THE SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED

CONTRACT SANRAL X.003-051-2019/1

FOR

THE ROUTINE ROAD MAINTENANCE OF NATIONAL ROUTES R335 SECTION 1 KM 30.12 TO KM 49.48, R336 SECTION 1 KM 0.0 TO KM 48.05, R342 SECTION 1 KM 0.0 TO KM 24.53 AND R75 SECTION 2 KM 25.93 TO SECTION 3 KM 49.42

GENERAL ROUTINE ROAD MAINTENANCE INFORMATION

APRIL 2026

ROAD CONDITION REPORT

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NAME OF CONTRACTOR: QTC CIVILS (PTY) LTD

SANRAL
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD
BUILDING SOUTH AFRICA THROUGH BETTER ROADS

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GENERAL ROUTINE ROAD MAINTENANCE INFORMATION

APRIL 2026 ROAD CONDITION REPORT

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DISCLAIMER

This Report has been compiled for the South African National Roads Agency SOC Limited (SANRAL) for use on its Routine Road Maintenance (RRM) Contracts on the National Road Network.

The information provided in the Report is based on available information which has been collected. The South African National Roads Agency SOC Limited takes no responsibility for the accuracy or adequacy of any item, which is offered in good faith. The responsibility remains with the tenderer to visit the project route to familiarize themselves with route condition and environment.

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1. INTRODUCTION

The intention of this report is to provide information to SANRAL on the condition of the roads in this Routine Road Maintenance (RRM) Contract. The information given is based on actual maintenance data and experience gained on maintenance done over the past four (4) years.

This information is intended to assist SANRAL and Engineers in managing the resources to ensure the effective maintenance of the route. It will be updated regularly to access the change in the condition of the road.

2. SCOPE

The primary aim of this report is to provide general and historic RRM data to the Client.

The topics covered falls under the following broad categories:

- General information
- General as-built information
- Traffic information
- Road furniture information
- Historic RRM information
- Current pavement condition information
- Proposed future rehabilitation projects
- Sub-contractors involved with RRM

3. DETAIL DESCRIPTION

3.1. General

3.1.1. Locality and Site

The locality of the Site is indicated on the Locality Plan in Annexure A and the Route Sections are indicated in Table 3.1.2 followed by a detailed description of sections. The Site Office was in Kirkwood.

The term “Site” as defined in the FIDIC Conditions of Contract for Construction, 1999, was comprised of the road reserves of existing National Routes R335 Section 1 KM 30.12 to KM 49.48, R336 Section 1 KM 0.0 to KM 48.05, R342 Section 1 KM 0.0 to KM 24.53 and R75 Section 2 KM 25.93 to Section 3 KM 49.42. The total distance is approximately 207.43 km.

This included all on-ramps, off-ramps, overpasses, underpasses and intersecting Provincial and Municipal roads within the National Road reserves up to the limits of the South African National Roads Agency’s responsibility.

The “Site” also included all road signs within 500 metres of an intersection or interchange, which form part of the road signs layout for the National Road.

The “Site” also included land not provided by the Employer, where equipment and / or materials for use in the permanent works of the Contract was stored and / or stockpiled with the proviso that the land selected for this purpose was approved by the Engineer. The Contractor made his own arrangements for the use of such land and obtained written approval from the owner(s) concerned.

3.1.2. Description of Route Sections

Table 3.1.2: Route Sections

ROUTE	SECTION	FROM KM	TO KM	LENGTH (KM)
SUNDAYS RIVER VALLEY LOCAL MUNICIPALITY				
R335	1	30.12	49.48	19.36
R336	1	0.0	48.05	48.05
R342	1	0.0	24.53	24.53
R75	2	25.93	88.99	63.06
DR BEYERS NAUDE LOCAL MUNICIPALITY				
R75	2	88.99	92.0	3.01
R75	3	0.0	49.42	49.42
TOTAL ROUTE LENGTH (KM)			207.43	

(a) The route description of National Route R335 Section 1:

Starts at km 30.12 and ends at km 49.48

- Section Start : NMBM Boundary
- Section End : Zuurberg Intersection
- Type of Carriageway : Single
- Median Description : No Median
- Surfacing : Bituminous
- Interchanges : 0
- Intersections : 7
- Accesses : 54
- Rest Areas : 0
- Road Reserve Width : 25 m to 30 m
- Shoulders : Gravel
- Terrain : Flat

(b) The route description of National Route R336 Section 1:

Starts at km 0.0 and ends at km 48.05

- Section Start : R75/2 Intersection
- Section End : R335/1 Intersection
- Type of Carriageway : Single
- Median Description : No Median
- Surfacing : Bituminous
- Interchanges : 0
- Intersections : 19
- Accesses : 95
- Rest Areas : 0
- Road Reserve Width : 25 m to 30 m

- Shoulders : Surfaced
- Terrain : Flat

(c) The route description of National Route R342 Section 1:

Starts at km 0.0 and ends at km 24.53

- Section Start : Zuurberg Intersection
- Section End : N10/1 (Paterson)
- Type of Carriageway : Single
- Median Description : No Median
- Surfacing : Bituminous
- Interchanges : 0
- Intersections : 2
- Accesses : 24
- Rest Areas : 0
- Road Reserve Width : 30 m
- Shoulders : Gravel
- Terrain : Flat

(d) The route description of National Route R75 Section 2:

Starts at km 25.93 and ends at km 92.0

- Section Start : NMBM Boundary
- Section End : Wolwefontein
- Type of Carriageway : Single
- Median Description : No Median
- Surfacing : Bituminous
- Interchanges : 0
- Intersections : 11
- Accesses : 53
- Rest Areas : 5
- Road Reserve Width : 32 m to 43 m
- Shoulders : Gravel
- Terrain : Flat

(e) The route description of National Route R75 Section 3:

Starts at km 0.0 and ends at km 49.42

- Section Start : Wolwefontein
- Section End : Jansenville
- Type of Carriageway : Single
- Median Description : No Median
- Surfacing : Bituminous
- Interchanges : 0
- Intersections : 8
- Accesses : 40
- Rest Areas : 3

- Road Reserve Width : 25 m
- Shoulders : Gravel
- Terrain : Flat

3.1.3. Urban and Rural Sections included in Route Sections

Urban sections as identified in Table 3.1.3 are considered sections which required more frequent maintenance activities such as cleaning and removal of litter and debris and activities associated with pedestrian and road user safety by virtue of higher pedestrian and road user volumes over these sections.

Table 3.1.3: Urban Sections

ROUTE	TOWN	TYPE	SECTION AND KILOMETRE				LENGTH (km)
			START		END		
			SECTION	KM	SECTION	KM	
R75	N/A	Rural	2	25.93	2	88.99	63.06
R75	N/A	Rural	3	0.00	3	49.00	49.00
R75	Jansenville	Urban	3	49.00	3	49.42	0.42
R335	N/A	Rural	1	30.12	1	37.00	6.88
R335	Addo	Urban	1	37.00	1	39.25	2.25
R335	N/A	Rural	1	39.25	1	49.48	10.23
R336	N/A	Rural	1	0.00	1	15.60	15.60
R336	Kirkwood	Urban	1	15.60	1	18.40	2.80
R336	N/A	Rural	1	18.40	1	21.90	3.50
R336	Sunland	Rural	1	21.90	1	22.50	0.60
R336	N/A	Rural	1	22.50	1	48.05	25.55
R342	N/A	Rural	1	0.00	1	24.53	24.53
						TOTAL	204.42

3.1.4. Cross-sectional Properties

The R75 Sections 2 to 3, R335 Section1, R336 Section1 and R342 Section) are bituminous surfaced single carriageway roads with the following cross-sectional properties:

Table 3.1.4: Cross-sectional Prperties

ROUTE / SECTION	CARRIAGEWAY SINGLE / DUAL (NO OF LANES) *	KILOMETRE		LENGTH (km)	WIDTHS (m) **				
		START	END		SURFACED LANE	SURFACED SHOULDER	TOTAL SURFACED WIDTH	GRAVEL SHOULDER	ROAD RESERVE (APPROXIMATE/VARIES)
R75/2	Single (1)	25.93	92.00	66.07	3.40	-	6.80	-	30
TOTAL				**66.07**					
R75/3	Single (1)	0.00	48.80	48.80	3.20	-	6.80	-	30
	Single (1)	48.80	49.42	0.62	3.40	1.50	9.40	-	30
TOTAL				**49.42**					
R335/1	Single (1)	30.12	32.00	1.88	3.42	1.20	9.30	-	25
	Single (1)	32.00	38.80	6.80	3.40	-	6.80	-	25
	Single (1)	38.80	49.05	10.25	3.05	-	6.10	-	25
	Single (1)	49.05	49.48	0.43	3.30	1.25	9.10	-	25
TOTAL				**19.36**					
R336/1	Single (1)	0.00	17.30	17.30	3.60	-	7.20	-	25
	Single (1)	17.30	30.60	13.30	3.30	0.50	7.60	-	25
	Single (1)	30.60	30.80	0.20	3.50	1.40	9.80	-	25
	Single (1)	30.80	34.10	3.30	3.20	-	6.40	-	25
	Single (1)	34.10	48.05	13.95	3.10	1.50	9.30	-	25
TOTAL				**48.05**					
R342/1	Single (1)	0.00	9.60	9.60	3.50	1.10	9.60	-	25
	Single (1)	9.60	24.53	14.93	3.85	0.50	8.70	-	25
TOTAL				**24.53**					

** The number of lanes is in one direction*

*** All widths are approximate and varies in places*

3.1.5. Relevant Areas

Table 3.1.5: Relevant Areas

ROUTE	SECTION	KILOMETRE			AREAS	
		START	END	LENGTH (KM)	ROAD PAVEMENT AREA* (m^2)	ROAD RESERVE AREA* (ha)
R75	2	25.93	92.00	66.07	449 276	198.21
R75	3	0.00	49.42	49.42	789 868	148.26
R335	1	30.12	49.48	19.36	130 162	58.08
R336	1	0.00	48.05	48.05	378 455	144.15
R342	1	0.00	24.53	24.53	222 051	73.59
				TOTAL	1 969 812	622.29

** Areas excluding interchanges*

3.1.6. Local Municipalities

Table 3.1.6: Local Municipalities

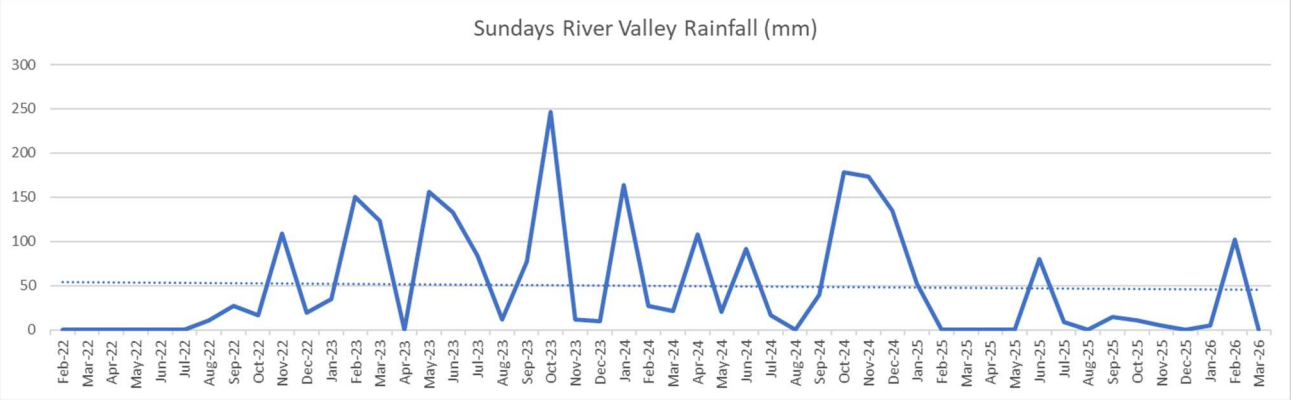
NATIONAL ROUTE					
ROUTE	SECTION	MUNICIPAL AREA	KILOMETRE		LENGTH (km)
			START	END	
R75	2	Sundays River Valley	25.93	88.99	63.06
R75	2	Beyers Naude	88.99	92.00	3.01
R75	3	Beyers Naude	0.00	49.42	49.42
R335	1	Sundays River Valley	30.12	49.48	19.36
R336	1	Sundays River Valley	0.00	48.05	48.05
R342	1	Sundays River Valley	0.00	24.53	24.53
				TOTAL	207.43

3.1.7. Climate

The weather over the past four years could be classified as dry at the start of the Contract and significantly getting wetter towards December 2024. A drought period followed with flash floods in June 2025 and February 2026.

Rainfall in the region is experienced during the spring and summer months. Graph 3.1.7(a) indicates the rainfall in mm during the Contract period for Sundays River Valley.

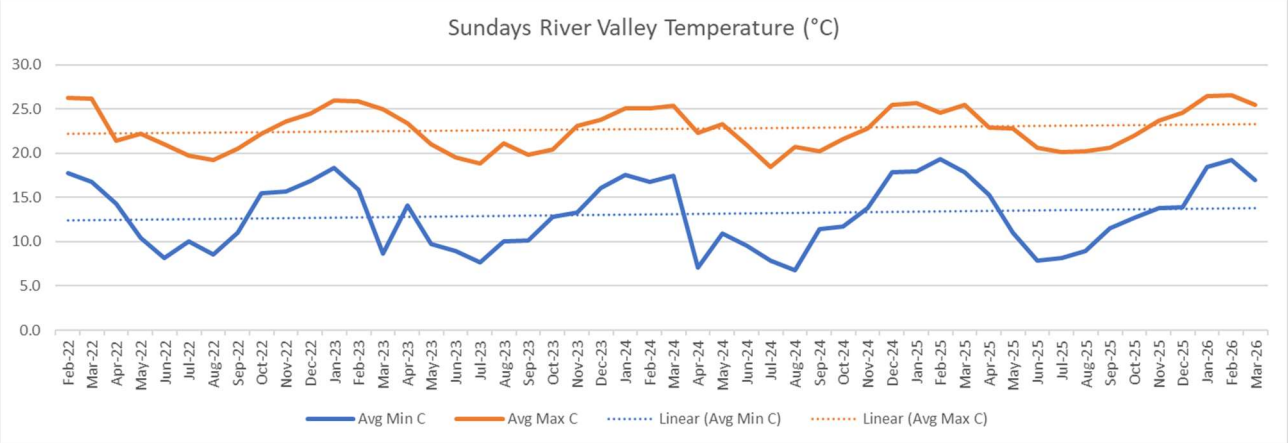
Graph 3.1.7(a): Sundays River Valley Rainfall



Graph 3.1.7(b) indicates the average minimum and maximum temperature in °C during the Contract period for Sundays River Valley.

The trendlines indicate a moderate temperature for the Sundays River Valley during the Contract period.

Graph 3.1.7(b): Sundays River Valley Temperature



3.1.8. Material Sources

Sources of materials / products identified over the last few years are provided below. The contact details are for information purposes only as some may have changed over the years.

MATERIAL / PRODUCTS	SUPPLIERS	TELEPHONE NO's
Aggregate	Afrimat Aggregates CC Glendore Sand & Stone Lafarge Aggregates & Ready Mix Metro Quarries SupaCrush (Pty) Ltd	041 398 9300 041 366 1917 041 395 7700 041 372 2232 041 406 7900
Asphalt	Burwana Asphalt Coldmix Much Asphalt	041 466 0626 041 364 1116
Concrete	Concrete 4 U Madiba Bay Concrete Scribante Concrete (Pty) Ltd	041 501 5400 041 481 1655 041 406 9500
Drain Grids (Polymer)	FHB Contracting Services CC H & H Industrial Products (Pty) Ltd K & L Building Contractors Makwande u Khanyiselo Enterprises (Pty) Ltd	041 481 6782 079 599 7427 084 845 7352 041 368 5834

MATERIAL / PRODUCTS	SUPPLIERS	TELEPHONE NO's
	Maverick Trading 59 CC	079 982 3580
Fencing	BKB Cape Gate Eastcape Cape Wire (Pty) Ltd Die Humansdorpse Ko-Op Somila Kunye (Pty) Ltd Stutt Poles CC Vuka Steel	084 712 7741 041 486 2538 041 451 2903 042 295 1082 041 010 0006 041 486 2866
Gabion Baskets	Cape Wire (Pty) Ltd P&P Plastics	041 451 2903
Grass Cutting Equipment	All Cut Power Products Game Makro Mowerama Turf Master	041 581 1184 086 060 0999 041 365 2138 041 581 8443
Guardrails	Andrew Mentis (Pty) Ltd Armco Superlite (Pty) Ltd Blue Key Road Safety Technologies (Pty) Ltd Bolt and Engineering Distributors (Pty) Ltd Hei Way Supply (Pty) Ltd Heintzmann Lillie's Sales & Services OBO Kunikwe Amandla (Pty) Ltd	011 255 3200 041 486 3674 011 954 5950 011 824 7500 011 762 2226 051 430 7287 011 378 3700
Herbicide	Herbcon Services Turf Master	041 487 2200 041 581 8443
Road Traffic Signs	EC Road Signs CC Hei Way Supply (Pty) Ltd Philock Sign Industries	041 775 1062 011 762 2226 041 486 2904
Wire Rope	Advadox (Pty) Ltd Armco RSP Bolt and Engineering Distributors (Pty) Ltd G Twaddle & H Engelbrecht (Pty) Ltd OBO Kunikwe Amandla (Pty) Ltd	041 365 5909 041 486 3674 011 824 7500 011 626 2936 011 378 3700

3.1.9. Rivers and Bridges

(a) R75 Section 2

KM	NAME	BRIDGE NO.	GENERAL CONDITION	DESCRIPTION
30.22	Bezuidenhouts R no1	B2740	Fair. Concrete balustrades painted	Concrete Structure
30.76	Bezuidenhouts R no1	B2741	Fair. Concrete balustrades painted	Concrete Structure
31.03	Bezuidenhouts R no1	B2742	Fair. Concrete balustrades painted	Concrete Structure
40.88	Steenboksvlakte	B2743	Fair. Concrete balustrades painted	Concrete Structure
47.38	Holbak River	B2744	Fair. Concrete balustrades painted	Concrete Structure
55.36	Kariega River	B2745	Fair. Concrete balustrades painted	Concrete Structure
56.73	Glenconner River	B2746	Fair. Concrete balustrades painted	Concrete Structure
59.41	Rautenbach	B2746	Fair. Concrete balustrades painted	Concrete Structure

KM	NAME	BRIDGE NO.	GENERAL CONDITION	DESCRIPTION
60.86	Paardepoort stream	B1797	Fair. Concrete balustrades painted	Concrete Structure

(b) R75 Section 3

KM	NAME	BRIDGE NO.	GENERAL CONDITION	DESCRIPTION
0.29	Wolwefontein	B2752	Fair. Concrete balustrades painted	Concrete Structure
13.77	Blaauwkrantz Stream	B2753	Fair. Concrete balustrades painted	Concrete Structure
23.82	Brak River	B2754	Fair. Concrete balustrades painted	Concrete Structure
25.51	Driekops River	B2755	Fair. Concrete balustrades painted	Concrete Structure
32.15	Glendale no1	B2756	Fair. Concrete balustrades painted	Concrete Structure
34.03	Glendale no2	B2757	Fair. Concrete balustrades painted	Concrete Structure
37.22	Rietgatdoring stream	B2759	Fair. Concrete balustrades painted	Concrete Structure
44.20	Noorsdoornplaas Str	B2560	Fair. Concrete balustrades painted	Concrete Structure
45.27	Delports River	B2561	Fair. Concrete balustrades painted	Concrete Structure
49.08	Sundays river	B4648	Fair. Concrete balustrades painted	Concrete Structure

(c) R336 Section 1

KM	NAME	BRIDGE NO.	GENERAL CONDITION	DESCRIPTION
0.25	Road-over-Rail	-	Good	Concrete Structure
1.50	Kariega River	4701	Fair. No copings on concrete balustrades for both sides over the full length	Concrete Structure
7.50	Sundays River No. 1	4699	Fair. No copings on concrete balustrades for both sides over the full length	Concrete Structure
7.78	Irrigation Canal No. 1	4700	Fair	Concrete Structure
10.01	Irrigation Canal No. 2	4002	Fair	Concrete Structure
20.50	Sundays River No.2	4901	Fair	Concrete Structure
30.81	Bezuidenhouts River	-	Fair. Concrete balustrades are heavily damaged and unsafe. Currently repaired with wire mesh. Major repair/upgrade required	Concrete Structure
38.50	Sundays River No. 3	-	Fair. Several concrete balustrades are heavily damaged and unsafe. Currently repaired with wire mesh. Major repair/upgrade required	Concrete Structure
43.50	Coerney River	-	Fair / Functional. Rusted guardrails to be replaced. Painting recommended	Concrete Structure



Bezuidenhouts River Bridge (currently under reconstruction)



Sundays River Bridge No. 3 (currently under reconstruction)

(d) R342 Section 1

KM	NAME	BRIDGE NO.	GENERAL CONDITION	DESCRIPTION
20.48	Road-over-Rail	-	Fair. Safety around the bridge should improve. as abutting embankments exceed 4m height and there are no guard rails on all approaches.	Concrete Structure



Road-over-rail Bridge overlooking roadway



Road-over-rail Bridge overlooking railway tracks (guard rails will be erected under upgrade project)

(e) R335 Section 1

KM	NAME	BRIDGE NO.	GENERAL CONDITION	DESCRIPTION
34.40	Sundays River	-	Fair. Several concrete balustrades are spalling. Major repairs are required	Concrete Structure



Sundays River Bridge overlooking roadway (currently under reconstruction)



Sundays River Bridge with damaged balustrades (currently under reconstruction)

3.2. Intersections

There are no major Interchanges present along the routes as it traverses primarily through a rural environment. The below tables list the main intersections along the routes per section. Also refer to Annexure C for a detailed list of intersections.

(a) R75 Section 2

KM	INTERSECTING ROAD NO. / ROUTE NO. / NAME	CLASSIFICATION: MAJOR OR MINOR INTERSECTION	INTERSECTING DIRECTION	STANDARD OF INTERSECTING ROAD
26.55	DR01976	Minor	Neg	Gravel
31.56	MR00472	Major	Neg	Surfaced
45.87	MR00471	Major	Neg	Surfaced
53.48	DR01976	Minor	Pos/Neg	Gravel
57.52	DR01984	Minor	Pos/Neg	Gravel
58.55	OP170	Minor	Neg	Gravel
68.80	MR00413	Major	Neg	Gravel
76.61	-	Minor	Neg	Gravel
85.90	DR01849	Minor	Pos/Neg	Gravel
86.88	DR03292	Major	Pos	Gravel
92.43	TR04302	Major	Pos	Surfaced

(b) R75 Section 3

KM	INTERSECTING ROAD NO. / ROUTE NO. / NAME	CLASSIFICATION: MAJOR OR MINOR INTERSECTION	INTERSECTING DIRECTION	STANDARD OF INTERSECTING ROAD
0.00	TR04302	Major	Pos	Surfaced

9.70	DR01866	Minor	Pos	Gravel
10.96	DR01871	Minor	Neg	Gravel
23.24	MR00412	Major	Neg	Gravel
31.98	DR01879	Minor	Neg	Gravel
48.38	DR01870	Minor	Pos	Gravel
48.90	R337	Major	Pos	Surfaced
49.42	Main Street	Major	Pos/Neg	Surfaced

(c) R335 Section 1

KM	INTERSECTING ROAD NO. / ROUTE NO. / NAME	CLASSIFICATION: MAJOR OR MINOR INTERSECTION	INTERSECTING DIRECTION	STANDARD OF INTERSECTING ROAD
34.14	MN50595	Minor	Neg	Surfaced
36.02	Unknown	Minor	Pos/Neg	Gravel
37.74	Potgieter Crescent	Minor	Pos	Surfaced
38.20	Unknown	Minor	Pos/Neg	Surfaced
39.52	R336	Major	Pos	Surfaced
40.06	Unknown	Minor	Pos	Gravel
42.21	Farm Road	Minor	Pos/Neg	Gravel

(d) R336 Section 1

KM	INTERSECTING ROAD NO. / ROUTE NO. / NAME	CLASSIFICATION: MAJOR OR MINOR INTERSECTION	INTERSECTING DIRECTION	STANDARD OF INTERSECTING ROAD
6.56	MN50265 & DR02017	Minor	Pos/Neg	Surfaced
16.64	Whytesway	Minor	Pos/Neg	Surfaced
16.75	Searle Street	Minor	Pos/Neg	Surfaced
16.86	Markstreet	Minor	Pos/Neg	Surfaced
16.93	Church Street	Minor	Pos	Surfaced
16.98	Middle Street	Minor	Neg	Surfaced
17.03	Voortrekker Street	Minor	Pos	Surfaced
17.10	John Street	Minor	Pos/Neg	Surfaced
17.21	Harrod Street	Minor	Pos/Neg	Surfaced
17.32	Sonop Street	Minor	Pos/Neg	Surfaced
17.63	Shand Street	Minor	Neg	Surfaced
17.88	School Crescent	Minor	Neg	Surfaced

17.94	Unknown	Minor	Pos	Gravel
18.06	School Crescent	Minor	Neg	Surfaced
18.15	Mimosa Street	Minor	Neg	Surfaced
20.63	MR00472	Major	Neg	Surfaced
38.78	MN50603 & MR00470	Minor	Pos/Neg	+ Gravel / - Surfaced
39.76	DR01983	Minor	Pos/Neg	+ Surfaced / - Gravel
48.07	R335	Major	Pos/Neg	Surfaced

(e) R342 Section 1

KM	INTERSECTING ROAD NO. / ROUTE NO. / NAME	CLASSIFICATION: MAJOR OR MINOR INTERSECTION	INTERSECTING DIRECTION	STANDARD OF INTERSECTING ROAD
0.00	+ R335 / - Unknown	Minor	Pos/Neg	Surfaced
24.53	N10	Major	Pos/Neg	Surfaced

3.3. Accesses

Various access roads to farms and other facilities are present along the routes, with the majority being minor gravel roads. The total number of accesses are tabled below. Also refer to Annexure C for a detailed list of accesses.

ROUTE – SECTION	NUMBER OF ACCESSES		
	POSITIVE SIDE	NEGATIVE SIDE	TOTAL
R75/2	28	25	53
R75/3	17	23	40
R335/1	25	29	54
R336/1	52	43	95
R342/1	10	14	24
TOTAL	**132**	**134**	**266**

3.4. Road Furniture

3.4.1. Side Drains

(a) R75 Section 2

The route is adjoined by earth drains. All earth drains were reinstated during the contract.

(b) R75 Section 3

The route is adjoined by earth drains. All earth drains were reinstated during the contract.

(c) R335 Section 1

The majority of the route is adjoined by earth drains. The table below indicates existing concrete drains on the route. The current upgrade project is installing new concrete drains.

START KM	END KM	LENGTH (m)	DIRECTION	TYPE
30.74	31.12	380	Neg	Concrete V-drain
31.23	31.43	200	Neg	Concrete V-drain
31.76	31.82	30	Neg	Concrete V-drain

(d) R336 Section 1

The route is adjoined by earth drains. The current upgrade project is installing new concrete drains.

(e) R342 Section 1

The route is adjoined by earth drains. The current upgrade project is installing new concrete drains.

3.4.2. Guardrails

The guardrails are generally in a good to fair condition. Realignment was done except at bridge approaches. These must be done to the new SANRAL specifications.

Also refer to Annexure E.

Guardrail reflectors and approach signage (danger plates, W401/W402) are mostly present on all sections, and are to be monitored on a monthly basis and replaced as required.

The tables below indicate the visual assessment on the respective sections.

(a) R75 Section 2

Start km	End km	Length (m)	Direction	Terminal: Buried, Bullnose or End Wing		Danger Plate	
				Approach	Departure	Pos	Neg
30.1	30.2	100	Neg	Buried	Connected to Bridge	-	Y
30.11	30.2	90	Pos	Buried	Connected to Bridge	Y	-
30.24	30.33	90	Neg	Connected to Bridge	Buried	-	Y
30.24	30.32	80	Pos	Connected to Bridge	Buried	Y	-
30.65	30.74	90	Pos/Neg	Buried	Connected to Bridge	Y	Y
30.78	30.87	90	Pos/Neg	Connected to Bridge	Buried	Y	Y
30.94	31.01	70	Pos/Neg	Buried	Connected to Bridge	Y	Y
31.05	31.14	90	Neg	Connected to Bridge	Buried	-	Y
31.05	31.13	80	Pos	Connected to Bridge	Buried	Y	
47.27	47.36	90	Pos/Neg	Buried	Connected to Bridge	Y	Y
47.4	47.49	90	Pos/Neg	Connected to Bridge	Buried	Y	Y
55.22	55.31	90	Pos/Neg	Buried	Connected to Bridge	Y	Y
55.42	55.51	90	Neg	Connected to Bridge	Buried	-	Y
55.42	55.52	100	Pos	Connected to Bridge	Buried	Y	-
56.63	56.82	190	Pos/Neg	Buried	Connected to Bridge	Y	Y
59.39	59.44	50	Pos/Neg	Connected to Bridge	Buried	Y	Y
60.84	60.89	50	Pos/Neg	Buried	Buried	Y	Y
70.48	70.53	50	Pos/Neg	Buried	Buried	Y	Y
82.62	82.73	110	Neg	Buried	Buried	-	Y
83.02	83.11	90	Neg	Buried	Buried	-	Y
84.37	84.58	210	Neg	Buried	Buried	-	Y
89.87	90.1	230	Pos/Neg	Buried	Buried	Y	Y
91.97	92.1	130	Pos/Neg	Buried	Buried	Y	Y

(b) R75 Section 3

Start km	End km	Length (m)	Direction	Terminal: Buried, Bullnose or End Wing		Danger Plate	
				Approach	Departure	Pos	Neg
0.07	0.28	210	Pos/Neg	Buried	Connected to Bridge	Y	Y
0.3	0.32	20	Pos/Neg	Connected to Bridge	Buried	Y	Y
5.78	5.93	150	Pos	Buried	Buried	Y	-
48.89	49.01	120	Pos/Neg	Buried	Buried	Y	Y

(c) R335 Section 1

Start km	End km	Length (m)	Direction	Terminal: Buried, Bullnose or End Wing		Danger Plate	
				Approach	Departure	Pos	Neg
34.3	34.324	24	Pos/Neg	Buried	Connected to Bridge	Y	Y
34.476	34.5	24	Pos/Neg	Connected to Bridge	Buried	N	N
43.15	43.3	150	Pos	Buried	Bullnose	Y	-
Note: GR Height ±400mm							

A short section of new guardrails is recommended along the curve at km32.0 to 32.4 – the fill height exceeds 3m and the embankment slope is roughly 1:1.5. This section is illustrated below and are currently part of the upgrade project.



Curve (left) at fill > 3.0m (with slope ±1:1.5) at km32.0 to 32.4



Side view of Curve & Embankment at km32.0 to 32.4

(d) R336 Section 1

Start km	End km	Length (m)	Direction	Terminal: Buried, Bullnose or End Wing		Danger Plate	
				Approach	Departure	Pos	Neg
0.05	0.59	540	Pos/Neg	Buried	Buried	N	N
1.1	1.40	300	Pos/Neg	Gabion	Gabion	Y	N
1.4	1.61	210	Pos/Neg	Buried	Buried	N	N
3.99	4.01	20	Pos/Neg	Buried	Buried	N	N
5.79	6.15	360	Pos	Gabion		Y	-
7.4	7.75	350	Pos/Neg	Buried	Buried	N	N
7.77	7.79	23	Pos/Neg	Buried	Buried	N	N
10.05	10.07	15	Pos/Neg	No Guardrails	No Guardrails	N	N
19.99	20.50	510	Pos/Neg	Buried	Buried	N	N
24.9	24.96	61	Neg	Buried	Buried	N	N
24.98	25.00	12.7	Neg	Bullnose	Bullnose	N	N
27.82	28.20	380	Pos	Buried	Buried	Y	N
28.1	28.22	120	Neg	Buried	Buried	Y	N
30.38	30.59	210	Neg	Buried	Buried	N	N

Start km	End km	Length (m)	Direction	Terminal: Buried. Bullnose or End Wing		Danger Plate	
				Approach	Departure	Pos	Neg
30.81	30.83	19	Pos	Buried	Connected to Bridge	Y	-
30.85	30.87	19	Pos	Connected to Bridge	Buried	N	-
30.81	30.83	19	Neg	Buried	Connected to Bridge	-	N
30.85	30.87	20	Neg	Connected to Bridge	Buried	-	Y
38.95	38.96	10	Pos	Buried	Connected to Bridge	Y	-
38.98	39.00	20	Pos	Connected to Bridge	Buried	N	-
38.95	38.96	15	Neg	Buried	Connected to Bridge	-	N
38.98	39.00	20	Neg	Connected to Bridge	Buried	-	Y
43.43	43.43	0	Neg	No Guardrails	No Guardrails	Y	-
43.47	43.49	25	Neg	Connected to Bridge	Buried	N	-
43.40	43.43	25	Pos	Buried	Connected to Bridge	-	N
43.47	43.49	25	Pos	Connected to Bridge	Buried	-	N

(e) R342 Section 1

Start km	End km	Length (m)	Direction	Terminal: Buried. Bullnose or End Wing		Danger Plate	
				Approach	Departure	Pos	Neg
2.2	2.3	100	Pos	Bullnose	Bullnose	N	-
2.5	2.65	150	Pos	Bullnose	Bullnose	N	-
2.51	2.65	140	Neg	Bullnose	Bullnose	N	-
2.8	2.9	100	Pos	Bullnose	Bullnose	N	N
2.83	2.9	70	Neg	Bullnose	Bullnose	N	N

A section for new guardrails is recommended for the approach and departure sections at the road-over-rail bridge at km20.48 – it is evident that the fill height exceeds 3m. This is currently being erected by the upgrade project.



Road-over-rail Bridge approach @ km 20.48 (neg. direction)



Road-over-rail Bridge @ km 20.48 overlooking railway tracks

3.4.3. Road Traffic Signs

The existing road traffic signs are considered to be in a fairly good condition. General notes on the overall signage are indicated below in items (a) – (c) and particular notes for the various road sections is addressed in items (d) – (h).

Also refer to Annexure F for the Road Traffic Sign Survey.

The new town names must still be indicated on all direction signs as well as a check on the distances indicated on direction signs.

(a) Regulatory / Warning signs:

Heights of road signs are generally within the prescribed specifications. Distances between intersection signage are according to specification. Signs are mostly facing a three percent offset to prevent glaring at night.

Signage in place or required at culverts (i.e., danger plates, W401/W402) has been recorded in Annexure D (Culvert Survey). Similarly, where danger plates are in place or required in conjunction with guardrails has been indicated under the previous section (3.4.2).

(b) Tourism / Information / Guidance road signs

Most of the tourism sign boards on the route are legal, with few exceptions for tourist businesses or advertising which could not be verified. It was noted that many bridges do not have signage for river names (GL4). It is recommended that all bridges crossing the Sundays River should be indicated – it was noted particularly that some of the bridges for route sections R335 and R336 did not have this signage indicated.

Sections of the R335 and R342 routes do not have sufficient confirmational guidance signs (GD3) to major intersections (e.g., N10, R342 / R335 to Zuurberg, R335 / R336 etc.) or familiar destinations (e.g., Paterson, Addo, Kirkwood etc.) in the direction of travel. It is generally required at 5 to 10km intervals before or after intersections or destinations or at multiples of 5km prior to the nearest intersections or destinations.

The above will be addressed by the various upgrade projects on the routes.

(c) Illegal Traffic signs

Very few illegal traffic signs are along the routes. There is various warehouses, tourism businesses and other developments located along the routes that tend to be the locations where illegal signs are typically installed.

(d) R75 Section 2

Overall, the existing road traffic signs on this section are considered to be in a fairly good condition and are within the prescribed specifications. There are very few signs that are damaged or not within specifications. Furthermore, no illegal signs are observed.

(e) R75 Section 3

The first portion of this section has been subjected to a Special Maintenance Project and completed. Hence, the existing signage are in a fairly good condition and are within the prescribed specifications.

(f) R335 Section 1

In general, there are a lack of signage on this route. The few existing signs were in a fair condition and within specifications.

Generally, the road curves along the route are fairly gentle, with some having major obstructions (e.g. sheer embankments, high/encroaching foliage, significant gradient changes etc.). The curve radii range generally between 60m to 600m. Most curves did not have curve signage (gentle curve, W202/W203 and chevron, W405/W406). In the few cases where it is applied, it is not to the appropriate standard (in terms of advanced warning and spacing).

The above will be addressed by the upgrade project.

(g) R336 Section 1

In general, there is a lack of signage on this route. The few existing signs were in a fair condition and within specifications.

Most of the bridges along route has appropriate signage – however, some does not have danger plates (W401/W402) on the approaches to abutments, where it is required in combination with guardrails.

Generally, the road curves along the route are fairly gentle, with some having major obstructions, with some having major obstructions (e.g. sheer embankments, high/encroaching foliage, significant gradient changes etc.). The curve radii range generally between 60m to 600m. The curves from ±km20.0 onwards do not have curve signage (gentle curve, W202/W203 and chevron, W405/W406).

The above will be addressed by the upgrade project.

(h) R342 Section 1

In general, there is a lack of signage on this route. The few existing signs were in a fair condition and within specifications.

The single road-over-rail bridge on this section does not have danger plates (W401/W402) on the approaches to abutments, and in addition no guardrails were installed (which are often required together).

Generally, the road curves along the route are fairly gentle with radii ranging generally between 60m to 600m. The road curves on this section did not have curve signage (gentle curve, W202/W203 and chevron, W405/W406) installed.

The above will be addressed by the upgrade project.

3.4.4. Fencing

The fencing types are categorized as below. The table below provides length of fence in a poor condition or damaged, if any, against the total length of fencing per type per route section.

Route / section	Stock proof (km)	Vermin proof (km)	Game (km)	Razor mesh (km)	Security / Electrified (km)	Bonnox (km)	No Fencing / Not Visible (km)
R75/2	5.0	0.2 / 45.0	0.2 / 42.4	0.0	0.0	3.0 / 31.8	4.4
R75/3	0.0	3.2 / 65.6	12.6	0.0	0.0	9.8	0.0
R336/1	4.1 / 12.6	2.0 / 8.2	3.2 / 34.5	3.0	1.5	2.6	27.6
R342/1	0.0	12.5 / 17.8	0.4	0.0	16.8	1.5	12.6*
R335/1	2.7	3.3 / 4.5	2.3 / 16.1	4.2	5.4	0.0	5.0*
TOTAL	**4.1 / 20.3**	**21.2 / 141.0**	**5.7 / 105.9**	**7.2**	**23.7**	**3.0 / 45.7**	**49.6**

**Fence not visible or missing due to extensive overgrowth/encroachment of vegetation along verges.*

Overall, most of the fences are functional and in a fair to condition. Fencing needs to be monitored regularly due to veldfires for functionality. Isolated sections of damaged fencing are observed, but deemed as minor.

Refer to Annexure G for the *Fencing Survey.*

3.4.5. Road markings

The road markings are generally in a poor state. Various sections require reinstatement of markings where patching and other roadworks occurred. There is also other sections where extensive patching was done, which also requires reinstatement of markings.

Not taking into account the upgrade projects, all routes require road marking as a matter of urgency.

3.4.6. Road studs

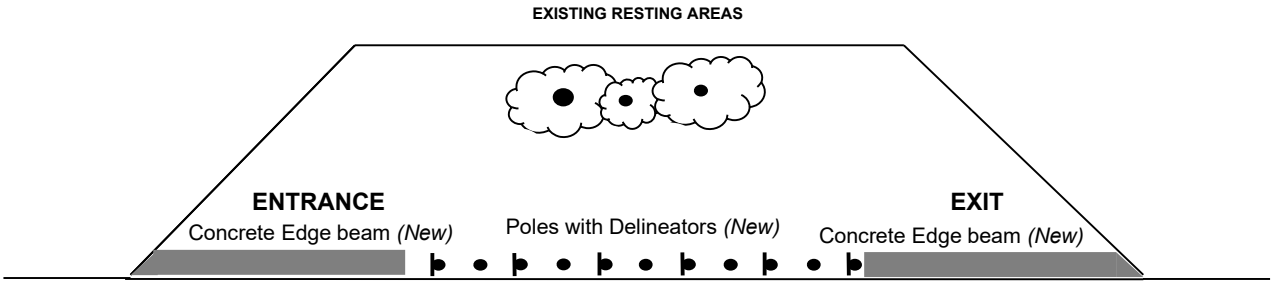
Various damaged and missing studs are observed and should be replaced. Road studs are monitored bi monthly and replaced by the Contractor as a measure to enhance road safety at night. Critical areas focus to be on the top or crest of the vertical alignments and also on curves as well as at barrier lines.

- R75-2: None observed (only between km 34 and km 72)
- R75-3: Road studs are present, but in need of replacement
- R335-1: Present intermittently, mostly damaged and non-functional
- R336-1: Present intermittently, mostly damaged and non-functional
- R342-1: Present intermittently, mostly damaged and non-functional

3.4.7. Rest Areas

ROUTE – SECTION	WITH FURNITURE (NO)	WITH DAMAGED FURNITURE (NO)	TOTAL (NO)
R75/2	2	3	5
R75/3	3	-	3
R336/1	-	-	-
R342/1	-	-	-
R335/1	-	-	-
TOTAL	**5**	**3**	**8**

Concrete Edge Beams need to be constructed at the entrance and exit areas of the Rest Areas to prevent the edge breaks by heavy vehicles. Proposed configuration is indicated below. Refer to Annexure J for Rest Stops Survey.



3.5. Culverts

Culvert structures mainly consist of precast pipe and box / portal sections of varying sizes. Inlet and outlet structures consist of in-situ cast concrete or stone masonry elements and are in a functional condition. Some in / outlet structures reflect cracking and spalling and remedial works will be required. Few culverts do not have in / outlet structures. Refer to Annexure D for culvert details and localities.

SANRAL RRM appointed Contractor / Subcontractors to clean and clear culverts effectively as a monthly performance-based item. Generally, the culverts are clean, but at a limited number with built-up silt must still be cleaned after recent flooding.

ROUTE – SECTION	CULVERT TYPE				TOTAL (NO)
	PIPE (NO.)		BOX (NO.)		
	MAJOR*	MINOR	MAJOR*	MINOR	
R75/2	-	66	7	52	125
R75/3	-	175	10	4	189
R335/1	-	29	2	-	31
R336/1	-	37	1	3	41
R342/1	-	28	-	11	39
TOTAL	**-**	**335**	**20**	**70**	**425**

** Major culverts > 2.1m in diameter/width. All others are minor/lesser culverts.*

3.6. Other Route Information

3.6.1. Route Marker Boards

Route marker boards (blue boards) are generally installed on the routes. The table of missing / unidentified markers per route are indicated below.

ROUTE – SECTION	CHAINAGE (km)	TOTAL (NO)
R75/2	37.0, 42.2, 49.2, 55.2	4
R75/3	16.6, 23.8, 26.8	3
R335/1	38.0, 43.8, 48.4	3
R336/1	1.2, 16.6, 16.8, 17.0, 17.2, 38.4, 43.8	7
R342/1	4.2, 4.6, 4.8, 5.2, 5.8, 6.0, 6.8, 7.4, 8.8, 10.6, 10.8, 11.0, 11.2, 11.6, 11.8, 12.4, 12.6, 14.0, 14.2, 14.4, 15.4, 15.6, 15.8, 16.2, 16.4, 16.6, 17.4, 17.6, 17.8, 18.0, 18.2, 18.4, 18.8, 20.4, 20.6, 20.8, 21.2, 21.6, 22.4, 22.6, 23.4	41
		58

3.6.2. Rumble Strips

No rumble strips are found on most of the routes. Only a short section of strips are on the approach to the intersection of R336 Section 1 and R75 Section 2.

3.6.3. Erosion Protection

No severe erosion is in the road reserve along any of the routes. The only current erosion to be addressed is on the R75/3 km 26 on the shoulder caused by recent flooding.

After previous flooding the outlets and daylighting of culverts on the R75/3 were addressed which resulted in almost no damage to infrastructure after recent floods.

3.6.4. Slope Stability

Generally, no slope instabilities are observed. A section along the R335 (km30,8-31,8), being in a deep cut, shows isolated bank erosion areas due to upstream stormwater runoff that requires attention as this may affect stability in the future. Refer to below photograph. This will be addressed during the current upgrade project.



4. PAVEMENT MANAGEMENT SYSTEM INFORMATION

4.1. R335 Section 1

4.1.1. Updating

The road was proclaimed a National Route on 22 June 2016. Routine Road Maintenance was since conducted by SANRAL.

4.1.2. Features

Prominent Features are included in the tables earlier on in this report under Section 3.

4.1.3. Road type

This remainder of the road consists of an Undivided (N) Single (S) Carriageway and Unpaved Shoulders (U). (N. S. U) with one (1) lane per direction. Approximately 2 km through Addo is an Undivided (N) Single (S) carriageway with paved Shoulders (P). (N.S.P) with one (1) lane per direction.

4.1.4. Reserve/Median

The road reserve width is generally 25m to 30m in width.

4.1.5. Cross Sections

The road has a lane width that varies from approximately 3.2m to 3.4m with mostly gravel shoulders. Refer to section 3.1.4 for details.



Typical road section

4.1.6. Topography / Climate

The topography of the section is flat with limited cut and fills.

Addo normally receives about 281mm of rain per year. with rainfall occurring throughout the year. It receives the lowest rainfall (13mm) in July and the highest (35mm) in March. The monthly distribution of average daily maximum temperatures shows that the average midday temperatures for Addo range from 20.7°C in July to 28.2°C in February. The region is the coldest during July when the mercury drops to 7.3°C on average during the night.

4.1.7. Road Renewal

Routine Road Maintenance was conducted by SANRAL and appointed contractors to date. An upgrade project for the road is currently in progress namely SANRAL R.335-010-2017/2R (Phase 2) from km 30.12 to km 38.25. Phase 3 from km 38.25 to km 49.48 is envisioned for the near future.

Maintenance activities on this section are indicated in the table below.

Maintenance Activities	Period	Engineer	Contractor
Routine Road Maintenance with budget	February 2022 – to date	GG&G Consulting Engineers - February 2022 to February 2025 Marumo Consulting Engineers – March 2025 to date	QTC Civils

4.1.8. Pavement

In general. the pavement condition for the road was poor with localised base and surface failures evident. The upgrade project is currently working on this section. Temporary repairs and patching were done under the current RRM project to make the road safe. Refer Annexure B.

There is a 5km stretch outside the upgrade project where the pavement layers are in good condition but the seal is stripping. A slurry is planned under the current RRM project to make the driveability better and seal the pavement layers as the start of phase 3 of the upgrade projects are still unknown.

4.1.9. Notes

It should be noted that many tourists make use of the route towards the popular Addo National Park and surrounding areas.

There are no road studs along the road.

4.2. R336 Section 1

4.2.1. Updating

The road was proclaimed a National route in June 2016. Routine Road Maintenance was conducted by SANRAL and appointed contractors to date. An upgrade project for the road is currently in progress namely SANRAL R.336-010-2017/2 (Phase 2) from km 30.5 to km 48.2.

4.2.2. Features

Prominent Features are included in the tables earlier on in this report under section 3.

4.2.3. Road type

This road consists of an Undivided (N) Single (S) Carriageway and mostly Paved Shoulders (P). (N. S. P) with one (1) lane per direction. There are however also sections that are Undivided (N) Single (S) Carriageway and Unpaved Shoulders (P). (N. S. U) with one (1) lane per direction.

4.2.4. Reserve/Median

The road reserve width is generally 25m. In certain cases. the road reserve was found to vary between 25 and 30m in width.

4.2.5. Cross Sections

The road has a lane width that varies between 3.1m to 3.6m. Refer to section 3.1.4 for details. Shoulders are present at some section on the route.



Typical road section

4.2.6. Topography/Climate

The topography of the section is fairly flat with limited major cut and fills.

Kirkwood normally receives about 315mm of rain per year with most rainfall occurring during summer. It receives the lowest rainfall (13mm) in July and the highest (44mm) in March. The monthly distribution of average daily maximum temperatures indicates the average midday temperatures for Kirkwood range from 20.5°C in July to 29.7°C in February. The region is the coldest during July when the mercury drops to 5.6°C on average during the night.

4.2.7. Road Renewal

Routine Road Maintenance was conducted by SANRAL and appointed contractors to date.

Maintenance activities on this section are indicated in the table below:

Maintenance Activities	Period	Engineer	Contractor
Routine Road Maintenance with budget	February 2022 – to date	GG&G Consulting Engineers - February 2022 to February 2025 Marumo Consulting Engineers – March 2025 to date	QTC Civils

4.2.8. Pavement

In general. the pavement condition for the road was poor with localised base and surface failures evident. Temporary repairs and patching were done under the current RRM project to make the road safe. Refer to Annexure B.

4.2.9. Notes

There are many farm accesses situated along the road.

4.3. R342 Section 1

4.3.1. Updating

The road was proclaimed a National Route in June 2016. Routine Road Maintenance was conducted by SANRAL and appointed contractors to date. An upgrade project for the road is currently in progress namely SANRAL R.342-010-2024/1 from km 14.5 to km 25.0.

4.3.2. Features

Prominent Features are included in the tables earlier on in this report under section 3.

4.3.3. Road type

This road consists of an Undivided (N) Single (S) Carriageway and Paved Shoulders (P). (N. S. P) with one (1) lane per direction.

4.3.4. Reserve/Median

The road reserve width is generally close to 30m.

4.3.5. Cross Sections

The road has a lane width that varies from 3.1m to 3.5m approximately and some sections with 1,5m wide shoulders.



Typical road section

4.3.6. Topography/Climate

The topography of the section is flat with limited cut and fills.

Paterson normally receives about 347mm of rain per year. with rainfall occurring throughout the year. It receives the lowest rainfall (16mm) in July and the highest (43mm) in March. The monthly distribution of average daily maximum temperatures shows that the average midday temperatures for Paterson range from 19.9°C in July to 28.1°C in February. The region is the coldest during July when the mercury drops to 6.4°C on average during the night.

4.3.7. Road Renewal

Routine Road Maintenance was conducted by SANRAL and appointed contractors to date.

Maintenance activities on this section are indicated in the table below:

Maintenance Activities	Period	Engineer	Contractor
Routine Road Maintenance with budget	February 2022 – to date	GG&G Consulting Engineers - February 2022 to February 2025 Marumo Consulting Engineers – March 2025 to date	QTC Civils

4.3.8. Pavement

The road is in a poor condition in general with cracks evident and an uneven surface.
Refer Annexure B.

4.3.9. Notes

There were very few signs present on the route. There were no road studs and route markers are mostly not present along the road. This is being addressed by the current upgrade project.

4.4. R75 Section 2

4.4.1. Updating

The Road condition report is based on available maintenance data from the current SANRAL maintenance contract.

4.4.2. Features

Prominent Features are included in the tables earlier on in this report under section 3.

4.4.3. Road type

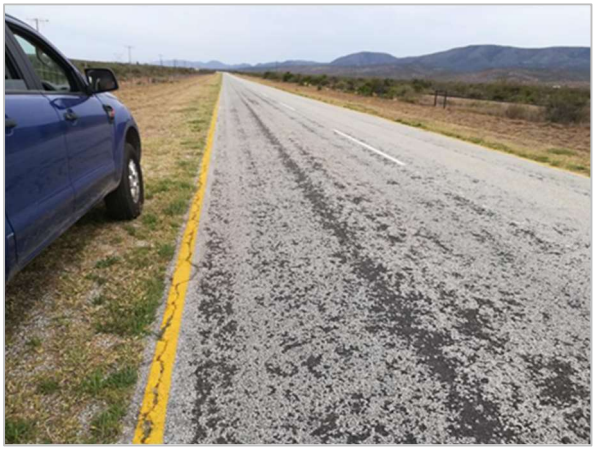
This section of the R75 consists of an Undivided (N) Single (S) Carriageway and Unpaved Shoulders (U). (N. S. U) with one (1) lane per direction.

4.4.4. Reserve/Median

The road reserve width is generally 32m. In certain cases. the road reserve was found to vary up to 43m in width.

4.4.5. Cross Sections

This section of the R75 has a lane width of 3.4 m with unpaved shoulders.



Typical road section

4.4.6. Topography/Climate

The topography of the section is rolling with moderate cut and fills. The climate of this section of road is Dry according to Weinert's classification system.

4.4.7. Road Renewal

Recent maintenance activities on this section are indicated in the table below:

Maintenance Activities	Period	Engineer	Contractor
Routine Road Maintenance with budget	February 2022 – to date	GG&G Consulting Engineers - February 2022 to February 2025 Marumo Consulting Engineers – March 2025 to date	QTC Civils

4.4.8. Pavement

The road was very narrow at places and had various surface failures and edge breaks occurring. Generally, the road is in a fair condition. Please refer to Annexure B for the photographic details indicating the pavement condition for the sections.

4.4.9. Notes

- Road studs required
- Various edge breaks are observed.

4.5. R75 Section 3

4.5.1. Updating

The Road condition report is based on available maintenance data from the current SANRAL maintenance contract.

4.5.2. Features

Prominent Features are included in the tables earlier on in this report under section 3.

4.5.3. Road type

This section of the R75 consists of an Undivided (N) Single (S) Carriageway and Unpaved Shoulders (U). (N. S. U) with one (1) lane per direction.

4.5.4. Reserve/Median

The road reserve width is generally 25m on the section.

4.5.5. Cross Sections

This section of the R75 has a lane width of 3.4 m with unpaved shoulders.



Typical Road Section

4.5.6. Topography/Climate

The topography of the section is rolling with moderate cut and fills. The climate of this section of road is Dry according to Weinert's classification system.

4.5.7. Road Renewal

Maintenance activities on this section are indicated in the table below:

Maintenance Activities	Period	Engineer	Contractor
Routine Road Maintenance with budget	February 2022 – to date	GG&G Consulting Engineers - February 2022 to February 2025 Marumo Consulting Engineers – March 2025 to date	QTC Civils

4.5.8. Pavement

Phase 1 and Phase 2 of the Special Maintenance project was completed before the start of the current RRM project and the road is in a good condition. Please refer to Annexure B for the photographic details indicating the pavement condition for the section.

4.5.9. Notes

- Road markings are outstanding.
- Road studs were installed.

4.6. Definition of Codes Used

Code	Material	Abbreviations
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	Continuously graded
BS	Hot	Semi-gap graded
TC	Tar hot	Continuously graded
TS	Tar hot	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	Cemented crushed stone or gravel	UCS 3 – 6 MPa at 100 % mod. AASHTO
C3	Cemented natural gravel	UCS 1.5 – 3 MPa at 100 % mod. AASHTO
C4	Cemented natural gravel	UCS 0.75 – 1.5 MPa at 100 % mod. AASHTO
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	Fine grading
S4	Cape seal	Coarse grading
S5	Slurry	Rejuvenator
S6	Slurry	Diluted emulsion
S7	Surface renewal	
S8	Surface renewal	
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

4.7. PMS – Road Information

Not available at current.

5. TRAFFIC INFORMATION

No traffic counts were conducted during this RRM.

6. HISTORIC ROAD MAINTENANCE INFORMATION

6.1. General

The maintenance information is from actual data obtained from previous maintenance contracts.

6.2. Description of Information

Historic maintenance information was obtainable from the SANRAL Maintenance Management System at the office of the Route Manager.

6.2.1. General Information

The road is situated in rolling topography. Cuttings observed were stable.

6.2.2. Pavement Condition Information

Base failures, potholes and edge break repairs were observed along all routes by the current RRM contractor

6.2.3. Drainage Information

The culverts would normally be cleaned once per month, depending on the weather conditions, thus at least 12 times per year. The position and sizes of culverts are indicated elsewhere. Visual inspections showed that most culverts are clean, with an isolated few that requires cleaning. A few culverts do not have in/outlet structures. Some spalling and cracking were detected on some of the structures.

Most of the roads have earth channels and seemed as in a fair condition. Concreted drains observed were in a good condition and clean. The inlet structures present along the concrete V-drain on the R335 do not have grid covers and this should be replaced during the reconstruction under the upgrade project.

6.2.4. Fencing

Occasional damage resulting from accidents are repaired as and when required.

6.2.5. Debris and Litter

Litter picking on the routes are done once a month. Litter picking packages were allocated where litter are collected 5km outside of each town once a week as defined in the contract document. The road reserves were clean.

6.2.6. Shoulders

The type and width of the shoulders are indicated in previous sections in the report. Some instances of shoulder loss were observed, mostly at intersections and rest stops.

6.2.7. Road Studs

Road studs are present on the R75 Section 3.

6.2.8. Road Markings

Existing lane road markings present with sections requiring attention.

6.2.9. Guardrails

Guardrails are mostly in a good condition. Refer to Section 3.4.2 for details.

6.2.10. Vegetation

Various types of alien vegetation were identified along the routes. The percentage invaders were estimated at less than 10%. Refer to Annexure I for a list of Typical Invader species including their treatment. The road reserves are mostly clear of vegetation, with the exception of the R342 that requires more extensive action.

Some photos of vegetation observed has been captured in Annexure H. Note the species types has not been identified at the time of this assessment.

6.3. Cost Comparison and Previous Expenditure

6.3.1. Average kilometre expenditure for the route.

ITEM DESCRIPTION	EXPENDITURE TOTAL TO DATE	COST PER KM AVG TO DATE/MONTH
M0200: GENERAL REQUIREMENTS AND PROVISIONS	134 000.00	17.94
M0300: CONTRACTORS ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	6 665 801.09	892.64
M0400: ROUTE PATROL SERVICES	1 741 500.00	233.21
M0500: ACCOMMODATION OF TRAFFIC	1 739 911.85	233.00
M1100: PAVEMENT LAYERS REPAIR	34 568 585.58	4 629.22
M1200: REPAIR OF POTHOLES	1 825 342.40	244.44
M1210: REPAIR OF EDGE BREAKS		-
M1220: REPAIR OF SURFACE FAILURES		-
M1300: CRACK SEALING	339 727.70	45.49
M1400: BLEEDING REPAIR		-
M1600: SURFACE TREATMENT - TEXTURE CORRECTION		-
M1610: SURFACE TREATMENT -RUT FILLING		-
M1700: REPAIR OF SLOPE FAILURES AND WASHAWAYS		-
M2100: REPAIR AND MAINTENANCE OF INLET AND OUTLET STRUCTURES		-
M2200: SUBSOIL DRAIN INSTALLATION AND MAINTENANCE		-
M2300: CLEANING OF WATERWAY STRUCTURES		-
M2400: CLEANING OF PREFABRICATED CULVERTS	824 380.60	110.40
M2500: CLEANING OF CONCRETE DRAINS AND CHANNELS	541 320.00	72.49
M2600: CLEANING AND MAINTENANCE OF EXISTING EARTH CHANNELS	1 913 691.66	256.27
M2700: EDGE BUILD-UP REMOVAL	1 046 446.20	140.13
M2800: CONCRETE CHANNEL CONSTRUCTION AND MAINTENANCE OF EXISTING CHANNELS		-
M3100: FENCING	3 598 263.89	481.86
M3200: COLLECTION AND REMOVAL OF DEBRIS AND LITTER	620 402.98	83.08
M3300: SHOULDER REPAIRS		-
M3500: STABILISATION OF CUTTINGS		-
M4100: ERECTION AND REPAIR OF PERMANENT ROAD TRAFFIC SIGNS	170 495.77	22.83
M4200: ROAD SIGN CLEANING	1 104.00	0.15
M4210: REMOVAL OF ILLEGAL SIGNS		-
M4300: ROADSTUDS		-
M4400: GUARD-RAIL ERECTION AND MAINTENANCE	871 423.66	116.70
M4600: ROAD MARKINGS		-
M4700: MAINTENANCE OF LAY-BYES AND REST AREAS		-
M5100: GENERAL EROSION PROTECTION		-
M5200: GABION PROTECTION	789 203.16	105.69
M6100: GENERAL AND SHOULDER MOW	8 195 970.80	1 097.56
M6110: INSTRUCTED GENERAL AND SHOULDER MOW	52 945.60	7.09
M6200: CHEMICAL CONTROL OF VEGETATION AND ERADICATION OF UNDESIRABLE VEGETATION		-
M6300: REMOVAL OF UNDESIRABLE VEGETATION: PHYSICAL ERADICATION	257 138.00	34.43
M7100: EMERGENCY STANDBY TEAM	527 636.30	70.66
M7200: ALL-EMERGENCY NORMALISATION	16 718.80	2.24
M8100: SMALL REPAIRS OF STRUCTURES		-
M9100: DAYWORKS SCHEDULE	1 341.00	0.18
UNMAPPED ACTIVITIES		-
TOTAL	**66 443 351.04**	

6.3.2. Kilometre expenditure as a percentage of the total expenditure.

ITEM DESCRIPTION	EXPENDITURE TOTAL TO DATE	COST PER KM KM % OF TOTAL EXPENDITURE
M0200: GENERAL REQUIREMENTS AND PROVISIONS	134 000.00	0.001%
M0300: CONTRACTORS ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	6 665 801.09	0.048%
M0400: ROUTE PATROL SERVICES	1 741 500.00	0.013%
M0500: ACCOMMODATION OF TRAFFIC	1 739 911.85	0.013%
M1100: PAVEMENT LAYERS REPAIR	34 568 585.58	0.251%
M1200: REPAIR OF POTHOLES	1 825 342.40	0.013%
M1210: REPAIR OF EDGE BREAKS		0.000%
M1220: REPAIR OF SURFACE FAILURES		0.000%
M1300: CRACK SEALING	339 727.70	0.002%
M1400: BLEEDING REPAIR		0.000%
M1600: SURFACE TREATMENT - TEXTURE CORRECTION		0.000%
M1610: SURFACE TREATMENT -RUT FILLING		0.000%
M1700: REPAIR OF SLOPE FAILURES AND WASHAWAYS		0.000%
M2100: REPAIR AND MAINTENANCE OF INLET AND OUTLET STRUCTURES		0.000%
M2200: SUBSOIL DRAIN INSTALLATION AND MAINTENANCE		0.000%
M2300: CLEANING OF WATERWAY STRUCTURES		0.000%
M2400: CLEANING OF PREFABRICATED CULVERTS	824 380.60	0.006%
M2500: CLEANING OF CONCRETE DRAINS AND CHANNELS	541 320.00	0.004%
M2600: CLEANING AND MAINTENANCE OF EXISTING EARTH CHANNELS	1 913 691.66	0.014%
M2700: EDGE BUILD-UP REMOVAL	1 046 446.20	0.008%
M2800: CONCRETE CHANNEL CONSTRUCTION AND MAINTENANCE OF EXISTING CHANNELS		0.000%
M3100: FENCING	3 598 263.89	0.026%
M3200: COLLECTION AND REMOVAL OF DEBRIS AND LITTER	620 402.98	0.005%
M3300: SHOULDER REPAIRS		0.000%
M3500: STABILISATION OF CUTTINGS		0.000%
M4100: ERECTION AND REPAIR OF PERMANENT ROAD TRAFFIC SIGNS	170 495.77	0.001%
M4200: ROAD SIGN CLEANING	1 104.00	0.000%
M4210: REMOVAL OF ILLEGAL SIGNS		0.000%
M4300: ROADSTUDS		0.000%
M4400: GUARD-RAIL ERECTION AND MAINTENANCE	871 423.66	0.006%
M4600: ROAD MARKINGS		0.000%
M4700: MAINTENANCE OF LAY-BYES AND REST AREAS		0.000%
M5100: GENERAL EROSION PROTECTION		0.000%
M5200: GABION PROTECTION	789 203.16	0.006%
M6100: GENERAL AND SHOULDER MOW	8 195 970.80	0.059%
M6110: INSTRUCTED GENERAL AND SHOULDER MOW	52 945.60	0.000%
M6200: CHEMICAL CONTROL OF VEGETATION AND ERADICATION OF UNDESIRABLE VEGETATION		0.000%
M6300: REMOVAL OF UNDESIRABLE VEGETATION: PHYSICAL ERADICATION	257 138.00	0.002%
M7100: EMERGENCY STANDBY TEAM	527 636.30	0.004%
M7200: ALL-EMERGENCY NORMALISATION	16 718.80	0.000%
M8100: SMALL REPAIRS OF STRUCTURES		0.000%
M9100: DAYWORKS SCHEDULE	1 341.00	0.000%
UNMAPPED ACTIVITIES		0.000%
TOTAL	**66 443 351.04**	

6.3.3. Section expenditure for the period involved as a percentage of the total expenditure on the different sections

ITEM DESCRIPTION	EXPENDITURE	
	TOTAL TO DATE	TOTAL % TO DATE
M0200: GENERAL REQUIREMENTS AND PROVISIONS	134 000.00	0.20%
M0300: CONTRACTORS ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	6 665 801.09	10.03%
M0400: ROUTE PATROL SERVICES	1 741 500.00	2.62%
M0500: ACCOMMODATION OF TRAFFIC	1 739 911.85	2.62%
M1100: PAVEMENT LAYERS REPAIR	34 568 585.58	52.03%
M1200: REPAIR OF POTHOLES	1 825 342.40	2.75%
M1210: REPAIR OF EDGE BREAKS		0.00%
M1220: REPAIR OF SURFACE FAILURES		0.00%
M1300: CRACK SEALING	339 727.70	0.51%
M1400: BLEEDING REPAIR		0.00%
M1600: SURFACE TREATMENT - TEXTURE CORRECTION		0.00%
M1610: SURFACE TREATMENT -RUT FILLING		0.00%
M1700: REPAIR OF SLOPE FAILURES AND WASHAWAYS		0.00%
M2100: REPAIR AND MAINTENANCE OF INLET AND OUTLET STRUCTURES		0.00%
M2200: SUBSOIL DRAIN INSTALLATION AND MAINTENANCE		0.00%
M2300: CLEANING OF WATERWAY STRUCTURES		0.00%
M2400: CLEANING OF PREFABRICATED CULVERTS	824 380.60	1.24%
M2500: CLEANING OF CONCRETE DRAINS AND CHANNELS	541 320.00	0.81%
M2600: CLEANING AND MAINTENANCE OF EXISTING EARTH CHANNELS	1 913 691.66	2.88%
M2700: EDGE BUILD-UP REMOVAL	1 046 446.20	1.57%
M2800: CONCRETE CHANNEL CONSTRUCTION AND MAINTENANCE OF EXISTING CHANNELS		0.00%
M3100: FENCING	3 598 263.89	5.42%
M3200: COLLECTION AND REMOVAL OF DEBRIS AND LITTER	620 402.98	0.93%
M3300: SHOULDER REPAIRS		0.00%
M3500: STABILISATION OF CUTTINGS		0.00%
M4100: ERECTION AND REPAIR OF PERMANENT ROAD TRAFFIC SIGNS	170 495.77	0.26%
M4200: ROAD SIGN CLEANING	1 104.00	0.00%
M4210: REMOVAL OF ILLEGAL SIGNS		0.00%
M4300: ROADSTUDS		0.00%
M4400: GUARD-RAIL ERECTION AND MAINTENANCE	871 423.66	1.31%
M4600: ROAD MARKINGS		0.00%
M4700: MAINTENANCE OF LAY-BYES AND REST AREAS		0.00%
M5100: GENERAL EROSION PROTECTION		0.00%
M5200: GABION PROTECTION	789 203.16	1.19%
M6100: GENERAL AND SHOULDER MOW	8 195 970.80	12.34%
M6110: INSTRUCTED GENERAL AND SHOULDER MOW	52 945.60	0.08%
M6200: CHEMICAL CONTROL OF VEGETATION AND ERADICATION OF UNDESIRABLE VEGETATION		0.00%
M6300: REMOVAL OF UNDESIRABLE VEGETATION: PHYSICAL ERADICATION	257 138.00	0.39%
M7100: EMERGENCY STANDBY TEAM	527 636.30	0.79%
M7200: ALL-EMERGENCY NORMALISATION	16 718.80	0.03%
M8100: SMALL REPAIRS OF STRUCTURES		0.00%
M9100: DAYWORKS SCHEDULE	1 341.00	0.00%
UNMAPPED ACTIVITIES		0.00%
TOTAL	**66 443 351.04**	

6.3.4. Kilometre expenditure for the three most expensive sections

ITEM DESCRIPTION	EXPENDITURE TOTAL TO DATE	COST PER KM
M0300: CONTRACTORS ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	6 665 801.09	32 135.18
M1100: PAVEMENT LAYERS REPAIR	34 568 585.58	166 651.81
M6100: GENERAL AND SHOULDER MOW	8 195 970.80	39 511.98

7. VISUAL ASSESSMENT OF PAVEMENT

See Road Condition Visual survey attached, Annexure B.

8. CONTRACTOR / SUB-CONTRACTORS INFORMATION

8.1. GENERAL

Routine Road Maintenance is done under a SANRAL RRM Contract with appointed sub-contractors.

8.1.1. Main Contractor

QTC Civils is the current RRM appointed Main Contractor.

8.1.2. Sub-contractors

There are various sub-contractors on the current project. The respective work packages were identified and determined by means of market analysis and a CPG Plan during the mobilisation period.

The table below indicates the Targeted Enterprises (TEs) that were involved during the project.

NAME	TYPE OF WORK	OWNERSHIP					CIDB GRADING
		OWNER NAME	OWNER ADDRESS	OWNER CONTACT NO.	%BP OWNERSHIP	BBBEE CONTRIBUTOR STATUS LEVEL	
SC01: KULY CAMAGU TRADING ENTERPRISE	GENERAL RRM (1CE & 2CE)	Bablawa Sybill Mongcaka	2469 Medi str addo	060 378 4641	100	1	1CE PE
SC02: INDLOVU IKHONA TRADING	GENERAL RRM (1CE & 2CE)	Coleen Thozama Gxoyiya	1752 Msengi str addo	060 378 4641	100	1	1CE PE
SC03: KIRKWOOD ENTERPRISE	GENERAL RRM (1CE & 2CE)	Karools Jordaan	56 Arend str Bergsig Kirkwood	072 511 0643	100	1	1CE PE
SC04: R75 MOTORS CLINIC	GENERAL RRM (1CE & 2CE)	Nowell Hermans Seekoei	1474 Mauritius str Jansenville	060 527 1217	100	1	1CE PE
SC05: CCL CIVILS	GENERAL RRM & VEGETATION (1CE & 2CE)	Henrico Dennis Rolls	3 searle Str Kirkwood	081 880 0617	100	1	1CE PE
SC06: KIRKWOOD LOGISTICS SERVICES / D MESLANE PROJECTS JV	GENERAL RRM (3CE & ABOVE)	Marcellis Adams	174 Fisant str Bergsig Kirkwood	084 070 5805	100	1	4CE
SC07: SICEDENI CONTRACTING AND SUPPLY	GENERAL RRM & VEGETATION (3CE & ABOVE)	Micheal damons	164 6th avenue Willowmore	079 292 4612	100	1	4CE PE
SC08: ZONDI AND CHAMA TRADING	VEGETATION (3CE & ABOVE)	Michael M Jovuka	1992 Mtyopho str Noma Thamsanqa location Addo	060 320 0827	100	1	2CE PE
SC09: QUNTA LANGA HOLDINGS	ROAD MARKING (3SK & ABOVE)	Mazwi thurslin Lama	2158 salowa Str addo	084 895 2056	100	1	2SK PE

9. PREVIOUS, CURRENT AND FUTURE PROJECTS

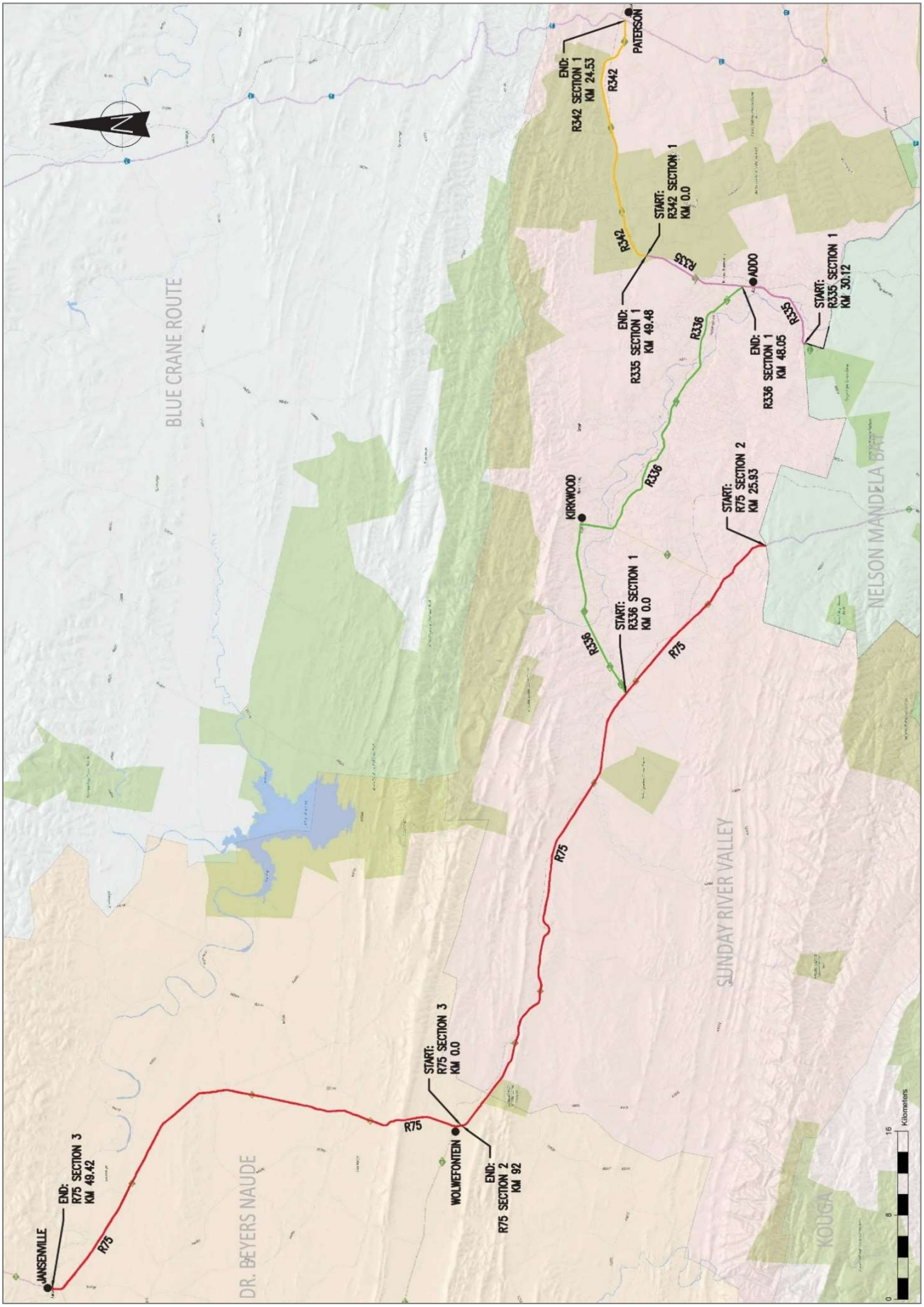
The following projects were previously done or are currently ongoing or are planned for the future:

SANRAL NO.	ROUTE, SECTION AND KM	WORKS DESCRIPTION	PERIOD	
			FROM	TO
R.075-020-2018/1	R75/2 KM 39.6 TO KM 72.0	Special Maintenance Phase 1	Jan 2022	Mar 2023
R.075-020-2018/2	R75/2 KM 72.0 TO KM 92.0	Special Maintenance Phase 2	Future	Future
R.075-030-2018/1	R75/3 KM 29.0 TO KM 50.0	Special Maintenance	Jun 2020	Aug 2021
X.003-018-2017/1	R335/1 KM 49.06 TO KM 49.49 R342/1 KM 0.0 TO KM 14.55	Special Maintenance	Jul 2021	Oct 2022
R.342-010-2024/1	R342/1 KM 14.5 TO KM 25.0	Strengthening	Jan 2025	May 2026
R.335-010-2017/2R	R335/1 KM 27.5 TO KM 38.25 Phase 2	Improvement	Oct 2024	Mar 2027

R.335-010-2019/1	R335/1 KM 37.72 TO KM 49.0 Phase 3	Improvement	Future	Future
R.336-010-2017/1	R336/1 KM 15.0 TO KM 30.0 Phase 1	Upgrade	Jun 2022	Jun 2024
R.336-010-2017/2	R336/1 KM 30.5 TO KM 48.2 Phase 2	Upgrade	May 2023	Jan 2026

ANNEXURE A

LOCALITY PLAN


N
BLUE CRANE ROUTE
DR. BEYERS NAUDE
SUNDAY RIVER VALLEY
NELSON MANDELA BAY
KOUGA
JANSENVILLE
END: R75 SECTION 3 KM 49.42
R75
WOLWEFONTEIN
START: R75 SECTION 3 KM 0.0
END: R75 SECTION 2 KM 92
R75
START: R75 SECTION 2 KM 25.93
KIRKWOOD
R336
START: R336 SECTION 1 KM 0.0
END: R336 SECTION 1 KM 48.05
R336
ADDO
R335
START: R335 SECTION 1 KM 30.12
END: R335 SECTION 1 KM 49.48
R335
START: R342 SECTION 1 KM 0.0
R342
PATERSON
END: R342 SECTION 1 KM 24.53
R342
0
8
16
Kilometers

ANNEXURE B

ROAD CONDITION VISUAL REPORT

R335 SECTION 1 - PAVEMENT



KM 30.1 -Seal condition/stone loss



KM 31.6 – Longitudinal cracks



KM 31.9 – Cracks/Failure



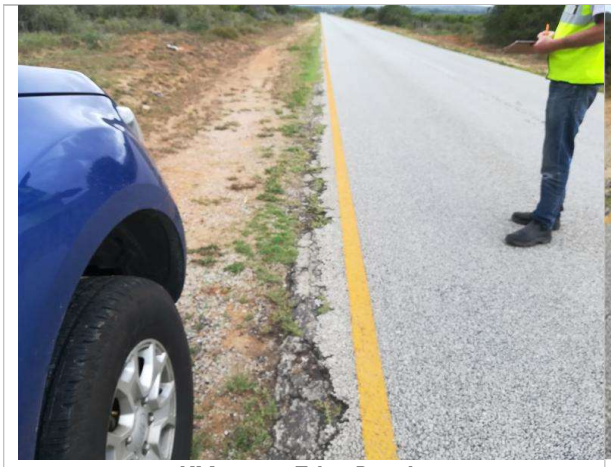
KM 31.9 – Crocodile Cracks



KM 31.9 – Crocodile Cracks/Pothole



KM 32.4 – Crocodile/Longitudinal cracks



KM 33.2 – Edge Breaks



KM 33.5 – Longitudinal/Crocodile cracks



KM 34.4 – Long/Transvers/Crocodile cracks



KM 36.2 – Crocodile cracks



KM 37.3 - Long/Transvers/Crocodile cracks



KM 37.5 - Long/Transvers/Crocodile cracks



KM 37.7 – Shoulder loss



KM 37.7 – Edge breaks



KM 37.7 – Pothole-Intersection



KM 38.7 – Block/Crocodile cracks



KM 39.3 - Crocodile cracks



KM 39.3 – Crocodile cracks/Failure



KM 39.5 – Extensive cracking



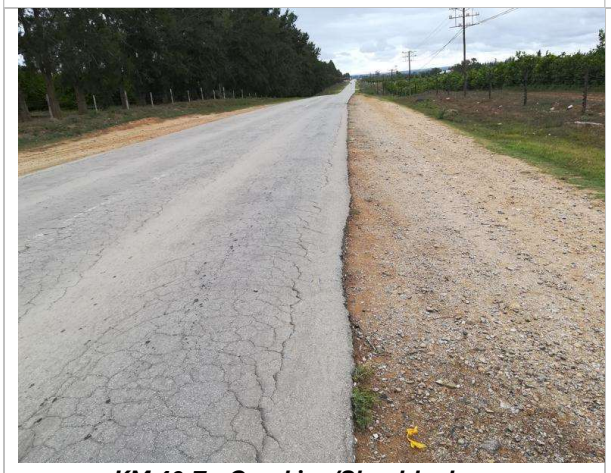
KM 39.5- Shoulder loss



KM 39.9 – Extensive cracking



KM 40.6 – Crocodile cracks



KM 40.7 – Cracking/Shoulder loss



KM 41.4 – Longitudinal/Crocodile cracks



KM 42.2 - Crocodile cracks



KM 42.9 Crocodile cracks



KM 43.0 – Edge breaks



KM 43.0 – Crocodile cracks



KM 43.2 – Extensive cracking



KM 43.7 – Edge break/Crocodile cracks



KM 44.5 -Longitudinal/Block cracking



KM 45.5 – Crocodile cracks/stone loss



KM 47.9 – Extensive cracking

R336 SECTION 1 - PAVEMENT



KM 6.6 – Longitudinal cracking



KM 10.7 – Edge breaks



KM 14,8 – Edge breaks/Cracking



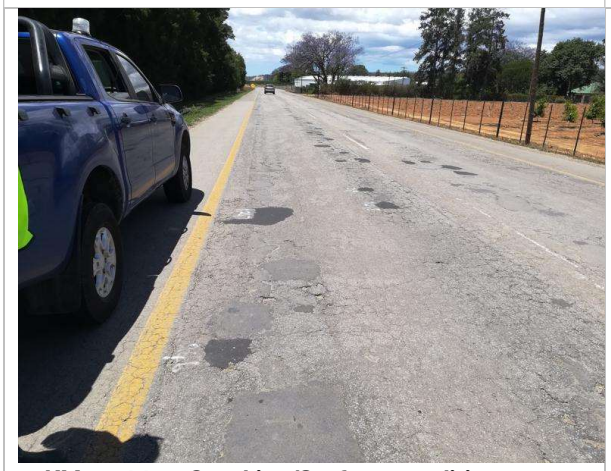
KM 31.7 - Crocodile crack/Failure



KM 31.97 - Crocodile crack extensive



KM 34.27 - Crocodile crack



KM 38.147 – Cracking/Surface condition stone loss



KM 40.97 – Crocodile cracks, extensive



KM 43.57- Crocodile cracks, extensive

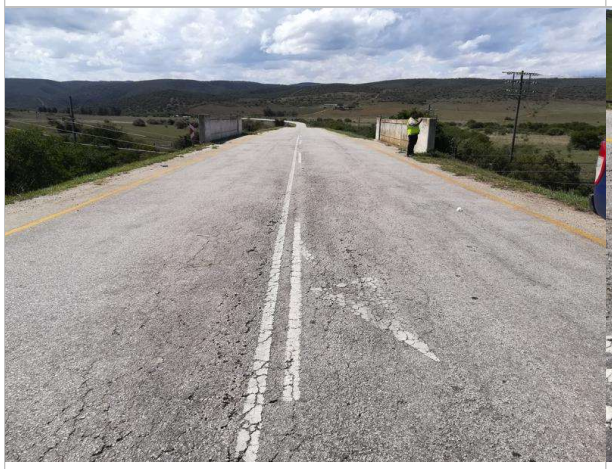
R342 SECTION 1 - PAVEMENT



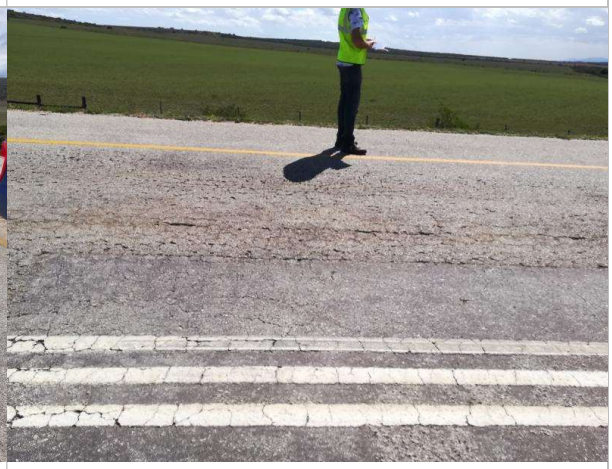
KM 15.3



KM 16.3 – Extensive cracking/surface stone loss



KM 20.5 – Extensive cracking-bridge approach



KM 20.7 - Extensive cracking



KM 23.1 – Extensive Cracking/Pothole



KM 23.4 – Longitudinal/crocodile cracking



KM end Paterson – Edge break

R75 SECTION 2 - PAVEMENT



KM 26 – General`



KM 27.6 – Seal condition/surface stone loss



KM 30.76 – Cracking/Surface stone loss



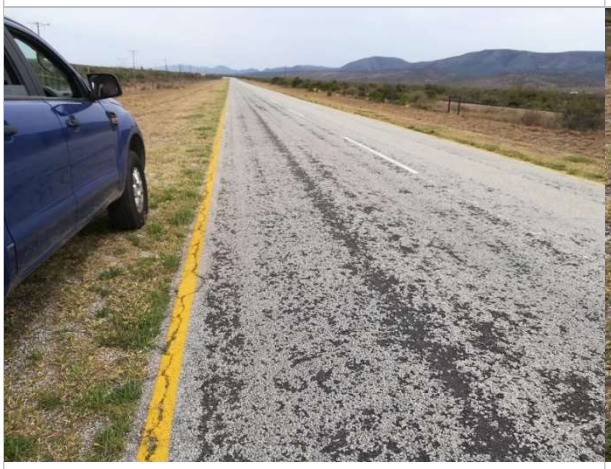
KM 39.2 – Edge break @ Farmstall



KM 42.2 – Shoulder loss



KM 47 – Edge break/Failure



KM 48.6 – Seal condition/stone loss



KM 57.4 – Edge break



KM 57.85 approx. – Edge breaks



KM 60.2 – Shoulder loss



KM 60.8 – Edge break



KM 62.4 – Transverse/bridge approach



KM 63.1 – Edge break



KM 73.5 – Edge break



KM 77 –Crack/failure @ culvert crossing



KM 80.1



KM 85 – Seal condition/stone loss



KM 90.9* – Minor edge break/shoulder loss

** Information after chainage km88.99 recorded in accordance with existing R75/2 route markers*

R75 SECTION 3 – PAVEMENT



KM 5.9 – Completed roadworks section in special maintenance contract

ANNEXURE C

INTERSECTIONS AND ACCESSES

R 75 SECTION 2: INTERSECTIONS AND ACCESSES

Km	Intersecting Road Number/Route Number/ Name	Destination of Intersecting Road		Standard of Intersecting Road
		Positive	Negative	
29.03	Unknown	Unknown	-	Gravel
29.33	Unknown	-	Unknown	Gravel
30.73	Unknown	Blaauwkrantz	-	Gravel
31.13	Unknown	Unknown	-	Gravel
31.63	Unknown	Unknown	-	Gravel
32.33	Unknown	Unknown	Unknown	Gravel
33.53	Unknown	-	Unknown	Gravel
33.73	Unknown	Unknown	-	Gravel
35.73	Unknown	Unknown	Unknown	Gravel
35.83	Unknown	Unknown	Unknown	Gravel
38.83	MN50455	Unknown	Unknown	Gravel
39.43	Unknown	-	Unknown	Gravel
41.13	Unknown	Unknown	Unknown	Gravel
42.03	Unknown	Unknown	Unknown	Gravel
43.43	Unknown	Unknown	Unknown	Gravel
46.33	Unknown	Kariega	Unknown	Gravel
48.83	Unknown	Thorndale	-	Gravel
49.13	Unknown	Unknown	-	Gravel
50.03	Unknown	-	Unknown	Gravel
51.33	Unknown	Unknown	Unknown	Gravel
55.03	Unknown	Unknown	Unknown	Gravel
57.03	Unknown	-	Unknown	Gravel
58.13	Unknown	-	Unknown	Gravel
60.63	Unknown	Unknown	-	Gravel
62.53	Unknown	-	Unknown	Gravel
62.80	Unknown	Unknown	-	Gravel
65.40	Unknown	Unknown	Unknown	Gravel
66.20	Unknown	Unknown	Unknown	Gravel
69.00	Unknown	Unknown	-	Gravel
70.10	Unknown	Kingsley	-	Gravel
71.60	Unknown	-	Unknown	Gravel
76.00	Unknown	Unknown	Unknown	Gravel
77.00	Unknown	Unknown	-	Gravel
78.70	Unknown	-	Unknown	Gravel
79.30	Unknown	-	Unknown	Gravel
79.60	Unknown	Unknown	-	Gravel
80.20	Unknown	-	Unknown	Gravel
85.70	Unknown	Unknown	-	Gravel
87.90	Unknown	-	Unknown	Gravel
89.00	Unknown	Unknown	-	Gravel

R 75 SECTION 3: INTERSECTIONS AND ACCESSES

Km	Intersecting Road Number/Route Number/ Name	Destination of Intersecting Road		Standard of Intersecting Road
		Positive	Negative	
3.70	Unknown	Unknown	Unknown	Gravel
5.20	Unknown	Unknown	Unknown	Gravel
6.00	Unknown	-	Unknown	Gravel
9.20	Unknown	Unknown	Unknown	Gravel
11.40	Unknown	Unknown	Unknown	Gravel
14.90	Unknown	-	Unknown	Gravel
15.20	Unknown	-	Unknown	Gravel
15.90	Unknown	Unknown	Unknown	Gravel
17.00	Unknown	Unknown	Unknown	Gravel
19.10	Unknown	Unknown	-	Gravel
19.40	Unknown	Unknown	Unknown	Gravel
21.90	Unknown	Unknown	-	Gravel
24.30	Unknown	-	Unknown	Gravel
24.50	Unknown	Unknown	Unknown	Gravel
29.00	Unknown	-	Unknown	Gravel
29.20	Unknown	Unknown	-	Gravel
32.50	Unknown	Unknown	-	Gravel
32.80	Unknown	-	Unknown	Gravel
35.10	Unknown	Unknown	-	Gravel
35.20	Unknown	-	Unknown	Gravel
37.30	Unknown	Unknown	-	Gravel
37.80	Unknown	-	Unknown	Gravel
40.60	Unknown	-	Unknown	Gravel
40.70	Unknown	Unknown	-	Gravel
42.10	Unknown	-	Unknown	Gravel
43.20	Unknown	-	Unknown	Gravel
44.10	Unknown	-	Unknown	Gravel
45.30	Unknown	Unknown	-	Gravel
46.80	Unknown	-	Unknown	Gravel
48.60	Unknown	-	Unknown	Gravel
49.40	Boom Street	Unknown	Unknown	Surfaced

R335 SECTION 1: INTERSECTIONS AND ACCESSES

Km	Intersecting Road Number/Route Number/ Name	Destination of Intersecting Road		Standard of Intersecting Road
		Positive	Negative	
30.20	Unknown	-	Farm Access/Game Reserve	Grass/Gravel
30.32	MN50267	Addo Longhill Lodge	-	Gravel
31.01	Unknown	-	Farm Access/Game Reserve	Gravel
31.18	Unknown	Private gate (off verge) to Farm/Game Reserve	-	Gravel
31.82	Unknown	-	Alwynkraal	Gravel
31.83	Unknown	Private gate (off verge) to Farm/Game Reserve	-	Gravel
32.08	Unknown	Kudu Ridge Reserve	-	Gravel
32.90	Unknown	Unknown (farms)	-	Gravel
32.60	Unknown	-	Unknown (farms)	Gravel
33.20	Unknown	Unknown (farms)	-	Gravel
33.40	Unknown	-	Unknown (farms)	Gravel
33.60	Unknown	Unknown (farms)	Unknown (farms)	Gravel
34.61	MN50595	De Old Drift Guest House	Anakai (Farm) Road	Gravel
34.90	Unknown	-	San Miguel Farms	Gravel
35.40	Unknown	Unknown (farms)	Unknown (farms)	Gravel
35.50	Unknown	-	Unknown (farms)	Gravel
35.60	Unknown	-	Farm Warehouse Access	Gravel
35.70	Unknown	Moon Valley Farms	-	Gravel
35.79	Unknown	Farm Access	-	Gravel
36.50	Unknown	Unknown	ARC Addo Research Station	Gravel
37.50	Pedestrian pathway	-	Addo Residential Area	Gravel
37.70	Potgieter Crescent	Unknown	-	Paved/Gravel
38.40	Link to Holland Street	Unknown	-	Gravel
38.61	Harvey Street (DR01971)	-	Addo Residential Area / Link to N10	Asphalt
38.61	Valentines Road	Unknown	Addo SAPS Station	Gravel
39.21	Unknown	Unknown	-	Gravel
39.23	Railway Crossing	Kirkwood	Addo	Rail
39.25	Unknown	-	Rosedale	Gravel
39.60	R336 (MR00471)	Kirkwood	-	Asphalt

40.00	Unknown (LT) / Main Road (RT)	Unknown (farms)	Link to Addo Residential Area	LT: Gravel RT: Asphalt
40.28	Unknown	-	Unknown (farms)	Grass/Gravel
40.50	Unknown	Unknown (farms)	Unknown (farms)	Gravel
40.81	Unknown	Retail/Business	Conetree Farm	Gravel
41.10	Unknown	-	Unknown (farms)	Gravel
41.15	Unknown	-	Unknown (farms)	Gravel
41.20	Unknown	-	Unknown (farms)	Gravel
41.22	Unknown	Addo Wildlife Lodge No. 1	-	Paved
41.23	Unknown	Addo Wildlife Lodge No. 2	-	Paved
41.23	Unknown	-	Unknown (farms)	Gravel
41.35	Unknown	Strosa	-	Gravel
41.50	Unknown	Unknown (farms)	-	Gravel
41.75	Unknown	Unknown (farms)	-	Gravel
41.77	Unknown		Unknown (farms)	Gravel
42.21	Unknown	Unknown (farms)	Residential (farms)	Gravel
42.35	Unknown	-	Orange Elephant Backpackers No. 1	Gravel
42.40	Unknown	-	Orange Elephant Backpackers No. 2	Gravel
42.70	Unknown	Unknown (farms)	Ndlovu Citrus	Gravel
42.80	Unknown	The Stable Cottages	Ndlovu Citrus	LT: Gravel/Grass RT: Gravel
43.02	MN50600	Unknown (farms) / Link to R336	-	Asphalt
43.90	Unknown	Langbos	-	Gravel
44.10	Unknown	-	Unknown (Quarry)	Gravel
44.96	Unknown	Kleinplaas	-	Gravel
45.18	Unknown	Unknown (farms)	-	Gravel
45.60	Unknown	-	Unknown (farms)	Gravel
46.22	Unknown	Unknown (farms)	-	Grass/Gravel
47.80	Unknown	-	Unknown (farms)	Gravel
49.18	Unknown	Unknown (farms)	Unknown (farms)	Grass/Gravel

R 336 SECTION 1: INTERSECTIONS AND ACCESSES

Km	Intersecting Road Number/Route Number/ Name	Destination of Intersecting Road		Standard of Intersecting Road
		Positive	Negative	
0.60	Unknown	Unknown	-	Gravel
1.60	Unknown	Unknown	-	Gravel
2.80	Unknown	Umlilo Safaris	-	Gravel
3.72	Unknown	Unknown	-	Gravel
4.10	DR 02012	Brackefontein	-	Gravel
4.23	MN 50455	-	Kirkwood Correctional Centre Shooting Range	Gravel
6.56	MN 50265 & DR 02017	Kirkwood Correctional Centre	Golden Ridge	Surfaced
7.70	Blue Crane Crescent	-	Unknown	Gravel
7.71	Unknown	-	Blackie Swart	Surfaced
7.80	Unknown	Unknown		Gravel
8.20	Unknown	Unknown	Vleisverwerking	Gravel
8.90	Unknown	Unknown	-	Surfaced
9.10	Unknown	Unknown	Unknown	Gravel
9.70	Unknown	Unknown	-	Surfaced
9.80	Unknown	Malmaison School	-	Gravel
9.81	Unknown	Unknown	-	Gravel
9.82	Unknown	Unknown	-	Gravel
10.06	Unknown	-	Broadlands/ Sitrus Oewer	Gravel
10.15	Unknown	Unknown	Unknown	Gravel
10.40	Taute Way	-	Unknown	Gravel
10.60	Unknown	Unknown	-	Gravel
10.97	McClelland Road	Unknown	McClelland Rd (Unknown Farm)	Gravel
11.20	Unknown	Unknown	-	Gravel
11.80	Unknown	-	Swartkop	Gravel
12.02	Wood Way	Goodhope	Unknown	Pos. (Surfaced) and Neg. (Gravel)
12.50	Unknown	Habata	-	Surfaced
12.60	Barclay Way	Goodhope	Unknown	Gravel
13.47	Vaaldrift Way	Stillerus	Unknown	Gravel
14.41	Larson Way	-	Unknown	Gravel
14.60	Unknown	Unknown	-	Gravel
14.90	Unknown	-	Lemens Lodge	Gravel
15.07	Unknown	Unknown	River Reeds Lapa	Pos. (Surfaced)
15.40	Unknown	-	Vra Weer	Gravel
15.56	Scrimgeour Way	-	Unknown	Gravel
15.98	Unknown	SRCC	Unknown	Pos. (Surfaced)
16.30	Unknown	-	Workshop	Gravel
19.98	DR 01976	Unknown	Unknown	Gravel
21.80	Unknown	-	Unknown	Gravel
22.25	Unknown	Unknown	-	Gravel

23.22	Wilfred Way	Unknown	-	Gravel
24.26	Waverly Road	Unknown	-	Gravel
25.01	DR 01976	-	Unknown	Gravel
25.58	Unknown	Artwell	-	Gravel
25.70	Unknown	-	Ntabeni	Gravel
26.00	Unknown	Unknown	-	Gravel
26.40	Unknown	-	Unknown	Gravel
26.70	Unknown	-	Artwell	Gravel
27.20	Unknown	Pezula	Pezula	Gravel
27.81	Unknown	Boschkraal/Woolley	-	Gravel
29.40	Unknown	Serfontein Boerdery	-	Gravel
30.10	Unknown	-	Unknown	Gravel
30.60	Unknown	Serfontein Boerdery	-	Gravel
31.22	Unknown	Quaccatam	-	Gravel
32.00	Unknown	Unifrutti	-	Surfaced
34.54	Unknown	Unifrutti	-	Surfaced
35.30	Unknown	Elandeni Fruit	-	Gravel
35.66	Kloof Way	-	Unknown	Gravel
35.92	Burchmore Way	-	Unknown	Surfaced
36.20	Unknown	-	Unknown	Gravel
36.40	Unknown	Rose Cottage/Summerville	-	Surfaced
36.67	Oskop Way	Unknown	Unknown	Gravel
38.27	Unknown	Shamrock	-	Gravel
38.78	Prospect Avenue	Unknown	Nooitgedacht	Pos. (gravel) Neg. (surfaced)
39.76	DR 01983	Tregaron	Unknown	Pos. (surfaced) Neg. (gravel)
41.28	Unknown	-	Unknown	Gravel
41.80	Ferreira Way	Unknown	Belmont	Gravel
42.00	Unknown	Goodhope Farm	-	Gravel
43.16	Carlton Way	-	Unknown	Gravel
43.86	Jan Smuts	-	Unknown	Gravel
44.88	Reitz LN & Zuurberg Way	Unknown	Panzi Citrus	Gravel
45.83	Unknown	Sundays River Citrus Company	-	Surfaced
46.08	Unknown	-	Hermitage	Gravel
46.77	Unknown	-	Sneizzewood	Gravel
47.12	Kimberly LN	Unknown	Unknown	Gravel
47.55	Unknown	Unknown	-	Gravel

R 342 SECTION 1: INTERSECTIONS AND ACCESSES

Km	Intersecting Road Number/Route Number/ Name	Destination of Intersecting Road		Standard of Intersecting Road
		Positive	Negative	
1.50	Unknown	-	Addo Elephant Park	Surfaced
2.90	Unknown	-	Electrical Sub Station	Gravel
6.00	Unknown	-	Woodlands Train Station	Gravel
6.95	Unknown	Unknown	-	Gravel
7.40	Unknown	Unknown	Unknown	Gravel
9.50	Unknown	Nguni River Lodge	-	Gravel
12.20	Unknown	-	Mimosa Train Station	Gravel
12.75	Unknown	Mimosa	-	Gravel
13.60	Unknown	-	Unknown	Gravel
16.95	Unknown	-	Addo Afrique Estate	Surfaced
18.35	Unknown	Unknown	-	Surfaced
19.10	Unknown	-	Unknown	Gravel
19.65	Unknown	Unknown	-	Gravel
20.95	Unknown	-	Unknown	Gravel
21.95	Kortdoringspad	-	Unknown	Gravel
22.25	Unknown	Unknown	-	Gravel
22.50	Unknown	-	Unknown	Gravel
23.25	Unknown	Unknown	Unknown	Gravel
24.15	Residential road	Residential	Residential	Surfaced
24.36	Residential road	Residential	Residential	Surfaced

ANNEXURE D

CULVERTS

R 75 SECTION 2: CULVERTS

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
26.31	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
26.58	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
27.6	Pipe	0.375	1	Minor	N	N	Concrete	Concrete	Y	Y
27.8	Pipe	0.375	1	Minor	N	N	Concrete	Concrete	Y	Y
27.99	Pipe	0.375	1	Minor	N	N	Concrete	Concrete	Y	Y
28.53	Box	3 x 1.5dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
28.74	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
29.34	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
29.46	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
29.52	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
29.99	Pipe	0.6	2	Minor	Y	Y	Concrete, No Wing Walls	Concrete, No Wing Walls	N	N
31.21	Pipe	0.3	1	Minor	N	N	Concrete	Concrete	Y	Y
31.27	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
32.14	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
32.35	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
32.98	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
32.99	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
33.92	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
33.94	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
34.31	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
34.44	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
36.53	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
36.74	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
36.94	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y

37.21	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
37.34	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
37.59	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
37.76	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
38.02	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
38.16	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
38.48	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
38.57	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
38.61	Box	1.8 x 0.7dp	1	Minor	Y	Y	Concrete, Cracking Head Wall	Concrete, Cracking Head Wall	Y	Y
38.64	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
38.99	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
39.05	Pipe	0.60	1	Minor	N	N	Concrete	Concrete	Y	Y
39.56	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
40.13	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
40.80	Box	4.2 x 2.2dp	1	Major	Y	Y	Concrete	Concrete, Wing Wall breaking Away	Y	Y
41.17	Pipe	0.60	1	Minor	N	N	Concrete	Concrete	Y	Y
41.79	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
42.06	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
42.36	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
42.99	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
43.27	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
43.48	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
43.94	Box	1.8 x 1.8dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
44.21	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
44.46	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
44.66	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
44.95	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y

45.16	Pipe	0.45	2	Minor	N	N	Concrete	Concrete	Y	Y
46.28	Box	3.1	1	Major	N	N	Concrete	Concrete	Y	Y
47.95	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
49.03	Box	1.8 x 1.49dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
49.85	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
50.37	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
50.56	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
50.71	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
50.8	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
51.05	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
51.16	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
51.3	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
51.43	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
51.75	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
51.85	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
52.12	Pipe	0.75	2	Minor	N	N	Concrete	Concrete	Y	Y
52.59	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
52.87	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
53.27	Pipe	0.75	2	Minor	N	N	Concrete	Concrete	Y	Y
53.3	Pipe	0.75	2	Minor	N	N	Concrete	Concrete	Y	Y
53.57	Pipe	0.75	2	Minor	N	N	Concrete	Concrete	Y	Y
53.92	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
54.06	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
54.15	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
54.43	Box	2.4 x 1.2dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
56.31	Pipe	0.60	1	Minor	N	N	Concrete	Concrete	Y	Y
57.27	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y

57.51	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
57.66	Pipe	0.60	2	Minor	Y	N	Stone Head Wall	Concrete	Y	Y
57.68	Pipe	0.60	2	Minor	N	N	Concrete	Concrete	Y	Y
58.18	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
58.57	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
59.05	Pipe	1	1	Minor	N	N	Concrete	Concrete	Y	Y
60.49	Box	1.9 x 0.9dp	2	Minor	Y	Y	Heavy Silted, Cracked Wing Wall	Heavy Silted, Cracked Wing Wall	Y	Y
61.22	Box	1.9 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
62.02	Box	2.0 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
62.80	Pipe	0.6	1	Minor	N	N	-	-	Y	Y
63.11	Pipe	0.45	1	Minor	N	N	-	-	Y	Y
63.56	Box	1.0	1	Minor	N	N	-	-	Y	Y
64.02	Pipe	0.6	2	Minor	N	N	-	-	Y	Y
64.86	Pipe	0.45	1	Minor	N	N	-	-	Y	Y
65.27	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
65.68	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete, Cracking Wing Wall	Y	Y
66.4	Box	2.0 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
67.1	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
67.47	Box	2.0 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
68.02	Box	2.0 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
68.43	Pipe	0.6	1	Minor	N	N	-	-	Y	Y
68.55	Pipe	0.6	1	Minor	N	N	-	-	Y	Y
68.83	Box	2.2 x 1.5dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
69.4	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
70.24	Box	1.5 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
70.64	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y

71.14	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
71.4	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
71.87	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
72.14	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
72.72	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
73.03	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
73.11	Pipe	0.6	1	Minor	N	N	-	-	Y	Y
73.5	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete, Cracking Wing Wall	Concrete, Silted	Y	Y
73.82	Box	1.2 x1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
74.15	Box	1.2 x1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
74.37	Box	1.2 x1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
74.37	Box	1.2 x1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
74.37	Box	1.2 x1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
74.37	Box	1.2 x1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
74.68	Box	1.8 x 1.8dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
75.48	Box	2.4 x 1.2dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
75.82	Box	1.8 x 0.92dp	1	Minor	Y	Y	Concrete	Concrete, Cracking Wing Wall	Y	Y
76.02	Pipe	1.5	1	Minor	Y	Y	Concrete, Cracking Head Wall	Concrete, Cracking Wing Wall	Y	Y
76.6	Box	1.8 x 0.9dp	2	Minor	Y	Y	Concrete	Concrete	Y	Y
77.22	Box	1.8 x 0.9dp	1	Minor	Y	Y	Concrete, Cracking Wing Wall	Concrete, Cracking Wing Wall	Y	Y
77.84	Box	1.8 x 1.8dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y

Km	**Culvert Type: Box / Pipe**	**Size (m)**	**Number of Culverts**	**Category**	**Headwall**		**Head & Wing Wall Condition**		**Danger Plate**	
					Pos	**Neg**	**Pos**	**Neg**	**Pos**	**Neg**
78.08	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
78.42	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y

79.2	Box	3.0 x 1.5dp	3	Major	Y	Y	Concrete	Concrete, Wing Wall Breaking	Y	Y
79.4	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
79.53	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
79.71	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
79.86	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
79.99	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
80.23	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
80.57	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
80.77	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
80.9	Pipe	0.45	1	Minor	N	N	Concrete	Concrete	Y	Y
80.97	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
81.34	Box	1.2	1	Minor	N	N	Concrete	Concrete	Y	Y
81.67	Box	1.8 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
82.06	Pipe	1.45	1	Minor	N	N	Concrete	Concrete	Y	Y
82.65	Pipe	1.45	1	Minor	N	N	Concrete	Concrete	Y	Y
83.08	Box	1.8	1	Minor	Y	Y	Concrete	Concrete	Y	Y
83.49	Pipe	1.45	1	Minor	N	N	Concrete	Concrete	Y	Y
83.66	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
83.92	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
84.05	Box	1.2 x 0.9dp	1	Minor	Y	Y	Stone Head & Wing Wall	Stone Head & Wing Wall	Y	N
84.37	Pipe	1.8	1	Minor	Y	Y	Concrete, Cracking Head Wall	Concrete, Cracking Head Wall	Y	Y
85.51	Box	1.2 x 0.9dp	1	Minor	Y	Y	Stone Head & Wing Wall	Stone Head & Wing Wall	Y	Y
86.2	Box	1.2 x 0.9dp	1	Minor	Y	Y	Stone Head & Wing Wall	Stone Head & Wing Wall	Y	Y
86.43	Box	1.8 x 1.2dp	2	Minor	Y	Y	Concrete, Silted	Concrete, Silted	Y	Y
87.14	Box	1.2 x 0.9dp	2	Minor	Y	Y	Stone Head Wall	Stone Head Wall	Y	Y
87.77	Box	1.2 x 0.9dp	1	Minor	Y	Y	Stone Head & Wing Wall	Stone Head & Wing Wall	Y	Y
88.19	Box	1.8 x 0.6dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y

88.93	Box	1.5 x 0.6dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y

Km	Culvert Type: Box / Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
*89.01**	*Pipe*	*0.45*	*1*	Minor	*Y*	*Y*	*Stone Head Wall*	*Stone Head Wall*	*Y*	*Y*
*89.56**	*Box*	*1.5 x 0.9dp*	*1*	Minor	*Y*	*Y*	*Concrete*	*Concrete*	*Y*	*Y*
*90.32**	*Box*	*1.5 x 0.9dp*	*1*	Minor	*Y*	*Y*	*Concrete*	*Concrete*	*Y*	*Y*
*91.07**	*Box*	*1.8 x 1.2dp*	*1*	Minor	*Y*	*Y*	*Concrete*	*Concrete*	*Y*	*Y*
*91.21**	*Box*	*1.8 x 1.2dp*	*1*	Minor	*Y*	*Y*	*Concrete*	*Concrete*	*Y*	*Y*

** Information after chainage km88.99 recorded in accordance with existing R75/2 route markers*

R 75 SECTION 3: CULVERTS

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
2.91	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
3.28	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
3.75	Box	4 x 0.9dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
3.80	Box	4 x 0.9dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
3.93	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.02	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.12	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.19	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.29	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.49	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.64	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.73	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.88	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
5.10	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
5.42	Pipe	0.75	2	Minor	Y	Y	Concrete	Concrete	Y	Y
5.98	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
6.19	Box	1.2 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
6.39	Pipe	0.6	1	Minor	N	N	Concrete	Concrete	Y	Y
6.56	Pipe	0.6	2	Minor	N	N	Concrete	Concrete	Y	Y
6.81	Box	2.6 x 1.2dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
6.96	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y
7.16	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
7.31	Box	1.5 x 0.9dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
7.40	Pipe	0.75	1	Minor	Y	Y	Stone Head and Wing Wall	Stone Head and Wing Wall	Y	Y
7.75	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
7.98	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
8.27	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
8.75	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
9.27	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
9.87	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
10.31	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
10.77	Box	3 x 1.2dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
10.90	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
11.03	Box	3 x 1.2dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
11.50	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
12.47	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
12.48	Pipe	0.60	2	Minor	Y	Y	Concrete	Concrete	Y	Y
13.11	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
13.17	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
13.32	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y

13.48	Pipe	0.75	3	Minor	Y	Y	Concrete	Concrete	Y	Y

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
13.80	Box	3 x 0.9dp	1	Major	Y	Y	Concrete, Slight Spalling	Concrete, Slight Spalling	Y	Y
14.41	Pipe	0.75	2	Minor	Y	Y	Concrete	Concrete	Y	Y
14.52	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y
14.76	Box	3.0 x 0.9dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
14.96	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
15.03	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
15.30	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
15.54	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
15.56	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
15.69	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
15.74	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
16.02	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
16.06	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
16.91	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
16.95	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
16.96	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
16.99	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
17.11	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
17.12	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
17.28	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
17.31	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
17.65	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
18.01	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
18.5	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
18.55	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
18.62	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
18.69	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
18.72	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
18.75	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
19.02	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
19.46	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
19.54	Pipe	2	1	Minor	Y	Y	Concrete	Concrete	Y	Y
19.65	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y
20.11	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
20.36	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
20.57	Box	3.0 x 0.9dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
20.76	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
21.54	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
22.29	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
22.35	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y

22.56	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
22.57	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
22.61	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
23.00	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
23.02	Pipe	0.6	3	Minor	Y	Y	Concrete	Concrete	Y	Y
23.53	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
23.68	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
23.96	Pipe	0.6	3	Minor	Y	Y	Concrete	Concrete	Y	Y
24.02	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
24.16	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
24.34	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
24.52	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
24.79	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
25.92	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
26.35	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
26.55	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
27.18	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
27.26	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
27.32	Pipe	0.75	2	Minor	Y	Y	Concrete	Concrete	Y	Y
27.81	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
28.11	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
28.17	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
28.24	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y
28.33	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
28.54	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
28.97	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
29.14	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
29.34	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
29.64	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
29.72	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
29.95	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
29.98	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
30.38	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
30.6	Box	2.4 x 1.2dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
30.7	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
31.15	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
31.23	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
31.31	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
31.35	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
31.46	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
31.6	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
32.53	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
32.83	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y

33.1	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
33.2	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
33.3	Pipe	0.6	3	Minor	Y	Y	Concrete	Concrete	Y	Y
33.42	Pipe	0.75	3	Minor	Y	Y	Concrete	Concrete	Y	Y

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
33.69	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
33.94	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
34.28	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
34.57	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
34.85	Box	2.4 x 1.2dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
36.32	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
36.45	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
37.08	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
37.94	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
37.96	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.01	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.05	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.1	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.12	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.21	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.3	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.34	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.43	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.51	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.54	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.57	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
38.88	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.89	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.92	Pipe	0.75	1	Minor	Y	Y	Concrete	Concrete	Y	Y
38.98	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
39.68	Box	3.9	1	Minor	Y	Y	Concrete	Concrete	Y	Y
40.7	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
41.14	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
41.36	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
41.52	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
41.55	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
41.63	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
41.73	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
41.76	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
42.17	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
42.63	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y

R 335 SECTION 1: CULVERTS

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
30.37	Not Accessible	Unknown	-	-	N	N	-	-	N	N
30.5	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	N	Y
30.628	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete	Y	Y
30.655	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
30.724	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
30.784	Pipe	0.45	1	Minor	Y	N	Concrete	Grid Inlet, (Grid Missing)	Y	N
30.841	Pipe	0.45	1	Minor	Y	N	Concrete	Grid Inlet, (Grid Missing)	Y	Y
30.895	Pipe	0.45	1	Minor	Y	N	Concrete	Grid Inlet, (Grid Missing)	Y	Y
30.957	Pipe	0.6	1	Minor	Y	N	Concrete, Spalling	Grid Inlet	Y	Y
31.08	Pipe	0.6	1	Minor	Y	N	Concrete, Spalling	Grid Inlet, (Grid Missing)	Y	N
31.077	Pipe	0.45	1	Minor	Y	N	Concrete	Grid Inlet, (Grid Missing)	Y	N
31.153	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	N	N
31.214	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
31.306	Pipe	0.45	1	Minor	Y	N	Concrete	Grid Inlet, (Grid Missing)	Y	Y
31.423	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	N	N
31.48	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
31.629	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
31.656	Pipe	0.6	2	Minor	Y	Y	Concrete	Concrete	Y	Y
31.762	Pipe	0.45	1	Minor	Y	N	Concrete	Grid Inlet,	Y	N

								(Grid Missing)		
32.14	Pipe	0.6	1	Minor	N	N	-	-	N	Y
32.5	Pipe	0.6	1	Minor	N	N	-	-	Y	Y
32.578	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
33.3	Pipe	0.45	2	Minor	Y	Y	Concrete	Concrete	Y	Y
36.3	Irrigation	0.6	-	Minor	Y	Y	Concrete, Collapsed	Concrete, Spalling	Y	Y
37.55	Armco Shape	2.4 x 2.1dp	1	Major	Y	Y	Concrete Cracking, no Wing Walls	Concrete Cracking, no Wing Walls	N	N
38.9	Not Accessible, Overgrown	Unknown	-	-	N	N	-	-	Y	N
39.3	Pipe	0.6	1	Minor	Y	N/A	Stone Headwall, Needs Cleaning	Not Accessible	Y	Y
40.63	Box	3.1 x 1.8dp	1	Major	Y	Y	Concrete, Wing Wall Cracking	Concrete Wing Wall Cracking	Y	Y
43.28	Irrigation Box Culvert	Unknown	3	-	Y	Y	Concrete	Concrete	Guard rail	N
43.8	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete		
44.61	Pipe	0.6	1	Minor	Y	Y	Concrete Cracked and silted	Concrete Cracked and silted	Y	Y
46.38	Pipe	0.6	1	Minor	Y	Y	Concrete Crack in Head Wall	Concrete	Y	Y
47.25	Pipe	0.6	1	Minor	Y	Y	Concrete Crack in Head Wall	Concrete Crack in Head Wall	Y	Y
49.1	Pipe	0.6	1	Minor	Y	Y	Stone Headwall, Cracking	Concrete	N	N
49.22	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
49.35	Pipe	0.6	1	Minor	Y	Y	Concrete Crack in Head Wall	Concrete Crack in Head Wall	N	N

R 336 SECTION 1: CULVERTS

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
2.42	Pipe	0.9	1	Minor	Y	Y	Stone Headwall	Stone Headwall Eroded	Y	Y
2.50	Pipe	0.9	1	Minor	Y	Y	Stone Headwall	Stone Headwall	Y	Y
2.63	Box	6.0 x 1.2dp	1	Major	Y	Y	Concrete	Concrete	Y	Y
3.57	Pipe	0.6	1	Minor	Y	Y	Stone Headwall	Stone Headwall Eroded	Y	Y
4.00	Box	2.0 x 1.7dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.30	Pipe	0.6	1	Minor	Y	Y	Stone Headwall	Stone Headwall	Y	Y
4.83	Pipe	0.6	1	Minor	N	Y	Stone Headwall Eroded	Stone Headwall	Y	Y
6.90	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
9.41	Box	1.4 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
14.41	Box	2.0 x 1.2dp	1	Minor	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
14.95	Irrigation Channel	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
21.30	Pipe	0.6	1	Minor	N	Y	Invisible, silted	Stone Headwall not intact (loose)	Y	Y
21.43	Pipe	0.45	1	Minor	N	N	-	-	Y	Y
22.63	Pipe	0.45	1	Minor	Y	Y	Concrete (no wing walls)	Concrete (no wing walls)	Y	Y
22.90	Irrigation Channel	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
23.58	Pipe	0.45	1	Minor	Y	Y	Concrete (no wing walls)	Concrete (no wing walls)	Y	Y
23.70	Pipe	0.45	1	Minor	Y	Y	Concrete (no wing walls)	Concrete (no wing walls)	N	N
23.90	Irrigation Channel	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
24.26	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
24.40	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
25.00	Irrigation Channel	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
25.61	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
25.80	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
26.10	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
26.60	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y

27.58	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
Km	**Culvert Type: Box/Pipe**	**Size (m)**	**Number of Culverts**	**Category**	**Headwall**		**Head & Wing Wall Condition**		**Danger Plate**	
					Pos	**Neg**	**Pos**	**Neg**	**Pos**	**Neg**
25.61	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
25.80	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
26.10	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
26.60	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
27.58	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
4.30	Pipe	0.6	1	Minor	Y	Y	Stone Headwall	Stone Headwall	Y	Y
4.83	Pipe	0.6	1	Minor	N	Y	Stone Headwall Eroded	Stone Headwall	Y	Y
6.90	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
9.41	Box	1.4 x 1.2dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
14.41	Box	2.0 x 1.2dp	1	Minor	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
14.95	Irrigation Channel	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
21.30	Pipe	0.6	1	Minor	N	Y	Invisible, silted	Stone Headwall not intact (loose)	Y	Y
21.43	Pipe	0.45	1	Minor	N	N	-	-	Y	Y
22.63	Pipe	0.45	1	Minor	Y	Y	Concrete (no wing walls)	Concrete (no wing walls)	Y	Y
22.90	Irrigation Channel	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
23.58	Pipe	0.45	1	Minor	Y	Y	Concrete (no wing walls)	Concrete (no wing walls)	Y	Y
23.70	Pipe	0.45	1	Minor	Y	Y	Concrete (no wing walls)	Concrete (no wing walls)	N	N
23.90	Irrigation Channel	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
24.26	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
24.40	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
25.00	Irrigation Channel	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
30.40	Not visible Heavily silted	Unknown	-	-	Y	Y	Concrete	Concrete	Y	Y
31.70	Pipe	0.6	1	Minor	N	N	-	-	Y	Y
34.30	Not visible Heavily silted	Unknown	-	-	Y	Y	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
34.59	Pipe	0.6	1	Minor	N	N	Stone Headwall	Stone Headwall	Y	Y

34.70	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
34.82	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
35.30	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
35.70	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
36.00	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
36.39	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
41.50	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
42.00	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
43.00	Irrigation Channel	Unknown	-	-	Y	Y.	Concrete (Irrigation)	Concrete (Irrigation)	Y	Y
43.15	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
44.60	Pipe	0.45	1	Minor	Y	Y	Concrete (cracked)	Concrete	Y	Y
44.70	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
45.80	Pipe	0.45	1	Minor	Y	Y	Concrete	Concrete	Y	Y
46.50	Not visible Heavily silted	unknown	-	-	N	N	-	-	Y	Y

R 342 SECTION 1: CULVERTS

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
0.16	Pipe	0.9	4	Minor	Y	Y	Concrete	Concrete	Y	Y
3.25	Box	1.8 x 1.8dp	1	Minor	Y	Y	Concrete	Concrete	Y	Y
3.50	Pipe	0.6	1	Minor	Y	Y	Concrete	Concrete	Y	Y
3.65	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
4.40	Pipe	0.9	2	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
4.60	Pipe	0.9	2	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
4.85	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
5.00	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
5.61	Box	1.8 x 1.8dp	2	Minor	Y	Y	Concrete	Concrete	Y	Y
6.00	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
6.22	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
6.35	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
6.95	Box	1.8 x 1.2dp	2	Minor	Y	Y	Concrete	Concrete	Y	Y
7.10	Box	1.8 x 1.8dp	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
7.70	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
8.00	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
8.43	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
8.98	Pipe	0.6	5	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
10.50	Box	1.8 x 1.8dp	2	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
11.40	Pipe	0.6	2	Minor	Y	Y	Stone Headwall	Stone Headwall	Y	Y
12.50	Box	1.8 x 2.4dp	3	Minor	Y	Y	Concrete	Concrete	Y	Y
13.15	Box	1.8 x 1.2dp	2	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
13.80	Pipe	0.6	1	Minor	N	N	-	-	Y	Y
14.30	Pipe	0.9	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
15.10	Pipe	0.9	2	Minor	Y	Y	Concrete	Concrete	Y	Y
15.20	Box	1.8 x 1.2dp	2	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
15.90	Box	1.8 x 1.8dp	2	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
16.20	Pipe	0.9	1	Minor	Y	Y	Concrete	Concrete	Y	Y

Km	Culvert Type: Box/Pipe	Size (m)	Number of Culverts	Category	Headwall		Head & Wing Wall Condition		Danger Plate	
					Pos	Neg	Pos	Neg	Pos	Neg
16.90	Pipe	0.9	2	Minor	Y	Y	Concrete	Concrete	Y	Y
17.30	Pipe	0.6	1	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
18.10	Pipe	0.45	1	Minor	Y	Y	Stone Headwall	Stone Headwall	Y	Y
18.30	Pipe	0.6	1	Minor	Y	Y	Stone Headwall	Stone Headwall	Y	Y
18.70	Box	1.9 x 1.9	2	Minor	Y	Y	Concrete	Concrete	Y	Y
19.40	Box	1.8 x 1.2dp	2	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
21.45	Pipe	0.90	3	Minor	Y	Y	Concrete, Spalling	Concrete, Spalling	Y	Y
21.90	Pipe	0.60	2	Minor	N	N	-	-	Y	Y
21.90	Pipe	0.60	1	Minor	N	N	-	-	Y	Y
22.81	Pipe	0.60	1	Minor	N	N	-	-	Y	Y
23.50	Pipe	0.60	2	Minor	N	N	-	-	Y	Y

R75 SECTION 2 - CULVERTS



KM 40.8 – 4.2x2.2dp Box with Wing Wall Cracking



KM 57.6 - 2 off Ø600 pipes with no headwall



KM 76.0 - Ø1.5m with Crack in Head Wall

R75 SECTION 3 - CULVERTS



KM 3.8 - 4x0.9dp Box with Cracking



KM 10.8 – Stone Wing Wall



KM 13.8 – 3x0.9dp Box with Head Wall Spalling

R336 SECTION 1 - CULVERTS



KM 3.572 - Ø600mm Pipe with Stone Head Wall Silted



KM 44.6 – Stone Head Wall Silted culvert

R342 SECTION 1 - CULVERTS



KM 0.16 - 4 x Ø900mm Head and Wing Wall Concrete Spalling



KM 6.95 – 2 x 1.8 x 1.2m Box with Cracking in Head and Wing Walls



KM 6.95 - 2x 1.8x1.2m Box Wing Walls Cracking



KM 21.45 – 3x Ø900mm Concrete Spalling and Need Cleaning

R335 SECTION 1 - CULVERTS



KM 32.5 - Ø600mm with no Head Wall



KM 36.3 - Irrigation Channel Head and Wing Walls Collapsing

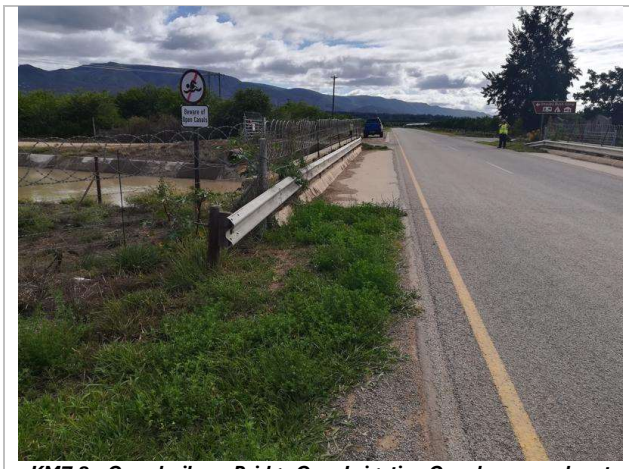


KM 37.55 - Head Wall Cracking

ANNEXURE E

GUARDRAILS

R336 SECTION 1 - GUARDRAILS



KM7.8 – Guardrails on Bridge Over Irrigation Canal-approach not buried

ANNEXURE F

ROAD TRAFFIC SIGNS

R75 SECTION 2 - SIGNAGE



Warning signs (W313/IN11.2/W405/W406) applied to standard



Sign (W331) angle to be adjusted (at ±93° to travel direction)



Tourist guidance sign (GF2) to standard. Minor moss growth on sign face



Warning sign (W358) to be rectified. Bottom height to be min. 1.9 - 2.1m)



Warning signs (W405/W406) applied to standard



River name sign (GL4) damaged. Sign placement close to road edge (min. 1.2m)



Tourist guidance sign (GF2, national park) to standard

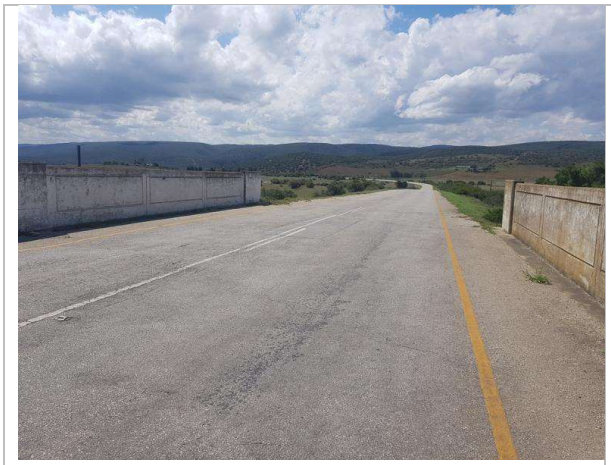


Stacked tourist guidance sign (GF2, police & wildlife) to standard



Directional guidance sign (GD1) to standard. Sign face slightly damaged

R342 SECTION 1 – SIGNAGE



KM19.5 – No advance warning or hazard signage on curve (viewed in neg. direction)



KM20.5 – No advance warning or hazard signage on curve

R336 SECTION 1 - SIGNAGE



KM0 - Directional guidance sign (GD2) & stop sign (R1). New sign being installed



KM7.5 – River name sign (GL4) + bridge name. Sign placement close to road edge (min. 1.2m)



Advertising (assumed illegal, status not verifiable)



KM20.4 - Curve signage recommended (W202/W203 & W405/W406)



Advertising (legal status not verifiable)



Tourist guidance sign (GF2) to standard (foreground). Curve signage recommended (W202/W203 & W405/W406) to appropriate standard

R335 SECTION 1 – SIGNAGE



KM30.5 - Tourist info/advertising (legal status not verifiable)



KM32.0 - Curve signage to standard (W202)



Curve signage (W405) to be replaced



Signage (R201 & W328) height to be rectified (min. 1.9 to 2.1m bottom height. Recommended for regulatory sign to be on top & the warning sign to be below



KM39.52 - Directional guidance sign (GD2) & T-junction chevron (W409) to standard



Tourist info/advertising (legal status not verifiable)



Speed limit sign (R201) is obscured. Sign (x2) to be replaced



KM43.1 - Curve signage recommended (W202/W203 & W405/W406). No stopping sign (R217) to standard. Road markings (RM12) required accordingly



KM49.3 - Crossroad on priority road sign (W102) to standard



KM49.48 - Directional guidance sign (GD2) & T-junction chevron (W409) to standard

ANNEXURE G

FENCING

R 75 SECTION 2: FENCING

KM			DIRECTION	FENCE TYPE	GENERAL CONDITION
START	END	LENGTH			
25.90	32.00	6.10	Pos	7-string/Vermin (±2.0m)	Fair to good
25.90	32.00	6.10	Neg	7-string/Vermin (±2.0m)	Fair to good
32.00	37.00	5.00	Pos	Bonnox/Vermin (±2.0m)	Fair to good
32.00	37.00	5.00	Neg	Bonnox/Vermin (±2.0m)	Fair to good
37.00	39.00	2.00	Pos	7-string/Vermin (±2.0m)	Fair to good
37.00	39.00	2.00	Neg	3-string/Vermin (±1.0m)	Fair to good
39.00	42.00	3.00	Pos	7-string/Vermin (±2.0m)	Fair to good
39.00	42.00	3.00	Neg	7-string/Vermin (±2.0m)	Fair to good
42.00	48.00	6.00	Pos	Bonnox/Vermin (±2.0m)	Fair. Sections are poor/corroded
42.00	48.00	6.00	Neg	7-string/Vermin (±2.0m)	Fair to good
42.00	48.00	6.00	Pos	7-string/Vermin (±2.0m)	Fair to good
48.00	53.00	5.00	Pos	5-string/stock (±1.0m)	Fair to good
48.00	53.00	5.00	Neg	Bonnox/Vermin (±2.0m)	Fair to good
56.00	62.00	6.00	Pos	3-string/Vermin (±1.0m)	Fair. Some sections (±100-200m) are poor/corroded
56.00	62.00	6.00	Neg	3-string/Vermin (±1.0m)	Fair to good
62.00	63.20	1.20	Pos	3-string/Vermin (±1.0m)	Fair to good
62.00	63.20	1.20	Neg	Bonnox/Vermin (±2.0m)	Fair to good
63.20	66.00	2.80	Pos	Bonnox/Vermin (±2.0m)	Fair to good
63.20	66.00	2.80	Neg	Bonnox/Vermin (±2.0m)	Fair to good
66.00	70.00	4.00	Pos	3-string/Vermin (±1.0m)	Fair to good
66.00	70.00	4.00	Neg	Bonnox/Vermin (±2.0m)	Fair to good
70.00	72.00	2.00	Pos	3-string/Vermin (±1.0m)	Fair to good
70.00	72.00	2.00	Neg	3-string/Vermin (±1.0m)	Fair to good
72.00	76.40	4.40	Pos	3-string/Vermin (±1.0m)	Fair to good
72.00	76.40	4.40	Neg	None/not visible	Possibly collapsed/overgrown by vegetation (along railway)
76.40	80.00	3.60	Pos	3-string/Vermin (±1.0m)	Fair to good

76.40	80.00	3.60	Neg	3-string/Vermin (±1.0m)	Fair to good
80.00	90.20	10.20	Pos	3-string/Vermin (±1.0m)	Fair to good
80.00	90.20*	10.20	Neg	7-string/Vermin (±2.0m)	Fair. Some sections (±100-200m) along railway are damaged

** Information after chainage km88.99 recorded in accordance with existing R75/2 route markers*

R 75 SECTION 3: FENCING

KM			DIRECTION	FENCE TYPE	GENERAL CONDITION
START	END	LENGTH			
0.00	18.00	18.00	Pos	3-string/Vermin (±1.0m)	Fair to good
0.00	18.00	18.00	Neg	3-string/Vermin (±1.0m)	Fair to good
18.00	20.40	2.40	Pos	3-string/Vermin (±1.0m)	Fair to good
18.00	20.40	2.40	Neg	Bonnox/Vermin (±2.0m)	Fair to good
20.40	33.00	12.60	Pos	7-string/Vermin (±2.0m)	Fair to good
20.40	33.00	12.60	Neg	3-string/Vermin (±1.0m)	Fair to good
33.00	34.00	1.00	Pos	Bonnox fence (±1.0m)	Fair to good
33.00	34.00	1.00	Neg	3-string/Vermin (±1.0m)	Fair to good
34.00	40.40	6.40	Pos	Bonnox/Vermin (±2.0m)	Fair to good
34.00	40.40	6.40	Neg	3-string/Vermin (±1.0m)	Fair. Some sections are poor/corroded
40.40	44.00	3.60	Pos	3-string/Vermin (±1.0m)	Fair to good
40.40	44.00	3.60	Neg	3-string/Vermin (±1.0m)	Fair to good

R 336 SECTION 1: FENCING

KM			DIRECTION	FENCE TYPE	GENERAL CONDITION
START	END	LENGTH			
0.00	0.20	0.20	Pos	3-string/Vermin (±1.0m)	Fair
0.00	0.20	0.20	Neg	3-string/Vermin (±1.0m)	Fair
0.32	6.50	6.18	Pos	7-String/ Bonnox/Vermin (±2.0m)	Fair to Good. ±10m section @ km4.0 (near Kirkwood prison) sagging
0.32	6.50	6.18	Neg	7-string/Vermin (±2.0m)	Fair to Good.
6.50	7.40	0.90	Pos	7-string/Vermin (±2.0m)	Fair to Good. (along farms)
6.50	7.40	0.90	Neg	3-string/Vermin (±1.0m)	Fair to Good (along farms)
7.80	9.70	1.90	Pos	3-string/Vermin (±1.0m)	Fair to Poor (along farms). 5-10m section @ approx. 9.7km (graveyard) collapsed
7.80	9.70	1.90	Neg	3-string/Vermin (±1.0m)	Fair to Poor (along farms).
9.70	9.90	0.20	Pos	Rectangular Mesh (±2.0m)	Good (at school)
9.70	10.01	0.31	Neg	3-string/Vermin (±1.0m)	Good (along farms)
9.90	10.01	0.11	Pos	5-string (±1.0m)	Fair (along farms)
10.02	11.00	0.98	Pos	7-string (±2.0m)	Fair (along farms)
10.02	11.00	0.98	Neg	7-string (±2.0m)	Fair (along farms)
11.00	12.00	1.00	Pos	7-string/Vermin (±2.0m)	Fair (along farms)
11.00	12.00	1.00	Neg	7-string/Vermin (±2.0m)	Fair (along farms)
12.00	12.60	0.60	Pos	5-string/Vermin (±2.0m)	Fair (along farms)
12.00	12.60	0.60	Neg	5-string (±1.0m)	Fair (along farms)
12.60	13.20	0.60	Pos	Barbed wire (±2.0m)	Good (along farms)
12.60	13.20	0.60	Neg	5-string (±1.0m)	Fair to poor (along farms). ±150m section collapsed
13.20	13.50	0.30	Pos	5-string (±1.0m)	Fair (along farms)
13.20	13.50	0.30	Neg	7-string (±1.0-2.0m)	Fair (along farms)
13.50	14.40	0.90	Pos	5-string (±1.0m)	Fair (along farms). Holes in fence @ ±13.5
13.50	14.80	1.30	Neg	Barbed wire (±2.0m)	Good (along farms)
14.40	14.80	0.40	Pos	Barbed wire (±2.0m)	Good (along farms)
14.80	15.40	0.60	Pos	7-string (±1.0-2.0m)	Fair (along farms)
14.40	16.10	1.70	Neg	5-string/Vermin (±1.0-2.0m)	Good to fair (along "Vra Weer" farms). Hole in fence near farm entrance
16.10	16.70	0.60	Neg	7-string (±1.0-2.0m)	Fair (along farms). Some sections covered by vegetation
16.70	17.30	0.60	Pos	n/a	Kirkwood Town Centre
17.30	20.30	3.00	Pos	7-string (±1.0-2.0m)	Fair to Good (along farms)
20.50	23.60	3.10	Pos	No Fence	-

20.50	23.60	3.10	Neg	No Fence	-
23.60	25.00	1.40	Pos	9-String (±2.0m)	Fair to Poor. Verges mostly overgrown with vegetation
23.60	25.00	1.40	Neg	9-String (±2.0m)	Fair to Poor. Verges mostly overgrown with vegetation
25.00	25.60	0.60	Pos	No Fence	-
25.00	25.60	0.60	Neg	9-String (±2.0m)	Fair to Poor
25.60	26.00	0.40	Pos	9-String (±2.0m)	Fair to Poor
25.60	26.00	0.40	Neg	9-String (±2.0m)	Fair to Poor
26.00	27.60	1.60	Pos	5-string (±1.0m)	Fair to Poor
26.00	26.80	0.80	Neg	No Fence	-
26.80	30.20	3.40	Neg	5-string (±1.0m)	Fair to Poor. Sections missing & collapsed (at graveyard). Overgrown
27.60	27.80	0.20	Pos	No Fence	-
27.80	29.00	1.20	Pos	7-string (±1.0-2.0m)	Fair to Good (along farms)
29.00	30.60	1.60	Pos	9-String (±2.0m)	Fair (along farms). No fence section at ±29.8 (along railway)
30.20	30.80	0.60	Neg	7-string (±1.0-2.0m)	Fair. Partially collapsed (along farms)
30.81	38.00	7.19	Pos	No Fence / Not visible	Some sections alongside railway or farms / possibly overgrown
30.81	33.20	2.39	Neg	No Fence	-
33.20	33.50	0.30	Neg	3-string/Vermin (±1.0m)	Poor. Collapsed section
33.50	34.60	1.10	Neg	No Fence	-
34.60	36.40	1.80	Neg	5-string/Bonnox (±1.0-2.0m)	Fair to Good
36.40	37.20	0.80	Neg	7-string (±1.0-2.0m)	Fair to Good. Section ±10-20m electrified at farmhouse
36.40	37.20	0.80	Neg	5-string/Bonnox (±1.0-2.0m)	Fair to Good
37.20	37.80	0.60	Neg	No Fence	Alongside farms & irrigation channel
37.80	38.00	0.20	Neg	7-string (±1.0-2.0m)	Fair to Good (along farms)
38.00	38.20	0.20	Pos	7-string (±1.0-2.0m)	Fair to Good (along farms)
38.00	38.20	0.20	Neg	Diamond mesh (±1.0-2.0m)	Fair to Good (along farms)
38.20	38.80	0.60	Pos	7-string (±1.0-2.0m)	Fair (along farms)
38.20	38.80	0.60	Neg	7-string (±1.0-2.0m)	Fair (along farms)
38.80	38.95	0.15	Pos	7-string (±1.0-2.0m)	Poor. Collapsed / Overgrown (by vegetation) sections
38.80	38.95	0.15	Neg	No Fence	Vegetation encroaching on verge / road
39.00	42.20	3.20	Pos	String / mesh	Poor. Overgrown by vegetation
39.00	40.20	1.20	Neg	No Fence	-
40.20	40.30	0.10	Neg	No fence / Boundary Walls	Section alongside residential houses / railway
42.20	43.40	1.20	Pos	Rectangular Mesh (±2.0m)	Fair to Good (along farms)
40.30	43.40	3.10	Neg	No Fence / Not visible	Vegetation encroaching on verge / road
43.50	44.20	0.70	Pos	5-string (±1.0m)	Fair (along farms). Sections overgrown with vegetation

44.20	44.90	0.70	Pos	Barbed wire (±2.0m)	Fair to Good (along farms)
43.30	44.50	1.20	Neg	5-string (±1.0m)	Fair (along farms). Sections overgrown with vegetation
44.90	47.50	2.60	Pos	7-string (±1.0-2.0m)	Fair (along farms). Sections overgrown with vegetation
47.50	48.05	0.55	Pos	No fence	-
44.50	48.05	3.55	Neg	No fence	Section alongside railway

R 342 SECTION 1: FENCING

KM			DIRECTION	FENCE TYPE	GENERAL CONDITION
START	END	LENGTH			
0.00	1.20	1.20	Pos	10-string/Vermin (±2.0m)	Fair to good
0.00	0.35	0.35	Neg	9-String (±2.0m)	Fair to good (along railway). 5-10m section at ±0.22 collapsed
1.20	18.00	16.80	Pos	Electrified/Game/Vermin (±2.0m)	Fair to Good. Alongside Addo game farm/park
0.35	0.40	0.05	Neg	7-string/Vermin-proof (±2.0m)	Fair to Good.
0.40	13.00	12.60	Neg	Vermin/Mesh/Bonnox (±1.0m) or No fence / not visible	Fence intermittent. Verges mostly overgrown / encroached with vegetation. Fence mostly not visible or missing, possibly collapsed. Visible sections are rusted / perforated. Alongside railway
13.00	14.00	1.00	Neg	3-string/Vermin (±1.0m)	Poor (along farms)
14.00	15.50	1.50	Neg	Bonnox/Vermin (±1.0m)	Fair to Poor (along farms). Overgrown / encroached with vegetation
15.50	19.50	4.00	Neg	7-string/Vermin (±1.0-2.0m)	Fair (along farms). Some sections overgrown / encroached with vegetation
18.00	19.50	1.50	Pos	3-string/Vermin (±1.0m)	Fair to Poor (along farms). Overgrown / encroached with vegetation
19.50	24.53	5.03	Pos	3-string/Vermin (±1.0m)	Fair to Poor (along farms). Overgrown / encroached with vegetation
19.50	24.53	5.03	Neg	3-string/Vermin (±1.0m)	Fair to Poor (along farms). Overgrown / encroached with vegetation

R 335 SECTION 1: FENCING

KM			DIRECTION	FENCE TYPE	GENERAL CONDITION
START	END	LENGTH			
30.10	32.15	2.05	Pos	10-String/Game (±2.0m)	Good. Some sections overgrown / encroached with vegetation
30.10	30.30	0.20	Neg	No Fence / not visible	Possible fence, but not visible on top / over of steep embankment
30.30	32.90	2.60	Neg	7-String/Bonnox/Vermin (±2.0m)	Fair to Good. 5-10m section @ approx. -4.0km (near Kirkwood prison) sagging @ culvert
30.30	32.90	2.60	Pos	Electrified/Game (±2.0m)	Good (along game farm/park)
32.15	34.20	2.05	Pos	7-string (±1.0-2.0m)	Fair to Poor (along farms). Sections collapsed / overgrown with vegetation
32.15	34.20	2.05	Neg	3-string/Vermin (±1.0m)	Fair to Good (along farms)
34.60	34.90	0.30	Pos	No fence	-
34.20	34.90	0.70	Neg	No Fence / not visible	-
34.90	37.00	2.10	Pos	5-string / Barbed wire (±2.0m)	Good (along farms)
34.90	37.00	2.10	Neg	5-string / Barbed wire (±2.0m)	Good (along farms). Minor section ±10-20m overgrown with vegetation
37.00	39.25	2.25	Pos	n/a	Addo Town area. Sections of verges overgrown
37.00	39.25	2.25	Neg	n/a	Addo Town area. Sections of verges overgrown
39.25	40.00	0.75	Pos	Rectangular Mesh/10-String (±2.0m)	Fair (along farms)
39.25	40.00	0.75	Neg	No fence	-
40.00	42.70	2.70	Pos	5-string (±1.0m)	Fair (along farms)
40.00	40.40	0.40	Neg	7-string/Vermin (±2.0m)	Fair (along farms)
40.40	40.50	0.10	Neg	Electrified (±2.0m)	Fair (along farms)
40.50	41.00	0.50	Neg	7-string (±1.0-2.0m)	Fair (along farms)
41.30	43.10	1.80	Neg	10-string (±2.0m) / Electrified	Good (along farms). Only short sections electrified
42.70	43.20	0.50	Pos	10-string (±2.0m)	Good (along farms)
43.10	43.20	0.10	Neg	Electrified (±2.0m)	Good (along farms)
43.30	44.20	0.90	Pos	No fence	-
43.30	44.00	0.70	Neg	No fence	-
44.00	44.20	0.20	Neg	7-string/Vermin (±2.0m)	Fair to Poor (along farms). Overgrown / encroached with vegetation
44.20	45.60	1.40	Pos	7-string/Vermin (±2.0m)	Fair to Poor (along farms)
44.20	45.60	1.40	Neg	7-string (±1.0-2.0m)	Fair to Poor (along farms). Overgrown / encroached with vegetation
45.60	47.50	1.90	Pos	10-String/Vermin-proof (±2.0m)	Fair to Poor (along farms)
45.60	47.00	1.40	Neg	No Fence / not visible	Fence intermittent. Verges mostly overgrown vegetation. Fence not visible or missing, possibly collapsed. Visible sections are rusted

47.00	48.00	1.00	Neg	7-string (±1.0-2.0m)	Fair (along farms). Minor section ±10-20m collapsed/missing
47.50	48.00	0.50	Pos	7-string (±1.0-2.0m)	Fair (along farms)
48.00	49.98	1.98	Pos	7-string (±2.0m)	Fair (along farms)
48.00	49.98	1.98	Neg	7-string (±2.0m)	Fair (along farms). ±10-20m section @ 49.6 collapsed

R75 SECTION 2 – FENCING



R75/2 - Typical Damage to Vermin Fence



R75/2 - Typical Overgrown Fence

R336 SECTION 1 – FENCING



R336/1 – Typical Damage to Stock Fence



R336/1 – Typical Overgrown Stock Fence

R342 SECTION 1 – FENCING



R342/1 – Typical Overgrown Stock Fence



R342/1 – Typical Damaged and Overgrown Stock Fence

R335 SECTION 1 – FENCING

	
R335/1 – Section of Fence Completely Missing	***R335/1 – Typical Damaged Stock Fence***

ANNEXURE H

VEGETATION

R75 SECTION 2 - VEGETATION

	
Grass on Edge of Road with and shrubs in Road Reserve	***Grass on Edge of Road with Small Vegetation***
	
Grass on Edge of Road	***Vegetation Overgrowing Fence***

R75 SECTION 3 - VEGETATION

	
Vegetation along verge	***Vegetation along verge***



Vegetation on fence Line



Vegetation along verge

R336 SECTION 1 - VEGETATION



Trees and shrubs on the Fence line



Grass on Edge of Road with trees overhanging into road reserve



Vegetation Encroaching on to Road Edge



Baling of Vegetation on the Edge of the Road

R342 SECTION 1 - VEGETATION



Vegetation Encroaching on to Roads Edge



Grass on Edge of Road with Vegetation at Fence



Baling of Vegetation on the Edge of the Road



Grass on Edge of Road, Baling Encroaching on the Road

R335 SECTION 1 - VEGETATION



Vegetation next to Road Edge



Vegetation next to Road Edge

	
Vegetation Encroaching on to Road Edge	***Vegetation Overgrowing Fence***

ANNEXURE I

TYPICAL INVADER SPECIES

TYPICAL INVASIVE PLANTS AND TREATMENT

NATIONAL ROUTES R335 SECTION 1 KM 30.12 TO KM 49.48, R336 SECTION 1 KM 0.0 TO KM 48.05, R342 SECTION 1 KM 0.0 TO 24.53 AND R75 SECTION 2 KM 25.93 TO SECTION 3 KM

Invasive Plant Photo	Description	Eradication method	Herbicide
	**Scientific name** *Melia azedarach* **Common name** Syringa **Category 1b**	• Cut close to the ground, remove sawdust and apply herbicide immediately to cut surfaces	• KAPUT GEL undiluted or HATCHET 0.5Lt in 16Lt water
	**Scientific name** *Psidium guajava* **Common name** Guava **Category 2**	• Cut close to the ground, remove sawdust and apply herbicide immediately to cut surfaces	• HATCHET 2Lt in 16Lt water
	**Scientific name** *Opuntia stricta / monacantha / ficus-indica* **Common name** Cactus pears **Category 1**	• Make 4 holes in the stem base and each of the side branches • Spray or inject small quantity (2ml) of herbicide into each hole • Lightly spray the leaves of small plants and loose cladodes	• MSMA (formulation L-7279). Mix 1Lt for every 1Lt water
	**Scientific name** *Ricinus communis* **Common name** Castor oil **Category 1b**	• Hand pulls small or isolated plants • Cut large plants close to the ground, remove sawdust and apply herbicide immediately to cut surfaces	• HATCHET 0.5Lt in 16Lt water
	***Scientific name*** *Lantana camara* ***Common name*** Lantana ***Category 1***	• Cut close to the ground, remove sawdust and apply herbicide immediately to cut surfaces	• HATCHET 0.5Lt in 16Lt water
	**Scientific name** *Cestrum laevigatum* **Common name** Inkberry **Category 1b**	• Cut close to the ground, remove sawdust and apply herbicide immediately to cut surfaces	• HATCHET 0.5Lt in 16Lt water

TYPICAL INVASIVE PLANTS AND TREATMENT

NATIONAL ROUTES R335 SECTION 1 KM 30.12 TO KM 49.48, R336 SECTION 1 KM 0.0 TO KM 48.05, R342 SECTION 1 KM 0.0 TO 24.53 AND R75 SECTION 2 KM 25.93 TO SECTION 3 KM

Invasive Plant Photo	Description	Eradication method	Herbicide
	**Scientific name** *Cortaderia selloana* **Common name** Pampas grass **Category 1b**	• Leaf spray • If plants are above head height, slash and spray regrowth when 1m tall	• KILO MAX 850ml + 100ml GREEN DYE in 16Lt water
	**Scientific name** *Arundo donax* ***Common name*** Spanish reed ***Category 1***	• Leaf spray • If plants are above head height, slash and spray regrowth when 1m tall	• KILO MAX 850ml + 100ml GREEN DYE in 16Lt water
	***Scientific name*** *Asclepias physocarpa / fruticose* ***Common name*** Shrubby milkbush, Old man's balls ***Category 1***	• Leaf spray	• ASTRA 120ml + CROPOIL 80ml + 100ml GREEN DYE
	***Scientific name*** *Rubus cuneifolius* ***Common name*** American bramble ***Category 1***	• Leaf spray	• ASTRA 120ml + CROPOIL 80ml + 100ml GREEN DYE
	***Scientific name*** *Eucalyptus camaldulensis / Diversicolor* ***Common name*** Gum trees ***Category 2***	• Cut close to the ground, remove sawdust and apply herbicide	• HATCHET 2Lt in 16Lt water

	***Scientific name*** *Datura stramonium / ferox* ***Common name*** Thorn apple ***Category 1***	• Hand pulls small or isolated plants Leaf spray dense stands	• ASTRA 120ml + CROPOIL 80ml + 100ml GREEN DYE

TYPICAL INVASIVE PLANTS AND TREATMENT ***NATIONAL ROUTES R335 SECTION 1 KM 30.12 TO KM 49.48, R336 SECTION 1 KM 0.0 TO KM 48.05, R342 SECTION 1 KM 0.0 TO 24.53 AND R75 SECTION 2 KM 25.93 TO SECTION 3 KM***

Invasive Plant Photo	Description	Eradication method	Herbicide
	***Scientific name*** *Circium vulgare* ***Common name*** Scotch thistle ***Category 1***	• Spray all leaf surfaces preferably while plants are still in the rosette stage	• ASTRA 120ml + CROPOIL 80ml + 100ml GREEN DYE
	***Scientific name*** *Acacia mearnsii* ***Common name*** Black wattle ***Category 2***	• Hand pull small plants • Cut large plants close to the ground, remove sawdust and apply herbicide immediately	• KAPUT GEL undiluted
	***Scientific name*** *Acacia saligna / longifolia / cyclops* ***Common name*** Port Jackson, Longleaf wattle, Rooikrans ***Category 2***	• Hand pull small plants • Cut large plants close to the ground, remove sawdust and apply herbicide immediately	
	***Scientific name*** *Acacia karroo* ***Common name*** Sweet thorn ***Regulation 16***	• Cut close to the ground, remove sawdust and apply herbicide immediately to cut surfaces • Lightly spray the leaves of small plants or stump regrowth	• BROWSER 320ml + CROPOIL 320ml + GREEN DYE 100ml in 16Lt water

Should the regulations become law, any species designated under section 70 cannot be propagated, grown, bought or sold by the industry without a permit. Below is a brief explanation of the three categories and the proposed list of invasive plants species (section 70 only):

- **Category 1a:** Invasive species requiring compulsory control. Remove and destroy. Any specimens of Category 1a listed species need, by law, to be eradicated from the environment. No permits will be issued.
- **Category 1b:** Invasive species requiring compulsory control as part of an invasive species control programme. Remove and destroy. These plants are deemed to have such a high invasive potential that infestations can qualify to be placed under a government sponsored invasive species management programme. No permits will be issued.
- **Category 2:** Invasive species regulated by area. A demarcation permit is required to import, possess, grow, breed, move, sell, buy or accept as a gift any plants listed as Category 2 plants. No permits will be issued for Cat 2 plants to exist in riparian zones.
- **Category 3:** Invasive species regulated by activity. An individual plant permit is required to undertake any of the following restricted activities (import, possess, grow, breed, move, sell, buy or accept as a gift) involving a Category 3 species. No permits will be issued for Cat 3 plants to exist in riparian zones.

ANNEXURE J

REST STOPS

R75 SECTION 2 – REST STOPS

<table>
<tr><td></td><td></td></tr>
<tr><td>KM 42 – Rest stop in fair condition</td><td>KM 42 – Rest stop in poor condition. Damaged furniture</td></tr>
<tr><td></td><td></td></tr>
<tr><td>KM 45.87 – Rest Stop at R75 – R336 Intersection. Fair to good condition</td><td>Typical rest stop in poor condition. No/missing Furniture</td></tr>
</table>