 58 meters. Consequently, the calculated average gradient of this watercourse equates to 1:40.

The Existing water furrow is to be re routed outside the erf boundaries of erf 7379 at the cost of the developer.

On the northern perimeter of the site, a piped system is situated within Church Street, directing its flow from west to east.

Conversely, on the southern boundary of the site, a separate piped system can be found within Mission Road, facilitating a west-to-east directional flow.

Runoff and Flow

This will be discussed briefly in this report. For more details and calculations, please refer to the separate Stormwater Management Plan compiled by DVP Consulting Engineers.

The basic design principles can be summarised as follows:

“Storage or attenuation/infiltration measures must provide for the difference between the Pre-development and Post-development 10-year storm runoffs generated/calculated.”

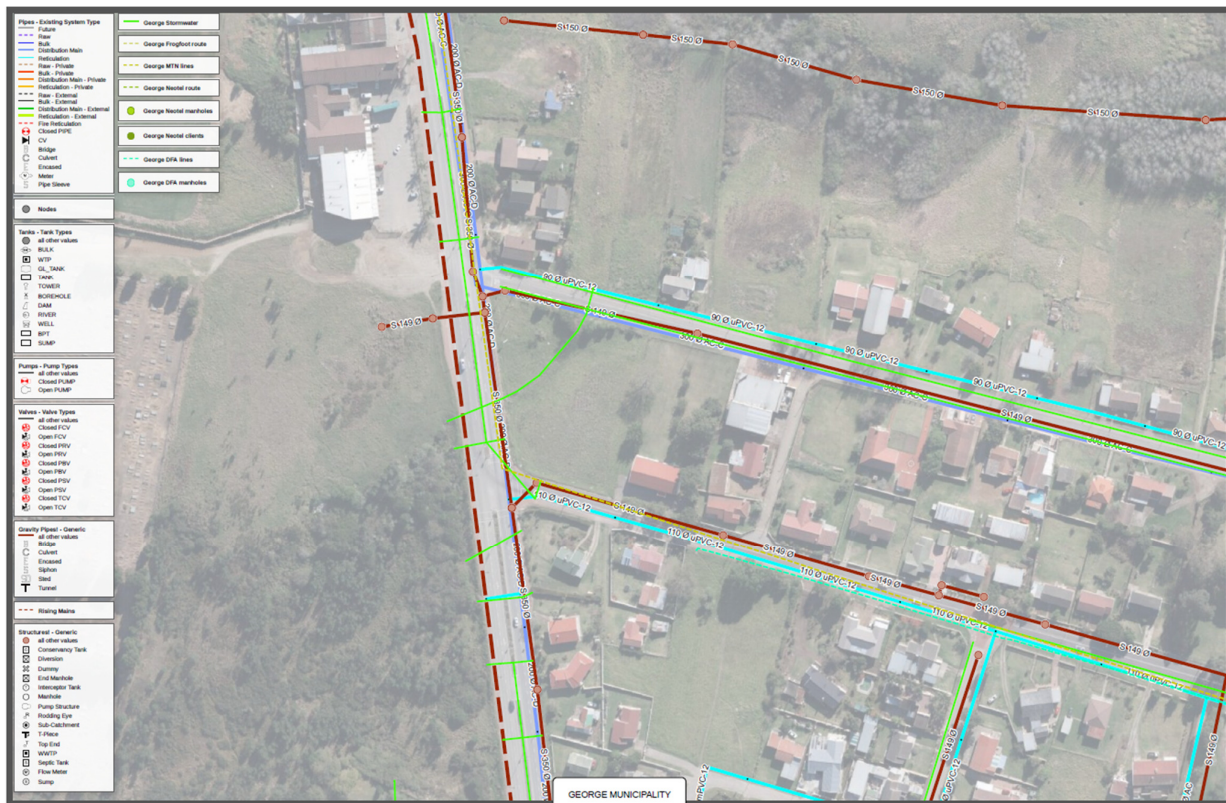
“The rate of outflow for any recurrence interval storm must be restricted to the pre-development runoff flow. The discharge may not exceed the pre-development flows in litres/second.”

The minor system will be designed to cater for the 1:5year return storm, and overland flow will be restricted to 60m. Roads and parking areas will be shaped to the main drainage routes and will be finished in material that will prevent scouring and erosion. The parking areas will also be designed in such a way as to temporarily retain the major storms, to relieve pressure on the main drainage routes.

Detailed design of the underground system will be completed with input from the Architect.

Groundwater

Ground water is present on site, A comprehensive geotechnical investigation must be done to confirm the extent of ground water present.



Existing stormwater infrastructure around the site (indicated in green)

Materials

Stormwater pipes will generally be Class 100D pre-cast concrete pipes with spigot and socket joints, laid on a Class B bed. Minimum pipe diameters on main lines will be 375 millimetres. Pipe diameters of catchpit links to be 300 millimetres. The minimum cover on stormwater pipes will generally be 0,8 metres under sidewalks and 1,0 metre at road crossings. Pipes under roadways shall be bedded and backfilled with clean sand compacted to 100% Mod AASHTO and pipes in other areas with approved backfill material compacted to 90% Mod AASHTO. Brick built catchpits with double cast iron grid inlets will be constructed to collect surface water. Pre-cast concrete ring manholes with precast concrete top slabs with ductile iron covers and frames will be constructed. Sub-surface drainage will be installed in appropriate areas to act as cut-off drains. Perforated pipes (110-millimetre diameter) in stone bedding and blanket with appropriate geofabric filter surround will be used. All subsoil runs will not exceed 60m and will terminate in a cleaning eye.

Layout

The minor stormwater system will be designed as a system of underground pipes, with associated structures to accommodate the runoff of a 1 in 5-year storm event. Flows will be piped to temporary stormwater retention facilities.

The emergency system recognises failure or malfunction of the minor and / or major systems by providing continuous overland flow routes in order to minimise flooding of residential areas. As with the pipes flows, these overland flow routes will be to retention facilities.

Detailed design of the underground system will be completed with input from the Architect.

See the separate **Stormwater Management Plan** for the proposed layout of the infrastructure.

7. Foul Sewer

The sewer system will be designed as a conventional waterborne gravity reticulation system. There are currently 2 possible connection points to the municipal infrastructure. The first is on the north of the development in Church Street. The second is on the south in Mission Street. Connection is to be made with a new manhole on the existing sewer line.

Discharge and Flow

The flows are calculated as follows:

ADDf= 4.248 Kl/Day

PDDWF= 5.523 Kl/day

IPDWF= 7.17 Kl/day

IPDWWF= 10.341 Kl/day

A peak factor of 1.3 is used.

Ground infiltration rate of 0.03 L/min/m pipe/ m diameter is used.

15% stormwater ingress is allowed for.

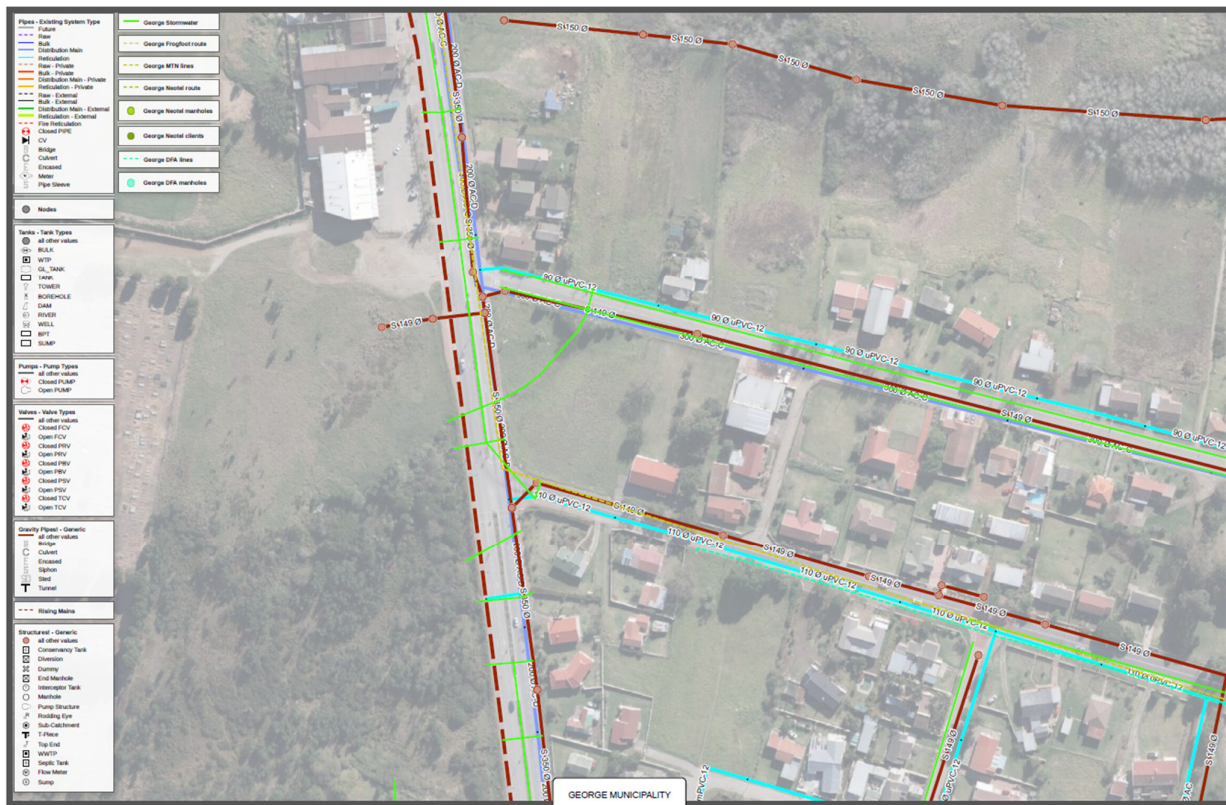
A minimum flow velocity of 0.7m/second will be achieved at least once per day to enable “self-cleaning” of the lines.

Materials

Pipes will be standard length, Class 34 heavy duty, solid wall uPVC pipes for both the main lines and the individual building connections, both on a bed suitable for flexible pipes. Minimum pipe diameter will be 160 millimetres for main lines and 110 millimetres for building connections. A minimum cover of 0,9 metres over all pipes outside trafficked areas and 1,2 metres in road reserves will be allowed. Pipes under roadways will be bedded and backfilled with clean sand compacted to 100% Mod AASHTO and pipes in other areas with approved backfill material compacted to 90% Mod AASHTO. Pre-cast concrete ring manholes (suitably waterproofed) with flexible pipe connections will be used. Covers and frames will be Type 2A (modified) hinged ductile iron throughout.

Layout

Main lines will generally be located in road reserves. Minimum grade on main lines of 1:150 and minimum grade on building connections of 1:60 will be applied. A maximum distance between manholes of 90 metres will be allowed. There shall be no change in flow direction where the internal angle of change is less than 90°.



Existing municipal sewer infrastructure (indicated in brown)

General

On completion, air pressure testing and mirror testing of the system will be carried out in the presence of the Engineer and representatives of the Local Authority.

8. Potable Water

The water system will be designed as a conventional medium pressure reticulation network.

The minimum water connection pipe size required for the development is 110mm diameter.

There are three possible connection points, the first being a 110mm UPVC reticulation pipe located in Mission Street to the south of the site. The second point is a 200mm asbestos-cement (AC) distribution main located in beach road to the west of the south. The third possible connection point is a 300mm asbestos-cement (AC) distribution main located to the north of the site in church street.

Municipal Supply System

The site is encircled by a multitude of water infrastructure components.

To the North, situated in Church Street, there is a 300mm asbestos-cement (AC) distribution main in conjunction with a 90mm (UPVC) reticulation pipe.

To the West of the site, positioned in Beach Road, there is a 200mm asbestos-cement (AC) distribution main.

To the South of the site, within Mission Street, there is an existing 110mm UPVC reticulation pipe.

Consumption and Flows

The flows are calculated as follows:

AADD= 6.904 Kl/Day

TAADD = 8.122 Kl/day

Peak demand= 13.07 Kl/day

A peak factor of 1.7 is used.

15% real losses are allowed for.

The fire demand will determine the instantaneous peak demand in the supply. A maximum head of 90m under static flow conditions will be designed for. A minimum instantaneous peak head of 24m will be designed for. The development will be provided with a 110mm connection, which will be metered using an 80mm bulk combination water meter that will be installed by a specialist contractor recommended by the local authority.

Fire Flow

The development can be classified as “High Risk” with a required flow of 200 litres/second. There must be a minimum residual head of 15m at peak demand with superimposed fire flow from one hydrant.

Materials

Minimum pipe diameter of 110 mm will be installed. Pipes will be SABS approved (SABS 966), standard length, Class 12 uPVC pipes on a bed suitable for flexible pipes. All uPVC pipes to utilise standard uPVC Z-lock couplings. Bends will be uPVC Class 12, but tees and crosses will be cast iron. Minimum cover on water pipes will be 0,9 metres. Specifications for valves as follows: -AVK or similar approved Class 16, left-hand closing isolation valves with non-rising spindles in brick built chambers with CI bell tobies. Underground type fire hydrants with London round screw thread and appropriate extensions and specials in brick built chambers with CI Type 5 FH box with appropriate lettering. Pipes under roadways will be bedded and backfilled with clean, imported sand compacted to 100% Mod AASHTO and pipes in other areas with approved backfill material compacted to 90% Mod AASHTO. Thrust blocks will be cast using Class 20/19 concrete throughout.

Layout

Pipes shall not have a longitudinal grade of less than 0,5%. Fire hydrants shall be located not more than 90 metres apart. Fire hydrants shall also be located to double as air release points or scour valves as required. The positions of all valves and hydrants shall be marked on the road kerbs opposite the valves. The minimum depth to invert on reticulation mains shall not be less than 900 millimetres and the minimum cover over shop connections shall not be less than 800 millimetres.

General

On completion, hydraulic testing of the system will be carried out in the presence of the Engineer and representatives of the Local Authority.

9. Roads

Access to the Property

Access to the property will be of both Church street and Mission Street for the development.

Both access points will serve as both entry and exit points.

Refuse will be collected from the refuse room provided in the yard area of the filling station. Adequate space is provided for movement of refuse trucks.

Materials

Subgrade CBR -7 to 15 minimum (in-situ sand / soil of G7 to G10 quality).

Subbase CBR -45 minimum at 95% Mod AASHTO (G5 quality).

Basecourse CBR -80 minimum at 98% Mod AASHTO (G3 quality).

Continuously graded hot asphalt premix with 80/100 penetration grade bitumen binder, compacted to 95% Marshall density.

Alternatively, 80 millimetre pre-cast interlocking concrete pavers on suitably designed layerworks may be used for aesthetic purposes in selected areas.

All road construction materials will be specified with due consideration for intended application, climatic conditions, level of stormwater system incorporated etc.

Material quality control tests and workmanship will be tested throughout the construction period in terms of the standard SABS test procedures for compliance with the specifications.

Layout

Parking bays will be 5m long by 2.5m wide perpendicular layout, with 7.5m aisle widths between bays. Pedestrian walkways with crossings will be provided for movement from the shops to the parked cars.

Precast concrete kerbs will be used on 75mm concrete bedding.

Minimum longitudinal grades will be 0.5%, and cross grades will be a minimum of 2%.

10. Solid Waste

The local authority will service the development as far as solid waste is concerned, and will collect refuse from the refuse room on the premises.

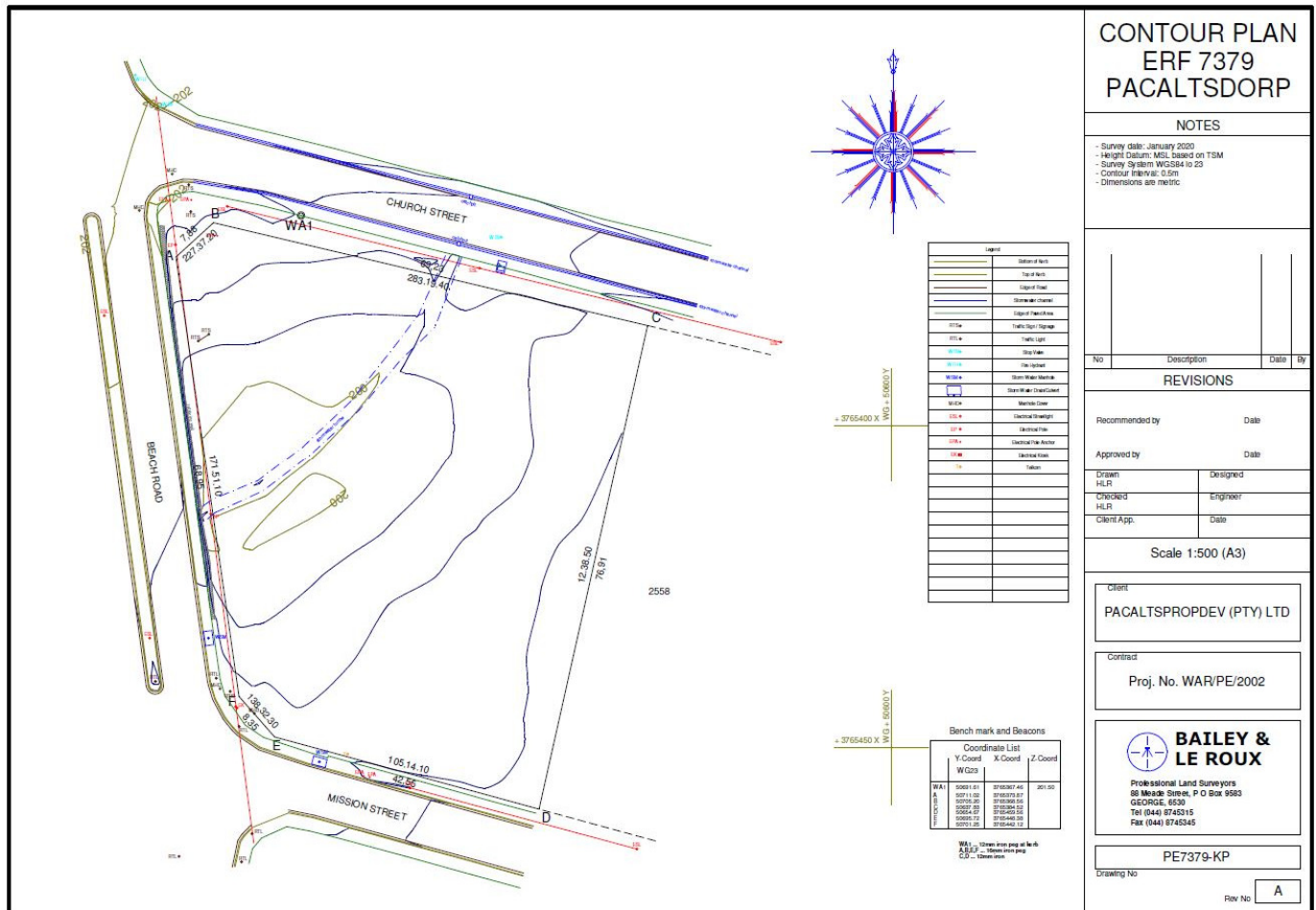
11. Recommendation

From our analysis of the existing and planned future civil engineering infrastructure, we are confident that the planned development can be adequately serviced.

Annexure A – Locality



Annexure B – Site Survey



Annexure C – Site Development Plan





DVP INC CONSULTING ENGINEERS

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Suite 225, Quays, Parklane, Century City, 7441

**STORMWATER MANAGEMENT PLAN FOR THE PROPOSED
DEVELOPMENT ON ERF 7379, PACALTS DORP.**

17 October 2023



Directors: Henk Roux Pr Eng

•

Stephen Brand Pr Eng

1. Table of contents

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2. Introduction

Our Stormwater Management Plan is aimed at outlining the design philosophy that will be applied when designing the minor and major stormwater services for the proposed development. It is also aimed at providing relevant data on existing municipal infrastructure, and the ability of this infrastructure to accommodate the proposed development.

3. Proposed & Existing Development

The Proposed development will consist of a filling station combined with a Drive through and a line shop of which the total GLE calculates to 863m².

The resultant area comprises of a yard area, electrical room, Refuse room, toilets, roads, and parking's.

The Site Development Plan (SDP) is presented in Annexure 1.

4. Site Location & Characteristics

Location

The site is described as Erf 7379, Pacaltsdorp. It is 4 663 m² in extent. The current zoning is Single Residential Zone I. The site is located at 34° 0'52.31"S; 22°27'4.90"E (50668.452 Y; 3765412.558 X). Pacaltsdorp Central is located to the east of the site.

The site is bordered on the northern side by Church Street. It is bordered on the east by Erf 2558. Mission Road forms the southern boundary. The site is bordered on the west by the Beach Road.

The location of the site is presented in Annexure 2.

Topography

The topography of the site is defined by the existing stormwater furrow creating a valley terrain. Generally, the northwestern portion falls from northwest to southeast; the southeastern portion falls from southeast to northwest. Generally, the site falls from northeast to southwest with the main stormwater furrow.

A comprehensive topographical survey of the site was completed and is attached as Annexure 3.

There are currently no structures on the site.

The site is covered with medium to sparse grass.

Soil and Geotechnical Conditions

A comprehensive geotechnical investigation must be done for input from structural and civil engineer.

5. Stormwater

Municipal Stormwater System

On the northern perimeter of the site, a piped system is situated within Church Street, directing its flow from west to east.

Conversely, on the southern boundary of the site, a separate piped system can be found within Mission Road, facilitating a west-to-east directional flow.

The site is intersected by a stormwater furrow, which descends from the northern boundary to the western boundary. This watercourse enters the site from the northern direction via a stormwater pipe beneath Church Street and subsequently departs from the site to the west through another box culvert positioned beneath Beach Road. Further to the west, the watercourse discharges into Erf 7387.

Runoff and Flow

The Province of the Western Cape: Provincial Gazette Extraordinary 8795 has been applied.

This requires that 1 in 10 year Post-development flows be limited to 1 in 10 year Pre-development levels, and that water quality be improved. Flows have been calculated using the Rational Method of flood calculation.

The minor system will be designed to cater for the 1:5 year return storm, and overland flow routes will be provided. Roads and parking areas will be shaped to the main drainage routes and will be finished in material that will prevent scouring and erosion.

Existing Water Courses and Bodies

There are no natural water courses on the property.

Existing stormwater infrastructure on the property

To the north of the site along Church Street, stormwater from erf 785, as per the municipal GIS diagram, is channelled underneath Church Street and released onto the proposed development through a headwall structure.

Additionally, at the same location where Church Street creates a low point, stormwater is gathered by a catchpit and then directed, via the same headwall, onto the proposed development.

Starting from the headwall entry point, a designated stormwater furrow is contoured to guide the water flow towards the western boundary of the site.

Upon reaching the western boundary, another stormwater headwall collects the stormwater. Subsequently, in accordance with the municipal GIS, the water flows beneath Beach Road and is discharged onto erf 7387.

Notably, the elevation at the northern culvert is 200.90, whereas at the western culvert, is 199.45. The overall length of the stormwater furrow spans 58 meters. Consequently, the calculated average gradient of this watercourse equates to 1:40.

The Existing water furrow is to be rerouted outside the erf boundaries of erf 7379 with cost being deductible from development contributions.



Stormwater furrow standing upstream looking towards western boundary



Discharge point on erf 7387

Proposed new stormwater infrastructure on the property.

New stormwater infrastructure will be required to service the proposed development.

Materials

Stormwater pipes will generally be Class 100D pre-cast concrete pipes with spigot and socket joints, laid on a Class B bed. Minimum pipe diameters on main lines will be 375 millimetres. Pipe diameters of catchpit links to be 300 millimetres. The minimum cover on stormwater pipes will generally be 0,8 metres under sidewalks and 1,0 metre at road crossings. Pipes will be bedded and backfilled with clean sand compacted to 95% Mod AASHTO density. Brick built catchpits with double cast iron grid inlets will be constructed to collect surface water. Pre-cast concrete ring manholes with precast concrete top slabs with ductile iron covers and frames will be constructed. Sub-surface drainage will be installed in appropriate areas to act as cut-off drains. Perforated pipes with bedding and blanket layers and appropriate geofabric filter surround will be used.

Layout

The minor stormwater system will be designed as a system of underground pipes, with associated manholes and catchpits and open channels to accommodate the runoff of a 1 in 5-year storm event.

Flows will be piped and accommodated in open channels to discharge into the existing bodies where it will be attenuated.

The emergency system recognises failure or malfunction of the minor system by providing continuous overland flow routes in order to disperse the stormwater into the attenuation facilities.

6. Applicable Conditions

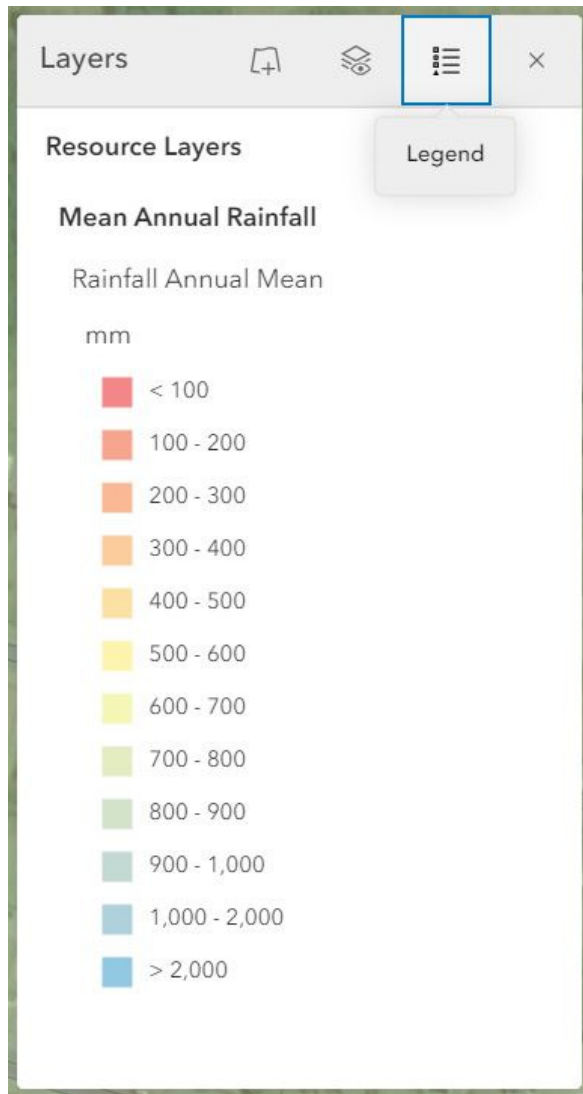
6.1 Rainfall

Rainfall information was obtained from Cap Farm Mapper 3

The mean annual rainfall can be seen on image extracted below.



From the legend below a mean annual rainfall of 800mm was used for calculation purposes



7. Pre-development flows

The site was treated as completely undeveloped for this calculation.

Ground Cover	Kerby Retardance Coefficient, r (Chin, 2000)
Conifer timberland, dense grass	0.80
Deciduous timberland	0.60
Average grass	0.40
Poor grass, bare sod	0.30
Smooth bare packed soil, free of stones	0.10
Smooth pavements	0.02

We have applied the n-factor used for Kerby as 0.3.

The Kerby formula was used to calculate the pre-development peak time of concentration. This was used to obtain the depth for the various events. The Rational Method was then used to calculate the runoff flows.

Our calculations are presented in Annexure 7.

The pre-development flows are as follows:

RECURRENCE INTERVAL (YRS)	10	50
PEAK (l/s)	62	129.4
Notes: 1. The catchment area is 4663m 2. The runoff factor is: Mean Annual Precipitation= 800mm		

8. Proposed on-site stormwater configuration and restriction of flows

The Bransby Williams formula was used to calculate the post-development peak time of concentration. This was used to obtain the depth for the various events. The Rational Method was then used to calculate the runoff flows.

The comparison between pre-development and post-development flows are as follows:

Combined

RECURRENCE INTERVAL (YRS)	10	50
PEAK PRE-DEVELOPMENT (l/s)	62	129.4
PEAK POST-DEVELOPMENT (l/s)	117.2	192.1

Storm Event	Storage Required (m3)	Allowable outflow (l/s)
10 year	14.6	62
50 year	12.1	129.4

9. Improving quality of runoff

Before entering the attenuation ponds, water will pass through a leaf and litter trap. This will remove leaves and litter and the larger suspended particles.

In order to remove the Suspended Solids and Phosphates, stormwater will be spread over a wider area, at a flatter gradient, thus slowing down the flow in order to allow the suspended particles to settle out.

The receiving heads of the detention area will have silt traps installed.

10. Servitudes

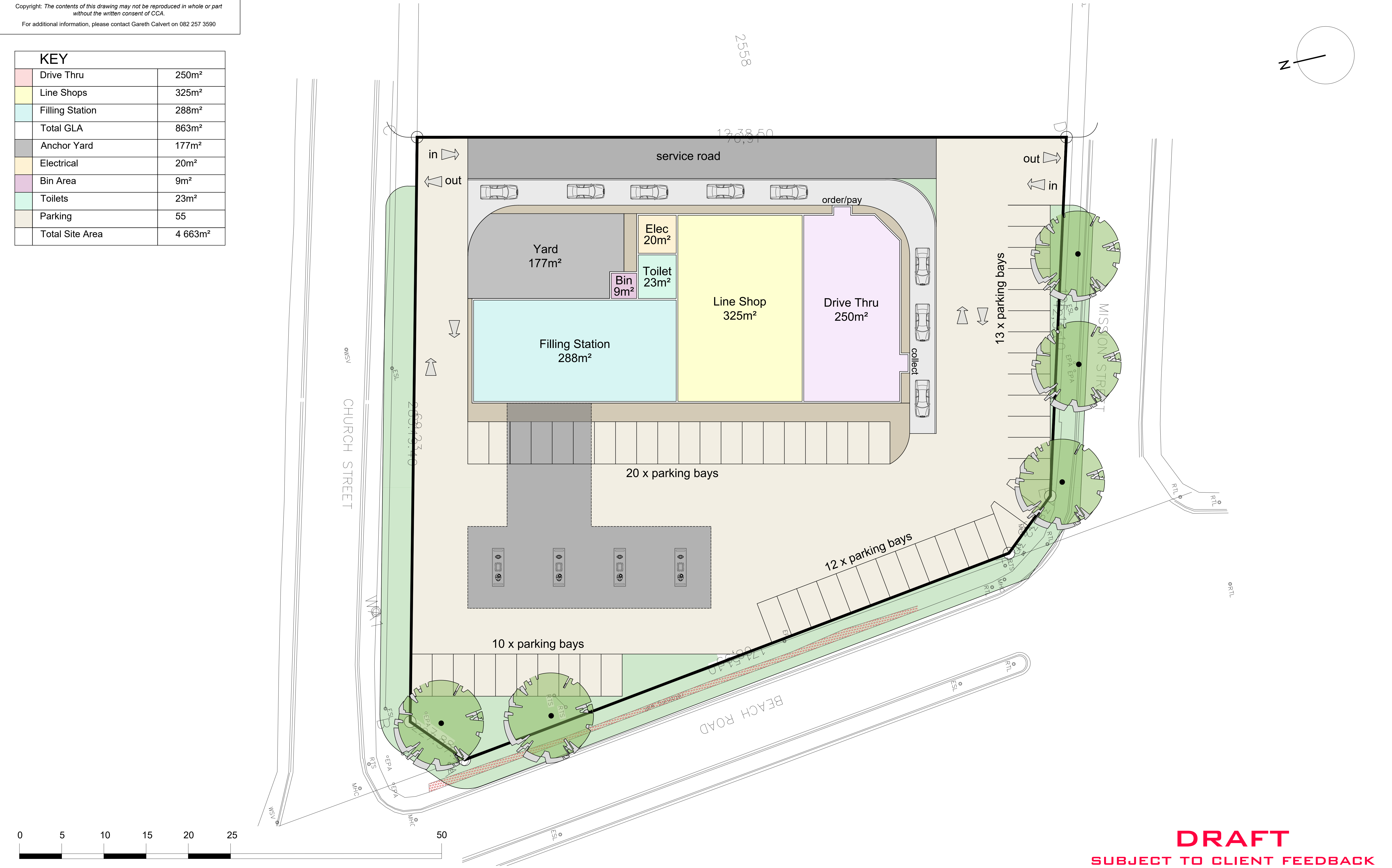
No stormwater servitudes are required over the property.

11. Conclusion

The above serves to confirm that sustainable urban drainage system objectives have been met in the proposed development of the property.

Annexure 1 – Site Development Plan

KEY		
	Drive Thru	250m ²
	Line Shops	325m ²
	Filling Station	288m ²
	Total GLA	863m ²
	Anchor Yard	177m ²
	Electrical	20m ²
	Bin Area	9m ²
	Toilets	23m ²
	Parking	55
	Total Site Area	4 663m ²



Annexure 2 – Locality Plan



Annexure 3 – Topographical Survey

CONTOUR PLAN
ERF 7379
PACALTSDORP

NOTES

- Survey date: January 2020
- Height Datum: MSL based on TSM
- Survey System WGS84 to 23
- Contour Interval: 0.5m
- Dimensions are metric

REVISIONS

Recommended by _____ Date _____

Approved by _____ Date _____

Drawn HLR	Designed
Checked HLR	Engineer
Client App.	Date

Scale 1:500 (A3)

Client
PACALTSPROPDEV (PTY) LTD

Contract
Proj. No. WAR/PE/2002



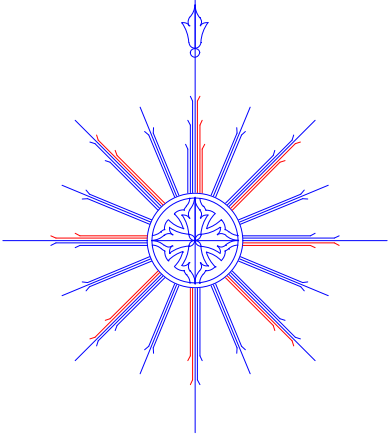
Professional Land Surveyors
88 Meade Street, P O Box 9583
GEORGE, 6530
Tel (044) 8745315
Fax (044) 8745345

PE7379-KP

Drawing No

Rev No

A



Legend	
	Bottom of Kerb
	Top of Kerb
	Edge of Road
	Stormwater channel
	Edge of Paved Area
	RTS Traffic Sign / Signage
	RTL Traffic Light
	WSV Stop Valve
	WFH Fire Hydrant
	WSM Storm Water Manhole
	Storm Water Drain/Culvert
	MHC Manhole Cover
	ESL Electrical Streetlight
	EP Electrical Pole
	EPA Electrical Pole Anchor
	EK Electrical Kiosk
	T Telkom

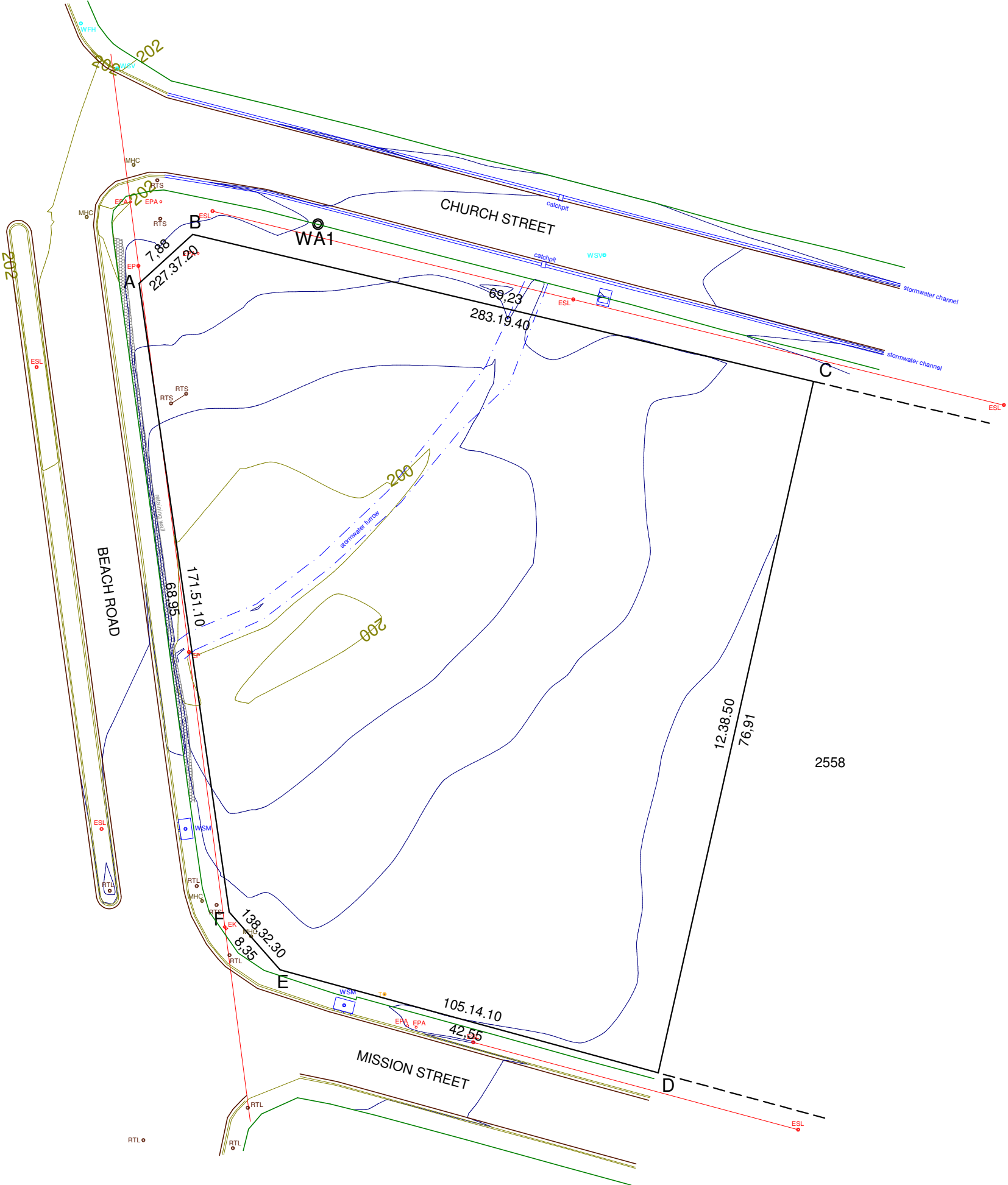
+ 3765400 X WG + 50600 Y

+ 3765450 X WG + 50600 Y

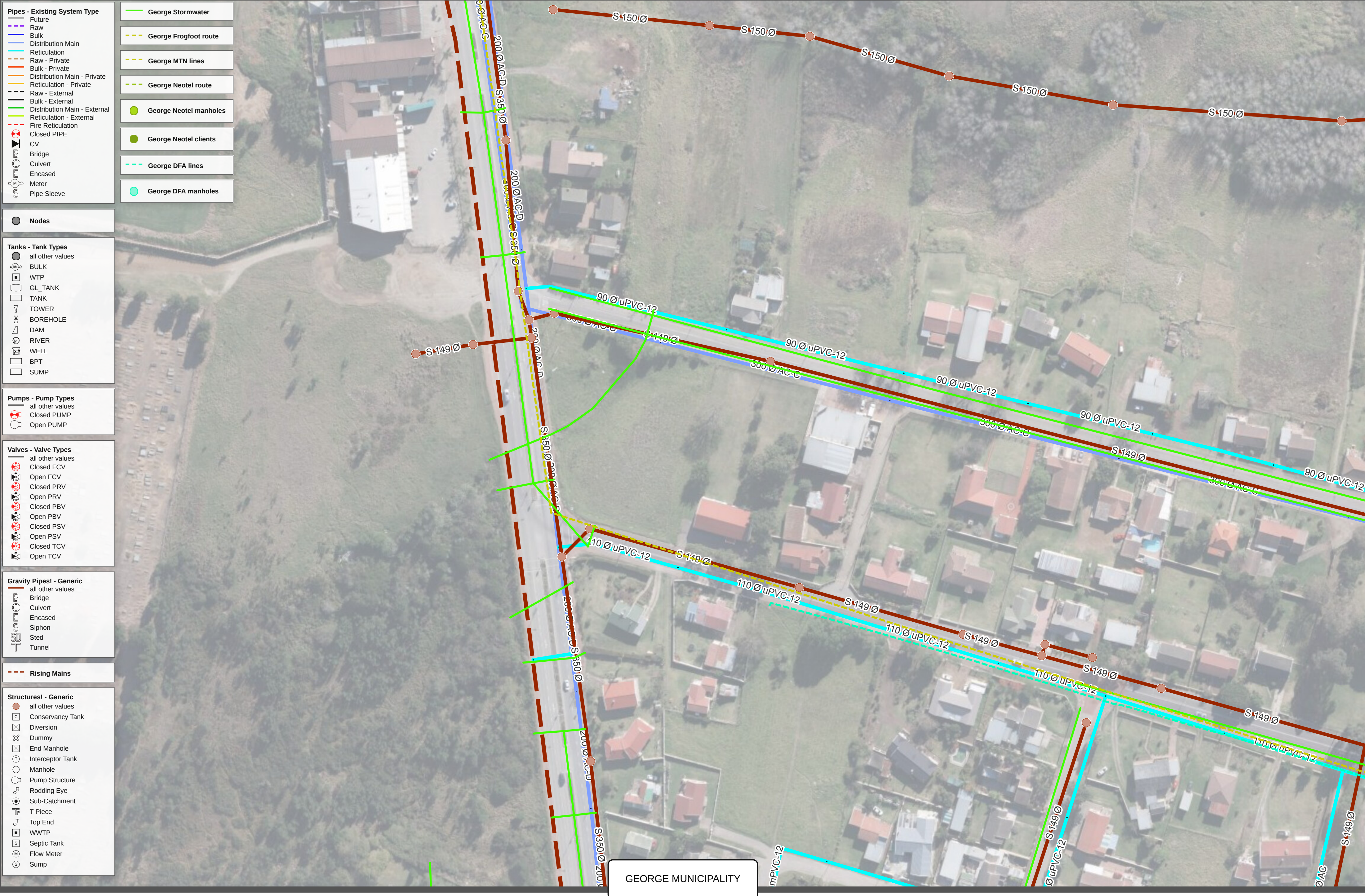
Bench mark and Beacons

Coordinate List			
	Y-Coord	X-Coord	Z-Coord
	WG23		
WA1	50691.61	3765367.46	201.50
A	50711.02	3765373.87	
B	50705.20	3765368.56	
C	50637.83	3765384.52	
D	50654.67	3765459.56	
E	50695.72	3765448.38	
F	50701.25	3765442.12	

WA1 ... 12mm iron peg at kerb
A,B,E,F ... 16mm iron peg
C,D ... 12mm iron



Annexure 4 - Existing Engineering Infrastructure on the Property



Annexure 5 - Stormwater Management Plan



GENERAL:

1. CONSTRUCTION MUST BE DONE IN STRICT ACCORDANCE WITH SABS 1200 AND GENERAL CONDITIONS OF CONTRACT (1950).
2. DRAWINGS ARE NOT TO BE SCALED FROM AND QUERIES SHOULD BE DIRECTED DIRECTLY TO THE ENGINEER OR HIS APPOINTED REPRESENTATIVE.
3. THE POSITION OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BEFORE CONSTRUCTION COMMENCES. ANY SERVICES THAT HAVE BEEN INDICATED ON DRAWINGS OR POINTED OUT ON SITE BY THE ENGINEER OR HIS APPOINTED REPRESENTATIVE ARE TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE STANDARD ACCEPTED BY THE ENGINEER OR OWNER OR SAID SERVICES (TELECOM, ESKOM ETC) STANDARDS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ACCESS TO THE LOCAL AUTHORITY PRIOR TO ANY EXCAVATION TAKING PLACE ON SITE. IT IS ACCEPTED THAT THE CONTRACTOR HAS MADE ALLOWANCE IN HIS RATES FOR ANY LEAVES OR DEPOSITS. NO ADDITIONAL PAYMENT WILL BE MADE FOR WAYLEAVES.

[illegible][illegible]

CLIENT	PACALTSPROPDEV (PTY) LTD
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DRAWING TITLE
CIVIL ENGINEERING SERVICES
STORMWATER MANAGEMENT PLAN

Pr Eng

dvp

DVP INC
CONSULTING ENGINEERS

T: +27 (0) 21 250 0300
E: info@dvpinc.co.za **W:** www.dvpinc.co.za

Suite 225, Quays, Parklane, Century City, 7441

Annexure 6 – Stormwater runoff calculations

Illudas Runoff Data

Subcatchment Name	Outlet Node	Runoff Area ha	Paved Area %	Paved Entry Time min	Paved Depr. Storage mm	Supplementary Area %	Grass Entry Time min	Grass Depr. Storage mm	Soil Type
A1	1	0.358	0	0	0	0	10	3	B/C
A2	1	0.108	0	0	0	0	7	3	B/C

Results Summary

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Inflow Calculation Method	= Illudas
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Chicago Storm Coastal Region	
Mean Annual Precipitation	= 800 mm
Return Period	= 10 years
Duration	= 120 min
Time Step	= 1 min
Ratio of Peak/Duration	= 0.38
Factor A	= 914
Factor B	= 12.6
Factor C	= 0.737
Total Depth	= 50.7 mm
Antecedant Moisture Condition	= Rather Wet (3)
Routing Method	= Time Shift
Proportional Flow Depth	= 100 %
Number of Nodes analyzed	= 3
Subnetwork 1	
Outfall Node	= OUT
Outlet Level	= 198.650 m
Design Flow	= 0.062 m ³ /s
Accuracy Check	
Volume of inflow	= 50.7 m ³
Volume at outfall	= 50.7 m ³
Percentage Error	= 0.00 %

Runoff Analysis

Node Name	Runoff m³/s	Surface Inflow m³/s	Paved Area Volume m³	Grass Area Volume m³	Total Volume m³
1	0.0620	0.0620	0.000	50.715	50.7

Overflow Analysis

Link Name	Node Name	Next Node Name	Overflow Node Name	Design Flow m ³ /s	Flow m ³ /s	Capacity m ³ /s	Overflow m ³ /s	Storage m ³	Inflow Storage m ³
L1	1	DAM		0.062	0.062	0.072	0.000	0.0	0.0
LDAM	DAM	OUT		0.062	0.062	0.072	0.000	0.0	0.0

Illudas Runoff Data

Subcatchment Name	Outlet Node	Runoff Area ha	Paved Area %	Paved Entry Time min	Paved Depr. Storage mm	Supplementary Area %	Grass Entry Time min	Grass Depr. Storage mm	Soil Type
A1	1	0.358	90	2	1	0	0	3	B/C
A2	1	0.108	90	2	1	0	0	3	B/C

Results Summary

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Inflow Calculation Method	= Illudas
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Chicago Storm Coastal Region	
Mean Annual Precipitation	= 800 mm
Return Period	= 10 years
Duration	= 120 min
Time Step	= 1 min
Ratio of Peak/Duration	= 0.38
Factor A	= 914
Factor B	= 12.6
Factor C	= 0.737
Total Depth	= 50.7 mm
Antecedant Moisture Condition	= Rather Wet (3)
Routing Method	= Time Shift
Proportional Flow Depth	= 100 %
Number of Nodes analyzed	= 3
Subnetwork 1	
Outfall Node	= OUT
Outlet Level	= 198.576 m
Design Flow	= 0.062 m³/s
Accuracy Check	
Volume of inflow	= 165.3 m³
Volume at outfall	= 165.3 m³
Percentage Error	= 0.00 %

Runoff Analysis

Node Name	Runoff m³/s	Surface Inflow m³/s	Paved Area Volume m³	Grass Area Volume m³	Total Volume m³
1	0.1172	0.1172	160.249	5.072	165.3

Overflow Analysis

Link Name	Node Name	Next Node Name	Overflow Node Name	Design Flow m³/s	Flow m³/s	Capacity m³/s	Overflow m³/s	Storage m³	Inflow Storage m³
L1	1	DAM		0.1172	0.1172	0.1276	0.0000	0.0	0.0
LDAM	DAM	OUT		0.1172	0.0620	0.0620	0.0552	14.6	0.0

Illudas Runoff Data

Subcatchment Name	Outlet Node	Runoff Area ha	Paved Area %	Paved Entry Time min	Paved Depr. Storage mm	Supplementary Area %	Grass Entry Time min	Grass Depr. Storage mm	Soil Type
A1	1	0.358	0	0	1	0	10	3	B/C
A2	1	0.108	0	0	1	0	7	3	B/C

Results Summary

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Chicago Storm Coastal Region	
Mean Annual Precipitation	= 800 mm
Return Period	= 50 years
Duration	= 120 min
Time Step	= 1 min
Ratio of Peak/Duration	= 0.38
Factor A	= 1482
Factor B	= 12.6
Factor C	= 0.737
Total Depth	= 82.2 mm
Antecedant Moisture Condition	= Rather Wet (3)
Routing Method	= Time Shift
Proportional Flow Depth	= 100 %
Number of Nodes analyzed	= 3
Subnetwork 1	
Outfall Node	= OUT
Outlet Level	= 198.494 m
Design Flow	= 0.129 m ³ /s
Accuracy Check	
Volume of inflow	= 155.7 m ³
Volume at outfall	= 155.7 m ³
Percentage Error	= 0.00 %

Runoff Analysis

Node Name	Runoff m³/s	Surface Inflow m³/s	Paved Area Volume m³	Grass Area Volume m³	Total Volume m³
1	0.1294	0.1294	0.000	155.658	155.7

Overflow Analysis

Link Name	Node Name	Next Node Name	Overflow Node Name	Design Flow m ³ /s	Flow m ³ /s	Capacity m ³ /s	Overflow m ³ /s	Storage m ³	Inflow Storage m ³
L1	1	DAM		0.129	0.129	0.210	0.000	0.0	0.0
LDAM	DAM	OUT		0.129	0.129	0.210	0.000	0.0	0.0

Illudas Runoff Data

Subcatchment Name	Outlet Node	Runoff Area ha	Paved Area %	Paved Entry Time min	Paved Depr. Storage mm	Supplementary Area %	Grass Entry Time min	Grass Depr. Storage mm	Soil Type
A1	1	0.358	90	2	1	0	0	3	B/C
A2	1	0.108	90	2	1	0	0	3	B/C

Results Summary

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Inflow Calculation Method	= Illudas
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Chicago Storm Coastal Region	
Mean Annual Precipitation	= 800 mm
Return Period	= 50 years
Duration	= 120 min
Time Step	= 1 min
Ratio of Peak/Duration	= 0.38
Factor A	= 1482
Factor B	= 12.6
Factor C	= 0.737
Total Depth	= 82.2 mm
Antecedant Moisture Condition	= Rather Wet (3)
Routing Method	= Time Shift
Proportional Flow Depth	= 100 %
Number of Nodes analyzed	= 3
Subnetwork 1	
Outfall Node	= OUT
Outlet Level	= 198.494 m
Design Flow	= 0.129 m³/s
Accuracy Check	
Volume of inflow	= 277.4 m³
Volume at outfall	= 277.4 m³
Percentage Error	= 0.00 %

Runoff Analysis

Node Name	Runoff m³/s	Surface Inflow m³/s	Paved Area Volume m³	Grass Area Volume m³	Total Volume m³
1	0.1921	0.1921	261.839	15.566	277.4

Overflow Analysis

Link Name	Node Name	Next Node Name	Overflow Node Name	Design Flow m³/s	Flow m³/s	Capacity m³/s	Overflow m³/s	Storage m³	Inflow Storage m³
L1	1	DAM		0.1921	0.1921	0.2103	0.0000	0.0	0.0
LDAM	DAM	OUT		0.1921	0.1290	0.1290	0.0631	12.1	0.0

APPENDIX 8: APPLICATION FORM

LAND USE PLANNING PRE-APPLICATION CONSULTATION FORM

PLEASE NOTE:

Pre-application consultation is an advisory session and is required prior to submission of an application for rezoning, consent use, temporary departure and subdivision. It does not in any way pre-empt the outcome of any future application which may be submitted to the Municipality.

PART A: PARTICULARS

Reference number: Collab No. 3043297

Purpose of consultation: To discuss proposed land use application

Brief proposal: Rezoning, Consent use

Property(ies) description: Erf 7379 Pacaltsdorp

Date: 5 September 2022

Attendees:

	Name & Surname	Organisation	Contact Number	E-mail
Official	Ilané Huyser	George Municipality	044 801 9120	ihuyser@george.gov.za
Official	Robert J.v. Rensburg	George Municipality	044 801 9555	rhjansevanrensburg@george.gov.za
Pre-applicant	Nashlin Ramgopal	Tshani Consulting CC	067 865 1508	nashlin@tshani.co.za

Documentation provided for discussion:

(Include document reference, document/plan dates and plan numbers where possible and attach to this form)

Copy of title deed, locality, site plan, watercourse verification

Has pre-application been undertaken for a Land Development application with the Department of Environmental Affairs & Development Planning (DEA&DP)?

(If so, please provide a copy of the minutes)

Comprehensive overview of proposal:

YES	NO
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Erf 7379, Pacaltsdorp is located where Mission Road and Church Street meets Beach Road. It is 4664m² in extent and zoned SRZI. It was zoned BZI which lapsed. It is proposed to develop a service station with the associated convenience shop as well as an anchor shop with two line shops. A traffic engineer will soon commence the process to compile the required traffic statement / assessment. As part of this process, the access & exit points will be assessed. Attached hereto is a draft site plan which includes 62 parking bays. The preliminary calculations indicate that 52 parking bays are required to the zoning by-law. With the rezoning to BZVI for a service station a consent use for shops will be included. It is further proposed to develop this filling station below the threshold where an EA to NEMA is required. No restrictive conditions were identified in the current title deed.

PART B: APPLICATION PROCESS

(WILL FULLY APPLY ONLY ONCE LUPA REGULATIONS ARE IN FORCE)

SUBMISSION

Draft By-Law on Municipal Land Use Planning

(Workflow)

Types of applications that can be submitted in terms of Section 15 (2)

- (a) Rezoning of land
- (b) Permanent departure
- (c) Temporary departure
- (d) Subdivision of land
- (e) Consolidation of land
- (f) Amendment, suspension or removal of restrictive conditions
- (g) Permission required in terms of the zoning scheme
- (h) Amendment, deletion or imposition of condition in respect of an approval
- (i) Extension of validity period of an approval
- (j) Approval of an overlay zone
- (k) Phasing, amendment or cancellation of a subdivision plan or part thereof
- (l) Permission required in terms of condition of approval
- (m) Determination of zoning
- (n) Closure of public place or part thereof
- (o) Consent use
- (p) Occasional use

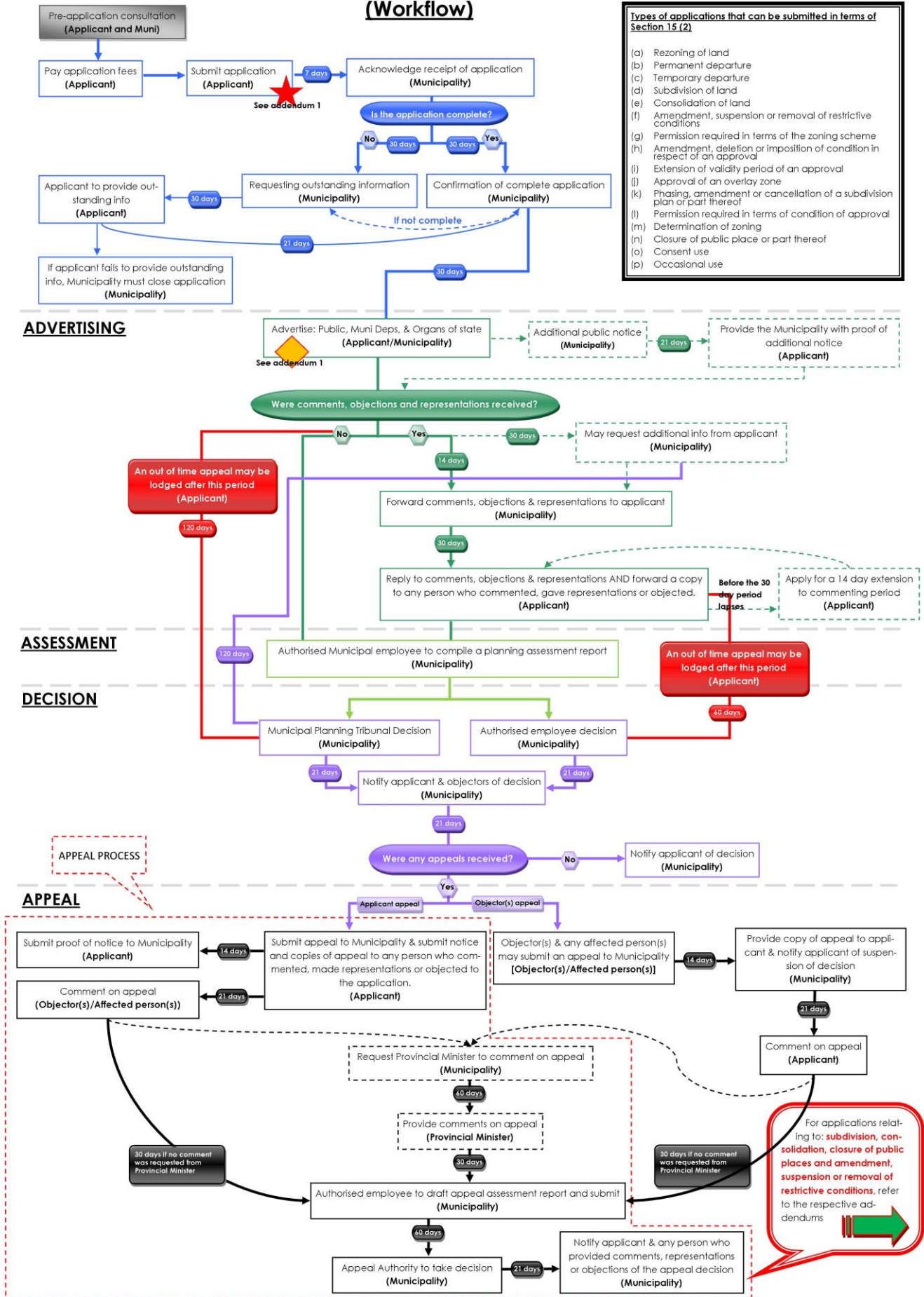
ADVERTISING

ASSESSMENT

DECISION

APPEAL PROCESS

APPEAL



PART C: QUESTIONNAIRES

SECTION A:

DETERMINATION OF APPLICATION TYPES, PRESCRIBED NOTICE AND ADVERTISEMENT PROCEDURES

Tick if relevant		What land use planning applications are required?	Application fees payable
X	2(a)	a rezoning of land;	R
	2(b)	a permanent departure from the development parameters of the zoning scheme;	R
	2(c)	a departure granted on a temporary basis to utilise land for a purpose not permitted in terms of the primary rights of the zoning applicable to the land;	R
	2(d)	a subdivision of land that is not exempted in terms of section 24, including the registration of a servitude or lease agreement;	R
	2(e)	a consolidation of land that is not exempted in terms of section 24;	R
	2(f)	a removal, suspension or amendment of restrictive conditions in respect of a land unit;	R
	2(g)	a permission required in terms of the zoning scheme;	R
	2(h)	an amendment, deletion or imposition of conditions in respect of an existing approval;	R
	2(i)	an extension of the validity period of an approval;	R
	2(j)	an approval of an overlay zone as contemplated in the zoning scheme;	R
	2(k)	an amendment or cancellation of an approved subdivision plan or part thereof, including a general plan or diagram;	R
	2(l)	a permission required in terms of a condition of approval;	R
	2(m)	A determination of a zoning;	R
	2(n)	A closure of a public place or part thereof;	R
X	2(o)	a consent use contemplated in the zoning scheme;	R
	2(p)	an occasional use of land;	R
	2(q)	to disestablish a home owner's association;	R
	2(r)	to rectify a failure by a home owner's association to meet its obligations in respect of the control over or maintenance of services;	R
	2(s)	a permission required for the reconstruction of an existing building that constitutes a non-conforming use that is destroyed or damaged to the extent that it is necessary to demolish a substantial part of the building	R
Tick if relevant		What prescribed notice and advertisement procedures will be required?	Advertising fees payable
Y	N	Serving of notices (i.e. registered letters etc.)	R
Y	N	Publication of notices (i.e. Provincial Gazette, Local Newspaper(s) etc.)	R
Y	N	Additional publication of notices (i.e. Site notice, public meeting, local radio, website, letters of consent etc.)	R

Y	N	Placing of final notice (i.e. Provincial Gazette etc.)	R
TOTAL APPLICATION FEE* (VAT excluded):			To be confirmed

PLEASE NOTE: * Application fees are estimated on the information discussed and are subject to change with submission of the formal application and/or yearly application fee increase.

SECTION B:

PROVISIONS IN TERMS OF THE RELEVANT PLANNING LEGISLATION / POLICIES / GUIDELINES

QUESTIONS REGARDING PLANNING POLICY CONTEXT	YES	NO	TO BE DETERMINED	COMMENT
Is any Municipal Integrated Development Plan (IDP)/Spatial Development Framework (SDF) and/or any other Municipal policies/guidelines applicable? If yes, is the proposal in line with the aforementioned documentation/plans?			X	
Any applicable restrictive condition(s) prohibiting the proposal? If yes, is/are the condition(s) in favour of a third party(ies)? [List condition numbers and third party(ies)]			X	Conveyancer certificate to confirm
Any other Municipal by-law that may be relevant to application? (If yes, specify)			X	
Zoning Scheme Regulation considerations: Which zoning scheme regulations apply to this site? _____ GIZS _____ What is the current zoning of the property? _____ SRZI _____ What is the proposed zoning of the property? _____ BZII with consent for service station _____ Does the proposal fall within the provisions/parameters of the zoning scheme? _____ Yes _____ Are additional applications required to deviate from the zoning scheme? (if yes, specify) _____ To be determined _____				

QUESTIONS REGARDING OTHER PLANNING CONSIDERATIONS	YES	NO	TO BE DETERMINED	COMMENT
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Is the proposal in line with the Provincial Spatial Development Framework (PSDF) and/or any other Provincial bylaws/policies/guidelines/documents?			X	
Are any regional/district spatial plans relevant? If yes, is the proposal in line with the document/plans?			X	

SECTION C:

CONSENT / COMMENT REQUIRED FROM OTHER ORGANS OF STATE

QUESTIONS REGARDING CONSENT / COMMENT REQUIRED	YES	NO	TO BE DETERMINED	OBTAIN APPROVAL / CONSENT / COMMENT FROM:
Is/was the property(ies) utilised for agricultural purposes?		X		Western Cape Provincial Department of Agriculture
Will the proposal require approval in terms of Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970)?		X		National Department of Agriculture
Will the proposal trigger a listed activity in terms of National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA)?			X	Western Cape Provincial Department of Environmental Affairs & Development Planning (DEA&DP)
Will the proposal require authorisation in terms of Specific Environmental Management Act(s) (SEMA)? (National Environmental Management: Protected Areas Act, 2003 (Act 57 of 2003) (NEM:PAA) / National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) (NEM:BA) / National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) (NEM:AQA) / National Environmental Management: Integrated Coastal Management Act, 2008 (Act 24 of 2008) (NEM:ICM) / National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEM:WA) (strikethrough irrelevant)			X	National Department of Environmental Affairs (DEA) & DEA&DP
Will the proposal require authorisation in terms of the National Water Act, 1998 (Act 36 of 1998)?			X	National Department of Water & Sanitation (DWS)
Will the proposal trigger a listed activity in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		X		South African Heritage Resources Agency (SAHRA) & Heritage Western Cape (HWC)
Will the proposal have an impact on any National or Provincial roads?			X	National Department of Transport / South

QUESTIONS REGARDING CONSENT / COMMENT REQUIRED	YES	NO	TO BE DETERMINED	OBTAIN APPROVAL / CONSENT / COMMENT FROM:
				Africa National Roads Agency Ltd. (SANRAL) & Western Cape Provincial Department of Transport and Public Works (DTPW)
Will the proposal trigger a listed activity in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993): Major Hazard Installations Regulations		X		National Department of Labour (DL)
Will the proposal affect any Eskom owned land and/or servitudes?		X		Eskom
Will the proposal affect any Telkom owned land and/or servitudes?		X		Telkom
Will the proposal affect any Transnet owned land and/or servitudes?		X		Transnet
Is the property subject to a land / restitution claims?		X		National Department of Rural Development & Land Reform
Will the proposal require comments from SANParks and/or CapeNature?		X		SANParks / CapeNature
Will the proposal require comments from DFFE?		X		Department of Environment, Forestry and Fishery
Is the property subject to any existing mineral rights?		X		National Department of Mineral Resources
Does the proposal lead to densification to such an extent that the number of schools, healthcare facilities, libraries, safety services, etc. In the area may be impacted on? (strikethrough irrelevant)		X		Western Cape Provincial Departments of Cultural Affairs & Sport (DCAS), Education, Social Development, Health and Community Safety

SECTION D:

SERVICE REQUIREMENTS

DOES THE PROPOSAL REQUIRE THE FOLLOWING ADDITIONAL INFRASTRUCTURE / SERVICES?	YES	NO	TO BE DETERMINED	OBTAIN COMMENT FROM: (list internal department)
Electricity supply:			X	Directorate: Electro-technical Services
Water supply:			X	Directorate: Civil

				Engineering Services
Sewerage and waste water:			X	Directorate: Civil Engineering Services
Stormwater:			X	Directorate: Civil Engineering Services
Road network:			X	Directorate: Civil Engineering Services
Telecommunication services:			X	
Other services required? Please specify.			X	
Development charges:	X			

PART D: COPIES OF PLANS / DOCUMENTS TO BE SUBMITTED AS PART OF THE APPLICATION

COMPULSORY INFORMATION REQUIRED:					
Y	N	Power of Attorney / Owner's consent if applicant is not owner (if applicable)	Y	N	S.G. noting sheet extract / Erf diagram / General Plan
Y	N	Motivation report / letter	Y	N	Full copy of the Title Deed
Y	N	Locality Plan	Y	N	Site Layout Plan
Y	N	Proof of payment of fees	Y	N	Bondholder's consent (To be confirmed)
MINIMUM AND ADDITIONAL REQUIREMENTS:					
Y	N	Site Development Plan	Y	N	Conveyancer's Certificate
Y	N	Land Use Plan	Y	N	Proposed Zoning plan
Y	N	Phasing Plan	Y	N	Consolidation Plan
Y	N	Abutting owner's consent	Y	N	Landscaping / Tree Plan
Y	N	Proposed Subdivision Plan (including street names and numbers)	Y	N	Copy of original approval letter
Y	N	Services Report or indication of all municipal services / registered servitudes	Y	N	Home Owners' Association consent
Y	N	Copy of Environmental Impact Assessment (EIA) / Heritage Impact Assessment (HIA) / Traffic Impact Assessment (TIA) / Traffic Impact Statement (TIS) / Major Hazard Impact Assessment (MHIA) / Environmental Authorisation (EA) / Record of Decision (ROD) (strikethrough irrelevant)	Y	N	1 : 50 / 1:100 Flood line determination (plan / report)
Y	N	Other (specify)	Y	N	Required number of documentation copies

PART E: DISCUSSION

The pre application meeting dated 14 February 2024 (which the applicant has attended) refers.



Town Planning

- Previous Pre-Applications comments refers and must still be considered.
- Need to address compliance with MSDF, LSDF, SPLUMA, Zoning Scheme etc.
- To address how the furrow will be reinforced to mitigate flood risk on the property/site.
- To address how the stormwater runoff be managed. (Stormwater management plan)
- To confirm if any NEMA activities are triggered.
- To show the parking measurements and manoeuvring space. (at least 2.5m x 5m with a 7.5m manoeuvring space)
- To consider the landscaping on site.
- All areas and dimensions to be shown on plan.

CES

- Access : restricted to the existing access within Church and/or Mission street as per the GIZS 2023. Access must also comply to York/Beach AMP.
- Parking: Parking: Must conform to the GIZS 2023. PT1 will be supported in principle, subject to a parking reduction application. No parking allowed within the road reserve. The developer may be required to have a TIA done, which must show all movements, including those of the fuel delivery vehicle.
- Water & Sewer: Available subject to the capacity required.
- DC's: DC will be applicable and charges with the amendment of building plans submitted.

- Stormwater: Note, development to adhere to the applicable Stormwater by-law. Developer to note of the existing stormwater channel which needs to be address within the development.
- Industrial license: Developer may be required to apply for an industrial effluent discharge license. No untreated industrial effluent may be discharge into the stormwater system. Oil traps and other associated infrastructure will be required.

ETS

- Electrical Services Report to be prepared for implementation stage.

PART F: SUMMARY / WAY FORWARD

Refer to the comments in part E.

OFFICIAL: Robert Janse van Rensburg

PRE-APPLICANT: Kreason Naidoo

Town Planner

(FULL NAME)

SIGNED:



SIGNED:



DATE:

_____21/02/2024_____

DATE:

10 February 2024

OFFICIAL: Ilané Huyser

(Senior Town Planner)

SIGNED:



DATE:

___22.02.2024

**Please note that the above comments are subject to the documents and information available to us at the time of the pre-application meeting and we reserve our rights to elaborate on this matter further and/or request more information/documents should it deemed necessary.*

PLANS

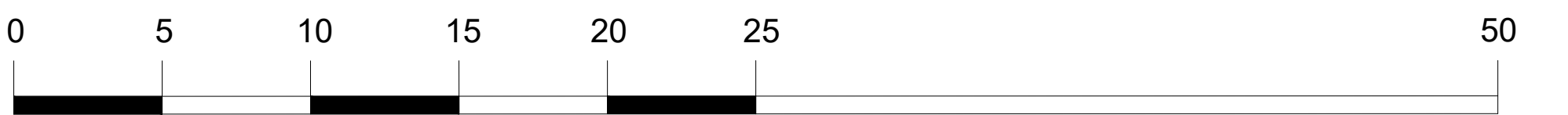
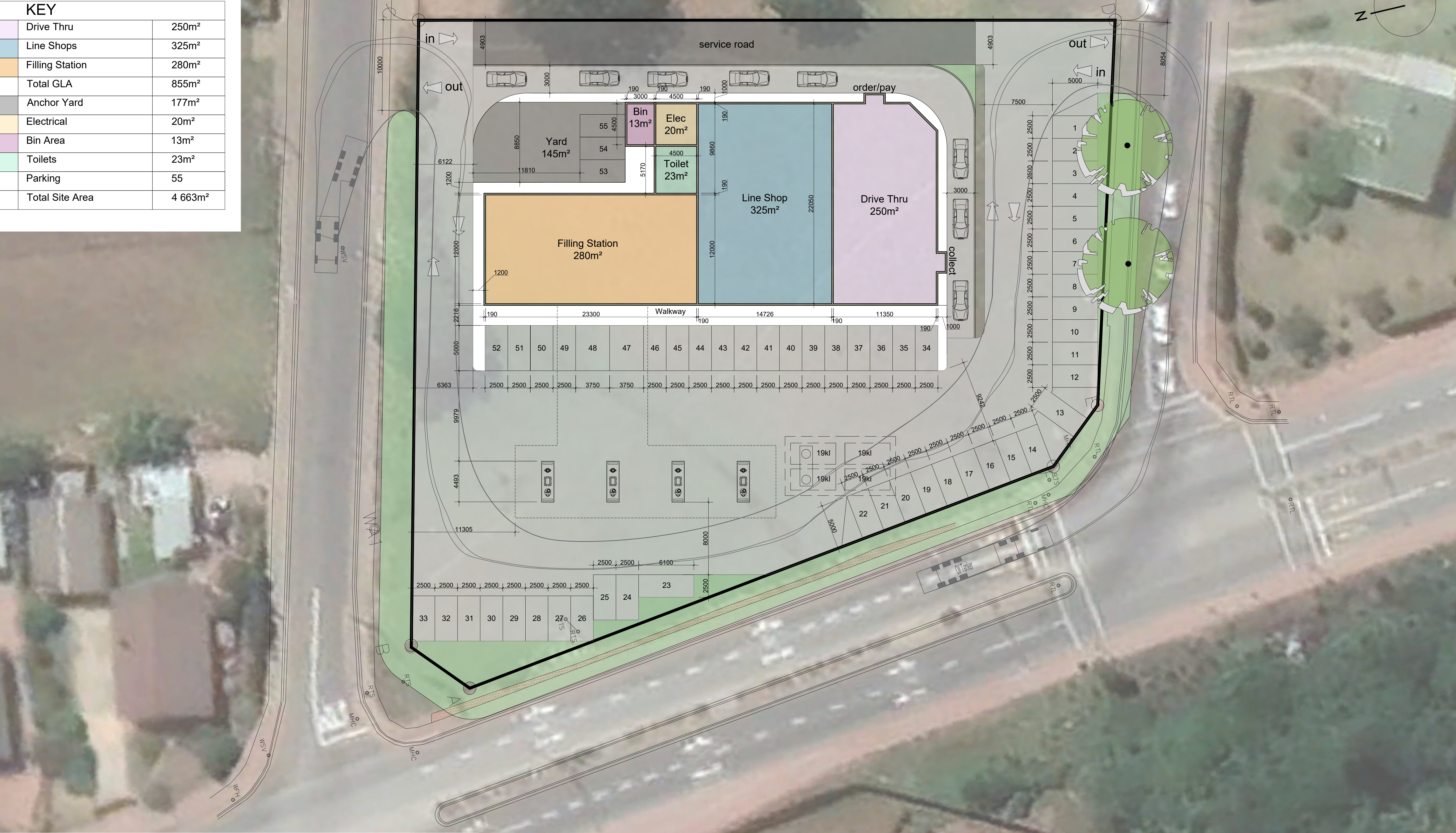
PLAN 4: SITE DEVELOPMENT PLAN

KEY		
	Anchor	680m ²
	Line Shops	124m ²
	Filling Station	256m ²
	Total GLA	1 060m ²
	Anchor Yard	142m ²
	Electrical	23m ²
	Bin Area	18m ²
	Toilets	24m ²
	Parking	62
	Total Site Area	4 663m ²

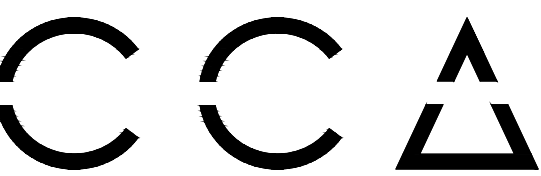


DRAFT
SUBJECT TO CLIENT FEEDBACK

KEY		
	Drive Thru	250m ²
	Line Shops	325m ²
	Filling Station	280m ²
	Total GLA	855m ²
	Anchor Yard	177m ²
	Electrical	20m ²
	Bin Area	13m ²
	Toilets	23m ²
	Parking	55
	Total Site Area	4 663m ²



SCALE 1 : 200



PACALTSDORP SITE DEVELOPMENT PLAN