

ENGINEERING SERVICES HIGHLIGHTS AND SIGNIFICANT ISSUES REPORT – MONTH ENDING JULY 2010

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Purpose

To review Engineering Services Department highlights and significant issues for the month ending July 2010.

Background and Discussion

Highlights and Significant Issues for period are as follows: -

ENGINEERING SERVICES MANAGEMENT

Coordination of project meetings, briefings and reports on the following projects:

- Site inspections with Portfolio Councillors
- Natural Disaster Resilience Program Round 2 - meeting with Senior Advisor
- Attended Local Disaster Management Group meeting
- Attended DDMG meeting
- Presented at Civil Contractors Federation Industry Forum
- Attended QTCCC Sub Committee meeting in Brisbane
- Met with Tim Mulherin to discuss Slade Point Rock Wall Foreshore Erosion

On-going involvement in the following areas:

- Mackay Water Recycling Project (i.e: PCG and PAB), Mackay Development Advisory Board, Management Leadership Forum and Sustainable Futures Committee Meetings.
- LGEG, Transport Working Group and Paget Depot Project Steering Committee.
- Safe Plan, Design and Construct Review Meetings and SES matters.
- CBD Economic Development Advisory Committee, Mackay Community & Public Transport Advisory Committee.
- Local Disaster Management Group and Rural Advisory Committee.

CONSTRUCTION

DAY LABOUR

Works have been completed on the following projects:

- Alfred St, Tennyson to Carlyle Streets
- Bridge Road, Hume to Holland Streets
- Andergrove Road drainage
- Eversleigh Road/Sarina Beach intersection



Smith Street

DAY LABOUR

Works have been substantially completed on the following projects:

- Bluewater Trail Lagoon to Bridge Road section
- Bridge Road, Holland to river end
- Casey Avenue Culvert and Leisure Court extension
- Dennis Street
- Smith Street, Bruce Highway to Wilson St
- Bridge Road /Longair St Intersection
- George Milton Street between Field Street to Paget Street
- Railway Square



Sarina Beach Road/Eversleigh Road Intersection

DAY LABOUR

The following projects are in progress:

- Branscombe St footpath
- Crightons Road – new Depot access
- Bridge Road Drainage widening, Leisure Court to Irving Street
- Bluewater Trail, Bridge Road Footpath between Leisure Court and Irving Street
- Kinchant Dam Road reconstruction
- Connors Road between Archibald St and Boundary Road
- Hunter Street
- Grasstree Road
- Middle Creek Road

CONSTRUCTION



Bridge Road Cycleway and Drainage Improvement

CONTRACTS

Works have been completed on the following projects:

- Gorge Road
- Flood Damage Package 2 - Mackay Urban Saturation 2008-2009
- Flood Damage Package 3 - Mackay Rural Saturation 2008-2009
- Flood Damage Package 6 - Mackay Outer Urban 2008-2009

Works have been substantially completed on the following projects:

- Bluewater Trail Environmental Park
- Flood Package 7 – Foamed Bitumen 2008 Flood Damage Program

CONTRACTS

The following projects are in progress:

- Rifle Range Road Reconstruction – Plane Creek Crossing
- Grasstree Beach Road
- Farrellys Road, Connors Road to Michelmore Streets, Paget
- Bluewater Trail Caneland Park
- Flood Package 8 – Mackay North 2008
- Flood Package 9 – Mackay North 2, 2008
- Flood Package 10 – Mackay South, 2 2008
- Brisbane Street Reconstruction
- Stormwater pipes re-lining, Wood Street and Brisbane Street
- West Plane Creek Road
- Flood Damage Package 1 - Sarina Mirani 2008-2009 Flood Damage Program

The following projects have been awarded but not yet started:

- Crediton Loop Road
- Roger Road Culverts
- Flood Package 11 – Midge Point 2008
- Flood Package 12, 2008

The following projects have been tendered:

- Perry Road

MAINTENANCE

Maintenance Grading in the following areas:

Heavy Formation Grading	Nil.
Medium Formation Grading	Fenners Access Road, Wetzel's Road, Cameron's Road, Graffunders Road.
Shoulder Grading	Dunrock Road, Munbura Road.

Special Works:

Fence & Handrail repairs – Munbura Road; Box Culverts – Kippen St, Field Street; Footpath Maintenance – Wood Street, Bridge Road, Gregory Street, Wentford Street, Fernleigh Avenue, Oak Street, Peel Street; Kerb & Channel repairs – Heather Court, Donaldson Street; Culvert/Pipe repairs – Field Street, Hart Street; Other concreting works – Ivers Street, McGinn Street, Peel Street, Hodges Street, Cape Hillsborough Road, Maple Drive, Bedford Road, Vailala Rise, Leahy Street.

Drainage Maintenance:

Munbura Road, Wetzel's Road, Pleystowe School Road, Graffunders Road, Donaldson Street.

Pothole Patching:

Oakenden area, Stockroute Road, Sunnyside area, Mandurana Road, Palmer Street, Celeber Drive, Burgess Street, Holack Street, Bedford Road, Fernleigh Avenue, Seaforth State School, Joe Johnson Court, Redcliffe Avenue, Cape Hillsborough Road, Seaforth-Port Newry Road, Rural View Drive, Balnagowan/Mandurana Road, Kippen Drive, Farleigh-Miclere Road, Wainai Road, Jensens Road, Farleigh Station Road, Waverley Street, Coles Road, Cutler Drive, Beaconsfield Road, Canberra Street, Meyer Street, Hamilton Street, Annie Wood Avenue, Walsh Avenue, Shepherds Road, Shoal Point Road, Davey Street, Burston Street, Holack Street, Evans Avenue, Harvey Street, Canberra Street, Russell Street, Nicklin Drive, Mango Avenue, Nebia-Conningsby Road, Flor Avenue, McCulloch Street, Sunset Drive, Bald Hill Road, Glenella Road, Hill End Road, Schapers Road, Pioneer Street, Corney Street, Marshall Avenue, Barrow Hill Road, LeGardes Road, Kemp Street, Busuttin Drive, Hancock Street, Blacks Beach Road, Walters Avenue, Keim Street, Eaglemount Road, Admiral Drive, The Goosewalk, Watson Street, East Point Drive.

Slashing:

Palmyra area, Walkerston area, Marian area, Pleystowe area.

Main Roads RMPC:

Other Bituminous Works / Pothole Patching / Pavement Repairs	Kochs Road to Bonsons Scrub Road, Conningsby to Truck stops near Gibson Creek, Bagley Creek Bridge to Oakenden School Road, Sams Road to Carwash (cnr Evans Ave) Intersection Peak Downs Highway to Top of Euneglla Range, Intersection Mackay-Eungella Road to Intersection Bruce Highway, Mirani West to the Bruce Highway Intersection, Intersection Farleigh-Habana Road to intersection Maraju-Yakapari Road Hill Street to Eton Pub Entrance, Near Miltons Look out road, Showgrounds to Whitsunday Boundary
Heavy Formation grading / gravel resheating / other formation works	1st Crediton Loop Road Intersection to Freegards Road Intersection Intersection Farleigh-Habana Road to Conningsby Truck Stop Stuart Drive to intersection Walkerston-Homebush Road Entrance to Melba House to Tolchers Lane Hannans Road to intersection Mirani-Eton Road Hannans Road to intersection Mirani-Eton Road

Heavy Shoulder Grading / Gravel Resheeting / Other Shoulder Works	Nil.
Culvert / Drainage Works	Intersection Calrossie Road to Mobile Service Station Near Bus Shelter at Nindaroo Intersection Bobongie Road to Leila Creek Melanie Street to Camilleri Street Reliance Creek Bridge
Tractor Slashing Rural / Urban / Boom Mowing / Clearing Works / Herbicide Spraying / Declared Plant Spraying	Intersection Homebush Road to showgrounds. Showgrounds Intersection to O'Connell River Bottom of Eungella Range, near the Mango Factory Mirani Township, Near Police Station Eungella to 2nd Crediton Loop Road Intersection Various Locations between Mirani & Eungella Showgrounds to Harbour Road Round about Intersection Bruce Highway to intersection Eimeo Road Showgrounds to Intersection Farleigh-Habana Road
Road Sweeping/Roadside Litter Collection	City Gates to Showgrounds Showgrounds to Heaths Road Sams Road to Palmer Street Intersection Bruce Highway to Eimeo turn off Palmer Street to Harbour Road Round about. Showgrounds to River Street City Gates to Showgrounds
Emergency Call Outs	Showgrounds to intersection Sams Road Eton Range Between McClure's Road & Illawong Access Near Golf Club Access
Signs / Guide Post Works	Bruce Highway - South Bruce Highway - North Mackay - Bucasia Eimeo

Flood Damages:

Formation grading and gravel re-sheeting on numerous roads in all localities.

Saturation Works: Progress to date

Package 1 – Variations to original scope of works are almost complete. Currently compiling a schedule for the outstanding items that were stood over from the wet season. An audit of sites in the Valley is currently being carried out, to date, most areas of repairs are holding up quite well considering the wet weather early this year.

Package 4 – Works complete.

Package 6 - Works complete.

Package 7 – Works substantially complete.



Bridge Road – Asphaltting works

Package 8 - Works underway and expected completion October 2010

Package 9 - Works underway and expected completion August 2010

Package 10 – Works underway and expected completion August 2010

Package 11 – Works to commence early August 2010

Package 12 - Works to commence mid August 2010

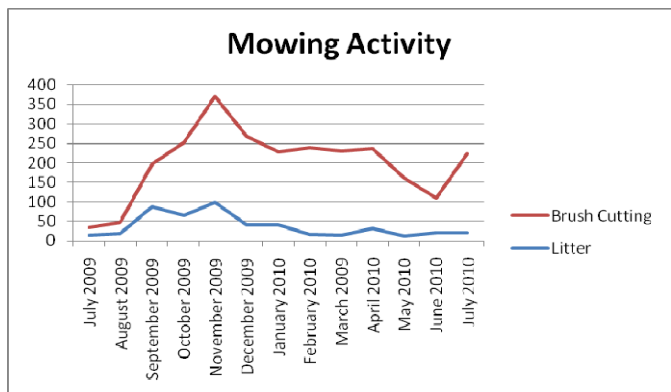
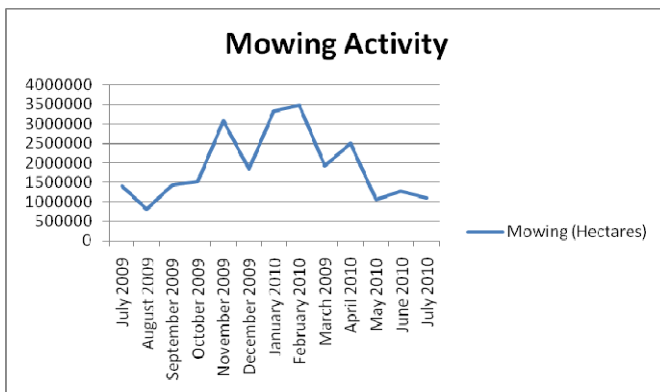
TECHNICAL SERVICES

- Development and design of projects for saturation damage projects throughout the Council area
- Development and design of projects within Capital Works Programme
- Development and ongoing modification of draft 20yr Capital Works Programme making provision for all current projects and proposed development projects for long term Financial Plan purposes
- Discussions with GHD & utility providers regarding proposed road construction Connors Road (Archibald to Farrelly's). Land acquisitions in progress and Ergon Telstra cost estimates received and orders placed. Construction sequencing plan and discussions proposed. Telstra and Water/Sewer works underway
- Detail design ongoing for intersection upgrading on Malcomson Street at Charles Hodge and Greenfields intersections.
- Tender Specification and issue for Mango Avenue Reconstruction and SOA for Bituminous Products supply and Lay.
- Detail design of culvert crossing Casey Avenue, concept development and detail design for stadium access, car park and Bluewater Trail extension ongoing. DA lodged and approved. Construction plans issued for drain widening and footpath construction
- Concept and detail design for future Milton/Bridge, Bridge/Paradise, Archibald/Milton and Paradise/Webberley intersections commenced as part of Paget intersection and traffic study
- General design development of detail plans for Archibald/Paradise roundabout & Glenpark/Evans Signalised Intersection
- Ongoing discussions with DMR, Developer and Council staff with regard to detail design and division of costs for Bruce Hwy/Boundary Rd intersection and section of Boundary Road from Hwy to Rainlover Street
- Attendance at Meetings Paget Steering Committee, Paget Depot Management Group, Land and Road Use Committee, Urban Enhancement Concept plan, Strategic Planning Internal stakeholders, Program Managers, DTMR City Gates Boundary Road Upgrade, ULDA Bedford Road project, DTMR Urban congestion study and DTMR Road Infrastructure Joint Meeting
- Provision to Council of briefing on Departmental Briefing
- Provision of Reports to Council on response to petition for street upgrades in Eton Village area

PARKS AND ENVIRONMENT

The Parks & Environment report for the month of July contains information on activities undertaken throughout the month by the staff within the program.

- **Administration** – Updating of Position Descriptions for all Parks & Environment Program positions is nearing completion to the new template format. This has taken administration staff a while as these documents are required to undertake performance appraisals. Human Resource staff have been forwarding updates and appraisal notifications regularly and this has assisted the review of staff performance and ensured that staff are appraised in line with their position descriptions. The end of financial year summary of accounts was undertaken with all accounts cleared prior to finance program completion dates. This ensured that the programs financial position was accurately reported for the end of year.
- **Customer Requests** – There were 182 requests received and 321 requests attended during the month. A total of 5 call outs were attended with 12 additional after hours calls received.
- **Technical Officers** – Project inspections were conducted on Illuka Park Playground defects repair, Bluewater Trail Environment Park section landscape works with 5 On Maintenance and 4 Off Maintenance Subdivision Inspections conducted this month. Asset Technical Officer coordinated the annual Yardstick survey information that compares MRC Parks operations against other council operations in Australia, New Zealand, South Africa and Europe. Review of asset management systems was also undertaken.
- **Horticulture Activities** – There were 281,225m² of garden beds serviced in the month in Mackay city area. 48 hours of herbicide spraying and 7.5 hours of vandalism repairs were also undertaken. Maintenance activities included pruning, weeding, mulch replenishment and fertilising of gardens in buffer strips, centre medians, entry statements, park garden beds and facilities landscapes. There were 23 full time staff engaged in horticultural activities in July, with 2 staff vacancies.
- **Grass Maintenance Activities** – 1,179,292m² of parks; 76,537m² of drains and 532,129m² of easements were mowed in July. 220 hours of whipper snipping was completed, with 64 hours of litter collection and 8 hours of spraying undertaken. Weather conditions for spray operations were not favourable this month.



- **Camp Ground Activities** - Camp ground attendants have been engaged for reserves in Seaforth, Ball Bay and St Helens Beach. A total of 4,914 campers enjoyed these three locations during July. The majority of campers stayed at Seaforth Camp Reserve, averaging 160 persons per night for this facility.

- **Arboriculture Activities** – 190 customer requests for trees were attended this month, with 64 requests received. This reduction in received requests will enable the tree crew to catch up on outstanding requests during the cooler months prior to next wet season. Watering of trees has increased as the drier winter weather and windy conditions reduces ground moisture levels. There were 22 trees planted this month as conditions are not ideal for optimal growth in the cooler months. 381 trees were pruned and cyclone clean up work continues accounting for the majority of the 245 tree removals undertaken this month.
- **Cemetery Operations** - Cemetery staff conducted 32 burials during the month and 9 ashes burials. Mt Bassett operational staff undertook maintenance and capital development activities. There are 8 staff and 1 vacant position in this operational area.
- **Natural Environment Activities** – Major activity for this operational area was located at the Bluewater trail and Sandfly Creek. 15 meetings were attended in the month, with liaison with Landcare and Reef Catchments ensuring that activities funded through the Natural Environment Levy are planned for this year.
- **Marine Beach Activities** – General maintenance and inspection of swimming enclosures, walkways and beach fences was conducted during the month.
- **Parks Building Services Activities** – Annual leave and sick leave of key staff in this area during the month accounted for some reduction in output by the team, however construction planning for new capital projects and materials sourcing was of prime tasks during the month. 27 customer requests were attended for general repairs to park furniture and playground equipment.
- **Capital Projects** – The following capital projects were in progress during July:
 - Eimeo Beach Tower, James Muscat Park Shelter and Gordon Street Artificial grass installation.

MACKAY REGIONAL BOTANIC GARDENS

Throughout July

Horticultural and Site Works

Staff works have been focussing on winter pruning and mulching of high profile areas, rotational planting in the Heritage Garden and formulative pruning and dead-wooding of the Living Collection throughout.

July/July also saw replanting occurring in the Regional Forest Garden and newly themed Natural Heritage – Flora for Fauna Garden by the Gardens Friends and Society for Growing Australian Plants (SGAP Mackay).

Contracted projects were completed including the re-oiling of the timber decks around the main visitor precinct, repairs to bitumen pathways damaged during Cyclone Ului, extensive mulching of the PlayGarden and Tropical Palm and Pandanus Collection and the installation of a Fire Detection System at the Visitors Centre.



The Gymnosperm Deck re-oiled

HRG - Cyclone Ului Report

Because of the large amount of damage sustained to the MRBG Living Collection (over 400 specimens damaged) during Cyclone Ului, the MRBG undertook a recording and research project into the damage caused and probable causes. This was to identify any areas of concern or consideration prior to replanting. Whilst the damage was site wide, some gardens, garden beds and collections suffered a much higher rate of attrition. Underlying the cyclone itself and the strong, unpredictable winds were two prior months of almost constant rain, saturating the soils to the point where water pooled extensively throughout the site after each rain event.

Both the winds and saturated soils were initially visible as the major cause of damage. However, a range of potential problems either suggested or suspected have/may also have added to the cause of damage, including:

- Cyclonic winds from 11pm to 5am over 100kph and gusting up to 200kph in the region
- The dominate MRBG site soil type - a clay loam topsoil and amorphous clays present at the surface or underlying and associated horticultural problems with these soils – from saturation and prior compaction, to poor structure e.g. slumping once disturbed.
- Construction-based soil problems occurring during Stage 1 and 2 of the MRBG development in 2001-03 and 2004-06 including compaction by machinery, top and subsoil replacements with disturbed or inappropriate matter, construction rubble and remnant profiles included path road base recorded in garden beds during planting.
- Inappropriate irrigation – incorrect regimes, location and type of irrigation suited to site or the collection
- Irrigation added to existing established trees, causing fast, weak growth or trees established on site prior to commencing of the Botanic Garden with little prior maintenance or deep watering to establish healthy root systems during the extended drought conditions of the 1990's and early 2000's.
- Beds with mulch deeper than 100mm and mulch migration causing collar rot
- Inadequate and inappropriate drainage and surface drainage directed over lawns

- Planting too much, too quickly and the inability to maintain the collection with current staffing levels has led to a lesser than desirable maintenance regime than required for the collection
- Poor horticultural maintenance practices including lack of pruning (see point above) and prior damage caused in previous years (mowing and snipping wounds in un-mulched lawn specimens, irrigation repairs cutting roots etc)
- Lack of understanding by staff of species growth habit and horticultural requirements for maintenance of some specimens
- The site itself – open and windy – causing wind shear and tilting of specimens, or not allowing specimens to firmly establish due to constant movement caused by winds
- Existing trees adapting to first drought conditions during establishment 2002-2005, then wet conditions and soils, gardens, infrastructure each growing season from 2006-2010
- Species selection – some species displayed a higher tendency than others for damage and toppled over in a range of exposed or steeply sloping sites and positions, including *Brachychiton* spp., *Corymbia* and *Eucalyptus* spp, *Terminalia* spp., *Tabebuia* and *Handroanthus* spp.
- Inappropriate design intent - rainforest or woodland specimens usually growing in ‘protected’ climates and sites away from strong winds, being trialled as specimen trees in lawns, etc (one of the roles of the MRBG)
- BGANZ Congress preparation in 2009 – mulching heavily and using higher than normal irrigation regimes to establish and maintain plantings during the traditional dry winter/spring period of 2009.

For a case-by-case information report and proposed actions, a spreadsheet **MRBG Cyclone Report on damage to vegetation at 070710** is available. This is a working document, with completion of outcomes expected in September this year. Over 277 hours was donated to Council by the Gardens Friends assisting the Curator with this project with recording data and images since the beginning of April.

Visitor Services Program

School holiday activities under the theme “Plant a seed and grow and mind” commenced in July and July holidays for school aged children. Due to omission from the previous edition of MRC’s ‘In Focus’ publication – bookings were substantially down compared to previous sessions, but were still popular and very enjoyable to the children that participated.

Community Groups also participated in activities at the MRBG including the Gardens Friends, the Society for Growing Australian Plants (SGAP Mackay, Bird Observation and Conservation Australia – Mackay Branch (MACBOCA).

Fours weddings and three private functions occurred on the grounds during July and Solomon Islands Independence Day was celebrated at the Australian South Sea Islands Hut. A visit from the Matsuura Sister City delegation was enjoyed by those that attended and a new Japanese language version of the Matsuura Sister City Fact Sheet created by the MRBG was launched.



Consultation

There has been consultation with Engineering Services Program Managers.

Resource Implications

Nil.

Conclusion

Programming of both capital works and maintenance scheduling across all program areas has been undertaken. It should also be emphasised that the improvements to ground conditions and stable weather patterns has enabled the backlog of customer requests to be addressed.

Officer's Recommendation

THAT this report be received.