



Carly Hamlin – Fulton Hogan

Smart Phone Technology
“Unsealed Road Deterioration Modelling”

Modelling Objectives

- Accurately determine the point of allowable deterioration
- Determine problem sites on a road
- Programme Optimisation –lowest long term cost for the asset
- Carryout surveys with ease
- Finding a cheap, credible device for every day use.

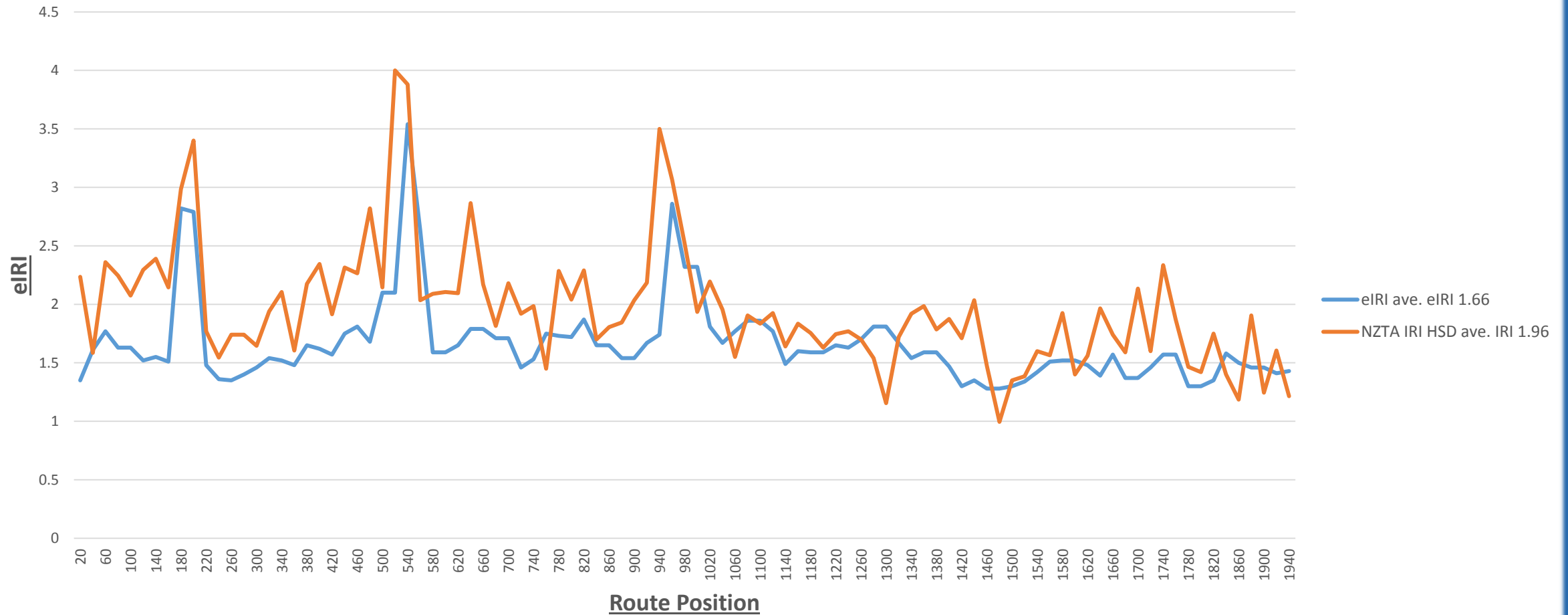
Smart Phone Technology – Roadroid App

- What is Roadroid?
- How does it work?
- Why use it?
- Stumbling blocks at the beginning
- How do we know the data is credible?



Calibration with High Speed Data (HSD)

Calibration Site - Roadroid with High Speed Data Survey

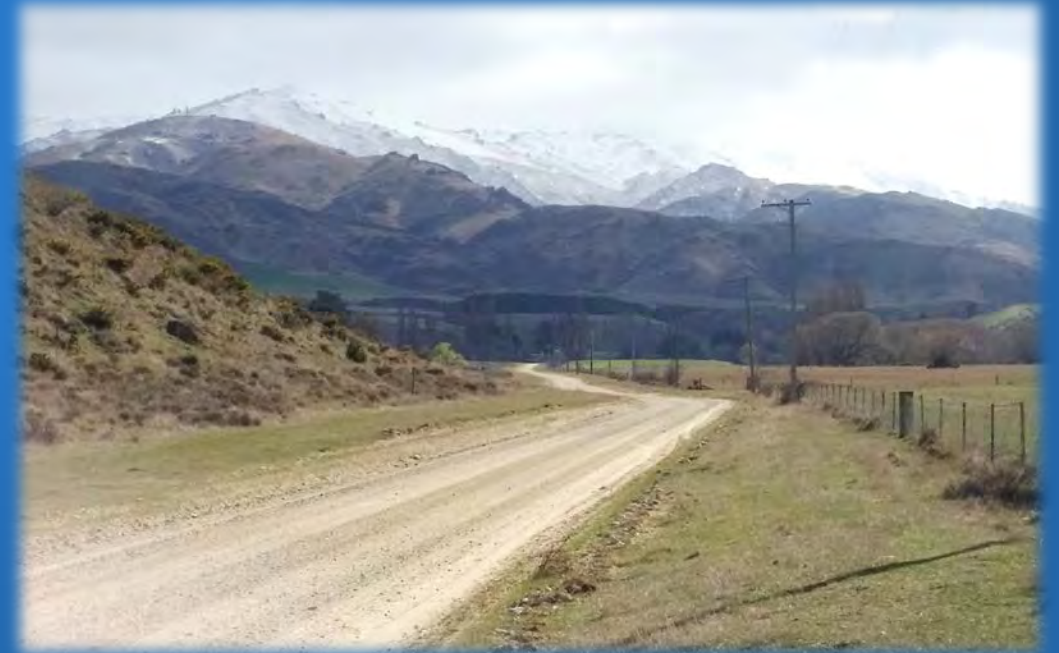


Waikerikeri Valley Road – Deterioration Trial

- High complaint site – impacting journey comfort
- Local
- ONRC – Access Road
- Combination of new and old surfaces

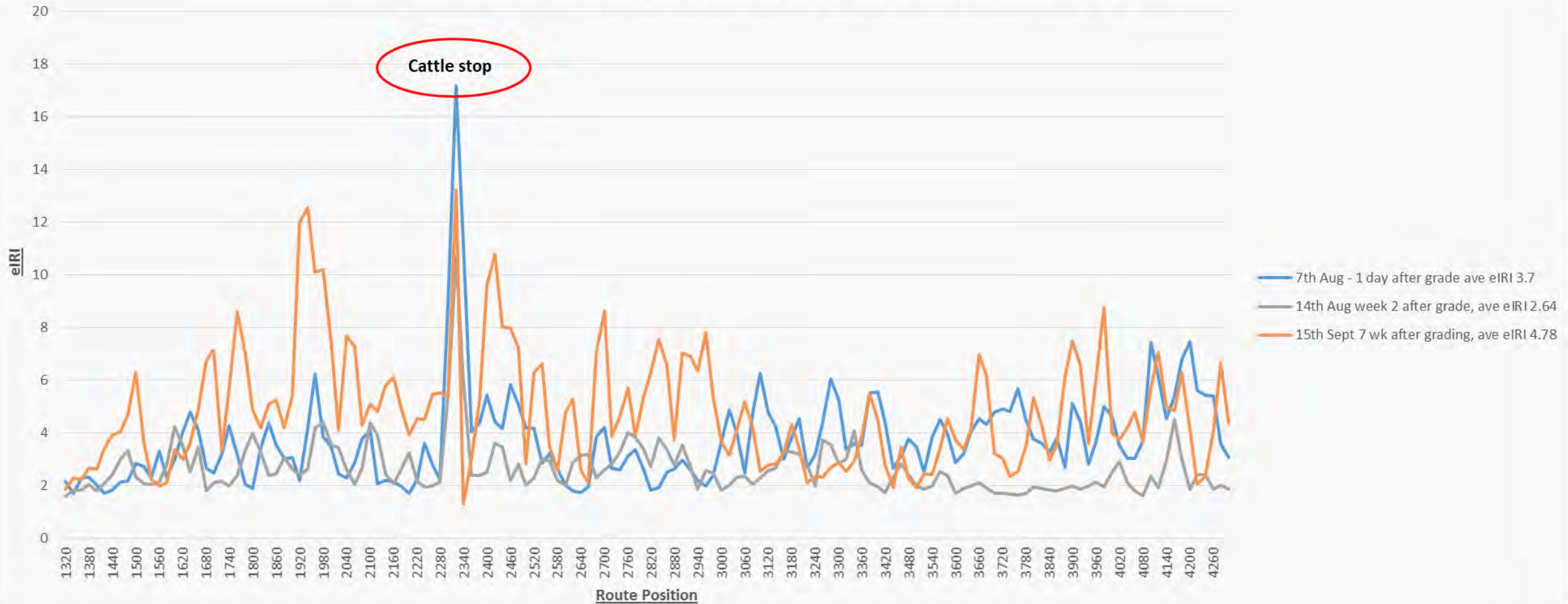
Trial Method

- Grade the road
- Monitor 2 times per week
- Track and plot results – Determine rate of deterioration



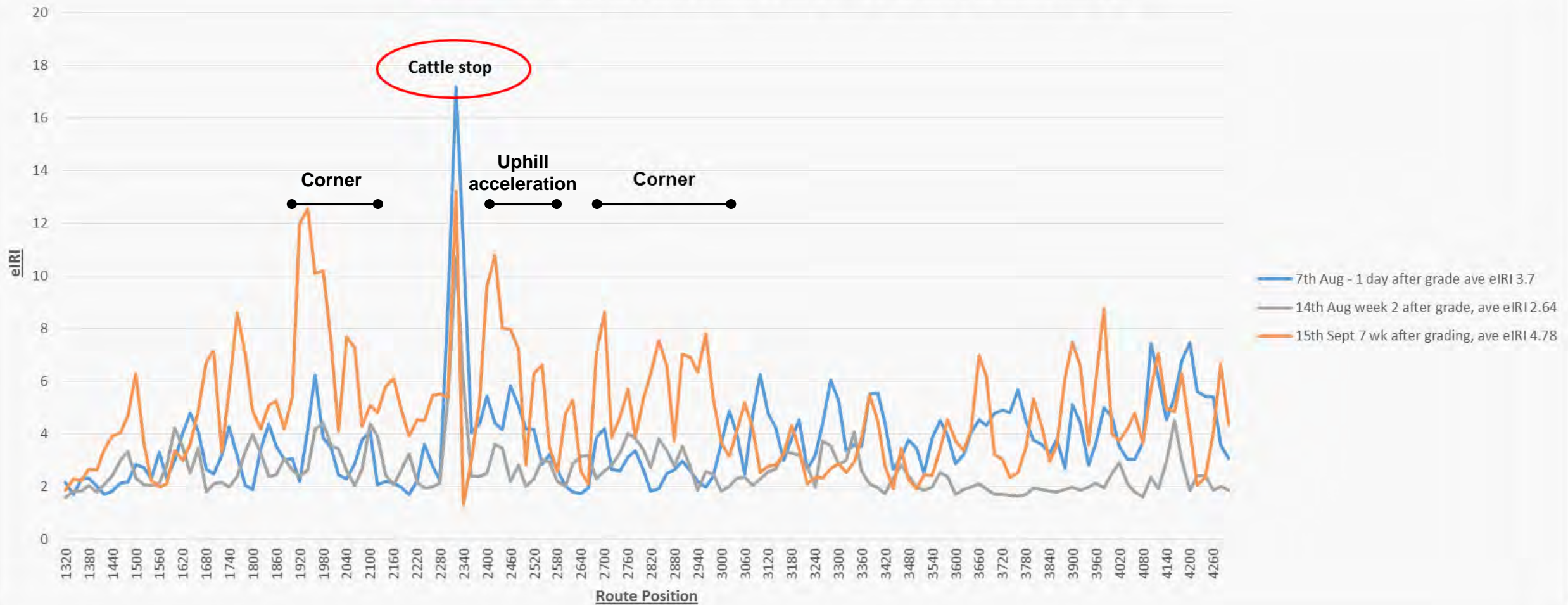
Deterioration Model Results

Waikerikeri Valley Road Pavement Deterioration Survey



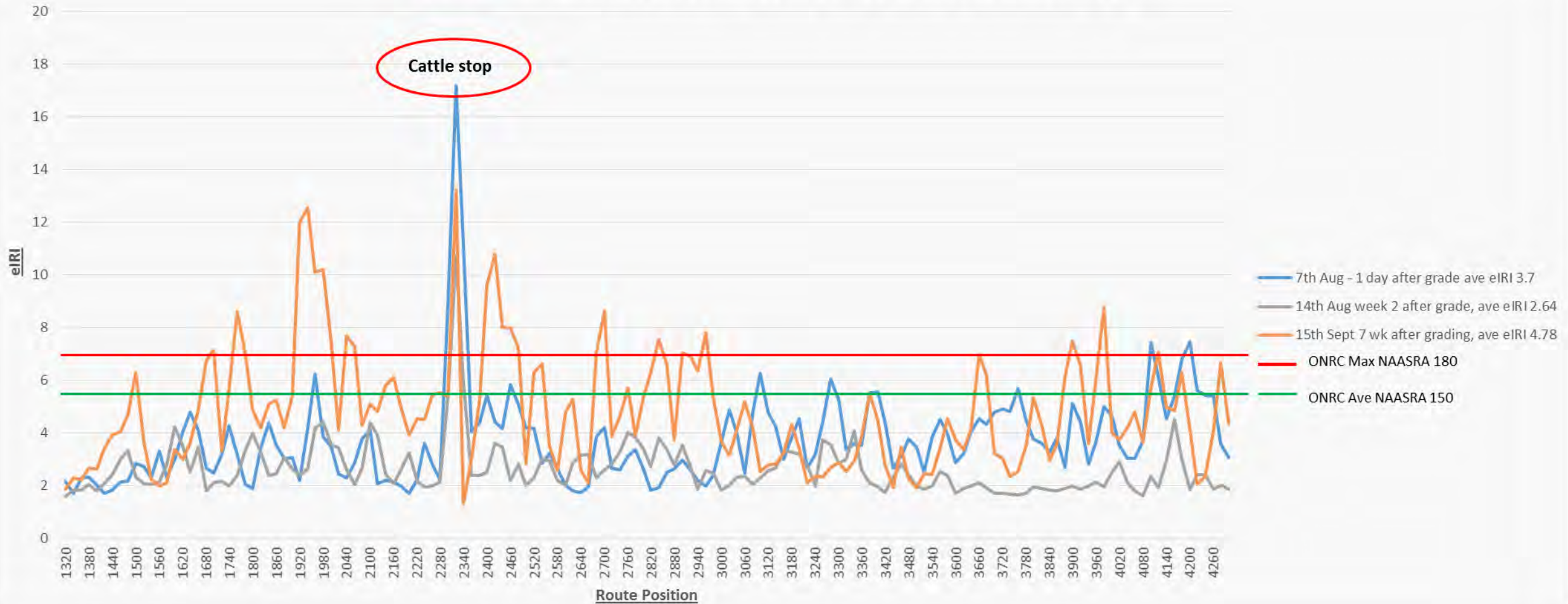
Deterioration Model Results

Waikerikeri Valley Road Pavement Deterioration Survey



Deterioration Model Results

Waikerikeri Valley Road Pavement Deterioration Survey



Challenges

- Can't use the data solely
- Maintaining Speed/Driving lines
- Stumbling blocks at the beginning
- Rural activities interfering with monitoring



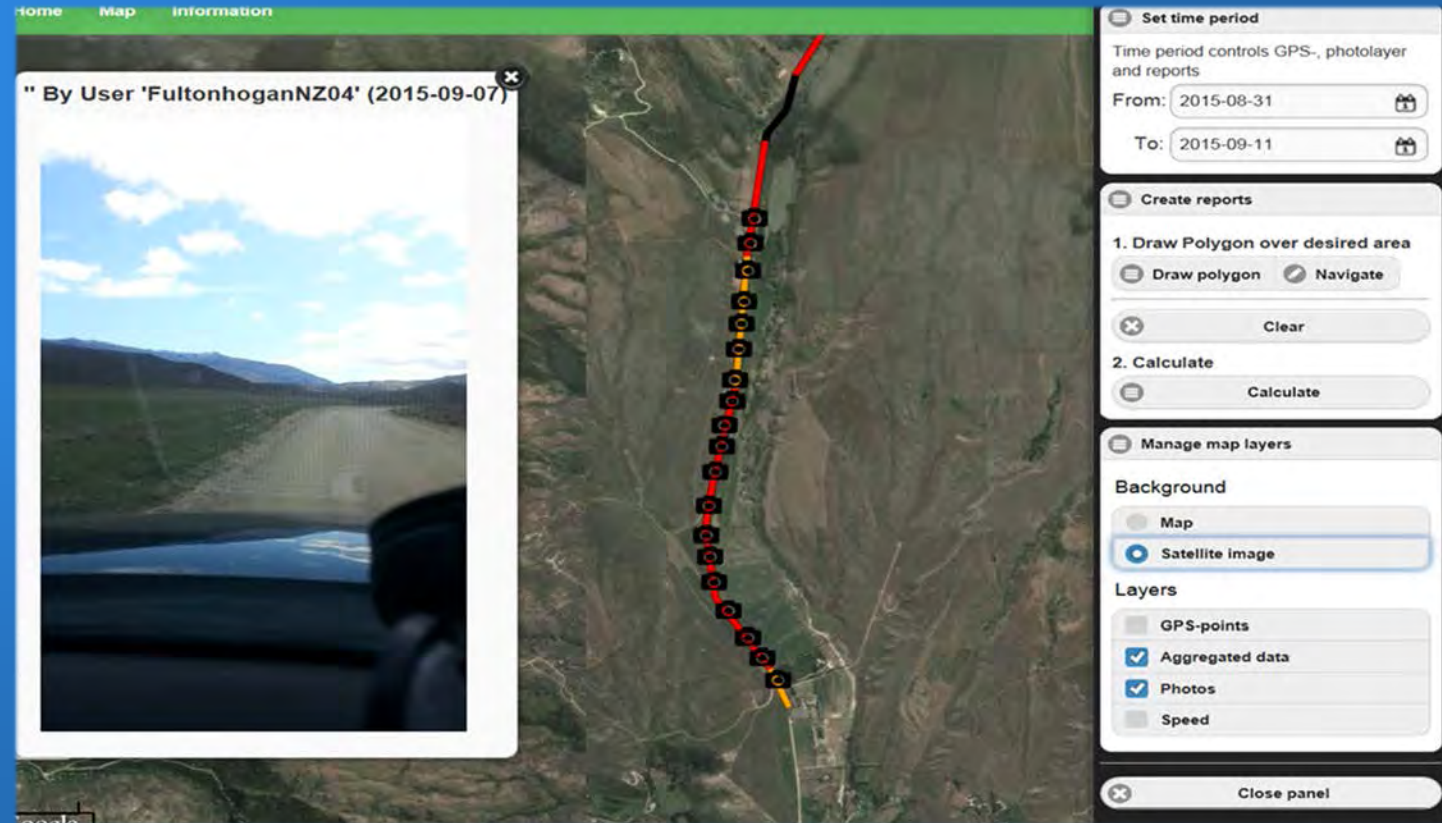
Where to from here

- Grading – Programme Optimisation
- Benefit Cost Analysis for treatments
- Footpath roughness – Internal affairs
- ONRC measures



Conclusion

- It's a tool
- Cost effective
- Strengthened Asset Management Practises
- ONRC Measures



Questions



Thank you