Investigate and Conquer

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What do we do when roads fail?

• Do-Minimum (Resurfacing and localised treatments)

• Rehabilitations and Reconstructions
Public perception of roadworks
Project Delays

Project Delays are caused by “unknowns”

- Shallow service strikes
- Shallow pavement depths
- Variable existing materials
- Sensitive Subgrades
- Plant damage/breakdown
Can we reduce the delays?

Project Stages

The more we do = Less Risk
Step 1 - Site Scoping

Site Background

- Stakeholders
- Traffic Conditions

Future Work

- Service upgrades
- Developments

Historic Information

- Alignment
- Developments
- Age of pavement

Services

- Service plans
- Stand over requirements
Step 2 - FWD Testing
FWD Results- How Does it help?

**High-Central Deflections**
- Soft subgrade areas
- Areas with shallow pavement

**Low-Curvature**
- Areas with stiff basecourse

**High-Curvature**
- Potentially inferior aggregates
Step 3 - Survey and GPR
• Provide exact locations of the services

• Identify the services at risk of being struck during construction

• Identify Abandoned services
Step 4 - Testpit Investigations

- “Snapshot” of the pavement
- Existing pavement profile
- Good spread = Greater overview
What is the depth of the aggregate?
What is the depth of the aggregate?

60mm
Step 5 - Lab Testing

• Further understand material properties

• Assess the sensitivity of subgrade materials

• Carry out reactivity testing to validate treatment solutions
Pavement Investigation Process

- Site Scope
- Survey + GPR
- Testpits
- FWD Testing
- Pavement Design
- Lab Testing
Conclusion

• A greater level of detail during investigations leads to a greater level of risk management during construction

• Reduce the number of ‘surprises’ on site

• Be able to meet project timeframes and minimise stakeholder disruptions

Stakeholders + Client + Contractor = Successful Project
Questions?