ROAD CONDITION REPORT: AUGUST 2026

THE SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED

CONTRACT NO. NRA. X.003-037-2019/1

FOR THE ROUTINE ROAD MAINTENANCE OF NATIONAL ROUTE N9 SECTION 5 KM 0.00 TO SECTION 6 KM 62.97 NATIONAL ROUTE R61 SECTION 2 KM 0.0 TO KM 17.24 AND NATIONAL ROUTE R63 SECTION 7 KM 40.25 TO SECTION 8 KM 20.25

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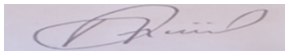
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Progress Report for;
SANRAL
Progress Report

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1. INTRODUCTION

This report is intended to provide an updated record, every 6 months of the road condition and maintenance actions to be implemented. The purposes of this report are:

- To provide the Project Managers with an overview of the route condition; and
- To inform prospective contractors of the current route condition for tendering purposes.

Although efforts have been made to ensure that this report is an accurate and complete representation of the current route condition, the report cannot be regarded as conclusive. The information given is based on visual survey data gathered from the site over a period of six months.

The standard industry guideline, TMH 9, was followed during the visual condition assessment of the route. TMH 9 is a useful guideline for the visual evaluation of the condition of flexible paved roads for use in the Pavement Management System (PMI). TMH9 outlines the standard assessment procedures and specifies the requirements for road segment information data. It provides a classification system for various pavement distress types with detailed descriptions of the standardised quantification of the degree and extent for each distress type. The key objectives for carrying out the visual assessment are to determine the following:

- Condition indices,
- Maintenance and rehabilitation need, and
- Priorities at network level.

Over the years, SANRAL has developed a Routine Road Maintenance Manual as a guideline for use in all of the routine maintenance contracts implemented on their road network. The scope of the routine road maintenance activities covered by this manual encompasses all the various aspects pertaining to routine road maintenance of National Roads, including the maintenance and management of the road reserve. This manual has been developed based on various industry guidelines and standards which, among others, include the following:

- TMH 9 (Standard Visual assessment manual for flexible pavements) and TRH 16 (Nomenclature and methods for describing the condition of asphalt pavements),
- Bituminous Pavement Repairs, General Repairs and Patching published by SABITA,
- South African Road Traffic Signs Manual (SARTSM),
- Site Management System for Routine Road Maintenance Contracts,
- National Slope Management Systems,
- Road Incident Management System,
- Drainage Manual (5th Edition), and

- Manual on Bi-Annual Bridge, Culvert, and Gantry Inspections.

2. SCOPE

The primary aim of this report is to provide current and historic routine road maintenance data of the NRA X.003-037-2019/1 Routine Road Maintenance (RRM) contract. Planned maintenance activities to address current maintenance needs be discussed for the period from 18 November 2021 to 31 August 2026. The topics covered fall under the following broad categories:

- General information
- General as built information
- Traffic information
- Road furniture information
- Historic routine road maintenance information
- Proposed future rehabilitations projects.
- Subcontractors and ABE' s involved with Routine Road Maintenance

3. DESCRIPTION OF CONTRACT

3.1 Route Description and Locality Plan

This report gives an insight on the Road Condition on NRA X.003-037-2019/1 Routine Road Maintenance (RRM) project on N9 section 5 km 0.0 to N9 section 6 km 62.97 and national route R61 section 2 km 0.0 to km 17.25 and national routes R63 section 7 km 40.20 to section 8 km 20.25. It falls under the Dr Beyers Naudé Local Municipality, which is spatially the third largest Local Municipality in the country, is well-positioned as a portal to the mystical Karoo, in a region renowned for its pristine natural environment, rich heritage, diverse people and cultures. The vast area (± 28,690 km² in extent) includes the towns of Graaff-Reinet, Willowmore, Aberdeen, Jansenville, Steytlerville, Nieu Bethesda, Klipplaat and Rietbron; plus, several smaller settlements and surrounding farms. It boasts several very popular tourist attractions, beautiful landscapes, and a healthy climate. The town of Graaff-Reinet, 4th oldest in South-Africa and referred to as the "Gem of the Karoo", is a hub of Agri-tourism activity; it is the political and administrative seat of the Municipality and is the centre where the biggest concentration of the population lives and works, including the RRM site office.

The project is spread between five sections, namely: N9 Section 5, which starts at km 0.0 in Aberdeen concluding at the town of Graaff-Reinet. N9 section 6 which starts in Graaff-Reinet and ends at the intersection of R61. R61 Section 2 commences at the N9 intersection and ends at km 17.25.
R63 Section 7 starts at Western Cape/Eastern Cape border, ending at the town of Graaff-Reinet and Section 8 – which starts at the N9 section 5 intersection and ends at km 20.25. The table below lists the five sections, the start and end points, and the length of each section.

2.2. LOCALITY PLAN

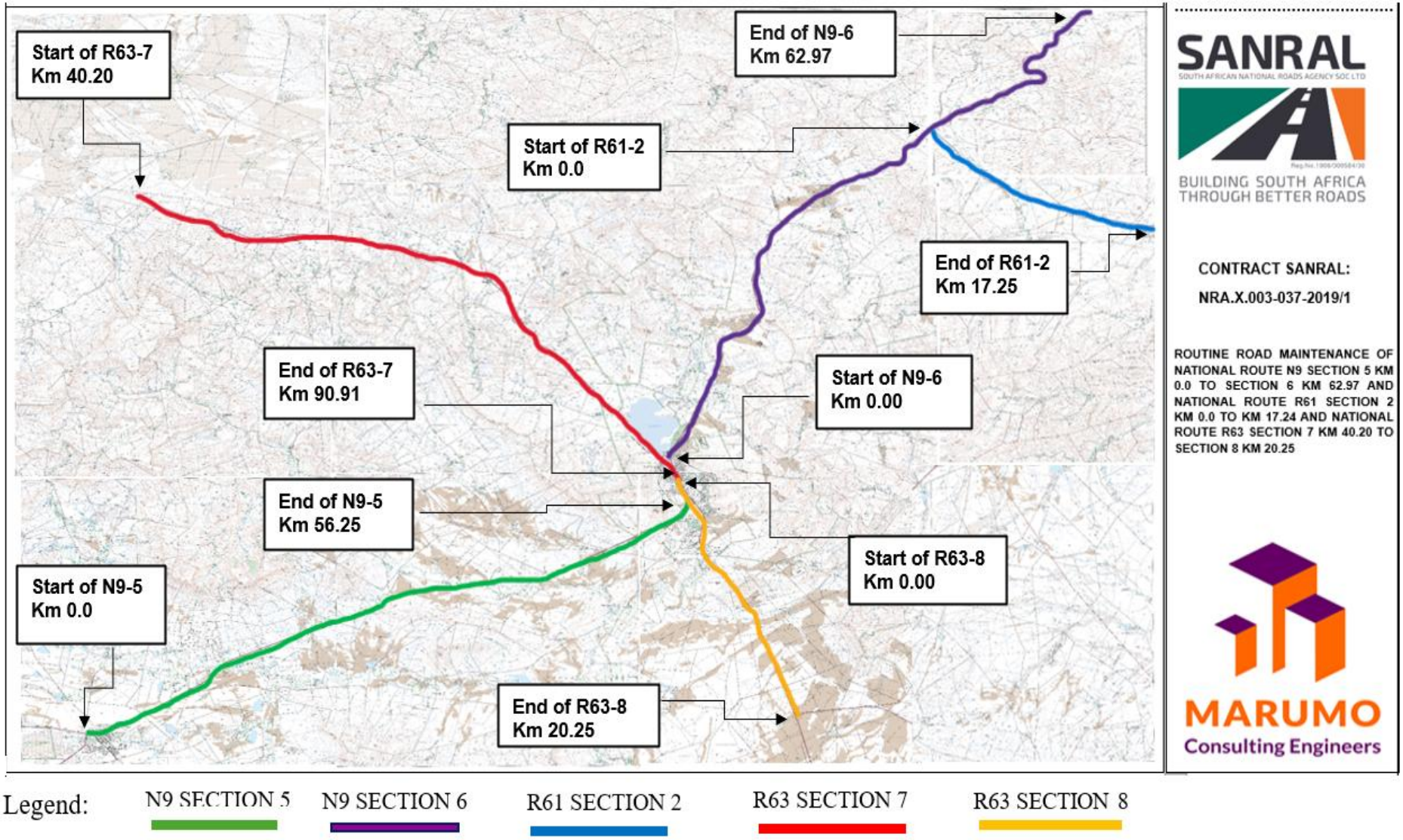


Figure 1: Locality Plan

(a) The route description of National Route NATIONAL ROUTE N9 SECTION 5:

(i) Starts at km 0.0 and ends at km 56.26

Type of carriageway	=	Single carriageway (S1)
Surfacing	=	Multiple seals (Double Seal, and Rutting)
Intersection	=	23 (excluding minor and accesses)
Toll Plazas	=	None
Road reserve width	=	46m
Median description	=	No median

(ii) List of interchanges = None

(iii) List of Toll Plazas = None

Table 3.3.1: Summary Route Description (N9-5)

Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 00.00 to Km 56.26	56.26	10.3	56.26	1.0 – 1.5	-	-

(b) The route description of National Route NATIONAL ROUTE N9 SECTION 6:

(i) Starts at km 0.0 and ends at km 62.97

Type of carriageway	=	Single carriageway (S1)
Surfacing	=	Multiple seals (Double Seal and Rutting)
Intersection	=	16 (excluding minor and accesses)
Toll Plazas	=	None
Road reserve width	=	42m
Median description	=	No median

(ii) List of interchanges = None

(iii) List of Toll Plazas = None

Table 3.3.2: Summary Route Description (N9-6)

Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 00.00 to Km 62.97	62.97	10.6	62.97	1.5 – 1.6	-	-

(c) The route description of National Route R61 Section 2:

(i) Starts at km 0.0 and ends at km 17.25

Type of carriageway	=	Single carriageway (S1)
Surfacing	=	Single Seal
Intersection	=	1 (excluding minor and accesses)
Toll Plazas	=	None
Road reserve width	=	18 m
Median description	=	No median

(ii) List of interchanges = None

(iii) List of Toll Plazas = None

Table 3.3.3: Summary Route Description (R61 -2)

Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 00.00 to Km 17.25	17.25	7.6	8.85	1.5 - 2.0	8.4	0 - 1.5

(d) The route description of National Route R63 Section 7

(i) Starts at km 40.2 and ends at km 91.91

Type of carriageway	=	Single carriageway (S1)
Surfacing	=	Multiple seals (Cape Seal and Geotextile)
Intersection	=	16 (excluding minor and accesses)
Toll Plazas	=	None
Road reserve width	=	25m
Median description	=	No median

(ii) List of interchanges = None

(iii) List of Toll Plazas = None

Table 3.3.4: Summary Route Description (R63-7)

Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 40.20 to Km 90.91	50.71	6.6	-	-	50.71	0 - 2.1

(e) The route description of National Route R63 Section 8

(i) Starts at km 0.0 and ends at km 20.25

Type of carriageway	=	Single carriageway (S1)
Surfacing	=	Cape Seal
Intersection	=	4 (excluding minor and accesses)
Toll Plazas	=	None
Road reserve width	=	30 m
Median description	=	No median

(ii) List of interchanges = None

(iii) List of Toll Plazas = None

Table 3.3.5: Summary Route Description (R63-8)

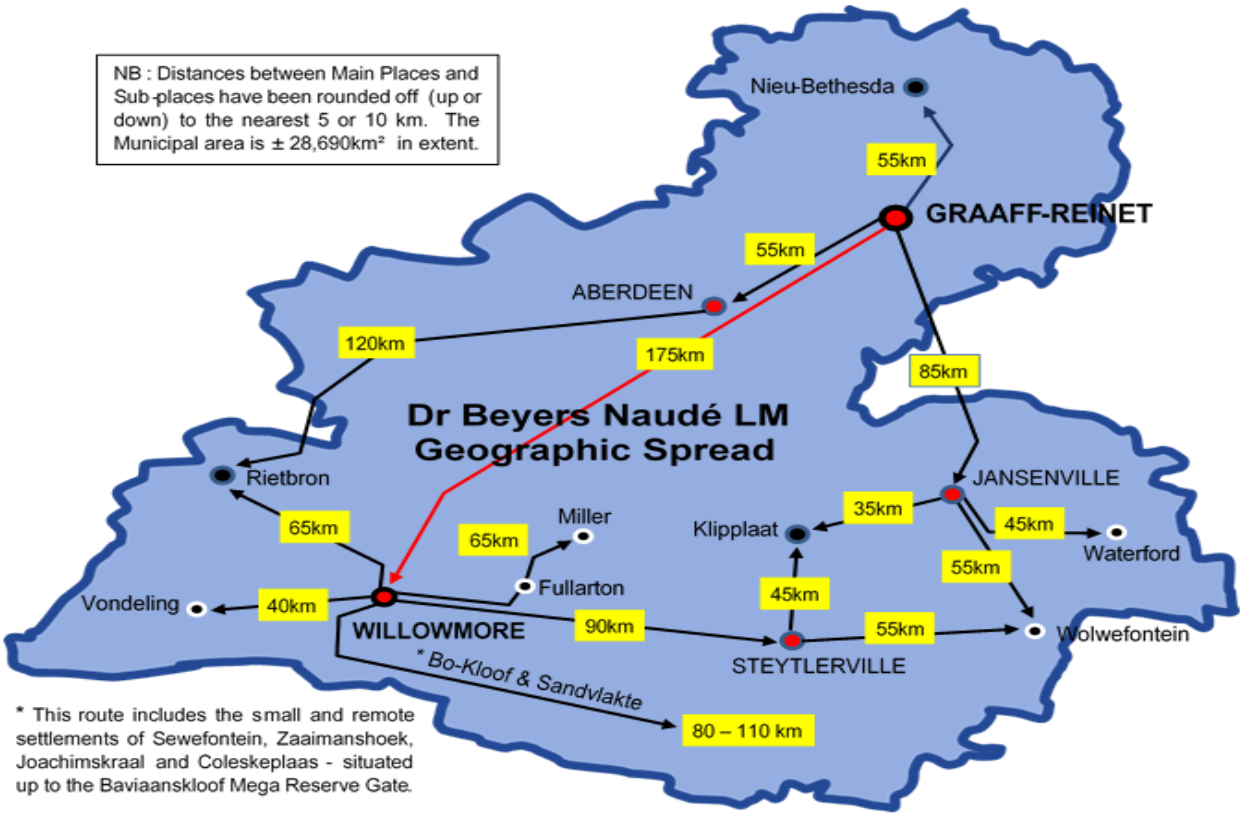
Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 00.00 to Km 20.25	20.25	11.8	20.25	2	-	-

Table 2.0: Description of various route sections with estimates surface areas

Route	Section	Kilometre		Length km	Road Pavement Area* (m²)	Road Reserve Area* (ha)
		Start	End			
N9	5	0.00	56.25	56.25	438 750.00	225.00
N9	6	0.00	62.97	62.97	491 166.00	220.395
R61	2	0.00	17.25	17.25	131 100.00	43.125
R63	7	40.20	90.91	50.71	334 686.00	126.775
R63	8	0.00	20.25	20.25	157 950.00	60.750
Total				**207.43**	**1 553 652**	**676.045**

3.1.1 District Municipalities

National Route N9, R63 & R61 lies on the Eastern Cape's south-eastern coast to the Karoo, under Dr Beyers Naudé Local Municipality, which is a new local municipality that was established by merging the Camdeboo, Ikwezi and Baviaans local municipalities in the Sarah Baartman District of the Eastern Cape in South Africa. Geographically the new Municipality makes up 49.2% of the Sarah Baartman District Municipality's landmass, with a low population density of 2.8 persons per km2, which is much lower than the district average of 7.7 persons per km2. The area is characterised by large tracts of commercial farmlands that are sparsely populated. The most densely populated areas are found in and around the established main towns. There are vast distances between main centres; some of the smaller towns and settlements can only be reached by unsurfaced (gravel) roads, not all of which are being maintained on a regular basis. The topography throughout the entire stretch of the project can be described as rolling; rolling terrain, as defined in SANRAL's Geometric Design Guidelines, refers to terrain where, "The natural slopes consistently rise above and fall below the highway grade with, occasionally, steep slopes presenting some restrictions on highway alignment. In general, rolling terrain generates steeper gradients, causing truck speeds to be lower than those of passenger cars." The slopes are relatively gentle with climbing lanes and passing lanes in N9 section 6, and R63 section 7 where the prevailing operating speed is 100 kilometres per hour. Below is a selection of pictures representing the typical terrain encountered along the route. The weather is generally moderate with rainfall experienced throughout the year in variable amounts, with the highest rainfall experienced in the month of March and the lowest amount recorded in the winter month of July.

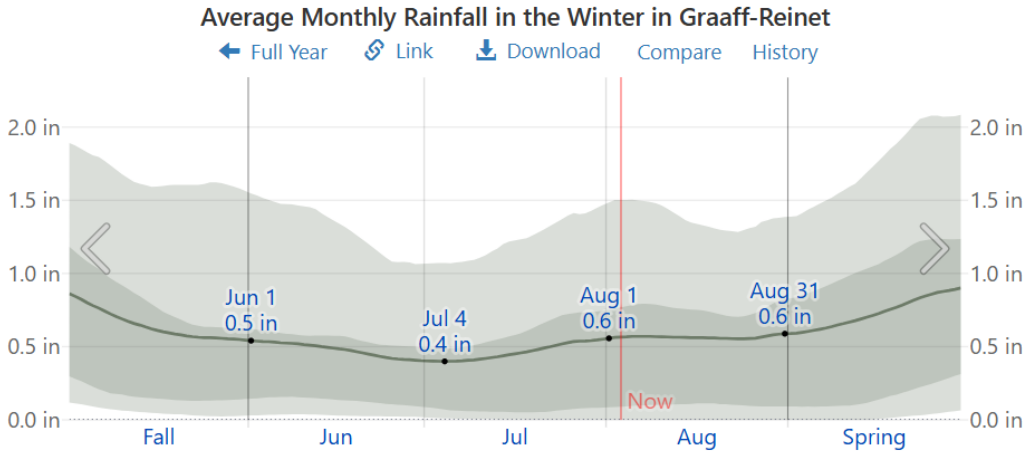


3.1.2 Climate

Climate and Average Weather Year-Round in under Dr Beyers Naudé Local Municipality, South Africa. The summers are hot; the winters are short, cold, dry, and windy; and it is mostly clear year-round. Over the course of the year, the temperature typically varies from 5° to 33°C and is rarely below 2°C or above 39°C. More information may be accessed on: https://weatherspark.com/s/90472/3/Average-Winter-Weather-in-Graaff-Reinet-Eastern-Cape-South-Africa#Figures-Temperature

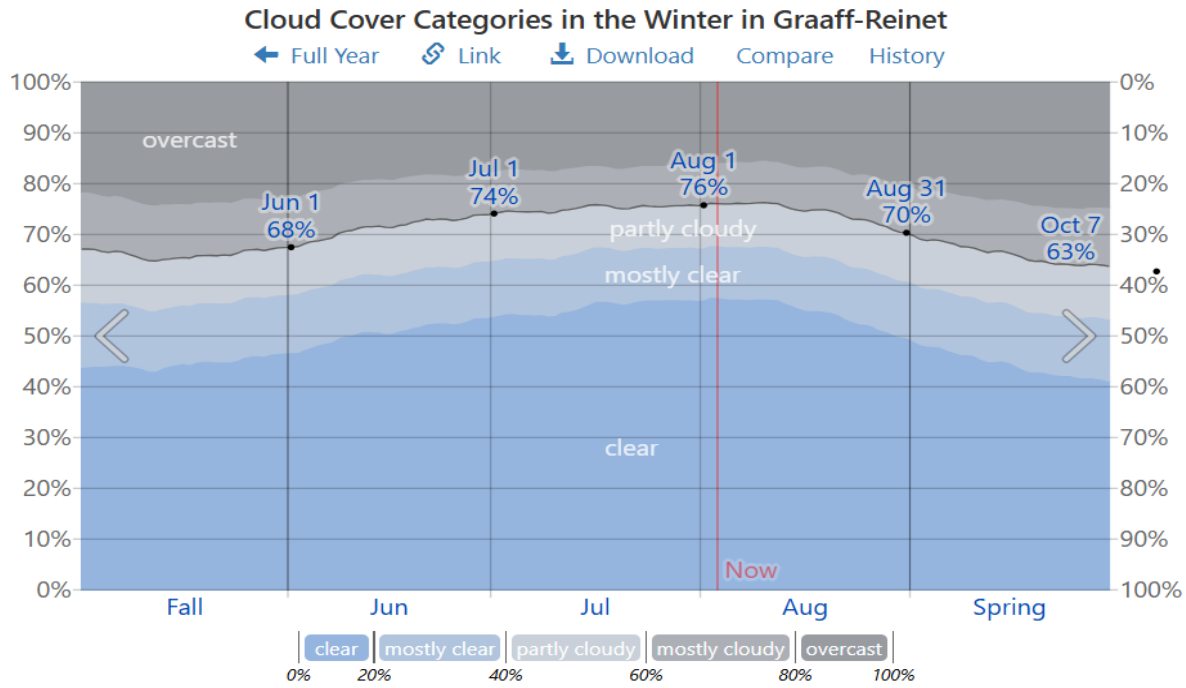
Rainfall

A wet day is one with at least 1.016mm of liquid or liquid-equivalent precipitation. The chance of wet days in Dr Beyers Naude LM region varies throughout the year. The wetter season lasts 5.4 months, from October 30 to April 10, with a greater than 18% chance of a given day being a wet day. The month with the most wet days in Dr Beyers Naude LM region is February, with an average of 7.9 days with at least 1.016mm of precipitation. The drier season lasts 6.6 months, from April 10 to October 30. The month with the fewest wet days in Dr Beyers Naude LM region is July, with an average of 1.9 days with at least 1.016mm of precipitation. Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. The month with the most days of rain alone in Dr Beyers Naude LM region is February, with an average of 7.9 days. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 30% on February 23.



The average rainfall (solid line) accumulated over the course of a sliding 31-day period centered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall.

In Dr Beyers Naude region, the average percentage of the sky covered by clouds experiences significant seasonal variation over the course of the year. The clearer part of the year in Graaff-Reinet begins around December 11 and lasts for 3.5 months, ending around March 29. The clearest month of the year in Graaff-Reinet is February, during which on average the sky is clear, mostly clear, or partly cloudy 83% of the time. The cloudier part of the year begins around March 29 and lasts for 8.5 months, ending around December 11. The cloudiest month of the year in Graaff-Reinet is October, during which on average the sky is overcast or mostly cloudy 36% of the time.

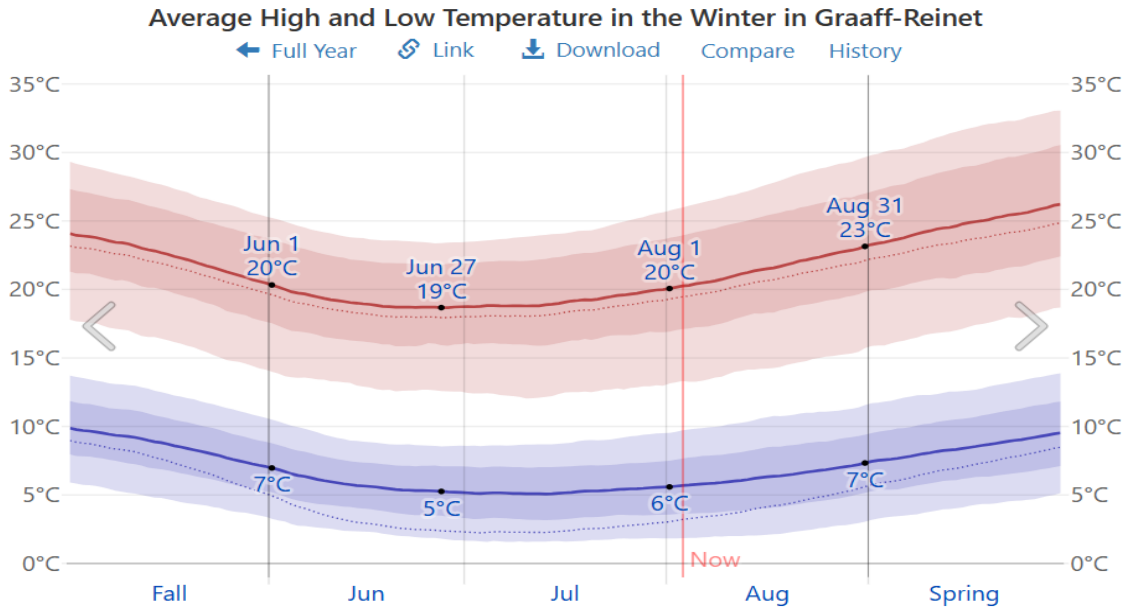


The percentage of time spent in each cloud cover band, categorized by the percentage of the sky covered by clouds.

CLIMATE – TEMPERATURES

The hot season lasts for 3.6 months, from November 27 to March 15, with an average daily high temperature above 31°C. The hottest month of the year in Graaff-Reinet is January, with an average high of 33°C and low of 16°C.

The cool season lasts for 2.8 months, from May 23 to August 17, with an average daily high temperature below 22°C. The coldest month of the year in Graaff-Reinet is July, with an average low of 5°C and high of 19°C.



The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures.

3.2 GENERAL

3.2.1 Traffic

An analysis of the traffic carried by the route is provided in Table 3.1 and includes the following traffic measures; annual average daily traffic (AADT) in both directions, the number of E80 kN axle loads and the year in which it was observed. This information was obtained from the Department's CTO system (Comprehensive Traffic Observations).

The Average Daily Traffic (ADT), Annual Average Daily Traffic (AADT) in both directions, as well as the number of E80 per day, the year in which it was observed and was counted (T) or estimated (B) for. The numerous counting stations along the project routes are included in Annexure P.

Table 3. 1: Traffic Information

Route	Section	Station	km	ADT	AADT	E80 kN	Year
N9	5	889	45.21	1643	1547	504	2021
N9	6	939	93.71	986	905	338	2021
R61	2	1226	84.40	999	957	301	2021
R63	7	01680	81.57	287	339	223	2021
R63	8	01711	6.30	1 359	1251	440	2021

3.2.2 KM – distance references

The South African National Roads Agency SOC Ltd (SANRAL) km-distance reference marker boards (blue boards) have been installed on all sections to assist with determining accurate locations of points of interest along the route. All sections of the routes are provided with the blue marker boards spaced at 200m intervals.

3.2.3 Urban and peri-urban sections included in Route Sections

Urban and peri-urban sections as identified in Table 3.2 are considered sections which will require more frequent maintenance activities such as cleaning, painting of the furniture and removal of litter and debris as well as activities associated with pedestrian and road user safety such as fencing, road marking and road signs amongst others.

Table 3.2: Peri-urban areas

Debris and litter (also a performance-based item) is removed on a weekly basis and inspected every month.

Town	Type	Section and Kilometre				Length (m)
		Start		End		
		Section	km	Section	Km	
Aberdeen	Removal of Litter	N9/S5	0	N9/S5	5	5000
Graaff-Reinet	Removal of Litter	N9/6	0	N9/6	5	5000

Neu Bethesda	Removal of Litter	R61/2	0	R61/2	5	5000
Graaff-Reinet	Removal of Litter	R63/8	0	R63/8	5	5000

3.2.4 Cross-sectional properties

Table 3.3: Cross-section profile information

Section	Kilometre		Total Length	Road prism (Length in Kilometres)							
				East Bound				West Bound			
	Start	End		Road Reserve(km)	Gravel Shoulder(km)	Surfaced Shoulder(km)	Surfaced Lanes No	Surfaced Lanes No	Surfaced Shoulder(km)	Gravel Shoulder(km)	Road Reserve(km)
5	0.00	56.26	56.26	53.4	0	56.26	2	2	56.26	0	53.4
6	0.00	62.97	62.97	59.6	0	62.97	2	2	62.97	0	59.6
2	0.00	17.25	17.25	17.25	17.25	17.25	1	1	17.25	17.25	17.25
7	40.2	91.91	50.71	50.71	50.71	50.71	1	1	50.71	50.71	50.71
8	0.00	20.25	20.25	20.25	20.25	20.25	1	1	20.25	20.25	20.25

3.3 Material sources

The table below shows the source of the materials used on site.

NAME	PRODUCTS	Tel. No.
Much Asphalt	Asphalt	041 364 1116
Armco	Guardrails	011 974 8511
Colas	Binders	043 731 1860
Heintzmann South Africa	Guardrails	011 762 2226

3.4 Interchanges, Intersections and Accesses

The summary of the intersections and accesses are detailed in Annexure A of the road logs.

3.4.1 Interchanges

There are no interchanges on all 5 routes of the project.

3.4.2 Intersections

There are several intersections, mostly ‘T’ junctions along the routes, intersections along the various sections are summarized in the table below. Minor intersections and access are summarized in Annexure A.

Table 3.6: Intersections N9 Section 5

Intersection	Start (km)	End (km)	Type of Intersection
N9 Section 5			
R61 Beaufort west/R338 Aberdeen	00.00	00.00	Crossing
Aberdeen	02.15	02.15	T-Junction
Kendrew	09.85	09.85	T-Junction
De Rust	15.50	15.50	T-Junction
Vrijnsfontein	22.55	22.55	T-Junction
Uitkomst	27.10	27.10	T-Junction
Adendorp/Camdeboo	44.50	44.50	Crossing
R63(R75) Somerset East/Port Elizabeth	53.50	53.50	T-Junction
Bresler st	54.00	54.00	Crossing
Spoorweg st	54.20	54.20	Crossing
Woeke st	54.48	54.48	T-Junction
Ben Schoeman st	54.7	54.7	T-Junction
Stations st	54.81	54.81	T-Junction
Meiring st	55.00	55.00	Crossing
Wes st	55.23	55.23	T-Junction
Rivier st	55.08	55.08	T-Junction
Middel st	55.32	55.32	Crossing
Caroline st	55.44	55.44	T-Junction
Parlement st	55.61	55.61	T-Junction
Somerset st	55.71	55.71	Crossing
Te water st	55.83	55.83	T-Junction
Muller st	55.89	55.89	T-Junction
Caledon st	56.23	56.26	T-Junction

Table 3.7: Intersections N9 Section 6

Intersection	Start (km)	End (km)	Type of Intersection
N9 Section 6			
Caledon St/Goendhals Square	00.00	00.00	T-Junction
Napier St	00.70	00.70	T-Junction
Noord St	00.15	00.15	Crossing
Erasmuskloof	03.90	03.90	T-Junction
Airfield	06.47	06.47	T-Junction

Intersection	Start (km)	End (km)	Type of Intersection
Roodebloem Primary School	07.96	07.96	T-Junction
Pretoriuskloof	09.45	09.45	T-Junction
Riversdale	14.70	14.70	T-Junction
Goliatskraal	19.20	19.20	T-Junction
Klipfontein	20.85	20.85	T-Junction
Bloemhof/Nieu Bethesda	27.8	27.8	Crossing
Coloniesplaats/Letskraal	44.20	44.20	T-Junction
R61 Cradock/Queenstown	46.62	46.62	T-Junction
Nieu Bethesda	47.24	47.24	T-Junction
Blaauwater	49.00	49.00	T-Junction
Pienaarsbaken	50.50	50.50	T-Junction

Table 3.8: Intersections R61 Section 2

Intersection	Start (km)	End (km)	Type of Intersection
R61 Section 2			
N9 Middelburg/Graaff Reinet	00.00	00.00	T-Junction

Table 3.9: Intersections R63 Section 7

Intersection	Start (km)	End (km)	Type of Intersection
R63 Section 7			
Richmond	64.6	64.6	T-Junction
Dassiesfontein	68.78	68.75	T-Junction
Roodewal	78.57	78.57	T-Junction
Welgenvonden	80.0	80.0	T-Junction
Gannaleegte	82.4	82.4	T-Junction
Winterhoek	85.25	85.25	T-Junction
Sondags River St	89.05	89.05	T-Junction
Stockenstroom St	89.10	89.10	T-Junction
Park St	89.43	89.43	Crossing
Caledon St	89.72	89.72	Crossing
Caledon/Cradock St	89.92	89.92	Crossing
Caledon/Miner St	90.01	90.01	Crossing
Caledon/Bourke St	90.11	90.11	Crossing
Caledon/Rabie St	90.18	90.18	T-Junction
Caledon/Te Water St	90.26	90.34	T-Junction
Caledon/Goendhals Square	90.91	90.91	T-Junction

Table 3.10: Intersections R63 Section 8

Intersection	Start (km)	End (km)	Type of Intersection
R63 Section 8			
N9/R63 Graaff Reinet/Aberdeen	00.00	00.00	T-Junction
Lootsfontein/Rynheath	06.20	06.20	Crossing
Adendorp	3.45	3.45	T-Junction
Lootsfontein/Rynhealth	6.20	6.20	Crossing

The photos below illustrate a typical example of intersection that are found along the route.
N9 section 5/ R63 Section 8.



Figure 1

3.3.1 Accesses

Access to the site(s) shall be from established intersections and approved accesses. All approved accesses along the various sections are summarized in the table below. Minor intersections and access are summarized in Annexure A.

N9 Section 5

Table 1.2.1: Intersections N9 Section 5

MINOR JUNCTIONS AND ACCESSES			
N9 SECTION 5			
Start Km	End Km	Type	Description
45.9	45.9	T-Junction	Access to power station
52.4	52.4	T-Junction	Graaff Reinet Transfer station & Recycle facility

N9 Section 6

Table 1.2.2: Intersections N9 Section 6

MINOR JUNCTIONS AND ACCESSES			
N9 SECTION 6			
Start Km	End Km	Type	Description
0.15	0.15	T-Junction	Access in the South direction opposite Noord street
0.23	0.23	T-Junction	Access to Town ship in the Southern direction
2.05	2.05	T-Junction	Access to Town ship in the Northern direction
2.55	2.55	Crossing	Access to Township and Farms
5.53	5.53	T-Junction	Access to water supply scheme

R63 Section 7

Table 1.1.4: Intersections R63 Section 7

MINOR JUNCTIONS AND ACCESSES			
R63 SECTION 7			
Start Km	End Km	Type	Description
86.65	86.65	T-Junction	Access to the Park
88.86	88.86	T-Junction	Access to the National Park

R63 Section 8

Table 1.2.5: Intersections R63 Section 8

MINOR JUNCTIONS AND ACCESSES			
R63 SECTION 8			
Start Km	End Km	Type	Description
0.35	0.35	T-Junction	Access to Private Property
0.70	0.70	Crossing	Intersection No Nam
3.45	3.45	T-Junction	Junction to Adendorp
3.53	3.53	T-Junction	Illegal Access
20.25	20.25	T-Junction	Access to Vodacom Site

The photos below illustrate typical examples of access road on N9 Section 6.



Figure 3

4. ROAD FURNITURE

Road furniture which includes all fixtures on the road and within the road reserve that are intended to provide information or safety to a road user and includes earth drains, traffic lights, sign posts, traffic signs, guardrails, marker posts, fences, reflectors and road studs. The road furniture for all roads is presented in the table below. For detailed information refer to Annexure A.

4.1 Earth Drains

Earth drains which act as temporary berm or ridge of compacted soil used to divert runoff or channel water to a desired location. Are maintained regularly on Engineers instruction under the RRM project.

The table below contain a summary off all the earth drains along the route and for detailed information refer to Annexure A.

Table 5.1: Earth channels Information

Route	Position	Length (m)	Frequency of Cleaning / year
N9 SECTION 5	Refer to Annexure E	2580	1
N9 SECTION 6	Refer to Annexure E	5540	1
R61 SECTION 2	Refer to Annexure E	600	1
R63 SECTION 7	Refer to Annexure E	10160	1
R63 SECTION 8	Refer to Annexure E	620	1

The photos below illustrate typical examples of Earth drains on N9 Section 6.





Figure 4

4.2 Concrete Drains

There are mainly stone pitching and concrete drain along the routes under this project, which ensure the collection of water at one end of a slope, and catch basin or area drains that drain the water from the middle of a slab. Stone pitching drains are found along all the routes with the exception of N9 section 5 and R61 section 2, respectively. While concrete drains are predominant on N9 section 5 and 6, R61 section 2 and as well as R63 section 8.

Table 5.2: Concrete channels Information

Route	Section	Description	Total (m)
N9	5	V-Drains	5930
		Catchwater drains (Culverts/Bridge)	N/A
		Median drains	N/A
		Kerbing	4720
N9	6	V-Drains	11890
		Catchwater drains (Culverts/Bridge)	N/A
		Median drains	N/A
		Kerbing	1780
R61	2	V-Drains	7240
		Catchwater drains (Culverts/Bridge)	N/A
		Median drains	N/A
		Kerbing	N/A
R63	7	V-Drains	2389
		Catchwater drains (Culverts/Bridge)	N/A
		Median drains	N/A
		Kerbing	N/A
R63	8	V-Drains	4410
		Catchwater drains (Culverts/Bridge)	N/A
		Median drains	N/A
		Kerbing	N/A

The photos below illustrate typical a concrete drain on N9 Section 5.

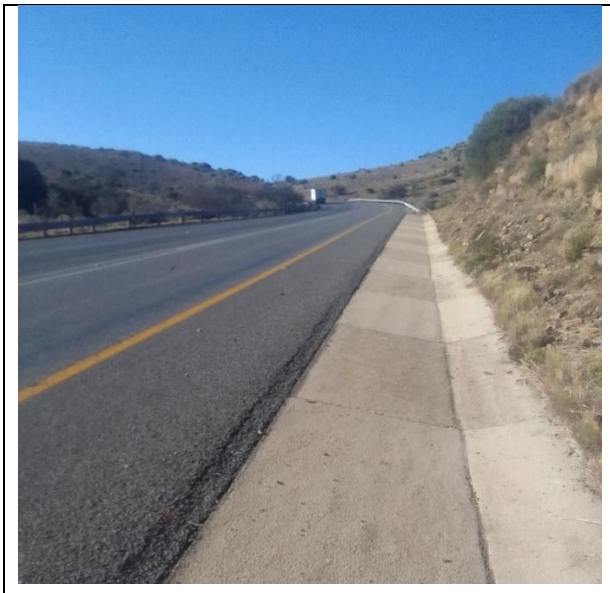




Figure 5

4.3 Guardrails

The following guardrail maintenance actions are done along the route through the current contract as ongoing activities and as a result the overall condition of the guardrail is good.

N9 Section 5

Table 5.3.1: Guardrails N9 Section 5

GUARDRAILS ALONG N9 SECTION 5			
Start Km	**End Km**	**Direction**	**Length (m)**
0,08	0,22	S	140
12,04	12,2	N	160
12,04	12,2	S	160
12,35	13,1	N	750
19,76	19,83	N	70
19,76	19,83	S	70
23,60	23,89	S	290
24,96	25,25	S	290
25,40	25,47	S	70
25,40	25,47	N	70
27,10	27,4	N	300
33,75	33,84	N	90
33,75	33,84	S	90
37,85	38,1	N	250
41,07	41,1	S	30
41,07	41,1	N	30
42,30	42,4	N	100
42,30	42,4	S	100
42,70	42,9	N	200
42,70	42,9	S	200
45,45	45,5	N	50
45,45	45,5	S	50
47,62	47,69	N	70
47,62	47,69	S	70
48,30	48,35	N	50
48,30	48,35	S	50
48,40	48,5	N	100
48,40	48,5	S	100
49,10	49,2	N	100
49,10	49,25	S	150
49,32	49,4	S	80
49,45	49,85	S	400
50,05	50,2	N	150
50,05	50,2	S	150
50,34	50,42	N	80
50,30	50,05	S	250
50,78	50,98	S	200

50,85	50,9	N	50
50,95	50,98	N	30
51,25	51,4	N	150
51,32	51,43	S	110
52,57	52,67	N	100
52,57	52,67	S	100

N9 Section 6

Table 5.3.2: Guardrails N9 Section 6

GUARDRAILS ALONG N9 SECTION 6			
Start Km	**End Km**	**Direction**	**Length (m)**
0,75	1,40	S	650
2,10	2,35	N	250
4,78	4,92	N	140
4,78	4,92	S	140
7,96	8,20	N	240
8,01	8,25	S	240
13,20	13,30	N	100
13,45	13,85	N	400
17,25	17,65	S	400
17,65	18,50	N	850
18,10	18,30	S	200
20,10	20,20	N	100
20,10	20,20	S	100
22,64	22,75	N	110
22,64	22,75	S	110
23,70	24,60	N	900
25,30	25,57	S	270
25,42	25,47	N	50
26,78	26,70	N	80
26,78	26,70	S	80
27,41	27,50	N	90
27,42	27,55	S	130
32,01	32,30	N	290
32,00	32,25	S	250
35,70	35,77	N	70
35,70	35,77	S	70
37,20	37,27	N	70
38,25	39,80	N	1550
38,90	39,44	N	540
39,30	39,32	S	20
39,40	39,52	S	120
39,49	39,52	N	30
39,59	39,72	N	130

39,63	39,72	S	90
39,88	40,40	N	520
40,10	40,40	N	300
45,45	46,12	N	670
45,45	46,12	S	670
49,15	49,30	N	150
49,15	49,30	S	150
53,30	53,87	S	570
53,35	53,47	N	120
53,78	53,87	N	90
54,76	54,92	N	160
54,76	54,92	S	160
55,05	55,17	S	120
55,30	55,55	S	250
55,61	55,90	S	290
60,44	60,50	S	60
60,67	60,84	S	170
61,20	61,30	N	100
61,20	61,30	S	100
61,35	62,97	N	1620

R61 Section 2

Table 5.3.3: Guardrails R61 SECTION 2

GUARDRAILS ALONG R61 SECTION 2			
Start Km	**End Km**	**Direction**	**Length (m)**
1,52	1,70	W	180
2,30	2,60	E	300
2,30	2,60	W	300
3,59	3,61	E	20
3,59	3,61	W	20
4,30	4,60	W	300
4,37	4,60	E	230
7,05	7,08	E	30
7,05	7,08	W	30
8,79	8,86	E	70
8,79	8,86	W	70
9,20	9,50	E	300
10,30	10,90	E	600
10,75	10,90	W	150
11,20	12,80	E	1600
13,25	13,35	E	100
13,25	13,40	W	150
13,52	13,70	E	180
13,52	13,70	W	180
13,90	14,05	E	150

13,90	14,05	W	150
14,10	14,20	E	100
14,10	14,20	W	100
14,40	14,55	E	150
14,40	14,55	W	150
15,30	15,40	W	100
15,57	15,65	E	80
15,57	15,65	W	80
15,83	16,20	W	370
16,50	16,70	E	200
16,50	16,70	W	200

R63 Section 7

Table 5.3.4: Guardrails R63 SECTION 7

GUARDRAILS ALONG R63 SECTION 7			
Start Km	**End Km**	**Direction**	**Length (m)**
40,50	41,05	-	550
40,75	41,05	+	300
42,05	42,35	+	300
42,05	42,35	+	300
43,35	43,45	-	100
43,37	43,45	+	80
48,40	48,55	+	150
48,40	48,55	-	150
54,95	55,15	+	200
54,95	55,10	-	150
55,30	55,60	+	300
55,75	55,80	+	50
55,75	55,80	-	50
57,85	58,00	+	150
57,85	58,00	-	150
62,20	62,35	+	150
62,20	62,35	-	150
66,00	66,25	+	250
66,00	66,25	-	250
69,25	69,70	+	450
69,78	70,75	+	970
70,90	71,40	+	500
71,44	72,45	+	1010
72,60	72,84	+	240
72,60	72,70	-	100
72,94	73,90	+	960
73,50	73,85	-	350
73,50	73,80	-	300

GUARDRAILS ALONG R63 SECTION 7			
87,04	88,20	-	1160
87,90	88,00	-	100

R63 Section 8

Table 5.3.5: Guardrails R63 SECTION 8

GUARDRAILS ALONG R63 SECTION 8			
Start Km	**End Km**	**Direction**	**Length (m)**
0,10	0,65	+	550
0,50	0,65	-	150
2,52	2,60	+	80
2,52	2,60	-	80
4,30	4,98	+	680
4,30	4,98	-	680
6,93	7,12	+	190
6,93	7,12	-	190
7,50	7,64	+	140
7,50	7,64	-	140
7,85	8,00	-	150
8,00	8,30	+	300
12,30	12,42	+	120
12,30	12,42	-	120
13,26	13,44	+	180
13,26	13,44	-	180

Photo's below shows a typical guardrail re-erected along the route.



Figure 6

4.4 Traffic Signs

The tables below are the register of traffic signs encountered on the different routes. Refer to Annexure A for detailed information.

N9 Section 5

Table 5.5: Traffic signs Information (N9-5)

Signs register N9 Section 5 - From km 00.00 to km 56.26	
Type	**Number**
GD1	4
GD2	20
GD3	12
GD1/GD2	0
GF5A	4
GF6A	5
GFSA4	2
GFS B1-2 RSA	2
GFS C1-1	1
GL4	8
GS101	2
GS202	1
R1	12
R2	1
R3	10
R103	1
R201	15
W107 & W108	20
W110	1
W202 & W203	2
W307 & W308	0
W310	0
W313	8
W333	3
W339-WD	2
(W339 + W313)-WD	2
W409	3

N9 Section 6

Table 1: Traffic signs Information (N9-6)

Signs register N9 Section 6 - From km 0.00 to km 62.97	
Type	**Number**
GD1	6
GD2	32
GD3	113

GD1/GD2	0
GF2	1
GF5A	8
GF6A	7
GFSA4	4
GF7	3
GF18-RSA	3
GFS B1-2 RSA	1
GS901 & GS902	2
GFS C1-1	0
GL4	7
GL6	6
GS101	6
GS202	5
R1	20
R2	0
R3	1
R103	1
R201	27
W101	1
W107 & W108	31
W110	0
W202 & W203	6
W208 & W209	5
W209-WB	1
W307 & W308	3
W310	0
W313	10
W333	0
W334	3
W339	2
W339-WD	0
W339 + W313-WD	0
W409	0
R201(40)-RC + W339-WD	1
R201(80)-RC + W211-WD	1
R201(80)-RC + W208-WD & R201(80)-RC + W209-WD	6

Table 5.6: Traffic signs Information (R61-2)

Signs register R61 Section 2 - From km 00.00 to km 17.25	
Type	**Number**
GD1	1
GD2	0
GD3	4
GD1/GD2	0
GF5A	1
GF6A	1
GF18-RSA	1
GFS B1-2 RSA	0

GL4	2
GL6	2
GFS C1-1	0
GL4	5
GL6	2
GF15-RSA	1
GS101	1
GS202	1
GS505	1
R1	0
R2	0
R3	0
R103	0
R201	3
R214	1
W104	1
W107 & W108	0
W110	0
W202 & W203	1
W208	1
W209	4
W302-WB	1
W307	0
W309	6
W310	0
W313	4
W333	1
W334 & W335	2
W339	1
W339-WD	0
(W339 + W302)-WD	0
W409	0

R63 Section 7

Table 5.7: Traffic signs Information (R63-7)

Signs register R63 Section 7- From km 40.20 to km 90.91	
Type	**Number**
GD1	3
GD2	14
GD3	9
GD1/GD2	0
GDLSA2-12	4
GF5A	1
GF6A	0
GFS A1-1 RSA	2
GFS B1-2 RSA	0
GFS C1-1	0
GFS18-RSA	1
GL4	2

GL6	2
GS101	2
GS202	0
R1	6
GS505	1
R2	0
R3	0
R103	0
R201	20
R214	1
W107 & W108	25
W110	0
W202 & W203	4
W209	4
W209-WB	2
W307	0
W309	6
W310	2
W313	6
W313-WA	1
W332	2
W332-WB	2
W333	0
W334	4
W335	8
W339	1
W339-WD	0
(W332 + W317)-WD	2
W409	2

R63 Section 8

Table 5.9: Traffic signs Information (R63-8)

Signs register R63 Section 8- From km 00.00 to km 20.25	
Type	**Number**
GD1	3
GD2	5
GD3	3
GD1/GD2	1
GF5A	1
GF6A	1
GFS B1-2 RSA	0
GS901	1
GFS C1-6	1
GF2	1
GL4	4
GL6	0
GL7	1
GS101	1

GS202	1
R1	5
R2	0
R3	0
R103	0
R201	7
R214	1
R217	1
W107 & W108	2
W110	1
W202 & W203	0
W302	2
W307	0
W310	0
W313	0
W333	0
W339-WD	0
W339 + W313-WD	0
W409	2

4.5 Fencing

There are numerous sections along the routes where the fence has been stolen. Key areas that could potentially pose imminent threat to motorists are the areas where communities and animals exist within the vicinity of the road reserve, especially around Graaff-Reinet.

Frequency of repair

As and when required.

Table 6.1: Fencing Information (N9-5)

Route	Type of Fencing
N9 SECTION 5	A combination of the following fences is found on the route: • vermin proof • security fence

Table6.2: Fencing Information (N9-6)

Route	Type of Fencing
N9 SECTION 6	A combination of the following fences is found on the route: • Security fence • vermin proof

Table 6.3: Fencing Information (R61-2)

Route	Type of Fencing
R61 SECTION 2	A combination of the following fences is found on the route: • Security fence • vermin proof

Table 6.4: Fencing Information (R63-7)

Route	Type of Fencing
R63 SECTION 7	A combination of the following fences is found on the route: • Security fence • vermin proof

Table 6.5: Fencing Information (R63-8)

Route	Type of Fencing
R63 SECTION 8	A combination of the following fences is found on the route: • Security fence • vermin proof

The photos below illustrate typical example types of fencing identified along the routes.



Figure 7

4.6 Road markings

Thermo-plastic as well as solvent and water-based paints are used for road marking on the different sections of route. The major parts or sections of the road exhibited fair road marking quality. Recently re-painted R63 Section 8.

Table 7.1: Road Marking Information

Route	Condition	Extent
N9 SECTION 5	Fair	>90% of road
N9 SECTION 6	Fair	>90% of road
R61 SECTION 2	Good	>90% of road
R63 SECTION 7	Fair	>90% of road
R63 SECTION 8	Poor	>90% of road

Based on the visual assessments' road marking along route is in a good condition and meet the minimum retro reflective requirements.

Photos below show some of the road markings along the route.



Figure 8

4.7 Road studs

Road studs are important part of road safety especially at night. They generally improve lane visibility. Road users can better navigate during the night as the road studs provide an illuminating effect to the roadway. Isolated damaged road studs were observed and are re-installed.

Table 7.2: Road studs Information

Route	Type	Frequency of Repairs
N9 SECTION 5	K-Lite	monitored monthly
N9 SECTION 6	EC 1	monitored monthly
R61 SECTION 2	Ferro Lynx A200 and STA 52	monitored monthly
R63 SECTION 7	Stimsonite	monitored monthly
R63 SECTION 8	STA 52	monitored monthly

The photos below illustrate typical example of road studs used along the route.



Figure 9

4.8 Vegetation

4.8.1 Grass

- The control of planted, natural grasses and other roadside vegetation has a management program which consists of eliminating or controlling vegetation through a variety of strategies including of mechanical mowers or by hand and should be undertaken on areas classified as general mow, shoulder mow, designated and additional. Refer to table 7.3 for more details.

Route	Grass Type	Frequency of Mowing	Frequency of baling	Frequency of herbicide
N9 SECTION 5	Cenchrus ciliaris	Monthly	N/A	3 time per year
N9 SECTION 6	Cenchrus ciliaris	Monthly	N/A	3 time per year
R61 SECTION 2	Cenchrus ciliaris	Monthly	N/A	3 time per year
R63 SECTION 7	Cenchrus ciliaris	Monthly	N/A	3 time per year
R63 SECTION 8	Cenchrus ciliaris	Monthly	N/A	3 time per year

Table 7.3: Grass Information

The photos below illustrate typical example of grass along the route.



Figure 10

4.8.2 Trees

Trees are planted or allowed to grow in road reserves for a number of reasons such as aesthetics, glare screens, control of marginal access or median crossings and shade for rest areas. However, the

presence of trees should be justified in each case and context and the removal of trees can be implemented where the trees are invasive or intrude the clear zones along roads. The table below illustrates the type of trees found along the route.

Table 7.4: Vegetation Information

Route	Type	% Invaders	Frequency of pruning
N9 SECTION 5	Thorn bushes (akasia)	Less than 1%	As and when required
N9 SECTION 6	Thorn bushes (akasia)	Less than 1%	As and when required
R61 SECTION 2	Thorn bushes (akasia)	Less than 1%	As and when required
R63 SECTION 7	Thorn bushes (akasia)	Less than 1%	As and when required
R63 SECTION 8	Thorn bushes (akasia)	Less than 1%	As and when required

The photos below illustrate typical example of trees along the route.



Figure11

4.8.3 Shrubs

The shrubs in the road reserve require regular trimming, just outside the 4.5 m shoulder strip and at the culvert inlets and outlets. The 4.5 m shoulder strip is clear of shrubs. Like the ones on the photo below.



Figure 12

4.8.4 Alien vegetation

Solanum elaeagnifolium, commonly known as satansbos or silverleaf nightshade, is the commonly found alien vegetation along the route. It is a perennial plant with extensive root systems which can extend to three metres deep and two metres horizontally, with an aerial growth of about 60cm. This alien species commonly occurs on disturbed farmlands or along road verges. Herbicides can be used but is only effective during the flowering cycle of the plant. The control program of alien vegetation and eradication of undesired vegetation is executed annually, usually around spring or summer, which is period that species grow strongly.

The photo below illustrates a typical alien species found along the route.



Figure 13

4.9 Rest areas

Rest Area		
N9 SECTION 5		
Start Km	End Km	Direction
3.45	3.65	+
3.45	3.65	-
5.9	6.15	-
15.9	16.0	-
13.4	13.6	-
20.94	21.12	+
24.06	24.3	-
35.1	35.34	-
43.65	43.9	+
43.65	43.9	+;-
46.0	46.2	-

Rest Area		
N9 SECTION 6		
Start Km	End Km	Direction
5.0	5.2	+
16.4	16.6	+
23.0	23.2	+
28.95	29.25	+
29.38	29.6	-
35.3	35.6	+
42.7	42.7	+
43.15	43.3	-
48.53	48.53	+
57.8	58.0	+
58.2	58.45	-

Rest Area		
R61 SECTION 2		
Start Km	End Km	Direction
1.25	1.35	-
13	13	+

Rest Area		
R63 SECTION 7		
Start Km	End Km	Direction
44.6	44.8	-

76.4	76.5	+
88.4	88.65	-
88.9	88.97	+
87.5	87.52	-
87.8	87.82	-

Rest Area		
R63 SECTION 8		
Start Km	**End Km**	**Direction**
14.6	14.8	+

The photos below illustrate typical example of rest areas along the route.



Figure 14

4.10 BRIDGES

The overall condition of the bridges along the route is good. They have been maintained under previous RRM contract. Maintenance of these facilities will continue under this RRM contract. Summarized details of the bridge facilities are presented in the tables below.

Table 8.1: Bridges on N9/5

Route	Section	Km	Start Latitude(south)	Start Longitude(east)	End Latitude(south)	End Longitude(east)	Condition
N9	5	12.2	32° 22' 53.58"	24° 09' 29.15"	32° 24' 53.34"	24° 09' 29"	Good

N9	5	19.8	32° 22' 59.72"	24° 13' 46.88"	32° 22' 51.66"	24° 13' 47.08"	Good
N9	5	25.4	32° 20' 38.34"	24° 17' 07.48"	32° 21' 52.39"	24° 17' 04.97"	Good
N9	5	33.8	32° 20' 37.52"	24° 22' 04.89"	32° 20' 38.77"	24° 22' 02.79"	Good
N9	5	42.8	32° 19' 25.17"	24° 27' 27.71"	32° 19' 25.90"	24° 27' 26.21"	Good
N9	5	52.6	32° 16' 42.90"	24° 32' 37.20"	32° 16' 43"	24° 36' 36.66"	Good

Table 8.2: Bridges on N9/6

Route	Section	Km	Start Latitude(south)	Start Longitude(east)	End Latitude(south)	End Longitude(east)	Condition
R61	2	3.1	31° 54' 53.65"	24° 54' 11.14"	31° 55' 44.94"	24° 54' 10.99"	Good
R61	2	14.2	31° 55' 44.96"	24° 47' 53.65"	31° 53' 53.74"	24° 47' 34.33"	Good

Table 8.3: Bridges on R61/2

Route	Section	Km	Start Latitude(south)	Start Longitude(east)	End Latitude(south)	End Longitude(east)	Condition
N9	6	4.9	32° 12' 42.26"	24° 32' 47.93"	32° 12' 42.18"	24° 32' 48.16"	Good
N9	6	8.2	32° 11' 06.26"	24° 33' 37.43"	32° 11' 04.48"	24° 33' 38.91"	Good
N9	6	21.2	32° 36' 11.12"	24° 36' 09.19"	32° 05' 04.19"	24° 36' 07.76"	Good
N9	6	22.7	32° 04' 21.80"	24° 36' 15.89"	32° 04' 22.55"	24° 36' 15.82"	Good
N9	6	32.2	32° 00' 20.25"	24° 39' 34.34"	32° 00' 19.96"	24° 27' 26.21"	Good
N9	6	45.7	31° 55' 14.21"	24° 45' 16.67"	31° 55' 15.19"	24° 45' 16.67"	Good
N9	6	49.2	31° 53' 59.55"	24° 46' 49.73"	31° 53' 59.55"	24° 46' 46.73"	Good

Table 8.4: Bridges on R63/7

Route	Section	Km	Start Latitude(south)	Start Longitude(east)	End Latitude(south)	End Longitude(east)	Condition
R63	7	48.4	32° 02' 35.16"	24° 12' 55.16"	32° 04' 04.88"	24° 12' 44.47"	Good
R63	7	62.2	32° 04' 05.11"	24° 21' 25.34"	32° 22' 51.66"	24° 21' 24.78"	Good
R63	7	81.2	32° 11' 41.51"	24° 28' 56.28"	32° 11' 40.75"	24° 28' 55.85"	Good
R63	7	88.9	32° 14' 40.92"	24° 24' 35.12"	32° 14' 41.53"	24° 31' 35.12"	Good

Table 8.5: Bridges on R63/8

Route	Section	Km	Start Latitude(south)	Start Longitude(east)	End Latitude(south)	End Longitude(east)	Condition
R63	8	0.4	32°16' 27.52"	24° 32' 58.15"	32° 16' 29.70"	24° 32' 59.20"	Good
R63	8	4.7	32° 18' 34.62"	24° 33' 18.09"	32° 18' 36.31"	24° 33' 18.37"	Good

Photo below illustrates a typical bridge found on R63 section 7.



Figure 15

Photo below illustrates a typical bridge found on N9 section 5.



Figure 16

4.11 CULVERTS

All culverts and their inlet and outlet are well maintained and cleaned on monthly basis. The table below shows the summary of the culverts along the route and for more details refer to Annexure A.

Table 2: Culvert Information

Route	Number of Culverts/Km	Average Size (mm)	Frequency of Cleaning / year
N9 SECTION 5	4.78	600 - 900	Monthly
N9 SECTION 6	2.97	600 - 900	Monthly
R61 SECTION 2	3.13	600 - 900	Monthly
R63 SECTION 7	6.29	600 - 900	Monthly
R63 SECTION 8	2.46	600 - 900	Monthly

The photos below illustrate typical examples culvert along the route.



Figure 17

4.12 EROSION PROTECTION AND GABIONS

Gabions both conform to ground movement and connect the flow of water with its surrounding areas. Which has been a persistent occurrence in R63 section 7, N9 section 5 and 6. The installation of gabions along the waterways has resulted in the rocks deflecting the impact of the waves, and the gaps between them trap and slow the flow of water, dissipating the energy from the water.

The photo below was taken on N9 section 5 and it shows recently installed gabions.



Figure 18

4.13 EDGE BREAKS

Damage caused to the edge of the road surface due to the lack of lateral support afforded to the base and surfacing by the gravel shoulder, has been evident in mostly the routes with a gravel shoulder along, such as R63 section 7 and R62 section 2.

Table 3: Edge Break Information

Route	Extent
N9 SECTION 5	Isolated
N9 SECTION 6	Isolated
R61 SECTION 2	Isolated
R63 SECTION 7	Isolated
R63 SECTION 8	Isolated

The photos below illustrate typical examples of edge breaks along the route.



Figure 19

4.14 SHOULDER REPAIRS

a. Gravel loss

Shoulder repair work has been visible along the route, especially along the rest area and minor access roads, this is an important exercise as to provide a safe and smooth transition for road users who accidently leave or are forced to leave the sealed pavement area, and also to protect the sealed pavement from excess deterioration such as edge breaks.

Table 4: Gravel loss Information

Route	Extent
N9 SECTION 5	Isolated
N9 SECTION 6	Isolated
R61 SECTION 2	Isolated
R63 SECTION 7	Isolated
R63 SECTION 8	Isolated

The photos below illustrate typical examples of gravel loss along the route (indicates that the binder is dry and brittle and mostly require a fog/rejuvenator spray).



Figure 20

4.15 PAVEMENT LAYER REPAIRS

Asphalt pavement rehabilitation, which typically involves milling and resurfacing of the existing asphalt pavement has been ongoing on the N9 section 6, R63 section 7 and 8 to mitigate the effects of per ride rutting, cracking, and other distresses.

Table 5: Pavement condition Information (N9-5)

Route	Type of Failure	Extent	Frequency of Repair	Comments
N9 SECTION 5	Crack sealing	Isolated	Regularly	
	Potholes	Isolated	Regularly	
	Pavement failure	Isolated	Regularly	
	Surface failure	Isolated	Regularly	

Table 6: Pavement condition Information (N9-6)

Route	Type of Failure	Extent	Frequency of Repair	Comments
N9 SECTION 6	Crack sealing	Isolated	Regularly	
	Potholes	Isolated	Regularly	
	Pavement failure	Isolated	Regularly	
	Surface failure	Isolated	Regularly	

Table 7: Pavement condition Information (R61-2)

Route	Type of Failure	Extent	Frequency of Repair	Comments
R61 SECTION 2	Crack sealing	Isolated	Regularly	
	Potholes	Isolated	Regularly	
	Pavement failure	Isolated	Regularly	
	Surface failure	Isolated	Regularly	

Table 8: Pavement condition Information (R63-7)

Route	Type of Failure	Extent	Frequency of Repair	Comments
R63 SECTION 7	Crack sealing	Isolated	Regularly	
	Potholes	Isolated	Regularly	
	Pavement failure	Isolated	Regularly	
	Surface failure	Isolated	Regularly	

Table 9: Pavement condition Information (R63-8)

Route	Type of Failure	Extent	Frequency of Repair	Comments
R63 SECTION 8	Crack sealing	Isolated	Regularly	
	Potholes	Isolated	Regularly	
	Pavement failure	Isolated	Regularly	
	Surface failure	Isolated	Regularly	

The photo below was taken on N9 section 6 during the activity of Pavement repairs.



Figure 21

4.16 SURFACE CRACKS

Surface cracking are more visible and prominence on N9 section 6 and R63 section 8, as a result of thermal contraction, subgrade settlement, applied loads and stress, and shrinkage.



Figure 22

4.17 RUMBLE STRIPS

Rumble strips have been installed on R63 section 7 at the Nqweba Dam to discourage vehicles from overtaking and alert them if they are moving out of their lane. This reduces accidents on the section.



Figure 23

4.18 ILLEGAL ADVERTISING

All illegal advertising inside the road reserve is removed as an ongoing activity. The normal application for facility signs is submitted to SANRAL for approval. Other advertisements outside road reserve are also submitted to SANRAL statutory control.

ILLEGAL SIGNS			
N9 SECTION 5			
Start Km	End Km	Direction	Description
0.08	0.08	SOUTH	Aberdeen Hospital
0.175	0.175	SOUTH	GEORG restaurant
1.0	1.0	SOUTH	Aberdeen Hospital 1Km
14.27	14.27	SOUTH	Stockdale
27.04	27.04	NORTH	Camdeboo Conservancy
27.6	27.6	NORTH	Summit wildlife 20 September 2020(Sign is outside reserve)
31.3	31.3	NORTH	Watervlei.(This sign is outside of road reserve)
44.56	44.56	NORTH	Camdeboo Conservancy
50.55	50.55	NORTH	Graaff Reinet Golf Club 1Km
51.52	51.52	SOUTH	Graaff Reinet Golf Club
52.6	52.6	SOUTH	Graaff Reinet Golf Club 1Km
52.6	56.26	BOTH	Illegal Signs in town exists in both direction

ILLEGAL SIGNS			
N9 SECTION 6			
Start Km	End Km	Direction	Description
0.0	0.2	BOTH	Illegal Signs in town exists in both direction
4.05	4.05	SOUTH	Andries Pretorius
7.3	7.3	NORTH	Summit wildlife 20 September 2020(Sign is outside reserve)
9.3	9.3	NORTH	Clifton Country House
9.45	9.45	SOUTH	Buccara wildlife reserve karoo
10.38	10.38	SOUTH	Dalham Cottages
27.2	27.2	NORTH	Abbotsbury
27.66	27.66	NORTH	Glen Harry 19Km
27.67	27.67	NORTH	Uilhuis 23Km
27.9	27.9	NORTH	T1 Owl Route
28.18	28.18	SOUTH	Glen Harry 19Km
31.0	31.0	NORTH	Wellwood R Rubidge
37.0	37.0	NORTH	The Glen
44.22	44.22	SOUTH	Colonelplaats
44.22	44.22	SOUTH	Gem Safaris
46.44	46.44	NORTH	Mountain Zebra
46.87	46.87	SOUTH	Mountain Zebra
47.0	47.0	NORTH	Owl House
47.1	47.1	NORTH	Owl Route
47.4	47.4	SOUTH	Owl Route
50.8	50.8	NORTH	Pienaarsbaken B&B
56.92	56.92	NORTH	Tweefontein guest house

ILLEGAL SIGNS			
R61 SECTION 2			
Start Km	End Km	Direction	Description
No information	No information	No information	No information

ILLEGAL SIGNS			
R63 SECTION 7			
Start Km	End Km	Direction	Description
48.1	48.1	-	Normandy/Grassdale JC De La Harpe
50.7	50.7	-	Houdconstant Charmac Merinos
55.84	88.84	BOTH	Doornplaats
61.8	61.8	+	Ferndale
64.45	64.45	+	Damesfontein
66.77	66.77	-	Damesfontein
68.79	68.79	+	Owl Route
69.11	69.11	-	Owl Route
82.4	82.4	-	Midland 10Km Hospital
85.15	85.15	+	Valley Desolation
85.5	85.5	-	Valley Desolation
86.87	86.87	+	Gideon Scheepes
87.25	87.25	-	Gideon Scheepes

ILLEGAL SIGNS			
R63 SECTION 8			
Start Km	End Km	Direction	Description
0.72	0.72	+	N-Construction
3.3	3.3	+	Mzomhle B&B
3.55	3.55	-	Mzomhle B&B
7.7	7.7	+	Midlands Hospital 10Km

Photos showing illegal advertisement along the route.

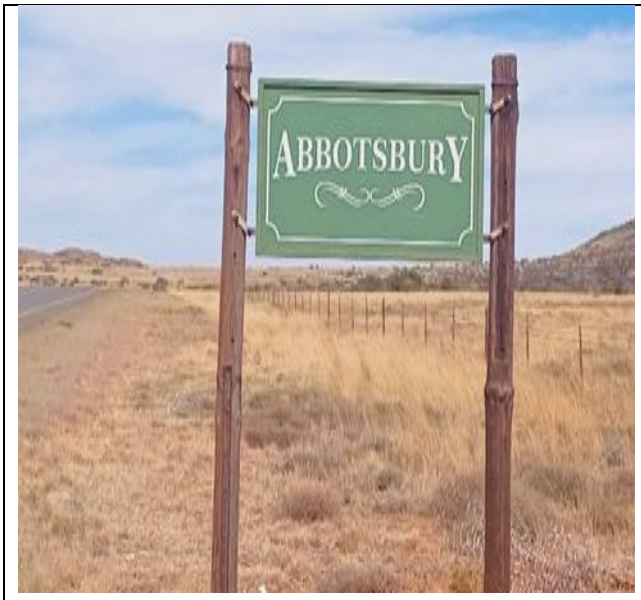




Figure 23

4.19 SLOPE STABILITY

Rock falling and erosion has is prominent in N9 section 6, R61 section 2 and R63 section 7, along the cuttings. The table below shows the type of slope stabilities and condition.

Table 10: Slope Protection Information

Route	Type of Slope Stability	Condition
N9 SECTION 5	N/A	N/A
N9 SECTION 6	Rock fall Netting & Gabion protection	Requires detailed assessment
R61 SECTION 2	Guniting Rock fall Netting	Requires detailed assessment
R63 SECTION 7	Rock fall Netting & Gabion protection	Requires detailed assessment
R63 SECTION 8	N/A	N/A

Photo of rocks falling in R63 section 7.



Figure 24

4.20 PEDESTRIAN PATHS

Pedestrian path means a facility physically separated from the roadway and intended for pedestrian use, are found on summarized on the tables below.

SIDEWALK PAVING			
N9 SECTION 5			
Start Km	End Km	Direction	Length(m)
53.9	55.26	NORTH	1360
53.9	55.26	SOUTH	1360

SIDEWALK PAVING			
N9 SECTION 6			
Start Km	End Km	Direction	Length(m)
0.0	0.2	+	200
0.0	0.2	-	200
0.75	2.05	-	1300

SIDEWALK PAVING			
R61 SECTION 2			
Start Km	End Km	Direction	Length(m)
No Information	No Information	No Information	No Information

SIDEWALK PAVING			
R63 SECTION 7			
Start Km	End Km	Direction	Length(m)
89.1	90.91	+	1810
89.1	90.91	-	1810

SIDEWALK PAVING			
R63 SECTION 8			
Start Km	End Km	Direction	Length(m)
0.0	1.85	+	1850

Photo of a typical pedestrian path found on R63 section 8.



Figure 25

4.21 ROUTE MARKER BOARDS

Route marker boards are significant to road users in case of emergency he would be able to pinpoint their location to emergency services by providing the detail on the marking closest and have been installed on all sections to assist with determining accurate locations of points of interest along the route. Ongoing challenges in respect of stolen route markers are being addressed frequently.

Photo below shows a typical km marker board found along the route.





Figure 21

5. PAVEMENT MANAGEMENT SYSTEM INFORMATION

The information presented in the following paragraphs includes all on-ramps and off-ramps as well as overpasses and underpasses within the national road reserve up to the limits of the South African National Roads Agency's responsibility.

Excluded are provincial, municipal, and private crossroads, which are not accessible from the road reserve of the national road.

5.1 ROUTE DESCRIPTION

The route description of the sections for which routine road maintenance will be provided by this Contract, varies, and may be described as follows.

NATIONAL ROUTE N9 SECTION 5

- NATIONAL ROUTE N9 SECTION 5, FROM ABERDEEN (KM0.0) TO GRAAFF REINET (KM56.26).

  - Type of carriageway = Single carriageway (S1)
  - Climbing/passing lanes = 1
  - Surfacing = Multiple seals (Double Seal, and Rutting)
  -
  - Shoulders = Paved (P)

- Intersections = 23 (excluding minor and accesses)
- Toll Plazas = None
- Road reserve width = 46m
- Median description = No median
- Rest area and lay byes =11
- Weigh Bridge = 0
- Distance = 56.26 km
- Terrain = Flat and Rolling
- Climate (Weinert) = Dry

Table 11: Summary Route Description (N9-5)

Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 00.00 to Km 56.26	56.26	10.3	56.26	1.0 – 1.5	-	-

NATIONAL ROUTE N9 SECTION 6

- NATIONAL ROUTE N9 SECTION 6, FROM GRAAFF REINET (KM0.0) TO N9 SECTION 6(62.97).

  - Type of carriageway = Single carriageway (S1)
  - Climbing/passing lanes = 6
  - Surfacing = Multiple seals (Double Seal and Rutting)
  - Shoulders = Paved (P)
  - Intersections = 16 (excluding minor and accesses)
  - Toll Plazas = None
  - Road reserve width = 42m
  - Median description = No median
  - Rest area and lay byes = 11
  - Weigh Bridge = 0
  - Distance = 62.97 km
  - Terrain = Flat and Mountainous
  - Climate (Weinert) = Dry

Table 12: Summary Route Description (N9-6)

Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 00.00 to Km 62.97	62.97	10.6	62.97	1.5 – 1.6	-	-

NATIONAL ROUTE R61 SECTION 2

- NATIONAL ROUTE R61 SECTION2, FROM N9 SECTION 6 TO R61 SECTION2(KM17.25)

  - Type of carriageway = Single carriageway (S1)
  - Climbing/passing lanes = 1
  - Surfacing = Single Seal
  - Shoulders = Paved (P)
  - Intersections = 1 (excluding minor and accesses)
  - Toll plazas = None
  - Road reserve width = 18m
  - Median description = No median
  - Rest areas and lay byes = 1
  - Weigh Bridge = 0
  - Distance = 17.25 km
  - Terrain = Flat and Mountainous
  - Climate (Weinert) = Dry

Table 13: Summary Route Description (R61 -2)

Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 00.00 to Km 17.25	17.25	7.6	8.85	1.5 - 2.0	8.4	0 - 1.5

NATIONAL ROUTE R63 SECTION 7

- NATIONAL ROUTE R63 SECTION 7, FROM WESTERN CAPE BORDER(KM40.2) TO GRAAF REINET(KM90.91)

  - Type of carriageway = Single carriageway (S1)
  - Climbing/passing lanes = 2
  - Surfacing = Multiple seals (Cape Seal and Geotexile)
  - Shoulders = Unpaved (U)
  - Intersections = 16 (excluding minor and accesses)
  - Toll plazas = None
  - Road reserve width = 25 m
  - Median description = No median
  - Rest areas and lay byes = 6
  - Weigh Bridge = 0
  - Distance = 50.71 km
  - Terrain = Flat and Mountainous
  - Climate (Weinert) = Dry

Table 14: Summary Route Description (R63-7)

Position	Carriageway	Shoulder

	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 40.20 to Km 90.91	50.71	6.6	-	-	50.71	0 - 2.1

NATIONAL ROUTE R63 SECTION 8

- NATIONAL ROUTE R63 SECTION 8, FROM N9 SECTION 6 TO R63 SECTION 8(KM20.25)

  - Type of carriageway = Single carriageway (S1)
  - Climbing/passing lanes = 1
  - Surfacing = Cape Seal
  - Shoulders = Paved (P)
  - Intersections = 4 (excluding minor and accesses)
  - Toll plazas = None
  - Road reserve width = 30 m
  - Median description = No median
  - Rest areas and lay byes = 1
  - Weigh Bridge = 0
  - Distance = 20.25 km
  - Terrain = Flat and Rolling
  - Climate (Weinert) = Dry

Table 15: Summary Route Description (R63-8)

Position	Carriageway		Shoulder			
	Length (km)	Width (m)	Surfaced		Gravel	
			Length (km)	Width (m)	Length (km)	Width (m)
Km 00.00 to Km 20.25	20.25	11.8	20.25	2	-	-

5.2 ROAD RENEWAL

ITIS Desktop Software captures information about every Job Instruction issued and Inspection Request received. This provides valuable information about the type of maintenance and the location of the maintenance undertaken. This information is available on request.

5.3 PAVEMENT

5.3.1 Pavement Condition

The overall pavement conditions are generally acceptable, although many defects such as depression and cracks are observed, more frequently on the National 9 section 6 and R63 Section 8, respectively. The strength of existing pavement, in these two sections mainly, is not sufficient to support the increasing traffic volume, especially that of heavy vehicles. Also, frequent inundation and subsequent

reduction in bearing capacities of the pavement/subgrade is accelerating the deterioration of the pavement. Although the pavement is maintained in an acceptable condition owing to the strenuous effort of repairing of potholes and pavement layers, such maintenance will become heavy burden in the near future in many ways such as budget requirements, workload of contacting and supervision of maintenance works and traffic management during the implementation of maintenance works. This situation is more common among the National 9 and R63 routes.

Pavement rehabilitation information is not available. The database is available from SANRAL (L Kannemeyer) and gives details about the pavement. Material codes are described in Table 20 below.

5.1.2 Definitions of codes used

Table 16: shows the definition of codes used.

Code	Material	Abbreviated Specification
G1	Graded crushed stone	86 – 88 % of apparent density; PI < 4.5
G2	Graded crushed stone	100 – 102 % mod. AASHTO; PI < 6
G3	Graded crushed stone	Min. 98 % mod. AASHTO; PI < 6
G4	Natural gravel	CBR > 80; PI < 6
G5	Natural gravel	CBR > 45; PI < 10
G6	Natural gravel	CBR > 25; PI < 10
G7	Gravel – soil	CBR > 15
G8	Gravel – soil	CBR > 10, in-situ
G9	Gravel – soil	CBR > 7, in-situ
G10	Gravel – soil	CBR > 3, in-situ
BC	Hot-mix Asphalt	Continuously graded
BS	Hot-mix Asphalt	Semi-gap graded
TC	Tar hot-mix	Continuously graded
TS	Tar hot-mix	Semi-gap graded
PCC	Portland cement concrete	Mod. rupture > 4,5 MPa
CRC	Continuously reinforced concrete	
C1	Cemented crushed stone or gravel	UCS 6 – 12 MPa at 100 % mod. AASHTO
C2		UCS 3 – 6 MPa at 100 % mod. AASHTO
C3	Cemented crushed stone or gravel	UCS 1.5 – 3 MPa at 100 % mod. AASHTO
C4	Cemented natural gravel	UCS 0.75 – 1.5 MPa at 100 % mod. AASHTO
	Cemented natural gravel	
AG	Asphalt surfacing	Gap-graded
AC	Asphalt surfacing	Continuously graded
AS	Asphalt surfacing	Semi-gap-graded
AO	Asphalt surfacing	Open-graded
AP	Asphalt surfacing	Porous
S1	Surface treatment	Single seal
S2	Surface treatment	Multiple seal
S3	Sand seal	
S4	Cape seal	
S5	Slurry	Fine grading
S6	Slurry	Coarse grading
S7	Surface renewal	Rejuvenator
S8	Surface renewal	Diluted emulsion

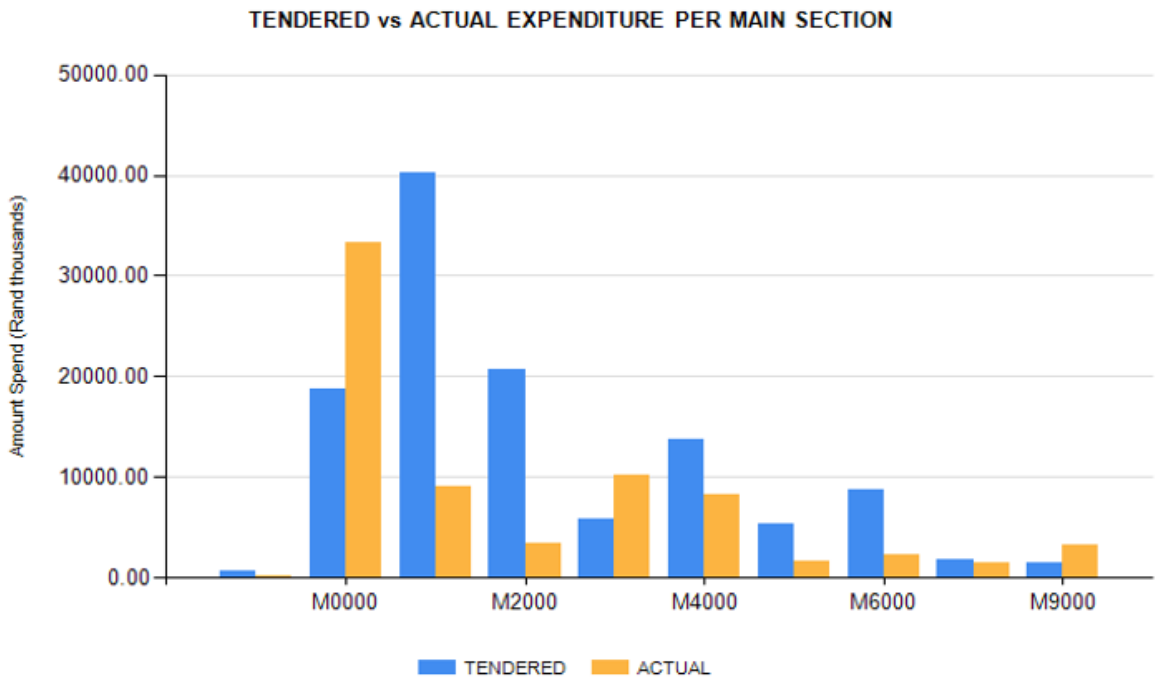
WM1	Waterbound macadam	PI < 6, 88 – 90 % of apparent density
WM2	Waterbound macadam	PI < 6, 86 – 88 % of apparent density
PM	Penetration macadam	Coarse stone with bitumen or tar
DR	Dumprock	Ungraded waste rock

6. HISTORIC ROAD MAINTENANCE INFORMATION

6.1 GENERAL

No historic maintenance information provided.

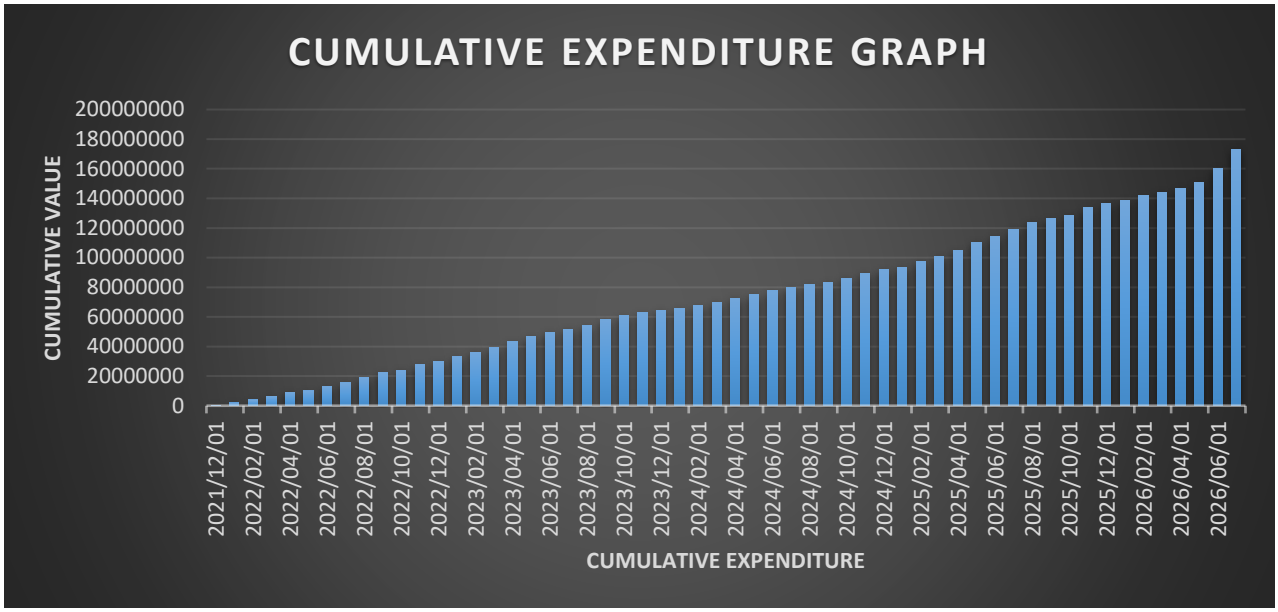
6.2 EXPENDITURE DISTRIBUTION



6.3 Actual expenditure in NRA X.003-037-2019/1

Information on expenditure patterns of the current contract is available from SANRAL. 5km section strip maps are available to reflect the current project expenditure and future project expenditures on the sections and will be submitted along with the report.

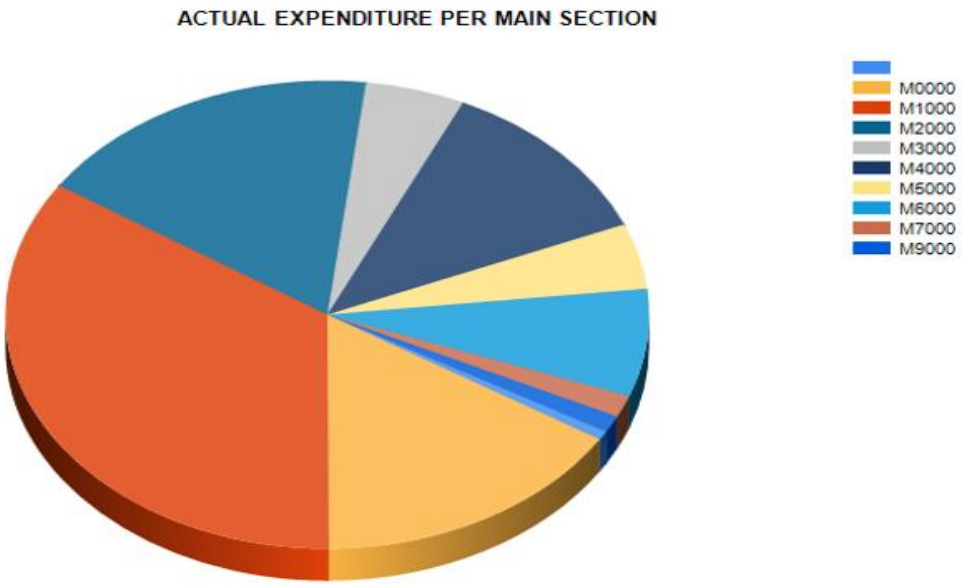
6.3.1 Cumulative Expenditure Chart



Total Budget	Expenditure to date	Percentage Expenditure	Remaining Amount	Remaining Percentage	Time Lapse
R183 957 892.31 Incl contingencies& Vat	R173 264 912.54 Incl Vat & CPA	94.2%	R10 692 979.77 Incl VAT & CPA	5.8%	91.8%

6.4 Expenditure Distribution

For this period the expenditure shown in the graph below highlights the major contributors to the total expenditure.



6. ANNEXURE A- VISUAL CONDITION ASSESSMENT REPORT

MINOR INTERSECTIONS AND ACCESS

7.1 MINOR INTERSECTIONS

N9 SECTION 5

MINOR JUNCTIONS AND ACCESSES			
N9 SECTION 5			
Start Km	End Km	Type	Description
45.9	45.9	T-Junction	Access to power station
52.4	52.4	T-Junction	Graaff Reinet Transfer station & Recycle facility

N9 SECTION 6

MINOR JUNCTIONS AND ACCESSES			
N9 SECTION 6			
Start Km	End Km	Type	Description
0.15	0.15	T-Junction	Access in the South direction opposite Noord Street
0.23	0.23	T-Junction	Access to Town ship in the Southern direction
2.05	2.05	T-Junction	Access to Town ship in the Northern direction
2.55	2.55	Crossing	Access to Township and Farms
5.53	5.53	T-Junction	Access to water supply scheme

R61 SECTION 2

MINOR JUNCTIONS AND ACCESSES			
R61 SECTION 2			
Start Km	End Km	Type	Description
No Information	No Information	No Information	No Information

R63 SECTION 7

MINOR JUNCTIONS AND ACCESSES			
R63 SECTION 7			
Start Km	End Km	Type	Description
86.65	86.65	T-Junction	Access to the Park
88.86	88.86	T-Junction	Access to the National Park

R63 SECTION 8

MINOR JUNCTIONS AND ACCESSES			
R63 SECTION 8			
Start Km	End Km	Type	Description
0.35	0.35	T-Junction	Access to Private Property
0.70	0.70	Crossing	Intersection No Name
3.45	3.45	T-Junction	Junction to Adendorp
3.53	3.53	T-Junction	Illegal Access
20.25	20.25	T-Junction	Access to Vodacom Site

7.2 FARMS ACCESSES

N9 SECTION 5

FARMS ACCESSES ALONG NATIONAL ROUTES

N9 SECTION 5			
Start Km	End Km	Direction	Description
0.4	0.4	-	Unpaved Access
1.45	1.45	+	Unpaved Access
2.0	2.0	+	Unpaved Access
3.89	3.89	-	Unpaved Access
4.72	4.72	+	Unpaved Access
4.72	4.72	-	Unpaved Access
8.6	8.6	-	Unpaved Access
8.85	8.85	+	Unpaved Access
9.7	9.7	+	Unpaved Access
14.27	14.27	-	Unpaved Access
12.3	12.3	+	Unpaved Access
12.3	12.3	-	Unpaved Access
13.96	13.96	+	Unpaved Access
18.04	18.04	+	Unpaved Access
18.94	18.94	-	Unpaved Access
19.57	19.57	+	Unpaved Access
19.57	19.57	-	Unpaved Access
20.07	20.07	+	Unpaved Access
20.15	20.15	-	Unpaved Access
21.7	21.7	+	Unpaved Access
21.7	21.7	-	Unpaved Access
24.55	24.55	+	Unpaved Access
24.7	24.7	-	Unpaved Access
25.5	25.5	+	Unpaved Access
27.1	27.1	-	Unpaved Access
27.9	27.9	-	Unpaved Access
30.8	30.8	-	Unpaved Access
31.3	31.3	+	Unpaved Access
31.3	31.3	-	Unpaved Access
33.62	33.62	+	Unpaved Access
33.75	33.75	-	Unpaved Access
34.85	34.85	+	Unpaved Access
34.85	34.85	-	Unpaved Access
35.07	35.07	-	Unpaved Access
35.95	35.95	+	Unpaved Access
37.85	37.85	B	Unpaved Access
41.25	41.25	+	Unpaved Access
42.2	42.2	+	Unpaved Access

42.2	42.2	-	Unpaved Access
42.6	42.6	+	Unpaved Access
42.65	42.65	-	Unpaved Access
43.1	43.1	B	Unpaved Access
45.33	45.33	+	Unpaved Access
47.69	47.69	+	Unpaved Access
51.52	51.52	-	Unpaved Access

N9 SECTION 6

FARMS ACCESSES ALONG NATIONAL ROUTES

N9 SECTION 6			
Start Km	End Km	Direction	Description
5.04	5.04	B	Unpaved Access
7.2	7.2	+	Unpaved Access
7.92	7.92	+	Unpaved Access
8.82	8.82	+	Unpaved Access
9.27	9.27	+	Unpaved Access
10.38	10.38	B	Unpaved Access
11.8	11.8	+	Unpaved Access
14.36	14.36	-	Unpaved Access
17.17	17.17	+	Unpaved Access
17.23	17.23	-	Unpaved Access
19.2	19.2	+	Unpaved Access
20.6	20.6	-	Unpaved Access
23.65	23.65	+	Unpaved Access
25.23	25.23	-	Unpaved Access
27.52	27.52	+	Unpaved Access
28.75	28.75	-	Unpaved Access
30.9	30.9	-	Unpaved Access
32.35	32.35	-	Unpaved Access
33.1	33.1	+	Unpaved Access
33.8	33.8	+	Unpaved Access
35.6	35.6	-	Unpaved Access
41.9	41.9	B	Unpaved Access
42.15	42.15	+	Unpaved Access
43.78	43.78	-	Unpaved Access
45.4	45.4	+	Unpaved Access
46.15	46.15	+	Unpaved Access
48.45	48.45	+	Unpaved Access
51.32	51.32	+	Unpaved Access
52.3	52.3	+	Unpaved Access
54.95	54.95	+	Unpaved Access
56.92	56.92	B	Unpaved Access

59.75	59.75	-	Unpaved Access

R61 SECTION 2

FARMS ACCESSES ALONG NATIONAL ROUTES

R61SECTION 2			
Start Km	End Km	Direction	Description
0.9	0.9	B	Unpaved Access
1.96	1.96	B	Unpaved Access
2.78	2.78	B	Unpaved Access
3.0	3.0	B	Unpaved Access
3.7	3.7	B	Unpaved Access
6.03	6.03	B	Unpaved Access
7.04	7.04	+	Unpaved Access
7.2	7.2	-	Unpaved Access
7.55	7.55	+	Unpaved Access
8.38	8.38	B	Unpaved Access
10.9	10.9	B	Unpaved Access
14.57	14.57	-	Unpaved Access

R63 SECTION 7

FARMS ACCESSES ALONG NATIONAL ROUTES

R63 SECTION 7			
Start Km	End Km	Direction	Description
40.2	40.2	+	Unpaved Access
41.1	41.1	B	Unpaved Access
43.25	43.25	B	Unpaved Access
43.75	43.75	B	Unpaved Access
44.15	44.15	+	Unpaved Access
44.9	44.9	-	Unpaved Access
45.95	45.95	+	Unpaved Access
47.1	47.1	-	Unpaved Access
47.12	47.12	+	Unpaved Access
48.1	48.1	-	Unpaved Access
48.64	48.64	+	Unpaved Access
49.38	49.38	B	Unpaved Access
50.7	50.7	B	Unpaved Access
53.04	53.04	+	Unpaved Access
55.84	55.84	B	Unpaved Access
57.85	57.85	B	Unpaved Access
59.4	59.4	B	Unpaved Access
61.8	61.8	+	Unpaved Access
62.1	62.1	-	Unpaved Access
62.46	62.46	-	Unpaved Access
66.87	66.87	-	Unpaved Access
66.92	66.92	B	Unpaved Access
65.03	65.03	+	Unpaved Access
65.09	65.09	+	Unpaved Access
65.08	65.08	-	Unpaved Access
65.2	65.2	-	Unpaved Access
65.49	65.49	B	Unpaved Access
66.82	66.82	+	Unpaved Access
67.18	67.18	-	Unpaved Access
68.1	68.1	+	Unpaved Access
68.1	68.1	-	Unpaved Access
69.15	69.15	-	Unpaved Access
72.35	72.35	-	Unpaved Access
72.6	72.6	B	Unpaved Access
74.9	74.9	B	Unpaved Access
76.7	76.7	B	Unpaved Access
77.9	77.9	+	Unpaved Access
81.5	81.5	+	Unpaved Access

R63 SECTION 8

FARMS ACCESSES ALONG NATIONAL ROUTES

R63 SECTION 8			
Start Km	End Km	Direction	Description
2.9	2.9	+	Unpaved Access
4.2	4.2	-	Unpaved Access
4.3	4.3	B	Unpaved Access
5.0	5.0	+	Unpaved Access
5.15	5.15	+	Unpaved Access
7.14	7.14	-	Unpaved Access
7.85	7.85	+	Unpaved Access
8.9	8.9	B	Unpaved Access
12.0	12.0	-	Unpaved Access
12.25	12.25	-	Unpaved Access
13.26	13.26	+	Unpaved Access
14.1	14.1	+	Unpaved Access
14.83	14.83	+	Unpaved Access
15.0	15.0	B	Unpaved Access
17.72	17.72	+	Unpaved Access
18.47	18.47	-	Unpaved Access

7.3 DRAINS AND KERBING

N9 SECTION 5

DRAINS AND KERBING ALONG N9 SECTION 5			
CONCRETE DRAINS			
Start Km	End Km	Direction	Length (m)
47,85	48,00	N	150
48,80	49,00	N	200
49,38	50,05	N	670
50,20	50,34	N	140
50,45	50,90	N	450
50,90	51,25	N	350

EARTH DRAINS			
Start Km	End Km	Direction	Length (m)
26,72	28,10	S	1380
52,60	53,80	N	1200

KERBING			
Start Km	End Km	Direction	Length (m)
53,90	56,26	N	2360
53,90	56,26	S	2360

STONE PITCHING DRAIN			
Start Km	End Km	Direction	Length (m)
No Information	No Information	No Information	No Information

N9 SECTION 6

DRAINS AND KERBING ALONG N9 SECTION 6			
CONCRETE DRAINS			
Start Km	End Km	Direction	Length (m)
12,90	13,20	S	300
23,70	24,45	S	750
24,60	25,00	N	400
38,20	39,40	S	1200
39,44	39,49	N	50
39,44	39,62	S	180
39,78	40,10	S	320
40,40	40,70	S	300
40,90	41,20	S	300
46,90	47,22	N	320
46,90	47,22	S	320
52,78	53,01	S	230
53,10	53,30	N	200
53,10	53,30	S	200
53,87	54,40	N	530
53,87	54,40	S	530
58,80	59,35	S	550
59,06	59,35	N	290
60,50	60,67	N	170
60,50	60,67	S	170
61,50	62,97	S	1470

EARTH DRAINS			
Start Km	End Km	Direction	Length (m)
0,95	1,33	N	380
1,58	2,05	N	470
1,90	2,40	S	500
2,40	2,70	N	300
3,70	3,80	N	100
3,70	3,80	S	100
4,92	5,10	N	180
4,92	5,20	S	280
7,01	8,00	N	990
12,90	13,10	N	200
13,30	13,85	S	550
14,00	14,20	S	200
18,40	18,80	S	400

18,50	18,80	N	300
34,40	34,60	N	200
48,20	48,30	N	100
48,20	48,30	S	100
50,40	50,50	S	100
50,51	50,60	S	90

KERBING			
Start Km	End Km	Direction	Length (m)
0,00	0,75	N	750
0,00	0,75	N	750

STONE PITCHING DRAIN			
Start Km	End Km	Direction	Length (m)
No Information	No Information	No Information	No Information

R61 SECTION 2

DRAINS AND KERBING ALONG R61 SECTION 2			
CONCRETE DRAINS			
Start Km	End Km	Direction	Length (m)
10,30	10,75	W	450
10,90	11,20	E	300
11,80	12,00	W	200
12,75	13,25	W	500
12,80	13,25	E	450
13,40	13,50	E	100
13,70	13,90	E	200
13,70	13,90	W	200
14,20	14,40	E	200
14,20	14,40	W	200
14,80	15,57	E	770
14,80	15,20	W	400
15,40	15,57	W	170
15,65	15,80	E	150
15,70	15,82	W	120
16,20	16,50	E	300
16,20	16,50	W	300

EARTH DRAINS			
Start Km	End Km	Direction	Length (m)
6,60	6,90	E	300
6,60	6,90	W	300

KERBING			
Start Km	End Km	Direction	Length (m)
4,30	4,45	W	150
14,10	14,20	E	100
14,10	14,20	W	100

STONE PITCHING DRAIN			
Start Km	End Km	Direction	Length (m)
3,90	4,05	E	150
4,60	5,05	E	450
4,60	5,05	W	450
5,42	5,80	E	380
5,42	5,80	W	380
7,22	7,55	E	330
7,22	7,55	W	330
8,86	9,00	E	140
8,86	9,00	W	140
11,00	11,20	W	200

R63 SECTION 7

DRAINS AND KERBING ALONG R63 SECTION 7			
CONCRETE DRAINS			
Start Km	End Km	Direction	Length (m)
No Information	No Information	No Information	No Information

EARTH DRAINS			
Start Km	End Km	Direction	Length (m)
40,26	40,75	+	490
40,26	40,75	-	490
41,25	41,40	+	150
41,76	42,05	+	290
41,85	42,05	-	200
42,35	42,45	+	100
44,10	44,40	-	300
45,03	45,40	-	370
52,62	52,80	+	180
52,62	52,80	-	180

53,80	54,30	-	500
54,72	54,95	-	230
54,70	54,95	+	250
54,70	54,95	-	250
55,10	55,30	+	200
55,10	55,30	-	200
55,65	55,80	+	150
55,60	55,80	-	200
56,39	56,55	+	160
57,25	57,38	-	130
57,65	57,85	+	200
57,65	57,85	-	200
58,84	59,00	-	160
61,80	62,05	+	250
61,80	62,05	-	250
66,77	66,90	+	130
66,77	66,90	-	130
65,80	66,00	+	200
65,80	66,00	-	200
66,25	66,50	+	250
66,25	66,50	-	250
68,60	68,80	+	200
68,60	68,80	-	200
71,00	71,40	-	400
72,45	72,60	-	150
73,94	74,15	-	210
74,40	74,60	+	200
74,40	74,60	-	200
74,85	75,10	-	250
75,65	75,80	-	150
77,50	77,65	-	150
79,00	79,15	-	150
87,04	87,70	-	660

KERBING			
Start Km	End Km	Direction	Length (m)
89,05	90,91	+	1860
89,05	90,91	-	1860

STONE PITCHING DRAIN			
Start Km	End Km	Direction	Length (m)
69,28	70,74	-	1460

71,00	71,40	-	400
71,45	71,90	-	450
72,10	72,30	-	200
72,30	72,70	-	400
88,30	88,72	-	420

R63 SECTION 8

DRAINS AND KERBING ALONG R63 SECTION 7			
CONCRETE DRAINS			
Start Km	End Km	Direction	Length (m)
0,20	0,52	-	320
0,62	0,70	+	80
0,62	0,70	-	80
8,25	8,65	-	400
9,00	9,20	+	200

EARTH DRAINS			
Start Km	End Km	Direction	Length (m)
7,14	7,30	+	160
7,14	7,30	-	160
9,00	9,20	-	200
15,00	15,10	-	100

KERBING			
Start Km	End Km	Direction	Length (m)
No Information	No Information	No Information	No Information

STONE PITCHING DRAIN			
Start Km	End Km	Direction	Length (m)
8,25	8,65	-	400

N9 SECTION 5

DRAINS AND KERBING ALONG N9 SECTION 5			
CONCRETE DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
47,85	48,00	N	150
48,80	49,00	N	200
49,38	50,05	N	670
50,20	50,34	N	140
50,45	50,90	N	450
50,90	51,25	N	350

EARTH DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
26,72	28,10	S	1380
52,60	53,80	N	1200

KERBING			
Start Km	**End Km**	**Direction**	**Length (m)**
53,90	56,26	N	2360
53,90	56,26	S	2360

STONE PITCHING DRAIN			
Start Km	**End Km**	**Direction**	**Length (m)**
No Information	No Information	No Information	No Information

N9 SECTION 6

DRAINS AND KERBING ALONG N9 SECTION 6			
CONCRETE DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
12,90	13,20	S	300
23,70	24,45	S	750
24,60	25,00	N	400
38,20	39,40	S	1200
39,44	39,49	N	50
39,44	39,62	S	180
39,78	40,10	S	320
40,40	40,70	S	300
40,90	41,20	S	300
46,90	47,22	N	320
46,90	47,22	S	320
52,78	53,01	S	230
53,10	53,30	N	200
53,10	53,30	S	200
53,87	54,40	N	530
53,87	54,40	S	530
58,80	59,35	S	550
59,06	59,35	N	290
60,50	60,67	N	170
60,50	60,67	S	170
61,50	62,97	S	1470

EARTH DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
0,95	1,33	N	380
1,58	2,05	N	470
1,90	2,40	S	500
2,40	2,70	N	300
3,70	3,80	N	100
3,70	3,80	S	100
4,92	5,10	N	180
4,92	5,20	S	280
7,01	8,00	N	990
12,90	13,10	N	200
13,30	13,85	S	550
14,00	14,20	S	200
18,40	18,80	S	400

18,50	18,80	N	300
34,40	34,60	N	200
48,20	48,30	N	100
48,20	48,30	S	100
50,40	50,50	S	100
50,51	50,60	S	90

KERBING			
Start Km	**End Km**	**Direction**	**Length (m)**
0,00	0,75	N	750
0,00	0,75	N	750

STONE PITCHING DRAIN			
Start Km	**End Km**	**Direction**	**Length (m)**
No Information	No Information	No Information	No Information

R61 SECTION 2

DRAINS AND KERBING ALONG R61 SECTION 2			
CONCRETE DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
10,30	10,75	W	450
10,90	11,20	E	300
11,80	12,00	W	200
12,75	13,25	W	500
12,80	13,25	E	450
13,40	13,50	E	100
13,70	13,90	E	200
13,70	13,90	W	200
14,20	14,40	E	200
14,20	14,40	W	200
14,80	15,57	E	770
14,80	15,20	W	400
15,40	15,57	W	170
15,65	15,80	E	150
15,70	15,82	W	120
16,20	16,50	E	300
16,20	16,50	W	300

EARTH DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
6,60	6,90	E	300
6,60	6,90	W	300

KERBING			
Start Km	**End Km**	**Direction**	**Length (m)**
4,30	4,45	W	150
14,10	14,20	E	100
14,10	14,20	W	100

STONE PITCHING DRAIN			
Start Km	**End Km**	**Direction**	**Length (m)**
3,90	4,05	E	150
4,60	5,05	E	450
4,60	5,05	W	450
5,42	5,80	E	380
5,42	5,80	W	380
7,22	7,55	E	330

7,22	7,55	W	330
8,86	9,00	E	140
8,86	9,00	W	140
11,00	11,20	W	200

R63 SECTION 7

DRAINS AND KERBING ALONG R63 SECTION 7			
CONCRETE DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
No Information	No Information	No Information	No Information

EARTH DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
40,26	40,75	+	490
40,26	40,75	-	490
41,25	41,40	+	150
41,76	42,05	+	290
41,85	42,05	-	200
42,35	42,45	+	100
44,10	44,40	-	300
45,03	45,40	-	370
52,62	52,80	+	180
52,62	52,80	-	180
53,80	54,30	-	500
54,72	54,95	-	230
54,70	54,95	+	250
54,70	54,95	-	250
55,10	55,30	+	200
55,10	55,30	-	200
55,65	55,80	+	150
55,60	55,80	-	200
56,39	56,55	+	160
57,25	57,38	-	130
57,65	57,85	+	200
57,65	57,85	-	200
58,84	59,00	-	160
61,80	62,05	+	250
61,80	62,05	-	250
66,77	66,90	+	130
66,77	66,90	-	130

65,80	66,00	+	200
65,80	66,00	-	200
66,25	66,50	+	250
66,25	66,50	-	250
68,60	68,80	+	200
68,60	68,80	-	200
71,00	71,40	-	400
72,45	72,60	-	150
73,94	74,15	-	210
74,40	74,60	+	200
74,40	74,60	-	200
74,85	75,10	-	250
75,65	75,80	-	150
77,50	77,65	-	150
79,00	79,15	-	150
87,04	87,70	-	660

KERBING			
Start Km	**End Km**	**Direction**	**Length (m)**
89,05	90,91	+	1860
89,05	90,91	-	1860

STONE PITCHING DRAIN			
Start Km	**End Km**	**Direction**	**Length (m)**
69,28	70,74	-	1460
71,00	71,40	-	400
71,45	71,90	-	450
72,10	72,30	-	200
72,30	72,70	-	400
88,30	88,72	-	420

R63 SECTION 8

DRAINS AND KERBING ALONG R63 SECTION 7			
CONCRETE DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
0,20	0,52	-	320
0,62	0,70	+	80
0,62	0,70	-	80
8,25	8,65	-	400
9,00	9,20	+	200

EARTH DRAINS			
Start Km	**End Km**	**Direction**	**Length (m)**
7,14	7,30	+	160
7,14	7,30	-	160
9,00	9,20	-	200
15,00	15,10	-	100

KERBING			
Start Km	**End Km**	**Direction**	**Length (m)**
No Information	No Information	No Information	No Information

STONE PITCHING DRAIN			
Start Km	**End Km**	**Direction**	**Length (m)**
8,25	8,65	-	400

7.4 GUARDRAILS

N9 SECTION 5

GUARDRAILS ALONG N9 SECTION 5			
Start Km	**End Km**	**Direction**	**Length (m)**
0,08	0,22	S	140
12,04	12,2	N	160
12,04	12,2	S	160
12,35	13,1	N	750
19,76	19,83	N	70
19,76	19,83	S	70
23,60	23,89	S	290
24,96	25,25	S	290
25,40	25,47	S	70
25,40	25,47	N	70
27,10	27,4	N	300
33,75	33,84	N	90
33,75	33,84	S	90
37,85	38,1	N	250
41,07	41,1	S	30
41,07	41,1	N	30
42,30	42,4	N	100
42,30	42,4	S	100
42,70	42,9	N	200
42,70	42,9	S	200
45,45	45,5	N	50
45,45	45,5	S	50
47,62	47,69	N	70
47,62	47,69	S	70
48,30	48,35	N	50
48,30	48,35	S	50
48,40	48,5	N	100
48,40	48,5	S	100
49,10	49,2	N	100
49,10	49,25	S	150
49,32	49,4	S	80
49,45	49,85	S	400
50,05	50,2	N	150
50,05	50,2	S	150
50,34	50,42	N	80
50,30	50,05	S	250

50,78	50,98	S	200
50,85	50,9	N	50
50,95	50,98	N	30
51,25	51,4	N	150
51,32	51,43	S	110
52,57	52,67	N	100
52,57	52,67	S	100

N9 SECTION 6

GUARDRAILS ALONG N9 SECTION 6			
Start Km	**End Km**	**Direction**	**Length (m)**
0,75	1,40	S	650
2,10	2,35	N	250
4,78	4,92	N	140
4,78	4,92	S	140
7,96	8,20	N	240
8,01	8,25	S	240
13,20	13,30	N	100
13,45	13,85	N	400
17,25	17,65	S	400
17,65	18,50	N	850
18,10	18,30	S	200
20,10	20,20	N	100
20,10	20,20	S	100
22,64	22,75	N	110
22,64	22,75	S	110
23,70	24,60	N	900
25,30	25,57	S	270
25,42	25,47	N	50
26,78	26,70	N	80
26,78	26,70	S	80
27,41	27,50	N	90
27,42	27,55	S	130
32,01	32,30	N	290
32,00	32,25	S	250
35,70	35,77	N	70
35,70	35,77	S	70
37,20	37,27	N	70
38,25	39,80	N	1550
38,90	39,44	N	540

39,30	39,32	S	20
39,40	39,52	S	120
39,49	39,52	N	30
39,59	39,72	N	130
39,63	39,72	S	90
39,88	40,40	N	520
40,10	40,40	N	300
45,45	46,12	N	670
45,45	46,12	S	670
49,15	49,30	N	150
49,15	49,30	S	150
53,30	53,87	S	570
53,35	53,47	N	120
53,78	53,87	N	90
54,76	54,92	N	160
54,76	54,92	S	160
55,05	55,17	S	120
55,30	55,55	S	250
55,61	55,90	S	290
60,44	60,50	S	60
60,67	60,84	S	170
61,20	61,30	N	100
61,20	61,30	S	100
61,35	62,97	N	1620

R61 SECTION 2

GUARDRAILS ALONG R61 SECTION 2			
Start Km	**End Km**	**Direction**	**Length (m)**
1,52	1,70	W	180
2,30	2,60	E	300
2,30	2,60	W	300
3,59	3,61	E	20
3,59	3,61	W	20
4,30	4,60	W	300
4,37	4,60	E	230
7,05	7,08	E	30
7,05	7,08	W	30
8,79	8,86	E	70
8,79	8,86	W	70
9,20	9,50	E	300
10,30	10,90	E	600
10,75	10,90	W	150
11,20	12,80	E	1600
13,25	13,35	E	100
13,25	13,40	W	150
13,52	13,70	E	180
13,52	13,70	W	180
13,90	14,05	E	150
13,90	14,05	W	150
14,10	14,20	E	100
14,10	14,20	W	100
14,40	14,55	E	150
14,40	14,55	W	150
15,30	15,40	W	100
15,57	15,65	E	80
15,57	15,65	W	80
15,83	16,20	W	370
16,50	16,70	E	200
16,50	16,70	W	200

R63 SECTION 7

GUARDRAILS ALONG R63 SECTION 7			
Start Km	**End Km**	**Direction**	**Length (m)**
40,50	41,05	-	550
40,75	41,05	+	300
42,05	42,35	+	300
42,05	42,35	+	300
43,35	43,45	-	100
43,37	43,45	+	80
48,40	48,55	+	150
48,40	48,55	-	150
54,95	55,15	+	200
54,95	55,10	-	150
55,30	55,60	+	300
55,75	55,80	+	50
55,75	55,80	-	50
57,85	58,00	+	150
57,85	58,00	-	150
62,20	62,35	+	150
62,20	62,35	-	150
66,00	66,25	+	250
66,00	66,25	-	250
69,25	69,70	+	450
69,78	70,75	+	970
70,90	71,40	+	500
71,44	72,45	+	1010
72,60	72,84	+	240
72,60	72,70	-	100
72,94	73,90	+	960
73,50	73,85	-	350
73,50	73,80	-	300
87,04	88,20	-	1160
87,90	88,00	-	100

R63 SECTION 8

GUARDRAILS ALONG R63 SECTION 8			
Start Km	**End Km**	**Direction**	**Length (m)**
0,10	0,65	+	550
0,50	0,65	-	150
2,52	2,60	+	80
2,52	2,60	-	80
4,30	4,98	+	680
4,30	4,98	-	680
6,93	7,12	+	190
6,93	7,12	-	190
7,50	7,64	+	140
7,50	7,64	-	140
7,85	8,00	-	150
8,00	8,30	+	300
12,30	12,42	+	120
12,30	12,42	-	120
13,26	13,44	+	180
13,26	13,44	-	180

7.5 ROAD SIGNS

N9 SECTION 5

ROAD SIGNS ALONG N09 SECTION 5				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
0.0		NORTH	GD2	Direction
0.01		NORTH	GD2	Direction
0.0		SOUTH	GD2	Direction
0.01		SOUTH	GD2	Direction
0.01		BOTH	R103	Command
0.01		BOTH	R1	Control
0.01		BOTH	R3	Control
0.205		NORTH	R201-100	Prohibition
0.225	0.52	NORTH	W405(600x600)	Warning
0.37		SOUTH	W103	Warning
0.307		NORTH	GD3	Direction
0.307		SOUTH	GD1	Direction
1.81		NORTH	GD1	Direction
1.81		SOUTH	R201-120	Prohibition
2.01		NORTH	GFS A4	Scenic Attractions
2.02		SOUTH	GFS A4	Scenic Attractions
2.15		NORTH	GD2	Direction
2.15		NORTH	GD2	Direction
2.15		SOUTH	GD2	Direction
2.15		SOUTH	R1	Control
2.15		SOUTH	R3	Control
2.15		SOUTH	R2	Control
2.15		SOUTH	W405(600x600)	Warning
2.39		NORTH	R201-120	Prohibition
2.3		SOUTH	GFSB1-2RSA + GFSB1-3 + GFS D1-22 + GFS B2-1 + GFS C1-6 + GFS B7-2 + GFS C1-1	Tourism Direction (Combination of signs in one board)
2.4	2.75	SOUTH	W405(600x600)	Warning
2.48		NORTH	GD3	Direction
2.48		SOUTH	GD1	Direction
2.8		NORTH	GF18-RSA	Tourism direction
3.45		SOUTH	R3	Control
3.65		SOUTH	GF6 A	Tourism direction
3.9		NORTH	GD3	Direction

ROAD SIGNS ALONG N09 SECTION 5				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
4.1		SOUTH	W107	Warning
4.57		NORTH	W107	Warning
4.72		NORTH	R1	Control
4.72		SOUTH	W409	Warning
5.05		SOUTH	W108	Warning
5.9		SOUTH	R3	Control
6.0		NORTH	W333 & IN11.2	Warning
6.15		SOUTH	GF6 A	Tourism direction
7.18		SOUTH	GF5 A	Tourism direction
8.67		NORTH	W107	Warning
8.85		NORTH	R1	Control
9.0		SOUTH	W313	Warning
9.1		SOUTH	W108	Warning
9.5		NORTH	W107	Warning
9.85		NORTH	GD2	Warning
9.85		NORTH	GD2	Warning
9.85		SOUTH	GD2	Warning
9.85		SOUTH	R1	Control
10.15		SOUTH	GD3	Direction
10.2		NORTH	R201-120	Prohibition
10.2		SOUTH	W107	Warning
12.04		NORTH	GL4	Location
12.2		SOUTH	GL4	Location
12.3		NORTH	W202	Warning
13.2		SOUTH	W203	Warning
13.4	13.4	SOUTH	R3	Control
13.55		SOUTH	GF6A	Tourism direction
13.98		NORTH	W110	Warning
14.0		SOUTH	W333	Warning
15.0		NORTH	W313	Warning
15.0		SOUTH	W313	Warning
15.18		NORTH	R201-120	Prohibition
15.18		SOUTH	R201-120	Prohibition
15.43		NORTH	W107	Warning
15.85		SOUTH	W108	Warning
16.0		SOUTH	GF6A	Tourism direction
16.5		NORTH	GD3	Direction
16.85		SOUTH	GF5 A	Tourism direction
19.4		NORTH	W107	Warning
19.57		NORTH	R1	Control
19.65		SOUTH	W108	Warning
19.75		NORTH	GL4	Location
19.86		SOUTH	GL4	Location
20.02		NORTH	GF5 A	Tourism direction

ROAD SIGNS ALONG N09 SECTION 5				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
20.02		SOUTH	GD3	Direction
20.09		NORTH	W339+W313-WD+IN11.2	Warning
21.0		NORTH	W339-WD+IN11.4	Warning
21.1		NORTH	R3	Control
22.2		NORTH	W107	Warning
22.55		NORTH	GD2	Direction
22.55		NORTH	R1	Control
22.55		SOUTH	W409	Warning
22.55		SOUTH	GD2	Direction
22.88		SOUTH	W108	Warning
23.6		SOUTH	W333	Warning
24.0		SOUTH	W313	Warning
24.06		SOUTH	R3	Control
24.3		NORTH	W313	Warning
24.3		SOUTH	GF6A	Tourism direction
25.2		NORTH	W209	Warning
25.3		SOUTH	GF5A	Tourism direction
25.4		NORTH	GL4	Location
25.5		SOUTH	GL4	Location
25.58		SOUTH	W405(600x600)	Warning
26.0		NORTH	W312	Warning
26.1		NORTH	W339-WD+IN11.4	Warning
26.64		NORTH	GD3	Direction
26.72		NORTH	W107	Warning
26.72		SOUTH	R201-120	Prohibition
27.1		NORTH	GD2	Direction
27.1		NORTH	R1	Control
27.1		SOUTH	GD2	Direction
27.1		SOUTH	GD2	Direction
27.4		NORTH	R201-120	Prohibition
27.45		SOUTH	W312	Warning
28.18		NORTH	W313	Warning
28.18		SOUTH	W313	Warning
30.0		SOUTH	GD3	Direction
31.13		NORTH	W107	Warning
31.46		SOUTH	W108	Warning
32.8		NORTH	W209	Warning
33.74		NORTH	GL4	Location
33.84		SOUTH	GL4	Location
34.8		SOUTH	W209	Warning
35.0		SOUTH	W339+W313-WD+IN11.2	Warning
35.15		SOUTH	R3	Control

ROAD SIGNS ALONG N09 SECTION 5				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
36.55		NORTH	GD3	Direction
36.55		SOUTH	GF5A	Tourism direction
39.0		NORTH & SOUTH	W313	Warning
40.0		SOUTH	GD3	Direction
40.2		SOUTH	W339-WD+IN11.4	Warning
42.9		NORTH	GF5A	Tourism direction
43.7		NORTH	GF6A	Tourism direction
43.8		NORTH	R3	Control
44.2		NORTH	W102	Warning
44.5		NORTH	GD2	Direction
44.5		NORTH	GD2	Direction
44.5		NORTH	R1	Control
44.5		SOUTH	GD2	Direction
44.5		SOUTH	GD2	Direction
44.5		SOUTH	R1	Control
44.86		NORTH	R201-120	Prohibition
44.86		SOUTH	W101	Warning
45.3		NORTH	GFS A4	Scenic Attractions
45.33		SOUTH	GFS A4	Scenic Attractions
46.0		SOUTH	R3	Control
46.2		SOUTH	GF6A	Tourism Direction
47.2		SOUTH	GF5A	Tourism Direction
47.48		NORTH	W107	Warning
47.8		SOUTH	W108	Warning
49.9		SOUTH	GF18-RSA	Tourism Direction
50.0		SOUTH	GD3	Direction
50.3		SOUTH	GS101	Guidance
50.6		SOUTH	GS101	Guidance
51.44		SOUTH	GS202	Guidance
51.65		SOUTH	W107	Warning
51.92		NORTH	R201-100	Prohibition
52.1		SOUTH	R201-120	Prohibition
52.3		NORTH	W108	Warning
52.4		SOUTH	R1	Control
52.4		NORTH	GD2	Guidance
52.4		NORTH	W409	Warning
53.2		NORTH	R201-80	Prohibition
53.2		SOUTH	R201-100	Prohibition
53.25		NORTH	GD1	Direction
53.25		NORTH	GD3	Direction
53.35		NORTH	R201-60	Prohibition
53.35		SOUTH	R201-80	Prohibition
53.38		NORTH	GFS B1-2 RSA	Tourism Direction

N9 SECTION 6

ROAD SIGNS ALONG N09 SECTION 6				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
0.15		NORTH	R2	Control
0.15		SOUTH	R1	Control
0.23		SOUTH	R1	Control
0.3		NORTH	W307	Warning
0.93		NORTH	W339 & IN11.4	Warning
1.0		NORTH	R201-80	Prohibition
1.0		SOUTH	R201-60	Prohibition
1.05		NORTH	W308	Warning
1.38		NORTH	W107	Warning
3.2		NORTH	GF18-RSA	Tourism direction
3.58		NORTH	W108	Warning
3.7		NORTH	GS902	Guidance
3.8		NORTH	R1	Control
3.9		NORTH	GD2	Guidance
3.9		SOUTH	GD2	Guidance
3.98		SOUTH	W307	Warning
4.0		NORTH	GF5A	Tourism direction
4.05		SOUTH	DFSA1	National Parks
4.15		SOUTH	W107	Warning
4.2		SOUTH	GS901	Guidance
5.0		NORTH	GF6A	Tourism direction
6.15		NORTH	W107	Warning
6.16		SOUTH	R201-120	Prohibition
6.47		NORTH	GD2	Guidance
6.47		NORTH	R1	Control
6.47		SOUTH	GD2	Guidance
6.47		SOUTH	GD2	Guidance
6.7		NORTH & SOUTH	W313	Warning
6.8		NORTH	R201-120	Prohibition
6.8		SOUTH	W108	Warning
6.87		NORTH	W107	Warning
7.01		NORTH	R1	Control
7.2		NORTH	R1	Control
7.27		SOUTH	W108	Warning
7.75		NORTH	W108	Warning
7.92		NORTH	R1	Control
7.96		NORTH	GD2	Guidance
7.96		SOUTH	GD2	Guidance
7.96		SOUTH	R1	Control
8.07		NORTH	GL4	Location
8.2		SOUTH	GL4	Location
8.25		SOUTH	W108	Warning

ROAD SIGNS ALONG N09 SECTION 6				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
9.15		NORTH	W108	Warning
9.15		SOUTH	R201-120	Prohibition
9.45		NORTH	GD2	Guidance
9.45		SOUTH	R1	Control
9.45		SOUTH	GD2	Guidance
9.8		NORTH	R201-120	Prohibition
9.8		SOUTH	W107	Warning
9.85		NORTH	W107	Warning
10.1		NORTH	GFSA4	Scenic attractions
10.13		SOUTH	GFSA4	Scenic attractions
10.19		NORTH	W107	Warning
10.18		SOUTH	GD3	Guidance
10.38		NORTH & SOUTH	R1	Control
10.52		SOUTH	W108	Warning
11.0		NORTH & SOUTH	W313	Warning
11.64		NORTH	W107	Warning
12.0		SOUTH	W108	Warning
12.15		NORTH	R201-80-RC+W208-WD+IN11.2	Prohibition/Warning
12.9		SOUTH	W202	Warning
13.1		NORTH	GS101	Guidance
13.3		NORTH	GD3	Guidance
13.45		NORTH	W202	Warning
13.7	14.05	NORTH	W405(600x600)	Warning
14.3		SOUTH	W203	Warning
14.5		NORTH	W107	Warning
14.5		SOUTH	R201-80	Prohibition
14.7		NORTH	GD2	Guidance
14.7		NORTH	R1	Control
14.7		SOUTH	GD2	Guidance
14.7		SOUTH	GD2	Guidance
15.05		SOUTH	W108	Warning
15.2		SOUTH	R201-80-RC+W209-WD+IN11.2	Prohibition/Warning
15.4		NORTH	GF5A	Tourism direction
15.75		SOUTH	W313	Warning
16.4		NORTH	GF6A	Tourism direction
17.14		NORTH	W209-WB	Warning
17.25		SOUTH	W405(600x600)	Warning
17.25		NORTH	GS202	Guidance
17.8		NORTH	GS101	Guidance
		NORTH	GS101	Guidance

ROAD SIGNS ALONG N09 SECTION 6				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
18.2		SOUTH	W405(600X600)	Warning
19.0		NORTH	W108	Warning
19.1		NORTH	W209	Warning
19.2		SOUTH	GD2	Guidance
19.2		NORTH	GD2	Guidance
19.2		SOUTH	R1	Control
19.2		NORTH	GD2	Guidance
19.45		NORTH	R201-80	Prohibition
19.45		SOUTH	W107	Warning
20.2		SOUTH	GD3	Guidance
20.6		NORTH	W107	Warning
20.6		SOUTH	R201-80	Prohibition
20.95		NORTH & SOUTH	W313	Warning
21.07		NORTH	R201-80	Prohibition
21.07		SOUTH	W108	Warning
22.05		NORTH	GF5A	Tourism direction
22.45		NORTH	R201-80-RC+ W209-WD+IN11.2	Prohibition/Warning
22.65		NORTH	GL4	Location
22.72		NORTH	GL4	Location
22.78		SOUTH	R201-100	Prohibition
22.85		NORTH	GS202	Guidance
23.17		NORTH	GD3	Guidance
23.58		NORTH	W208	Warning
23.65		NORTH	W334	Warning
24.2	24.45	NORTH	W405(600x600)	Warning
25.07		NORTH	GS101	Guidance
25.07		SOUTH	W334	Warning
25.18		SOUTH	W208	Warning
25.3		SOUTH	R201-80-RC+ W209-WD+IN11.2	Prohibition/Warning
27.54		NORTH	W103	Warning
27.6		NORTH	GD1	Guidance
27.6		SOUTH	R201-120	Prohibition
27.66		NORTH	GF7	Tourism direction
27.67		NORTH	GF7	Tourism direction
27.8		NORTH	GD2 & R1	Guidance & Control
27.8		SOUTH	GD2 & R1	Guidance & Control
27.9		SOUTH	GF2	Tourism direction
27.95		SOUTH	GFS B1-2 RSA	Tourism direction
28.05		SOUTH	GD1	Guidance
28.06		NORTH	GF5A	Tourism direction

ROAD SIGNS ALONG N09 SECTION 6				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
28.06		SOUTH	W101	Warning
28.15		NORTH	R201-120	Prohibition
28.15		SOUTH	R201-80	Prohibition
28.18		SOUTH	GF7	Tourism direction
28.23		SOUTH	R201-100	Prohibition
28.25		SOUTH	W313	Warning
28.97		NORTH	GF6A	Tourism direction
30.15		SOUTH	GD3	Guidance
30.7		NORTH	W107	Warning
31.0		NORTH	R1	Control
31.35		SOUTH	W108	Warning
32.1		NORTH	GL4	Location
32.2		SOUTH	GL4	Location
33.15		NORTH	GD3	Direction
34.4		NORTH	GF5A	Tourism direction
34.6		NORTH	W313	Warning
35.32		NORTH	GF6A	Tourism direction
36.58		NORTH	GS202	Guidance
36.9		SOUTH	R201-120	Prohibition
37.27		NORTH	R201-80-RC+ W209-WD+IN11.2	Prohibition/Warning
37.97		NORTH	GL6	Location
38.25		NORTH	W208	Warning
40.1		NORTH	W205	Warning
40.45		SOUTH	W202	Warning
40.83		SOUTH	W209	Warning
40.98		NORTH	GL6	Location
40.98		SOUTH	GL6	Location
41.15		BOTH	GS101	Guidance
41.42		NORTH	R201-120	Prohibition
41.55		SOUTH	GS101	Guidance
41.75		NORTH	GF5A	Tourism direction
41.8		NORTH	GL6	Location
42.02		NORTH	GD3	Guidance
42.22		SOUTH	R201-80-RC+ W209-WD+IN11.2	Prohibition/Warning
42.5		NORTH	GS202	Guidance
42.74		NORTH	GF6A	Tourism direction
42.98		NORTH & SOUTH	W313	Warning
43.02		NORTH	GD3	Guidance
43.3		SOUTH	GFSA4	Scenic attractions
43.89		NORTH	W108	Warning

ROAD SIGNS ALONG N09 SECTION 6				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
43.89		SOUTH	R201-120	Prohibition
44.22		SOUTH	GD2	Guidance
44.22		SOUTH	R1	Control
44.22		NORTH	GD2	Guidance
44.22		NORTH	GD2	Guidance
44.57		NORTH	R201-120	Prohibition
45.35		NORTH	GD1	Guidance
45.35		SOUTH	GF18-RSA	Tourism direction
45.5		NORTH	GD1	Guidance
46.3		NORTH	GD1	Guidance
46.3		SOUTH	GD3	Guidance
46.4		SOUTH	R201-120	Prohibition
46.44		NORTH	GFSA4	Scenic attractions
46.62		NORTH	GD2	Guidance
46.62		NORTH	GD2	Guidance
46.62		SOUTH	R1	Control
46.62		SOUTH	GD2	Guidance
46.93		NORTH	W107	Warning
46.96		NORTH	R201-20	Prohibition
46.96		NORTH	GD1	Guidance
47.01		NORTH	GD3	Guidance
47.24		SOUTH	GD2	Guidance
47.24		SOUTH	GD2	Guidance
47.24		NORTH	R1	Control
47.24		SOUTH	GD2	Direction
47.6		NORTH	R201-120	Prohibition
47.6		SOUTH	W108	Warning
47.65		NORTH	GF18-RSA	Tourism direction
48.53		NORTH	GF6A	Tourism direction
48.65		NORTH	W107	Warning
48.65		SOUTH	R201-120	Prohibition
49.0		NORTH	R1	Control
49.0		NORTH	GD2	Guidance
49.0		SOUTH	GD2	Guidance
49.0		SOUTH	GD2	Guidance
49.2		NORTH	GL4	Location
49.35		NORTH	R201-120	Prohibition
49.35		SOUTH	W108	Warning
49.5		BOTH	W313	Warning
49.96		SOUTH	GL6	Location
50.18		NORTH	W108	Warning
50.18		SOUTH	GD3	Guidance
50.23		NORTH	GFSC1-6	Accommodation
50.26		SOUTH	R201-120	Prohibition

ROAD SIGNS ALONG N09 SECTION 6				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
50.5		NORTH	GD2	Guidance
50.5		NORTH	GD2	Guidance
50.5		SOUTH	GD2 + R1	Guidance/Control
50.85		NORTH	R201-120	Prohibition
50.85		SOUTH	W107	Warning
53.0		NORTH	GD3	Guidance
53.1		NORTH	W203	Warning
53.45	53.87	SOUTH	W405	Warning
54.02		SOUTH	W202	Warning
55.13		NORTH	W313	Warning
56.7		NORTH	GF5A	Tourism direction
57.82		NORTH	GF6A	Tourism direction
59.3		SOUTH	W313	Warning
59.3		SOUTH	GF5A	Tourism direction
59.5		NORTH	GS202	Guidance
59.98		SOUTH	R201-120	Prohibition
60.2		NORTH	GL6	Location
60.3		NORTH	R201-80-RC+ W211-WD	Prohibition/Warning
60.44		NORTH	W205	Warning
60.44		SOUTH	GD3	Guidance
60.46		NORTH	R201-40-RC+ W339-WD	Prohibition/Warning
60.6	60.88	SOUTH	W405(600X600)	Warning
61.5		SOUTH	W205	Warning
60.77		NORTH	W339+IN11.4	Warning
62.25	62.4	NORTH	W405(600X600)	Warning

R61 SECTION 2

ROAD SIGNS ALONG R61 SECTION 2				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
0.07		EAST	GD3	Guidance
0.07		WEST	W302-WB	Warning
0.22		WEST	(W339+W302)-WD+IN11.3	Warning
0.26		WEST	GD1	Guidance
0.3		EAST	R201-100	Prohibition
0.31		WEST	R201-60	Prohibition
0.35		WEST	W104 + IN11.3	Warning
0.38		EAST	W313	Warning
0.5		EAST	GF18-RSA	Tourism direction
0.5		WEST	(W339+W302)-WD+IN11.3	Warning
0.8		WEST	R201-80	Prohibition
1.35		WEST	GF6A	Tourism direction
2.3		EAST	GL4	Location
2.35		WEST	GF5A	Tourism direction
2.7		EAST	W313	Warning
3.09		EAST	GL4	Location
3.2		WEST	GL4	Location
4.05		WEST	GD3	Guidance
4.2		WEST	W313	Warning
4.37	5.15	EAST	W405(600X600)	Warning
4.6		EAST	W335	Warning
8.52		BOTH	W313	Warning
8.78		EAST	W339+IN11.4	Warning
8.78		WEST	W328	Warning
8.85		EAST	GL6	Location
9.04		WEST	W405(600X600)	Warning
9.15		WEST	W208	Warning
9.3	9.8	EAST	W405(600x600)	Warning
9.35		EAST	W334	Warning
9.58		EAST	GS202	Guidance
9.9		EAST	GD3	Guidance
10.3	10.4	EAST	W405(600x600)	Warning
10.75		WEST	W334	Warning
10.75	10.95	WEST	W405(600x600)	Warning
11.25	11.5	WEST	W405(600X600)	Warning
12.7		EAST	W405(600x600)	Warning
13.26		EAST	GS101	Guidance
13.26		WEST	GS505	Guidance
13.9	14.2	EAST	W405(600X600)	Warning
14.15		EAST	GL4	Location

ROAD SIGNS ALONG R61 SECTION 2				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
14.2		WEST	GL4	Location
14.4		WEST	W203	Warning
17.05		EAST	W333+IN11.4	Warning
17.15		WEST	GL6	Location

R63 SECTION 7

ROAD SIGNS ALONG R63 SECTION 7				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
40.2		-	W108	Warning
40.26		+	W209	Warning
43.35		+	GF18-RSA	Tourism direction
42.47		+	R201-100	Prohibition
42.6		-	W209	Warning
43.29		+	W102	Warning
44.0		-	W102	Warning
45.5		-	GF5A	Tourism direction
44.84		+	W108	Warning
47.4		-	W107	Warning
47.9		-	W108	Warning
48.3		-	W107	Warning
50.0		+	GD3	Guidance
50.0		-	GD3	Guidance
50.4		+	W108	Warning
51.05		-	W107	Warning
54.3		+	W203	Warning
55.2		-	W202	Warning
55.24		+	W313	Warning
55.52		+	W107	Warning
56.07		-	W108	Warning
59.93		+	W309	Warning
60.01		+	GD3	Guidance
60.01		-	GD3	Guidance
60.9		+	W310	Warning
61.5		+	W107	Warning
61.85		-	W310	Warning
62.0		-	W108	Warning
62.6		-	W313	Warning
64.37		+	GD1	Guidance
64.37		-	R201-100	Prohibition
64.6		+	R1	Control
64.6		+	GD2	Guidance
64.6		-	GD2	Guidance
64.6		-	GD2	Guidance
66.25		+	W202	Warning
66.9		-	GD1	Guidance
66.9		+	R201-100	Prohibition
67.1		-	W203	Warning
68.4		-	W309	Warning
68.5		+	GL6	Location
68.65	68.8	+	W405(600X600)	Warning

ROAD SIGNS ALONG R63 SECTION 7				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
68.68		+	W107	Warning
68.68		-	R201-100	Prohibition
68.85		+	GDLSA2-12	Local direction
68.8		+	GD2	Guidance
68.9		+	W209-WB+IN11.2	Warning
68.95		-	GDLSA2-12	Local direction
68.98		+	GDLSA2-12	Local direction
69.02		+	GS505	Guidance
69.1		+	W309	Warning
69.07		-	GDLSA2-12	Warning
96.2		-	W108	Warning
69.45	69.7	-	W405(600X600)	Warning
69.5		+	W335	Warning
69.64	69.74	+	W405(600x600)	Warning
69.8		-	W334	Warning
69.9	69.95	+	W405(600x600)	Warning
70.02		-	W405(600x600)	Warning
70.05		+	GD3	Guidance
70.05		+	GD3	Guidance
70.34		-	W335	Warning
70.35	70.45	+	W405(600x600)	Warning
70.72	70.9	-	W405(600x600)	Warning
71.0		-	W335	Warning
71.15		-	GS101	Guidance
71.25	71.3	+	W405(600x600)	Warning
71.4		-	W334	Warning
71.44		-	W405(600x600)	Warning
71.45		-	GS101 + IN11.3	Guidance
71.65	71.85	+	W405(600x600)	Warning
71.9		-	W334	Warning
72.15		-	GS201	Guidance
72.25	72.27	+	W405(600x600)	Warning
72.38		+	W335	Warning
72.45	72.7	-	W405	Warning
72.6		+	GS201 + IN11.3	Guidance
72.84	72.94	+	W405(600x600)	Warning
73.0	73.2	-	W405(600x600)	Warning
73.0		-	W335	Warning
73.3	73.85	+	W405(600x600)	Warning
73.38		-	W335	Warning
73.6		-	W209-WB+IN11.2	Warning
73.95		+	R201-100	Prohibition
73.95		-	GL6	Location
76.5		+	W107	Warning

ROAD SIGNS ALONG R63 SECTION 7				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
76.8		-	W108	Warning
78.3		+	W108	Warning
78.3		-	R201-100	Prohibition
78.57		+	GD2	Guidance
78.57		+	GD2	Guidance
78.57		-	R1	Control
78.57		-	GD2	Guidance
78.8		+	R201-100	Prohibition
78.8		-	W107	Warning
79.25		-	W313	Warning
79.68		-	R201-100	Prohibition
79.78		+	W107	Warning
79.78		-	GD3	Guidance
80.0		+	R1	Control
80.0		+	GD2	Guidance
80.0		-	GD2	Guidance
80.0		-	W409	Warning
80.15		+	W309	Warning
80.15		-	W309	Warning
80.25		+	GD3	Guidance
80.25		-	W108	Warning
80.33		+	R201-100	Prohibition
81.2		+	R201-80	Prohibition
81.2		-	R201-100	Prohibition
81.27		+	R201-60	Prohibition
81.4		+	W317	Warning
81.55		+	W332-WB+IN11.3	Warning
81.7		+	GL4	Location
81.73		-	GL4	Location
81.74		+	R214	Prohibition
81.9		+	(W332+W317)-WD+IN11.1	Warning
81.96		+	GFS A1-1 RSA	N Parks Attractions
81.97		+	W332	Warning
81.97		-	W332	Warning
82.26		+	W108	Warning
82.24		-	(W332+W317)-WD+IN11.1	Warning
82.35		+	W313	Warning
82.35		-	R201-60	Prohibition
82.4		-	R201-60	Prohibition
82.45		+	GD2	Guidance
82.45		+	W409	Warning

ROAD SIGNS ALONG R63 SECTION 7				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
82.45		-	R1	Control
82.45		-	GD2	Guidance
82.48		-	W332-WB	Warning
82.5		-	W107	Warning
82.6		-	R201-60	Prohibition
83.95		-	W313	Warning
85.1		+	W108	Warning
85.1		-	R201-100	Prohibition
85.25		+	GD2	Guidance
85.25		+	GD2	Guidance
85.25		-	GD2	Guidance
85.25		-	R2	Control
85.5		+	W313	Warning
85.55		+	R201-80	Prohibition
85.55		-	W107	Warning
85.8		+	W339+IN11.4	Warning
86.25		+	R201-80	Prohibition
86.5		+	W107	Warning
86.72		-	W313-WA	Warning
86.8		+	W209	Warning
86.84		-	W108	Warning
86.87		-	GFS A1-1 RSA	N Parks Attractions
87.0		+	W334	Warning
88.15		-	W335	Warning
88.5		-	W335	Warning
88.7		+	R201-60	Prohibition
88.72		-	R201-80	Prohibition
88.82		-	GD3	Guidance
88.84		-	W309	Warning
88.86		+	R1	Control
88.86		-	GD1	Guidance
88.86		-	R1	Control

R63 SECTION 8

ROAD SIGNS ALONG R63 SECTION 8				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
0.0		EAST	GD1/GD2	Guidance
0.0		WEST	R1	Control
0.15		EAST	GD1	Guidance
0.15		WEST	GD1	Guidance
0.2		EAST	R201-60	Prohibition
0.18		WEST	W302 + IN11.3	Warning

ROAD SIGNS ALONG R63 SECTION 8				
Start Km	**End Km**	**Direction**	**Sign Code**	**Description**
0.35		WEST	W104	Warning
0.5		EAST	GS901	Guidance
0.64		WEST	R201-60	Prohibition
0.7		WEST	GD2	Guidance
0.72		EAST	R201-80	Prohibition
1.85		WEST	W409	Hazard
3.2		WEST	R201-80	Prohibition
3.2		EAST	W107	Warning
3.25		EAST	GD1	Guidance
3.3		EAST	GF2	Tourism direction
3.45		WEST	R1	Control
3.45		WEST	GD2	Guidance
3.45		EAST	GD2	Guidance
3.55		WEST	GFSC1-6	Accommodation
3.85		WEST	R201-80	Prohibition
4.4		WEST	W107	Warning
4.9		EAST	R201-120	Prohibition
5.15		EAST	R1	Control
5.15		WEST	W409	Warning
5.8		EAST	W102	Warning
5.77		WEST	W110	Warning
5.85		EAST	W102 + IN11.3	Warning
6.2		EAST	GD2 + R1	Guidance/Control
6.2		WEST	GD2 + R1	Guidance/Control
6.5		WEST	R214	Prohibition
6.58		WEST	W302 + IN11.3	Warning
6.87		EAST	R201-120	Prohibition
6.85		WEST	W102	Warning
7.4		EAST	GS202 +IN11.3	Guidance
7.57		EAST	GL4	Location
7.6		WEST	GL4	Location
7.7		EAST	GF7	Tourism direction
7.85		WEST	GD3	Guidance
8.87		EAST	GS101	Guidance
12.0		EAST	GD3	Guidance
13.32		EAST	GL4	Location
13.4		WEST	GL4	Location
13.65		WEST	GF5A	Tourism direction
14.58		EAST	GF6A	Tourism direction
17.84		WEST	GD3	Guidance
18.12		EAST	R217	Prohibition

7.6 CULVERTS

N9 SECTION 5

N9-5 Pipes and Culverts	
Legend for Pipes	Legend for Culverts
450	600x450
600	900x600
900	900x450

Start Km	End Km	Pipes	Culvert
0.08	0.08		2× (450×900)
01.95	01.95		(2100×1200)
0.39	0.39	600	
0.61	0.61	600	
0.7	0.7	600	
0.81	0.81	600	
1.08	1.08	600	
1.35	1.35	600	
1.6	1.6	600	
1.7	1.7	600	
1.87	1.87	600	
2.16	2.16	600	
2.16	2.16		(600×450)
2.48	2.48	600	
2.78	2.78		(900×450)
2.9	2.9		2× (2400×1500)
3.1	3.1		(900×450)
3.32	3.32		(900×450)
3.7	3.7	600	
3.95	3.95	600	
4.05	4.05		

Start Km	End Km	Pipes	Culvert
4.25	4.25		
4.42	4.42		(2400×1500)
4.68	4.68	600	
4.72	4.72	600	
4.9	4.9	600	
5.05	5.05	600	
5.38	5.38	600	
5.95	5.95	600	
6.15	6.15	600	
6.26	6.26		(900×450)
6.45	6.45		900×450
6.8	6.8	600	
7.05	7.05	600	
7.23	7.23		(2100×1200)
7.4	7.4	600	
7.55	7.55	600	
7.69	7.69		(900×450)
7.9	7.9	600	
8.05	8.05	600	
8.1	8.1	600	
8.15	8.15	600	
8.2	8.2	600	
8.5	8.5	600	
8.6	8.6	600	
8.83	8.83		(900×450)
9.0	9.0		(900×450)
9.27	9.27	600	
9.52	9.52	600	
9.8	9.8		(1800×900)

Start Km	End Km	Pipes	Culvert
10.47	10.47	(3×600)	
10.68	10.68	(3×600)	
10.87	10.87	600	
11.06	11.06		
11.4	11.4	600	
11.64	11.64		
11.85	11.85		(2400×1500)
14.4	14.4		2× (1500×1500)
14.76	14.76		2× (1500×1500)
14.97	14.97		(1500×650)
15.15	15.15		2× (1800×1500)
15.28	15.28		(2400×1800)
15.45	15.45	600	
16.07	16.07	600	
12.35	12.35		(2400×1500)
12.6	12.6		(2400×1500)
12.8	12.95		
13.05	13.05		
13.2	13.2		2400x1800
13.63	13.63		(1500×1500)
13.7	13.7	600	
13.81	13.81		2× (2400×1500)
13.92	13.92	600	
14.0	14.0	600	
14.2	14.2	600	
14.26	14.26		2× (2400×1800)
16.19	16.19		3× (1200×600)
16.34	16.34		2× (900×450)
16.42	16.42		(900×450)

Start Km	End Km	Pipes	Culvert
16.5	16.5	600	
16.66	16.66		(1800×1500)
16.7	16.7	600	
16.76	16.76	2×600	
16.82	16.82	(2×600)	
16.84	16.84	(2×600)	
17.09	17.09		(1800×1200)
17.2	17.2		3× (1500×900)
17.5	17.5		3× (1500×900)
17.6	17.6		2× (1500×900)
17.7	17.7	600	
17.8	17.8		(900×450)
17.88	17.88		2× (900×450)
17.98	17.98		2× (1800×900)
18.1	18.1	(2×600)	
18.34	18.34		2× (1500×1500)
18.47	18.47		2× (1500×1500)
18.52	18.52	(2×600)	
18.63	18.63	600	
18.8	18.8		(2400×1200)
18.84	18.84		2× (2400×1500)
18.93	18.93	600	
19.12	19.12	600	
19.25	19.25	600	
19.4	19.4	600	
19.57	19.57	600	
19.6	19.6	600	
19.9	19.9		2× (2400×1800)
20.07	20.07	600	
20.13	20.13		2× (1500×1200)

Start Km	End Km	Pipes	Culvert
20.3	20.3	600	
20.37	20.37	600	
20.53	20.53		2× (1800×1500)
20.6	20.6	600	
20.88	20.88	600	
21.1	21.1	600	
20.9	20.9	(2×600)	
21.2	21.2		3× (2100×2100)
21.3	21.3	600	
21.5	21.5	600	
21.7	21.7	600	
21.7	21.7	(2×600)	
21.83	21.83	600	
21.86	21.86	600	
22.0	22.0	600	
22.07	22.07	600	
22.3	22.3		(2400×1200)
22.64	22.64		(1200×1200)
22.78	22.78	600	
22.95	22.95	(2×600)	
23.12	23.12	600	
23.45	23.45	(2×600)	
23.48	23.48	600	
23.55	23.55	600	
23.63	23.63		(2400×1500)
23.7	23.7	(2×600)	
23.73	23.73		2× (1500×1200)
23.87	23.87	(2×600)	
24.05	24.05		2× (900×450)
24.36	24.36	(2×600)	

Start Km	End Km	Pipes	Culvert
24.55	24.55	600	
24.6	24.6		2× (1500×1200)
25.05	25.05		(2400×1200)
25.58	25.58		(1800×600)
25.72	25.72		
25.8	25.8		
25.9	25.9		(1500×1500)
26.2	26.2		(1500×1200)
26.3	26.3		(1500×1200)
27.04	27.04	600	
26.95	26.95	600	
27.15	27.15	600	
27.5	27.5	600	
27.7	27.7		(900×450)
27.9	27.9	600	
28.1	28.1	600	
28.27	28.27	600	
28.5	28.5	600	
28.65	28.65	600	
28.9	28.9	(2×600)	
29.07	29.07	600	
29.0	29.0	600	
29.4	29.4		2× (1500×1200)
29.64	29.64	600	
29.8	29.8	600	
30.0	30.0	600	
30.4	30.4		(900×450)
30.6	30.6		(900×450)
30.8	30.8	600	
31.0	31.0		(900×450)

Start Km	End Km	Pipes	Culvert
31.25	31.25		(900×450)
31.45	31.45		(900×450)
31.63	31.63		(900×450)
31.9	31.9		(900×450)
32.1	32.1		(900×450)
32.37	32.37	600	
32.6	32.6	600	
32.9	32.9		2× (900×450)
33.25	33.25	600	
33.4	33.4		2× (900×450)
33.5	33.5		2× (900×450)
33.65	33.65	(2×600)	
34.1	34.1	600	
34.16	34.16	2×600	
34.44	34.44		3× (2400×2400)
34.65	34.65		(900×450)
34.9	34.9	(2×600)	
35.45	35.45	(2×600)	
35.6	35.6	(2×600)	
35.77	35.77		(3000×1200)
38.83	38.83		(900×450)
35.9	35.9		(2400×1200)
36.04	36.04		2× (2400×1200)
36.12	36.12	600	
36.3	36.3		(2400×1200)
36.5	36.5		(900×450)
36.64	36.64	600	
36.77	36.77		(2400×1200)
36.83	36.83	600	
37.0	37.0		(900×450)

Start Km	End Km	Pipes	Culvert
37.1	37.1		(900×450)
37.27	37.27	600	
37.42	37.42	(2×600)	
37.57	37.57	(2×600)	
37.7	37.7	(2×600)	
38.05	38.05	(2×600)	
38.16	38.16		(1500×1200)
38.2	38.2		2× (900×450)
38.21	38.21	600	
38.4	38.4		1800×900
38.5	38.5	600	
38.6	38.6		(900×450)
38.7	38.7	600	
38.85	38.85	600	
39.0	39.0		(2400×1200)
39.1	39.1	600	
39.25	39.25	600	
39.4	39.4	600	
39.5	39.5	600	
39.6	39.6	600	
39.8	39.8	600	
39.9	39.9		(900×450)
39.96	39.96		2× (900×450)
40.16	40.16		(900×450)
40.3	40.3		2× (900×450)
40.4	40.4		(1800×1200)
40.7	40.7		2× (900×450)
40.74	40.74		(900×450)
41.2	41.2	600	
41.28	41.28		(900×450)

Start Km	End Km	Pipes	Culvert
41.4	41.4	600	
41.5	41.5	600	
41.6	41.6	600	
41.7	41.7	600	
41.78	41.78	600	
41.9	41.9	600	
42.01	42.01	600	
42.1	42.1	(2×600)	
42.2	42.2	(3×600)	
42.25	42.25	600	
42.45	42.45	(2×600)	
42.55	42.55	600	
42.7	42.7	600	
43.3	43.3		(900×450)
44	44	600	
44.3	44.3	600	
44.57	44.57		(900×450)
44.7	44.7	600	
45.45	45.45		(2400×2400)
45.91	45.91		(900×450)
46.3	46.3		(900×450)
46.7	46.7	600	
47.18	47.18	600	
47.38	47.38	600	
47.47	47.47		(900×450)
47.51	47.51		(2400×1500)
48.1	48.1	600	
48.78	48.78		(1800×1200)
49.1	49.2		2× (1800×1500)
50.6	50.6		(900×450)

Start Km	End Km	Pipes	Culvert
50.82	50.82	600	
50.85	50.9		(2400×24800)
51.5	51.5		(3000×1500)
51.65	51.65		(1500×900)
51.8	51.8		(900×450)
52	52	600	
52.97	52.97	600	
53.02	53.02	600	
53.1	53.1	600	
53.6	53.6	600	

N9 SECTION 6

N9 - 6 **Pipes and Culverts**		
	Legend for Pipes	Legend for Culverts
	450	600x450
	600	900x600
	900	900x450

Start Km	End Km	Pipes	Culvert
1.33	1.33	600	1500×600
1.35	1.35		1500×900
1.7	1.7	600	
2.9	2.9		1800×900
3.4	3.4		2× (1500×1500)
3.5	3.5		1500×900
4.4	4.4	600	
4.57	4.57	600	
5.38	5.38		1200×600
5.52	5.52		1200×600
6.34	6.34	2×600	
6.4	6.4	2×600	
6.48	6.48	2×600	
6.58	6.58	2×600	
6.47	6.47		900×400
6.67	6.67	2×600	
7.0	7.0	2×600	
8.76	8.76	2×600	
9.1	9.1		2100×900
9.6	9.6	600	
9.8	9.8		2100×900
9.84	9.84		2100×900

Start Km	End Km	Pipes	Culvert
10.07	10.07		2100×900
10.5	10.5		2× (1800×900)
11.8	11.8	450	
14.3	14.3	600	
14.56	14.56		2100×1200
14.6	14.6		1500×1200
19.32	19.32	600	
19.4	19.4	900	
19.48	19.48		1800×900
19.65	19.65	900	
19.7	19.7		2100×1200
19.85	19.85		2100×1200
20.15	20.15	2×600	
20.5	20.5	2×600	
20.92	20.92		3×(2400×1800)
21.3	21.3	2×600	
21.85	21.85	3×600	
21.98	21.98	5×600	
22.38	22.38	2×600	
23.5	23.5		900×450
23.6	23.6	2×600	
25.07	25.07	800	
25.17	25.17	600	
25.25	25.25	600	
25.33	25.33		900×600
25.57	25.57	600	
25.74	25.74		900×600
25.9	25.9	600	
26.1	26.1	600	

Start Km	End Km	Pipes	Culvert
26.2	26.2	600	
26.65	26.65		900×450
27.18	27.18		900×450
27.38	27.38		2× (1000×600)
27.65	27.65		900×450
27.8	27.8		2× (1200×600)
27.95	27.95		3000×750
28.24	28.24	600	
28.58	28.58		900×450
28.95	28.95		900×450
29.2	29.2		900×450
29.37	29.37		900×450
29.6	29.6		900×450
29.8	29.8		900×450
29.96	29.96		7× (2400×900)
30.24	30.24		900×450
30.38	30.38		900×450
30.48	30.48		2× (1800×450)
30.6	30.6		1800×450
30.85	30.85		3× (1800×450)
31.0	31.0		2× (1800×450)
31.15	31.15		3× (1800×450)
31.3	31.3		2× (2400×600
31.55	31.55		2× (2400×600
31.47	31.47		2× (2400×600)
31.6	31.6		2× (2400×600)
31.7	31.7		2× (2400×600)
31.78	31.78	2×900	
31.85	31.85	2×900	

Start Km	End Km	Pipes	Culvert
31.9	31.9	2×900	
32.6	32.6		900×450
32.8	32.8		900×450
34.6	34.6		900×450
35.32	35.32		900×450
35.14	35.14		3× (900×450)
36.4	36.4		2400×600
36.57	36.57		4× (2400×1200)
36.82	36.82		2× (3000×900)
37.6	37.6		900×450
38.0	38.0	900	
39.78	39.78	900	
40.7	40.7	900	
40.95	40.95	600	
41.3	41.3		900×450
41.38	41.38		900×450
41.55	41.55		900×450
41.85	41.85		1800×450
41.9	41.9		1800×450
42.1	42.1		1800×450
42.15	42.15		2400×450
42.22	42.22		1800×450
42.38	42.38		1800×450
42.5	42.5		1500×450
42.6	42.6		2× (1800×450)
42.7	42.7		2400×450
42.8	42.8	600	
42.9	42.9		900×450
43.0	43.0		2× (1800×450)
43.1	43.1		2× (1800×450)

Start Km	End Km	Pipes	Culvert
43.1	43.1		2× (1800×450)
43.3	43.3		2× (1800×450)
43.35	43.35		4× (3000×900)
43.5	43.5		4× (3000×900)
43.6	43.6		3× (3000×900)
43.66	43.66		1800×450
43.79	43.79		900×450
43.87	43.87		900×450
44.1	44.1		3× (1800×1800)
44.3	44.3		900×450
44.4	44.4		900×450
44.5	44.5		3× (3600×600)
44.6	44.6		2× (3600×900)
44.72	44.72		3000×900
44.9	44.9		4× (3000×450)
44.98	44.98		2× (3000×450)
45.08	45.08		4× (3000×450)
45.2	45.2		6× (3000×1200)
45.23	45.23		1800×1800
46.45	46.45		2× (900×450)
46.6	46.6		2× (900×450)
46.75	46.75		2× (900×450)
48.02	48.02		2×1200×450
48.07	48.07		2×(3600×900)
48.38	48.38		900×450
48.5	48.5		1200×450
48.7	48.7		2400×4500
48.8	48.8		2400×450
48.98	48.98		2× (1800×450)
49.1	49.1		2× (1800×450)

Start Km	End Km	Pipes	Culvert
49.63	49.63		900×600
49.82	49.82		3× (3600×900)
50.44	50.44	600	
50.6	50.6	600	
50.7	50.7	600	
50.8	50.8	900	
50.9	50.9	2×900	
51.07	51.07		900×450
51.2	51.2		900×450
51.3	51.3		900×450
51.45	51.45		900×450
51.72	51.72		900×450
51.93	51.93		900×450
52.15	52.15		900×450
52.4	52.4		900×450
52.58	52.58		900×450
52.7	52.7		1200×450
53.5	53.5		1200×450
54.47	54.47		1200×450
54.59	54.59		1200×450
54.7	54.7		1200×450
55.0	55.0		900×450
55.13	55.13		900×450
55.3	55.3		900×450
55.61	55.61		900×450
55.9	55.9		900×450
56.1	56.1		900×450
56.5	56.5		900×450
56.5	56.5		900×450
56.75	56.75		900×450

Start Km	End Km	Pipes	Culvert
57.15	57.15		1200×450
57.3	57.3		2× (2400×1200)
57.32	57.32		2× (2400×1200)
57.38	57.38		2× (1500×450)
57.5	57.5		900×600
57.74	57.74		900×450
58.46	58.46		900×450
59.05	59.05		3× (900×450)
59.42	59.42		3× (900×450)
59.65	59.65		5× (900×450)
59.85	59.85		4× (900×450)
59.98	59.98		5× (900×450)
60.2	60.2	600	
61.5	61.5		5× (900×450)
61.35	61.35		5× (900×450)
61.55	61.55		5× (900×450)
62.0	62.0		5× (900×450)

R61 SECTION 2

R61-2 **Pipes and Culverts**	
Legend for Pipes	Legend for Culverts
450	600x450
600	900x600
900	900x450

Start Km	End Km	Pipes	Culvert
0.01	0.01	900	
0.08	0.08	900	
0.18	0.18	900	
0.25	0.25	900	
0.31	0.31	900	
0.36	0.36	600	
0.42	0.42		600×450
0.7	0.7		(600×450)
0.75	0.75		2× (600×450)
0.8	0.8		(600×450)
0.85	0.85		(600×450)
0.87	0.87		(600×450)
1.05	1.05		(600×450)
1.1	1.1	750	
1.15	1.15	600	
1.45	1.45		(600×450)
1.48	1.48	600	
1.63	1.63	600	
2.85	2.85		(600×450)
2.88	2.88		(600×450)
3.36	3.36		(1800×450)
4.052	4.052	(2×600)	

Start Km	End Km	Pipes	Culvert
5.2	5.2	600	
5.24	5.24	(2×600)	
5.28	5.28	(2×600)	
5.33	5.33	600	
5.38	5.38	600	
5.42	5.42	600	
5.78	5.78		(1200×450)
5.76	5.76		(1200×450)
5.85	5.85	900	
5.88	5.88	600	
6.25	6.25	600	
6.23	6.23	600	
6.28	6.28	600	
6.45	6.45	600	
6.92	6.92	600	
6.96	6.96	600	
7.7	7.7	600	
7.8	7.8	600	
7.83	7.83	600	
7.87	7.87	600	
7.94	7.94		(1200×600)
8.25	8.25	600	
8.35	8.35	600	
8.5	8.5	(2×600)	
8.55	8.55	(2×600)	
8.65	8.65		2× (600×450)
8.75	8.75		2× (600×450)
15.32	15.32	900	
15.35	15.35	900	

Start Km	End Km	Pipes	Culvert
16.01	16.01	(2×600)	
16.2	16.2	(2×600)	
16.9	16.9	600	

R63 SECTION 7

R63-7 Pipes and Culverts	
Legend for Pipes	Legend for Culverts
450	600x450
600	900x600
900	900x450

Start Km	End Km	Pipes	Culvert
40.6	40.6	600	
41.16	41.16		2× (2100×1200)
41.25	41.25		2× (600×450)
41.58	41.58	2×900	
41.67	41.67	2×600	
41.76	41.76	2×600	
42.45	42.45	2×750	
42.61	42.61	3×750	
42.7	42.7	600	
42.8	42.8	600	
42.87	42.87	3×750	
42.92	42.92		1200×450
43.24	43.24		2× (900×450)
43.47	43.47	600	
43.62	43.62		600×450
44.0	44.0	2×600	
44.4	44.4		600×450
44.5	44.5	600	
44.6	44.6	600	
44.67	44.67		9× (1200×450)
44.82	44.82	600	
45.03	45.03		5× (1800×900)

Start Km	End Km	Pipes	Culvert
45.43	45.43		4× (1800×900)
45.63	45.63		5× (1800×900)
45.9	45.9	4×600	
46.07	46.07		1800×900
46.33	46.33	3×600	
46.44	46.44		2× (1800×900)
46.52	46.52		2× (2400×600)
44.55	44.55		2×2400×600)
44.58	44.58		2× (2400×600)
44.62	44.62		2× (2400×600)
44.67	44.67		2× (1800×600)
47.5	47.5		600×450
47.9	47.9		600×450
48.13	48.13		600×450
48.3	48.3		600×450
48.7	48.7	2×750	
48.72	48.72	2×750	
48.74	48.74	2×750	
48.76	48.76	3×750	
48.9	48.9		1200×450
48.97	48.97	750	
49.0	49.0		1200×450
49.04	49.04		1200×450
49.06	49.06	750	
49.12	49.12	2×750	
49.13	49.13	3×750	
49.17	49.17	3×750	
49.18	49.18	3×750	
49.21	49.21	3×750	

Start Km	End Km	Pipes	Culvert
49.24	49.24	3×750	
49.29	49.29	3×750	
49.32	49.32	3×750	
49.37	49.37	750	
49.39	49.39	3×750	
49.43	49.43		3× (1800×900)
49.46	49.46	3×750	
49.49	49.49	3×750	
49.52	49.52	3×750	
49.55	49.55	3×750	
49.58	49.58	3×750	
49.6	49.6		3× (1200×450)
49.7	49.7		1200×450
49.85	49.85	2×600	
49.87	49.87	2×600	
49.89	49.89	3×750	
49.93	49.93		2× (1800×900)
50.0	50.0		2× (1800×900)
50.05	50.05		2× (1800×900)
50.07	50.07	750	
50.3	50.3	2×750	
50.33	50.33	2×750	
50.56	50.56	600	
50.6	50.6	600	
50.85	50.85	2×750	
50.95	50.95		4× (1800×900)
50.98	50.98		3× (1800×900)
51.7	51.7	600	
51.75	51.75	750	

Start Km	End Km	Pipes	Culvert
51.84	51.84	750	
51.89	51.89	750	
51.97	51.97	750	
52.0	52.0	750	
52.1	52.1	750	
52.14	52.14	750	
52.15	52.15	750	
52.17	52.17	750	
52.25	52.25	600	
52.35	52.35	600	
52.4	52.4	600	
52.42	52.42	600	
52.5	52.5	750	
52.52	52.52	750	
52.55	52.55	750	
52.52.57	52.52.57	750	
52.62	52.62	750	
52.81	52.81		1200×450
52.9	52.9		1200×450
53.10	53.10		2× (1800×900)
53.16	53.16	600	
53.2	53.2		1800×900
53.27	53.27		1200×450
53.29	53.29		1200×450
53.38	53.38		1200×450
53.5	53.5		1200×600
53.7	53.7	600	
53.8	53.8		2400×1500
53.82	53.82		1800×1200
54.0	54.0		600x450

Start Km	End Km	Pipes	Culvert
54.14	54.14		600x450
54.45	54.45		2400×900
54.72	54.72		1200×450
55.38	55.38		1200×450
55.55	55.55		1200×450
55.9	55.9		1500×900
56.0	56.0		1200×600
56.05	56.05		1800×900
56.12	56.12		1200×450
56.2	56.2		1200×450
56.3	56.3		1800×900
56.32	56.32		1200×600
56.35	56.35		1200×600
56.39	56.39	750	
56.5	56.5		1200×450
56.55	56.55		1800×600
56.6	56.6	750	
56.65	56.65		600×450
56.7	56.7		1200×450
56.75	56.75		1800×600
56.78	56.78		1200×450
56.84	56.84	750	
56.88	56.88	750	
56.91	56.91	750	
56.95	56.95		1800×600
56.99	56.99		1800×600
57.02	57.02		1200×600
57.05	57.05		1200×450
57.15	57.15		1200×600
57.17	57.17		1200×600

Start Km	End Km	Pipes	Culvert
57.25	57.25		1800×600
57.39	57.39		600×450
57.42	57.42	2×750	
57.45	57.45	750	
57.55	57.55	750	
57.58	57.58	750	
57.59	57.59		1200×450
57.6	57.6		1200×450
57.61	57.61		600×450
57.62	57.62		600×450
58.01	58.01	750	
58.07	58.07		1200×600
58.09	58.09	750	
58.12	58.12		600×450
58.15	58.15	600	
58.18	58.18		1800×600
58.19	58.19	600	
58.2	58.2	600	
58.24	58.24	600	
58.43	58.43	750	
58.47	58.47	750	
58.5	58.5	600	
58.52	58.52	600	
58.58	58.58	600	
58.59	58.59	2×600	
58.6	58.6	2×600	
58.62	58.62	750	
58.64	58.64	600	
58.66	58.66	600	
58.72	58.72	600	

Start Km	End Km	Pipes	Culvert
58.76	58.76	600	
58.84	58.84	750	
58.88	58.88	750	
58.95	58.95	750	
59.02	59.02	600	
59.04	59.04	600	
59.09	59.09	600	
59.14	59.14	600	
59.18	59.18	600	
59.21	59.21	600	
59.24	59.24	600	
59.28	59.28	600	
59.33	59.33	600	
59.36	59.36	600	
59.39	59.39	600	
59.5	59.5	600	
59.53	59.53	600	
59.57	59.57	600	
59.65	59.65	600	
59.7	59.7	600	
59.73	59.73	600	
59.76	59.76	600	
59.79	59.79		1800×600
59.85	59.85		1800×600
59.88	59.88		1800×600
60.0	60.0		1800×600
60.04	60.04		600×450
60.07	60.07		600×450
60.01	60.01		600×450
60.15	60.15		1800×600

Start Km	End Km	Pipes	Culvert
60.2	60.2		2× (2100×600)
60.22	60.22		1200×450
60.24	60.24		1200×450
60.27	60.27		1200×450
60.29	60.29		1200×450
60.58	60.58		600×450
60.73	60.73		600×450
60.93	60.93	2×600	
61.1	61.1		600×450
61.22	61.22		2× (1200×450)
61.38	61.38		600×450
61.5	61.5		600×450
61.7	61.7		600×450
62.05	62.05		1200×1500
62.36	62.36	600	
62.5	62.5		2× (2400×1500)
62.7	62.7		600×450
62.8	62.8		600×450
62.88	62.88	600	
62.95	62.95		600×450
63.35	63.35	600	
63.5	63.5	600	
63.62	63.62	600	
63.78	63.78	600	
63.95	63.95	600	
64.2	64.2	600	
64.22	64.22	600	
64.39	64.39	600	
64.55	64.55	600	
66.75	66.75	600	

Start Km	End Km	Pipes	Culvert
65.2	65.2	600	
65.44	65.44	600	
65.49	65.49	600	
65.8	65.8		4500x1200
66.5	66.5		600×450
66.62	66.62		600×450
66.7	66.7		600×450
66.75	66.75		600×450
66.82	66.82		600×450
66.86	66.86		600×450
66.97	66.97	750	
66.99	66.99	2×600	
67.07	67.07		3× (600×450)
67.13	67.13	2×600	
67.15	67.15	2×600	
67.18	67.18	2×600	
67.2	67.2	2×600	
67.42	67.42		600×450
67.45	67.45		600×450
67.47	67.47		2× (600×450)
67.5	67.5		600×450
67.53	67.53		600×450
67.58	67.58		600×450
67.75	67.75		600×450
67.85	67.85		600×450
68.4	68.4		600×450
68.5	68.5		600×450
68.6	68.6		600×450
68.9	68.9		600×450
68.81	68.81		600×450

Start Km	End Km	Pipes	Culvert
69.8	69.8		600×450
70.46	70.46		600×450
70.58	70.58		600×450
70.64	70.64		600×450
70.7	70.7	600	
70.85	70.85	600	
70.95	70.95	600	
71.9	71.9	600	
71.95	71.95	600	
73.25	73.25	600	
73.38	73.38	600	
73.05	73.05	600	
74.15	74.15	600	
88.2	88.2	600	
88.5	88.5	600	
88.7	88.7	600	
88.89	88.89	600	
74.05	74.05		1200×450
74.15	74.15		2× (600×450)
74.35	74.35		2× (1800×1200)
74.84	74.84		3× (1800×1200)
75.65	75.65	2×600	
76.1	76.1		2×4600×1500
76.2	76.2		1800×900
76.3	76.3		1800×900
76.55	76.55		3000×900
77.4	77.4	600	
78.5	78.5	2×600	
78.62	78.62	2×600	
79.0	79.0	2×600	

Start Km	End Km	Pipes	Culvert
79.15	79.15	2×600	
79.38	79.38	3×600	
79.65	79.65	600	
80.3	80.3		4800×1200
80.78	80.78		3000×1200
82.25	82.25		3000×1200
82.45	82.45		3000×1200
82.64	82.64		3000×1200
82.8	82.8		3000×1200
83.2	83.2	600	
83.25	83.25		3000×1200
83.35	83.35		3000×1200
83.37	83.37		2× (3000×1200)
83.8	83.8		3× (5000×1200)
83.92	83.92		3000×1200
83.95	83.95		2× (4000×1200)
84.02	84.02		3000×1500
84.3	84.3	600	
84.4	84.4	600	
84.6	84.6		1500×1200
84.9	84.9		1500×1200
85.1	85.1		3600×1500
85.55	85.55		3600×1500
85.9	85.9		4200×1500
86.18	86.18	600	
86.5	86.5		4200×900
86.65	86.65	600	
83.95	83.95	600	
87.58	87.58	600	

R63 SECTION 8

R63-8 Pipes and Culverts	
Legend for Pipes	Legend for Culverts
450	600x450
600	900x600
900	900x450

Start Km	End Km	Pipes	Culvert
2.95	2.95		(3000×1500)
3.3	3.3		(1500×600)
4.27	4.27		(3000×900)
5.2	5.2		(900×450)
5.77	5.77		(1500×600)
6.45	6.45	600	
9.45	9.45	600	
9.65	9.65	600	
9.9	9.9	600	
10.42	10.42		(1200×450)
10.6	10.6	600	
10.65	10.65	600	
10.8	10.8	600	
10.9	10.9	600	
11.15	11.15		(1200×450)
11.4	11.4	(2×600)	
11.45	11.45	2×600	
11.5	11.5		(1500×900)
11.52	11.52	(2×600)	
11.67	11.67		2× (1800×1200)
11.85	11.85	(2×600)	
11.89	11.89		(1500×900)

Start Km	End Km	Pipes	Culvert
12.9	12.9		(1800×1200)
13.7	13.7		
14.02	14.02	600	
14.16	14.16	600	
15.27	15.27		(1800×900)
15.72	15.72	2×600	
15.87	15.87	2×600	
16.0	16.0	600	
16.12	16.12	600	
16.22	16.22	2×600	
16.36	16.36	2×600	
16.53	16.53	600	
16.9	16.9	600	
17.14	17.14	600	
17.5	17.5	600	
17.7	17.7	600	
17.93	17.93	600	
18.4	18.4		
18.46	18.46		(1800×900)
18.62	18.62		(1800×900)
18.8	18.8		(1800×900)
18.9	18.9		(1800×900)
19.07	19.07	600	
19.19	19.19	600	
19.44	19.44	600	
19.65	19.65	600	
19.84	19.84	600	
20.05	20.05	600	