

**REAAA**<sup>®</sup>  
Driving Progress

ROAD ENGINEERING ASSOCIATION OF ASIA & AUSTRALASIA (NZ)

# POLYCOM STABILISING AID FOR LOCAL ROADS

*Amal(Jimmy)Prasad*  
*Downer New Zealand LTD*

**LOW  
VOLUME  
ROADS**  
WORKSHOP  
2022

# LOW VOLUME ROADS WORKSHOP 2021

The Gisborne District Council like many local authorities in Aotearoa, is challenged with high demands from forestry loadings, poor local material quality, and climate change impacts.

These challenges make providing an appropriate level of service on unsealed roads difficult for the limited funding available.



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The Gisborne District Council (GDC) and Downer identified that traditional methods of unsealed road maintenance may no longer be sustainable given these local challenges and so decided to trial an alternative method.

The team agreed to trial the Polycom stabilising agent because of the benefits being identified from its use in the forestry sector and my past experience with the product in **Fiji** for similar challenges.



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The team identified Ngakoroa Road as the ideal candidate to test the effectiveness of the Polycom product.

This presentation will focus on: -

1. Why we felt it necessary to depart from traditional maintenance methodologies and why this site was chosen for a trial.
2. Why we chose Polycom as a product to use for the trial and how it was constructed.
3. How the site is performing and the benefits it presents from level of service and economic contexts.



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So what we talking about here



A single 2 kg bottle  
treats 500 m<sup>2</sup> of material

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## 1. Why we felt it necessary to do depart from traditional maintenance methodologies.

- Geology of Gisborne Region
- Soil Type
- High transportation and material cost due to remote location.
- High treatment cost due to all of the above



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## Trial site and location –

Ngakoroa Road is on the Western part Gisborne Region which is looked after and maintained by Gisborne District Council.

The trial site –

- Is located 31km from Gisborne Port
- Trial site length was 1km
- Has Hilly terrain
- Traction Seal with multiple pavement failures
- Heavy Forestry route
- Low traffic and volume road





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## Why Ngakoroa Road was chosen as a trial site.

- Continuous complain from Forestry company regarding the poor road condition.
- Was part of the rehabilitation programme
- Heavy forestry and logging route
- Poor and weak pavement material – lot of clay



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## 2. Why we chose Polycom as a product to use for the trial.

- Past experience with PolyCom
- Works very well with clay and silt material.
- Its success around forestry routes in Australia and New Zealand.
- Opportunity to try something different to strengthen weak unsealed pavement. This was a new product for Gisborne region.



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## 3. How it was constructed.

- Drainage works carried out
- Existing road surface were scarified using the grader rippers
- Polycom product was spread over the whole road where Polycom spreader was attached to the back of a ute which was operated from inside the vehicle.



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## 3. How the site is performing and the benefits it presents from level of service and economic contexts.

- The site is performing really well, minor failures due to very recent Rain Event we had in Gisborne.
- It meets the clients level of service – road is safe and now accessible at all times.
- Low cost treatment when compared to traditional method.



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**Before Pictures**

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## During Construction Pictures



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**Post Construction Pictures after 6  
month**



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## The advantage of using PolyCom –

- Low cost treatment when compared to conversational method
- Don't need to be sealed
- Environmentally friendly and compliant
- Same pavement material can be used over and over gain.
- Reduced purchase of resheeting materials
- Pavement remains flexible
- Reduces mud and dust (up to 80%).
- Reduces grading frequency and maintenance cost by 60%
- Treated roads are less slippery when wet



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## Conclusion –

It has been noticed recently that more District Councils in new Zealand have started using PolyCom to treat their Low volume roads and forestry routes.

Surely PolyCom is much better option compared to conversational method of treating Low volume unsealed road network when you have constrain and limited budget.

This also support New Zealand carbon emission policy to reduce fuel usage and protect the environment.



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**Thank you**

**Tēnā Koutou**

**Vinaka Vakalevu**



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**Questions**

