

Rheenendal Structure Plan Transportation Status Quo Report

Knysna Municipality

30 May 2013

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Summary Sheet

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1. INTRODUCTION

1.1 Background

The town of Rheenendal is located in the Knysna Municipality in the north-eastern expanse of the municipal area as shown in Figure 1. It comprises various smallholdings, farms and settlements with the main settlement being the Keurhoek community. Refer to Figure 2.

Although various planning guidelines have been developed by various government institutions for rural areas in general, and the Spatial Development Framework for Knysna Municipality¹ has been developed, none of these guidelines provide specific guidelines for the Rheenendal area. Rheenendal experiences various planning and socio-economic challenges. Accordingly, Knysna Council recognised that there is a need to develop spatial planning guidelines for the Rheenendal area to guide future development.

Marika Vreken Town Planners are managing the planning process and ITS Engineers was subsequently appointed to provide transportation planning and engineering services as part of this process.

1.2 Objectives

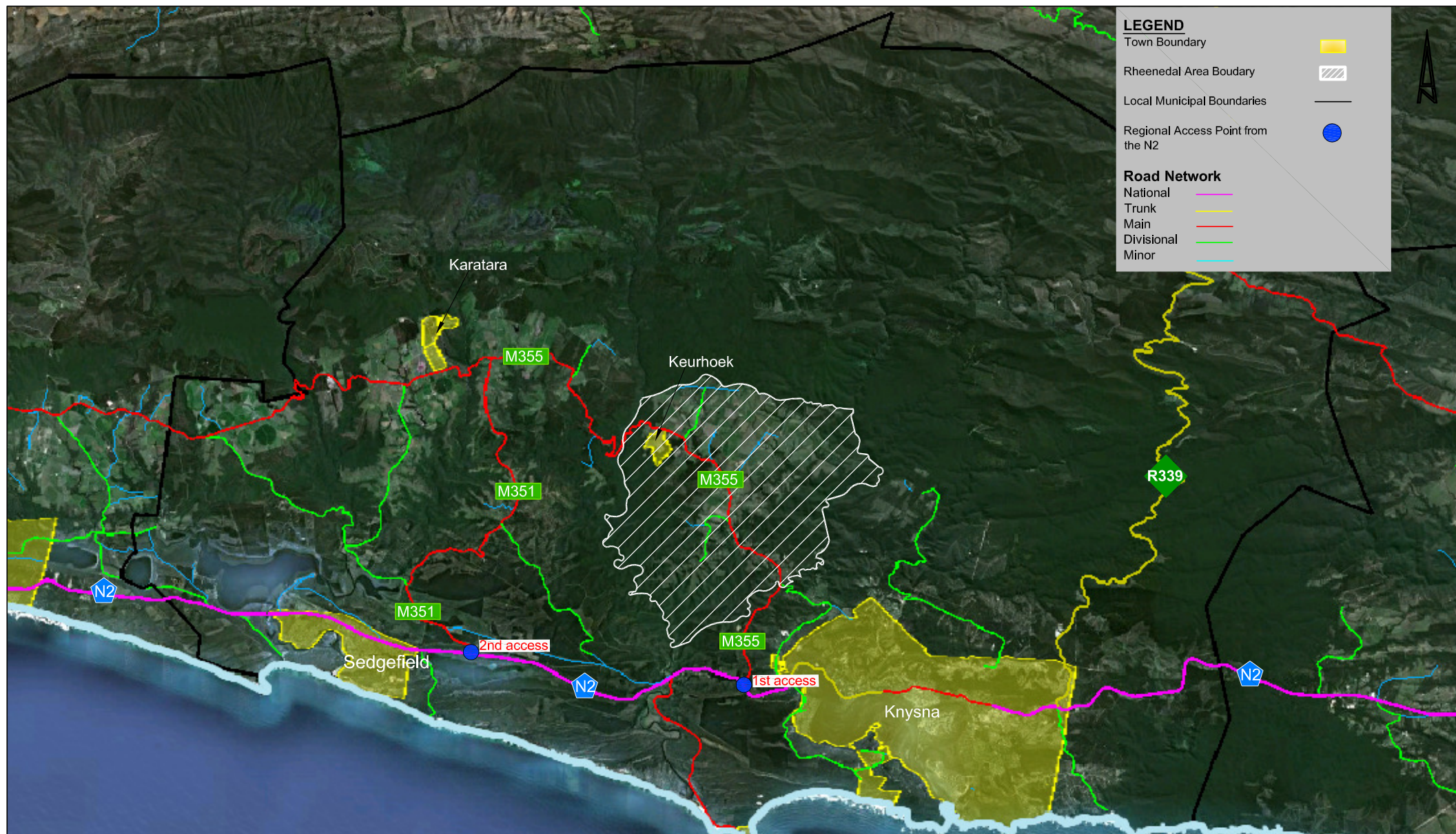
The objective of this Status-Quo report is to investigate existing transport services and infrastructure in the study area.

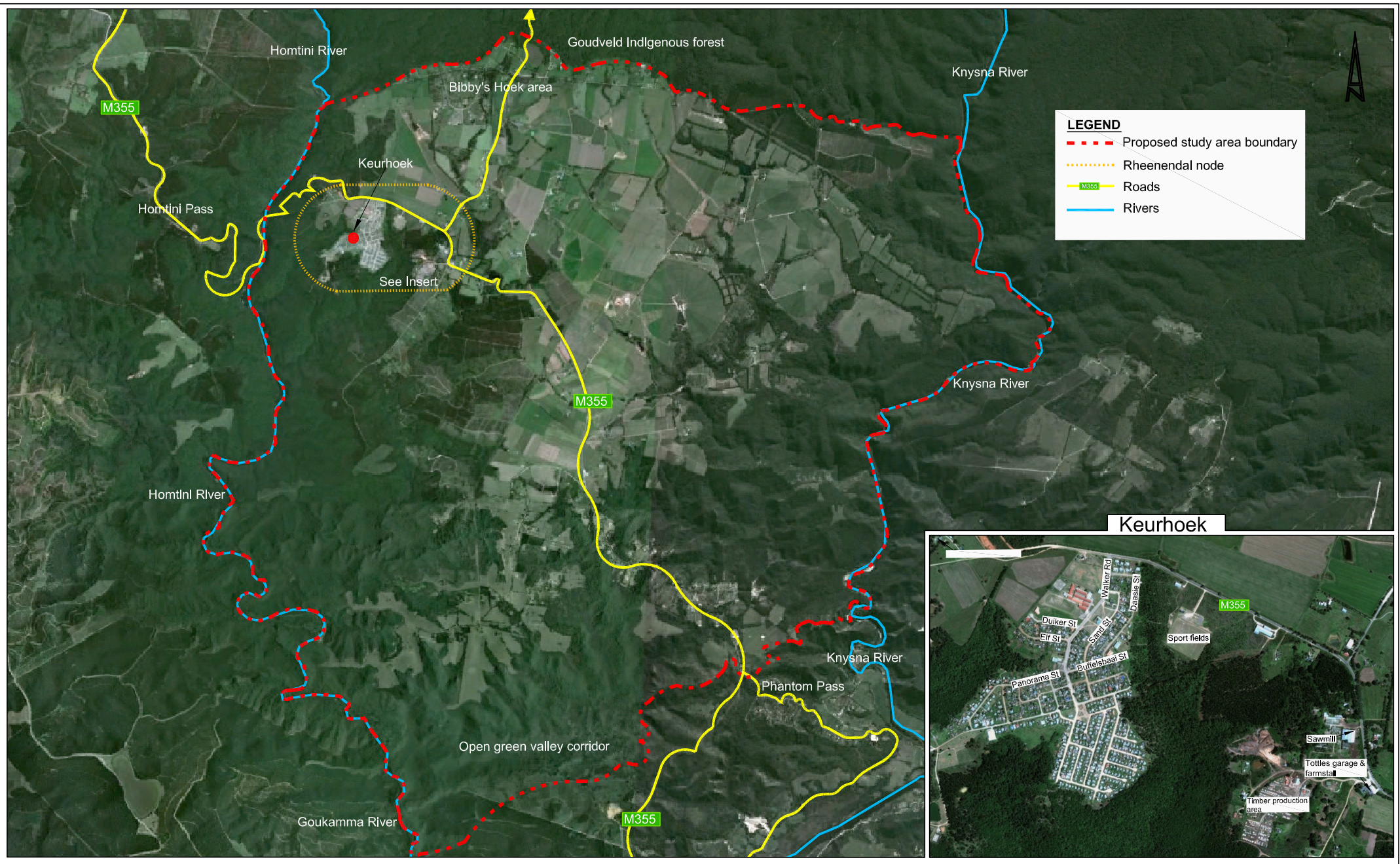
1.3 Layout of report

The status quo report is divided into the following chapters:

- Chapter 1: *Introduction* provides a brief overview of the project.
- Chapter 2: *Description of the existing transportation environment* highlights the existing transportation conditions.
- Chapter 3: *Conclusion* outlines the main findings.

1. Knysna Municipality, *The Spatial Development Framework for Knysna LM*, Prepared by MCA Planners November, 2008





2. DESCRIPTION OF THE EXISTING TRANSPORTATION ENVIRONMENT

2.1 Location

Rheenendal forms part of the Knysna Municipality as shown in Figure 1. The area is bounded by the Knysna River to the east, the Homitini and Goukamma Rivers to the west, the Goudveld indigenous forest in the north and the Phantom Pass and the valley open/ green corridor to the south as shown in Figure 2.

2.2 Existing street and road network

2.2.1 Regional access roads

There are 2 accesses routes to the Rheenendal area as shown in Figure 1. The first access is the MR355 (the Rheenendal Road) connecting Rheenendal and Karatara, located further north of Rheenendal, with the N2 to the shoulders. The road is surfaced, but approximately 12 km of this road between Rheenendal and Karatara, the Homtini Pass, is gravel only as illustrated in Figure 3. However, according to the Provincial Government Western Cape (PGWC) Road Network Information System (RNIS), the condition this gravel road is generally good.

MR355 is a class 3 district distributor road and connects Rheenendal to Knysna CBD via the N2. MR355 intersects with the N2 in a priority-controlled intersection with the N2 having priority. It also provides direct local access to the Keurhoek settlement, as well the surrounding farms and smallholdings in the Rheenendal area.



Figure 3: Current condition of the MR355

The second access is the MR351 (R102) connecting Rheenendal and Karatara with the N2 to the west, as shown in Figure 1. The MR351 also intersects with the N2 in a priority-controlled intersection with the N2 having priority as shown in Figure 4. The full length of the road is paved. According to the PGWC RNIS the condition of this road is generally good. MR351 is also a class 3 district distributor road. This road intersects with the MR355 approximately at the Rheenendal boundary.



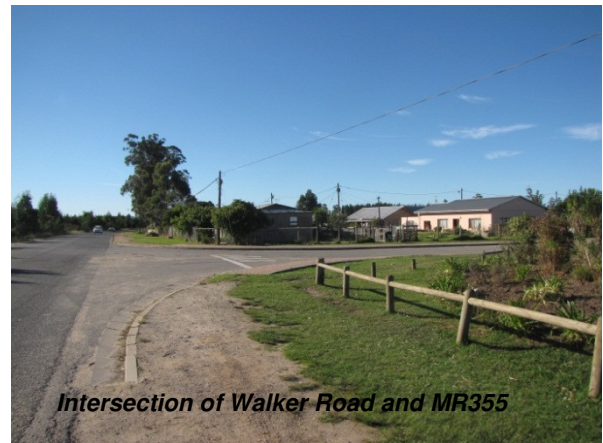
Figure 4: N2 intersection and cross-section of MR351

2.2.2 Local streets

The streets serving Rheenendal include MR355, Walker Street and various local streets. These are further discussed hereafter:

- As shown in Figure 2 MR355 is the main route connecting the Keurhoek settlement to the surrounding destinations in the Rheenendal area.

Walker Road is a class 4 local distributor road running north-south in the Keurhoek settlement and intersects with MR355 at the northern end. The intersection shoulder sight distances at this intersection appears to be sufficient.



Walker Road serves as the local main street and all public facilities, including the primary school and community centres, are located along it. Traffic calming measures are provided along Walker Road, as well as in front of the school for learners, as shown in Figure 5 below. Walker Road is surfaced, but not along the newer residential extensions to the south of Keurhoek as illustrated in Figure 2. The majority of the local residential streets connect with Walker Road in priority-controlled intersections with Walker Road having priority.

- Generally all the local streets in the older section of Keurhoek including; Elf, Duiker, Sand, Panorama, and Bufflesbaai Streets, as well as in the newer residential areas to the south of Keurhoek, are not paved.



Traffic calming measure at Rheenendal Primary school



Traffic calming along Walker Road



Road condition along Walker Road



Gravel section along Walker Road

Figure 5: Existing street network and roads condition in Keurhoek residential area

2.3 Future road network

Future road network planning for the Rheenendal area have not been undertaken in the past. However, the Spatial Development Framework for Knysna LM² recommends that the gravel road between Rheenendal and Karatara, to create a loop of access between the towns and the N2.

2.4 Existing traffic volumes

Traffic volumes for the major roads in Rheenendal area, including the MR355 and MR351, were obtained from the PGWC RNIS as illustrated on Figure 6 overleaf. These roads carry low to moderate traffic volumes ranging between Annual Average Daily Traffic (AADT) levels of 501-1500 and between 1051 – 4500 vehicles per day.

2. Knysna Municipality, Spatial Development Framework for Knysna LM. Prepared by MCA Planners November, 2008

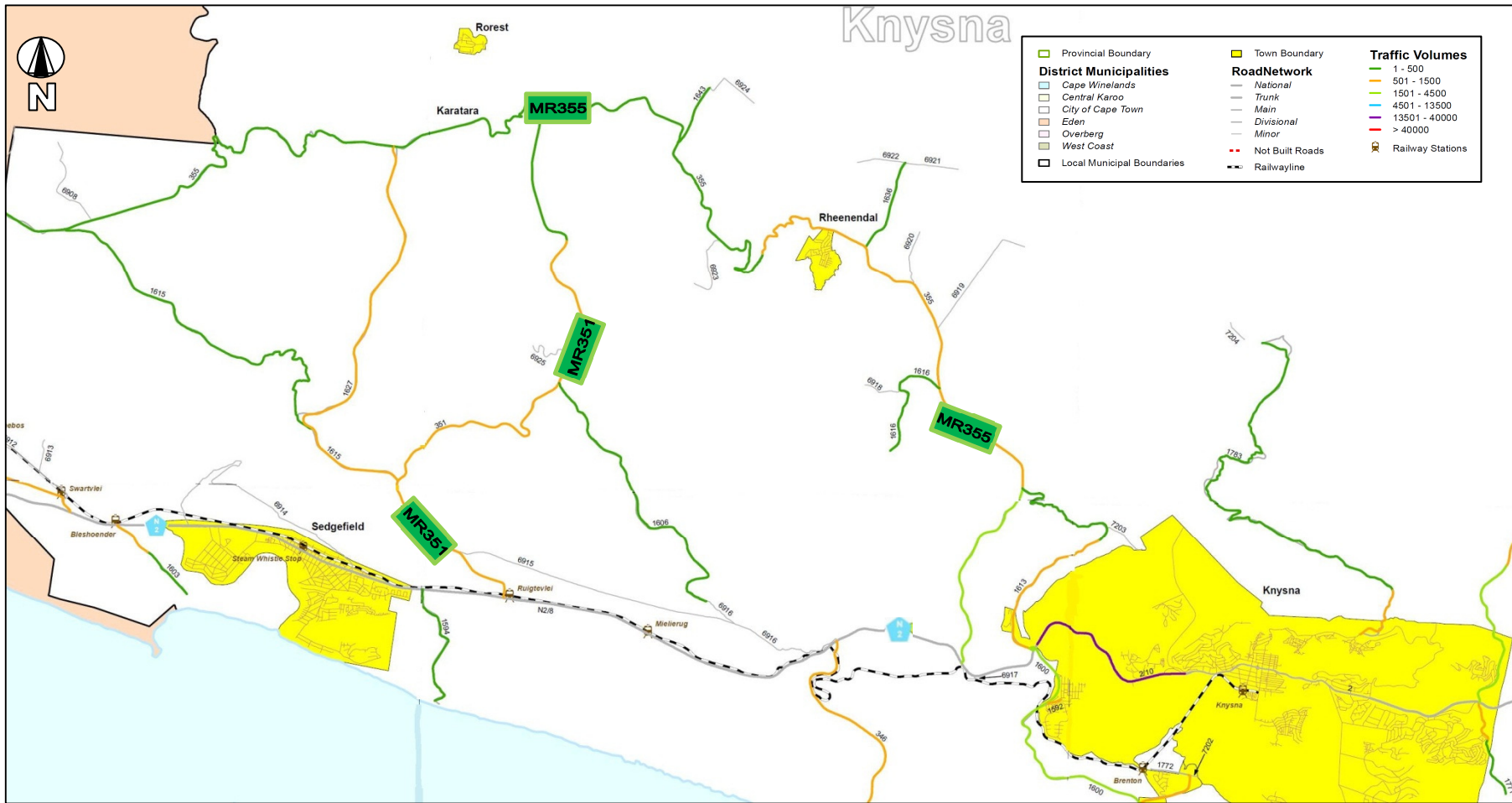


Figure 6: Traffic volumes on major roads in Rheenendal area

Source: PGWC GIS Map, March 2013

2.5 Road safety

According to an official of Knysna Municipality, not many accidents in the past ten year have been reported in the Rheenendal area. Most accidents that occurred in the area were due to high speeds or overloading of buses (especially learner buses). The summary of inputs from community consultation as part of the review of the Integrated Development Plan for Knysna Municipality³ indicated that there is a strong request from the Rheenendal community to intensify law enforcement on public transport for learners by ensuring that vehicles transporting learners are roadworthy and not overloaded. This is due to the the recent learner bus accident that occurred in the area in 2011.

2.6 Road-based public transport

Public transport in this region is primarily provided by local minibuss taxis and learner bus services. These services are further discussed hereafter.

2.6.1 Taxi operations

The Current Public Transport Record⁴ (CPTR) for Knysna Municipality recorded a taxi route operating between Knysna and Rheenendal via Belvidere as shown on Figure 7. Figure 7 also outlines the major boarding and along points along the route.

Seven taxi trips were observed between Knysna and Rheenendal during the peak hour on both a typical weekday and on a Saturday as listed in Table 1. There were approximately 81 passengers observed on this route on a weekday and 58 passengers on a Saturday. The highest demand for taxis occurs on a weekday, because of home-work or home-school trips.

Table 1: Service Capacity and Capacity Utilisation of Routes

Town	Rank	Route Codes	Route Name	Period	No of Departures	Vehicle Cap	Service Cap	No. of Pax	% Utilisation
Weekday : Service Capacity and Capacity Utilisation of Routes									
Knysna	Knysna Rank	869	Rheenendal	07:00 to 08:00	7	15	105	81	77%
Saturday : Service Capacity and Capacity Utilisation of Routes									
Knysna	Knysna Rank	869	Rheenendal	13:00 to 14:00	7	15	103	58	56%

Source: CPTR for Knysna LM, 2013

3. Knysna Municipality, *Knysna Municipality Integrated Development Plan, 2012–2017, May 2012*

4. Western Cape Department of Transport and Public Works, *Update of the CPTR and OLS for Knysna Local Municipality, Prepared by Pendulum Consulting, 2011*

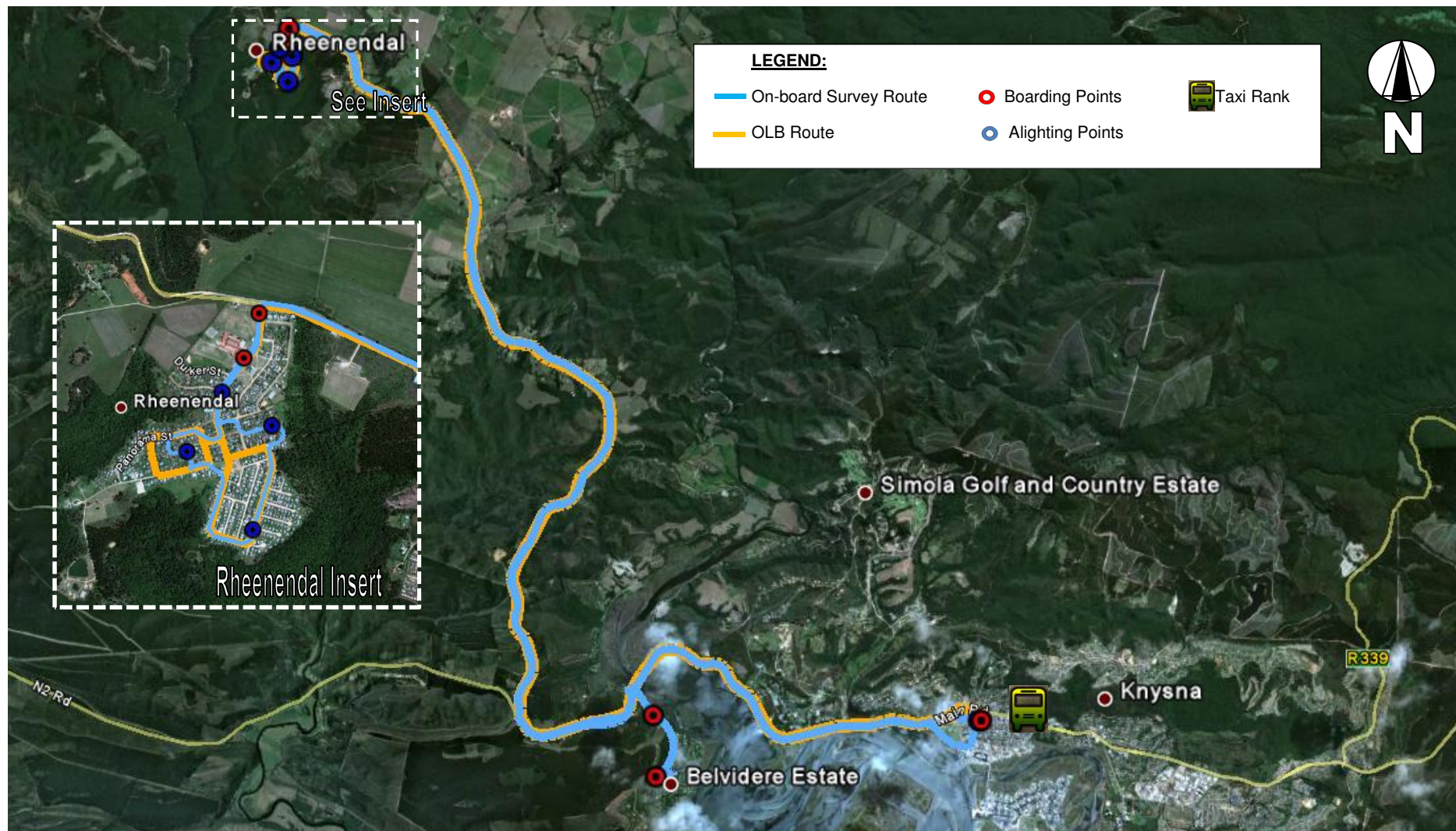


Figure 7: Taxi routes in the Rheenendal area

2.6.1 Bus services

Currently there are no bus services for local commuters in the Rheenendal area. The only bus services operating in the region are subsidised learner buses serving the Rheenendal Primary School. As shown in Table 2 below a total number of 58 primary school learners use the subsidised learner transport in Rheenendal area.

Table 2: Primary school learner routes in Rheenendal area

School	Learners per route	Route Description
Rheenendal Primary School	40	Gouldveld Staatbos, Highway Turn-off, Leeubosch Turn-off to Rheenendal Primary School
	18	Bosbou Nursery Turn-off, Barrington Turn-off, Farleigh Turn-off, Ruyterplaats and Kraaibosch Turn-off to Rheenendal Primary School

Source: CPTR for Knysna LM, 2013

Unfortunately, there is no subsidised learner transport for high school learners in the Rheenendal area. Currently the transport is privately contracted and paid for by the parents. There is only one daily bus that transport learners to the high schools in Knysna.



2.6.2 Public transport facilities

There is currently no formal taxi rank provided in the Rheenendal area. Public transport embayments are provided along Walker Road in the Keurhoek residential area as shown in the photographs in Figure 8. Generally, passengers are collected and dropped –off along informal stops along the residential streets in Keurhoek and along MR355.



Figure 8: Existing public transport infrastructure along Walker Road, Keurhoek

2.6.3 Future public transport planning

The Eden District Municipality Mobility Strategy⁵ proposed a daily commuter and social service throughout the day between Keurhoek and Knysna. The Mobility Strategy also recommended that Rheenendal will require a full depot and secure parking area.

2.7 Rail

Although quite an extensive rail network exists in Knysna LM, there are no passenger rail services that exist in the region.

2.8 Non-motorised transport

Based on on-site observations and discussions with local people, the community relies heavily on non-motorised transport (NMT) as their main mode of transport to work. People were observed walking and cycling to various places of work. A number of cyclists were observed along MR355, as well as within Keurhoek, as shown in the photographs in Figure 9.

There is currently no NMT infrastructure along MR355 although cyclists do use it. Cyclists cycle in the road because the shoulders are not paved. This is dangerous because motorists travel at high-speeds.

Sidewalks and pedestrian crossings are provided along Walker Road in the Keurhoek area, but no cycle facilities are provided.

5. Western Cape Department of Transport and Public Works, *Eden District Municipality Mobility Strategy*, Prepared by Arcus Gibb, 2012



Pedestrian desire lines in Keurhoek



Sidewalks along Walker Road



Cycling to work



Cycling on regional roads

Figure 9: Existing NMT activities and infrastructure in Rheenendal area

There are visible pedestrian and NMT desire lines in the community, as well as to the neighbouring farms as shown on Figure 10.



Figure 10: NMT desire lines in Rheenendal area

The Eden District Municipality's NMT Masterplan⁶ recognised the portion between the Walker Road and Totties garage and farm stall access along the MR355, as a strategic NMT route. The plan recommends a class 2 cycle way (physically separated from the travel way for vehicles) along this route. This facility will provide a cycle route between Keurhoek and the existing employment opportunities and business/ shops in the area.

⁶ *Eden District Municipality, Non-Motorised Transport Masterplan for Eden District Municipality. Prepared by Pendulum PDNA Joint Venture, July 2007.*

3. CONCLUSION

After undertaking this status quo investigation our main findings are as follows:

- The main road (MR355) to Rheenendal is a surfaced road and is in relatively good condition. This route is frequently used by pedestrians and cyclists, but has no shoulders. This is a relatively dangerous situation as pedestrians and cyclists are not always very visible and the operating speed along this road can be expected to be high. MR355 carries moderate levels of traffic with an AADT of less than 1500 vpd.
- There is a high reliance on public transport, walking and cycling in the community. Public transport embayments, sidewalks, pedestrian crossings and traffic calming have been provided along Walker Road in response to the more active pedestrian environments along this section. However, almost half of the residential streets in Keurhoek are not surfaced and almost all do not have sidewalks.
- A strong pedestrian desire line is observed from Keurhoek to the timber production yard behind Totties garage and farm stall. Although proposals have been made for NMT facilities along a section of the MR355 just north of Keurhoek, the planning to date has not addressed this strong pedestrian desire line.
- In terms of future public transport planning, a public transport facility in Rheenendal has been identified, but the site for such a facility has not been identified yet.