

A SURVEY ON ROAD USERS WITH REGARD TO ROAD MAINTENANCE, SAFETY AND TRAFFIC WITHIN THE PORT OF DURBAN

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ABSTRACT

Over the past years road traffic has increased at the Port of Durban and this has resulted in an increase in road maintenance work including its budget. Roads are considered as the most important transport mode at the Port of Durban. Road transport moves almost 80% of the import and export cargo and railways approximately 20%.

The Port of Durban is an important vehicle for facilitating economic growth of local, regional and national industries. For the Port to maintain global competitiveness with the current trend of globalization, it has to ensure that roads are well maintained, safe and have smooth traffic flow with minimum delays.

The purpose of the paper is to provide an overview of the status of road maintenance, safety and traffic within the Port of Durban. A questionnaire survey was conducted targeting road users and recommendations were also drawn based on the findings.

1. INTRODUCTION

1.1 Background of the study

In the past, all roads within the Port of Durban were owned and maintained by Transnet National Ports Authority (formerly known as Portnet). Currently, not all roads within the Port are owned and maintained by Transnet National Ports Authority (TNPA). Some of the roads are owned by eThekwini Municipality, Transnet Port Terminals, Transnet Freight Rail and Private companies. TNPA is the landlord for the Port of Durban. Private companies and other Transnet divisions such as Transnet Port Terminals and Transnet Freight Rail leases land from TNPA. EThekwini Municipality is the local government for the City of Durban, in which the Port of Durban is located. Normally the period of change in ownership and delay in reaching agreements between the landlord and lessee has resulted in most of the roads not being maintained.

There is a weigh bridge at Bayhead Road which assists in ensuring that the weight of goods and condition of the vehicle is legal. The law enforcement agencies such as Metro Police, South African Police Services (SAPS) and South African Revenue Service (SARS) are major contributors in improving road safety. The Customs department of SARS deals

with goods clearance by checking the permit on cargo that enter or exit the Port. The introduction of a security control system known as International Ship and Port Facility Security (ISPS) Code has also assisted in improving Port security which plays a major role on drivers' behaviour. Drivers are now aware of the ISPS Code with regard to Port security rules and road rules.

The objectives of the ISPS Code was to establish an international framework involving co-operation between contracting governments, government agencies, local administrations and the shipping and port industries to detect/assess security threats and take preventive measures against security incidents affecting ship or port facilities used in international trade. In order to achieve its objectives, the Code embodies a number of functional requirements, one of which was to prevent unauthorized access to ships, port facilities and their restricted areas (International Marine Organization, 2003).

In the eighty five years leading up to 1995, the South African Railways and Harbours held a monopoly on transport over a 50 km lead distance from the port and therefore all cargo owners, both import and export, were obliged to dispatch their produce by rail. This led to large areas of the Bayhead becoming the preserve of the railways, large marshalling yards and carriage and wagon workshops were established in the area. When rail was the dominant mode of transport to the port, all the marshalling yards were used and in fact lack of marshalling space often proved to be the bottleneck of the Port (Department of Transport, 2008).

1.2 Objectives of the study

The main purpose of the study was to determine the following:

- To obtain feedback from road users with regard to the status of road maintenance, safety, traffic and law enforcement within the Port,
- To recommend measures based on the findings of the survey.

1.3 Study limitations

The study covers the roads within the Port of Durban. The survey was aimed at road users who travel on the roads within the Port using light or heavy vehicles. People who use motorbikes, bicycles and those who walk to access the Port were excluded from this survey because of their minor contribution in regard to road maintenance and traffic. The following Figure 1 shows the major roads within the Port of Durban that connect the South, West and North of eThekweni Municipality. It also shows the location of the six stations where the survey was conducted. Stations were numbered as follows: Station 1 – Quayside road, Station 2 – Intersection of Maydon road and Victoria Embankment, Station 3 – Intersection of Francois and Maydon road, Station 4 – Intersection of Bayhead and South Coast road, Station 5 – Intersection of Langerberg and Bayhead road, Station 6 – Intersection of Bluff and Iran road.

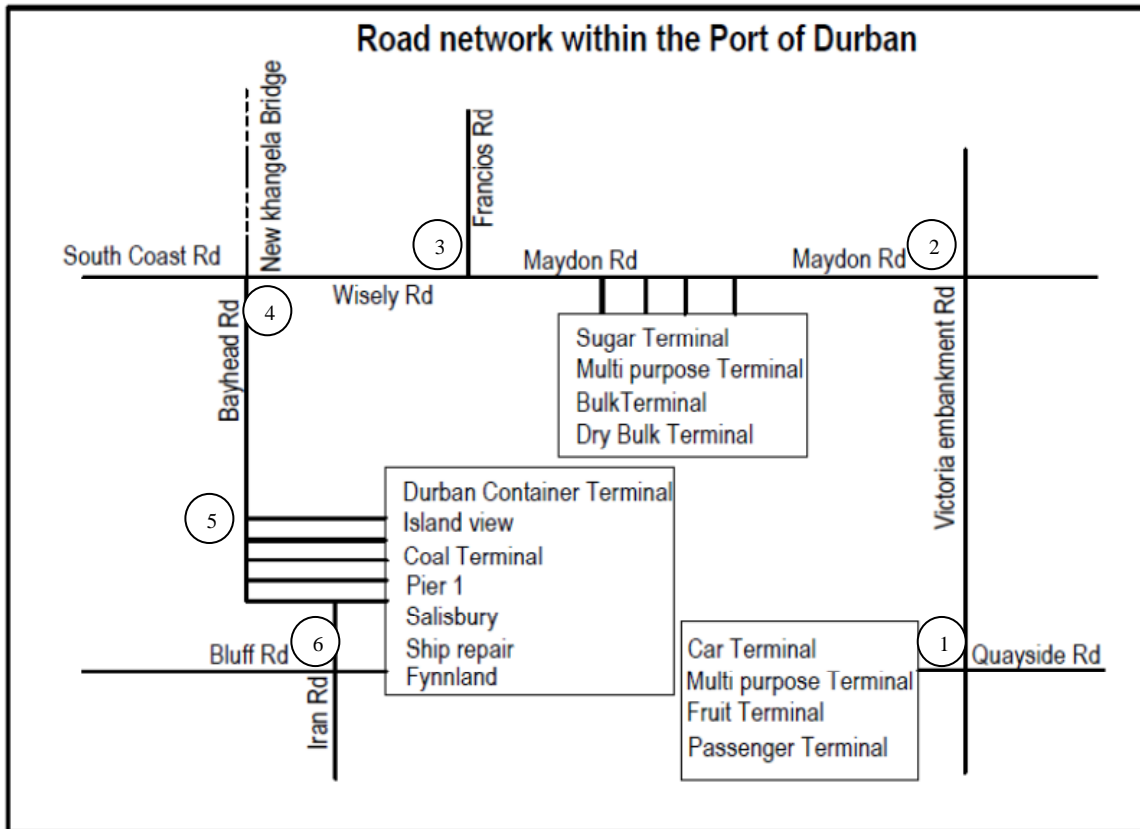


Figure 1: Road network and stations where survey was conducted

2. METHODOLOGY

Three hundred and sixty (360) people participated in the questionnaire survey. These included road users from Government, private sector and unemployed road users. The questionnaire survey was completed in November 2011. The questionnaire survey forms were handed to road users on selected dates at various stations as reflected in Table 1. These questionnaires were handed out to every road user approaching the survey station between 09h00 – 15h00. There were 600 questionnaire survey forms distributed and each station was allocated 100 forms resulting in an overall return rate of 60%. Some road users refused to participate in this survey by not taking the forms or taking the form but not returning it back. Some road users completed the forms on site while others completed the form in their own time. Completed forms were sent back via fax or email address as indicated on the questionnaire.

Table 1: Schedule of surveys

Survey Dates	Stations	Station number
Tuesday 25-10-2011	Quayside road	Station 1
Thursday 27-10-2011	Maydon and Victoria embankment road	Station 2
Tuesday 01-11-2011	Francios and Maydon Road	Station 3
Thursday 03-11-2011	Bayhead and South Coast Road	Station 4
Tuesday 08-11-2011	Langerberg and Bayhead Road	Station 5
Thursday 10-11-2011	Bluff and Iran Road	Station 6

The questionnaire was simplified so that road users could choose between yes, no or not applicable (not sure). Allowance was also made for detail comments for those who wanted to give more information on this topic. There were 32 standard questions asked to road users from Government, private sector and unemployed.

The feedback received was analysed and presented in a summarised format. Some of the answers are combined and details are discussed under the findings.

3. FINDINGS

Approximately 250 (69.4%) of the respondents indicated that they often travel on these roads and 110 (30.6%) travel seldomly on these roads. Seldom travellers included first time travellers on these roads.

As illustrated in Figure 2, 67% of the road users use light vehicles who are employed by both Government and private sector. Approximately 33% of road users use heavy vehicles such as trucks to deliver or collect cargo at the Port of Durban and are employed by private sector. These results may not be applicable at different times of the day or at different periods of the month.

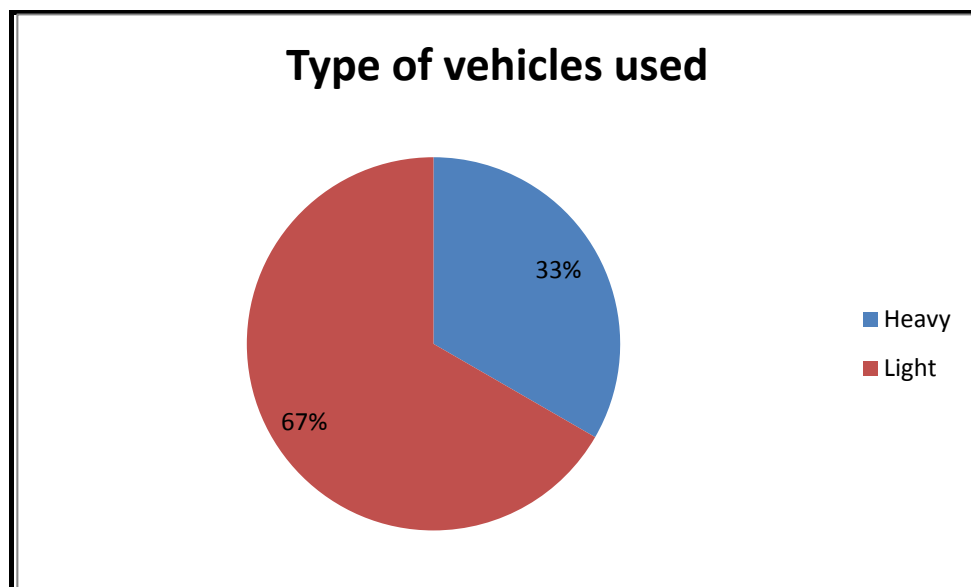


Figure 2: What type of vehicle you normally use?

Just over sixty nine per cent (69.4%) of the road users were privately employed, 26.7% were employed by the government and 3.9% of the respondents were unemployed.

In Figure 3, although 97% of the respondents claimed to have valid driver's licences, the surveyors didn't ask them to proof. Hence the authenticity of this feedback is debatable.

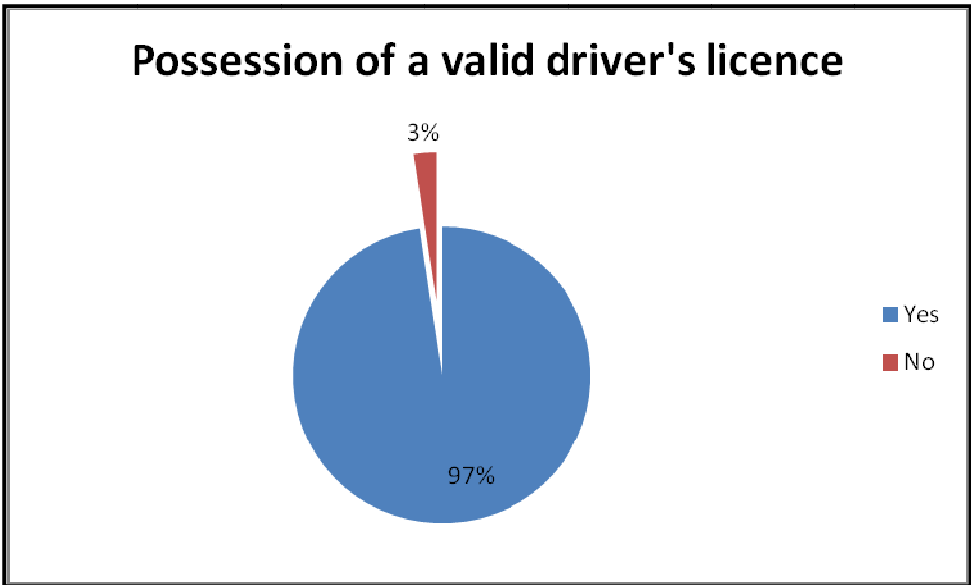


Figure 3: Are you in possession of a valid driver's licence?

Although 65.3% agreed that it is safe to drive on the roads within the Port compared to roads outside the Port, 37.5% felt that it not safe to drive on these roads (Figure 4).

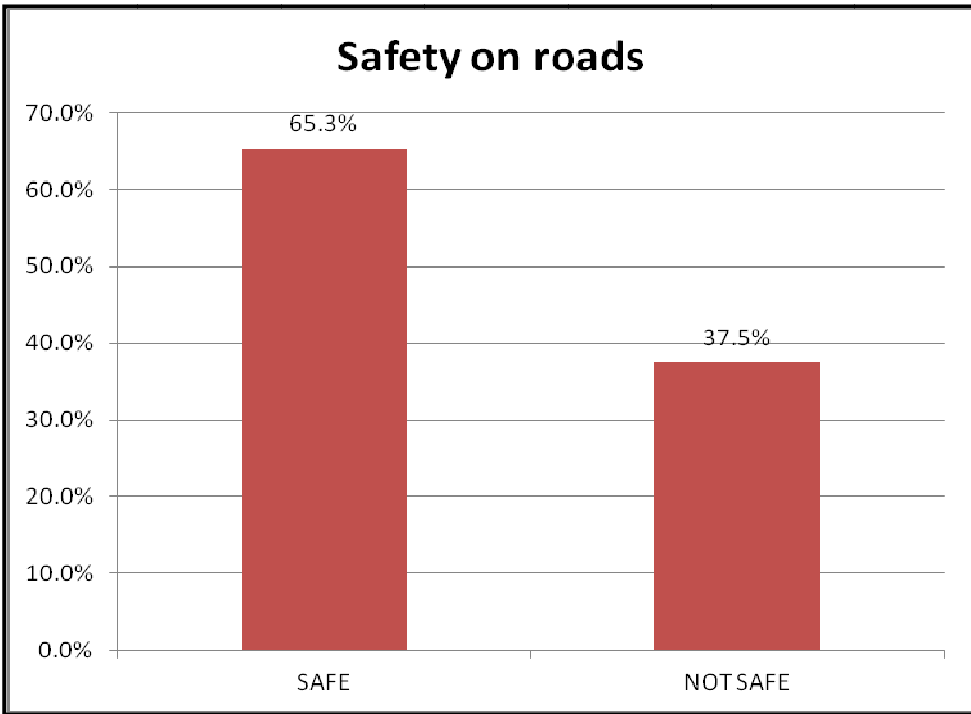


Figure 4: Is it safe to drive on roads within the Port of Durban compared to roads outside the Port?

It is seen from Figure 5, that 75% of the road users don't know where or how to report road defects. Approximately 25% of the road users know where or how to report road defects. For Transnet's roads, the defect/s can be reported via the Port Engineer's Department (Road Maintenance Section). For roads belonging to eThekweni Municipality, the defect/s can be reported via their Call Centre. It is not easy for road users to know the authority owning the road since no boards or signs are visible on the road highlighting this.

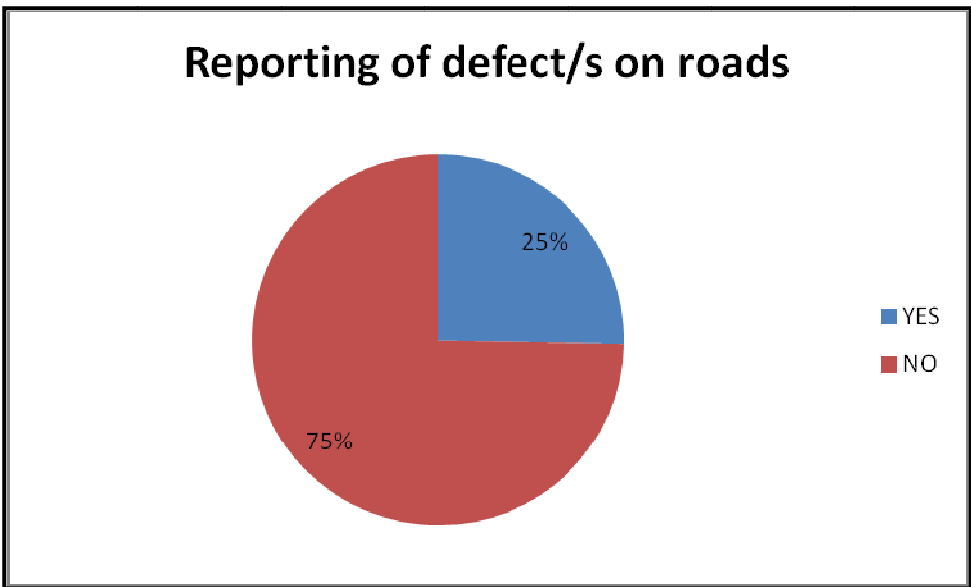


Figure 5: If you see a defect on the road, do you know where or how to report it?

Approximately 57% of the respondents believe that traffic signals are not always working and they take time to repair.

Also, approximately 25% of the respondents believe that road signs are either damaged or not there at all.

Figure 6 shows that 72% of the respondents believe that roads are being repaired within a reasonable time frame and 28% disagreed. The reasonable time for repair of potholes is within 48 hours, sink hole and traffic signals are within 24 hours, road, sidewalk repairs, reinstatements of trenches, broken kerbs and road signs are repaired within 10 days (City of Durban, 1992).

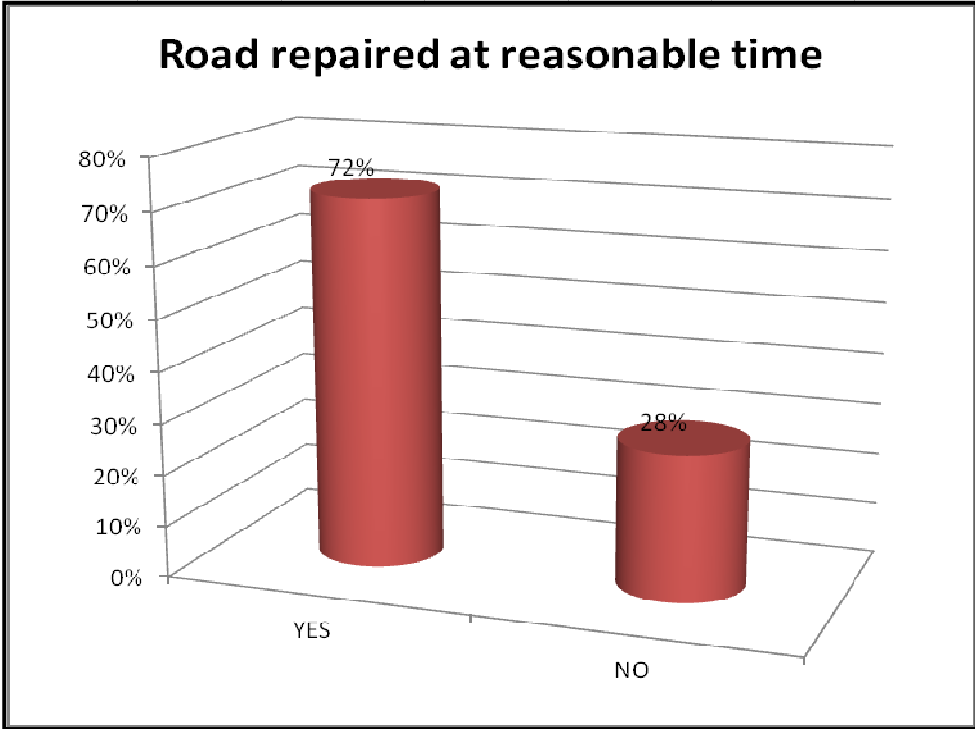


Figure 6: Are roads repaired within a reasonable time?

Figure 7 indicates that the majority (69%) of the respondents believe that traffic signals and road signs are not replaced or repaired within a reasonable time. It can take approximately a month to replace road signs but traffic signals are normally repaired faster than road signs.

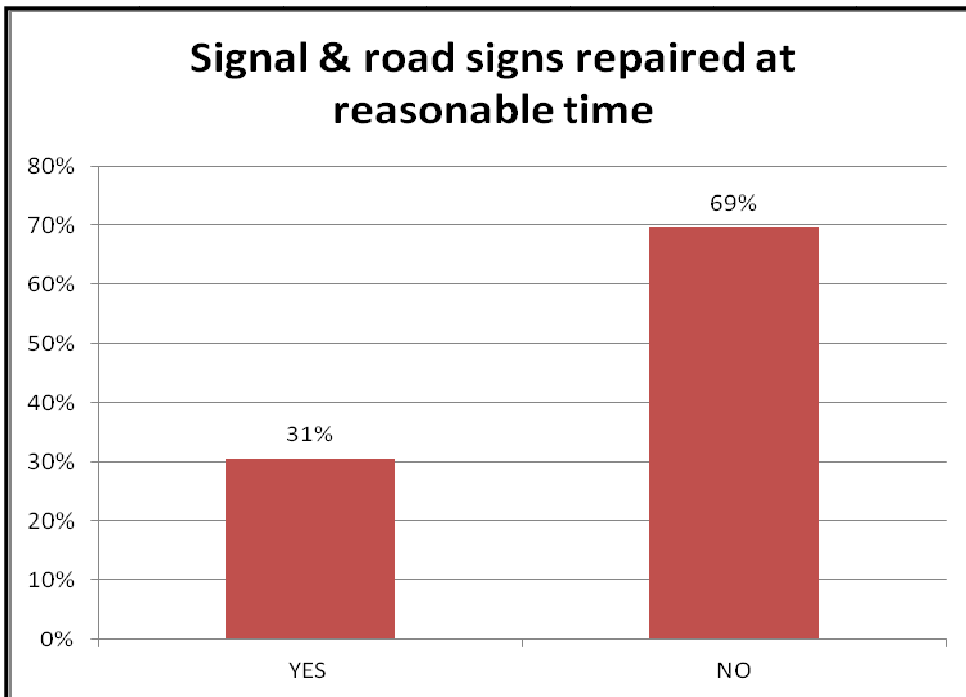


Figure 7: Are traffic signals and road signs repaired within a reasonable time?

As illustrated in Figure 8, majority (83%) of the respondents disagreed that maintenance of roads within the Port is better than outside the Port. The maintenance of road covers the repair of potholes, sink holes, sidewalks, reinstatements of trenches, broken kerbs, replacement of traffic signs and signals.

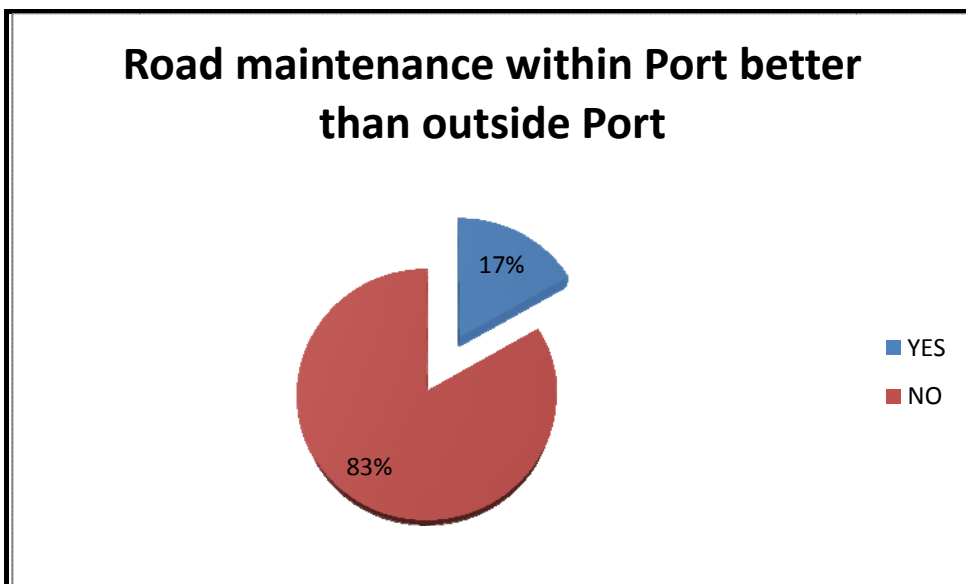


Figure 8: Is the maintenance of roads within the Port better than outside Port?

Approximately 29% of the respondents had their vehicles damaged due to poor road condition within the Port such as potholes, depression, loss of aggregates, open manholes or other defects.

Approximately 57% disagreed that roads within the Port are suitable or designed to carry heavy traffic. These roads were built to carry limited load but over the past years they have been upgraded to carry increased loads.

Figure 9 indicates that majority (63%) of the respondents agreed that the roads in the past were better than at present.

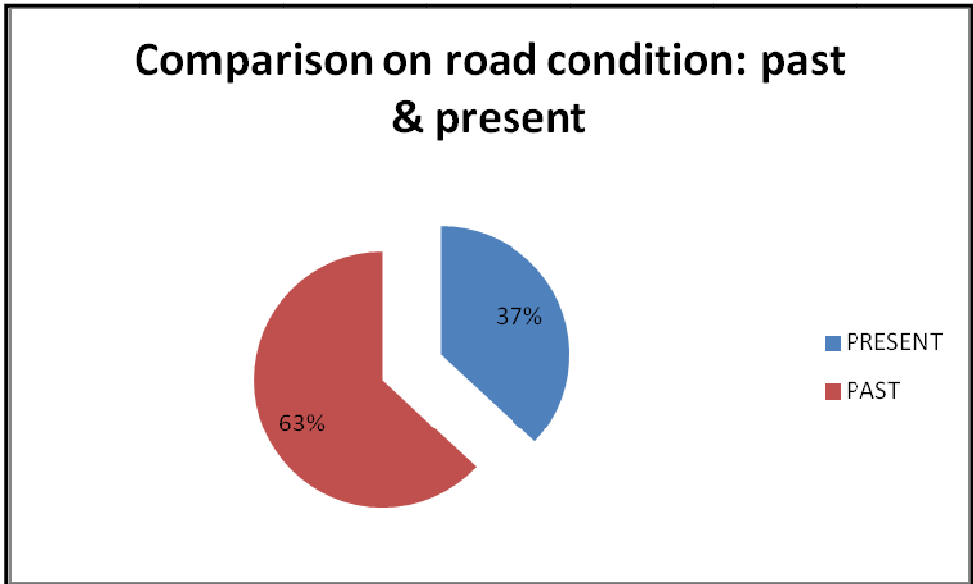


Figure 9: Are road conditions better in the past than at present?

Twenty four per cent (24%) are experiencing delays getting in or out of the Port due to poor road condition. Most (58%) of the road users have experienced traffic congestion during roads repairs.

Figure 10 shows that approximately 83% of the road users seldom see accidents on these roads and 10% often witness accidents.

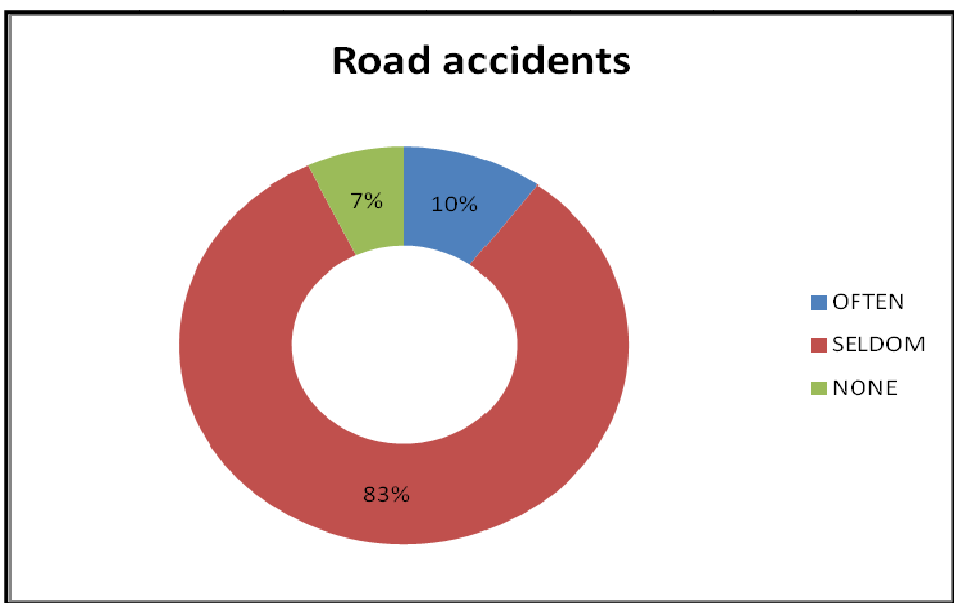


Figure 10: Do you always witness accidents on these roads?

Approximately 83% of the road users don't wear seatbelt when driving. This is of serious concern.

It was positive to note that the majority (94%) of the respondents knew the speed limit but adhering to the speed limit is questionable.

There were mixed feelings about answering cell phones while driving. Approximately 50.8% of the respondents answer their cell phones while driving.

Figure 11 shows the trucks parked on both side of Maydon Road. Approximately 83% of drivers parked close to the gate of the premises while waiting to deliver or to collect goods.



Figure 11: Trucks parked on both side of Maydon Road

Figure 12 indicates that majority (82.5%) of the road users have experience traffic congestion especially during the month end.

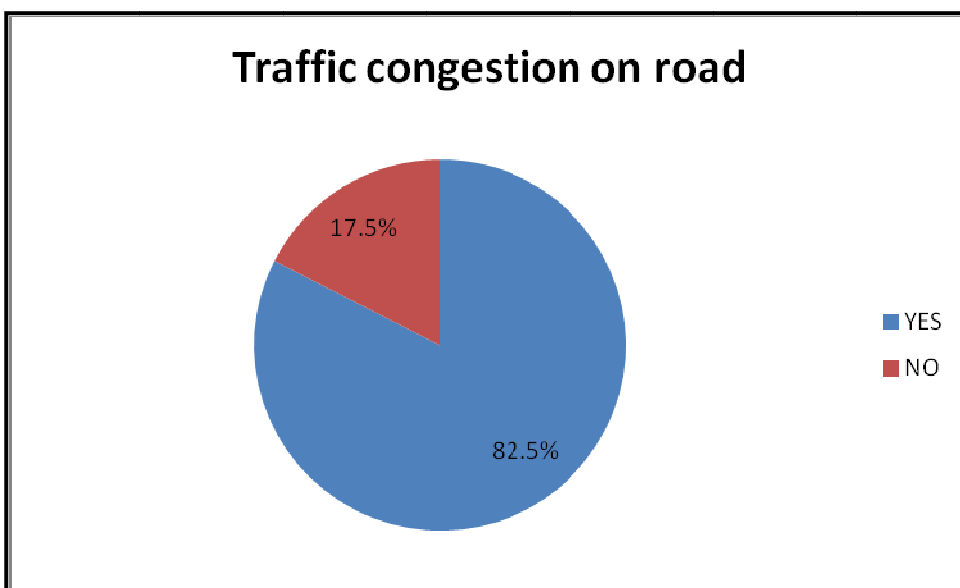


Figure 12: Have you experience any traffic congestion within the Port?

Approximately 52.5% of road users believe that traffic signals and roads signs are not obeyed. This is a major cause of road accidents.

Figure 13 below shows a high volume of traffic on Bayhead Road. Almost 91.7% believe that there is major traffic congestion during peak hours. Peak hours refer to 06h00 to 09h00 in the morning and 15h00 to 18h00 in the afternoon.



Figure 13: Traffic congestion at Bayhead Road

Approximately 44.8% of the respondents believe that law enforcement on these roads is limited (Figure 14). They felt that a much greater presence of the police force was necessary.

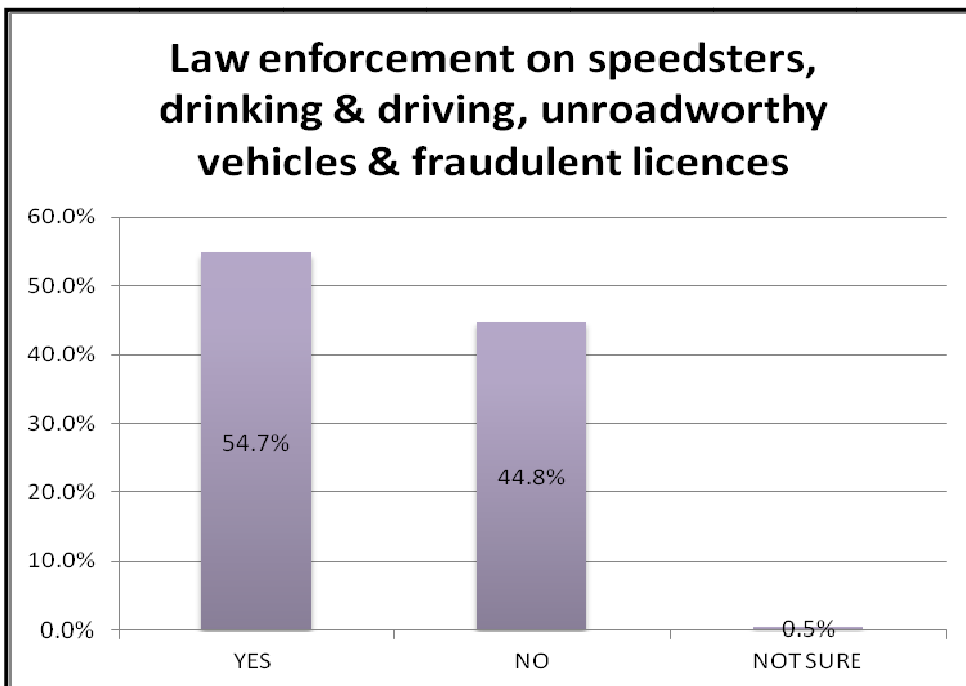


Figure 14: Do you think the police are doing enough with regard to clamping down on speedsters, drinking and driving, unroadworthy vehicles and fraudulent licences?

Thirty per cent (30%) have last seen or passed through a roadblock over a year ago while 5.8% have not seen or passed through a roadblock on these roads within the Port and they believe that it doesn't happen.

4. CONCLUSIONS AND RECOMMENDATIONS

Maintenance of roads outside the Port is much better than inside the Port. Most (75%) road users don't know where to report defect/s on roads within the Port. Also, about 57% of the road users believe that roads are not suitable or not designed for heavy vehicles.

Approximately 37.5% of the road users felt not safe to drive on roads within the Port especially on South Coast Road. A high percentage of people (83%) seldom witnessed accidents on these roads. Traffic signals within the Port are maintained by eThekweni Municipality and are very often non-functional. When road signs need to be repaired or replaced, it takes longer than expected. Most of the drivers don't wear seatbelts and also answer their cell phones while driving.

Most (82.5%) of the road users have experienced traffic congestion on these roads especially during roads repair work and peak hours. Drivers parked close to the gate of the premises while waiting to collect or deliver goods cause major traffic congestion.

It is recommended that the road users be informed of the reporting process with regard to road defects and malfunctioning of traffic signals. The boards or signs need to be placed on roads highlighting the responsible authority and their contact details. It is also recommended that Transnet National Ports Authority as the landlord of the Port take full responsibility of maintenance work especially where there are "grey" areas. The major problems are experienced when there is a change of ownership. Transnet National Ports Authority must ensure that all lessees are maintaining their roads at acceptable standards. It is important that qualified personnel with the relevant experience conduct all inspections, assessments and maintenance of roads within the Port. Both eThekweni Municipality and Transnet National Port Authority need to use a common standard/benchmark when undertaking road inspections and maintenance work.

It is also recommended that law enforcement be improved to effectively address the following:

- Illegal parking especially on Maydon Road,
- Use of cell phones while driving,
- Lack of seat belt usage,
- Disobeying traffic signals and road signs.

5. REFERENCE

City of Durban, 1992. Standard Engineering Specification.

- Department of Transport KwaZulu-Natal, 2008. National Transport Master Plan 2005-2050.
- International Marine Organization, 2003. International Ship and Port Security Facility Code (ISPS Code).

6. QUESTIONNAIRE SURVEY

NO.	QUESTIONS	YES	NO	N/A
1.	Background			
1.1	How often do you travel on the roads within the Port? (yes = always, no = seldom)			
1.2	What type of vehicle do you normally use? (yes = heavy vehicle, no = light vehicle)			
1.3	Which company are you working for? (yes = government, no = private, n/a= unemployed)			
1.4	Are you in possession of a valid driver's licence?			
2.	Road condition and safety			
2.1	Is it safe to drive on roads within the Port of Durban compared to roads outside Port?			
2.2	If you see a defect on the road, do you know where or how to report it?			
2.3	Are traffic signals always working?			
2.4	Are road signs visible at all times?			
2.5	Are roads repaired within a reasonable time? (pothole repairs is within 48 hrs, sinkholes repaired within 24 hrs, road, sidewalk repairs, reinstatements of trenches and broken kerbs are repaired within 10 days)			
2.6	Are traffic signals and road signs repaired within a reasonable time?(traffic signals are repaired within 24 hrs and road signs are repaired within 10 days)			
2.7	Is the maintenance of roads within the port better than outside the port?			
2.8	Was your vehicle damaged due to poor road condition within the Port?			
2.9	Are roads within the Port suitable or designed to carry heavy traffic?			
2.10	Are roads conditions better now than in the past?			
2.11	Are you experiencing delays getting in or out of Port due to poor road conditions?			
2.12	Have you experienced any traffic congestion during the road repairs?			
2.13	Do you always witness accidents on these roads? (yes = often, no = seldom, n/a = none)			
2.14	Do you wear a seatbelt when driving?			
2.15	What is the speed limit on roads within the Port? (yes = 60 km/hr, no = 100 km/hr, n/a = 120 km/hr)			
2.16	Have you driven a vehicle while under the influence of alcohol?			
2.17	Have you at any stage answered your cell phone while driving?			
2.18	Where do you park while waiting to deliver or pick-up? (yes = outside Port, no = close to the gate of premises, n/a = n/a)			
3.	Traffic			
3.1	Have you experience any traffic congestion within the Port?			
3.2	Are road users obeying traffic signals and road signs?			
3.3	Is there a high volume of traffic during peak hours?			
3.4	Is there a high volume of traffic during night?			
4.	General			
4.1	Do you think the police are doing enough with regard to clamping down on:			
4.1.1	Speedsters (yes = yes, no = no, n/a = not sure)			
4.1.2	Drinking and driving (yes = yes, no = no, n/a = not sure)			
4.1.3	Unroadworthy vehicles (yes = yes, no = no, n/a = not sure)			
4.1.4	Fraudulent licences (yes = yes, no = no, n/a = not sure)			
4.2	When last did you see or pass through a roadblock (yes = less than a month) or (no = more than a year) or (n/a = doesn't happen)			
4.3	Do you have any other points or comments regarding road maintenance, safety and traffic within the Port?			

NOTE: THIS FORM CAN BE SUBMITTED VIA EMAIL TO MBONGENIK@YAHOO.COM OR FAX TO 0865809419 OR HANDED OVER AT THE VARIOUS SURVEY STATIONS. FOR MORE INFORMATION PLEASE CONTACT OSCAR KUNENE ON TEL: 031-4655732 OR CELL: 0835005751