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THE NATIONAL ASSEMBLY

ELEVENTH PARLIAMENT - THIRD SESSION - 2015

DEPARTMENTAL COMMITTEE ON TRANSPORT, PUBLIC WORKS  
AND HOUSING

REPORT ON THE CONSIDERATION OF THE PUBLIC PETITION BY  
GREEN PENCIL REGARDING THE INTERVENTION TO HAVE HIGH  
QUALITY ROAD STUDS INSTALLED ON ALL TARMAC ROADS IN  
THE COUNTRY

DIRECTORATE OF COMMITTEE SERVICES,  
CLERK'S CHAMBERS,  
PARLIAMENT BUILDINGS,  
NAIROBI

DECEMBER, 2015

*BAF*  
*SNA*  
*3/12/15*

*Paper laid by*  
*Hon. (Eng) Mahmud*  
*Maalim, MP*  
*on 3/12/2015*

*V. 31*

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## **1.0 EXECUTIVE SUMMARY**

### **1.1 PREFACE**

On Thursday 11<sup>th</sup> December, 2014, the Speaker of the National Assembly the Hon. Justin Muturi, E.G.H, MP, on behalf of Green Pencil Ltd conveyed to the House a petition regarding the intervention to have high quality road studs installed on all tarmac roads in the country pursuant to Standing Order 225 (2)(b).

Pursuant to House rules, the petition was referred to the Departmental Committee on Transport, Public Works and Housing for consideration and preparation of a report within 60 days. The Committee considered the petition pursuant to the provisions of Standing Order 227 (2).

### **1.2 MANDATE OF THE COMMITTEE**

The Committee is established pursuant to the provisions of Standing Order No. 216, with the following terms of reference: -

- a) to investigate, inquire into, and report on all matters relating to the mandate, management, activities, administration, operations and estimates of the assigned Ministries and departments;
- b) to study the programme and policy objectives of Ministries and departments and the effectiveness of the implementation;
- c) to study and review all legislation referred to it;
- d) to study, access and analyze the relative success of the Ministries and departments as measured by the results obtained as compared with their stated objectives;
- e) to investigate and inquire into all matters relating to the assigned Ministries and departments as they may deem necessary, and as may be referred to them by the House or a Minister;
- f) to vet and report on all appointments where the Constitution or any law requires the National Assembly to approve, except those under Standing Order 204 (Committee on Appointments); and
- g) to make reports and recommendations to the House as often as possible, including recommendation of proposed legislation.

The Committee is mandated to consider matters of Transport, Roads, Public works, Construction, and Maintenance of roads, rails and buildings, air, seaports and housing and oversees the following Government Ministry and State Department, namely: -

- a) Ministry of Transport and Infrastructure;
- b) State Department for Housing
- c) Directorate of Public Works and Urban Development

### **1.3 COMMITTEE MEMBERSHIP**

The Committee was constituted on May 20<sup>th</sup> 2013 and its membership is as follows:-

1. The Hon. Maina Kamanda, M.P. – **(Chairperson)**
2. The Hon. Eng. Mahamud M. Mohamed, M.P. – **(Vice Chairperson)**
3. The Hon. Eng. Stephen Ngare, M.P.
4. The Hon. Ali Wario, M.P.
5. The Hon. Arch. David Kiaraho, M.P.
6. The Hon. Cecily Mbarire, M.P.
7. The Hon. Capt. Clement Wambugu, M.P.
8. The Hon. Eng. John Kiragu, M.P.
9. The Hon. Gideon Konchella, M.P.
10. The Hon. Barchilei Kipruto, M.P.
11. The Hon. Mark Lomunokol, M.P.
12. The Hon. Grace Kipchoim, M.P.
13. The Hon. Mathias Robi, M.P.
14. The Hon. Joseph Lomwa, M.P.
15. The Hon. Peter Shehe, M.P.
16. The Hon. Stephen Manoti, M.P.
17. The Hon. Emmanuel Wangwe, M.P.
18. The Hon. K.K. Stephen Kinyanjui Mburu, M.P.
19. The Hon. Suleiman Dori, M.P.
20. The Hon. Edick Omondi Anyanga, M.P.
21. The Hon. Simon Nyaundi Ogari, M.P.
22. The Hon. Johnson Many Naicca, M.P.

23. The Hon. Mishi Juma, M.P.
24. The Hon. Aduma Owuor, M.P.
25. The Hon. Chachu Ganya, M.P.
26. The Hon. Omar Mwinyi, M.P.
27. The Hon. Ahmed Abbas Ibrahim, M.P.
28. The Hon. Omulele Christopher, M.P.
29. The Hon. Mukwe James Lusweti, M.P.

#### **1.4 CONSIDERATION OF THE PETITION**

On Thursday 11<sup>th</sup> December, 2014, the Speaker of the National Assembly the Hon. Justin Muturi, E.G.H, MP, on behalf of Green Pencil Ltd conveyed to the House a petition regarding the intervention to have high quality road studs installed on all tarmac roads in the country pursuant to Standing Order 225 (2)(b).

The Committee proceeded with the consideration of the petition by holding meetings to set up terms of reference and scheduling meetings.

The Committee invited the petitioners, Messrs. Antony Kinori, ID number 1031855 and Ivan Ochieng, ID number 9789448 to provide on the petition and they appeared before the Committee on Thursday, 26<sup>th</sup> March, 2015. The Committee also held several meetings with Ministry of Transport and infrastructure on the same.

#### **1.5 COMMITTEE OBSERVATIONS**

Having considered the petition and submissions made by the Ministry, the Committee observed that;

1. The use of road studs is a standard practice that is used to encourage road safety internationally.
2. The Ministry of Transport and Infrastructure has put in place regulations on the use of road studs in the Country; and

3. Road studs are not stand alone items in road works and that it falls generally under the road furniture.

## **1.6 RESPONSE TO THE PRAYERS IN THE PETITION**

The petitioners had **prayed that the National Assembly through the relevant Committee**

1. Intervenes to have high quality road studs with no scrap value installed on all tarmac roads, at all times to enhance road safety in the Country ;
2. Intervenes to have road studs installation component separated from the main road contracts;
3. Initiates necessary measures to introduce advance road warning signs in Kenya; and
4. Further intervenes to ensure implementation of local innovations and solutions and solutions that are in line with the RS-10 Project of the UN.

**After considering the prayers, the Committee recommends that**

1. The Ministry of Transport and Infrastructure should ensure that high quality road studs are installed on all tarmac roads in the Country;
2. The installation of road studs should be incorporated in the road works during the tendering process in order to achieve value for money in the procurement process;
3. The Ministry of Transport and Infrastructure should install road warning signs on all tarmac roads in the Country; and
4. Local entrepreneurs should be encouraged to participate in the road works procurement/tendering process so as to compete with other bidders.

## **1.7 ACKNOWLEDGEMENTS**

The Committee wishes to sincerely thank the Offices of the Speaker and the Clerk of the National Assembly for the necessary support extended to it in the execution of its mandate.

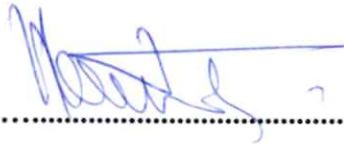
I take this opportunity to thank all the Members of the Committee for their useful

contributions towards the production of this report and hard work during the long sitting hours under tight schedules which enabled us to complete the tasks within the stipulated period.

The Committee wishes to record its appreciation for the services rendered by the staff of the National Assembly attached to the Committee. Their efforts made the work of the Committee and the production of this Report possible.

Finally, it is now my pleasant duty, on behalf of the Departmental Committee on Transport, Public Works and Housing, to present this report to the House pursuant to the provisions of Standing Order 227 (2).

SIGNED:.....



**THE HON. MAINA KAMANDA, M.P, (CHAIRPERSON)**

**DEPARTMENTAL COMMITTEE ON TRANSPORT, PUBLIC WORKS AND HOUSING**

DATE:.....

11/12/2015

## **2.0 BACKGROUND INFORMATION**

- 2.1** The Petition was conveyed in the House pursuant to Standing Order 225 (2)(b) by the Speaker of the National Assembly the Hon. Justin Muturi, E.G.H, MP, on behalf of Green Pencil Ltd.
- 2.2** Pursuant to Standing Order 227 (1), the petition was referred to the Departmental Committee on Transport, Public Works and Housing for consideration and preparation of a report within 60 days. The Committee considered the petition pursuant to the provisions of Standing Order 227 (1) and (2).
- 2.3** The petitioners wished to draw the attention of the House that Green Pencils Ltd. is a locally registered company operating within Nairobi County;
- 2.4** According to the National Transport and Safety Authority, over 80% of road traffic crashes occur at night, despite the reduced traffic flow at this time; and that the Accident Cause Code classification used by the Kenya Traffic Police states that human error accounts for 85.5% of the road traffic crashes and further 45% to 60% of all hospital admissions in surgical wards are road crash victim;
- 2.5** There are only two African countries in the UN Decade of Action for Road Safety(RS-10 Project) i.e Egypt and Kenya and this is a challenge to Kenya to present a suitable homegrown solution in line with the RS-10 Project;
- 2.6** Green Pencils Ltd manufacturers the Infinity Road Stud, an innovation in road furniture, made from recycled materials which not only meet but also exceeds the highest global standards, a first time innovation in Kenya by a Kenyan Company;
- 2.7** In addition, the Infinity Road Studs introduces the advance road warnings studs to the Kenyan road and that the performance of the Kenyan made studs far surpasses all others in the market with the lifespan of the imported road studs varying from 3weeks to about 3months, while the lifespan of the infinity road studs is more than a year;
- 2.8** That 75% of the raw materials used is local creating 100% employment;
- 2.9** The use of these studs will greatly improve night driving visibility and provide advance

road warnings and will go a long way in improving road safety and therefore save lives and reduce the stress associated with driving at night;

- 3.0** The use of the studs will greatly reduce the cost of maintaining road furniture as their compressive strength is high, they have no scrap value and are installed using a complementary agent;
- 3.1** The use of these studs will reduce road accidents therefore reducing the associated medical expenditures;
- 3.2** Efforts to have the matter addressed by the relevant government institutions have borne no fruits; and
- 3.3** The matter in respect to the petition is made is not pending in any Court of Law or Tribunal.

### **3.0 SUBMISSIONS AND EVIDENCE**

Having been seized of the Petition, the Committee commenced its investigations by inviting the Cabinet Secretary for Transport and Infrastructure for a meeting on Thursday 26<sup>th</sup> March, 2015 to respond to the Petitioners' concerns.

### **3.1 MEETING WITH THE PETITIONERS**

On Thursday 26<sup>th</sup> March, 2015 the Committee invited the petitioners messrs Antony Kinori, ID number 1031855 and Ivan Ochieng, ID number 9789448 being the persons who signed the petition on behalf of Green Pencil Ltd, and they were able to appear before the Committee.

The Petitioner Mr. Kinori briefed the Committee as follows, that:-

1. In 1963, the British left Kenya with the white and yellow road studs. More than 50 years later, Kenya has not moved on as far as road studs usage is concerned. Kenya is using the white and the yellow coloured road studs, while the British have moved on and are using the red, blue and green coloured studs.

2. Road studs are dependable fail-safe road safety devices which reduces straining associated with night driving, on rainy conditions, or in general unfamiliar roads without good visibility. In 2006, Green Pencil Ltd decided to address these challenges and sought to get a permanent and practical local solution.
3. In October 2008, for the first time in the country, road studs made in Kenya were tested by the Ministry of Roads and passed. Their compressive strength exceeded 40 tons, a first in Kenya. The mandatory requirement is 25 tons. After a number of years of research and development, the Infinity Road Studs were successfully developed in white, yellow & red colours. Unfortunately, the Ministry of Roads could only test the white and yellow road studs; they could not test the red as they were not being used in the country. After challenging the Ministry to see how they could test the red road studs, they eventually directed us to Kenya Bureau of Standards (KEBS).
4. In November 2008, KEBS tests the Infinity road studs using the United Kingdom Accreditation Scope (UKAS) standards and found that they not only met the local standards, but exceeded the international standards as well.
5. In December 2008, the Permanent Secretary (P.S.) of the Ministry of Roads wanted the Kenyan made road studs to be tested as soon as possible and grants the authority to install the Infinity Road Studs along Kiambu road and Mai Mahiu. The installation was undertaken under the supervision of the Ministry's staff.
6. After the successful installation of the Infinity Road Studs along Kiambu and Mai Mahiu roads in January 2009, the Ministry invited Green Pencil Ltd to install the Infinity Road Studs along Komarock road.
7. As KEPSA Roads Sector Board members, Green Pencil Ltd took part in a number of MSF's (Ministerial Stakeholders Forum) with the Ministry of Roads. The then Principal Secretary, Eng. Michael Kamau chaired the sessions where it was agreed that, to improve night driving visibility, funds meant for road marking and road studs installation should be ring-fenced. Unfortunately, this never happened.
8. Severally engagements with the Ministry on the need of introducing the advance road warning studs on our roads have not yield much result. Had ministry embraced the idea

of studs usage, accidents such as the Ntulele road accident that killed 41 people and injured others, or the Loreto school bus accident at Nithi, among many others, could have been avoided and much more.

9. No one in Kenya wanted to install road studs along Mbagathi Way, a concrete surface, Green Pencil ltd was approached and installed the studs and they are still there to date.
10. When the ministry of Transport & Infrastructure wanted to introduce the night travel ban, the management of Green pencil Ltd brought it to the attention of the ministry that they could provide a solution to help improve the night driving visibility while at the same time providing advance road warnings. Unfortunately, their proposal was totally ignored.

### **3.2 | MEETING WITH THE PRINCIPAL SECRETARY FOR THE STATE DEPARTMENT OF INFRASTRUCTURE**

On **Thursday 26<sup>th</sup> March, 2015**, the officials from the State Department of Infrastructure Eng. P. C Kilimo informed the Committee as follows;

- a) The Ministry of Transport and Infrastructure has put in place regulations on the use of road studs and because of their cost, they are recommended for use under the following conditions;
  - i. Frequent Mist, Fog or Rain (making it difficult to see road markings).
  - ii. Poor visibility due to glare from head lights of oncoming vehicles.
  - iii. Difficult alignment (e.g. roads with many bends)
  - iv. Road side hazards (e.g. reduced carriageway width or limited clearance).

The Harmonized regional studs recommended for use throughout the regional network are:

- Red – for Prohibition
- Yellow – for Warning
- White- for Guidance

Spacing of between 18 meter and 24 meters is recommended in Rural and Urban areas respectively for various line conditions related to overtaking and edge lines. In conclusion, the use of Studs is a standard practice that is encouraged to enhance Road Safety. However, the cost of the Studs Prohibit their inclusion in contract items for roads furniture on minor roads and reflective paint which is cost effective or is often used

- b) Road Studs are not a stand-alone item under the standard specification and fall generally under the item on road furniture. This item comprises of road reserve post, fencing gates, edge marker posts, permanent road signs, road markings guardrails, kilometers marker post, Rumble strips and studs. Regarding the selected use of Studs on difficulty areas, Stud installation is a small percentage of road development and Maintenance Works. It is therefore best incorporated in the works to realize value for money in the Procurement Process, Supervisory expert input, Monitoring and evaluation through road Safety audits of the Road works.
- c) The government is currently finalizing updating of all design Manuals in the following areas:-
- Manual Part 1. Geometric design
  - Manual Part 2. Drainage Manual
  - Manual Part 3. Pavement Materials
  - Manual Part 4. Structure Manual
  - Manual Part 5. Road signs and Markings
  - Manual Part 6. Bridges and Culvert design.

This is a comprehensive Exercise to incorporate the state of art practice in road development and Maintenance funded through a European Union (EU) grant under EDF 10. The Cabinet Secretary will be launching the revised design Manuals later this year.

- d) The Ministry through development assistance under the Northern Corridor Transport Improvement Project has undertaken a comprehensive study towards the formulation of Road Safety action plan which contains a Summary of recommendations and action to

improve Road Safety in Kenya. This is an ongoing Project that is fully being led by the National Transport and Safety Authority (NTSA). These recommendations are aligned to the UN Road Safety Decade Objectives, in reducing road crashes.

#### **4.0 OBSERVATIONS**

Having considered the petition and submissions made by the Ministry, the Committee observed that;

1. The use of road studs is a standard practice that is used to encourage road safety internationally.
2. The Ministry of Transport and Infrastructure has put in place regulations on the use of road studs in the Country; and
3. Road studs are not stand alone items in road works and that it falls generally under the road furniture.

#### **5.0 RECOMMENDATIONS**

The Committee recommends that:-

1. The Ministry of Transport and Infrastructure should ensure that high quality road studs are installed on all tarmac roads in the Country;
2. The installation of road studs should be incorporated in the road works during the tendering process in order to achieve value for money in the procurement process;
3. The Ministry of Transport and Infrastructure should install road warning signs on all tarmac roads in the Country; and
4. Local entrepreneurs should be encouraged to participate in the road works procurement/tendering process so as to compete with other bidders.

THE NATIONAL ASSEMBLY


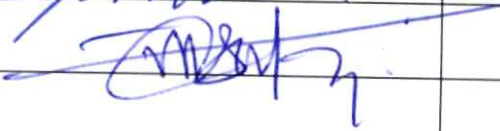
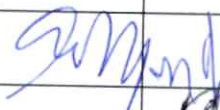



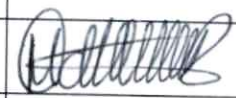


ELEVENTH PARLIAMENT – 3<sup>RD</sup> SESSION

DEPARTMENTAL COMMITTEE – L: TRANSPORT, PUBLIC WORKS AND HOUSING

Adoption list for the report on the Petition regarding the intervention to have high quality road studs installed on all tarmac roads in the country – Tuesday 1<sup>st</sup> December, 2015 10.00 am

NO.	MEMBER	SIGNATURE
1.	Hon. Maina Kamanda (Chairperson), MP	
2.	Hon. (Eng.) Mohamed M. Mahamud (Vice Chairperson), MP	
3.	Hon. KK Stephen Kinyanjui Mburu, MP	
4.	Hon. Christopher Omulele, MP	
5.	Hon. (Eng.) Stephen Ngare, MP	
6.	Hon. Johnson M. Naicca, MP	
7.	Hon. (Eng.) John Kiragu, MP	
8.	Hon. Stephen K. Manoti, MP	
9.	Hon. Joseph Lomwa, MP	
10.	Hon. (Capt.) Clement M. Wambugu, MP	
11.	Hon. Emmanuel Wangwe, MP	
12.	Hon. Grace J. Kipchoim, MP	
13.	Hon. Cecily M. Mbarire, MP	
14.	Hon. Mishi Juma Khamis, MP	

15.	Hon. Peter Shehe, MP		
16.	Hon. Omar Mwinyi, MP		
17.	Hon. Suleiman Dori, MP		
18.	Hon. Edick O. Anyanga, MP		
19.	Hon. Aduma Owuor, MP		
20.	Hon. Gideon Konchella, MP		
21.	Hon. Abass Ahmed Ibrahim, MP		
22.	Hon. Ali Wario, MP		
23.	Hon. David Kiaraho, MP		
24.	Hon. Barchilei Kipruto, MP		
25.	Hon. Simon Nyaundi Ogari, MP		
26.	Hon. Chachu Ganya , MP		
27.	Hon. Mathias N. Robi , MP		
28.	Hon. Mukwe James Lusweti, MP		
29.	Hon. Mark Lomunokol, MP		

Mr. Samuel Kalama – First Clerk Assistant

For: CLERK OF THE NATIONAL ASSEMBLY

**MINUTES OF THE 57<sup>TH</sup> SITTING OF THE TRANSPORT, PUBLIC WORKS AND HOUSING COMMITTEE HELD ON TUESDAY 1<sup>ST</sup> DECEMBER, 2015 IN THE BOARDROOM ROOM ON 2<sup>ND</sup> PROTECTION HOUSE, AT 10: 25 AM.**

**Present**

1. Hon. (Eng.) Mahamud M. Mohamed, M.P. –**Vice Chairman**
2. Hon. Edick Omondi Anyanga, M.P.
3. Hon. (Eng.) John Kiragu, M.P.
4. Hon. Stephen Manoti, M.P.
5. Hon. Aduma Owuor, M.P.
6. Hon. Mishi Juma, M.P.
7. Hon. Peter Shehe, M.P.
8. Hon. Chachu Ganya, M.P.
9. Hon. (Eng.) Stephen Ngare, M.P.
10. Hon. Omar Mwinyi, M.P.
11. Hon. Ahmed Abbas Ibrahim, M.P.
12. Hon. Joseph Lomwa, M.P.
13. Hon. K.K. Stephen Kinyanjui Mburu, M.P.
14. Hon. Gideon Konchella, M.P.
15. Hon. Mathias Robi, M.P.

**Apologies**

1. Hon. Maina Kamanda, M.P. – **Chairperson**
2. Hon. Emmanuel Wangwe, M.P.
3. Hon. (Capt.) Clement Wambugu, M.P.
4. Hon. Johnson Many Naicca, M.P.
5. Hon. Omulele Christopher, M.P.
6. Hon. Suleiman Dori, M.P.
7. Hon. Grace Kipchoim, M.P.
8. Hon. Ali Wario, MP.
9. Hon. Simon Nyaundi Ogari, M.P.
10. Hon. Mark Lomunokol, M.P.
11. Hon. Cecily Mbarire, M.P.
12. Hon. (Arch.) David Kiaraho, M.P.
13. Hon. Mukwe James Lusweti, M.P.
14. Hon. Barchilei Kipruto, M.P.

## **In Attendance**

1. Mr. Samuel Kalama
2. Ms. Nuri K. Nataan
3. Mr. James Muguna
4. Mr. Omar Abdirahim

## **- National Assembly**

- First Clerk Assistant
- Third Clerk Assistant
- Research Officer
- Fiscal Analyst

## **Min/DC-TPWH/2015/286**

### **Preliminaries**

The Chair called the meeting to order at 10:25 am and proceeded to say the opening prayer.

## **Min/DC-TPWH/2015/287**

### **Consideration of the report on the Petition regarding the intervention to have high quality road studs installed on all tarmac roads in the country**

The Committee considered the report and adopted it with the following observations and recommendations:-

### **Committee Observations**

The Committee observed that:-

1. The use of road studs is a standard practice that is used to encourage road safety internationally.
2. The Ministry of Transport and Infrastructure has put in place regulations on the use of road studs in the Country; and
3. Road studs are not stand alone items in road works and that it falls generally under the road furniture.

### **Committee Recommendations**

The Committee recommends that:-

1. Intervenes to have high quality road studs with no scrap value installed on all tarmac roads, at all times to enhance road safety in the Country ;

2. Intervenes to have road studs installation component separated from the main road contracts;
3. Initiates necessary measures to introduce advance road warning signs in Kenya; and
4. Further intervenes to ensure implementation of local innovations and solutions and solutions that are in line with the RS-10 Project of the UN.

**Min/DC-TPWH/2015/288**

**Any Other Business**

The Chair informed the meeting that the vetting process of the new Cabinet Secretaries and Principal Secretaries will commence from Wednesday, 2<sup>nd</sup> December 2015 after the Speaker of National Assembly reads the communication in today's afternoon Sitting of the House. He further informed the Members that the Committee Secretariat will communicate to them a program for the vetting process in order for them to be available on those dates.

**Min/DC-TPWH/2015/289**

**Adjournment**

And there being no other business the meeting was adjourned at 11.15 am to be reconvened at a later date.

SIGNED.....

**HON MAINA KAMANDA, M.P**

**(Chairperson)**

DATE.....



THE NATIONAL ASSEMBLY

ELEVENTH PARLIAMENT- (SECOND SESSION)

PETITIONS

(No. 074 of 2014)

CONVEYANCE OF A PETITION TO THE NATIONAL ASSEMBLY  
ON ENHANCING NIGHT VISIBILITY AND PROVISION OF  
ADVANCE WARNINGS IN KENYAN ROADS

Honourable Members,

Pursuant to Standing Order 225(2) (b), I have a Petition to report to the House.

The Petition is signed by a Mr. Anthony Kirori, I.D. number 1031855 and a Mr. Ivan Ochieng, I.D. number 9789448, both of P.O. Box 50226-00200 Nairobi on behalf of Green Pencil Ltd. The Petitioners pray that the National Assembly *inter alia*, intervenes to have high quality road studs installed on all tarmac roads in the country and that the component for the installation of these road studs be separated from the main road contracts. Further, the Petitioners pray that the National Assembly intervenes to ensure implementation of the UN Decade of Action for Road Safety (RS-10) Project on the improvement of road safety.

Honourable Members,

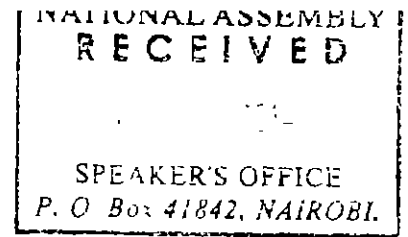
This Petition stands committed to the Departmental Committee on Transport, Public Works and Housing for consideration. The Committee is requested to consider the Petition and report its findings to the Petitioners and the House in accordance with Standing Order 227 (2).

Thank you!

A handwritten signature in black ink, appearing to read 'J.B. Muturi', written over a horizontal line.

THE HON. J.B. MUTURI, EGH, MP  
SPEAKER OF THE NATIONAL ASSEMBLY

December 11, 2014



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Tel +254 723 670 242 / 0736 670 242/ 0722 330 637 / 0733 330 637  
E-Mail: [info@greenpencilsltd.co.ke](mailto:info@greenpencilsltd.co.ke) Website: [www.greenpencilsltd.co.ke](http://www.greenpencilsltd.co.ke)

24<sup>th</sup> November 2014

The Speaker  
National Assembly  
Parliament Building, NAIROBI

## PETITION TO THE SPEAKER OF THE NATIONAL ASSEMBLY

Dear Sir,

### RE: Infinity Road Studs, Enhancing Night Visibility & Providing Advance Road Warnings

The Accident Cause Code classification used by the Kenya Traffic Police states that human error accounts for 85.5% of the road traffic crashes

45% to 60% of all admissions in surgical wards are road crash victims

According to the National Transport & Safety Authority, over 80% of road traffic crashes occur at night, despite the reduced traffic flow at this time. Lack of visibility is a major contributor to this

Do you find it difficult to drive at night, or find yourself straining, especially when it is raining? Have you ever driven over a bump or into a junction you had not seen?

Streetlights or road studs can be used to improve night driving visibility. However, for a variety of reasons, both are hardly used on Kenyan roads. Therefore, in 2008, then trading as Infinity Zone Ltd, we developed the Infinity Road Studs that present a practical & guaranteed solution suitable to our needs.

The Infinity Road Stud, made from recycled materials, is an innovation in road furniture, which not only meets but also exceeds the highest Global Standards, a first time invention in Kenya by a Kenyan company. In addition, the Infinity Road Studs introduces the advance road warning studs to the Kenyan road users. The performance of the Kenyan made studs far surpasses all others in the market. (For practical demonstration, allow us to invite you for a drive along the Thika Superhighway, Mbagathi Way & Langata road. The lifespan of the imported road studs varies from 3 weeks to about 3 months, while the lifespan of the Infinity Road Studs is more than 1 year.)

There are only two African countries in the UN Decade of Action for Road Safety (the RS-10 project) i.e. Egypt & Kenya. In line with the RS-10 project, the Infinity Road Studs provide the country an excellent opportunity to present a suitable homegrown solution.

Since 2008, we have tried to introduce the Infinity Road Studs to the Kenyan road users. The Ministry of Roads (now Transport and Infrastructure), say installing the road studs is purely the mandate of road contractors. The contractors in turn say that

- 1 They need approval from the ministry to use the Kenyan made road studs
- 2 In most cases, the funds for making the roads run out before completion, therefore they are forced to forgo installing the road studs

Installing the made-in-Kenya Infinity studs on our roads will improve road safety thereby save lives and reduce driving stress. In addition, the first African country to come up with a practical homegrown solution in the RS-10 project will be recognized both locally & internationally, therefore that country (its citizens, visitors & tourists) will benefit immensely from this global program.

*Throughout the whole year, our roads can now look like this when driving at night, especially when raining.*



*The made in Kenya road studs are ideal for the harsh Kenyan / African road conditions.*

Mr. Speaker Sir, the salient features of our product can greatly benefit Kenyans and the economy as a whole. Using the made in Kenya road studs will help industrialize our country, reduce road carnage therefore reducing associated medical expenditures, as well as reducing the cost of maintaining road furniture. However, our efforts to introduce our product to the relevant authorities have fallen on deaf ears. Therefore, we humbly request for your intervention in line with the Constitution. Sir, we implore you to present our predicament to the August House and to the relevant Committees, i.e. Infrastructure, Health & Industrialization Committees to look into the use of this innovative product, for the better national good and in pursuit of achieving Vision 2030.

Attached please find the certificates from the laboratory of the Ministry of Roads, KEBS and various correspondences to the government.

The undersigned is the Brand Kenya Ambassador for Innovations & Entrepreneurship.

Humbly,

Antony Kirori

**INVENTOR: Infinity Road Studs**

**INVENTOR: Infinity Bonding Agent**

*Infinity Road Studs: Enhancing Safety, Mobility & Providing A Safer Road For All*

**PETITION TO THE NATIONAL ASSEMBLY ON ENHANCING NIGHT  
VISIBILITY AND PROVIDING ADVANCE ROAD WARNINGS IN KENYAN  
ROADS**

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P.O.BOX 50226 - 00200 Nairobi, Kenya  
Tel +254 723 670 242 / 0736 670 242/ 0722 330 637 / 0733 330 637  
E-Mail: [info@greenpencilsLtd.co.ke](mailto:info@greenpencilsLtd.co.ke) Web: [www.greenpencilsLtd.co.ke](http://www.greenpencilsLtd.co.ke)

**WE**, the **UNDERSIGNED** on behalf of Green Pencils Ltd of P.O. Box 50226-00200 Nairobi of Nairobi County;

Draw the attention of the National Assembly to the following:-

- I. **THAT**, Green Pencils Ltd is a locally registered company operating within Nairobi County;
- II. **NOTING** that, according to the National Transport & Safety Authority, over 80% of road traffic crashes occur at night, despite the reduced traffic flow at this time; and that the Accident Cause Code classification used by the Kenya Traffic Police states that human error accounts for 85.5% of the road traffic crashes and further that 45% to 60% of all hospital admissions in surgical wards are road crash victims;
- III. **FURTHER** noting that, there are only two African countries in the UN Decade of Action for Road Safety (the RS-10 Project) i.e. Egypt & Kenya and this is a challenge to Kenya to present a suitable homegrown solution in line with the RS-10 project;
- IV. **THAT**, Green Pencils Ltd manufactures the Infinity Road Stud, an innovation in road furniture, made from recycled materials which not only meet but also exceeds the highest global standards, a first time invention in Kenya by a Kenyan company;

**PETITION TO THE NATIONAL ASSEMBLY ON ENHANCING NIGHT  
VISIBILITY AND PROVIDING ADVANCE ROAD WARNINGS IN  
KENYAN ROADS**

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- V. **THAT**, in addition, the Infinity Road Studs introduces the advance road warning studs to the Kenyan road and that the performance of the Kenyan made studs far surpasses all others in the market with the lifespan of the imported road studs varying from 3 weeks to about 3 months, while the lifespan of the Infinity Road Studs is more than 1 year;
- VI. **THAT**, 75% of the raw materials used is local creating 100% local employment;
- VII. **THAT**, the use of the studs will greatly improve night driving visibility and provide advance road warnings, <sup>and</sup> will go along way in improving road safety and therefore save lives and reduce the stress associated with driving at night;
- VIII. **THAT**, use of the studs will greatly reduce the cost of maintaining road furniture as their compressive strength is high, they have no scrap value and are installed using a complementary bonding agent;
- IX. **THAT**, the use of these studs will reduce road accidents therefore reducing the associated medical expenditures;
- X. **THAT**, efforts to have the matter addressed by the relevant government institutions have borne no fruits; and
- XI. **THAT**, the matter in respect of which this Petition is made is not pending in any Court of Law or Tribunal.

**PETITION TO THE NATIONAL ASSEMBLY ON ENHANCING NIGHT  
VISIBILITY AND PROVIDING ADVANCE ROAD WARNINGS IN KENYAN  
ROADS**

**THEREFORE**, your humble **PETITIONERS**, **PRAY** that the National Assembly;

- a) Intervenes to have high quality road studs with no scrap value installed on all tarmac roads, at all times to enhance road safety in the Country;
- b) Intervenes to have road stud installation component separated from main road contracts;
- c) Initiates necessary measures to introduce advance road warning signs in Kenya; and
- d) Further intervenes to ensure implementation of local innovations and solutions that are in line with the RS-10 Project of the UN.

And your **PETITIONERS** will ever **PRAY**:

**PRESENTED BY**

1) **ANTONY KIRORI**

ID: 10318555

Tel. No: 0723670242

P.O Box 50226-00200 Nairobi

SIGN:  .....

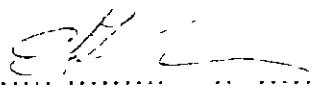
DATE: 10<sup>th</sup> / DEC / 2014 .....

2) **IVAN OCHIENG**

ID: 9789448

Tel. No: 0722330637

P.O Box 50226-00200 Nairobi

SIGN:  .....

DATE: 10<sup>th</sup> / Dec / 2014 .....



**MINISTRY OF TRANSPORT & INFRASTRUCTURE**  
Office of the Principal Secretary, Infrastructure

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WORKS BUILDING  
NGONG ROAD  
P.O. Box 30260-0010  
NAIROBI- KENYA

When replying please quote

Ref No: MOTI/I/A. 24.04 VOL 20/47

24<sup>th</sup> March, 2015

**Mr. Justin N. Bundi, CBS**  
Clerk of the National Assembly  
Parliament Building  
**NAIROBI**

Dear *Justin*

**PARLIAMENTARY PETITION REGARDING THE INTERVENTION TO  
HAVE HIGH QUALITY ROAD STUDS INTALLED ON ALL TARMAC ROADS  
IN THE COUNTRY.**

Reference is made to letter No. KNA/DC.TPWH/CORR/2015/13 of 20<sup>th</sup> March, 2015 on the above subject.

Attached, Please find the Ministry's response to the Petition by Members of the Public **Mr. Antony Kinori and Mr. Ivan Ochieng on behalf of Green Pencil Ltd** to the Speaker of the National Assembly for your further necessary action.

Yours *Sincerely*

Eng. John K. Mosonik, EBS  
**PRINCIPAL SECRETARY**

Encls



## MINISTRY OF TRANSPORT & INFRASTRUCTURE

**The Speaker of the National Assembly**  
Parliament Building  
NAIROBI

### PARLIAMENTARY PETITION REGARDING THE INTERVENTION TO HAVE HIGH QUALITY ROAD STUDS INTALLED ON ALL TARMAC ROADS IN THE COUNTRY.

The Member of the Public Mr. Antony Kinori, ID number 1031855 and Mr. Ivan Ochieng, ID number 9789448, both of P.O Box 50226-00200 Nairobi on behalf of Green Pencil Ltd. They Petitioned the Speaker of the National Assembly through the Chairperson of Departmental Committee on Transport, Public Works and Housing regarding the Intervention to have high Quality Road Studs Installed on all Tarmac Roads in the Country as follows:-

#### **Questions:-**

- a) Intervenes to have high Quality roads with no scrap value installed on all tarmac roads, at all times to enhance road safety in the Country;
- b) Intervenes to have road stud installation Component separated from main road Contracts;
- c) Initiates necessary measures to introduce advance road warning signs in Kenya; and
- d) Further intervenes to ensure Implementation of local innovations and solutions that are in line with the RS-10 project of the UN.

## Answers:

### **Mr. Speaker Sir, I beg to reply as follows:-**

- a) The Ministry of Transport and Infrastructure has put in place regulations on the use of road studs and because of their cost, they are recommended for use under the following conditions;
- i. Frequent Mist, Fog or Rain (making it difficult to see road markings).
  - ii. Poor visibility due to glare from head lights of oncoming vehicles.
  - iii. Difficult alignment (e.g. roads with many bends)
  - iv. Road side hazards (e.g. reduced carriageway width or limited clearance).

The Harmonized regional studs recommended for use throughout the regional network are:

- Red - for Prohibition
- Yellow - for Warning
- White- for Guidance

Spacing of between 18 meter and 24 meters is recommended in Rural and Urban areas respectively for various line conditions related to overtaking and edge lines. In conclusion, the use of Studs is a standard practice that is encouraged to enhance Road Safety. However, the cost of the Studs Prohibit their inclusion in contract items for roads furniture on minor roads and reflective paint which is cost effective or is oftenly used

b) Road Studs are not a stand alone item under the standard specification and fall generally under the item on road furniture. This item comprises of road reserve post, fencing gates, edge marker posts, permanent road signs, road markings guardrails, kilometers marker post, Rumble strip and studs. Regarding the selected use of Studs on difficulty areas, Stud installation is a small percentage of road development and Maintenance Works. It is therefore best incorporated in the works to realise value for money in the Procurement Process, Supervisory expert input Monitoring and evaluation through road Safety audits of the Road works.

c) The government is currently finalizing updating of all design Manual in the following areas:-

- Manual Part 1. Geometric design
- Manual Part 2. Drainage Manual
- Manual Part 3. Pavement Materials
- Manual Part 4. Structure Manual
- Manual Part 5. Road signs and Markings
- Manual Part 6. Bridges and Culvert design.

This is a comprehensive Exercise to incorporate the state of art practice in road development and Maintenance funded through a European Union (EU) grant under EDF 10. The Cabinet Secretary will be launching the revised design Manuals later this year.

d) The Ministry through development assistance under the Northern Corridor Transport Improvement Project has undertaken a comprehensive study towards the formulation of Road Safety action plan which contains a Summary of recommendations and action to improve Road Safety in Kenya. **A copy of this report is hereby provided containing the recommendations.** This is an ongoing Project that is fully being led by the National Transport and Safety Authority (NTSA). These recommendations are aligned to the UN Road Safety Decade Objectives, in reducing road crashes.



**Eng. John K. Mosonik, EBS**  
**PRINCIPAL SECRETARY**

24<sup>th</sup> March, 2015

## **SUPPLEMENTARY INFORMATION ON STUDS AND DELINEATORS**

### **12.1 Reflecting Road Studs**

Road studs should be of a type approved for use by the Ministry of Roads. Where alternative products are presented they should be accompanied by certification from a Competent testing laboratory indicating that the product provides, in use, an equivalent level of safety, suitability and durability. In the case of rural National roads, all centre lines and lane lines and lines across the mouths of slip roads should have reflecting road studs. In urban or slow speed situations, discretion should be used as to the amount of studs to be provided, having regard to the traffic pattern and mix.

### **12.2 Delineation Lines**

#### **12.2.1 Double Yellow Centre Lines**

For the standard double line yellow marking, bi-directional yellow studs should be laid between the lines, but where lines are splayed to form a central island with a hatched marking (in white) between them the studs should be white and located in both of the lines and should be of the uni-directional type. The stud spacing should be at 8m between centres for mark / space ratios of 2m/6m, except on substandard radii bends where they should be 4m between centres on continuous lines.

#### **12.2.2 Lane Lines**

White reflecting road studs should be used in those cases as indicated in the relevant figures. Where road curves are of substandard radii, line stud spacing should be 4m on continuous lines.

#### **12.2.3 Edge of Carriageway**

The continuous white line at the edge of major roads, dual carriageways and motorways should have bi-directional white studs at 8m centres if the centre lines or lane lines are set to a mark / space ratio of 2m / 6m. However, if the mark / space ratio is 3m / 9m, then the stud spacing should be set to 12m. The stud spacing should be 6m on major route curves where the lines are continuous.