Reflect Case Studies 2017

Let's take a look at some of the innovative adaptions of the Asset Edge software apps by some of our clients over the past 12 months - thanks for those that have contributed their work.....

Reflect Case Studies

Bridge Inspection and Defect Management	Byron Shire Council
Electronic Forms for Grid Inspection and Reporting	Charters Towers Regional Council
Recover - Cyclone Debbie and North Coast Flooding	Multiple Sites (NSW and QLD)
Merit - Reflect Integration	Nambucca (NSW) and Loddon (VIC)
Aerodrome Inspections	Goondiwindi Regional Council
Reflect for Motorways	NSW Roads and Maritime Services

Bridge Inspection and Defect Management
Byron Shire Council

Information provided by
Craig Purdy - Asset Engineer

Bridge Inspection and Defect Management

Bridge Inspections using *Reflect* Mobile Technology:

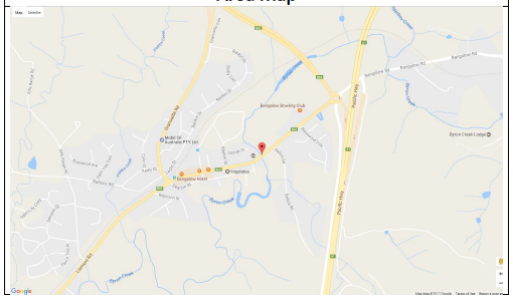
2017 has been the first year of implementation using ***Reflect*** in the bridge inspection regime.

Past years of bridge inspections have shown that improvements could be made to both the data gathering, compilation and interpretation methods.

Therefore as a result of these shortcomings, ***Reflect*** has been chosen as the preferred solution.

Location	J.C. Snow Bridge
Asset ID	44,827
Primary Location	BSC BRIDGES
Form Number	JC00001
Entered By	Malcolm Montgomery
Inspection Level	1
Completion Date	07/02/2017
Bridge ID	BRIDGE02
Bridge Normal Load Limit	
Reduced Load Limit	NO MASS LIMIT
Bridge Type	CONCRETE
Length (m)	37.20
Width (m)	12.30
Minimum Width (m)	9.75
Walkway Width (m)	2.00
Area (m2)	265.00
Construction Year	1,952
Span Length (m)	12.4
Number of Spans	3
Number of Lanes	2
Abut A	Abut is Bangalow side
Re-inspection Date	07/02/2018
Bridge Attributes Comment Section:	Structure widened on from origonal on US / walkway side. "super T girders"

Area Map



Bridge Inspection and Defect Management

Bridge Inspections using *Reflect* Technology:

Individual and unique electronic forms have been produced for each bridge to ensure the bridge inspector gathers all required information on each bridge asset.

These electronic forms are pre-loaded with previous inspections to allow inspector to observe any follow up requirements.

Data is then synced to the cloud in the field and is easily transferable to both our Asset Register and GIS with no human error risks.

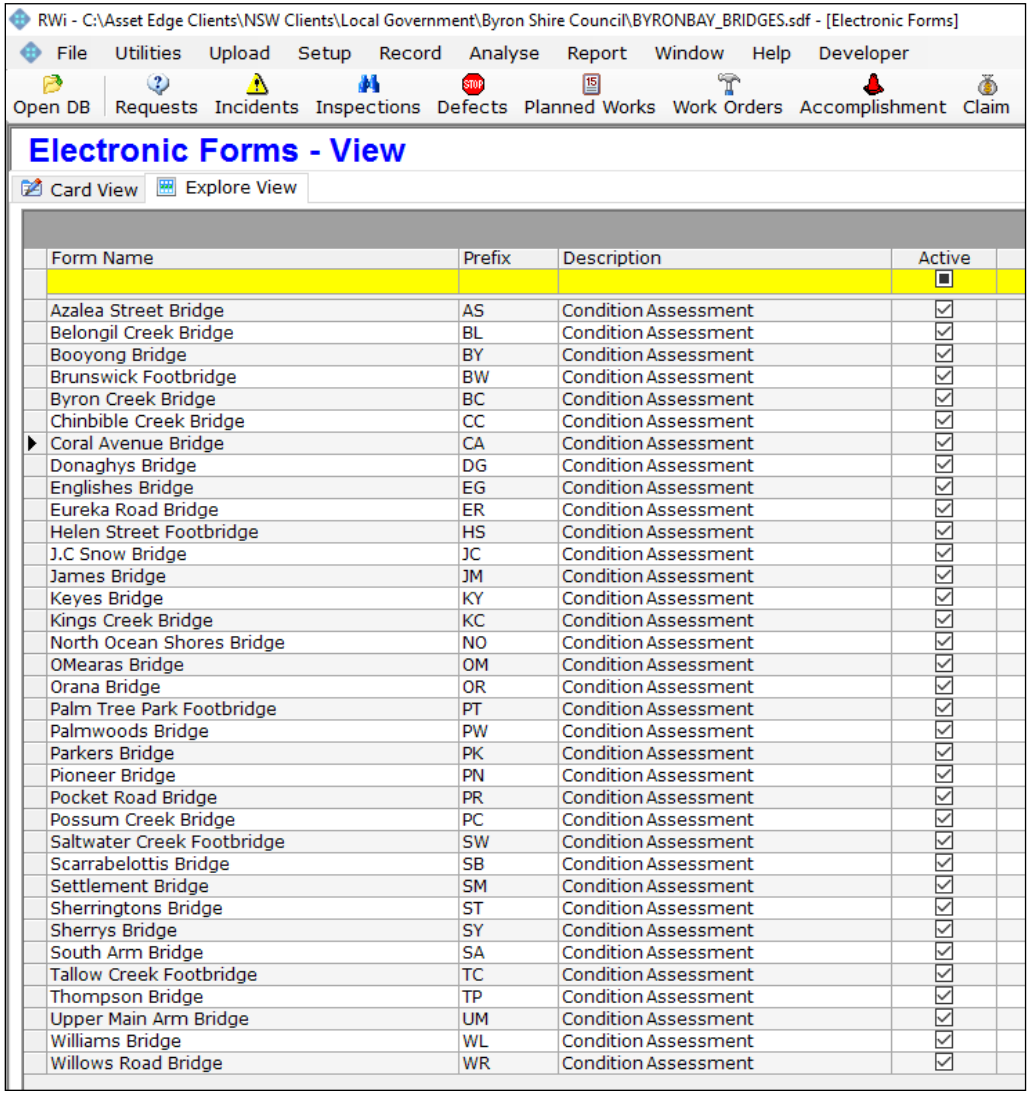
The Asset Register templates have been built around the electronic form layout to efficiently bulk upload the data when required.

Bridge Inspection and Defect Management

Advantages on using the *Reflect* solution for bridge inspections:

- Consistent and reliable data gathering in the field.
- Human error reduced considerably when data loading to Authority and GIS.
- Allows confidence to use multiple contractors.
- Forms are pre-filled with previous inspection information to allow inspector to observe any follow up requirements.
- Data is synchronised to the cloud server to ensure data integrity.
- *Reflect* is already in use by council (no incurred costs).
- Inspections and reports generated in a faster time frame creating cost savings.

Bridge Inspection and Defect Management

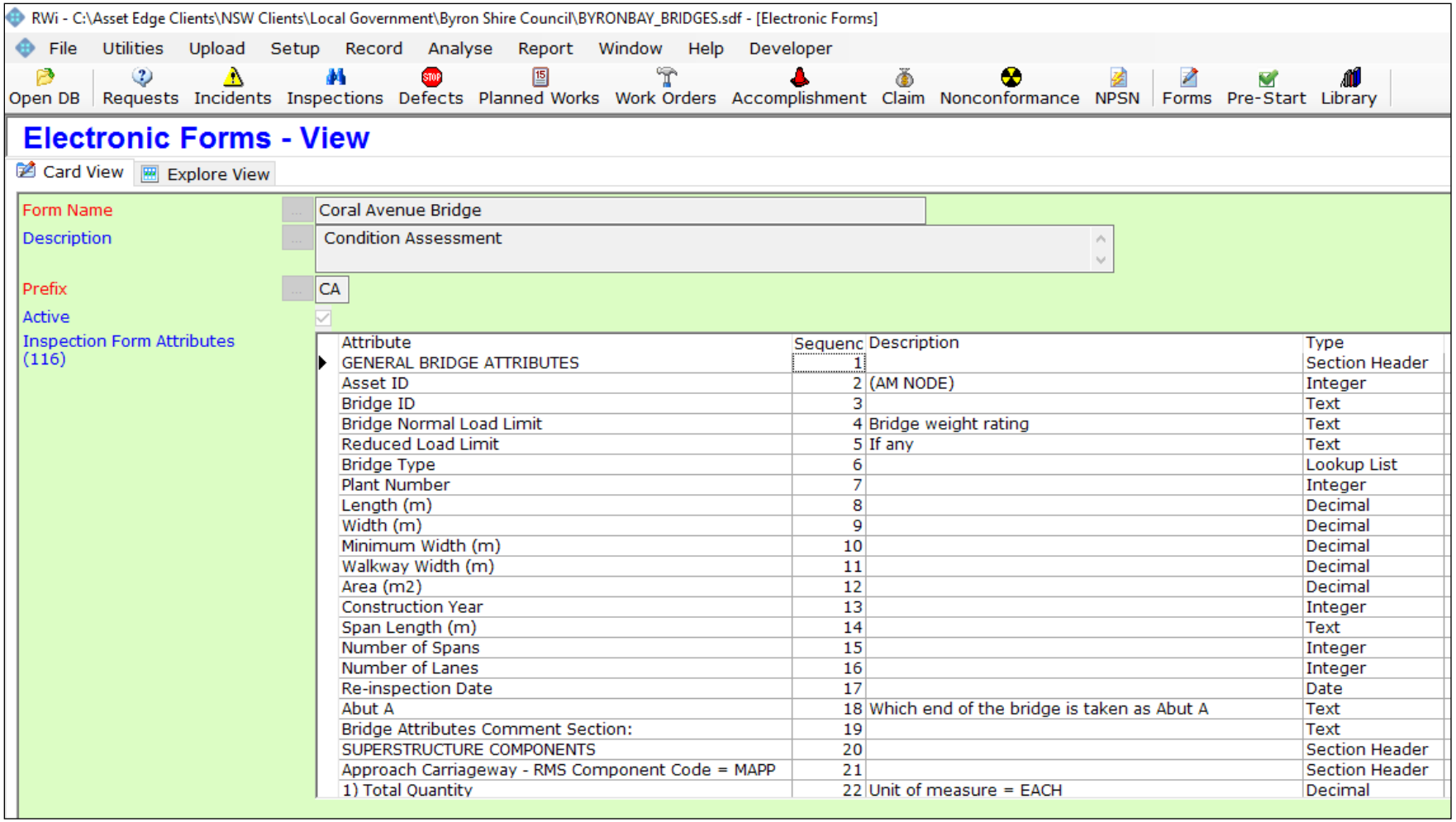


Form Name	Prefix	Description	Active
Azalea Street Bridge	AS	Condition Assessment	☑
Belongil Creek Bridge	BL	Condition Assessment	☑
Booyong Bridge	BY	Condition Assessment	☑
Brunswick Footbridge	BW	Condition Assessment	☑
Byron Creek Bridge	BC	Condition Assessment	☑
Chinbible Creek Bridge	CC	Condition Assessment	☑
Coral Avenue Bridge	CA	Condition Assessment	☑
Donaghys Bridge	DG	Condition Assessment	☑
Englishes Bridge	EG	Condition Assessment	☑
Eureka Road Bridge	ER	Condition Assessment	☑
Helen Street Footbridge	HS	Condition Assessment	☑
J.C Snow Bridge	JC	Condition Assessment	☑
James Bridge	JM	Condition Assessment	☑
Keyes Bridge	KY	Condition Assessment	☑
Kings Creek Bridge	KC	Condition Assessment	☑
North Ocean Shores Bridge	NO	Condition Assessment	☑
OMearas Bridge	OM	Condition Assessment	☑
Orana Bridge	OR	Condition Assessment	☑
Palm Tree Park Footbridge	PT	Condition Assessment	☑
Palmwoods Bridge	PW	Condition Assessment	☑
Parkers Bridge	PK	Condition Assessment	☑
Pioneer Bridge	PN	Condition Assessment	☑
Pocket Road Bridge	PR	Condition Assessment	☑
Possum Creek Bridge	PC	Condition Assessment	☑
Saltwater Creek Footbridge	SW	Condition Assessment	☑
Scarrabelottis Bridge	SB	Condition Assessment	☑
Settlement Bridge	SM	Condition Assessment	☑
Sherringtons Bridge	ST	Condition Assessment	☑
Sherrys Bridge	SY	Condition Assessment	☑
South Arm Bridge	SA	Condition Assessment	☑
Tallow Creek Footbridge	TC	Condition Assessment	☑
Thompson Bridge	TP	Condition Assessment	☑
Upper Main Arm Bridge	UM	Condition Assessment	☑
Williams Bridge	WL	Condition Assessment	☑
Willows Road Bridge	WR	Condition Assessment	☑

An individual form has been created for each of the 35 bridges maintained by council

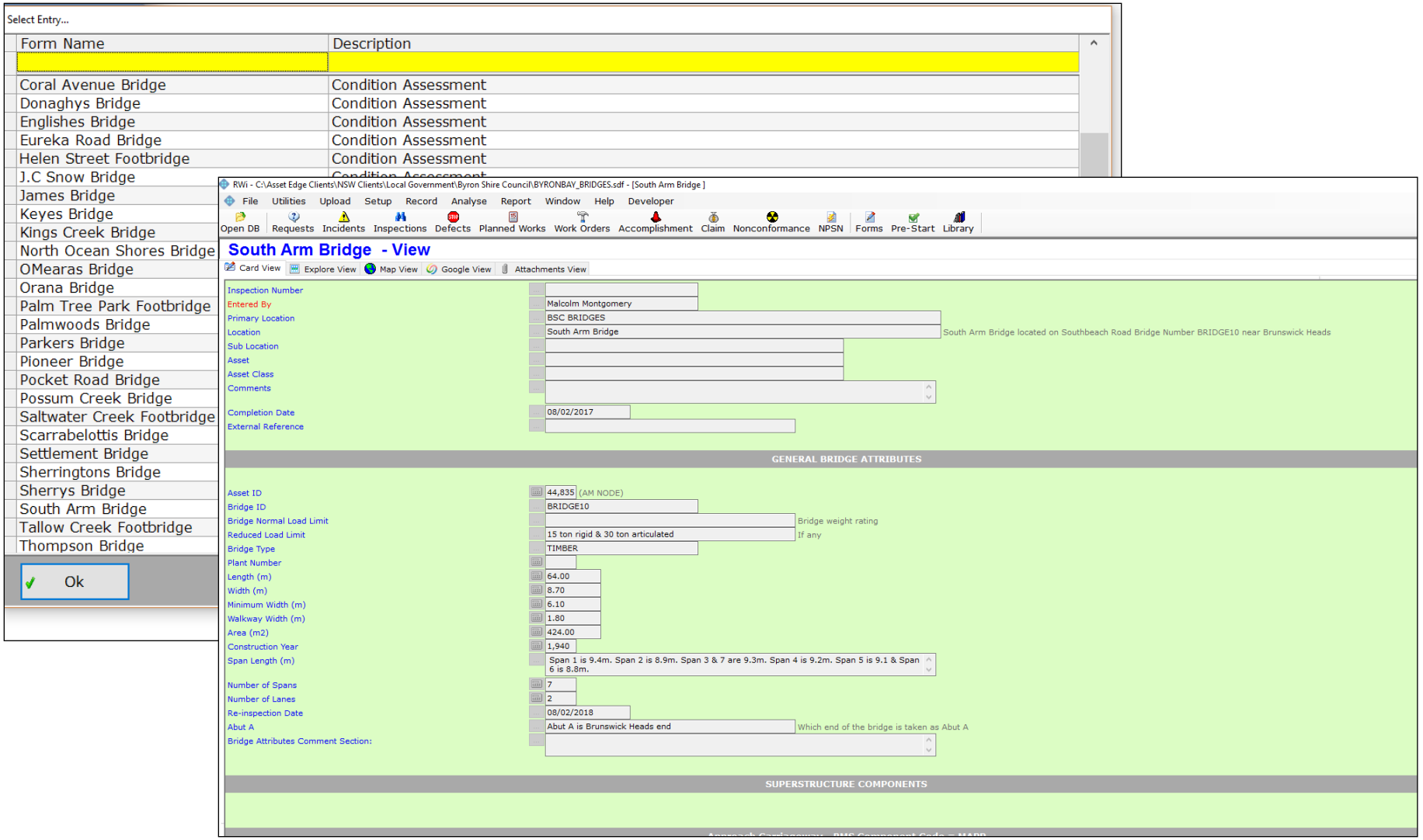
Each form has been customised for the site and uses a unique prefix value for the form

Bridge Inspection and Defect Management



Attribute	Sequenc	Description	Type
GENERAL BRIDGE ATTRIBUTES	1		Section Header
Asset ID	2	(AM NODE)	Integer
Bridge ID	3		Text
Bridge Normal Load Limit	4	Bridge weight rating	Text
Reduced Load Limit	5	If any	Text
Bridge Type	6		Lookup List
Plant Number	7		Integer
Length (m)	8		Decimal
Width (m)	9		Decimal
Minimum Width (m)	10		Decimal
Walkway Width (m)	11		Decimal
Area (m2)	12		Decimal
Construction Year	13		Integer
Span Length (m)	14		Text
Number of Spans	15		Integer
Number of Lanes	16		Integer
Re-inspection Date	17		Date
Abut A	18	Which end of the bridge is taken as Abut A	Text
Bridge Attributes Comment Section:	19		Text
SUPERSTRUCTURE COMPONENTS	20		Section Header
Approach Carriageway - RMS Component Code = MAPP	21		Section Header
1) Total Quantity	22	Unit of measure = EACH	Decimal

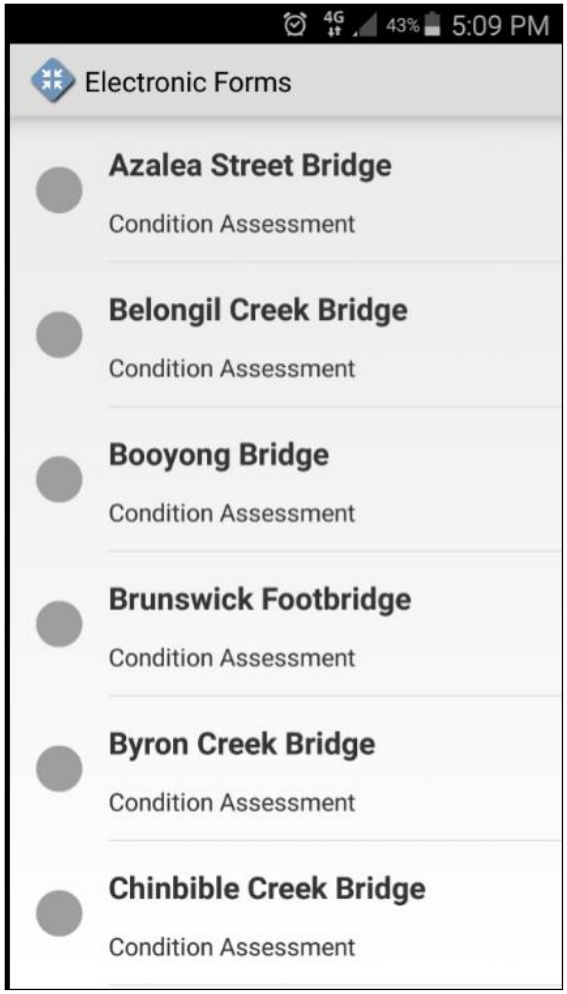
Bridge Inspection and Defect Management



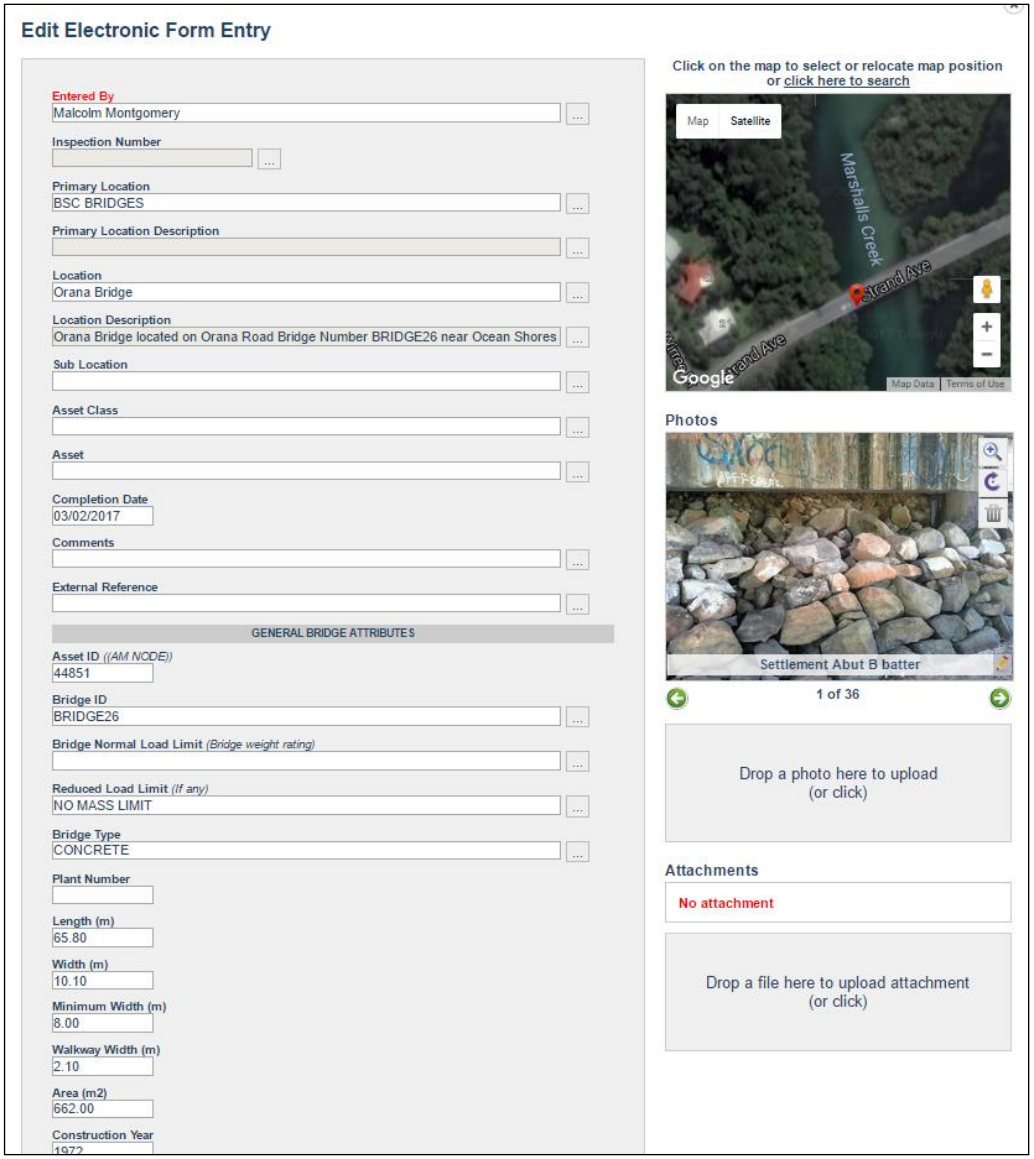
Bridge Inspection and Defect Management

Condition Assessment inspections are then able to be carried out on mobile devices.

Currently the Byron Shire are inspecting bridges annually .



Bridge Inspection and Defect Management

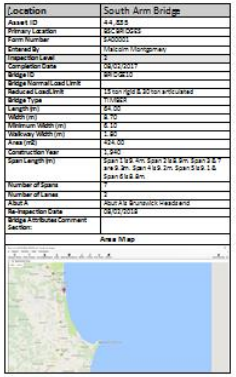


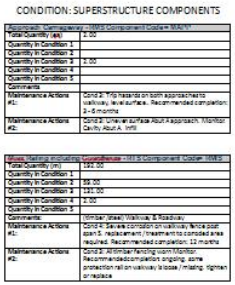
Information can then be easily accessed using Reflect Web

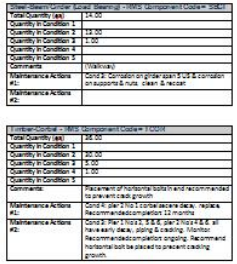
Post inspection editing can also be carried out.

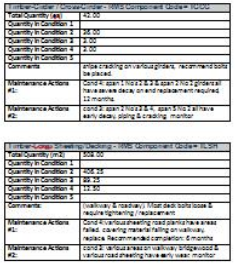
Bridge Inspection and Defect Management

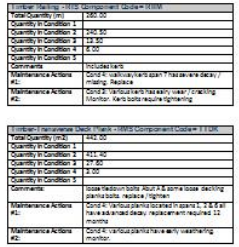
Comprehensive reports including images for each bridge asset can be generated using templates from Reflect Windows version

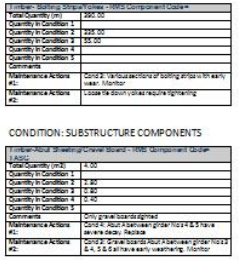


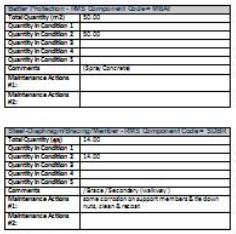


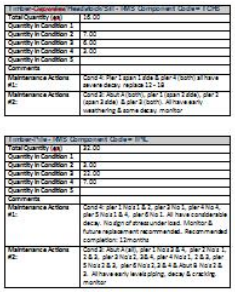


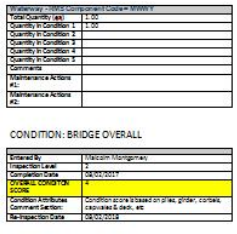


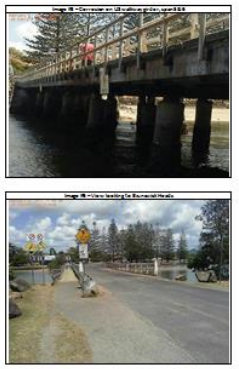






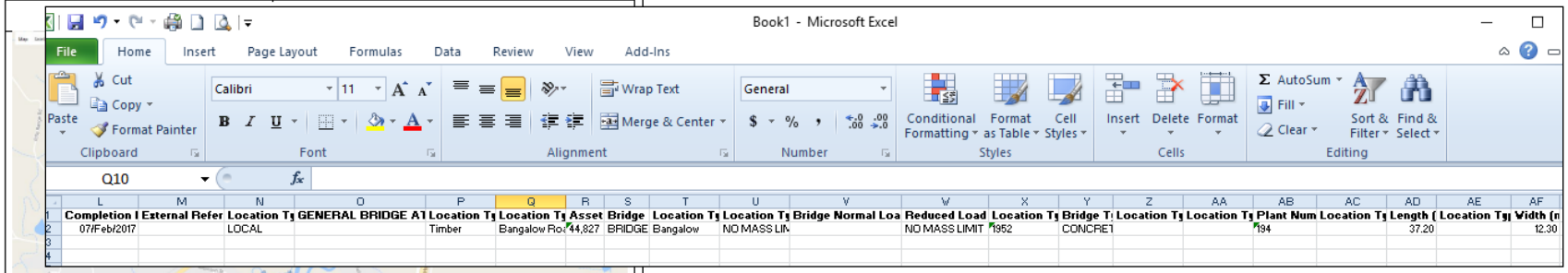






Bridge Inspection and Defect Management

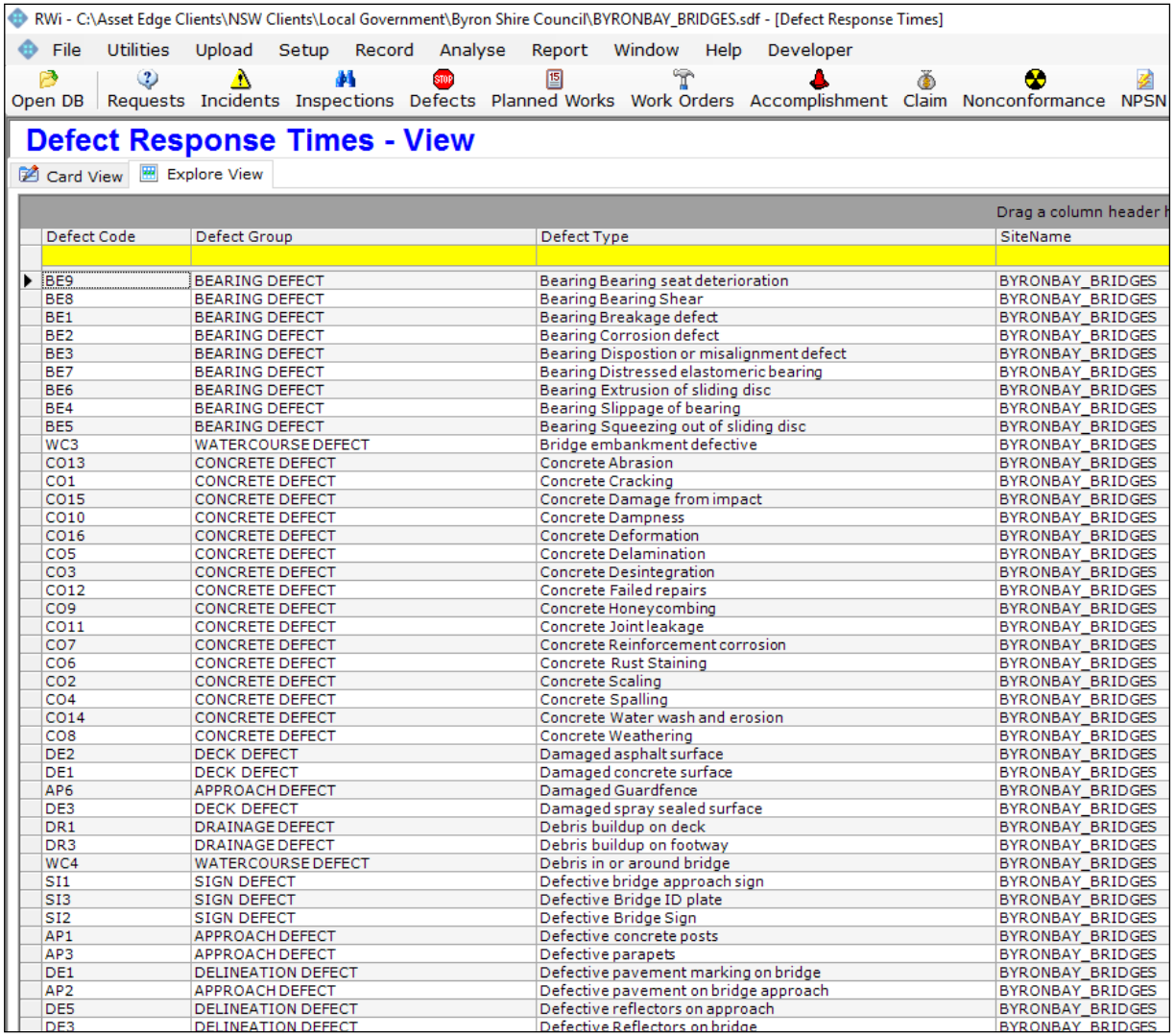
Location	J.C. Snow Bridge
Asset ID	44,827
Primary Location	BSC BRIDGES
Form Number	JC00001
Entered By	Malcolm Montgomery
Inspection Level	1
Completion Date	07/02/2017
Bridge ID	BRIDGE02
Bridge Normal Load Limit	
Reduced Load Limit	NO MASS LIMIT
Bridge Type	CONCRETE
Length (m)	37.20
Width (m)	12.30
Minimum Width (m)	9.75
Walkway Width (m)	2.00
Area (m2)	265.00
Construction Year	1,952
Span Length (m)	12.4
Number of Spans	3
Number of Lanes	2
Abut A	Abut is Bangalow side
Re-inspection Date	07/02/2018
Bridge Attributes Comment Section:	Structure widened on from origonal on US / walkway side. "super T girders"



All transfer of data is currently done using MS Excel to

- GIS is ESRI
- Asset Register Civica Authority

Bridge Inspection and Defect Management



Defect Code	Defect Group	Defect Type	SiteName
BE9	BEARING DEFECT	Bearing Bearing seat deterioration	BYRONBAY_BRIDGES
BE8	BEARING DEFECT	Bearing Bearing Shear	BYRONBAY_BRIDGES
BE1	BEARING DEFECT	Bearing Breakage defect	BYRONBAY_BRIDGES
BE2	BEARING DEFECT	Bearing Corrosion defect	BYRONBAY_BRIDGES
BE3	BEARING DEFECT	Bearing Dispostion or misalignment defect	BYRONBAY_BRIDGES
BE7	BEARING DEFECT	Bearing Distressed elastomeric bearing	BYRONBAY_BRIDGES
BE6	BEARING DEFECT	Bearing Extrusion of sliding disc	BYRONBAY_BRIDGES
BE4	BEARING DEFECT	Bearing Slippage of bearing	BYRONBAY_BRIDGES
BE5	BEARING DEFECT	Bearing Squeezing out of sliding disc	BYRONBAY_BRIDGES
WC3	WATERCOURSE DEFECT	Bridge embankment defective	BYRONBAY_BRIDGES
CO13	CONCRETE DEFECT	Concrete Abrasion	BYRONBAY_BRIDGES
CO1	CONCRETE DEFECT	Concrete Cracking	BYRONBAY_BRIDGES
CO15	CONCRETE DEFECT	Concrete Damage from impact	BYRONBAY_BRIDGES
CO10	CONCRETE DEFECT	Concrete Dampness	BYRONBAY_BRIDGES
CO16	CONCRETE DEFECT	Concrete Deformation	BYRONBAY_BRIDGES
CO5	CONCRETE DEFECT	Concrete Delamination	BYRONBAY_BRIDGES
CO3	CONCRETE DEFECT	Concrete Desintegration	BYRONBAY_BRIDGES
CO12	CONCRETE DEFECT	Concrete Failed repairs	BYRONBAY_BRIDGES
CO9	CONCRETE DEFECT	Concrete Honeycombing	BYRONBAY_BRIDGES
CO11	CONCRETE DEFECT	Concrete Joint leakage	BYRONBAY_BRIDGES
CO7	CONCRETE DEFECT	Concrete Reinforcement corrosion	BYRONBAY_BRIDGES
CO6	CONCRETE DEFECT	Concrete Rust Staining	BYRONBAY_BRIDGES
CO2	CONCRETE DEFECT	Concrete Scaling	BYRONBAY_BRIDGES
CO4	CONCRETE DEFECT	Concrete Spalling	BYRONBAY_BRIDGES
CO14	CONCRETE DEFECT	Concrete Water wash and erosion	BYRONBAY_BRIDGES
CO8	CONCRETE DEFECT	Concrete Weathering	BYRONBAY_BRIDGES
DE2	DECK DEFECT	Damaged asphalt surface	BYRONBAY_BRIDGES
DE1	DECK DEFECT	Damaged concrete surface	BYRONBAY_BRIDGES
AP6	APPROACH DEFECT	Damaged Guardfence	BYRONBAY_BRIDGES
DE3	DECK DEFECT	Damaged spray sealed surface	BYRONBAY_BRIDGES
DR1	DRAINAGE DEFECT	Debris buildup on deck	BYRONBAY_BRIDGES
DR3	DRAINAGE DEFECT	Debris buildup on footway	BYRONBAY_BRIDGES
WC4	WATERCOURSE DEFECT	Debris in or around bridge	BYRONBAY_BRIDGES
SI1	SIGN DEFECT	Defective bridge approach sign	BYRONBAY_BRIDGES
SI3	SIGN DEFECT	Defective Bridge ID plate	BYRONBAY_BRIDGES
SI2	SIGN DEFECT	Defective Bridge Sign	BYRONBAY_BRIDGES
AP1	APPROACH DEFECT	Defective concrete posts	BYRONBAY_BRIDGES
AP3	APPROACH DEFECT	Defective parapets	BYRONBAY_BRIDGES
DE1	DELINEATION DEFECT	Defective pavement marking on bridge	BYRONBAY_BRIDGES
AP2	APPROACH DEFECT	Defective pavement on bridge approach	BYRONBAY_BRIDGES
DE5	DELINEATION DEFECT	Defective reflectors on approach	BYRONBAY_BRIDGES
DE3	DELINEATION DEFECT	Defective Reflectors on bridge	BYRONBAY_BRIDGES

Byron Shire Council also has access to comprehensive Defect Type and Activity models for use in Bridge Inspection and maintenance.

Electronic Forms for Grid Inspection and Reporting

Charters Towers Regional Council

CHARTERS TOWERS
REGIONAL COUNCIL

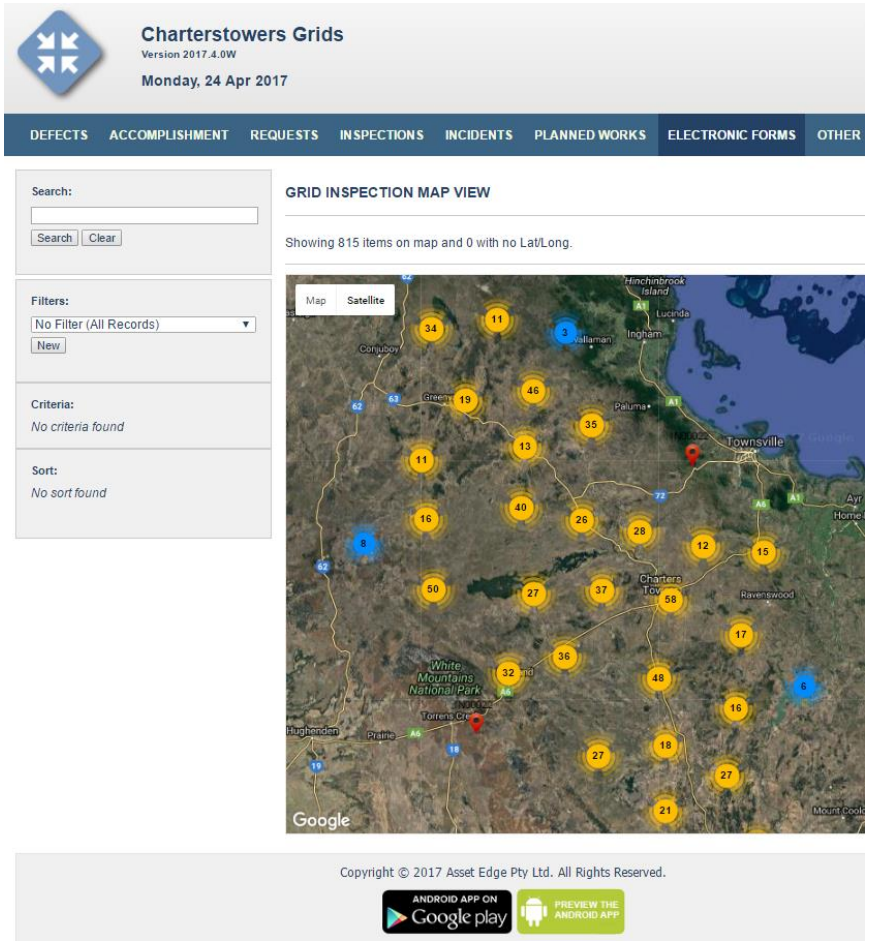
Information provided by
Helen King - Team Leader Civil Construction

Grid Inspection and Reporting

CHARTERS TOWERS
REGIONAL COUNCIL

- Annual Inspection – Electronic Form, defects generated from this inspection
- Defects added to Work Orders for the Grid and sent to the Grid Owner, simple Work Order template attached to the print button.
- Grid Owner returns Work Order with works completed, these works are inspected and if completed accomplishment record created.
- There are two activities at present one for inspections and one GRID WORKS COMPLETED uom each for both.

Grid Inspection and Reporting



Grids in the CTRC region are owned by the property owners rather than the council. Inspections on the 815 Stock Grid Locations are conducted by council annually.

Any identified Defect are compiled from the inspection data and “Work Orders” are then issued out to the Grid owners will then know which parts of their grids are defective.

Each grid will have an individual work order numbered to that grid. Many property owners have multiple grids CTRC needs to make it as clear as possible which grid the work needs to be done.

The Reflect Location model and use of chainage points assists with Grid identification

Grid Inspection and Reporting

CHARTERS TOWERS REGIONAL COUNCIL

RWi - C:\Asset Edge Clients\QLD Clients\Local Government\Charters Towers Regional Council\CHARTERSTOWERS_GRIDS.sdf - [Electronic Forms]

File Utilities Upload Setup Record Analyse Report Window Help Developer

Open DB | Requests | Incidents | Inspections | Defects | Planned Works | Work Orders | Accomplishment | Claim | Nonconformance | NPSN | Forms | Library

Electronic Forms - View

Card View | Explore View

Form Name: Grid Inspection

Description: Annual inspection of Grids

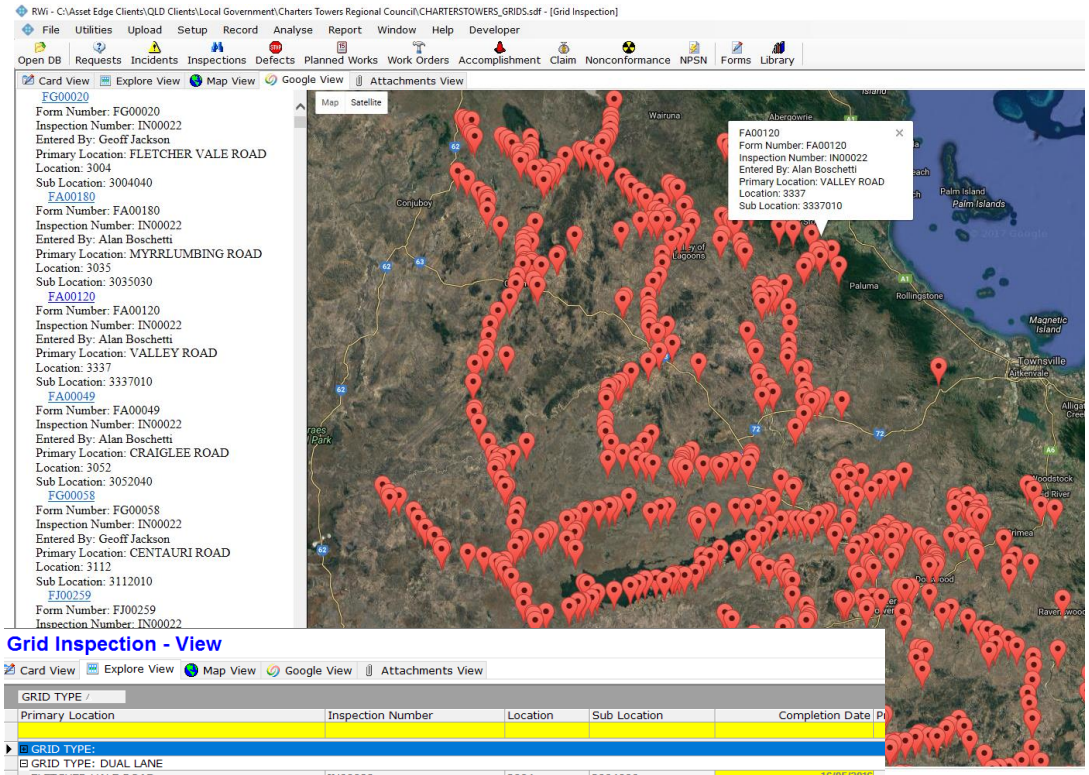
Active: ☑

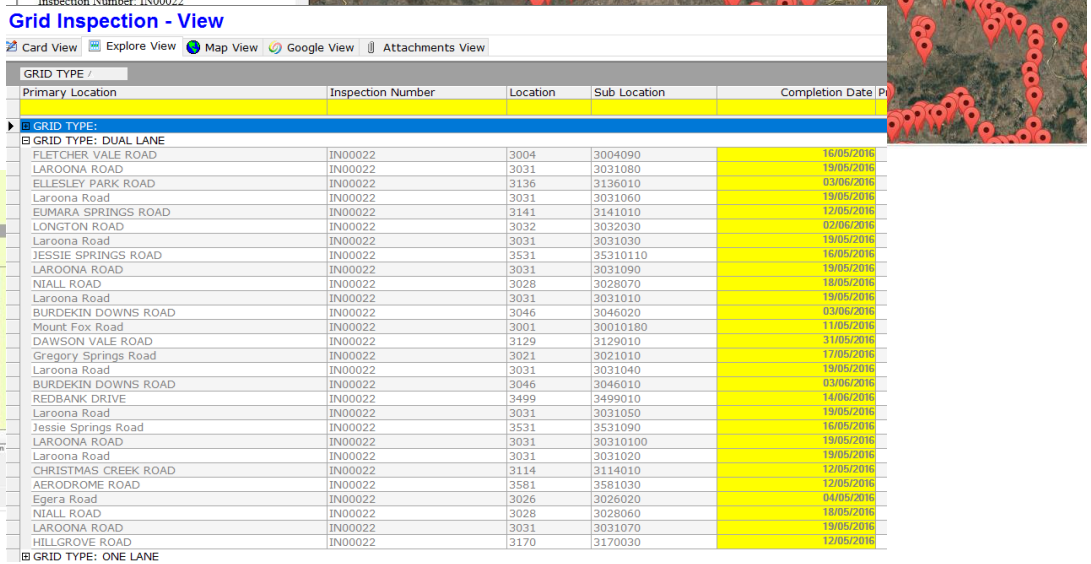
Inspection Form Attributes (55)

Attribute	Sequence	Description	Type
Form Number	1		Text
Inspection Date	2		Date
INSPECTION TYPES	3		Lookup List
INSPECTOR	4		Text
GRID TYPE	5		Lookup List
One Lane Sign	6		Lookup List
2 GRIDS 40MM APART	7		Lookup List
BOLTED as per spec	8		Lookup List
POSITION WITHIN LOCATION	9		Lookup List
GRID SQUARE TO ROAD	10		Lookup List
RIDEABILITY	11		Lookup List
APPROACH 1	12		Lookup List
APPROACH 2	13		Lookup List
ABUTMENTS - Condition	14		Lookup List
ABUTMENTS - Grid fixed securely	15		Lookup List
BEARERS - Condition	16		Lookup List
GRID FLOOR	17		Lookup List
END/WING WALLS	18		Lookup List
DECK RAILS	19		Lookup List
DECK RAILS - Broken	20		Lookup List
DECK RAILS - Missing	21		Lookup List
DECK RAILS - Bent	22		Lookup List

Grid Inspection and Reporting

CHARTERS TOWERS REGIONAL COUNCIL





Primary Location	Inspection Number	Location	Sub Location	Completion Date
GRID TYPE:				
GRID TYPE: DUAL LANE				
FLETCHER VALE ROAD	IN00022	3004	3004090	16/05/2016
LAROONA ROAD	IN00022	3031	3031080	19/05/2016
ELLESLEY PARK ROAD	IN00022	3136	3136010	03/06/2016
Laroona Road	IN00022	3031	3031060	19/05/2016
EUMARA SPRINGS ROAD	IN00022	3141	3141010	12/05/2016
LONGTON ROAD	IN00022	3032	3032030	02/06/2016
Laroona Road	IN00022	3031	3031030	19/05/2016
JESSIE SPRINGS ROAD	IN00022	3531	35310110	16/05/2016
LAROONA ROAD	IN00022	3031	3031090	19/05/2016
NIALL ROAD	IN00022	3028	3028070	18/05/2016
Laroona Road	IN00022	3031	3031010	19/05/2016
BURDEKIN DOWNS ROAD	IN00022	3046	3046020	03/06/2016
Mount Fox Road	IN00022	3001	30010180	11/05/2016
DAWSON VALE ROAD	IN00022	3129	3129010	31/05/2016
Gregory Springs Road	IN00022	3021	3021010	17/05/2016
Laroona Road	IN00022	3031	3031040	19/05/2016
BURDEKIN DOWNS ROAD	IN00022	3046	3046010	03/06/2016
REDBANK DRIVE	IN00022	3499	3499010	14/06/2016
Laroona Road	IN00022	3031	3031050	19/05/2016
Jessie Springs Road	IN00022	3531	3531090	16/05/2016
LAROONA ROAD	IN00022	3031	30310100	19/05/2016
Laroona Road	IN00022	3031	3031020	19/05/2016
CHRISTMAS CREEK ROAD	IN00022	3114	3114010	12/05/2016
AERODROME ROAD	IN00022	3581	3581030	12/05/2016
Egera Road	IN00022	3026	3026020	04/05/2016
NIALL ROAD	IN00022	3028	3028060	18/05/2016
LAROONA ROAD	IN00022	3031	3031070	19/05/2016
HILLGROVE ROAD	IN00022	3170	3170030	12/05/2016
GRID TYPE: ONE LANE				

Grid Inspection and Reporting

CHARTERS TOWERS REGIONAL COUNCIL

Edit Electronic Form Entry

Entered By
Greg Parish

Inspection Number
IN00022

Primary Location
PLUMWOOD ROAD

Location
3268

Completion Date
25/05/2016

External Reference

Form Number
FJ00254

Inspection Date
25/05/2016

INSPECTION TYPES
ROUTINE

INSPECTOR
Greg Parrish

GRID TYPE
ONE LANE

One Lane Sign
No

2 GRIDS 40MM APART
N/A

BOLTED as per spec
N/A

POSITION WITHIN LOCATION
STRAIGHT

GRID SQUARE TO ROAD
Yes

RIDEABILITY
2. GOOD

Click on the map to select or relocate map position
or click here to search

Photos

3 of 3

Drop a photo here to upload
(or click)

Cyclone Debbie and North Coast Flooding

Recover Damage Collection

Information from

Whitsunday Regional Council
Isaac Regional Council
Gladstone Regional Council
Southern Downs Regional Council
Tweed Shire Council
Lismore City Council
Ballina Shire Council
Byron Bay Shire Council

Cyclone Debbie and North Coast Flooding

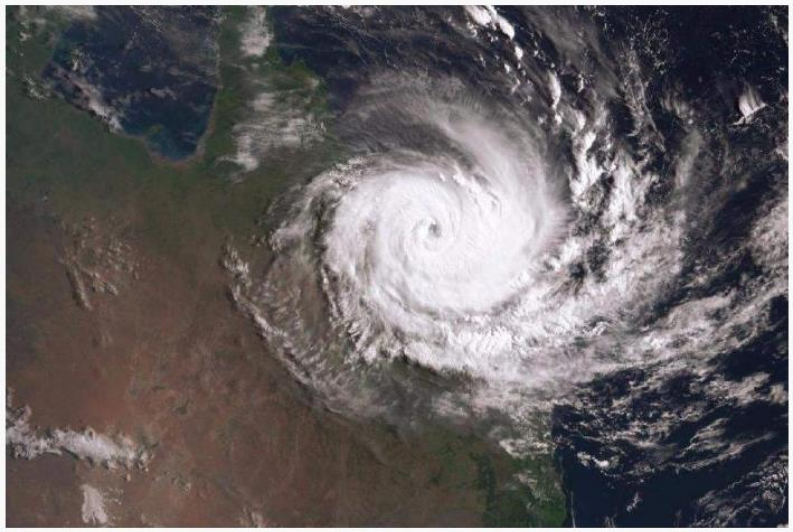
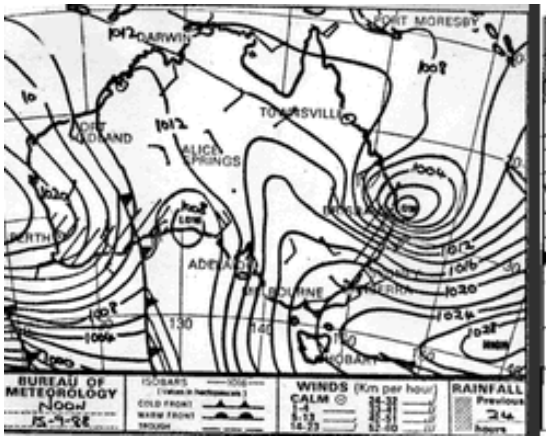
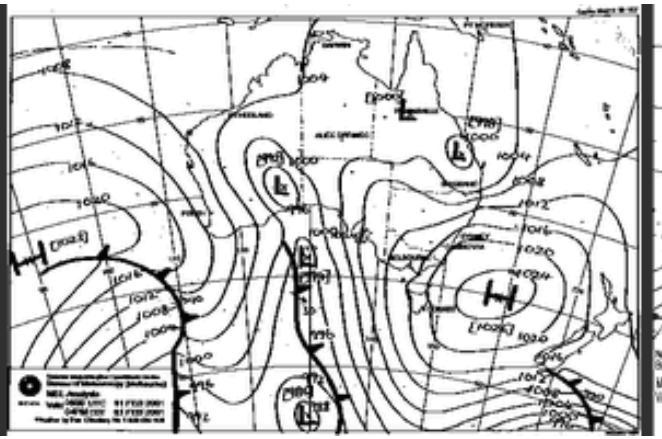
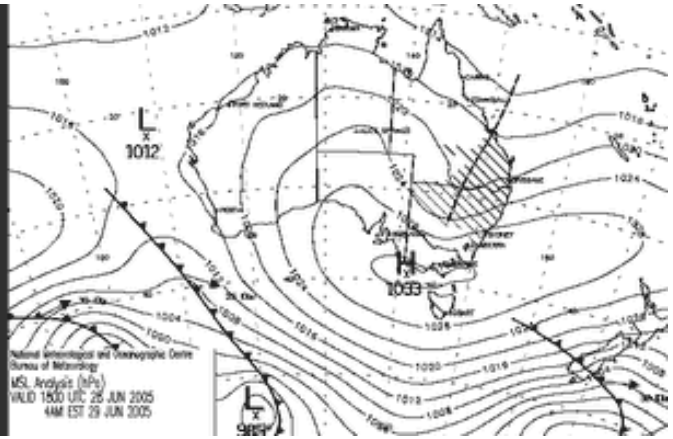


PHOTO: Cyclone Debbie edges closer to the mainland, captured by Himiwari at 8:20am AEST (Bureau of Meteorology)

On the 28th March this year TC Debbie crossed the Queensland Coast near Proserpine and slowly carved a distructive path southwest eventually combining with a Low Pressure system to the south resulting in heavy rains and flooding in the Northern NSW region





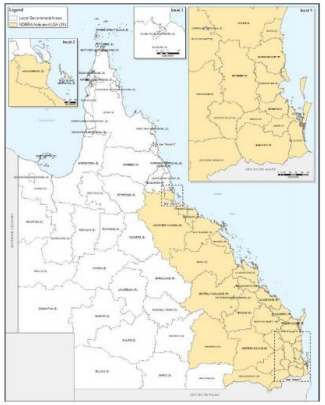


Cyclone Debbie and North Coast Flooding

RECOVER

Queensland Reconstruction Authority

NDRRA Event – Severe Tropical Cyclone Debbie and associated rainfall and flooding, 28 March – 6 April 2017



Assistance activated

The Minister for Police, Fire and Emergency Services activated the Commonwealth/State Natural Disaster Relief and Recovery Arrangements (NDRRA).

The Prime Minister has approved Category C Clean-up and Recovery Grants under the Commonwealth/State Natural Disaster Relief and Recovery Arrangements (NDRRA).

NSW GOVERNMENT Emergency New South Wales

Home | About Us | For the Community | For the Emergency Management Sector | Public

Publications » Natural Disaster Declarations » Current Declarations

- Publications
- Reports and corporate publications
- Plans
- Guidelines, legislation and policies
- Communiques
- Guides, factsheets and brochures
- **Natural Disaster Declarations**
- 2015-2016 Declarations
- 2014-2015 Declarations
- 2013-2014 Declarations
- 2012-2013 Declarations

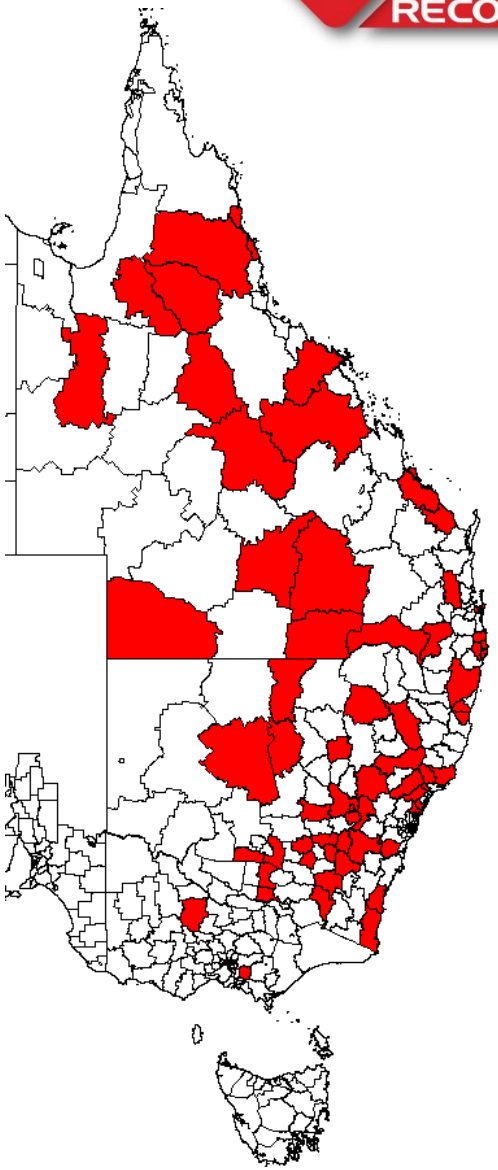
Current Natural Disaster Declarations

The following Local Government Areas in NSW have been declared Natural Disasters: -

Financial Year 2016 - 2017

North Coast Floods - from 28 March 2017

- Ballina Shire
- Byron Shire
- Kyogle
- Lismore City
- Richmond Valley
- Tweed Shire



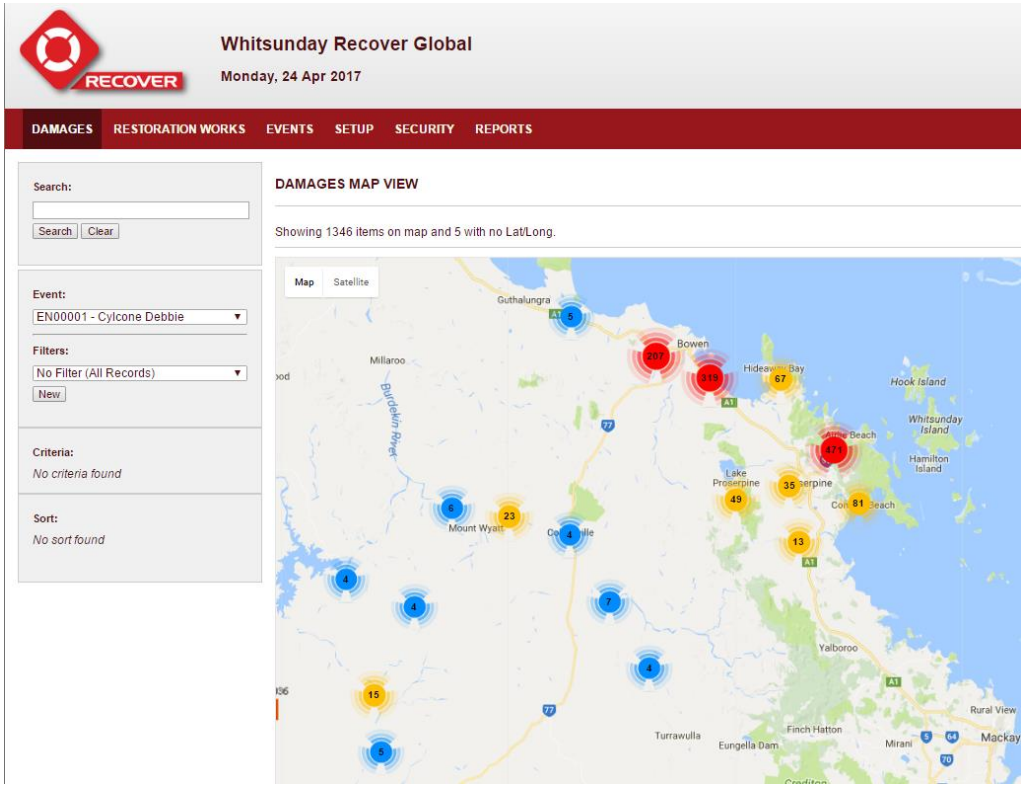
Cyclone Debbie and North Coast Flooding

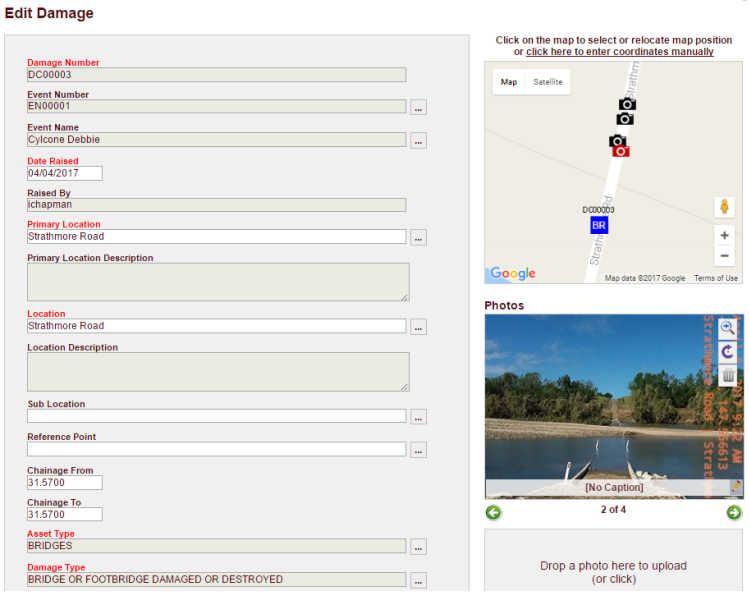
Damage Recording

Council	Damage Site Count as at 21/4
Whitsunday Regional Council *(new recover site)*	1346
Isaac Regional Council	554
Gladstone Regional Council *(new recover site)*	2310
Southern Downs Regional Council	752
Tweed Shire Council *(new recover site)*	1364
Lismore City Council *(new recover site)*	391
Byron Shire Council	481
Ballina Shire Council	196

Cyclone Debbie and North Coast Flooding

Whitsunday Regional Council

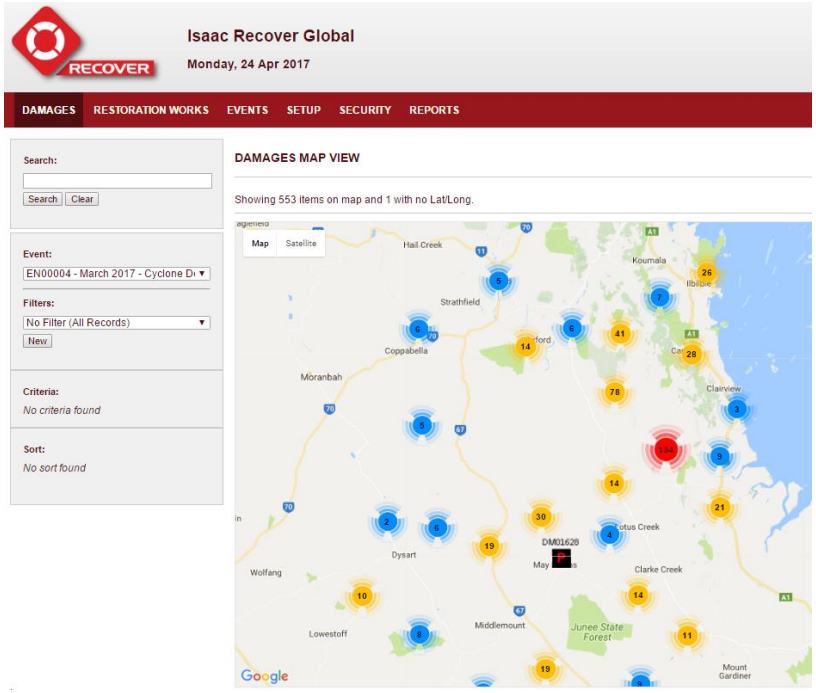


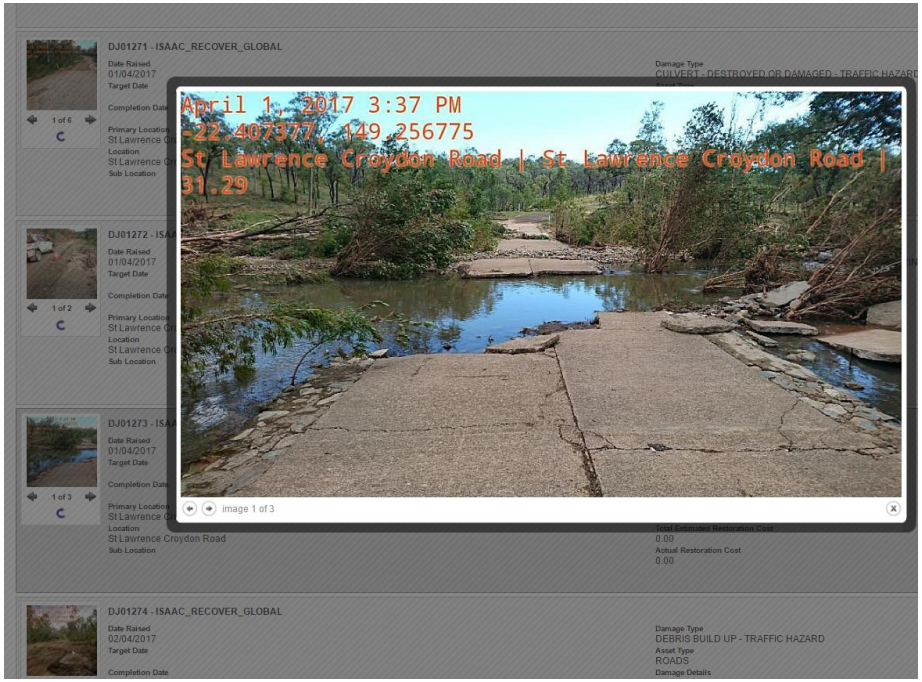


	Event Number	Event Name	Event Type	Event Date	Estimated Restoration Cost	CreatedBy	CreatedOn	Status
	EN00001	Cylcone Debbie	CYCLONE	28/03/2017	0.00	kmcshane	03-04-17 11:01	Post Disaster

Cyclone Debbie and North Coast Flooding

Isaac Regional Council





EVENTS

Reports

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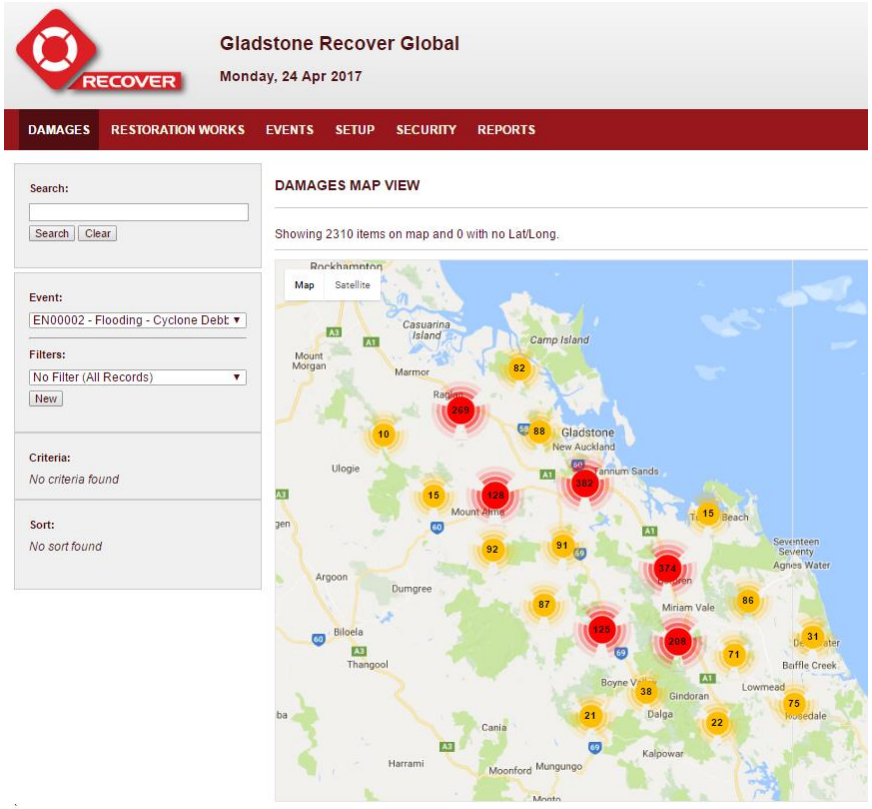
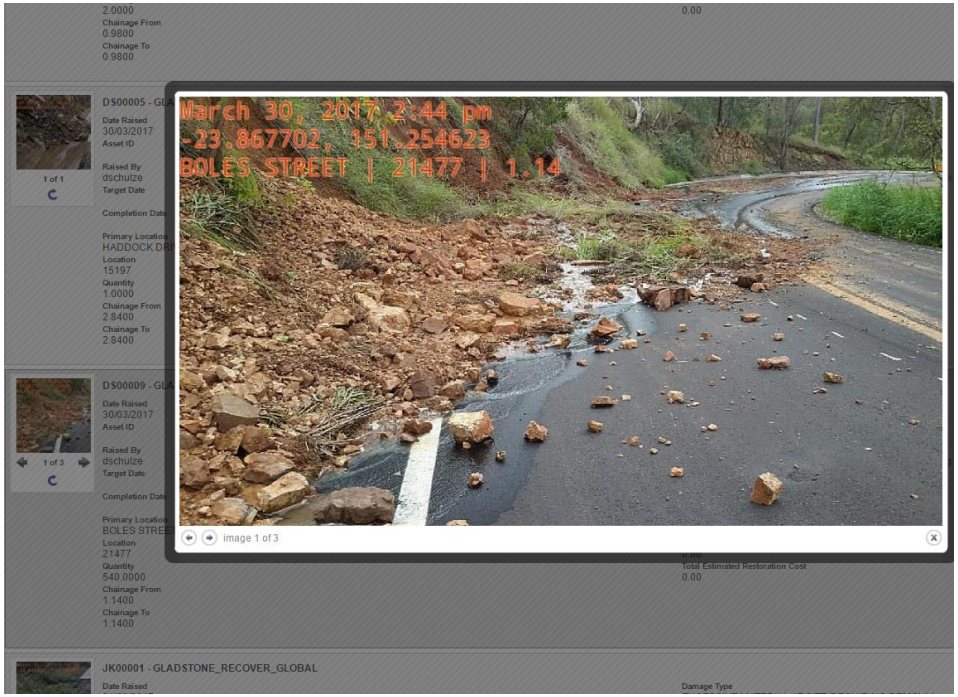
Previous Page 1 Next

Event Number	Event Name	Event Type	Event Date	Estimated Restoration Cost	Status
EN00004	March 2017 - Cyclone Debbie	CYCLONE	27/03/2017	0.00	Post Disaster
EN00003	July 2016 Flooding	FLOOD	14/07/2016	365784.20	Disaster Pending
EN00002	February 2016 Central Queensland Flooding - TBC	FLOOD	04/02/2016	1129638.52	Disaster Pending

Cyclone Debbie and North Coast Flooding

Gladstone Regional Council

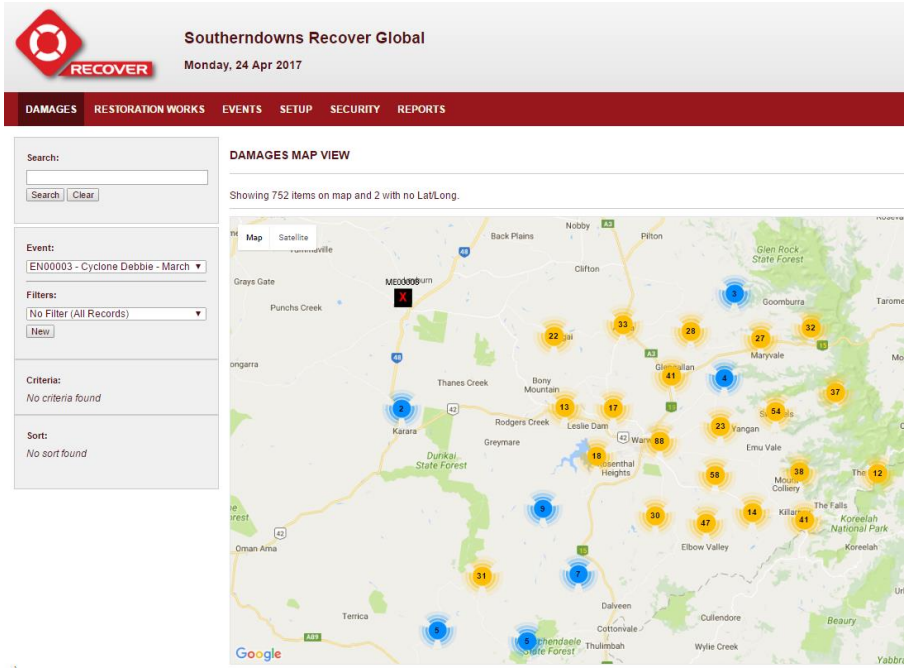


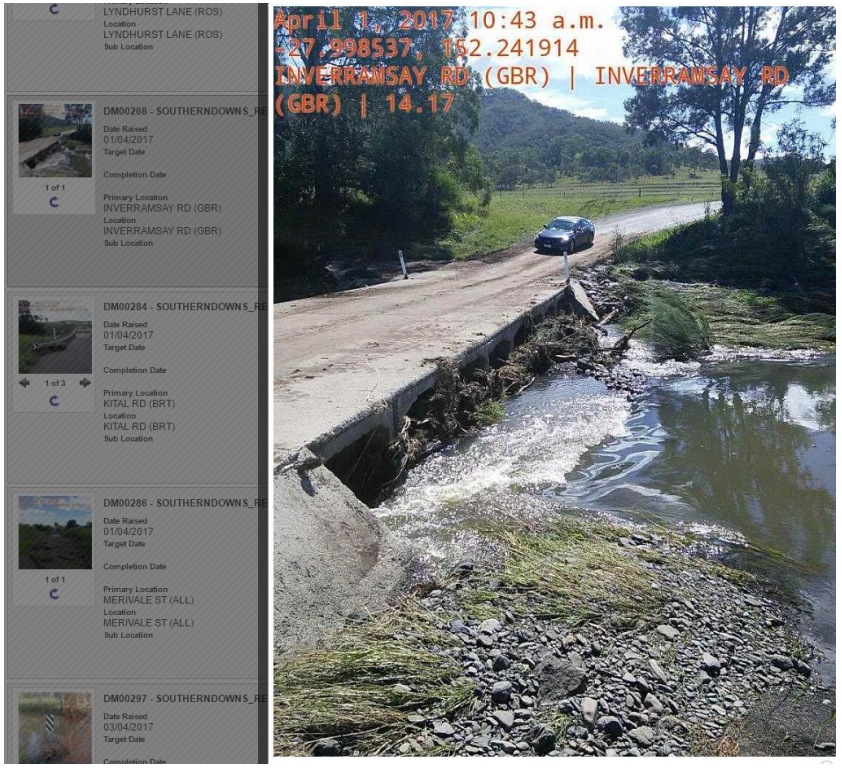


Event Number	Event Name	Event Type	Event Date	Estimated Restoration Cost	Status
EN00002	Flooding - Cyclone Debbie - March 2017	FLOOD	30/03/2017	658229.77	Disaster Pending

Cyclone Debbie and North Coast Flooding

Southern Downs Regional Council

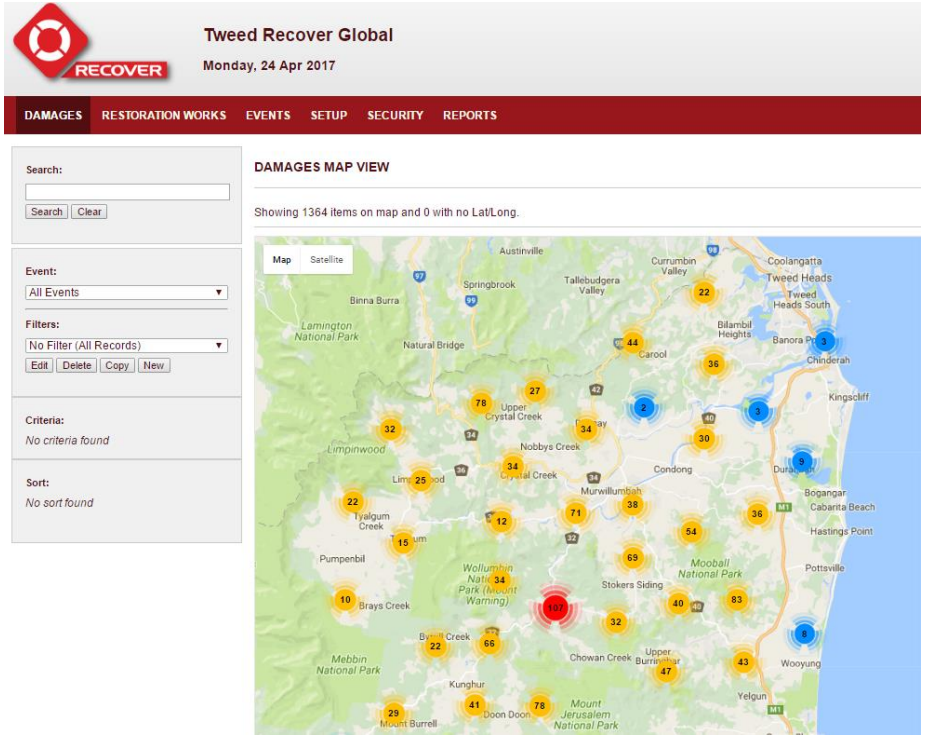


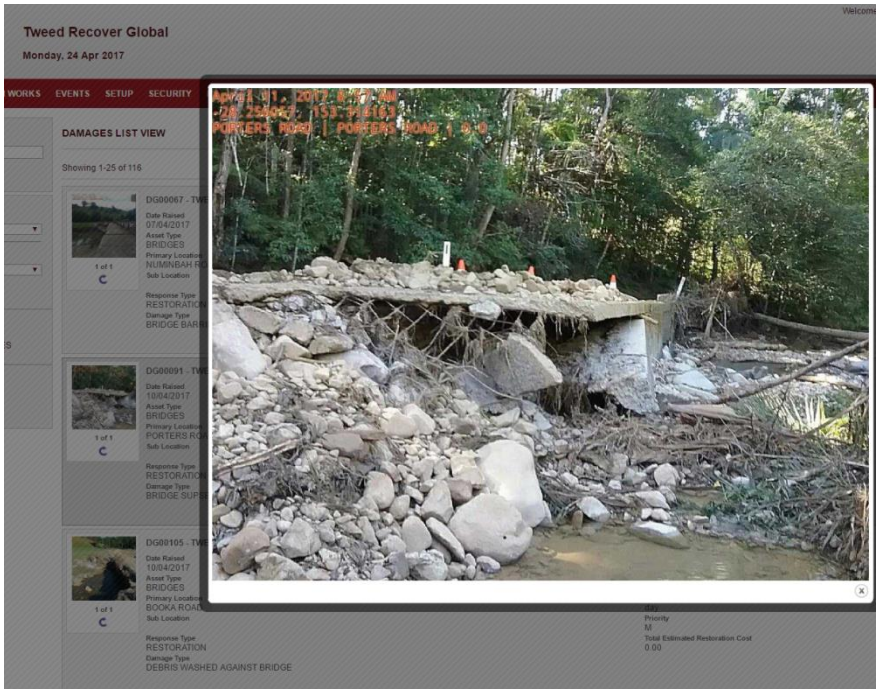


Event Number	Event Name	Event Type	Event Date	Estimated Restoration Cost	CreatedBy	CreatedOn	Status
EN00003	Cyclone Debbie - March 2017	FLOOD	30/03/2017	0.00	bweeks652	31-03-17 09:48	Disaster In Progress

Cyclone Debbie and North Coast Flooding

Tweed Shire Council

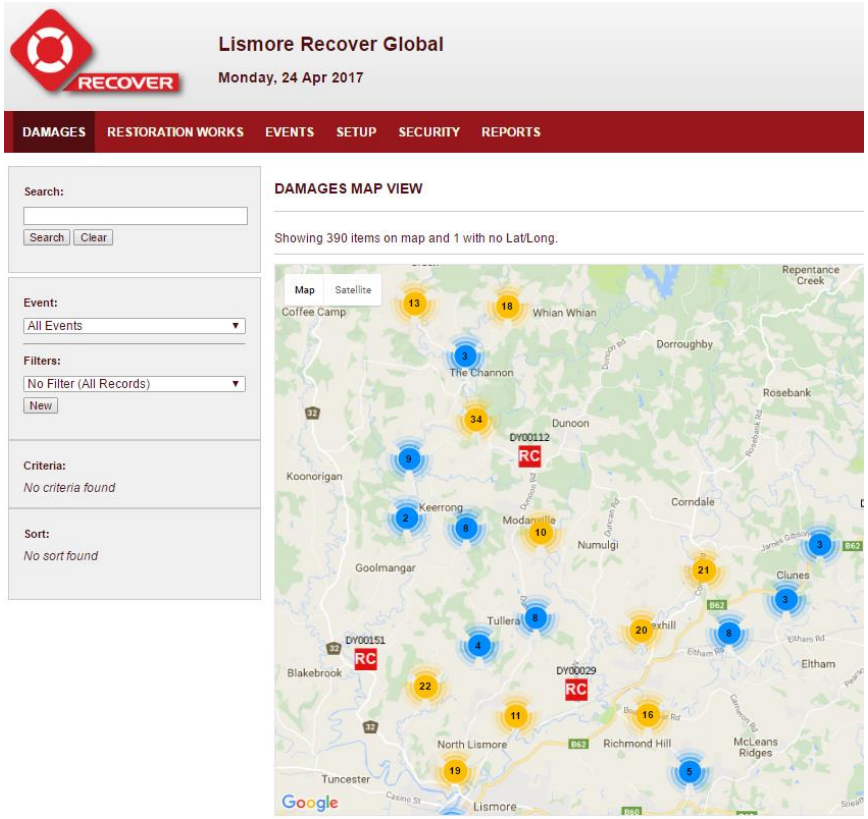


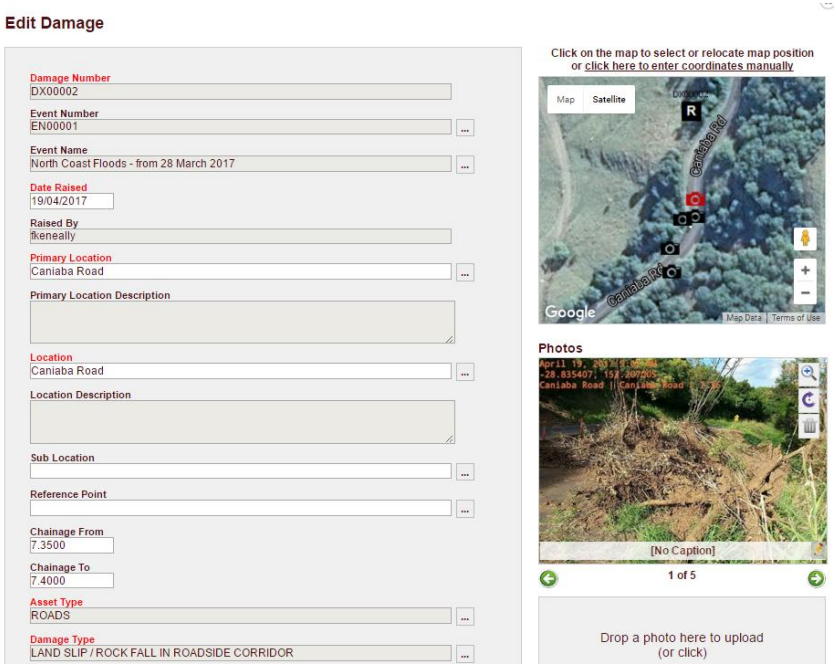


Event Number	Event Name	Event Type	Event Date	Estimated Restoration Cost	Status
EN00001	North Coast Floods - from 28 March 2017	FLOOD	28/03/2017	350.00	Disaster Pending

Cyclone Debbie and North Coast Flooding

Lismore City Council

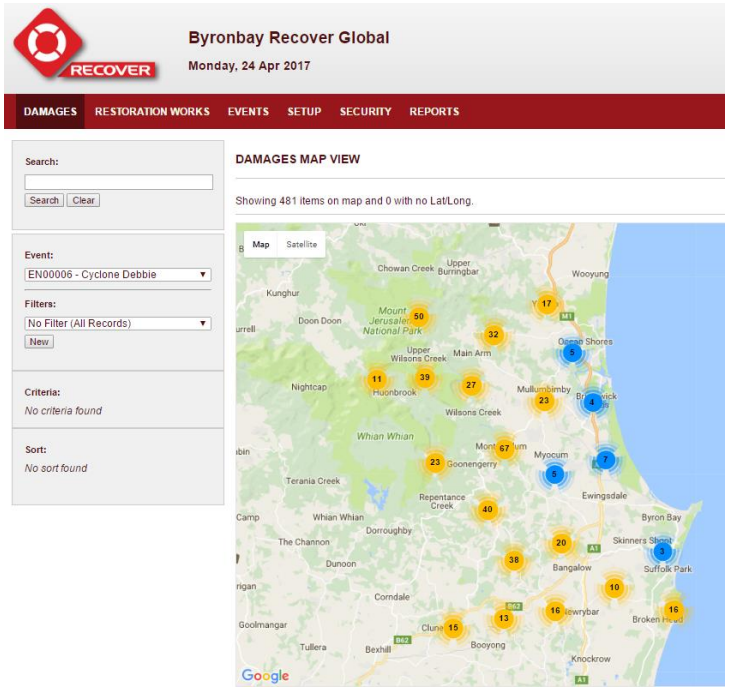


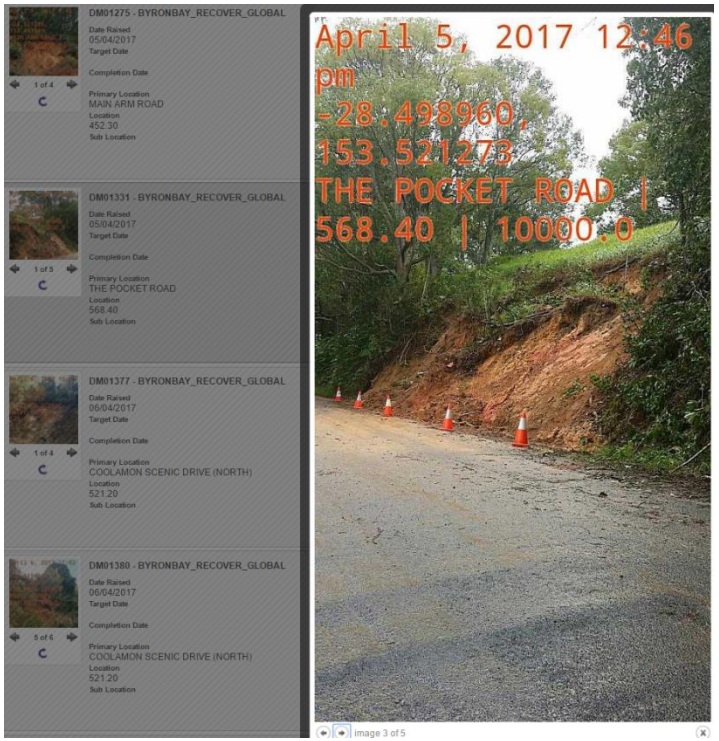


Event Number	Event Name	Event Type	Event Date	Estimated Restoration Cost	Status
EN00001	North Coast Floods - from 28 March 2017	FLOOD	28/04/2017	0.00	Disaster In Progress

Cyclone Debbie and North Coast Flooding

Byron Shire Council





EVENTS

Reports

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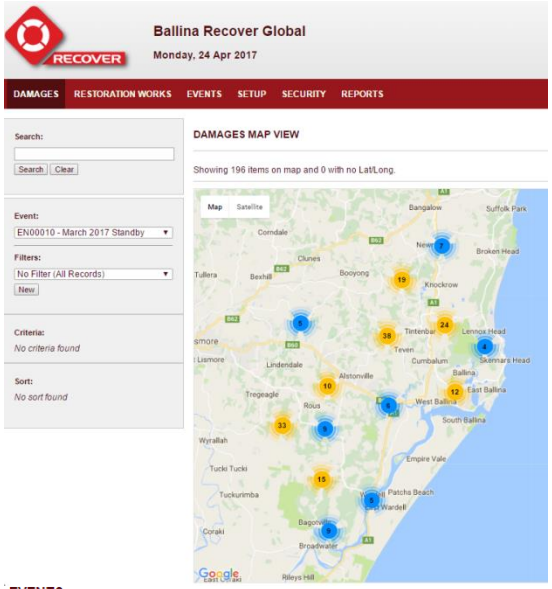
Event Number	Event Name	Event Type	Event Date	Estimated Restoration Cost	CreatedBy	CreatedOn	Status
EN00006	Cyclone Debbie	CYCLONE	31/03/2017	0.00	cpurdy	03-04-17 14:07	Disaster In Progress
EN00005	June 4 Rain Event	STORM	04/06/2016		smulhall	06-06-16 10:21	Disaster Pending
EN00004	May 1 Event	STORM	01/05/2015		smulhall	06-05-15 10:16	Disaster Pending
EN00003	Feb 20 2015	STORM	20/02/2015	0.00	kpenrose809	18-02-15 10:47	Disaster Pending
EN00002	NYE 2015	STORM	01/01/2015	0.00	smulhall	07-01-15 09:01	Disaster Pending
EN00001	TRIAL EVENT	FLOOD	17/06/2014	0.00	brendon	17-06-14 12:44	Closed

Cyclone Debbie and North Coast Flooding

Ballina Shire Council



EVENTS

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Event Number	Event Name	Event Type	Event Date	Estimated Restoration Cost	Status
EN00010	March 2017 Standby	Storm	15/03/2017	0.00	Disaster Pending
EN00009	August East Coast Low 2016	Storm East Coast Low August 2016	04/08/2016		Disaster Pending
EN00008	Storm_Flooding June 4th 2016	Storm_Flooding	04/06/2016		Disaster Pending
EN00007	January 2016 Storm	Storm	29/01/2016	0.00	Closed
EN00006	2015 STANDBY	STORM	18/02/2015	0.00	Disaster Pending
EN00005	Storm/Flood 22 February 2013	STORM	22/02/2013	254711.75	Disaster Pending
EN00004	26/1/2013 Storm event	CYCLONE	26/01/2013	0.00	Disaster Pending
EN00003	Storm 17th november 2012	STORM	17/11/2012	0.00	Disaster Pending
EN00002	JANUARY STORM 2012	STORM	25/01/2012	0.00	Disaster Pending
EN00001	DECEMBER STORM 2010	STORM	26/12/2010	5000.00	Disaster Pending

Merit Integration with Reflect

Nambucca Shire Council
Loddon Shire Council

Information provided by

Merit Integration with Reflect

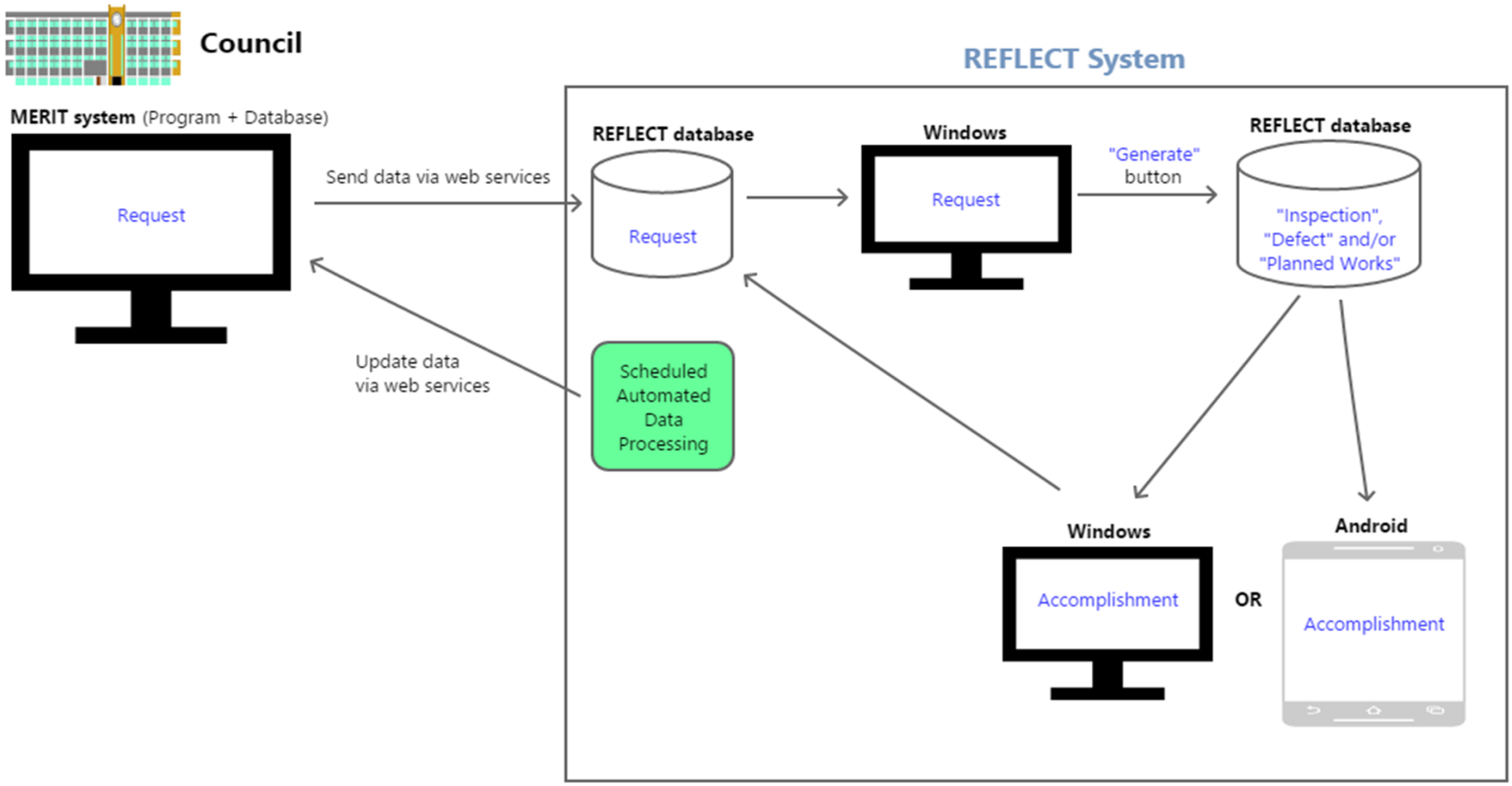
Merit Technology is a leader in Customer Relationship Management (CRM) and Border Management System (BMS) software.

As an Australian based privately owned organisation established in 1996, Merit Technology is proud to support a client base that includes a significant number of clients both in Australia and around the world.

Our software solutions provide our clients with the advantage of accelerated solution delivery times and as a consequence, significant cost savings. Recognized as a leading solution provider in the Government marketplace, Merit Technology also fosters a commitment to alliances and business partnerships with other leading companies.

Merit Integration with Reflect

REQUEST integration (MERIT to REFLECT and back)



Merit Integration with Reflect

Diagram explained:

1. New REQUEST data entered via Merit system. After saving, data (selected fields) are also sent to REFLECT database via **web services**.
2. User goes to REFLECT Windows's REQUEST view and sees the Merit Request was transmitted.
3. User decides how to process the REQUEST either by GENERATING an INSPECTION, DEFECT or PLANNED WORK.
4. User (usually from field) sees the generated INSPECTION, DEFECT or PLANNED WORK, processes it and creates an ACCOMPLISHMENT.
5. Once accomplished, the originating REQUEST is also set to COMPLETED.
6. A Scheduled Automated Data Processing routine (runs every 10 minutes) picks up all those requests that have been completed since the last processing and updates the Merit database via web services.
7. User goes to Merit and sees that the REQUEST has been completed and takes action (e.g. informs the requestor)

Merit Integration with Reflect

Requirements from Asset Edge:

Assuming that we have now covered all of the possible workflow scenarios from both our experiences at Nambucca and Logan.

A new council would need the following performed before commencing the integration work:

- Database upgrade
- Deploy the automated job on council's REFLECT database
- After it goes LIVE, coordinate with a council resource person to make first-run trial request from Merit to Reflect and back

Merit Integration with Reflect

Requirements from Council:

Contact Jo Martin from Merit (jmartin@merit.com.au) to have their Merit system upgraded and configured so the Merit system will be able to communicate with the REFLECT system. Merit will then provide us a link to a web service so we could configure Reflect to communicate back to Merit. A council resource (IT person) to coordinate testing (on Production and optionally, on TEST) will be required at tis stage - **Merit will need to quote for this service to council.**

However, it is likely that the council will want to have this setup first on test Merit and test REFLECT database

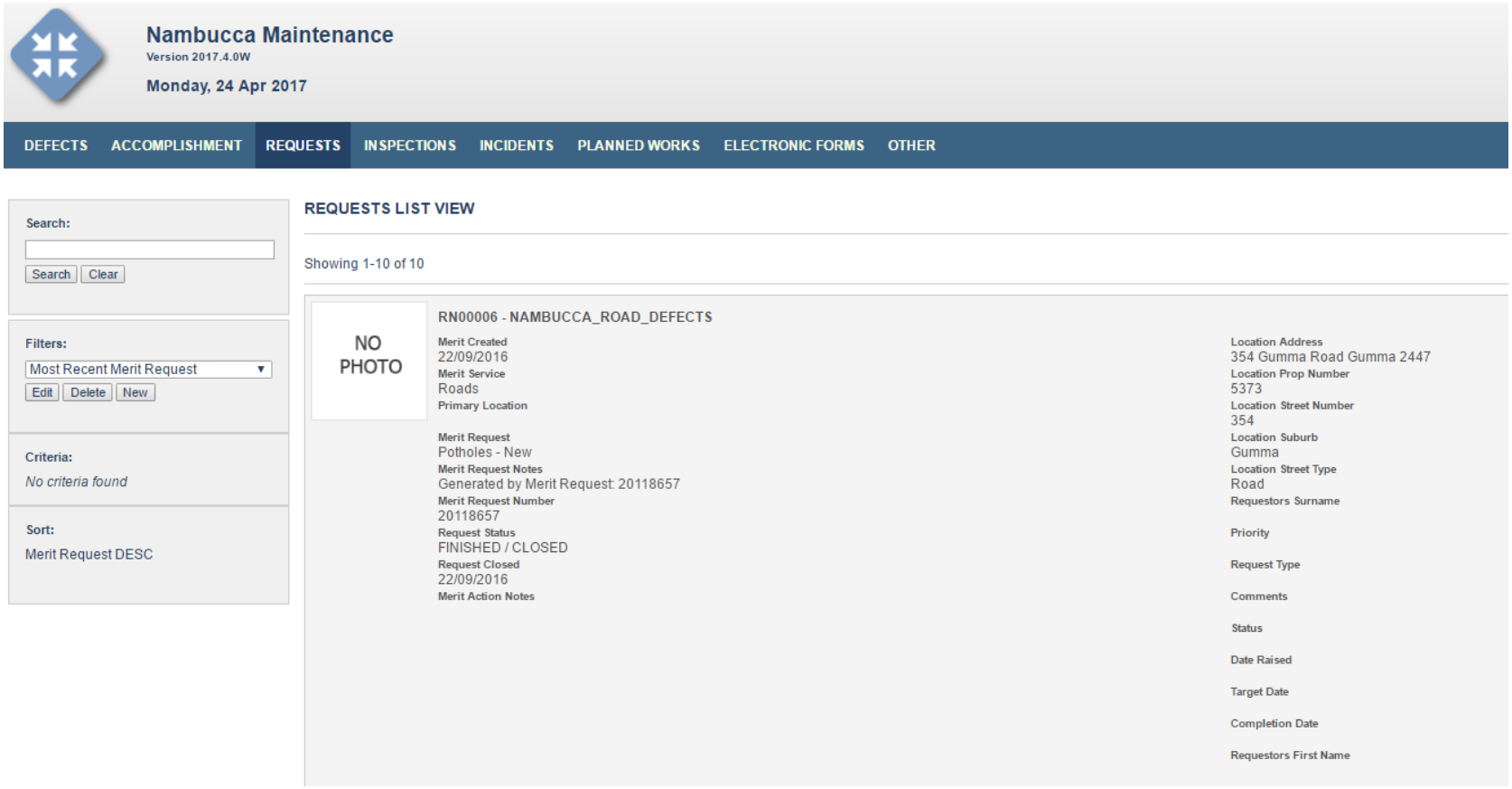
Other things to consider:

- Availability and aptitude of council's IT team to be able to coordinate with Merit to properly configure Merit (e.g. possible firewall issues, specific Merit system workflow setup etc.)
- Availability and aptitude of resource person who is going to do the user acceptance training. They must at least be aware of their own workflow (request processing) so they could verify that it all data flows to where they want it to go (e.g. Request → Defect → Accomplishment) and what platform (e.g. Windows, Android) they need to use to complete (i.e. Accomplishment) the processing.

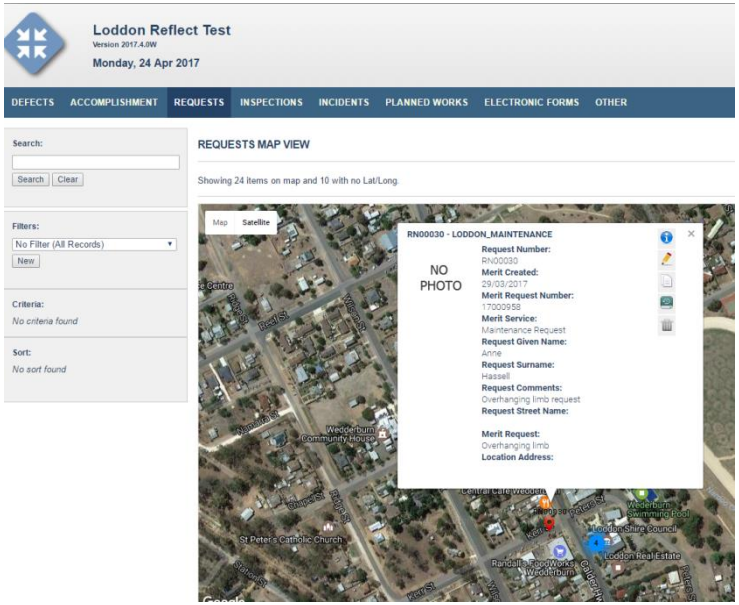
Merit Integration with Reflect

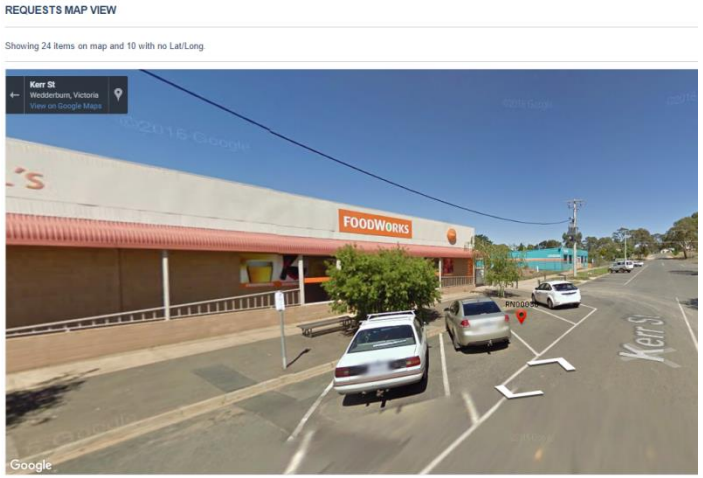
NAMBUCCA SHIRE COUNCIL

LODDON SHIRE



Merit Integration with Reflect





NO PHOTO

RN00034 - LODDON_MAINTENANCE

Request Number
RN00034
Merit Request Number
17000984
Merit Created
11/04/2017
Merit Function
Dust Issue
Merit Request Notes
Generated by Merit Request: 17000984
Merit Service
Maintenance Request
Request Comments
test for reflect
Merit Request
Dust Issue
Merit Action Notes

Request Status
FINISHED / CLOSED
Request Given Name
Susan
Request Surname
Smith
Request Address

Request Street Name

Request Email
htonkin@loddon.vic.gov.au
Request Postcode

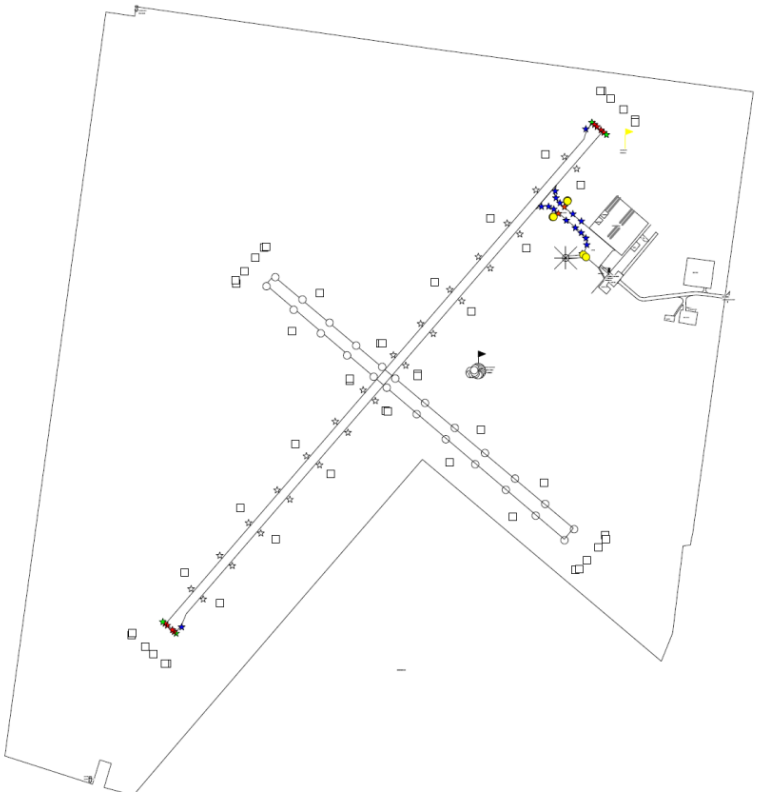
Request Mobile

Aerodrome Inspection and Management

Goondiwindi Regional Council

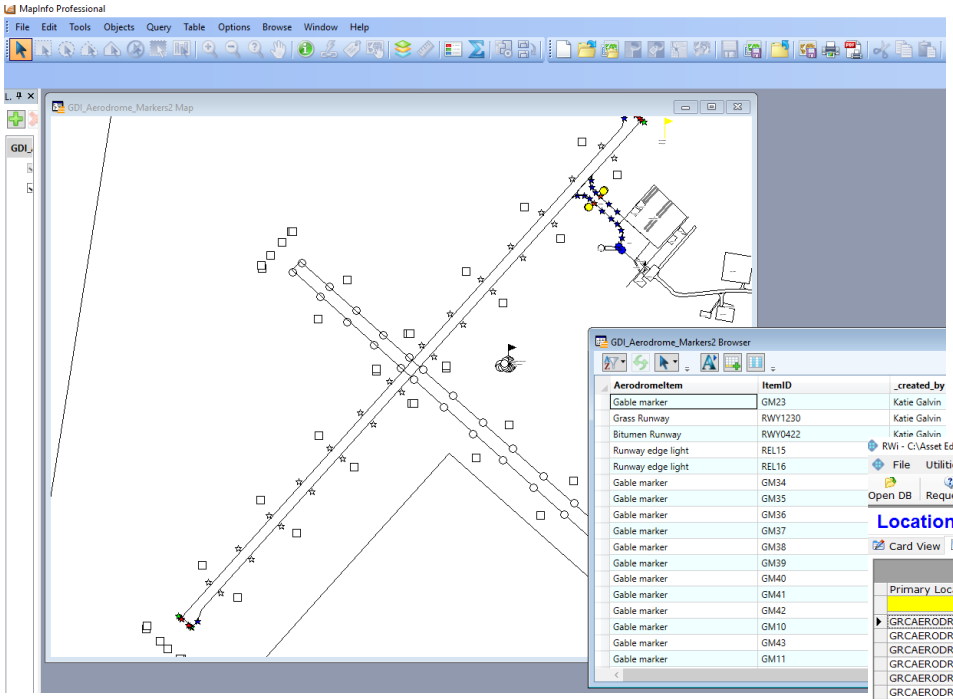
Information provided by
Luke Tanner - manager Work

Aerodrome Inspection Management



The GRC engaged the services of Asset Edge recently to build a database for use with Reflect to manage inspections and reporting of Aerodrome Runways, lighting and other infrastructure.

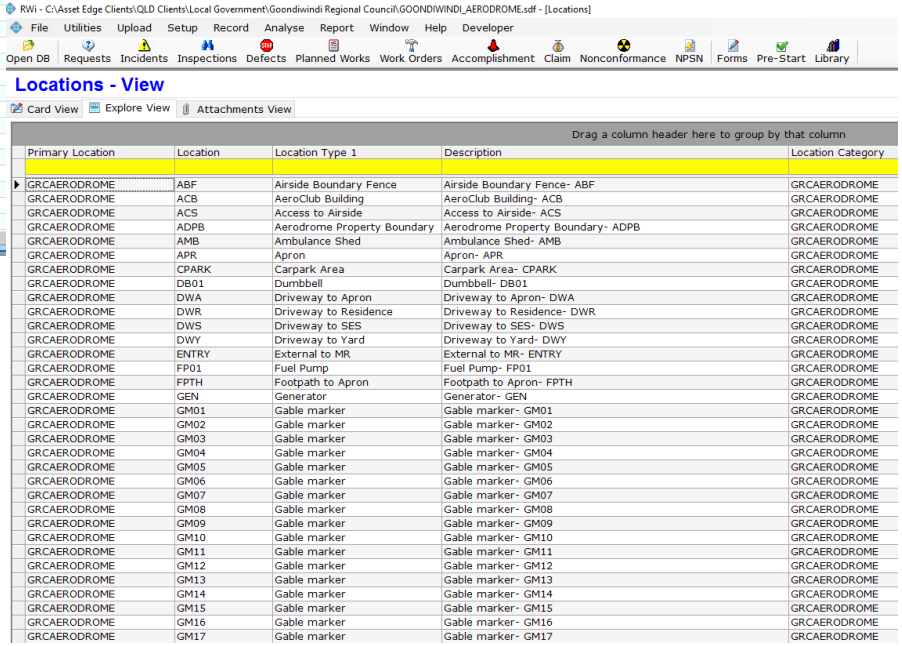
Aerodrome Inspection Management



A part of the work was to convert the existing GIS layer into a workable Location model for Reflect.

Chainage points were also generated on all of the point assets to improve data capture and recording.

Polygon assets like runway and taxiway are selected from a drop down list with the lat/long being capture to plot actual location of any Defect, Planned Work or accomplishment



Primary Location	Location	Location Type 1	Description	Location Category
GRCAERODROME	ABF	Airside Boundary Fence	Airside Boundary Fence- ABF	GRCAERODROME
GRCAERODROME	ACB	AeroClub Building	AeroClub Building- ACB	GRCAERODROME
GRCAERODROME	ACS	Access to Airside	Access to Airside- ACS	GRCAERODROME
GRCAERODROME	ADPB	Aerodrome Property Boundary	Aerodrome Property Boundary- ADPB	GRCAERODROME
GRCAERODROME	AMB	Ambulance Shed	Ambulance Shed- AMB	GRCAERODROME
GRCAERODROME	APR	Apron	Apron- APR	GRCAERODROME
GRCAERODROME	CPARK	Carpark Area	Carpark Area- CPARK	GRCAERODROME
GRCAERODROME	DB01	Dumbbell	Dumbbell- DB01	GRCAERODROME
GRCAERODROME	DWA	Driveway to Apron	Driveway to Apron- DWA	GRCAERODROME
GRCAERODROME	DWR	Driveway to Residence	Driveway to Residence- DWR	GRCAERODROME
GRCAERODROME	DWS	Driveway to SES	Driveway to SES- DWS	GRCAERODROME
GRCAERODROME	DWY	Driveway to Yard	Driveway to Yard- DWY	GRCAERODROME
GRCAERODROME	ENTRY	External to MR	External to MR- ENTRY	GRCAERODROME
GRCAERODROME	FP01	Fuel Pump	Fuel Pump- FP01	GRCAERODROME
GRCAERODROME	FPTH	Footpath to Apron	Footpath to Apron- FPTH	GRCAERODROME
GRCAERODROME	GEN	Generator	Generator- GEN	GRCAERODROME
GRCAERODROME	GM01	Gable marker	Gable marker- GM01	GRCAERODROME
GRCAERODROME	GM02	Gable marker	Gable marker- GM02	GRCAERODROME
GRCAERODROME	GM03	Gable marker	Gable marker- GM03	GRCAERODROME
GRCAERODROME	GM04	Gable marker	Gable marker- GM04	GRCAERODROME
GRCAERODROME	GM05	Gable marker	Gable marker- GM05	GRCAERODROME
GRCAERODROME	GM06	Gable marker	Gable marker- GM06	GRCAERODROME
GRCAERODROME	GM07	Gable marker	Gable marker- GM07	GRCAERODROME
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GRCAERODROME	GM11	Gable marker	Gable marker- GM11	GRCAERODROME
GRCAERODROME	GM12	Gable marker	Gable marker- GM12	GRCAERODROME
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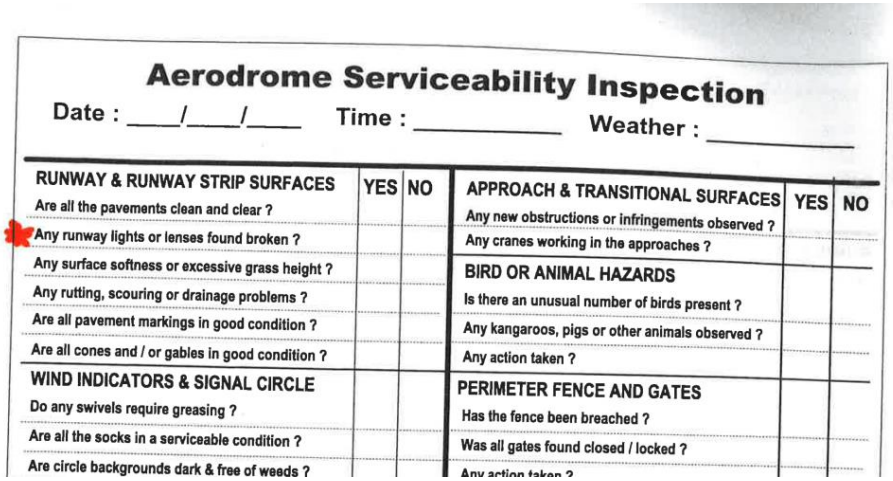
GRCAERODROME	GM15	Gable marker	Gable marker- GM15	GRCAERODROME
GRCAERODROME	GM16	Gable marker	Gable marker- GM16	GRCAERODROME
GRCAERODROME	GM17	Gable marker	Gable marker- GM17	GRCAERODROME

Aerodrome Inspection Management

Paper based methods have been replaced with Electronic forms that are completed on each of the scheduled inspections.

The results can then be reviewed in web and optionally printed to hard copy



Aerodrome Serviceability Inspection

Date : ____/____/____ Time : _____ Weather : _____

RUNWAY & RUNWAY STRIP SURFACES	YES	NO
Are all the pavements clean and clear ?		
Any runway lights or lenses found broken ?		
Any surface softness or excessive grass height ?		
Any rutting, scouring or drainage problems ?		
Are all pavement markings in good condition ?		
Are all cones and / or gables in good condition ?		
WIND INDICATORS & SIGNAL CIRCLE		
Do any swivels require greasing ?		
Are all the socks in a serviceable condition ?		
Are circle backgrounds dark & free of weeds ?		

APPROACH & TRANSITIONAL SURFACES	YES	NO
Any new obstructions or infringements observed ?		
Any cranes working in the approaches ?		
BIRD OR ANIMAL HAZARDS		
Is there an unusual number of birds present ?		
Any kangaroos, pigs or other animals observed ?		
Any action taken ?		
PERIMETER FENCE AND GATES		
Has the fence been breached ?		
Was all gates found closed / locked ?		
Any action taken ?		

Weather :

RUNWAY & RUNWAY STRIP SURFACES

Are all the pavements clean and clear ?
YES

Any runway lights or lenses found to be broken ?
NO

Any surface softness or excessive grass height ?
NO

Any rutting scouring or drainage problems ?
NO

Are all pavement markings in good condition ?
YES

Are all cones and/or gables in good condition ?
YES

WIND INDICATORS & SIGNAL CIRCLE

Do any swivels require greasing ?
NO

Are all the socks in serviceable condition ?
YES

Are circle backgrounds dark & free of weeds ?
YES

Correctly marked & all cones in good order ?
YES

TAXIWAYS AND APRON AREA

Are all pavements clean and clear?
YES

Are all pavement markings in good condition?
YES

Any Broken lights or lenses observed?
NO

Any drainage problems?
NO

Any surface softness or excessive grass height?
NO

APPROACH & TRANSITIONAL SURFACES

Aerodrome Inspection Management

Aerodrome Serviceability Inspection

Date : 17/04/2017 Time: 10:15 PM

Weather : fine Form Number : AI00001

RUNWAY & RUNWAY STRIP SURFACES	YES / NO
Are all the pavements clean and clear ?	YES
Any runway lights or lenses found to be broken ?	NO
Any surface softness or excessive grass height ?	NO
Any rutting scouring or drainage problems ?	NO
Are all pavement markings in good condition ?	YES
Are all cones and/or gables in good condition ?	YES
WIND INDICATORS & SIGNAL CIRCLE	
Do any swivels require greasing ?	NO
Are all the socks in serviceable condition ?	YES
Are circle backgrounds dark & free of weeds ?	YES
Correctly marked & all cones in good order ?	YES
TAXIWAYS AND APRON AREA	
Are all pavements clean and clear?	YES
Are all pavement markings in good condition?	YES
Any Broken lights or lenses observed?	NO
Any drainage problems?	NO
Any surface softness or excessive grass height?	NO

APPROACH & TRANSITIONAL SURFACES	YES / NO
Any new obstructions or infringements observed ?	NO
Any cranes working n the approaches ?	NO
BIRD OR ANIMAL HAZARDS	
Is there a usual number of birds present ?	NO
Any kangaroos pigs or other animals observed ?	YES
Any action taken ?	YES
PERIMETER FENCE AND GATES	
Has the fence been breached ?	NO
Was all gates closed/checked ?	YES
Any action taken?	NO
UNSERVICABLE MOVEMENT AREAS	
Are there any unserviceable areas ?	NO
Are they correctly marked ?	
Are there any current NOTAMs to review ?	NO
	YES / NO
As a result of your Inspection has the Australian NOTAM Office been advised for NOTAM action?	NO

Maintenance planned for today :
N/A

Additional remarks :
3 roos crossed runway 04/22 when RFDS came in to land. Cleared northern approach for landing. Chased roos. Cleared again for takeoff.

Inspected by : Signed : .....
(Print name)

Sighted & signed by Supervisor : ..... Date :

Serviceabilty checklist for aerodrome lighting on the back page.

© AOS

Lighting

Date : Time:

Form Number :

RUNWAY & TAXIWAY LIGHTING	YES / NO
Fittings in good condition & operating normally ?	YES
Threshold lights show green/green-red/red ?	YES
Do all turning node lights show blue ?	YES
Do all taxiway edge light show blue ?	YES
Do all holding lights show orange ?	YES
Are lenses/filters clean & inside free of water ?	YES
Are any light obscured by grass growth ?	NO
ILLUMINATED WIND SOCKS	
Do windsock lights come on with runway lights ?	YES
Are all the windsock lamps in working order ?	NO
Are all windsock plugs & fittings in good order ?	YES
APRON LIGHTS	
Apron lights in good condition & operational ?	YES
Are they part of the PAL system ?	YES

AIRPORT LIGHTING CUBICLE	YES / NO
Operate the main switch - Does lighting come on ?	YES
Does the lighting remain on for set period ?	YES
Is the PAL system serviceable ?	YES
HAZARD LIGHTS AND BEACONS	
Are all hazard lights and beacons in working order ?	YES
NON-OPERATIONAL LIGHTING	
All car park & security lighting operating properly ?	YES
EMERGENCY LIGHTING	
Are kerosene flares/battery lights serviceable ?	YES
AFRU : Is the Aerodrome Frequency Response Unit (AFRU) serviceable ?	YES
No of lenses replaced ?	0
No of lamps replaced ?	0

Maintenance planned for today :

Additional remarks :

Inspected by : Signed : .....
(Print name)

Date :

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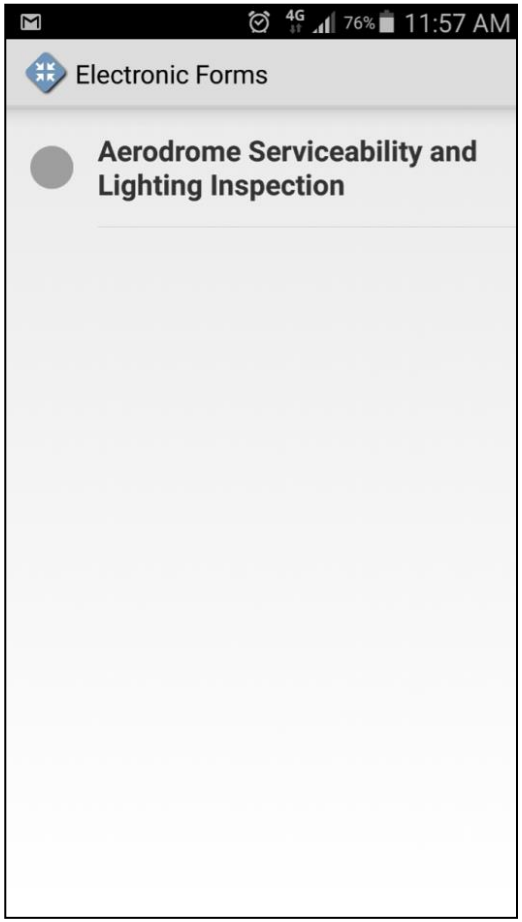
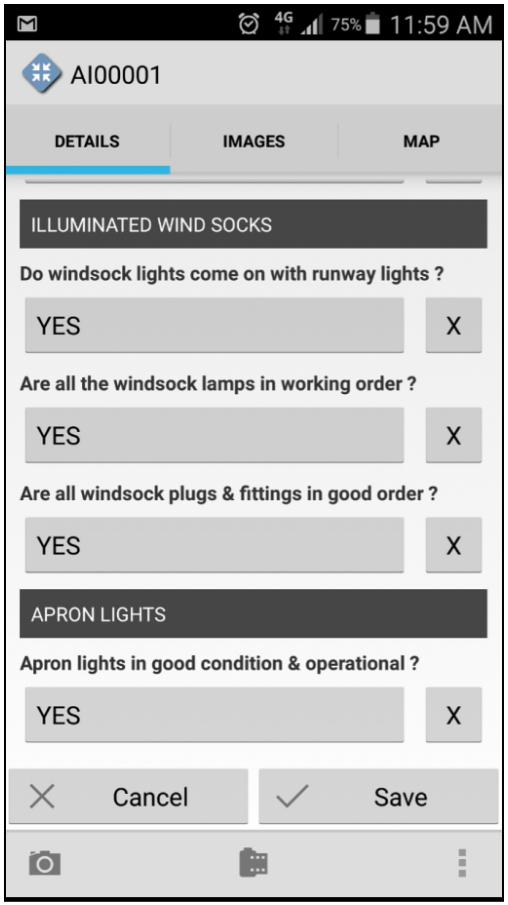
Aerodrome Inspection Management





Aerodrome Inspection Management

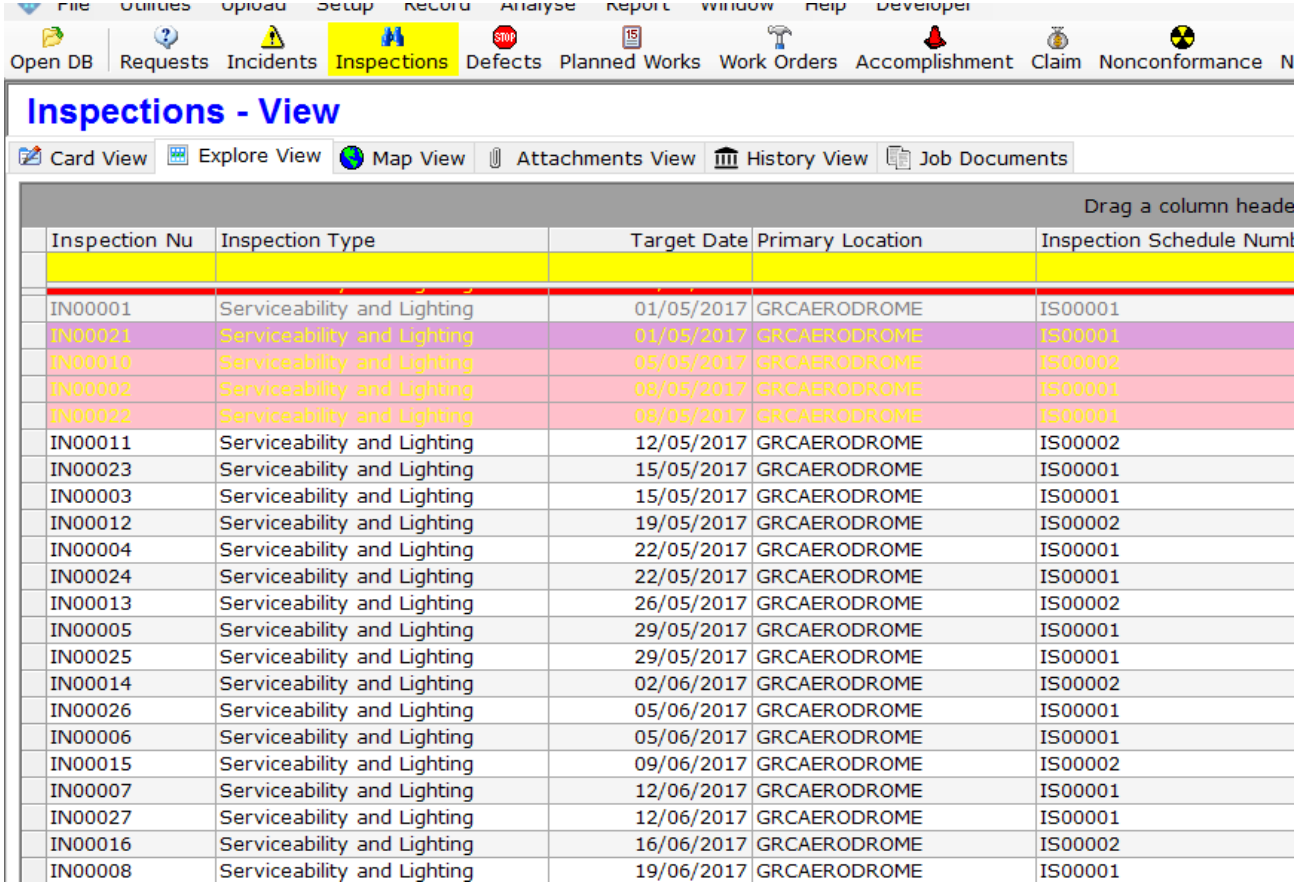
Reflect Mapping Symbol Report - Defects

SYMBOL	Defect Type	Defect Code	Defect Group	Location Category	Physical Description	Po
D	Poor Drainage areas		Drainage	GRCAERODROME		
X	Facility defect		Other Defects	GRCAERODROME		
F	Faulty/missing Fencing		Other Defects	GRCAERODROME		
S	Faulty/missing Signage		Other Defects	GRCAERODROME		
W	Faulty/missing Windsock		Other Defe			
T	Toilet amenity defect		Other Defe			
C	Pavement Cracking defect		Pavement			
X	Pavement Crossfall defect		Pavement			
D	Pavement deformation defect		Pavement			
P	Pavement pothole defect		Pavement			
L	Poor illegible pavement marking		Pavement			
G	Grass on Runway		Vegetation			
R	Grass on Runway Strip		Vegetation			
V	Grass/Vegetion control other areas		Vegetation			
A	Long Grass on Transition Areas		Vegetation			
O	Obstructions in flight clearence		Vegetation			

Reflect Mapping Symbol Report - Activities

SYMBOL	Activity Name	Description	Unit of Measure
D	DRAINAGE WORKS	Restablish surface drains for correct run off	m2
E	ELECTRICAL SUPPLY	Repair of electrical faults	job
F	FACILITY MAINTENANCE	Maintenance to Hangers, Buildings and associated facilities	job
C	FLIGHT CLEARANCE WORK	Clear vegetation in approach/take off areas	m2
I	INSPECTION	Inspection of Airfield and surrounds	each
L	LIGHTING	Repair of lighting faults	job
V	MOWING	Control vegetation by mowing	hectares
o	OTHER	Other works completed	job
M	PAVEMENT MARKING	Remark pavement lines and symbols	m2
V	POISONING	Control vegetation by spraying	hectares
F	REPAIR FENCING	Repair of fencing, gates etc	metres
W	REPAIR WINDSOCK	Repair/Replace windsock or structure	job
R	RUBBISH	Collect and remove rubbish	m3
P	SEALED PAVEMENT REPAIR	Repairs to any sealed pavement area	m2
S	SIGN MAINTENANCE	Maintain/Replace signage for Airstrip	each
S	SWEEPING	Sweeping of surfaces	metres
T	TOILET MAINTENANCE	Maintenance to toilet facilities	job
V	TRIMMING	Control vegetation by trimming	hectares
U	UNSEALED PAVEMENT REPAIR	Repairs to any unsealed pavement or should area	m2
V	VEGETATION CONTROL	Control vegetation by mowing or spraying	hectares

Aerodrome Inspection Management



Inspection Nu	Inspection Type	Target Date	Primary Location	Inspection Schedule Numb
IN00001	Serviceability and Lighting	01/05/2017	GRCAERODROME	IS00001
IN00021	Serviceability and Lighting	01/05/2017	GRCAERODROME	IS00001
IN00010	Serviceability and Lighting	05/05/2017	GRCAERODROME	IS00002
IN00002	Serviceability and Lighting	08/05/2017	GRCAERODROME	IS00001
IN00022	Serviceability and Lighting	08/05/2017	GRCAERODROME	IS00001
IN00011	Serviceability and Lighting	12/05/2017	GRCAERODROME	IS00002
IN00023	Serviceability and Lighting	15/05/2017	GRCAERODROME	IS00001
IN00003	Serviceability and Lighting	15/05/2017	GRCAERODROME	IS00001
IN00012	Serviceability and Lighting	19/05/2017	GRCAERODROME	IS00002
IN00004	Serviceability and Lighting	22/05/2017	GRCAERODROME	IS00001
IN00024	Serviceability and Lighting	22/05/2017	GRCAERODROME	IS00001
IN00013	Serviceability and Lighting	26/05/2017	GRCAERODROME	IS00002
IN00005	Serviceability and Lighting	29/05/2017	GRCAERODROME	IS00001
IN00025	Serviceability and Lighting	29/05/2017	GRCAERODROME	IS00001
IN00014	Serviceability and Lighting	02/06/2017	GRCAERODROME	IS00002
IN00026	Serviceability and Lighting	05/06/2017	GRCAERODROME	IS00001
IN00006	Serviceability and Lighting	05/06/2017	GRCAERODROME	IS00001
IN00015	Serviceability and Lighting	09/06/2017	GRCAERODROME	IS00002
IN00007	Serviceability and Lighting	12/06/2017	GRCAERODROME	IS00001
IN00027	Serviceability and Lighting	12/06/2017	GRCAERODROME	IS00001
IN00016	Serviceability and Lighting	16/06/2017	GRCAERODROME	IS00002
IN00008	Serviceability and Lighting	19/06/2017	GRCAERODROME	IS00001

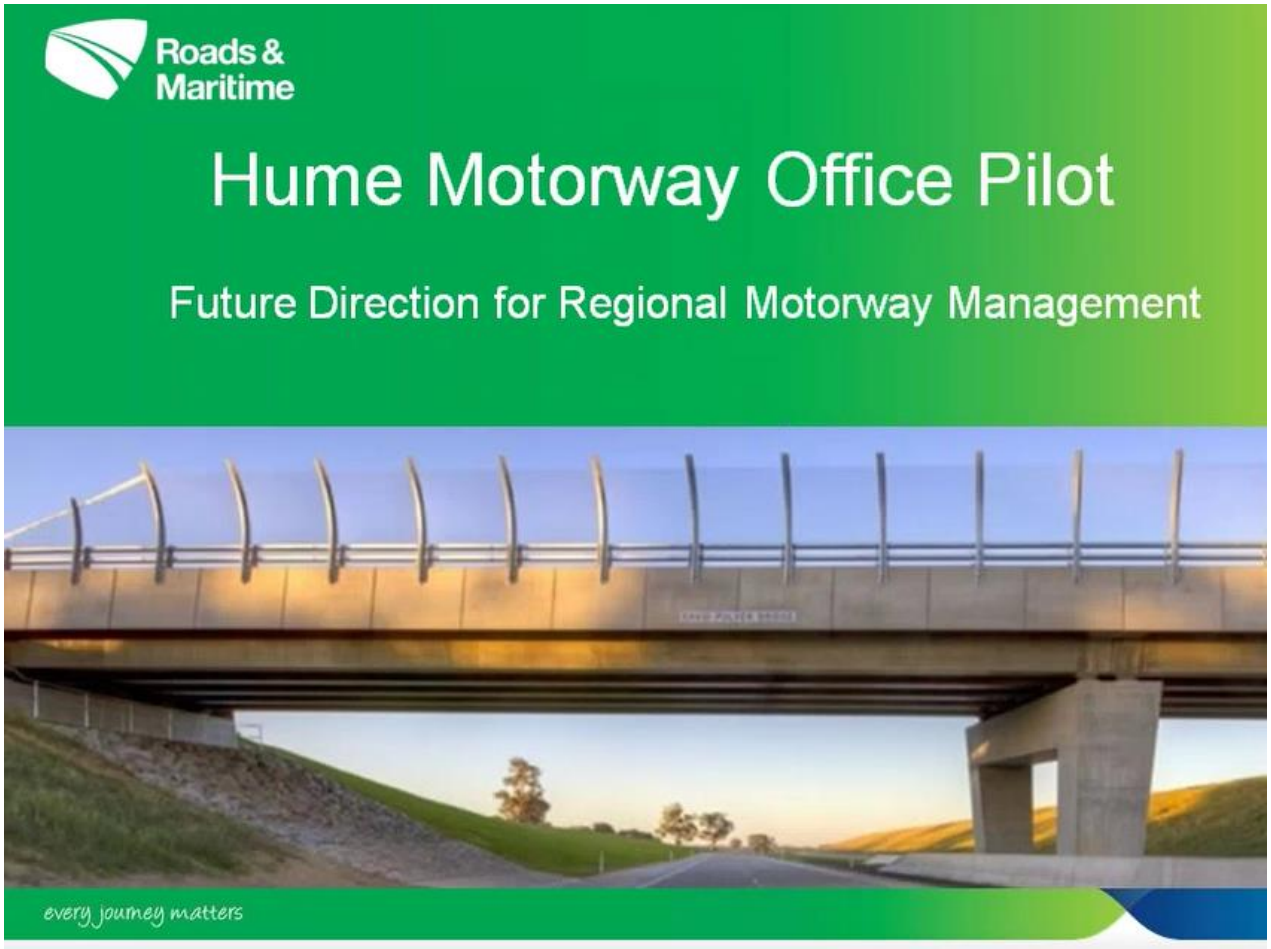
Reflect for Motorways

Roads and Maritime Services - NSW

Information provided by

Roads & Maritime

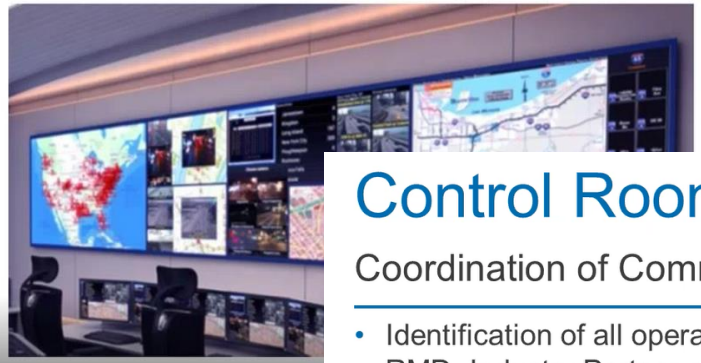
Reflect for Motorways



Reflect for Motorways

Objectives of the Hume Motorway Office Pilot

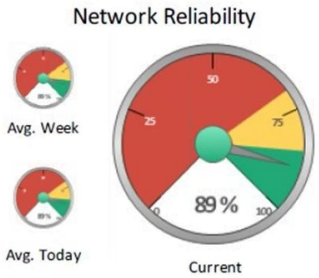
- Development of long term strategic motorway plans
- Establishing strong governance around motorway management
- Embracing technology to enable change
- Introduction of modern Motorway Control Room facilities.



Control Room Operation

Coordination of Communications

- Identification of all operational field units – RMD, Industry Partner and subcontractors work units – established for rosters – weekly / 2 weekly / month
- Dispatching of approved work schedules
- Provision of Status Reports on progress of team work schedules



- Provision of Status Reports on work team performance measure – travel time, establishment time, work time
- Provision of Status Reports of accomplishment by activity by team.

Reflect for Motorways

The 'Reflect for Motorways' system is based upon the existing Reflect software already in use by RMD but will contain a significant number of enhancements. These enhancements will be delivered in a two phased approach which includes:

Phase 1 - Pilot

The initial rollout of the software will contain sufficient functionality that will support both the field operations and management operations. (Refer *Reflect for Motorways - Phase 1 Conceptual Guide*) This includes:

Planned Work Scheduling (Web)

The ability to forward plan routine planned works and Inspections on one or more segments for various frequencies across multiple year timeframes and auto-create scheduled Jobs.

Raising Defects (Android)

The ability to raise Defects (with or without relating to an Inspection) using the existing M3 model.

Raising Incidents (Web & Android)

The ability to raise reactive Incidents and assign to a Work Team/Responder and auto-create a scheduled Job.

Raising Planned Works (Web)

The ability to raise identified Planned Works and optionally assign to a Work Team.

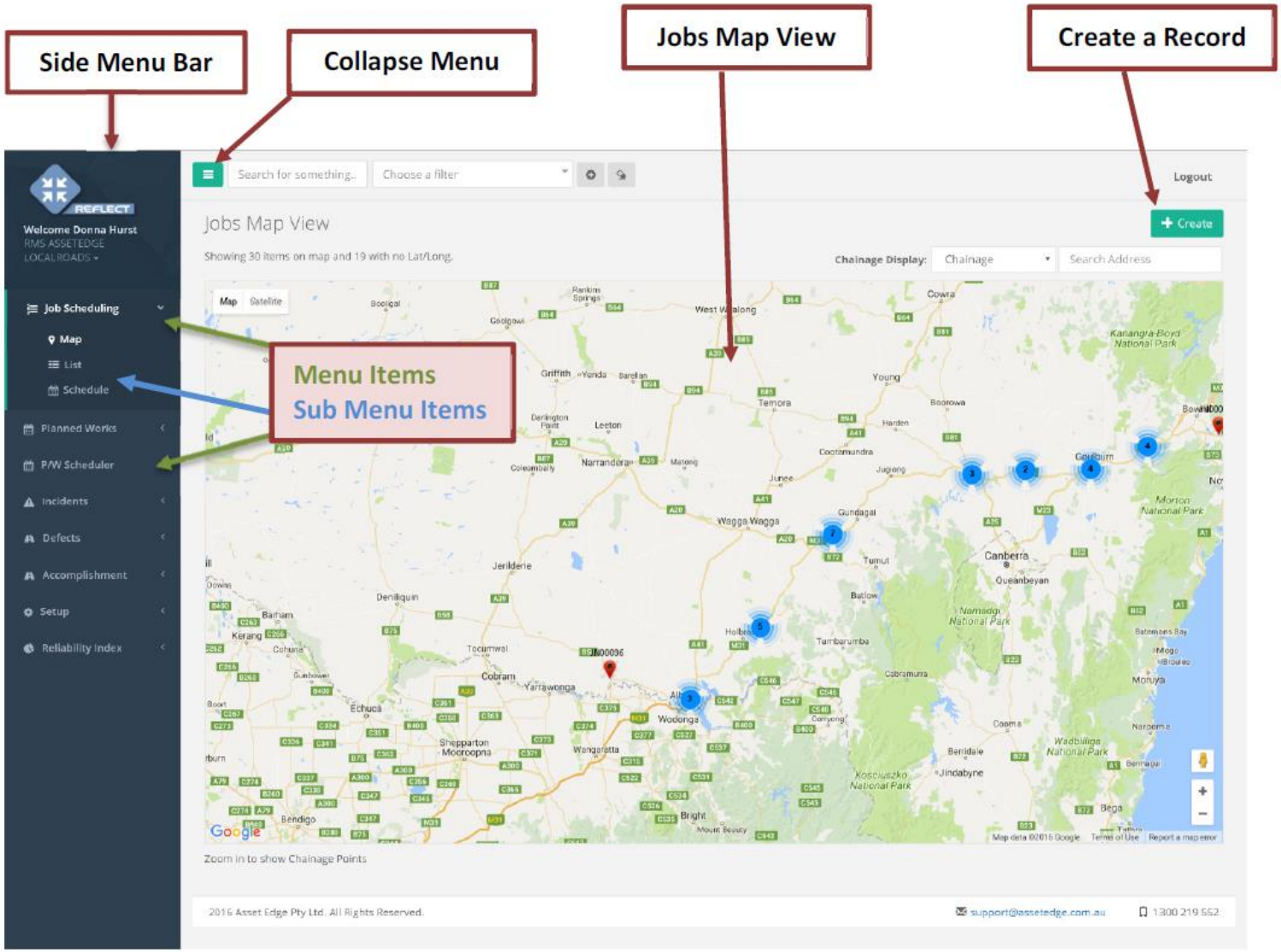
The ability to allocate and de-allocate Defects, Planned Works, and Incidents to Jobs.

Job Assignment (Web)

The ability to assign Work Teams to Jobs.

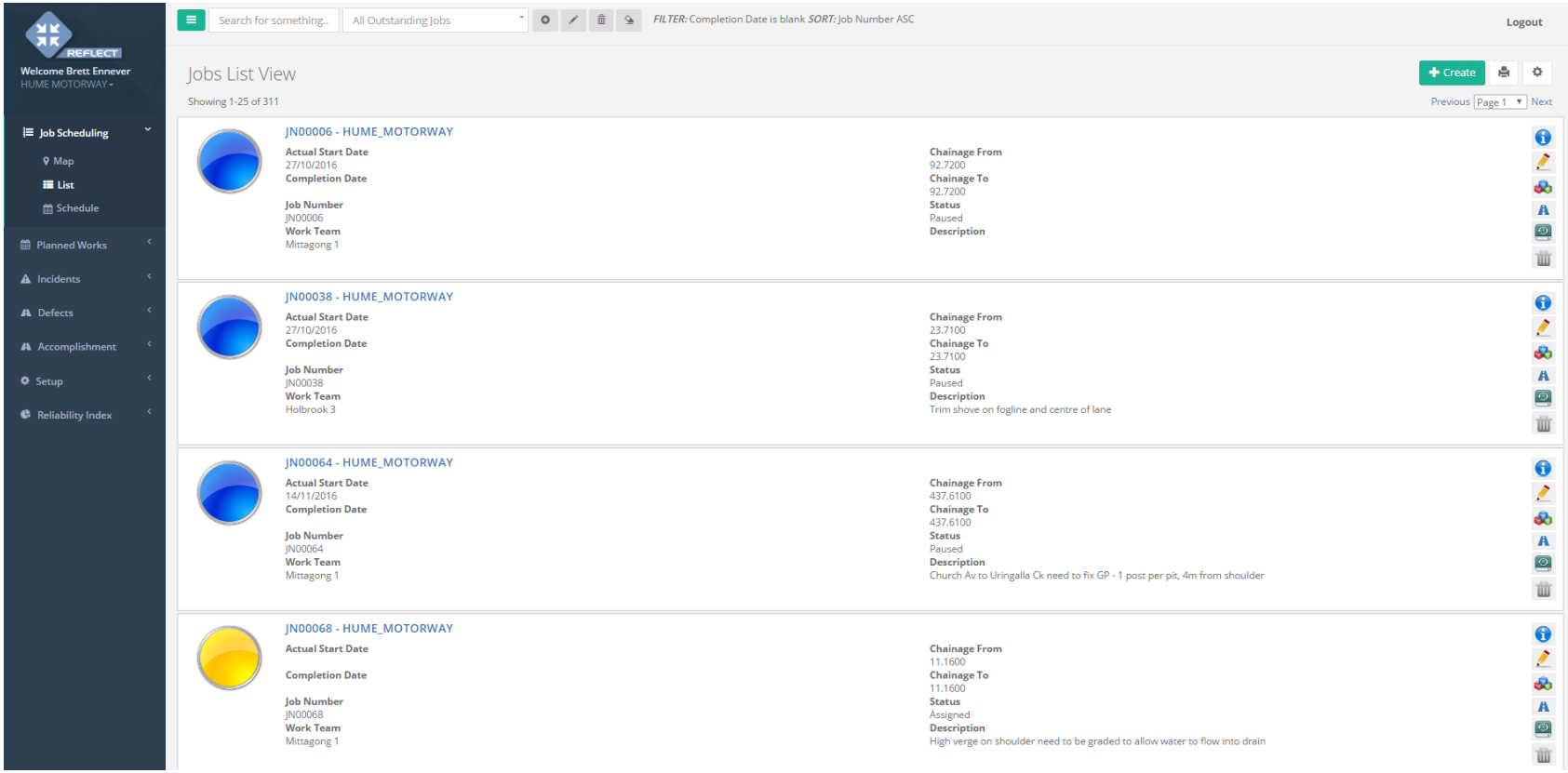
Reflect for Motorways

THE HOME PAGE



Reflect for Motorways

Rfm uses JOBS and COMPONENTS similar to WORK ORDERS and DEFECTS / PLANNED WORKS



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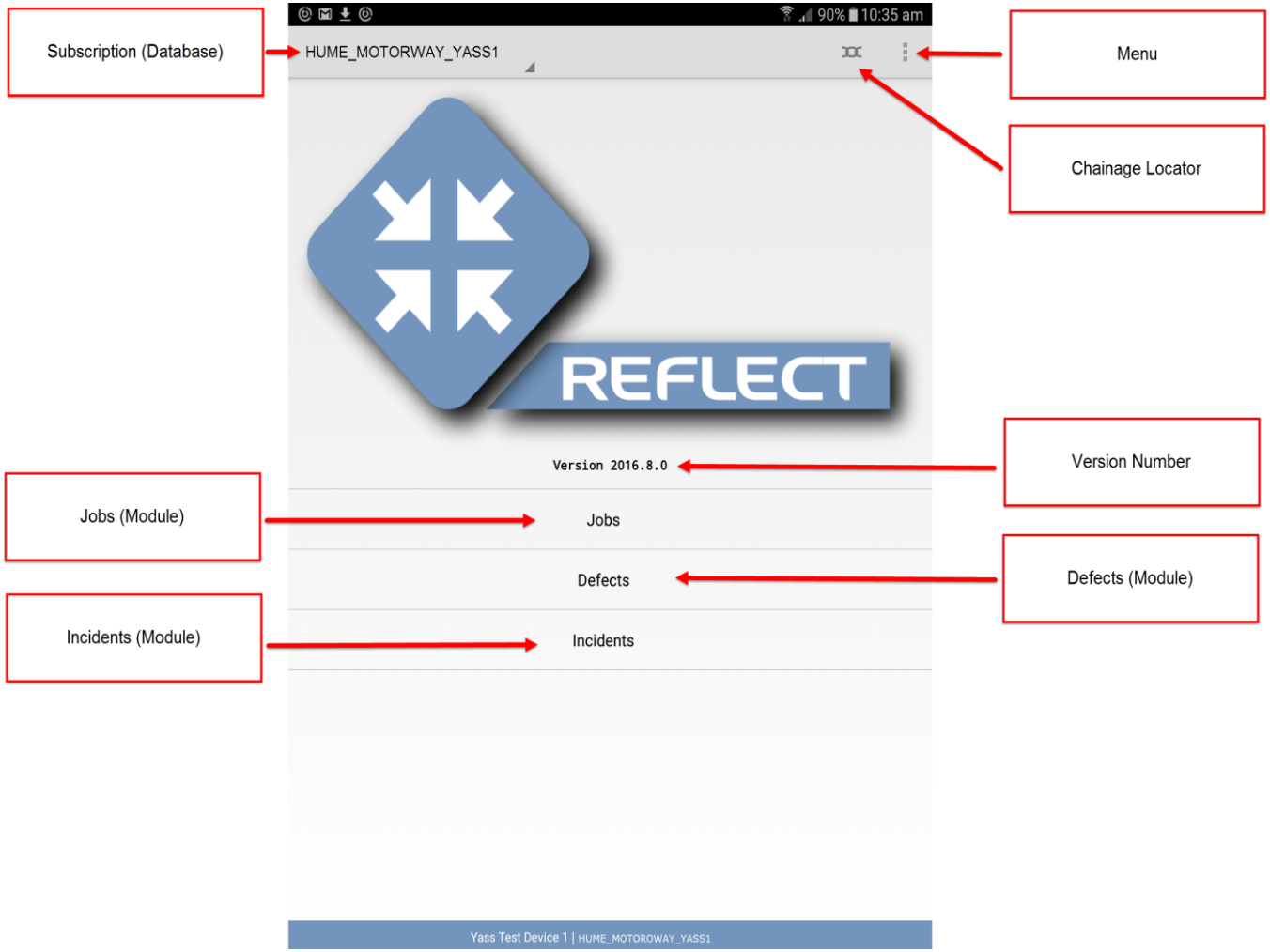

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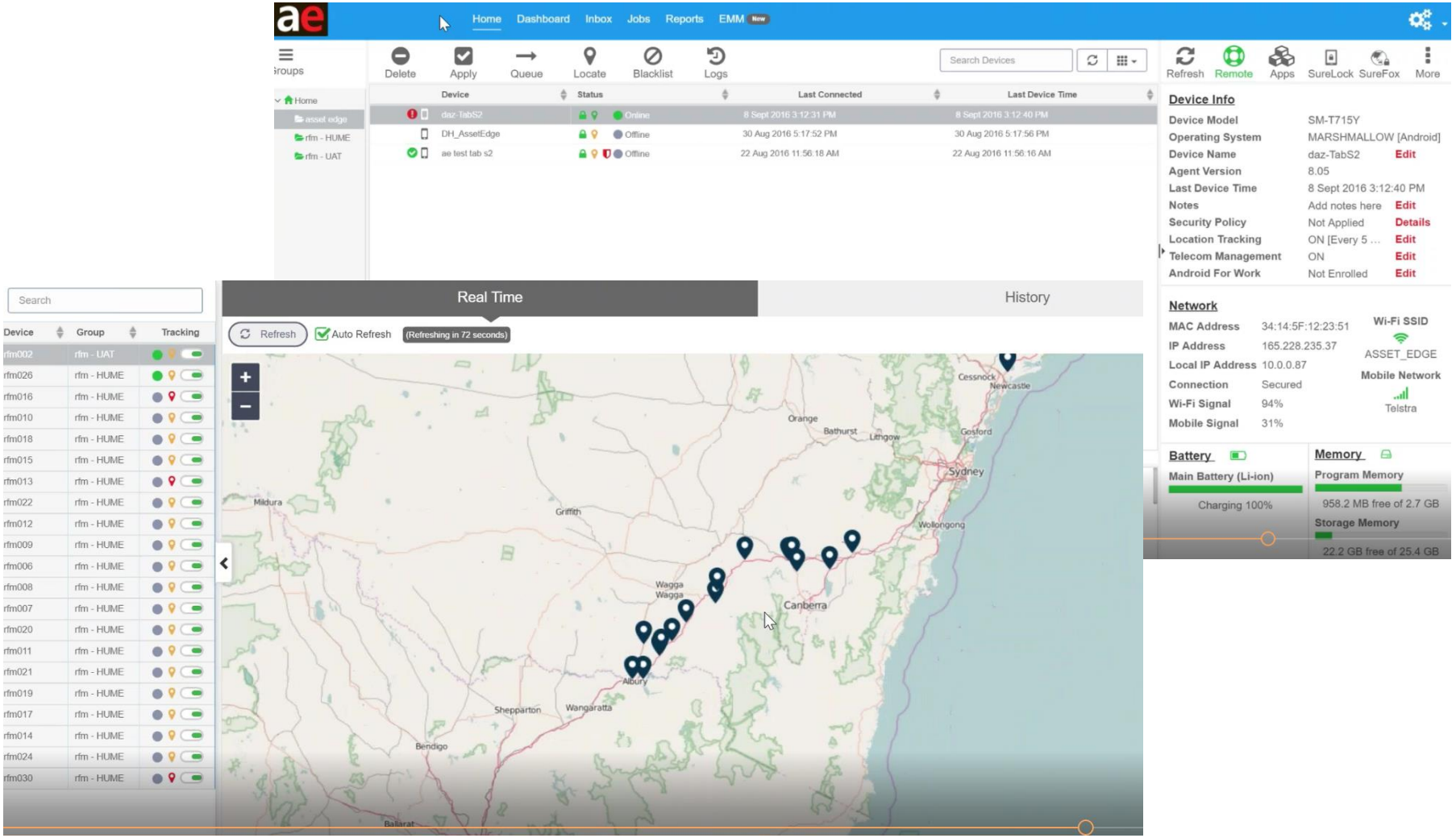
Roads & Maritime