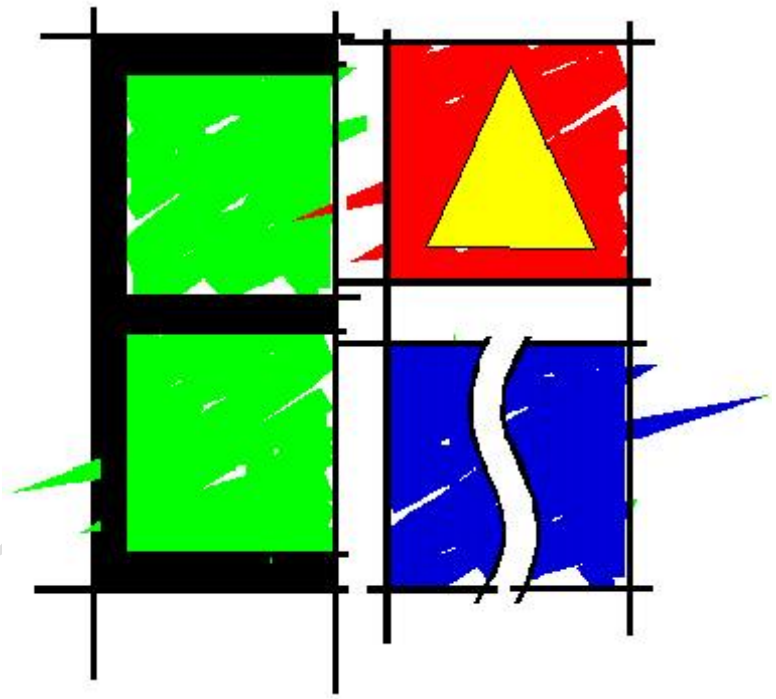
TRAFFIC IMPACT ASSESSMENT

FOR A
PROPOSED LIQUID NATURAL GAS TERMINAL AND VEHICLE DISTRIBUTION FACILITY IN ZONE 10 OF THE COEGA SPECIAL ECONOMIC ZONE



August 2020

Prepared for: **SRK Consulting (South Africa) Pty Ltd**
Obo
Coega Development Corporation

Prepared by: **Engineering Advice and Services (Pty) Ltd**
(041) 5812421

DOCUMENT CONTROL SHEET

CLIENT REF: **SRK CONSULTING (SOUTH AFRICA) PTY LTD**

PROJECT NAME: **PROPOSED LIQUID NATURAL GAS VEHICLE DISTRIBUTION FACILITY IN ZONE 10 OF THE COEGA SPECIAL ECONOMIC ZONE**

DOCUMENT TITLE: **TRAFFIC IMPACT ASSESSMENT**

DOCUMENT FILE REF: F:\1700-1799\1768\Reports\Zone 10 - Vehicle Distribution\REP002 - TIA for CDC Gas to Power Project - Veh Distribution - Final 12022020.docx

Version	**1**		
Compiled by	JK Charlton Cand Eng Technologist (201580304)	May 2020	
Reviewed by	CGA Hastie Pr Tech. Eng (200070122)	June 2020	
Amendments made by	CGA Hastie Pr Tech. Eng (200070122)	January 2021	
Version	**1**		
Compiled by	CGA Hastie Pr Tech. Eng (200070122)	January 2021	
Reviewed by			

DISTRIBUTION:
1) Original : Client – SRK Consulting – Ms A van Nierop
2) Copy :
3) Copy :
4) Copy : EAS File 1768

PREPARED BY: Engineering Advice and Services (Pty) Ltd
P O Box 13867
HUMEWOOD
6013

Telephone: 041 581 2421

Email: caryh@easpe.co.za

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURES

ABBREVIATIONS

CBD	Central Business District
CDA	Core Development Area
CDC	Coega Development Corporation
DEA	Department of Environmental Affairs
EAS	Engineering Advice & Services (Pty) Ltd
ECDoT	Eastern Cape Province Department of Transport
FSRU	Floating Storage Gasification Unit
I/C	Interchange
IDZ	Industrial Development Zone
Km/h	kilometres per hour
LNG	Liquified Natural Gas
LOS	Level of Service
NMBM	Nelson Mandela Bay Municipality
SANRAL SOC	South African National Roads Agency Limited
SARTSM	South African Development Community Road Traffic Signs Manual
SEZ	Special Economic Zone
SRK	SRK Consulting (South Africa) (Pty) Ltd
TIA	Traffic Impact Assessment
TMH	Technical Methods for Highways
TRH	Technical Recommendations for Highways
V/C	Vehicle to Capacity ratio

1 INTRODUCTION

1.1 BACKGROUND

Engineering Advice & Services (Pty) Ltd was appointed by SRK Consulting (South Arica) Pty Ltd during February 2020 to conduct a traffic impact assessment for the proposed development of a Liquified Natural Gas terminal and distribution facility in Zone 10 of the Coega Special Economic Zone, situated just northwest of the Port of Ngqurha in the Nelson Mandela Bay Municipality as indicated on **Figure 1** overleaf.

1.2 OBJECTIVES OF THE STUDY

In broad terms, the purpose of the traffic assessment is to determine the extent and nature of the traffic generated by the proposed development, assess the initial and cumulative impact of this traffic on operation of the associated road network in terms of capacity, and recommend measures to mitigate any problems identified. The following key elements, *inter alia*, are addressed in this traffic impact assessment:

- The suitability and safety of proposals for access to and egress from the site;
- The impact of construction and operational traffic on the capacity of the existing and future road network within the influence radius; and
- The road upgrading measures required to accommodate traffic generated by the proposed facility.

In general, this report serves to satisfy the Department of Environmental Affairs and the South African National Roads Agency SOC Limited that the traffic impact of the envisaged facility is within acceptable limits and that any proposed road and the suggested access requirements and improvements conform to the standards and parameters set by these authorities.

1.3 METHODOLOGY

The approach followed in conducting the traffic impact assessment was in accordance with the guidelines contained in **TMH 16 Volume 1- South African Traffic Impact and Site Assessment Manual** [(1)].

Given the extent of the proposed development and in terms of the aforementioned guidelines, the expansion is considered to be a medium-sized development and this assessment thus considered impact for the development (assumed to be 2020) and development plus ten-year (2030) horizons.

The methodology used was as follows:

- Present traffic flow patterns were obtained during typical weekday morning and afternoon peak periods
- The expected trips that will be generated by the proposed expansion were determined by using trip generation rates determined based on the projected staff complement on the facility and supplemented with the rates specified in **TMH 17 Volume 1 - South African Trip Data Manual** [(2)].
- The distribution of the generated trips was estimated where after the generated traffic was assigned to the surrounding road network.
- A suitable access location was determined in terms of **TRH 26 South African Road Classification and Access Management Manual** [(3)] and assessed from an operational and traffic safety perspective;
- The operation of affected junctions was analysed to ensure that they operate at acceptable levels of service and recommendations made on the need for road upgrading, taking cognisance of the proposed development for the 2020 and 2030 planning horizons; and
- Potential cumulative impacts were assessed in terms of operation, traffic safety and road condition for the construction and operational phases of all known power station facilities using the impact rating system described in **Chapter 8**.

1.4 STUDY AREA

Based on the type and extent of the proposed facility and its location adjacent to a National Road (N2 Section 11), the study area focussed on the Hougham Park interchange along the N2 and the roads from the interchange approaching the proposed site.

1.5 ASSUMPTIONS AND LIMITATIONS

The scope of this TIA is limited to the project as described in Chapter 2.4 and as detailed in the **Draft Scoping Report** [(4)]. The scope only deals with vehicular traffic related impacts and excludes consideration of the following:

- Source of gas;
- The transmission of gas via pipelines other than construction traffic related to implementation of such pipelines; and
- The provision of power to consumers from facilities to which gas is supplied.

The report is based on a number of assumptions and is subject to certain limitations. These are as follows:

- That operational trip generation rates are based on information supplied by the prospective plant/facility operator;
- That vehicle occupancy rates for the purposes of determining operational trip generation rates for transport modes are based on average vehicle occupancies used for the NMBM Transport demand model;
- That construction trip generation rates are based on high level assessments of the proposed construction requirements for similar developments;
- That access and road upgrading proposals are conceptual at this stage and subject to detail designs being developed in the event of environmental authorization being granted;
- That the capacity analysis process is based on the highest peak hour traffic volumes of adjacent street traffic based on baseline traffic surveys undertaken for this project;
- That trip distribution is based on the location of the development relative to the surrounding residential areas; and
- That the roads constructed in the SEZ and on which traffic generated by the development travel have been constructed to accommodate traffic volumes over their projected design life and that such roads are operating well below their design traffic class.

Notwithstanding these assumptions it is our view that this TIA provides a good description of the potential traffic issues associated with the proposed development.

Engineering Advice and Services

Tel: (041) 581 2421

N

Legend

Site Boundary

Project Title: Traffic Impact Assessment For a Proposed Liquid Natural Gas Terminal and Vehicle Distribution Facility In Zone 10 of the Coega Special Economic Zone

Drawing No: 1768-P-001

Drawing Title: Figure 1: Locality Plan

Drawing Date: July 2020

Meters

0 180 360 720

Scale 1 : 35 000

Prepared by : MS

Checked by : CH

2 LAND USE RIGHTS, DEVELOPMENT AND ENVIRONS

2.1 SITE LOCATION

As indicated on **Figure 2 overleaf**, the proposed gas power plant is situated on erf 351, Coega to the northwest of the Port of Nqgurha and approximately 25km north of the Port Elizabeth CBD.

The site is located in Zone 10 of the Coega Special Economic Zone and is surrounded by predominantly vacant land use in all directions.

2.2 LAND USE RIGHTS

Erf 351, Coega is zoned for Special Zone (IDZ) purposes. A copy of the rezoning approvals are attached as **Annexure A**.

2.3 DEVELOPMENT ENVIRONS

Much of Zones 7 and 10 are still undeveloped and are earmarked for light industrial uses, with the land to the northeast of the site along the coast earmarked for aquaculture purposes. Land southwest of the gas distribution facility forms part of the Port of Ngqurha.

The proposed Transnet Tank Farm is situated in Zone 8 just north of the power plant with the site platforms currently nearing completion.

The Cerebos Salt facility is situated in Zone 7 just west of the Ring Road.

2.4 PROPOSED DEVELOPMENT

As specified in the **Draft Scoping Report** [(4)], Natural Gas will be pumped from the Port of Ngqurha to a storage and regassification facility.

The storage and regassification facility will initially be a Floating Storage Regassification Unit (FSRU) located adjacent the eastern breakwater in the Port. In the longer term (Phase 2) the FSRU will be replaced by an onshore storage and regasification unit, located at the LNG and gas hub located next to the proposed Zone 10 North Power Station. The LNG and gas hub will be constructed in Phase 1 and will initially be used for gas distribution only. In the longer term (Phase 2) the land-based LNG storage and regassification, will become active.

The facility will enable distribution to the market via LNG and gas pipelines and for third party customers via LNG trucks (assumed 40 x 20-ton LNG trucks per day).

Access to the facility will be gained via an access road from the existing roundabout junction on the Ring Road via the Hougham Park Interchange at Exit 770 on the N2.

Figure 2 overleaf indicates the process conceptually from arrival by ship to the distribution facility.

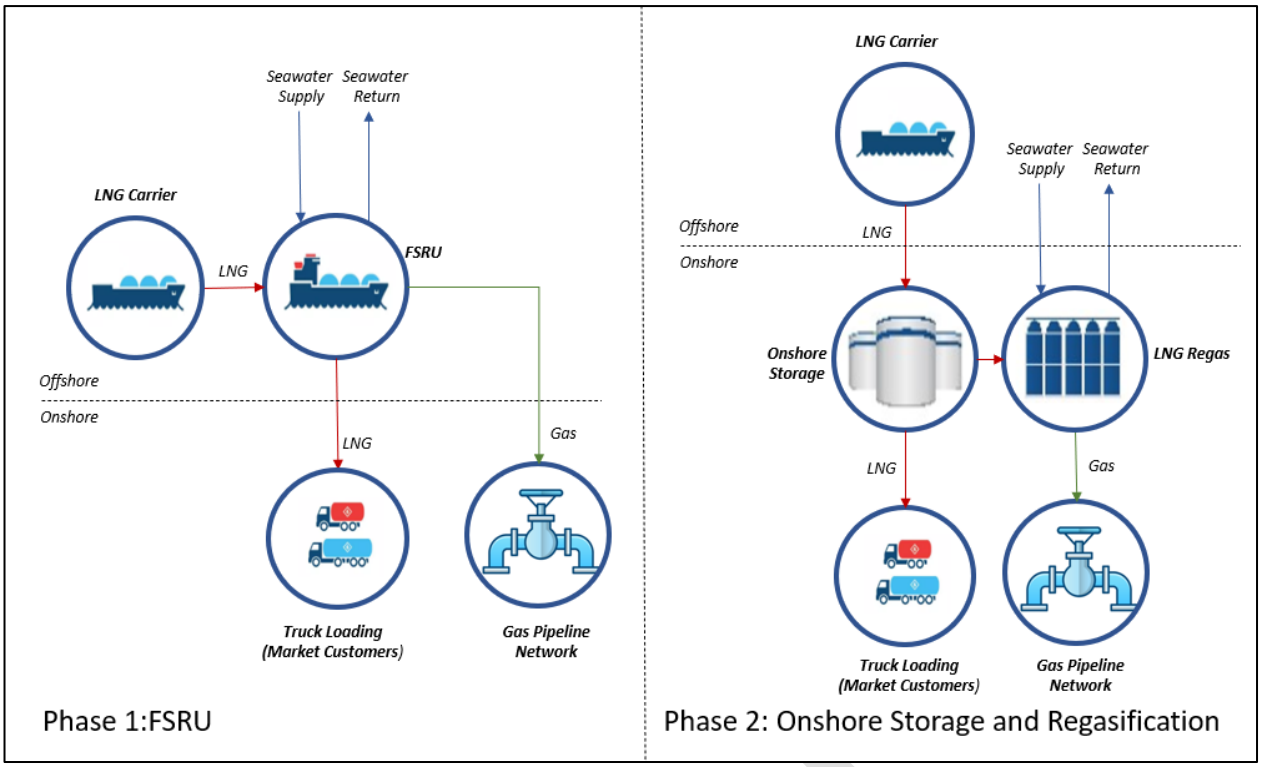


Figure 2: Process from Ship to Distribution Facility

3 DATA COLLECTION

3.1 PEAK HOUR TRAFFIC VOLUMES

Traffic turning movement counts were conducted at the following intersections during a typical weekday on Tuesday 3 March 2020 from 06:00 to 18:00.

- N2 Hougham Park Interchange West terminal
- N2 Hougham Park Interchange East terminal
- R102 / Ring Road

The detailed survey data is attached as **Annexure B** and summarised on **Figure 3** below.

As is evident from the current traffic data, traffic volumes are very low, relative to the limited development that has occurred in Zones 6, 7, 9 and 10.

3.2 HISTORICAL DAILY TRAFFIC VOLUMES

Historical daily traffic volume data at count station 1448 on the N2 just north of the St George's Interchange was sourced from SANRAL. The count information is attached as **Annexure C**.

The data indicates that between 2014 and 2019 ADT on the N2 increased at an average rate of 1.26% per annum.

For the purposes of this study and to be conservative the peak hour volumes have been escalated by 2%per annum.

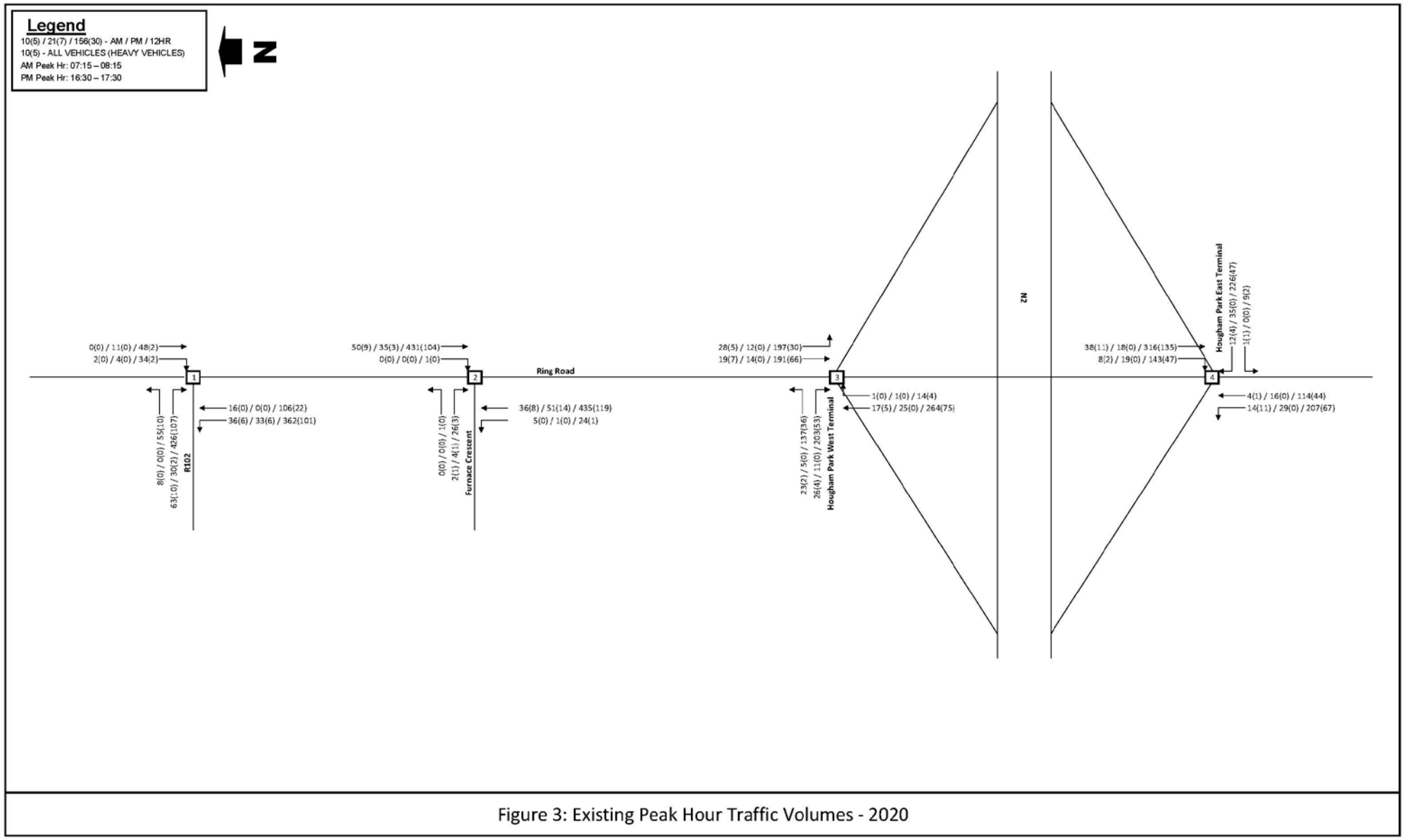


Figure 3: Existing Peak Hour Traffic Volumes - 2020

3.3 PROJECTED PEAK HOUR VOLUMES

The **Coega IDZ Transport Study** [5] projected that Zones 7 and 10 would be fully developed by 2030 together with the rest of the IDZ (a theoretical exercise). In addition, Zone 8 - the port and back of port area (east of the Coega River) would also be fully developed by 2030.

A total of 56 439 employment opportunities were projected in Zones 7 and 10, and a further 3896 in Zone 8, by 2030. This equates to approximately 45 152 and 2482 AM peak hour person trips in Zones 7 & 10 and Zone 8 respectively as indicated in the schedule attached as **Annexure D**. These person trips were converted to vehicle trips using vehicle occupancy rates for various transport modes.

Furthermore, a number of modal split scenarios were modelled for each development scenario in order to assess a possible future shift from private to public transport modes in line with stated national government policy. The main scenarios considered, in line with the NMMM Public Transport Plan, were the so-called C3 and B2 scenarios. The B2 Scenario provides for a trunk bus network without rail while the C3 scenario included a commuter rail service between the CBD and Motherwell as well as a loop through the Coega area. Two sub-scenarios were assessed, namely a 60:40 and a 70:30 public/private modal split.

The scenarios that considered higher private transport trips were used to determine future road requirements (60% public: 40% private transport).

The output of the transport demand modelling process resulted in projected link volumes for the 2020 and 2030 development scenarios as indicated on **Figure 4** below. The detailed transport model outputs for each B2 development scenario are attached as **Annexure E**.

It is important to note that the **Coega IDZ Transport Study** [5] makes provision for a second interchange with the N2 situated on the eastern boundary of the SEZ. This interchange would however be constructed dependent upon demand and should development in Zones 7 and 10 proceed as initially envisaged.

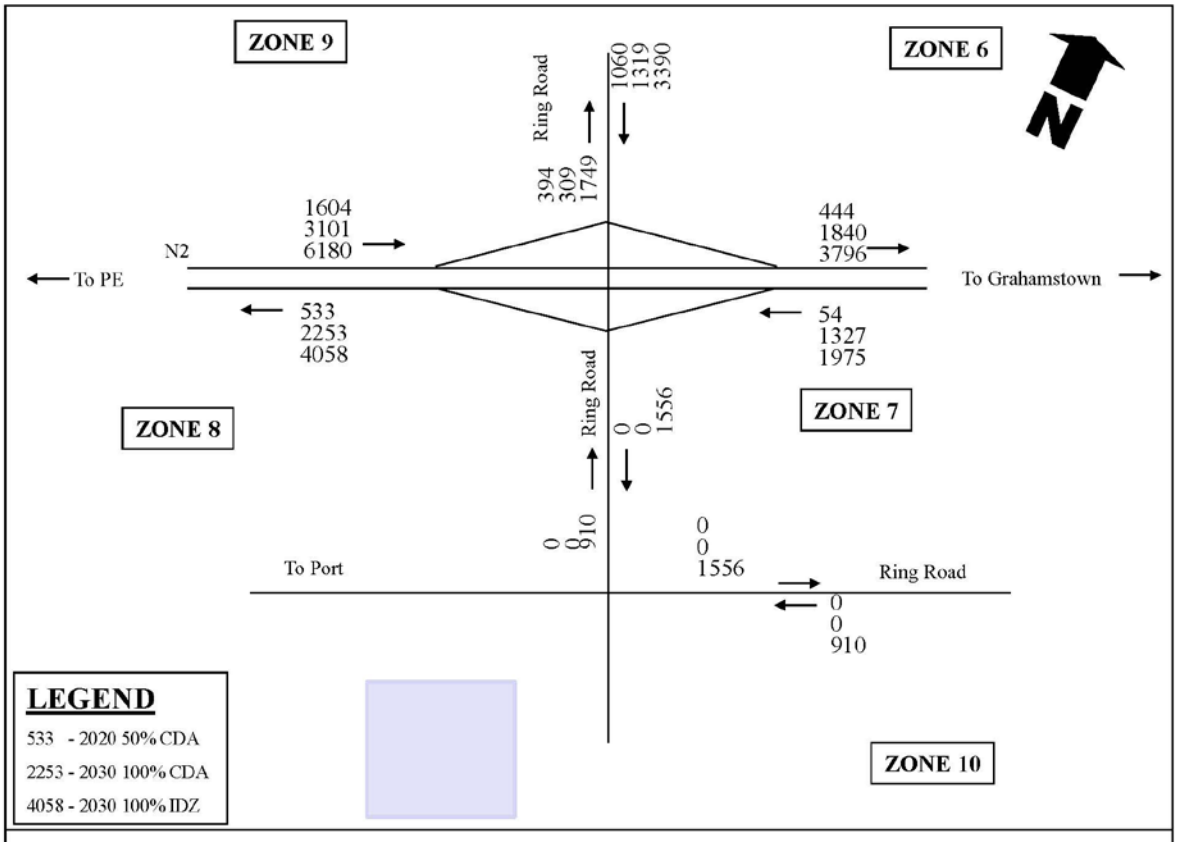


Figure 4 : Projected AM Peak Hour Link Traffic Volumes

3.4 ROAD NETWORK

3.4.1 Existing Roads

The existing road and intersection configuration in the vicinity of the proposed development were obtained from the various zone consultants with the permission of the Coega Development Corporation. As-built information was provided in electronic CAD format. The primary road network can briefly be described as follows:

- **Ring Road 1** is classified as a class 3 arterial road that will serve as one of the main access roads between the N2 and IDZ Development Zones south of the N2 and east of the Coega River (Zones 7, 8 and 10). The road is currently constructed as a single carriageway with one 3.7m traffic lane and a 0.5m shoulder per direction. On the approach to the traffic circle in Zone 10, the road widens to a dual carriageway with two lanes per direction separated by a 7.5m wide median. The circle is configured with two 6.6m wide circulating lanes to accommodate long trucks.

  On the bridge over the N2, the shoulders are 1.8m wide.

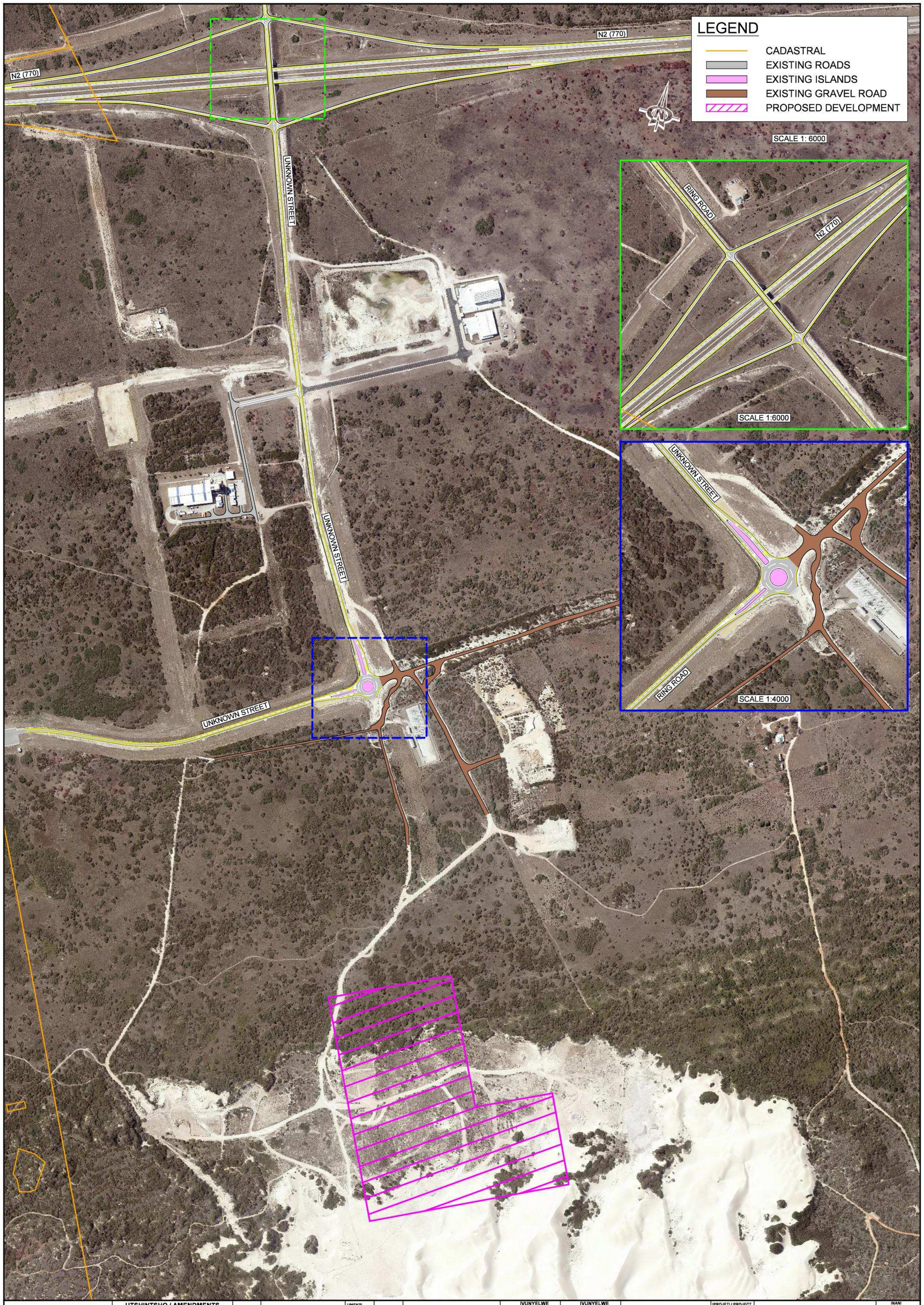
- **National Route 2** is a class 1 national trunk road. In the vicinity of the proposed development the N2 is a freeway with two 3.5m wide traffic lanes, a 3m left shoulder and 1.5m right shoulder on each carriageway.

The existing road and intersection configuration within the vicinity of the proposed power plant is indicated on **Figure 5** overleaf.

Ring Road 1 SB to Zone 10

Ring Road 1 across the N2

Note that the road classification described above is as per **TRH 26 South African Road Classification and Access Management Manual [3].**



"UMNIKELO" "AS BUILT" - NOTES

UTSHINTSHO / AMENDMENTS			
INANI NO.	UMHLA DATE	INKCAZA DESCRIPTION	IVUNYELWE APPROVED

UMLINGANISELO SCALE: AS SHOWN

UMLINGANISELO WOMZOBO OHLISIWEYO SCALE ON REDUCED DRAWING: 20mm KUMZOBO WANGAPHAMBILI = 20mm ON ORIGINAL DRAWING

UMENZI DESIGN	MS/JC
UMZOBI DRAWN	TF
IVUNYELWE APPROVED	CH
UMHLA DATE	JULY 2020

ENGINEERING ADVICE AND SERVICES associated with ULWAZI
73 Heugh Road, Walmer
P.O. Box 13867
Humewood
Port Elizabeth
6013
tel/fax: (041) 581 2421

IVUNYELWE APPROVED	IVUNYELWE APPROVED
INJINELI/ENG.	UMENZELWA / CLIENT
UMHLA / DATE	UMHLA / DATE

IPROJETI / PROJECT: TRAFFIC IMPACT ASSESSMENT FOR A PROPOSED LIQUID NATURAL GAS TERMINAL AND VEHICLE DISTRIBUTION FACILITY IN ZONE 10 OF THE COEGA SPECIAL ECONOMIC ZONE

UMZOBONKCAZA / DWG DESCRIPTION: FIGURE 5: EXISTING ROAD AND ACCESS CONFIGURATION

INANI LESIVUMELWANO CONTRACT NO.

INANI LOMZOBO DWG.NO. 1768-P-005

UMNIKELO ISSUE

3.4.2 Future Roads

The future road network serving Zones 7, 8 and 10 was determined in the **Coega IDZ Transport Study Demand Modelling Report** [5] and is indicated conceptually on an extract of the layout in **Figure 6** below. Ring Road 1 which extends from the Hougham Park Interchange through Zones 7 and 10 to the future interchange on the SEZ boundary is a class 2 road which can accommodate 1000 vehicles per hour per lane.

Currently the existing portion of the road is constructed as a single lane per direction but can be upgraded to two lanes per direction should demand require so. Initial projections indicate that two lanes per direction would be required by full development of the SEZ.

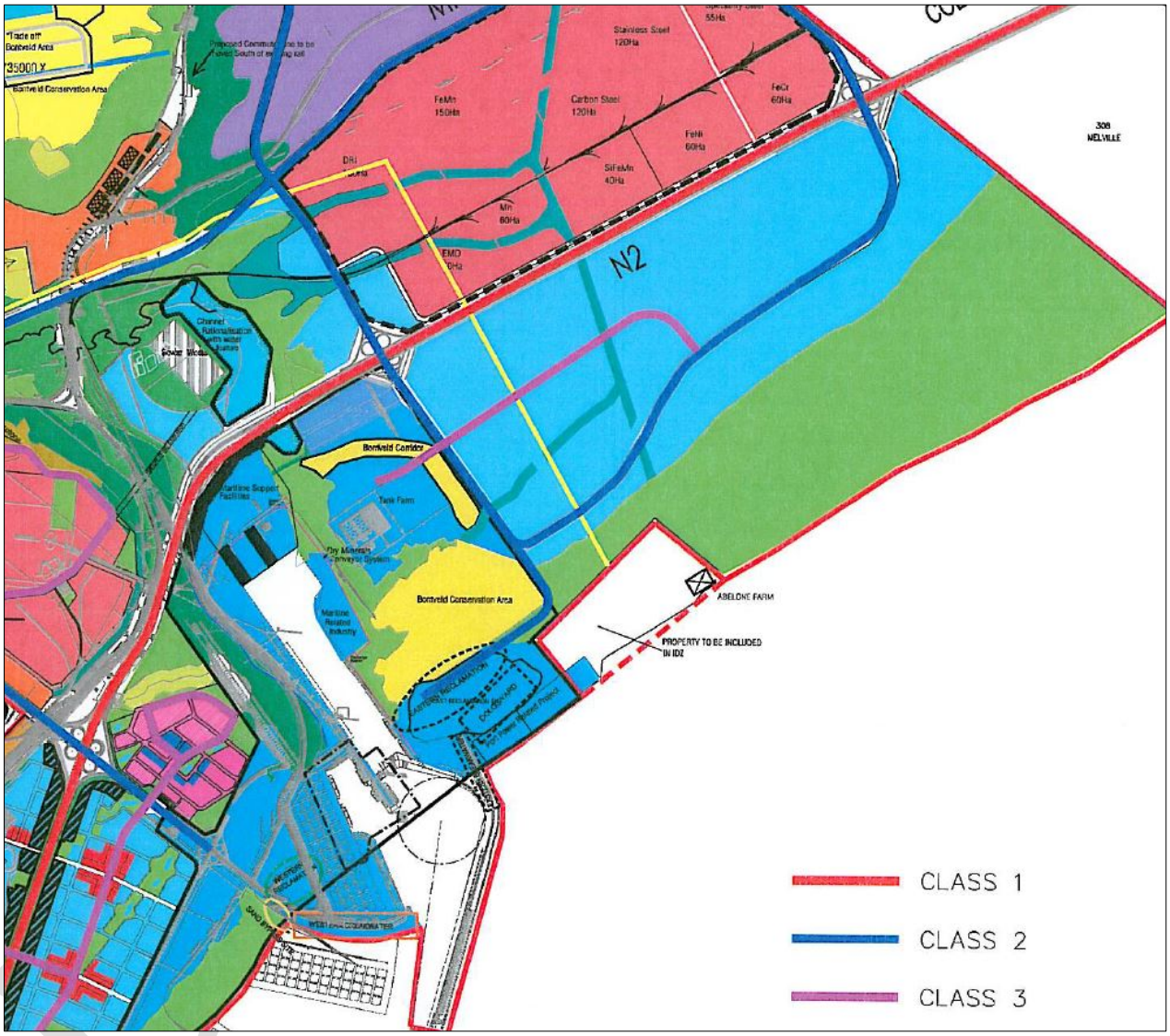


Figure 6: Proposed Road Layout – Zones 7 and 10

3.5 PUBLIC TRANSPORT

Provision was made for two public/private transport modal split scenarios in the **Coega IDZ Transport Study** [5]. The **Public Transport Plan** [6] component of the study assessed the future public transport requirements but due to the long-term nature of the development in these zones did not address the detailed location of public transport interchanges serving Zones 7 and 10.

In the short term however, until critical mass is reached in terms of employees that would make use of public transport services, it is likely that public transport services would be on a contract basis between the plant operator and the relevant service provider as is currently the case.

4 TRIP GENERATION AND DISTRIBUTION

4.1 TRIP GENERATION

Vehicle trips generated by the proposed Gas Distribution site are likely to be at a peak during the construction stage and will comprise of labour transport and construction vehicles.

The construction traffic will likely comprise of construction plant (vehicles such as graders, front-end loaders, bull dozers, tipper trucks and cranes) some of which will arrive on site at the start of construction and remain on site, while others will deliver materials. Construction trips are likely to vary based on the extent of construction material that will be required on the site for the earthworks, road surfaces and paving (aggregate, concrete, etc.) as well as the building materials for the power plant itself (mainly steel elements).

Vehicle trips during operation will be related to staff and deliveries and will most likely be relatively low.

The following vehicle occupancies have been assumed:

Passenger car / LDV - 1.5 (Average to allow for ride-sharing)
Minibus-Taxi - 12
Bus - - 55

4.1.1 Construction Traffic

Construction Staff
Approximately 2030 employees are expected to work on the site during construction of the power station, 75% of which are expected to unskilled and the remaining 25% skilled employees.

Given a construction duration of approximately 24 months, it is assumed that a peak of 60% of the workforce is expected to be on site at one time during construction of the power plant.

It is further assumed that 90% of the unskilled labour force will be transported to site via public transport modes, namely contracted minibus-taxis and buses, with the remaining 10% via private or company passenger vehicles.

Approximately 80% of the skilled labour force is expected to make use of private car or company-LDV vehicles. The remaining 20% will likely travel via minibus-taxi.

Based on the assumed peak of 60% of the labour force, this relates to the number of peak hour vehicle trips indicated in **Table 1** below:

Table 1: Peak Hour Vehicle Trips – Construction Workforce

Employees (60% of 2030)	Skill Level	Transport Mode	Vehicle Occupancy (average)	% Workforce / Mode	Employees / Mode	No of Vehicles
1218	Skilled (25%)	Passenger Car / LDV	1.5	80%	243	162
		Minibus-taxi	12	20%	61	5
	Un-skilled (75%)	Passenger Car / LDV	1.5	10%	91	61
		Minibus-taxi	12	50%	457	38
		Bus	55	40%	366	7
Total						**273**

Construction Vehicles

The total number of construction vehicles generated by the project is not yet known, given the complexity of the project and that it is still in the planning phase. As such, it is assumed that the construction vehicles generated by the project will operate outside of the peak hour and will not be used in the capacity analysis described in **Chapter 6** below.

The vehicles are comprised of those that will remain on site while the tasks for which they are required are performed and those that are required to deliver various materials to and from the site.

It is assumed that the composition of construction vehicles generated by the development is as follows:

- Construction plant vehicles that will arrive on site once and remain for the duration of the time necessary to perform their tasks (dozers, graders, loaders);
- Steel components (pipes, tanks and sections) will be transported to site;
- Material for foundations will be imported from commercial sources;
- Waste Material will be transported from site to authorized waste disposal sites (tipper trucks); and
- Material supply to a concrete batch plant to be erected on site to mix concrete, to be delivered as and when they required.

Pipe sections will also be transported to the required pipeline route by truck, and most likely be deposited along the route to facilitate more efficient construction of the pipeline. Apart from the initial supply of the pipe sections it is not expected that there will be any significant construction traffic on the road network during construction of the pipelines.

4.1.2 Operational Traffic

Approximately 85 employees are expected to work at the power station once construction has completed, 70% of which are expected to be unskilled and the remaining 30% skilled employees.

It is assumed that 90% of the unskilled labour force will be transported to site via public transport modes, i.e. contracted minibus-taxis and buses, with the remaining 10% via private or company passenger vehicles.

Approximately 100% of the skilled labour force is expected to make use of private car or company-LDV vehicles with an element of ride-sharing. It is further assumed that the workforce will operate on a two-shift basis over 24 hours. This relates to the number of peak hour vehicle trips as indicated in **Table 2** below:

In addition, delivery and collection of the following products will also occur at the frequencies indicated below. These volumes are per truck. Thus, each truck represents two trips, one in and one out:

Liquified Natural Gas	-	40 20-ton trucks per day (assumed 4 in and 4 out in peak hours)
General supplies	-	1 per month
Waste (Refuse)	-	1 per week

Table 2: Vehicle Trips – Operational Workforce

Employees	Skill Level	Transport Mode	Vehicle Occupancy (average)	% Workforce / Mode	Employees / Mode	No of Vehicles
85	Skilled (30%)	Passenger Car / LDV	1.5	100%	25	17
	Un-skilled (70%)	Passenger Car / LDV	1.5	10%	6	4
		Minibus-taxi	12	50%	30	3
		Bus	55	40%	24	1
Total						25

Figure 8 overleaf indicates the operational AM and PM peak hour trips.

4.1.3 Latent Traffic Volumes

Other known developments that will impact on the access road to the Regasification Terminal and Gas Distribution Facility are the proposed Tank Farm and the OTGC Bulk Liquid and Handling Facility within the Port. The proposed tank farm site will make use of the same access road while the OTGC site will make use of the Port access road.

The Traffic Impact Assessment in the EIA prepared for the proposed Coega Tank Farm [(7)] indicates that the proposed tank farm will generate 26 vehicle trips during the AM and PM peak hours, while the proposed OTGC site will generate 31 peak hour trips.

The trips generated by these two developments are indicated on **Figure 9**.

4.1.4 Other Power Plant Developments

Other known power plant developments that will impact on the access roads to Zones 10 and 13 are the ENGIE Zone 13 plant next to the CDC Zone 13 plant and the Karpowership plant which does not generate any traffic impact as the gas is transported to the DEDEISA power station via pipelines. The ENGIE site will make use of the same access road as the CDC Zone 13 site.

These trips are indicated on **Figure 11**.

4.1.5 Trip Generation Summary Traffic

A summary of the generated AM and PM peak hour trips is indicated in **Table 3** below.

Table 3: Summary of Generated Trips

Component	TRIPS IN		TRIPS OUT	
	AM	PM	AM	PM
Construction – Veh Distribution	273	50*	50*	273
Operation – Veh Distribution	28	4	7	25
Tank Farm and OTGC #	29	28	28	29
Zone 10 North #	25	4*	4*	25
Zone 10 South #	25	4*	4*	25
Zone 13 #	64	5*	5*	64
ENGIE – Zone 13 #	25	4*	4*	25

* These trips are public transport return trips in AM and arriving in PM
# Operational trips only

4.2 TRIP DISTRIBUTION

Based on the observed traffic volumes and taking into account the location of the LNG and Gas Hub and Distribution Facility relative to the surrounding residential areas, the following distribution has been assumed for trips generated by the power plant.

Construction Stage

- 80% to and from the west along N2
- 20% to and from the east along N2

Operational Stage

- 90% to and from the west along N2
- 10% to and from the east along N2

The generated construction peak hour traffic volumes added to the background and latent traffic volumes for the 2020 horizon are indicated on **Figure 10** overleaf.

Cumulative Impacts for all Power Stations

It is assumed that all proposed plants will be operational by 2030.

As such **Figure 11** indicates the cumulative operational traffic for the Zone 10 South and North Power Stations, the Zone 13 Power Station and the LNG and Gas Hub and Distribution facility added to the latent volumes and the ENGIE Zone 13 plant and the escalated background traffic volumes for the 2030 development horizon.

It is further noted that the proposed Karpowership will not generate any traffic impact as the gas is transported to the DEDISA power station via pipelines

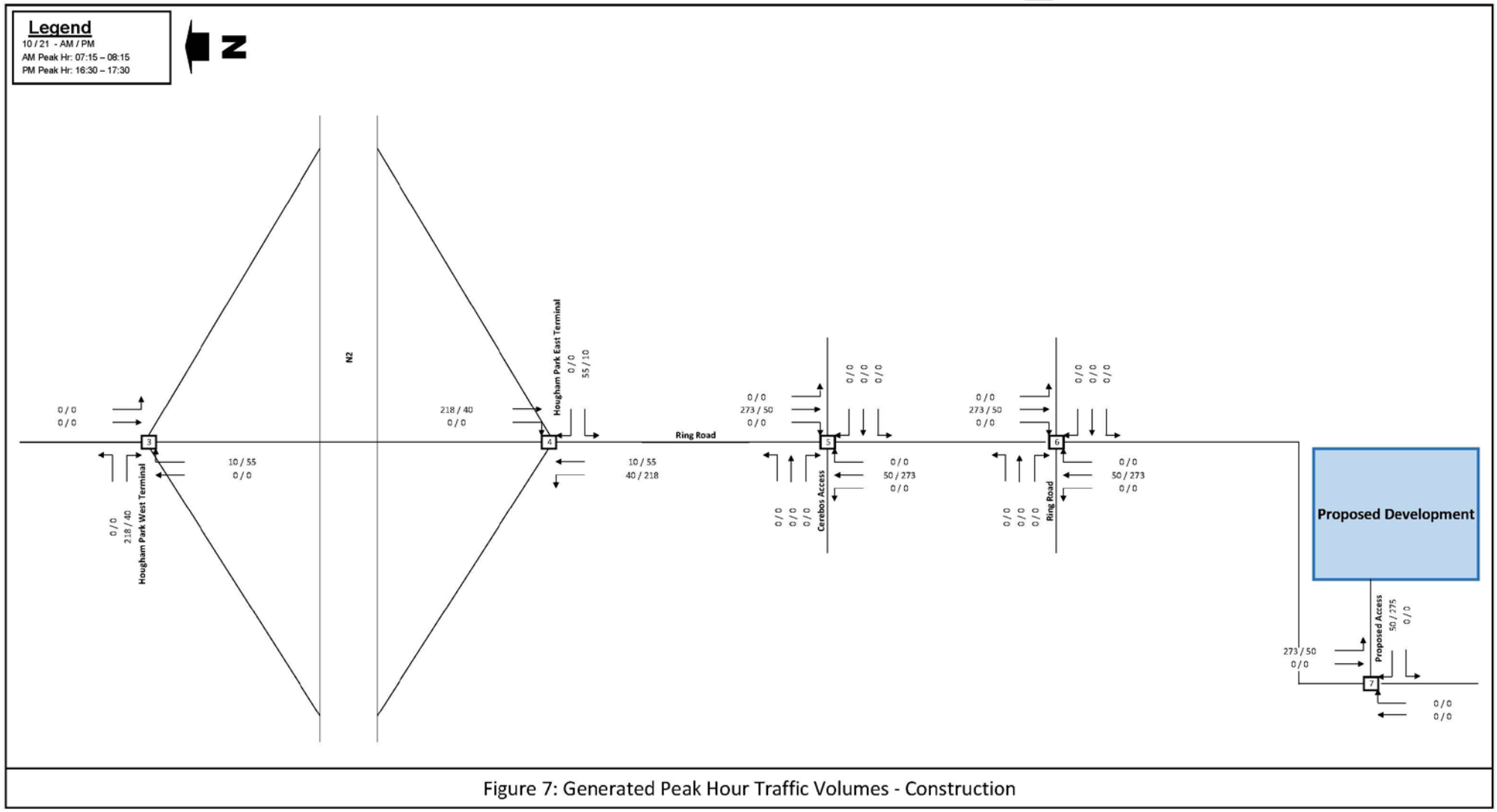


Figure 7: Generated Peak Hour Traffic Volumes - Construction

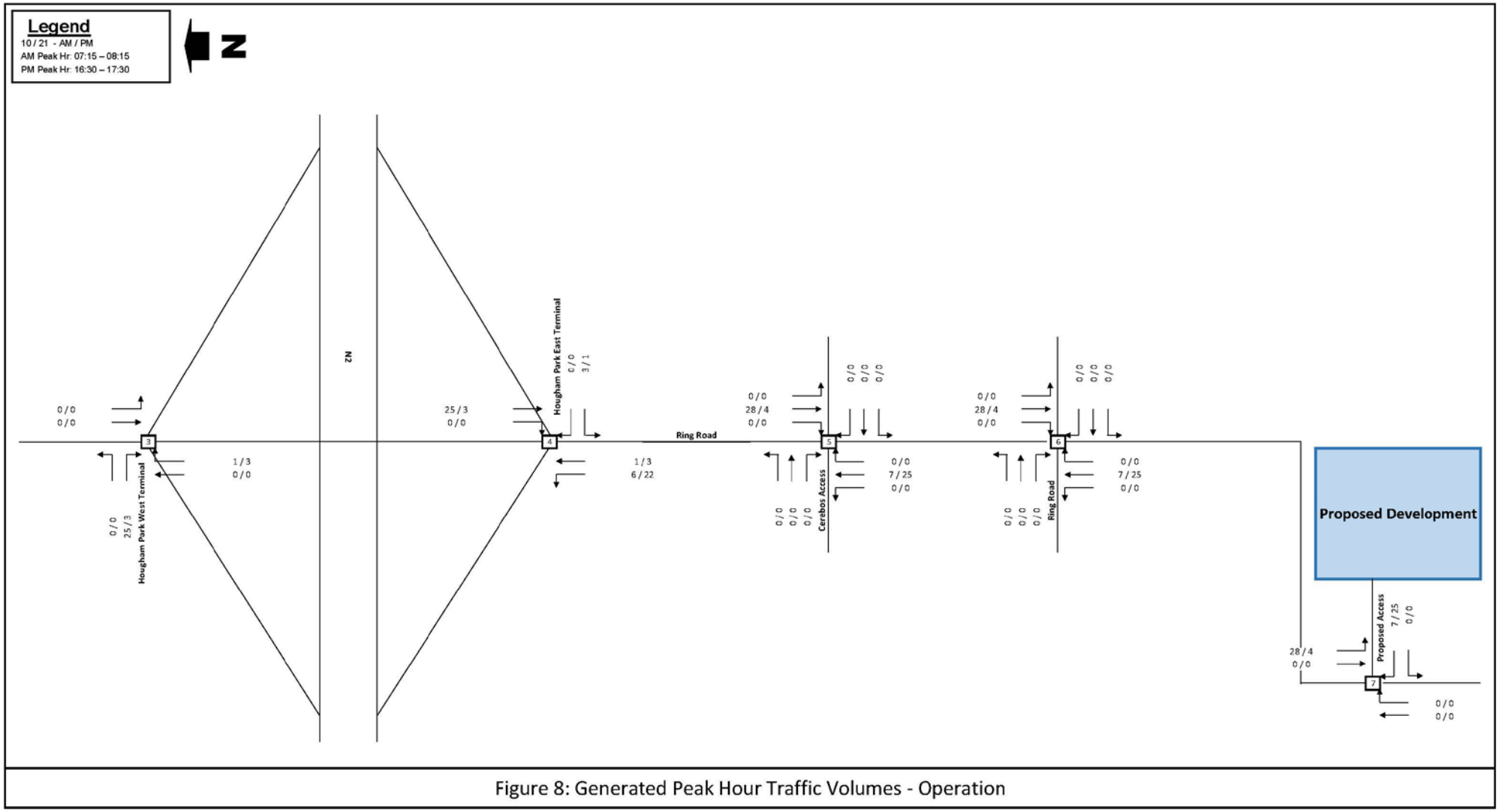


Figure 8: Generated Peak Hour Traffic Volumes - Operation

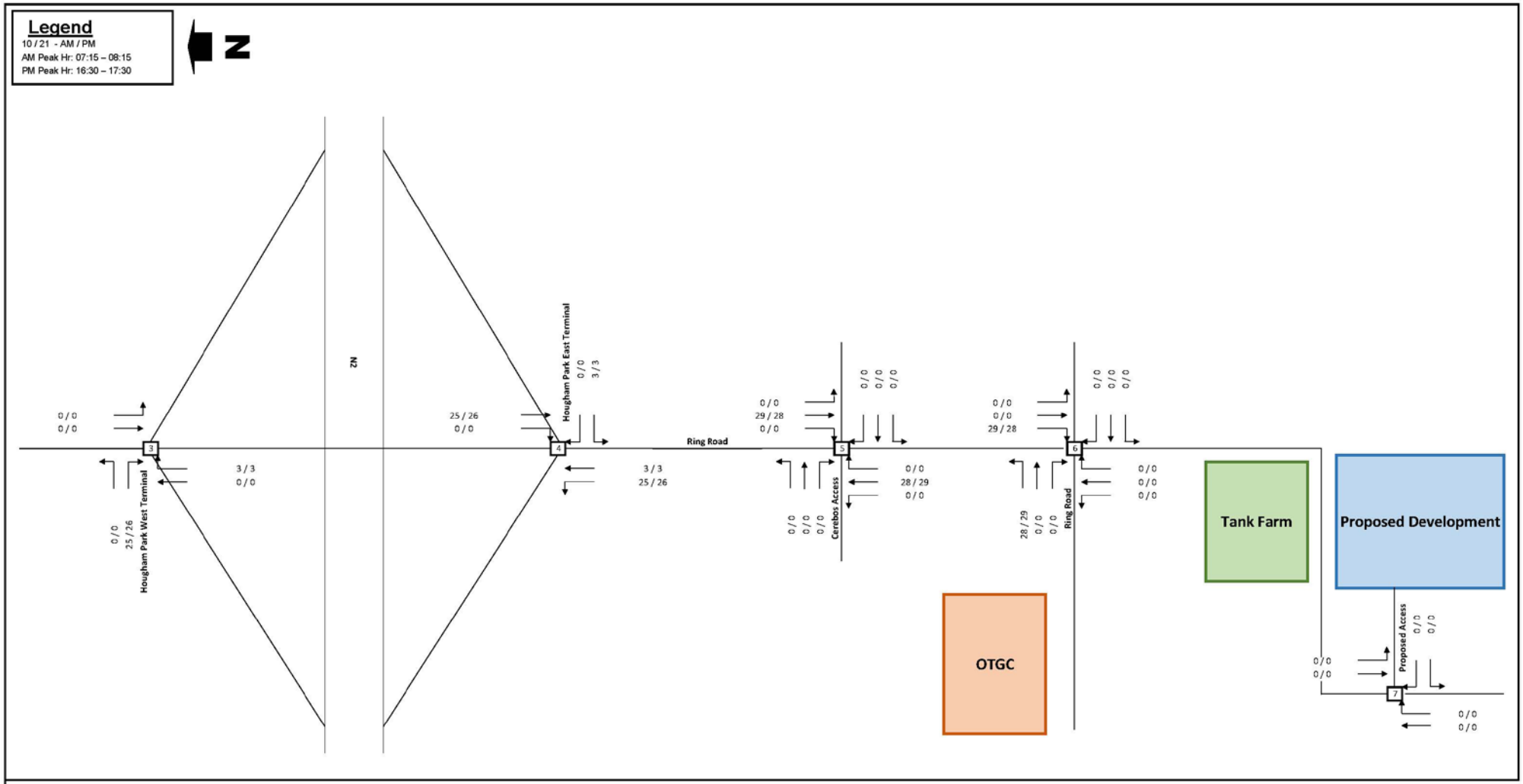


Figure 9: Latent Peak Hour Traffic Volumes - Tank Farm & OTGC

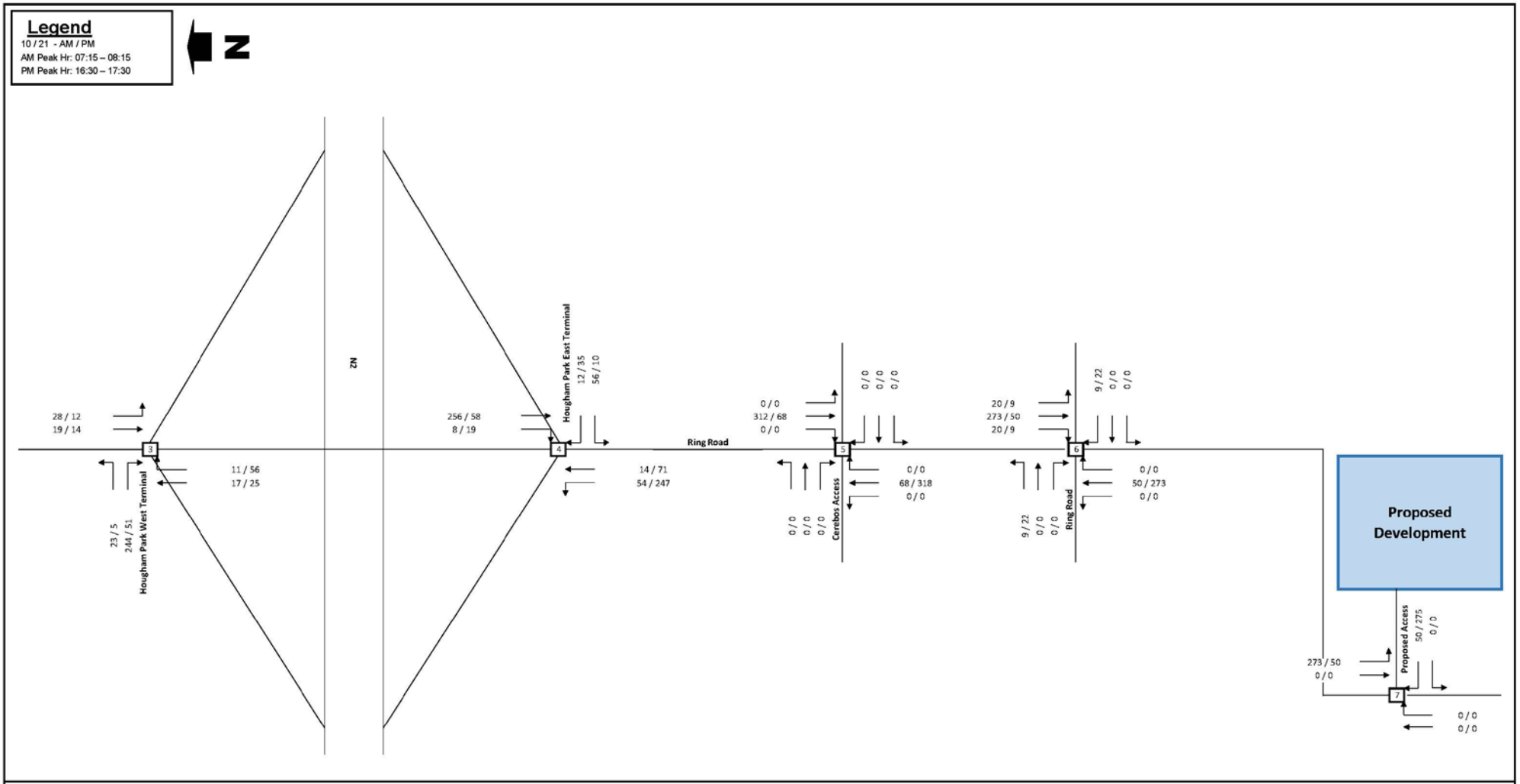


Figure 10: Peak Hour Traffic Volumes after Development - 2020 (Constuction)

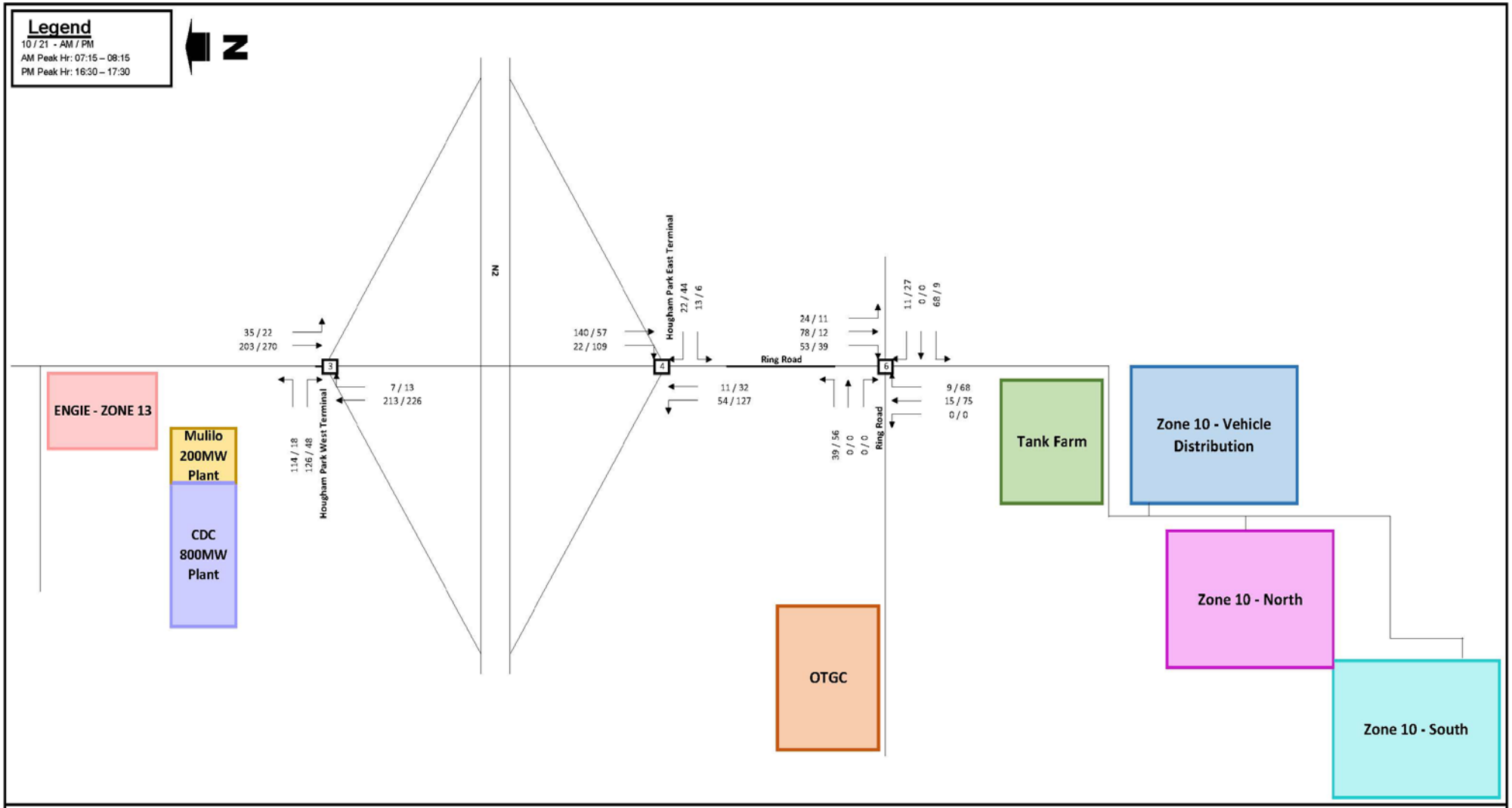


Figure 11: Peak Hour Traffic Volumes after Development - 2030 (All Development)

5 PROPOSED ACCESS ARRANGEMENTS

The primary access to the site is proposed from an extension of the Ring Road from the existing roundabout as indicated on **Figure 12**.

Based on the projected peak hour operational volumes a single lane per direction is sufficient to accommodate these volumes.

In terms of **TRH 26 - South African Road Classification and Access Management Manual** [3] the minimum access spacing on Class U2 roads is 150m to 175m. In addition, sight distance requirements for a semi-trailer vehicle entering a road with a design speed of 60 kph turning left or right requires is 200m. The requirement for a passenger car is 120m.

The access to the site must be configured with a minimum of two lanes and the security gates set back at least one truck length (20m) from the kerb-line to ensure no impact on passing traffic.