



Leveraging Advanced Technology for Rapid Disaster Recovery



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2025 State Conference - *Developing Resilience through Innovation*

IPWEA NSW & ACT

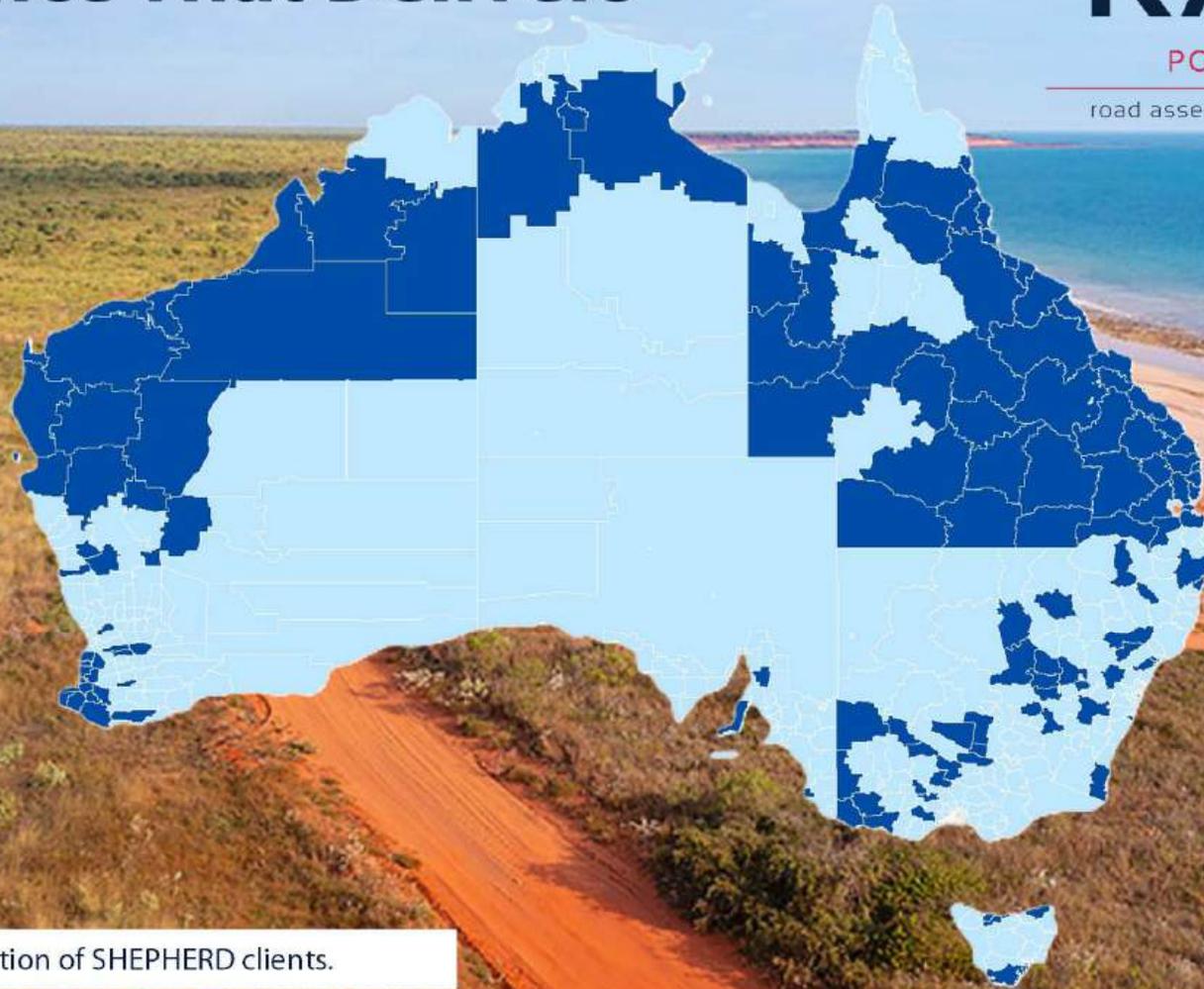
10 – 11 April, Tweed NSW

Experience That Delivers

RACAS[®]

POWERED BY SHEPHERD

road asset condition assessment system



Indicates location of SHEPHERD clients.

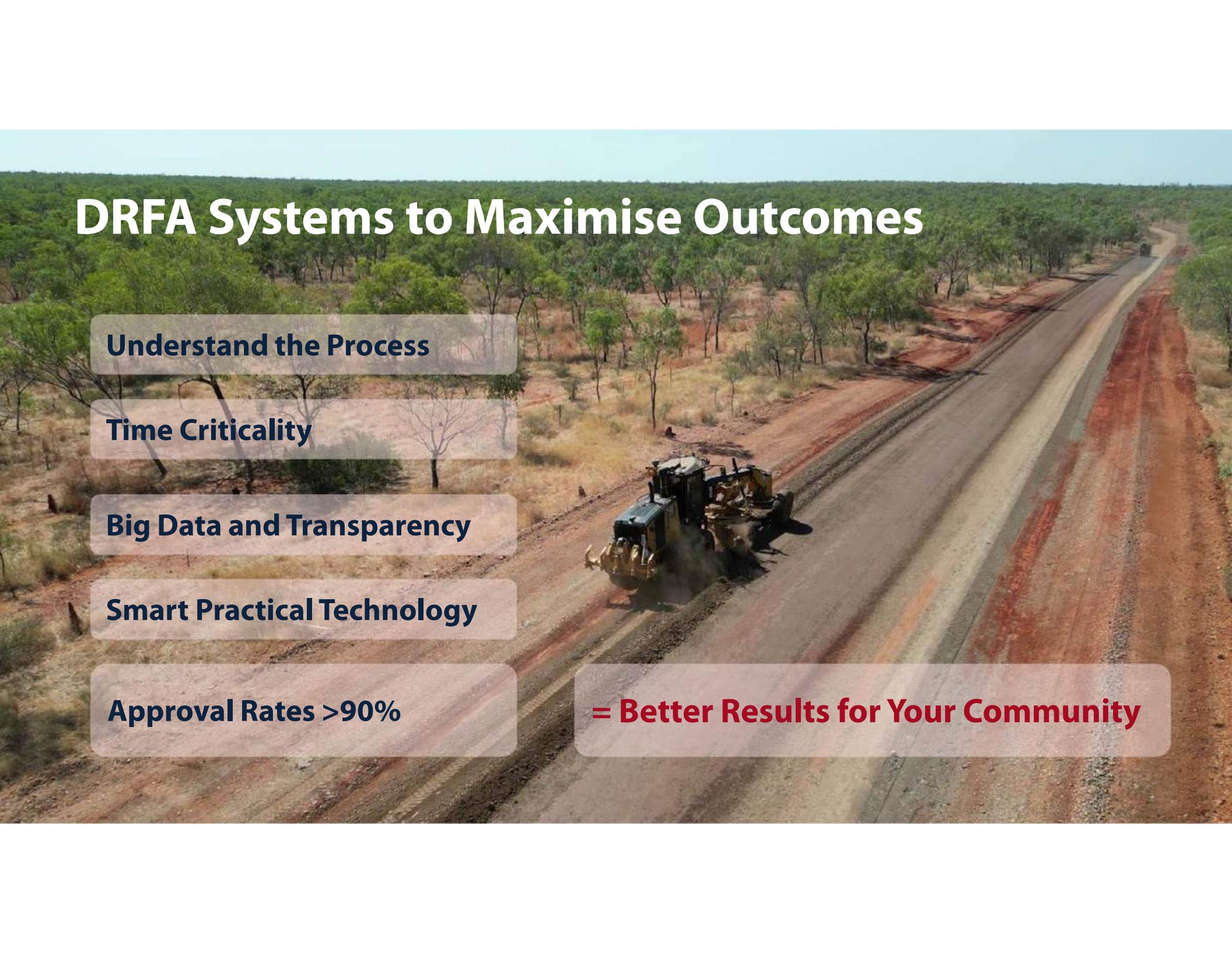
Agenda

Leveraging Advanced Technology for Rapid Disaster Recovery

- DRFA History
- DRFA Damage Assessment Technology
- Ai Technology
- DRFA Program Delivery Technology
- Emergency Response Technology



DRFA Systems to Maximise Outcomes



Understand the Process

Time Criticality

Big Data and Transparency

Smart Practical Technology

Approval Rates >90%

= Better Results for Your Community



DRFA Damage Assessment Technology

DRFA Assessment

Using Technology for Smarter In-Field Assessment

- The Traditional Approach



Introducing the New Approach

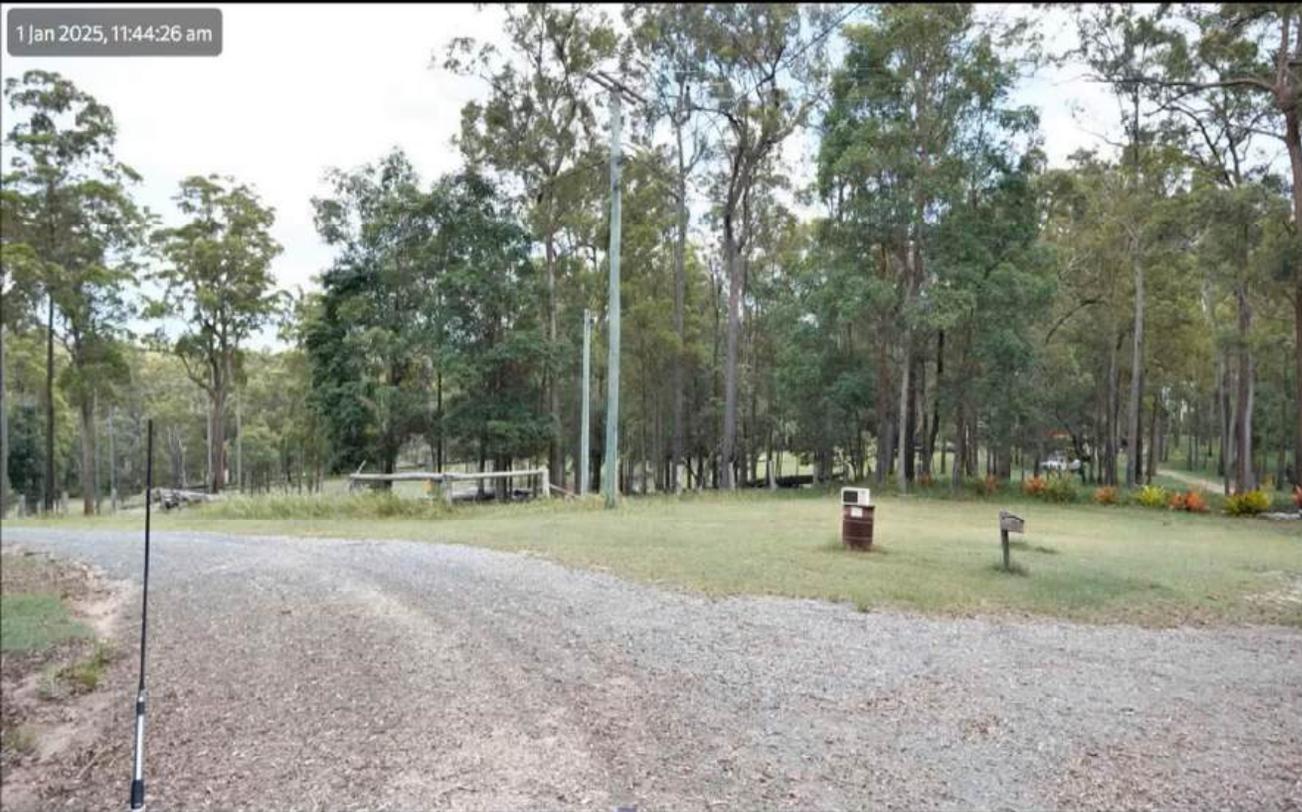
with

RACAS®
POWERED BY SHEPHERD

road asset condition
assessment system

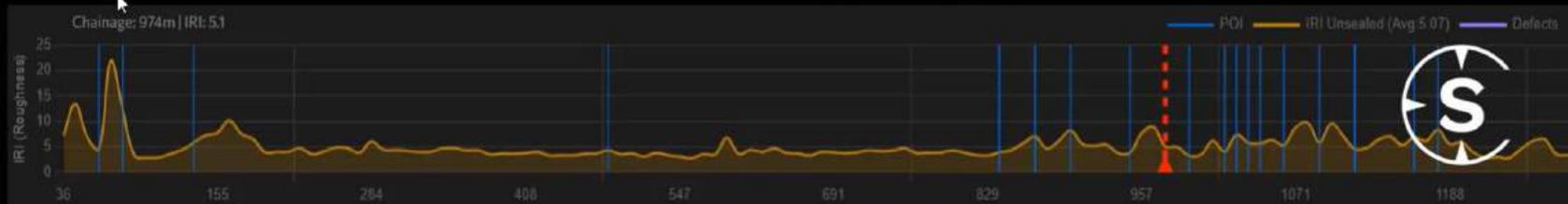
SHEPHERD
driving asset excellence

1 Jan 2025, 11:44:26 am



Show Defects

Name: Kenins Road	Locality: Downsfield
RoadNo: 3040	Hierarchy: 2 Star
AssetID: RDS.042366	Material: Formed
AvgUnsealedRt: 5.07	



Faster, Smarter Disaster Recovery

RACAS® In-Field POI Identification of Damage = Huge Efficiency Gains

- 📍 Pre-condition evidence at your fingertips
- 📍 Side-by-side comparisons for instant assessment
- 📍 DRFA standard treatments built-in
- 📍 Identify priority safety damage for immediate works
- 📍 Log damage directly on GPS-tagged images
- 📍 GIS-integrated mapping for real-time decision making
- 📍 Meta-data embedded into photos - exceeding DRFA requirements

Data Management - The Old vs The New

Hard Drives vs Cloud Technology



Evidence Backed Submissions = Faster Approvals

- 217: Boothroyds Road - rd-0093, 1483-1604, Gravel resheeting
- 218: Boothroyds Road - rd-0093, 1673-1709, Gravel resheeting
- 219: Boothroyds Road - rd-0093, 1709-1755, Gravel resheeting
- 220: Boothroyds Road - rd-0093, 1920-1938, Gravel resheeting
- 221: Boothroyds Road - rd-0093, 2050-2113, Gravel resheeting
- 222: Boothroyds Road - rd-0093, 2214-2305, Gravel resheeting
- 223: Boothroyds Road - rd-0093, 2305-2364, Gravel resheeting
- 224: Boothroyds Road - rd-0093, 2449-2467, Gravel resheeting
- 225: Boothroyds Road - rd-0093, 2678-2738, Gravel resheeting
- 227: Boothroyds Road - rd-0093, 3130-3131, Pothole repair
- 228: Boothroyds Road - rd-0093, 5760-5788, Reconstruct unbound granular pavement
- 230: Boothroyds Road - rd-0093, 6710-6711, Pothole repair
- 231: Boothroyds Road - rd-0093, 8340-8341, Pothole repair
- 233: Boothroyds Road - rd-0093, 10480-10481, Pothole repair



Case Study 1 – Gympie Regional Council

Fast, Accurate, and Funding-Ready – How RACAS® Helped Gympie Recover Sooner

"SHEPHERD's RACAS® technology provided Gympie Regional Council with an efficient and accurate assessment of our 2,300km road network following a recent rain event.

Within days, their team captured 3,000 Points of Interest, allowing us to quickly identify Emergent Works and prioritise funding applications.

Their rapid deployment and expertise have been invaluable in helping us get ahead in the recovery process."

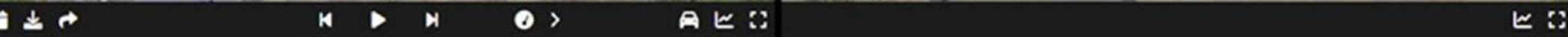
Josh Hyam, Coordinator Road Operations
Gympie Regional Council



Jan 2025, 2:45:46 pm

21 Oct 2024, 8:41:51 am

Defect	Remedy	Width	Severity	Side	Actions
1	Heavy formation grading				Edit Delete
2					Edit Delete
3					Edit Delete
4					Edit Delete



Show Defects

Locality: Bella Creek Road	Locality: Bella Creek
Address: 510	Heritage: Rural
Asset ID: RD5.041977	Material: Formed
Condition: 4.96	Avg Unsealed IRI: 5.03



Road Name: Rossmore Road

Asset ID: RDS.044154

Hierarchy: 3 Star

Locality: Kilkivan

Chainage: 3521 m

POI: POI

Time Stamp: 28 Dec 2024, 10:59:42 am

Latitude: -26.1702795

Longitude: 152.27793



SHEPHERD Bella Creek Road-510 All Roads A-2 Gympie Regional Council: Roads

4 Jan 2025, 2:28:25 pm 10 Dec 2024, 8:52:11 am

Ai Technology

Next Event

Show Defects
 Show AI Defects

Name: Bella Creek Road	Locality: Bella Creek
RoadNo: 510	Hierarchy: Rural
AssetID: RDS.041972	Material: Formed
AggSealIRI: 4.95	AggInsealIRI: 5.03

Chainage: 380m | IRI: 3.7

— PCI — IRI Sealed (Avg 4.95) — IRI Unsealed (Avg 5.83) — IRI (Right 15)

Ai Lessons Learnt

- Image quality enhances Ai accuracy
- Ai is a tool to make defect detections
- Reporting Ai Results in a useful format is important
- Make providing feedback on detections easy
- The two main benefits of Ai defect detection:
 - ✓ Improving safety of road Inspectors
 - ✓ Time saving

RACAS[®] Ai
POWERED BY SHEPHERD



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LIFE IS LIKE A BOX OF CHOCOLATES



RACAS[®] Ai
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Ai Supported - DRFA Assessment

SHEPHERD asset management solutions

Bella Creek Road~510 All Roads A-Z Gympie Regional Council: Roads

4 Jan 2025, 2:28:25 pm 10 Dec 2024, 8:52:11 am

POI AI HPD IRI Sealed (Avg: 4.95) IRI Unsealed (Avg: 5.03) Altitude IRI (Right: 15)

Chainage: 388m | IRI: 3.7 | Altitude: 111

Name: Bella Creek Road	Locality: Bella Creek
RoadNo: 510	Hierarchy: Rural
AssetID: RDS.041972	Material: Formed
AvgSealedIRI: 4.95	AvgUnsealedIRI: 5.03

IRI (Roughness) Altitude

Technology to Support DRFA Delivery

Status

(Select to Filter)

- Not Delivering 1
- Ready for Inspection 11
- Setout Completed 242
- Works Completed 409
- Works in Progress 17

Last Update: 10/3/2025

Completed Works

60.1%

Completed Value

Approved Value



Gravel Resheeting

Zoom to Pan

Site ID	4.45
Location	Old Kerang Rd Ch.2550 3256m
Approved Value	\$22,556.37



RACAS[®] HUB
POWERED BY SHEPHERD

Displaying Complex Road Management Data Simply




DRFA
Disaster Recovery Funding Arrangements




Valuations
Software to Assist and Ensure Compliance with Asset Valuations



TIDS
Transport Infrastructure Development Scheme




Unsealed Roads
Managing the Maintenance of the Unsealed Roads



info@shepherdservices.com.au 07 4911 2716 Support

Smart Delivery with SHEPHERD Hub





Emergency Response Technology





The road to success is
always under construction.

Lily Tomlin

“ quoteency

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Any Questions?

