



## **MINUTES**

### **Ordinary Meeting**

**Held at Council Chambers  
Sir Albert Abbott Administration Building  
73 Gordon Street, Mackay**

**On Wednesday 10 February 2021**

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His Worship the Mayor, Cr Williamson acknowledged the traditional custodians of the land on which we meet today, the Yuwibara and Yuibera people and paid his respects to their Elders past and present. He also extended his acknowledgement to all Aboriginal members of the Birri Gubba Nation.

Cr Williamson advised that the Council Meeting is being streamed live, recorded and published in accordance with Council's Standing Orders, including publishing on Council's web-site.

## **1. ATTENDANCE**

His Worship the Mayor, Cr G R Williamson (Chairperson), Crs M J Bella, L G Bonaventura, M I Green, B C Hassan, A N Jones, F A Mann, K L May, R J Seymour and P A Townsend were in attendance at the commencement of the meeting.

Also present was Mr M Thomson (Chief Executive Officer), Mrs P Jaenke (Minute Secretary), Mr D McKendry (Executive Officer), Mr J Devitt (Director - Engineering & Commercial Infrastructure), Ms A Nugent (Director - Development Services), Mr J Carless (Director - Capital Works), Ms A Hays (Director - Community & Client Services), Ms K Lamb (Director - Organisational Services) and Mr M Sleeman (Manager - Corporate Communications & Marketing).

The meeting commenced at 10:00am.

## **2. OPENING PRAYER**

Reverend John McKim from the Anglican Church led those present in Prayer.

## **3. ABSENT ON COUNCIL BUSINESS**

Nil

## **4. APOLOGIES**

### **Council Resolution ORD-2021-28**

#### **4.1 LEAVE OF ABSENCE - Cr Englert**

THAT Cr Justin Englert be granted leave of absence for today's Meeting.

**Moved Cr May**

**Seconded Cr Mann**

**CARRIED**

## **5. CONDOLENCES**

Cr Jones expressed condolences, on behalf of Council to the family of Edward Royce Ramsamy, who passed away recently. Cr Jones advised that Mr Ramsamy, known as Ted, was the son of Edward Ramsamy Snr, known as Ram Chandra (deceased) and Mrs Nolear Ramsamy. Cr Jones advised that in his early days, Ted used to catch cane toads to help Ram with his research into taipan anti-venene. Cr Jones advised that Ted's working life had included commercial fishing, crane driving, crocodile farming and cane farming and that he was passionate about reconciliation and had contributed significant volunteer time to moulding Council's Reconciliation Action Plan.

## **6. CONFLICT OF INTEREST**

Nil

**7. CONFIRMATION OF MINUTES**

**7.1. CONFIRMATION OF MINUTES - 27 JANUARY 2021**

**Council Resolution ORD-2021-29**

THAT the Ordinary Meeting Minutes dated 27 January 2021 be adopted.

**Moved Cr Green**

**Seconded Cr Bonaventura**

**CARRIED**

**8. BUSINESS ARISING OUT OF PREVIOUS MINUTES**

Nil

**9. MAYORAL MINUTES**

Nil

**10. CONSIDERATION OF COMMITTEE REPORTS & RECOMMENDATIONS**

Nil

## 11. CORRESPONDENCE AND OFFICER'S REPORTS

### 11.1. OFFICE OF THE MAYOR AND CEO

#### 11.1.1. THE OFFICE OF THE MAYOR AND CEO MONTHLY REVIEW REPORT - JANUARY 2021

<b>Author</b>	Chief Executive Officer (Michael Thomson)
<b>Responsible Officer</b>	Chief Executive Officer (Michael Thomson)
<b>File Reference</b>	DMRR
<b>Attachments</b>	1. Report for Office of Mayor CE Os - Monthly Review - January 2021 [11.1.1.1 - 16 pages]

#### **Purpose**

To provide Council with the Office of the Mayor and Chief Executive Officer's Monthly Report for month of January 2021.

#### **Related Parties**

Nil

#### **Officer's Recommendation**

THAT the Office of the Mayor and Chief Executive Officers Monthly Report for January 2021 be received.

Cr Seymour sought clarification in relation to an incident involving the refuelling of a mower and asked if operators were aware of the correct refuelling procedures.

The Chief Executive Officer (CEO) advised that the incident is still under investigation but when concluded, he would be happy to report back to Council.

#### **Council Resolution ORD-2021-30**

**THAT the Office of the Mayor and Chief Executive Officers Monthly Report for January 2021 be received.**

**Moved Cr May**

**Seconded Cr Hassan**

Cr May highlighted several items from the report noting that the site safety inspection checklist and monthly action plans were both at 100% this month, the appointment of Tony Caruso as the new Chair of GW3 and the external funding of \$18.3 million received which helps relieve the burden on ratepayers. Cr May noted that the recent Council in Community day had been well received by Councillors and staff and thanked the Director of Engineering and Commercial Infrastructure, Jason Devitt, the Manager of Waste Services, Jason Grandcourt, and staff members, for hosting the inspection of Council's waste facilities in the Region.

Cr Bonaventura agreed with Cr May that the Council in Community Day was a great opportunity to view and gain an understanding of the journey of Council's waste stream. Cr Bonaventura urged residents to be vigilant with regards the items they place in their recycle bin, to ensure there is no contamination of recyclables.

Mayor Williamson noted that Council could perhaps do more to ensure residents understand the process and costs of the modern waste stream and suggested that he and the CEO would discuss methods of delivering increased public education.

**CARRIED**



# Office of Mayor and CEO

Monthly Review

Period - January 2021



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## OVERVIEW

This report is for the Office of the Mayor and CEO for January 2021

- Unfortunately, January saw Council with another Lost Time Injury (LTI), bringing our total to five (5), with a total of 76 days. Each has been unique, and whilst all incidents are reviewed for learnings, LTI's in particular are scrutinised.
- January saw the Council meetings move back to the familiar Council Chambers under a COVID safe plan. This included a continued restriction on the number of public participation attendees. It was however refreshing to have public participation with Council receiving interaction from five (5) members of the public
- Legal Services statistics are included in this report, with specific details of cases provided monthly to Council
- Another Council in Community Day was undertaken, with a concentration on waste services and processes. The scale of waste and associated services was something good to experience firsthand, as I am sure many first time Councillors would also appreciate. Visiting such sites helps put context to any upcoming discussions and consideration regarding waste options and strategies.

A handwritten signature in black ink that reads "Michael Thomson".

Michael Thomson  
*Chief Executive Officer*

## SAFETY

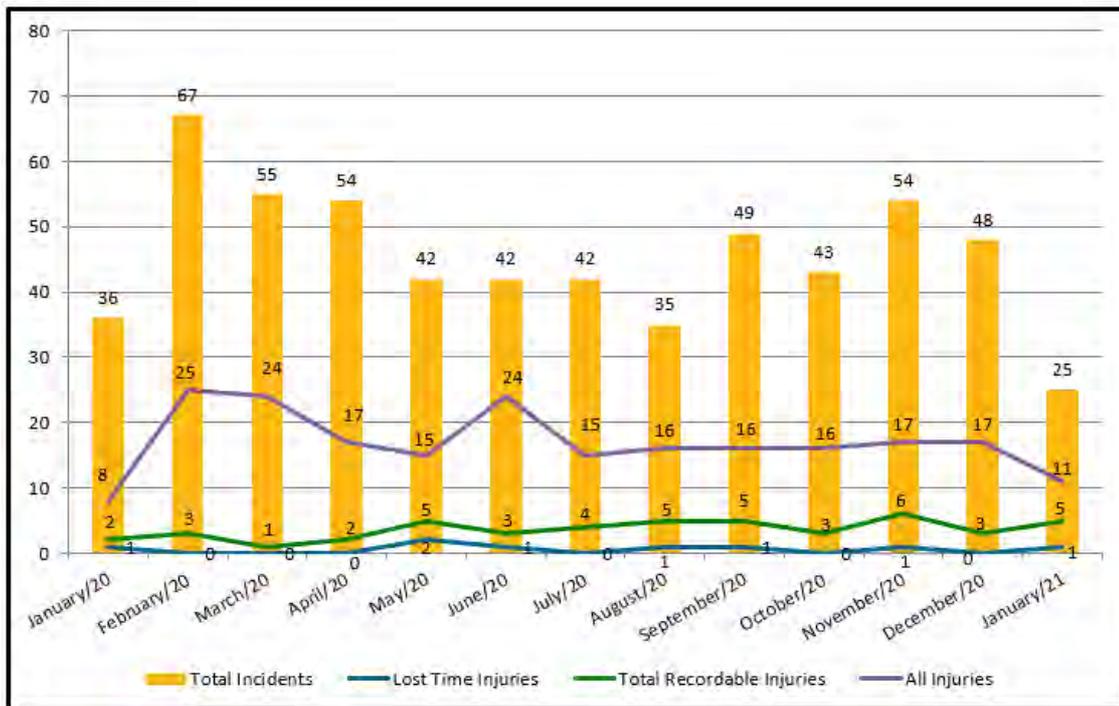
### 1.1. Overview

In January 2021:

- Fifty-Seven safety interactions were undertaken.
- Thirty-seven safety inspections were undertaken.
- 100% of monthly action plans activities were carried out.
- Four department Health and Safety Committees met.
- Representatives attended a meeting of the WHS Management Committee.

Twenty-five incidents were reported involving MRC employees, contractors, and members of the public. Two lost time injuries were recorded: one in January and another following an incident that occurred in December 2020.

### Incidents and Injuries



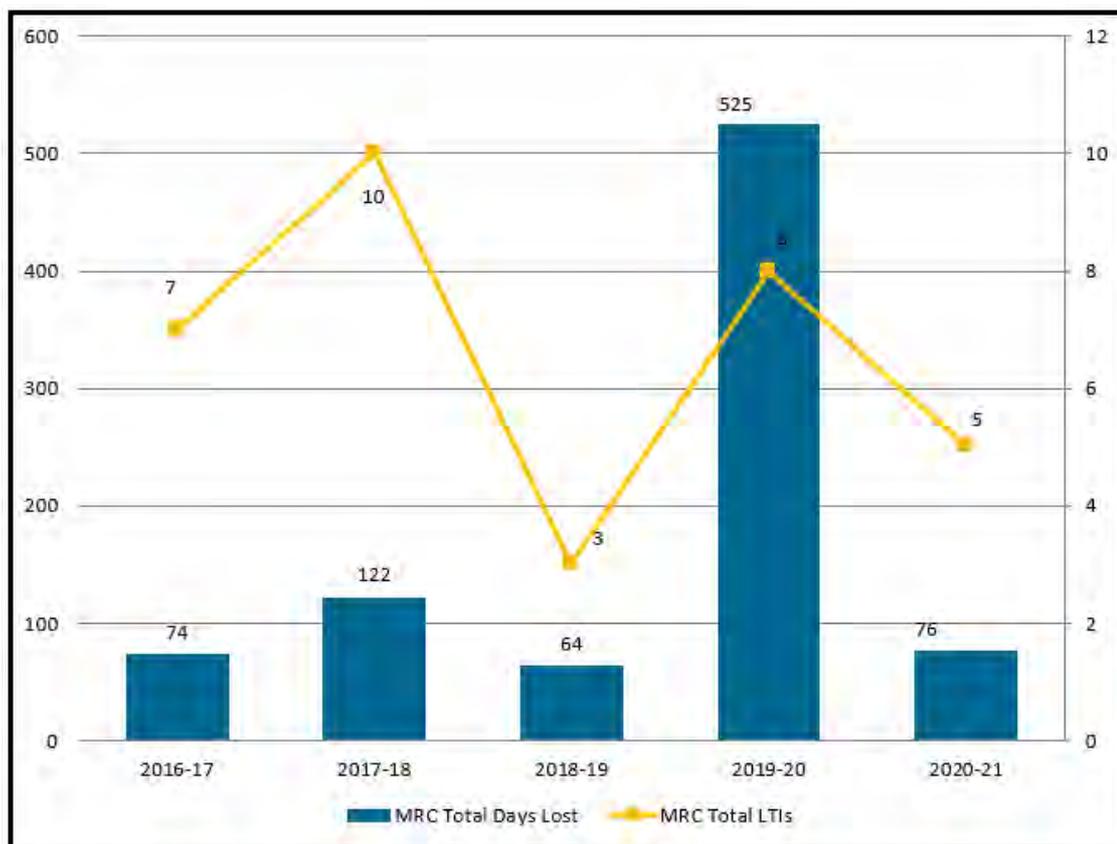
The following injuries to MRC employees were reported in January:

- Lost time injury:
  - A mower operator sustained burns to fingers / hand whilst refuelling a mower.
- Suitable duties and medical treatment injuries:
  - Minor lower back pain whilst getting up from chair.

- Dog bite on hand after rescuing small dog that was drowning in lagoon.
- Cut on leg whilst hedging.
- Minor burns on hand, wrist and forearm after some hot mix fell into glove.
- First aid and non-treatment injuries:
  - Knee sprain when foot became entangled in computer cables under desk resulting in a fall to the ground.
  - While stepping up into tractor, felt pain in thigh.
  - Person felt unwell after whipper snipping, possible mild heat stress. Felt better after resting.
  - Shoulder strain while raking asphalt when undertaking road repairs.
  - Wasp sting.
  - Bruise and pain to knee when knocked against workstation furniture.

Each incident is investigated, and appropriate corrective measures implemented to reduce future risks.

**Lost Time Injuries and Days Lost**

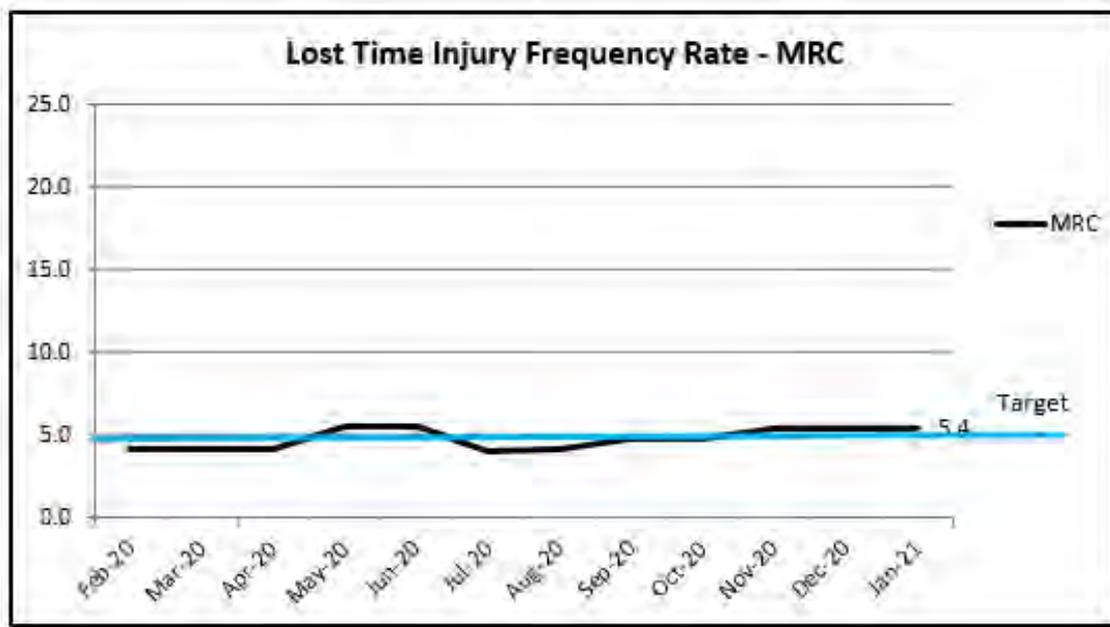


Department	2016-17		2017-18		2018-19		2019-20		2020-21	
	LTI	Days Lost	LTI	Days Lost	LTI	Days Lost	LTI	Days Lost	LTI	Days Lost
Capital Works										
Community & Client Services	3	6	1	1	1	18	1	3		
Organisational Services			2	25						
Development Services	3	55	1	13	1	33	4	154	1	7
Engineering & Commercial Infrastructure	1	13	6	83	1	13	3	368	4	69
<b>Mackay Regional Council</b>	<b>7</b>	<b>74</b>	<b>10</b>	<b>122</b>	<b>3</b>	<b>64</b>	<b>8</b>	<b>525</b>	<b>5</b>	<b>76</b>

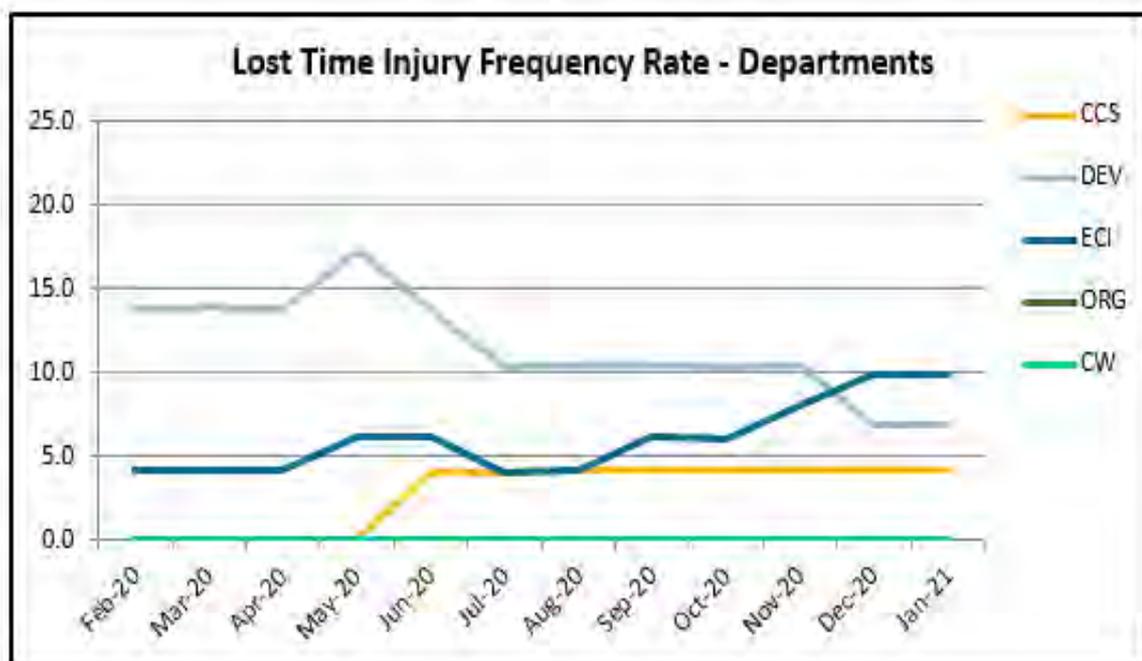
For the 2020-21 year, five lost time injuries have been recorded:

- In August 2020, an upper arm and shoulder injury was sustained after arm was over extended after minor fall from same level. Eleven days have been lost whilst the person recovers.
- In September 2020, a lower back injury was sustained whilst operating a roller. One day was lost as the worker recovered.
- In November 2020, a worker injured their knee after tipping a mower. Eighteen days have been lost while the worker recovers.
- In December 2020, a worker suffered a knee strain while loading a tyre into ute tray. Two days were lost in January as they received treatment.
- In January, a worker sustained burns to fingers / hand, when a fire broke out while refuelling a mower. Seven days were lost as the worker recovered.

**Injury Frequency Rates 12 month rolling average**

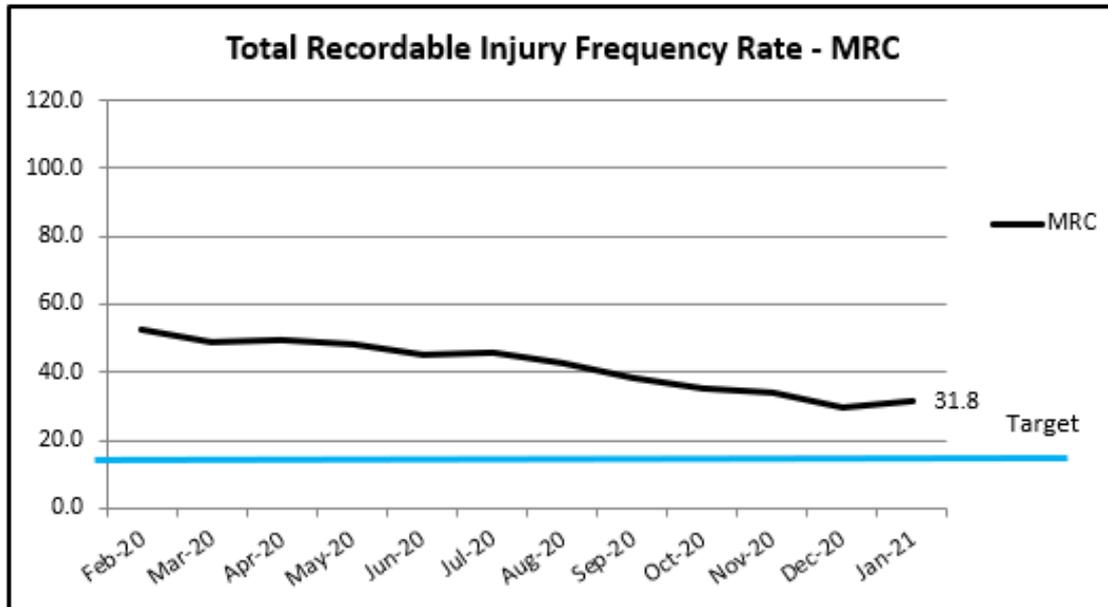


Five lost time injuries have been recorded in the 2020-21 year.

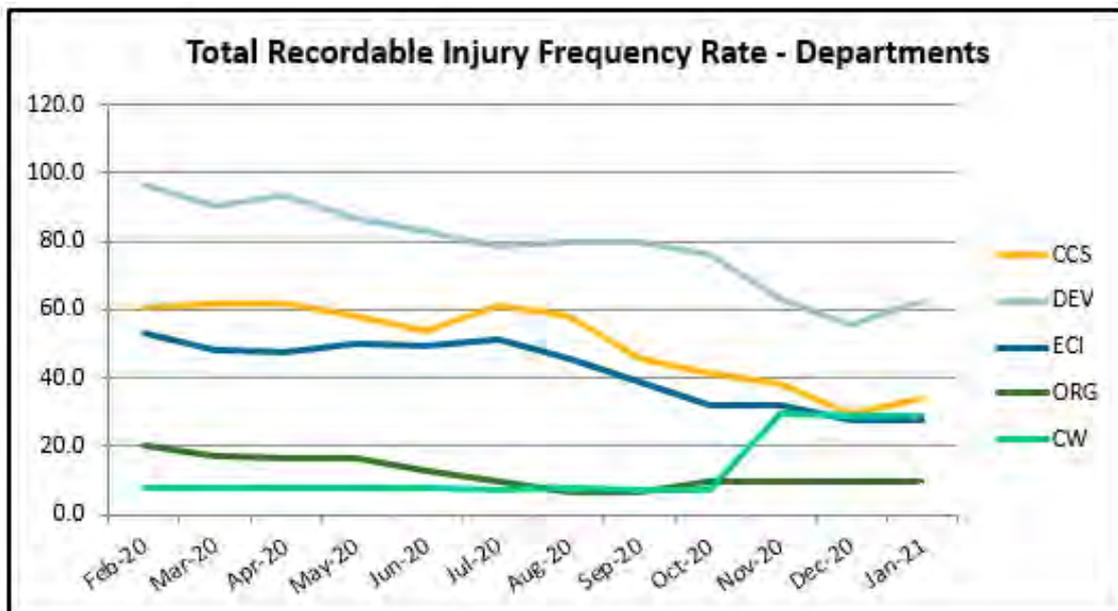




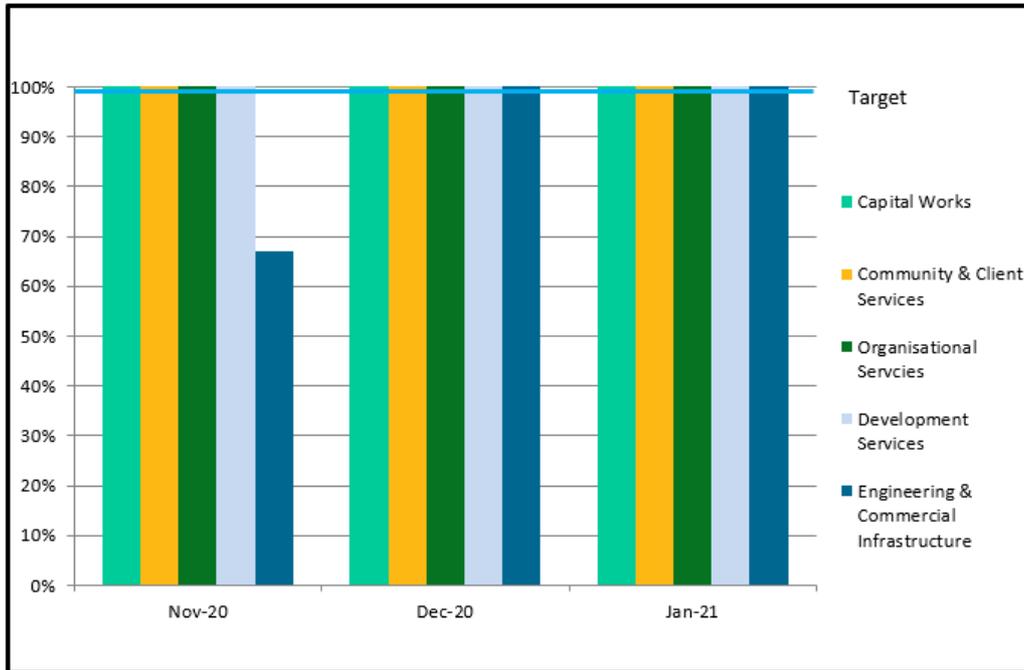
**Total Recordable Injury Frequency Rates 12 month rolling average**



Detailed analysis has been undertaken to identify ways to reduce the number of injuries requiring medical treatment. Most of the injuries involve ‘muscular stress’. The actions that have been implemented are beginning to have a positive impact. The areas of focus include: pre-employment checks; new employee inductions; fitness for work; hazardous manual task identification & management; and improved incident investigation

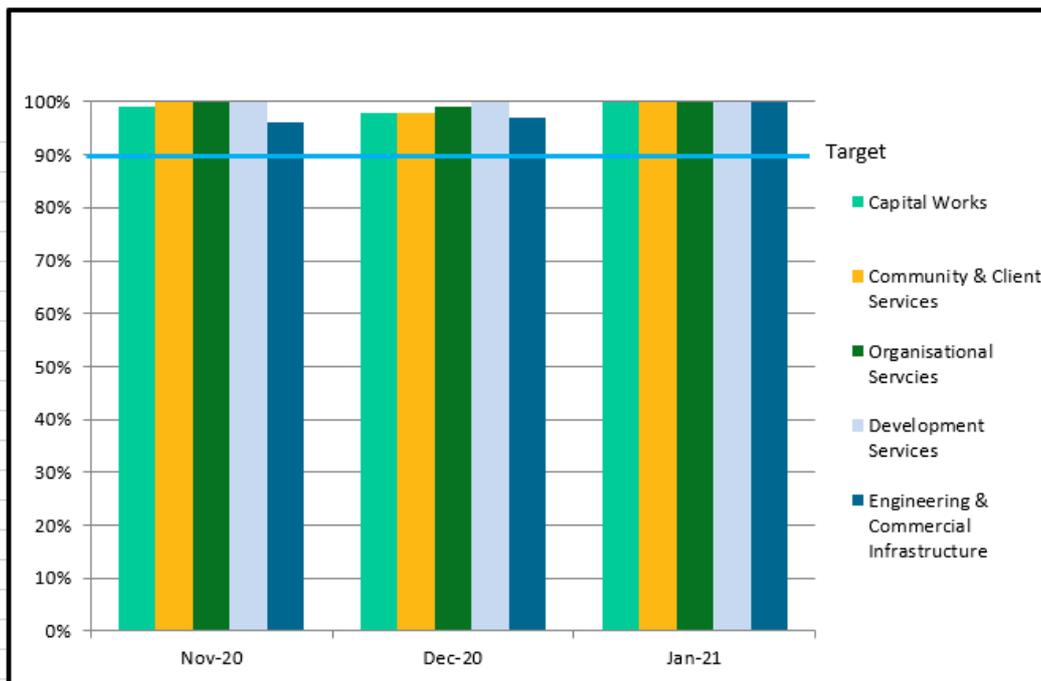


**Site Safety Inspection Checklists**



There were two outstanding inspections in November.

**Monthly Action Plans**





Monthly Action Plans (MAP) are planned safety-related actions allocated to work groups over a 12-month schedule and are developed in response to identified risks.

#### Glossary

Group E	Councils with wages greater than \$50 million
Incident	Any unplanned event resulting in, or having a potential for injury or ill health.
Lost Time Injury (LTI)	Incidents that resulted in a fatality, permanent disability or time lost from work of one day / part of a day or more
Lost time incident frequency rate (LTIFR)	The number of lost-time injuries per million hours worked. Calculated as follows: $\frac{\text{No of LTI} \times 1,000,000}{\text{total hours worked during period}}$
Total Recordable Injuries (TRI)	Incidents that result in a Lost Time Injury (LTI), Suitable Duties Injury (SDI) and Medical Treatment Injury (MTI)

## KEY INITIATIVES

### 2.1. Summary of key projects and initiatives

This section provides a summary of key initiatives linked directly to the Office of the Mayor and CEO for 2020/21.

#### Councillor Activities

##### Council in Community

Planning for the February Council in Community day was undertaken, with the visits centred on the Pioneer Valley region undertaken on Wednesday 3 February 2020.

Still with a focus on Council facilities rather than open community meetings, the following were included in site visits –

- ✓ Council facilities:
  - Paget Waste Management Centre
  - Mackay Recycling Facility
  - Hogan's Pocket Landfill
  - Otterburn Transfer Station

The visit was very informative and allowed Councillors, especially those in their first term, to understand the complexity and scale of waste processing and disposal services undertaken by Council.

*Receiving an update from Incredibles at the Paget Transfer Station*



*Briefing on-site at Hogan's Pocket, and having the opportunity of witnessing a side tipping truck transferring waste from Paget Transfer Station*



*On-site at Otterburn Waste Management Centre, Mirani*Meetings/Briefings

For the month of January, the following Council meetings/briefings were co-ordinated:

- First Ordinary Council meeting for 2021 – 27 January
- Briefing Day - 27 January

The January meeting saw the meeting being held back in the Council Chambers for the first time since February 2020 under a COVID safe plan. Members of the public have been invited to attend the Ordinary meetings commencing from 7 October 2020. There is currently a restriction limit to five (5) attendees who have pre-registered. On 27 January 2021 there were five (5) registered members of the public.

Live streaming of Council meetings however continues to ensure public access. Details of Council meeting minutes, and recorded live streaming, are all available on Council's website.



### Legal Services

Legal Services is currently working on 219 Matters spread across all Directorates as follows:

Directorate	Matter Type	No.	No.
Capital Works	Disputes/Litigation	1	20
	General	8	
	Land Acquisition	6	
	Land Tenure	2	
	Native Title	3	
CCS	Disputes/Litigation	2	32
	Regulatory Compliance & Enforcement ( <i>particularly Warrants for overgrown properties and dangerous dogs</i> )	16	
	General	14	
Development Services	Disputes/Litigation	3	25
	Infrastructure Agreements	7	
	P&E Appeals	1	
	General	10	
	Leasing/Licensing	1	
	Drafting/Reviewing	2	
	Regulatory Compliance & Enforcement	1	
ECI	Land Acquisition	10	44
	Disputes/Litigation	3	
	General	26	
	Land Tenure	3	
	Native Title	2	
OM&CEO	Land Acquisition	3	23
	Disputes/Litigation	3	
	General	16	
	Regulatory Compliance & Enforcement	1	
Organisational Services	Disputes/Litigation	7	75
	General	40	
	Land Acquisition	1	
	Leasing/Licensing	25	
	Native Title	1	
	Land Tenure	1	
TOTAL CURRENT MATTERS			219

Total external legal fees and outlays paid for the financial year to date are \$165,880.00 broken down by Directorate as follows:



### External Grant Funding

2020/21 external funding monies for 2020/21 year to date to 31 January 2021 being actually received by payments to Council is \$18,305,266.64

The major components received in January being:

- Building our Regions R5 – Mirani Planning Project - \$117,120
- Waste Levy Funding - \$968,728.00
- Illegal Dumping – Partnerships Program \$47,148.50

Funding applications successful during January include –

- Nil

### 2.2 NQ & FNQ Monsoon Trough Update

#### NQ & FNQ Monsoon Trough – Road Restoration Works

The Dalrymple Road Landslips Micropiling contract works were completed in late November 2020. The second seal has been delayed to February due to cost sharing negotiations with the roadworks contractor.

## GREATER WHITSUNDAY COUNCILS OF MAYORS (GWCoM'S)

### 3.1. Greater Whitsunday Council of Mayors (GWCoM's) – formerly Whitsunday Regional Organisation of Councils (WROC)

Joint group in conjunction with the Councils of Isaac and Whitsunday.

Membership involves the Mayor and CEO of each of the three (3) Councils, supported by various staff.

A CEO's Group has been established as part of the GWCoM's. The intent of this group is to handle the 'business' matters and look for possible synergies between Councils at CEO level and allowing focus on higher level and strategic issues for the region by the wider group. The next meeting is planned for Friday 12 February 2021.

It was reported in the December report that the last GWCoM's meeting was held on 7 December 2020, in Mackay, with the next GWCoM's meeting being Friday 26 February 2021 in Moranbah. There have been no meetings or other activities in January.

### **11.1.2. RESPONSE TO PETITION - 4 CHRISTOE STREET, FARLEIGH**

<b>Author</b>	Executive Officer (David McKendry)
<b>Responsible Officer</b>	Chief Executive Officer (Michael Thomson)
<b>File Number</b>	4 Christoe Street, Farleigh, Roads - General
<b>Attachments</b>	Nil

#### **Purpose**

To report back to Council on the petition as tabled at the Council meeting of 27 January 2021 related to an objection to the establishment of a truck depot at 4 Christoe Street, Farleigh.

A petition was received by Council on 23 December 2020, and tabled at the Council meeting of 27 January 2021, relating to an objection to the establishment of a truck depot at 4 Christoe Street, Farleigh.

#### **Related Parties**

Listed petitioners per the attached petition.

#### **Corporate Plan Linkage**

N/A

#### **Background/Discussion**

Council received the petition on 23 December 2020, and at the Council meeting of 27 January 2021 resolved –

***THAT the petition be received and referred to the Chief Executive Officer for a report to be prepared for consideration by Council which investigates the issues identified within the petition.***

***FURTHER THAT the principle petitioner be advised of Council's determination.***

***Moved Cr Bonaventura***

***Seconded Cr Green***

***CARRIED***

The petition relates to an objection to the establishment of a truck depot at 4 Christoe Street, Farleigh.

4 Christoe Street is a Rural zoned land parcel of some 2.9 hectares on the outskirts of the Farleigh township. A history of Council involvement on the site more recently dates back to September 2020 with a report of unlawful land use related to filling of the site. Following a number of site visits and inspections, Compliance Officers have taken appropriate enforcement action and activities on site have now ceased.

The property owner however has the ability to obtain the required approvals for the earthworks, and in this regard Council is in receipt of a properly made Operational Works application for bulk earthworks, although no decision has been made on this application.

It is important to note that Council has not at this time received a Material Change of Use application or similar. Therefore, the Operational Works application, as the only application before Council, is simply to obtain approval for the filling of the site and is not related to the actual use of the site. Even if the current Operational Works application is approved, this does not authorise the use of the land for anything other than for existing uses or accepted development in accordance with its Rural zoning.

Operational Works applications sometimes involve external referral agencies, but do not involve or allow for submissions by the general public. Such applications are assessed and approved in accordance with Council's

local planning framework, established in accordance with the *Planning Act 2016*, largely focused on engineering and environmental requirements.

The petition relates to an objection to a truck depot being established at the site. At this point Council has neither received an application requesting approval for a truck depot or similar, nor has it approved such use. Until Council receives an application, the parcel in question remains limited to existing uses or accepted development in the Rural zone, and any site use or activity to the contrary can and will only be investigated and acted upon once it has occurred. Council is unable to take compliance action prior to an activity commencing.

### **Consultation and Communication**

Comments and background advice have been provided by both the Development Engineering and Health & Regulatory Services Programs.

Cr Laurence Bonaventura has attended the site for inspection at the request of neighbouring property owners (including some petitioners).

### **Resource Implications**

Outside standard compliance and application processing resources, there are no specific resource implications for Council.

### **Risk Management Implications**

NIL.

### **Conclusion**

In simple terms, Council has neither received an application requesting approval for a truck depot or similar, nor has it approved such a use. Despite any potential approval for filling of the site in accordance with Council's local planning framework, until Council receives a Material Change of Use application, the parcel in question remains limited to existing uses or accepted development in the Rural zoning. Any site use or activity to the contrary can and will only be investigated and acted upon once it has occurred (ie Council can not take action prior to an activity commencing).

Therefore, Council is not able to further any action related to the petition request at this time.

### **Officer's Recommendation**

THAT Council confirms that as no application has been lodged or approval granted for the use of 4 Christoe Street, Farleigh as a truck depot, and as the site is not being utilised as a truck depot, that the petition as received objecting to use of a site as a truck depot cannot be further actioned at this time.

THAT the principal petitioner be advised of Council's determination.

### **Council Resolution ORD-2021-31**

**THAT Council confirms that as no application has been lodged or approval granted for the use of 4 Christoe Street, Farleigh as a truck depot, and as the site is not being utilised as a truck depot, that the petition as received objecting to use of a site as a truck depot cannot be further actioned at this time.**

**THAT the principal petitioner be advised of Council's determination.**

**Moved Cr Green**

**Seconded Cr Bonaventura**

Cr Green supported the recommendation of Officers, that as there had been no application for a truck depot lodged, the petition did not require any further action. Cr Green acknowledged the concerns of the residents of Farleigh and congratulated them on bringing their concerns to Council. Cr Green noted that she was pleased that community engagement would occur with these residents to ensure they understand the outcome of this process.

**CARRIED**

### **11.1.3. COUNCILLOR ATTENDANCE AT THE LGAQ WASTE FORUM**

**Author** Executive Officer - David McKendry  
**Responsible Officer** Chief Executive Officer – Michael Thomson  
**File Reference** Councillors General

**Attachments** LGAQ Waste Forum Program

#### **Purpose**

This report is to request Council approval for Cr Belinda Hassan to attend the Local Government Association of Queensland (LGAQ) Waste Forum to be held in Brisbane on 15 – 16 February 2021.

#### **Related Parties**

LGAQ

#### **Corporate Plan Linkage**

Recycling and Reuse – Increase recycling and reuse by diverting waste from landfill and raising community awareness, in order to reduce the costs of providing waste services, gain the economic advantages of producing material for reuse, and reducing the impact on the environment.

Waste Services – Maintain and improve Council's waste facilities and services by adopting improved practices and service delivery.

#### **Background/Discussion**

The LGAQ is hosting a Waste Forum in Brisbane on 15 – 16 February 2021 with speakers from Government and industry presenting on a range of topics including organics, recycling opportunities and community engagement.

Cr Hassan represents Council on the Local Authorities Waste Management Advisory Committee (LAWMAC) and the Infrastructure Recovery Sub-Group.

The LGAQ Waste Forum provides an opportunity to be informed on the latest activities in the field of waste management and recycling.

#### **Consultation and Communication**

Mayor and Councillors

Per Council's policy, a report on the Forum will be tabled at a future Council meeting by Cr Hassan.

#### **Resource Implications**

There is no charge to register to attend the Forum and Cr Hassan will undertake independent travel to Brisbane.

The total cost for accommodation and attendance at the Forum dinner is estimated as \$280.

#### **Risk Management Implications**

Nil

**Conclusion**

The LGAQ Waste Forum will provide an opportunity for Council to obtain information and knowledge on waste management and recycling.

**Officer's Recommendation**

THAT Council approve Cr Belinda Hassan's attendance at the LGAQ Waste Forum in Brisbane on 15-16 February 2021.

**Council Resolution ORD-2021-32**

**THAT Council approve Cr Belinda Hassan's attendance at the LGAQ Waste Forum in Brisbane on 15-16 February 2021.**

**Moved Cr May**

**Seconded Cr Mann**

Cr May noted that Cr Hassan's attendance at this Forum was a great opportunity for her, as Councils' representative on the Local Authority Waste Management Advisory Committee (LAWMAC), to stay up to date with advances in this area.

Cr Bonaventura noted, that having served as Council's representative on LAWMAC in the past, it was very important for Cr Hassan to attend this Conference especially as Council would soon be embarking on the renewal of its' own waste strategy. Cr Bonaventura thanked Cr Hassan for reducing the cost to Council of her attendance at this Forum by driving to Brisbane and staying with family, and looks forward to receiving her report at a future meeting.

**CARRIED**



# WASTE FORUM

***LEARNING THE CURVE***

Getting up to speed in the  
circular economy.

**15 – 16 FEB 2021**

**Hilton Brisbane  
190 Elizabeth Street, Brisbane**

**Register  
today**

If you would like further information  
please contact:

**Robert Ferguson  
Lead Public Health and Waste**

**P 07 3000 2212**

**M 0458 802 120**

**E Robert\_Ferguson@lgaq.asn.au**

**Register online**

**Accommodation**

# Agenda one

## 15 February

Light Lunch available 12 noon for a 12:45pm start

### Monday

Time - Topic	Speaker
<b>12.45 PM: Welcome</b>	<b>Greg Hallam AM</b> CEO, LGAQ
<b>12.55 PM: Queensland waste and resource recovery agenda</b>	<b>Karen Hussey</b> Deputy Director-General, Department of Environment and Science (DES)  <b>Rob Lawrence</b> Deputy Director-General, DES
<b>1.30 PM: Queensland industry update</b>	<b>Mark Smith</b> CEO, Waste Recycling Industry Queensland (WRIQ)
<b>2.00 PM: Organics – National state of play</b>	<b>Peter Olah</b> National Executive Officer, Australian Organics Recycling Association (AORA)
<b>2.30 PM: Panel discussion – Organics</b>	<b>Mark Smith</b> CEO, WRIQ
<ul style="list-style-type: none"> <li>• Pravin Menon, Executive Director (DES)</li> <li>• Dr Georgina Davis, CEO (Queensland Farmers Federation)</li> <li>• Greg Whitehead, Director (AORA)</li> <li>• Matthew McCarthy, Team Manager (Townsville Waste Services)</li> </ul>	
<b>3.15 PM: AFTERNOON TEA</b>	
<b>3.45 PM: Community engagement – methods and social media</b>	
<b>4.30 PM: Ups, downs and data vaults – Latest waste figures and new initiatives for data</b>	
<b>5.00 PM: Close of day I</b>	<b>Tim Cox</b> LGAQ Communications Advisor
<b>6.00 PM: Dinner</b>	<b>The Honourable Meaghan Scanlon MP</b> Minister for Environment and The Great Barrier Reef and Minister for Science and Youth Affairs  <b>Venue:</b> Pool Terrace, Hilton Hotel.

# Agenda two

## 16 February

8.30 am for a 8.45 am start

## Tuesday

*Time - Topic*

*Speaker*

**8.45 AM: Welcome and Overview of Day 2**

**Tim Cox**  
LGAQ Communications Advisor

**8.50 AM: National Waste Policy**

**Matthew Ryan**  
Assistant Secretary  
Waste Action Plan and Modernisation Branch  
Environment Protection Division  
Department of Agriculture, Water and  
Environment.

**9.15 AM: Local government - regional updates**

**Regional waste group representatives**

**10.00 AM: Morning Tea**

**All**

**10.30 AM: Local government priorities for 2021 – survey (live polling) and discussion**

**Gayle Sloan** – CEO, WMRR  
**Tim Cox** LGAQ Communications Advisor

**11.20 AM: Resource Recovery Industry Development Program (RRIDP) Update**

**Danielle Ellem**  
Director, Department of State Development,  
Infrastructure, Local Government and Planning  
(DSDILGP)

**11.45 AM: Glass, rubber and rap – recycled content in roads**

**Stephen Hulme**  
Principal Engineer, Department of Transport  
and Main Roads (TMR)

**12.15 PM: Regional Queensland circular economy business case for used tyres**

**Alison Colella**  
Technical Director – GHD

**12.40 PM: General Q&A**

**Tim Cox**  
LGAQ Communications Advisor

**12.50 PM: Where to from here?**

**Alison Smith**  
LGAQ Head of Advocate

**1.00 PM: Close**

**Tim Cox**  
LGAQ Communications Advisor



## ENQUIRIES

**Forum: Members Hotline**

**P** 1300 542 700

**E** [ask@lgaq.asn.au](mailto:ask@lgaq.asn.au)

## FORUM

**Robert Ferguson Lead – Public Health and Waste**

**P** 07 3000 2212

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**E** [Robert\\_Ferguson@lgaq.asn.au](mailto:Robert_Ferguson@lgaq.asn.au)

## 11.2. CAPITAL WORKS

### 11.2.1. CAPITAL WORKS MONTHLY REVIEW REPORT - JANUARY 2021

<b>Author</b>	Director Capital Works (Jim Carless)
<b>Responsible Officer</b>	Director Capital Works (Jim Carless)
<b>File Reference</b>	Departmental Monthly Review Reports
<b>Attachments</b>	1. Capital Works Monthly Review Report - January 2021 [11.2.1.1 - 21 pages]

#### **Purpose**

To provide Council with the Capital Works Monthly Review Report for the month of January 2021.

#### **Related Parties**

Nil.

#### **Officer's Recommendation**

THAT the Capital Works Monthly Review Report for the month of January 2021 be received.

The Director of Capital Works, Jim Carless, spoke to the report and provided an overview and highlights of the Capital Works Monthly Review Report for January 2021.

Cr Jones noted that the Lansdowne Road culvert replacement project had been completed quickly and queried if the project was expected to be finalised on budget.

The Director advised that the project would be finalised on budget.

Cr Bonaventura noted the underspend on sewer renewals and queried what percentage of the \$281,000 underspend was payments scheduled to be made for work completed but waiting for further documentation, and what percentage is work that still remains to be done.

The Director advised that approximately \$200,000 is work completed by the contractor but as it is predominantly underground infrastructure which cannot physically be checked off by Council, requires verification that the work has been done. The Director advised that until this verification, either CCTV footage or photos is provided, payment will not be made. The Director advised that the remaining approximately \$80,000 is an underspend in work that the contractor did not get it.

#### **Council Resolution ORD-2021-33**

**THAT the Capital Works Monthly Review Report for the month of January 2021 be received.**

**Moved Cr Mann**

**Seconded Cr Jones**

Cr Mann noted that there had been no LTI's in the Department since its formation which shows that staff are working as safely as possible. Cr Mann highlighted several items from the report including her disappointment that a person had driven through barricades, the changes made to the current years' projects which allow more shovel ready projects to be brought forward, the increased work on the provision of boating facilities and the number of projects happening under Works for Queensland, a State Government initiative which aims to support Local Governments outside South East Queensland.

Cr Jones noted the pleasing number of projects undertaken by Council which align to Council's Fishing Strategy, including the improvements to existing boat ramps, the construction of new boat ramps and the widening of footpaths.

**CARRIED**



# Capital Works Monthly Review

January 2021

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## OVERVIEW

This report is for Capital Works Department activities during the month of January 2021. Significant items in this period include:

- No LTI's incurred for the month.
- The YTD capital project spend is \$41.9M which is approximately \$3.3M below the YTD forecast of \$45.2M (approximately 92.63%).
- Projects where construction was completed\* during the period included:
  - Middle Creek Dam - Renewal - Telemetry
  - Paget Depot Building security
  - Gorge Road Upgrade - First causeway to crossing (defect phase now active) (*Works 4 Queensland Round 3 funded*)
  - Softfall Impact Testing Equipment
  - Wellington St footpath - Western Side Victoria St to River St (*Works 4 Queensland funded*)

\* Note construction means practical works were completed however project accounts remain open to close out financials and to manage defects and maintenance periods, and as constructed/handover documents.



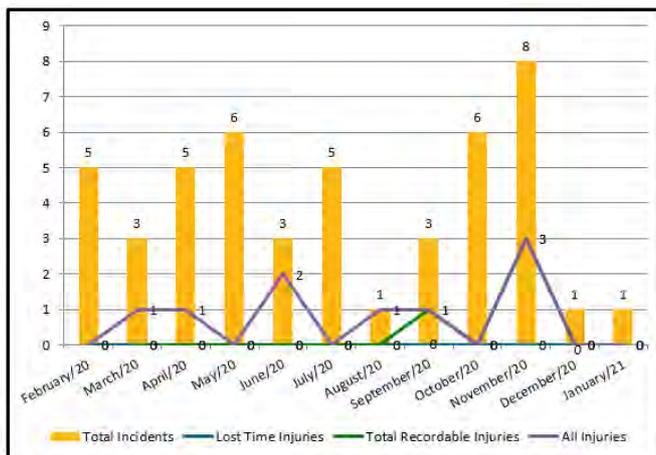
Jim Carless  
**Director Capital Works**

## SAFETY

### 1.1. Incidents and Injuries

Below is a summary of the Capital Works safety incident performance. Capital Works aspires to achieve zero harm with a stretch target of zero injuries.

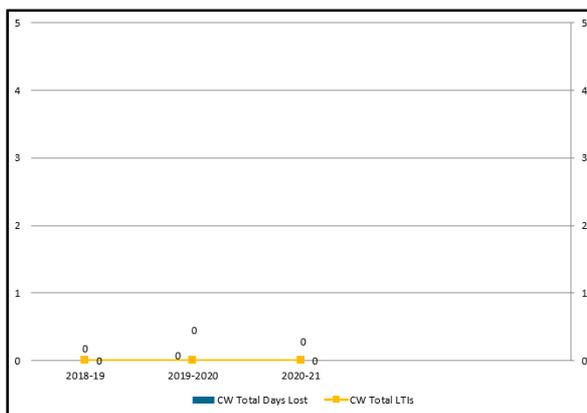
#### January 2021 Summary:



The following incident involving a member of the public was reported during January:

- After hours, a member of the public drove their vehicle past barricades and into a closed road.

### 1.2. Lost Time Injuries & Days Lost



Department	2018-19		2019-20		2020-21	
	LTI	Days Lost	LTI	Days Lost	LTI	Days Lost
Contract Services						
Design Services						
Field Services						
Major Projects						
Portfolio Management Office						
<b>Capital Works Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## CAPITAL PROJECT UPDATES

### 2.1. Capital Summary Report

Following is the capital financial summary for the YTD delivery to end of January 2021.

The current approved 2020/21 amended budget is \$129M.

The YTD capital project spend is \$41.9M which is approximately \$3.3M below the YTD forecast of \$45.2M (approximately 92.63%). The top five projects underspent account for \$1.3M of this variance. Context and comments on each variance can be found on page 7 of this the report.

The project spend to the end of January is \$41.9M, approximately \$87.1M below the 20/21 Amended Budget of \$129M (32.5% delivered against 20/21 Amended Budget).

### 2.2. Financial Performance

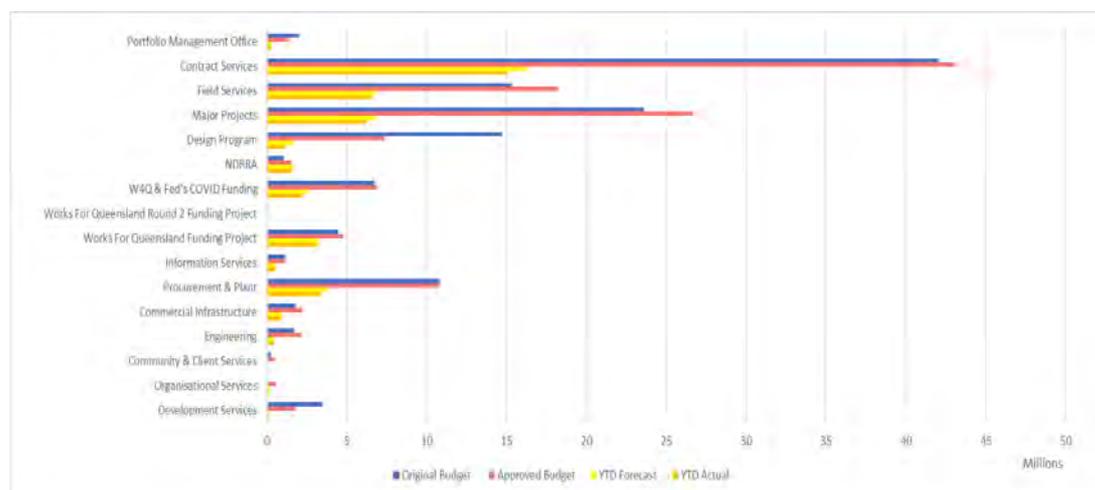
The table below summarises the year to date financial summary for the 2020/21 Capital program at the end of January 2021.

Capital Projects Expenditure 2020/2021

Department	Original Budget	Carryovers	January 2021					% Spent of YTD	
			Original Budget	Approved Budget	Current Forecast	YTD Forecast	YTD Actual	Forecast	Approved Budget
Development Services	3,461,600	9,321	3,470,921	1,801,821	354,100	108,087	118,426	109.56%	7%
Organisational Services	0	3,326	3,326	553,316	770,830	165,075	166,979	101.15%	30%
Community & Client Services	216,000	0	216,000	476,000	1,751,000	0	0	0.00%	0%
Engineering	1,286,188	406,807	1,692,994	2,120,280	1,076,444	426,055	404,087	94.84%	19%
Commercial Infrastructure	1,781,187	4,568	1,785,755	2,246,978	2,246,044	963,071	924,611	96.01%	41%
Procurement & Plant	9,191,627	1,634,604	10,826,231	10,776,231	9,525,946	3,825,061	3,393,034	88.71%	31%
Information Services	1,150,890	0	1,150,890	1,150,890	1,177,837	549,499	518,581	94.37%	45%
Works For Queensland Funding Project	3,696,095	736,090	4,432,185	4,760,754	4,904,380	3,200,223	3,222,354	100.69%	68%
Works For Queensland Round 2 Funding Project	0	21,759	21,759	21,759	21,759	0	0	0.00%	0%
W4Q & Fed's COVID Funding	6,646,595	78,555	6,725,150	6,892,702	7,157,364	2,610,932	2,244,118	85.95%	33%
NDRRA	530,000	497,567	1,027,567	1,547,903	1,648,270	1,648,270	1,589,789	96.45%	103%
Design Program	14,349,952	363,220	14,713,172	7,347,858	7,123,479	1,661,835	1,189,899	71.60%	16%
Major Projects	20,164,567	3,415,388	23,579,954	26,640,618	21,793,750	6,790,657	6,206,785	91.40%	23%
Field Services	14,682,767	659,512	15,342,279	18,220,069	16,595,059	6,768,950	6,578,090	97.18%	36%
Contract Services	35,999,355	6,067,894	42,067,248	43,141,272	38,046,289	16,232,412	15,087,855	92.95%	35%
Portfolio Management Office	1,771,575	188,325	1,959,900	1,317,892	1,256,051	286,666	257,590	89.86%	20%
<b>Total</b>	<b>114,928,397</b>	<b>14,086,936</b>	<b>129,015,333</b>	<b>\$ 129,016,345</b>	<b>\$ 115,448,601</b>	<b>\$ 45,236,793</b>	<b>\$ 41,902,199</b>	<b>92.63%</b>	<b>32.48%</b>
Capital Expenditure	113,307,818	13,707,850	127,015,667	126,911,145	113,411,215	44,412,058	41,151,329	92.66%	32.43%
Operational Expenditure	1,620,579	379,086	1,999,665	2,105,200	2,037,386	824,736	750,870	91.04%	35.67%

### Capital Spend by Department for January 2021

The table below summarises the year to date financial summary for the 2020/21 Capital program at the end of January 2021.





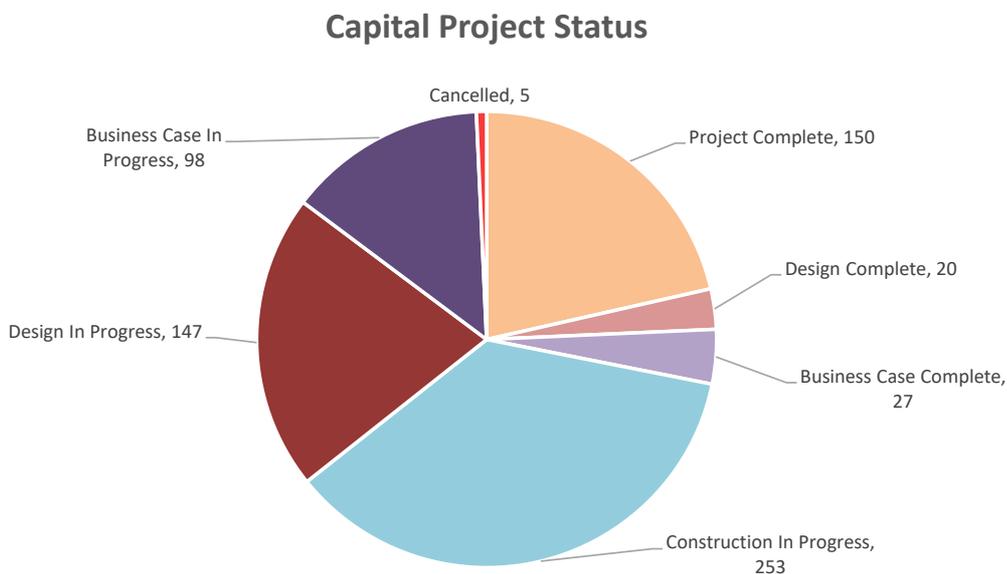
**Capital Expenditure Forecast 2020/21**

The top five variances (underspend) between actuals and forecast for the month of January are:

Project	Description	Comments	Variance
10390	Plant & Equipment - Replacement Program	Issues with delivery contractor workloads and delays in registration of plant. Also, body builds delayed due to Christmas/New Year closure period.	-\$434,117
53791	Sarina Northern Drainage	Delays in awarding contract due to RFI correspondence between Council and the contractor regarding contractual matters.	-\$190,823
53902	Patch St & Cyril McKie Crt, Sarina Pavement Rehabilitation/R	Delays due to late contractor submission of appropriate plans to be assessed.	-\$192,088
55440	Stormwater Culvert Relining Works – FY19/20	This is due to the \$120k booked to the incorrect job number which was later amended.	-\$199,198
70237	SLP-Sewer Renewals \ Replacement Programme 20/21	Missing QA information meant claims could not be approved and paid. Also, some works were affected due to the early January wet weather.	-\$281,053

**2.3. Capital Projects Phases for January 2021**

The below graph shows the phases of capital projects as at the end of January 2021.



**2.4. Key Contracts Approved for January 2021**

A list of key contracts that have been finalised and approved during January 2021 is given below. In total these contracts are valued at ~ \$1,981,201.59 for January 2021. There are smaller packages of works (not included below) and ancillary contracts that have also been awarded for the months of January linked to capital.

Contract	Design / Construction	Amount Award (ex GST)	Contractor
MRC 2021-040 Sarina North Drainage	Construction	1,419,536.94	BMD Constructions Pty Ltd
MRC 2021-041 Upgrade to Cone Street Park, Shoal Point	Construction	\$176,180.03	J Mac Constructions Pty Ltd
Quote 2021-030 Belmunda Road Culvert Repairs	Design	39,700.00	Tetra Consulting Pty Ltd
Quote 2021-049 Replacement of MECC Digital Signage	Construction	\$90,974.65	Kennedy Amplifier Hire Services
Quote 2021-053 Multiple Design Briefs	Design	\$53,590.00	Cardno (Qld) Pty Ltd
Quote 2021-054 Supply and Install Bus Shelters	Construction	\$223,800.00	G.James Extrusions Co. Pty Ltd
Quote 2021-063 Project Management	Construction	\$153,600.00	Ranbury Management Group Pty Ltd
<b>Total</b>		\$1,981,201.59	

## PORTFOLIO MANAGEMENT OFFICE

### 3.1 Monthly Achievements

The Portfolio Management Office (PMO) has seen some changes in January to the current year's program of works. There has been a re-prioritisation to the current 20/21 projects, more shovel ready projects are being brought forward into the current year's program to balance out the delivery.

Working with the Asset teams to plan out an additional program of works, we received \$4.3M from the recent Local Roads and Community Infrastructure Program (Federal Government) funding for delivery of projects. Planning is underway to align the projects to delivery teams.

In conjunction with the Finance team, PMO have been working through ways to improve and streamline our monthly reporting, removing the manual processes of generating specific reports to automatic through the finance software.

We have drafted our ideal future state for the EPMF, comparison with our current state and stakeholder feedback has identified our gap areas. We will proceed with prioritising items for action and developing working groups with subject matter experts within MRC. It is encouraging to see staff continuing to identify improvement opportunities and raise these with the project team.

In coming months we will seek external advice on and benchmark against other local government authorities to learn about how they manage Program Development and Project Management functions. Anticipated benefits of discussion with other councils include identification of the challenges we have in common, learning about difficulties they have already addressed, and creating a network to facilitate discussion around ways to move forward.

In addition to the updated Business Case Template, a Cost Benefit Analysis Tool and an Assessment Criteria Guide were also developed in conjunction with the LTFF working group. These have been added to the EPMF corporate documents suite and we are actively seeking feedback from users. Work on developing the schedule and responsibilities associated with the 2021/22 Concept and Business case assessment rounds was also undertaken and is being reviewed in conjunction with the finance team.

## DESIGN SERVICES

### 4.1 Design Summary Report

#### Overview

Design Services commenced several notable design projects during this period being:

Design programming and listing of Shovel Ready projects was undertaken to support both the Accelerant and Local Roads and Community Infrastructure programs. The project list is a mix of infrastructure that primarily addresses community expectations, safety maintenance and completion of major works.

Several Mackay Parks and Recreation Projects were commenced as part of the on-going improvements of community and suburban playgrounds. These included Botanic Gardens, Northview, Canecutters and Woodlands.

#### Notable Designs Completed

- ✓ Dianne Street Park upgrade

#### Notable Designs in Progress:

- Banyan Park upgrade
- Sewerage Pump Station improvement program (24 sites)
- Broomdykes/Woodlands District Park
- Victor Ck pontoon upgrade

#### Estimating and Specifications

The team are building unit rates from first principles for Parks and Open Space related tasks, with the first prototype to be done on the Diane Street Park Upgrade project, with the goal of having a template ready to roll out to this program by the end of February.

Specifications have been looking at the existing MRC Landscaping Specification and aligning the format to the MRC Supplementary Specifications template to assist with simplifying the documents.

### 4.2 Survey Office Summary Report

#### Overview

January saw a wet start to 2021, but strategic scheduling of field and office work meant the rain had minimal impact on Council's survey operations. The team completed more surveys for the kerb and channel replacement program and small culvert replacements. Two large projects were the surveys completed for Boundary Rd turn lane and Range Rd water main renewal.

#### Surveys were completed for:

- ✓ Kerb and Channel 20/21 replacement program – Graffunder St, Plath Ct, Parker St
- ✓ Culvert Replacements – Hamilton St, Field St, Maud St
- ✓ Boundary Rd, Ooralea Turn Lane
- ✓ Dalrymple St Drain Crossing
- ✓ Habana Park Amenities Renewal
- ✓ Range Rd Water Main Renewal
- ✓ Service locations – Victor Creek Boat Ramp
- ✓ As constructed surveys – Ball Bay Camping Reserve



Figure 1: Service locations at Victor Creek Boat Ramp

## CONTRACT SERVICES

### 5.1 Boat Ramp and Carpark Extension Projects

#### Overview

Recreational boating and fishing are popular activities in the Mackay Region. Council's "Mackay Region Recreational Fishing Strategy 2017" highlights recreational fishing infrastructure as an action area, recommending investment in new and upgraded facilities to meet anticipated demand. Given the local demand for boating facilities the standard of these facilities is a regular focus of complaints from members of the public.

Council has progressively been improving boat ramps and associated car parking and access to the relevant standards though grant applications for gazetted ramps or capital works allocations for Council owned facilities.

Council has been able to attract part funding under the Federal Government "Building Better Regions Funding" grant for improvements to facilities at numerous boat ramp facilities around the Mackay region.

The works involve the overlay and widening of the existing boat ramp, reconstruction of roadway and construction of the carpark at Campwin Beach Boat Ramp, the extension to the existing carparks at Victor Creek and Murray Creek Boat Ramps and upgrading of the Headland Drive carpark and connecting footpath to the boat ramp at Holiday Bay Beach..

#### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
<b>Victor Creek &amp; Campwin Beach</b>					
Construction	External	Late June 2020	Late November 2020	\$1,112,694	Complete & open to the public
<b>Murray Creek, Haliday Bay Carpark &amp; Footpath</b>					
Construction	External	Early April 2021	End of June 2021	\$1,129,885	Recently awarded to contractor

#### Recent Project Activities

##### Victor Creek & Campwin Beach

- ✓ Both facilities are now open for public usage.

##### Murray Creek, Haliday Bay Carpark & Footpath

- ✓ Tender evaluation completed and Contract awarded
- ✓ Contractor management plans received, and review commenced
- ✓ Site works scheduled to commence early April

### 5.2 Stormwater and Sewer Relining Works 2020/2021

#### Overview

The Project includes:

- Structural relining of stormwater Reinforced Concrete Pipes (RCP) and Reinforced Concrete Box Culverts (RCBC)
- Structural Relining of sewer gravity mains

These works are located in Mackay, Sarina and environs.



MRC undertakes ongoing condition assessment by CCTV of both stormwater and sewer networks. CCTV work identifies stormwater and sewer mains requiring rehabilitation by relining.

The cost-effective approach to sewer main renewals and stormwater mains is to insert a structural liner into the existing sewer and stormwater mains. Relining of sewer mains and stormwater drainage strengthens the structure, prevents entry of foreign debris including infestation of tree roots and greatly reduces inflow and infiltration of ground water.

The stormwater drainage conduits to be relined are in the size range of 375 to 1200mm diameter with an approximate length of 1.1km of stormwater Reinforced Concrete Pipes and Reinforced Concrete Box Culverts. On top of these works, carried over stormwater relining works from 2019/2020 FY will also be carried out under this contract that includes relining of stormwater drainage pipes in the size range of 300 to 1200mm diameter with an approximate total length of 730m.

The 2020/2021 FY package of works includes structural relining of 84 sewer mains totalling approximately 5km in the size range of 150 to 900mm diameter.

The key Project Drivers are:

- Rehabilitation of deteriorating sewer and stormwater mains before structural failure.
- Increasing knowledge of sewer and stormwater mains asset condition and rate of degradation.

#### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
<b>Sewer Main Relining</b>					
Construction	External	Early September 2020	Early February 2021	\$1,950,000	Relining works are now completed and some final CCTV and junction works remaining. Anticipated to be completed in early February 2021, weather permitting.
<b>Stormwater Main Relining</b>					
Construction	External	Early October 2020	End of February 2021	\$1,357,602	Cleaning, CCTV and Relining activities of Stormwater mains commenced in early October and progressing well. Anticipated to be completed by end of February 2021, weather permitting.
<b>Stormwater Main Relining (Carried Over from 19/20)</b>					
Construction	External	Late September 2020	Early February 2021	\$766,263	Cleaning, CCTV and Relining activities of Stormwater mains commenced in early October and progressing well. Anticipated to be completed early February 2021, weather permitting.

#### 5.3 Resurfacing Reseal Program

##### Overview

The Resurfacing and Rehabilitation Program comprises resurfacing works on various streets and roads around the region. Resurfacing includes two types of treatments, one being Asphalt on urban streets and roads, the

other Bitumen Spray Resealing on rural roads. Resurfacing works are carried out to protect the pavement and extend the road pavement life.

**Project Status** as at 20/01/2020

Activity	Delivery	Start Date	Completion Date	Budget	Comments
<b>Asphalting Works 2019/2020</b>					
Construction	External	Late May 2020	December 2020	\$2,501,464	Works are complete.
<b>Resealing Works 2019/2020</b>					
Construction	External	Mid October 2020	January 2021	\$2,094,923	Bitumen re-seal works expected to be complete by mid-February 2021
<b>Total Resurfacing Reseal Program 2019/2020</b>				\$4,596,387	

**Recent Project Activities**

- ✓ Asphalt Re-surfacing Package works complete, project finalisation activities in progress including collation and submission of Quality Assurance documentation.
- ✓ Bitumen reseal program commenced as scheduled. Works have slipped behind, now expect to complete mid-February. Wet weather and budget constraints has impacted execution of the works as rationalisation of scope and budget was undertaken.

Activity	Delivery	Start Date	Completion Date	Budget	Comments
<b>Asphalting Works 2020/2021</b>					
Construction	External	Early March 2021	Mid June 2021	\$2,115,379	Tenders have closed and evaluation progressing. Expected to be awarded in early February 2021.
<b>Resealing Works 2020/2021</b>					
Construction	External	Early March 2021	Mid June 2021	\$870,202	Tenders have closed and evaluation progressing. Expected to be awarded in early February 2021.
<b>Total Resurfacing Reseal Program 2020/2021</b>				\$2,985,581	

**Recent Project Activities**

- ✓ The FY2020/2021 Resurfacing program was released to tender and submissions have been received. The contract is expected to be awarded early February 2021 with works completed by end of FY

**5.4 Caping Road, Bloomsbury Bridge Replacement**
**Overview**

The Caping Road timber bridge crossing is located on the O'Connell River approximately 9km north of Bloomsbury. It is a low-level river crossing servicing an isolated agricultural community with the bridge regularly inundated preventing access. During inundation the bridge is regularly damaged. A recent condition assessment found several components in poor condition requiring replacement. It was determined to construct a new bridge to replace the existing floodway crossing. The new structure is designed to cater for a Q100 flood event with overtopping to occur infrequently and once completed will significantly improve the level of service to impacted residents with improvements to freight efficiency for market access by graziers.

The detailed bridge design has been undertaken by InQuik Bridging Systems with civil works for bridge approaches and ancillary works designed by MRC Design Services.

InQuik Bridging Systems prefabricated steel bridge formwork and bridge only reinforcing will be provided by MRC to the successful civil works contractor.

The bridgework consists of 2 x 12.5m spans, 5.2m wide, designed to a T44 load rating, including abutments, pier headstock, decks with associated concrete floodway approaches and rock revetment protection. In addition to the bridgework works include, construction of a partially sealed side-track and associated drainage works, removal of the existing bridge and floodway sections, construction of approach earthworks, concrete pavements and rock protection and raising new floodway approaches to the new bridge structure.

The project had an original budget of \$2,159,339 however the successful tenderer's price was significantly lower than the estimate and \$778k was returned to the Council reserve in the September Budget review. The revised budget of this project is \$1,381,339 with \$700,000 of grant funding being provided by the Federal Government under the "Bridges Renewal Program". The balance of the project is to be funded by Council's Capital Works budget.

#### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
Construction	External	23 November 2020	End of April 2021	\$1,381,339	Construction commenced in late November 2020 and progressed well until the Christmas shutdown. However, progress has been impacted by recent wet weather.

#### Recent Project Activities

- ✓ Contractor commenced works on site in mid-November. Old bridge demolished and side-track opened to public
- ✓ Piling Platform constructed and piling works of all 7 piles were completed before Christmas 2020
- ✓ Bridge components have been delivered on site.
- ✓ No works are currently taking place due to the high-water level from the recent rainfall. High flows in river resulted in the sidetrack being washed out. However, this has been reinstated and contractor is maintaining the side track to keep it safe and trafficable.
- ✓ Contractor is due to be back on site in early February, works still on track to complete construction by end of April 2021.

#### 5.5 Lansdowne Road Culvert Replacement

##### Overview

This project comprises the replacement of the stormwater culvert structure at Lansdowne Road, between Lagoon Street and Alexandra Street, in West Mackay. Reconstruction entails the removal of existing culverts and end structures, and installation of new culverts and end structures to current standards. For Lansdowne Road, council is replacing the older cells only, while leaving the recently installed extension under the shared path intact. The works will be conducted under full road closure with the shared pathway remaining open for pedestrians and cyclists.

##### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
Construction	External	Mid November 2021	End of January	\$560,770	Culvert installation and road work completed ahead of program Finalisation works in progress

### Recent Project Activities

- ✓ Works on site started November 2020
- ✓ Demolition and removal of old culverts
- ✓ Installation of new culverts and completion of road works completed ahead of schedule and road opened to Public before Christmas 2020.
- ✓ Minor construction works and compilation of QA Documentation in progress



Figure 2: Works Complete



Figure 3: Overhead view of culvert (Downstream)

## 5.6 Park Improvement Projects

### Overview

Council is delivering a program of Park renewals for the community to provide well designed parks and open space networks which cater for the changing needs of the community and to promote outdoor social and recreational activities.

The equipment in the playgrounds has been in service for more than the prescribed operational life and has been assessed as requiring replacement. Work in these parks includes the replacement and/or adjustment to the softfall edging, softfall depth and/or sub-soil drainage servicing these playgrounds as well as hard landscaping and soft landscaping, to various extents depending on the park.

The Park upgrades are at various locations within the region including, Sarina, South Mackay, Eimeo, Ooralea, Marian and Shoal Point.

### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
<b>Brownsey Court Park</b>					
Construction	External	Mid November 2020	End February 2021	\$223,257	Earthworks commenced. Playground Equipment and Shelter installed. Concrete and Landscaping works commenced and currently on schedule to meet completion date.
<b>Ron Anderson Park &amp; Busuttin Drive Park</b>					

Activity	Delivery	Start Date	Completion Date	Budget	Comments
Construction	External	Mid November 2020	End February 2021	\$494,981	Majority of works completed ahead of schedule for Ron Anderson & Busuttin Parks and both open to the public. Supply of one swing for Ron Anderson has been delayed and some minor works to shelter drainage at Busuttin is outstanding, but this is expected to be installed before end of February completion date
<b>Canecutters Park</b>					
Construction	External	January 2021	End of March 2021	\$420,999	Contractor established on site and demolition works commenced. Works currently on schedule to meet completion date.
<b>Nell Baker Park</b>					
Construction	External	Mid February 2021	April 2021	\$450,417	Recently awarded to contractor for commencement mid-February.
<b>Cone Street Park</b>					
Construction	External	Early March 2021	End of April 2021	\$343,401	Recently awarded to contractor for commencement early March.

### Recent Project Activities

#### Brownsey Court Park

- ✓ Concrete Works commenced
- ✓ Preparations for picnic shelter installation
- ✓ Project is on schedule to meet completion date

#### Ron Anderson and Busuttin Park

- ✓ Works mostly completed prior to Christmas which allowed the parks to be opened to the public.
- ✓ Some minor works outstanding due to procurement delays, however these are expected to occur over the next month and all works done by end of February completion date.

#### Canecutters Drive Park

- ✓ Contractor established on site
- ✓ Commenced demolition of existing elements on site
- ✓ Learn to ride path is being formed for concreting
- ✓ Project currently on schedule to meet completion date

#### Nell Baker Park

- ✓ Contract awarded to successful contractor
- ✓ Works on site expected to commence on 22 February 2021
- ✓ Playground equipment and playground shelter procurement in progress, due for delivery in February.
- ✓ Project currently on schedule to meet completion date

#### Cone Street Park



**Capital Works**  
Monthly Review > January 2021

- ✓ Contract awarded to successful contractor
- ✓ Contractor currently working on the management plans
- ✓ Playground equipment procurement in progress, due for delivery in February.
- ✓ Project currently on schedule to meet completion date

## MAJOR PROJECTS

### 6.1 Animal Management Centre

#### Overview

The objective of the Animal Management Centre (AMC) project is to provide a brand new facility of which can cater for the growing needs of the Mackay animal management services, currently provided to the community. The scope of works includes the construction of a new administration building and two new kennel facilities with provisions for future expansion.

The works incorporate improved parking facilities, increased security and will also increase the numbers of animals able to be housed at any one time. The management building will incorporate an office space, a meeting room, staff facilities and public access areas.

The project is being completed in two stages. Stage 1, the construction of the administration building and new kennel building, has commenced with works located adjacent the existing AMC building. Once this stage is complete, the AMC staff will commence working out of the new building whilst the existing building is demolished and a new enforcement kennel building is constructed in its place (Stage 2). The enforcement kennel building will house the stray and/or dangerous dogs as well as the cattery separated by a food preparation and Vet room.

AMC staff will continue to provide their current level of service during the entire construction process.

#### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
Construction	External	STAGE 1 December 2020	STAGE 1 July 2021	\$3.39M	Project running as per schedule.
		STAGE 2 July 2021	STAGE 2 December 2021		Project within budget.

#### Recent Project Activities

##### STAGE 1

- ✓ Site establishment complete
- ✓ Earthworks commenced on site
- ✓ In-ground footings commenced



Figure 4: Site establishments works

**6.2 Brice Avenue Footpath**

**Overview**

This project was identified under the Transport and Drainage Infrastructure Program nominally called 'High Risk' footpaths. This program encompasses funding for infrastructure delivery in areas servicing schools within the region where a perceived safety issue may exist. The construction of this footpath will allow students to more safely navigate movement from the main Sarina High School area to the school's agricultural centre.

The works consist of a new concrete path adjoining an elevated boardwalk along Brice Avenue Sarina. The path will start at Anzac Avenue, running adjacent to the train track to the entry of the agricultural centre.

**Project Status**

Activity	Delivery	Start Date	Completion Date	Budget	Comments
Construction	External	November 2020	February 2021	\$314k	Project on budget  Project is almost complete with only tidy up of site to finish



Figure 5: Elevated board work progress



Figure 6: Works in progress

## FIELD SERVICES

### 7.1 Schapers Rd Pavement Rehab

#### Overview

The existing pavement on Schapers Road is characterised by, longitudinal cracking, rutting and patch repairs. The project scope consists of the reconstructing sections of the existing pavement before foam bitumen stabilising the full pavement width between Pioneer St and Davey St. This works will improve pavement life and reduce maintenance of the existing road.

#### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
Construction	Internal	Late Jan 2021	Mid-April 2021	\$2,714,794	Road closure was advertised prior to Christmas – to date, there have been only minimal commentary on social media which prompted some minor changes to the signage and message boards. No concerns with budget at this stage. Construction commencement was delayed due to inclement weather in early January though still on track for original completion date at this stage.

#### Recent Project Activities

- ✓ Project commenced 18 Jan 2021 after being delayed initially by inclement weather.
- ✓ Pavement reconstruction works commenced between Pioneer St and Ribbon Crt.



Figure 7: Excavation of existing pavement

## 7.2 Smith-Cross Road Culvert Upgrade, Smith Deveraux Creek

### Overview

The project is a Works for Queensland (W4Q) funded project and consists of the upgrade of two individual causeways which currently have small diameter, low flow culverts. The upgrade in both locations includes an increased hydraulic capacity by installing large box culverts. The increased capacity will raise the flow to a compliant Q2 rain event and allow emergency vehicles to traverse the location up to a Q5 event meaning the culverts should not be submerged as frequently and if they are submerged, it will be for a shorter period of time. The culverts will be topped with a concrete base course and concrete batters for additional scour protection as well as revegetation of the batters both up and downstream.

### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
Construction	Internal	Mid July 2020	Mid February 2021	\$1,458,309	Wet weather, as well as unsuitable material in the pavement approaches, has caused some delays to schedule with completion date revised to mid February.  Variations to be submitted for recent subgrade rectification works.

### Recent Project Activities

- ✓ Side-tracks no longer operational due to weather events, pavement of road now having to be completed under traffic. Slowed the progress of works due to requirement for half road construction at a time.
- ✓ Site 1 (eastern culvert)
  - Concrete works completed
  - Pavement approaches commenced. Wet weather and unsuitable ground conditions have delayed works on the road construction.
  - Subbase pavement commenced.
- ✓ Site 2 (western culvert)
  - Concrete pavement completed in Dec 2020,
  - Concrete batters completed
  - Road pavement approaches to commence after Site 1 is at subbase level.



Figure 8: Site 1 - Culverts fully operational, road pavement commenced but delayed from weather events



Figure 9: Site 2 - Culverts and concrete works complete, road approaches to commence.

### 7.3 **Ball Bay Road Reconstruction, Ch700 to Haliday Bay Intersection**

#### Overview

The project scope consists of an upgrade to the existing drainage and pavement on Ball Bay Road between Cape Hillsborough Road and Haliday Bay Road. The drainage component includes the upgrade of 15 property accesses and 8 culvert road crossings while for the pavement, the shoulders of the road are to be widened to allow for an increased width of bitumen seal. The project is partially funded through the Department of Transport & Main Roads (DTMR) Transport Infrastructure Development Scheme (TIDS).

#### Project Status

Activity	Delivery	Start Date	Completion Date	Budget	Comments
Construction	Internal	Late May 2020	Early Feb 2021	\$3,388,134	Contractor availability and wet weather in late December has pushed final completion out to early February.  No budget issues currently forecast  No issues to date with the local residents or general public.

#### Recent Project Activities

- ✓ Asphalt works are completed.
- ✓ Signage and guideposts are installed.
- ✓ Line-Marking is completed.
- ✓ Hydro-mulching, minor concrete kerb and sealing of minor access are outstanding along with rectification of some local scouring which has been identified in the swale drains after the recent weather events.

### **11.3. COMMUNITY AND CLIENT SERVICES**

#### **11.3.1. COMMUNITY & CLIENT SERVICES MONTHLY REVIEW JANUARY 2021**

**Author** Director Community & Client Services (Angela Hays)  
**Responsible Officer** Director Community & Client Services (Angela Hays)  
**File Reference** DMRR

**Attachments** 1. CCS MONTHLY REVIEW JANUARY 2021 Updated [11.3.1.1 - 47 pages]

#### **Purpose**

Attached is a copy of the Community and Client Services Monthly Review for the month of January 2021.

#### **Related Parties**

N/A

#### **Corporate Plan Linkage**

This links to various corporate objectives and strategies within the corporate plan.

#### **Officer's Recommendation**

THAT the Community and Client Services Monthly Review covering 1 – 31 January 2021 be received.

The Director for Community and Client Services, Angela Hays, spoke to the report and provided an overview and highlights of the Community and Clients Services Monthly Review Report for January 2021.

Cr Bonaventura queried if information from the flood cameras was accessible to the public.

The Director advised that this information is available on the Emergency Dashboard on Council's website and is updated every 30 minutes.

Cr Bonaventura noted the operations by staff in the public health and safety environment area had almost doubled in the last month, and queried what had driven this increase.

The Director advised that the increase had primarily been driven by the recent rainy weather conditions with increased incidences of overgrown properties and mosquitoes.

#### **Council Resolution ORD-2021-34**

**THAT the Community and Client Services Monthly Review covering 1 - 31 January 2021 be received.**

**Moved Cr Townsend**

**Seconded Cr Jones**

Cr Townsend noted several items from the report including the new programs introduced to the community which cater to a wide range of interests, such as Sewing Together, which seeks to increase Australian South Sea Islander participation and knowledge share in the community, Gold Moves, which aims to progress dance for older people and the many activities which were offered by the Libraries to entertain children during the school holidays. Cr Townsend congratulated the 77 new Australians who were welcomed at the recent

Australia Day ceremony, the worthy recipients of the Australia Day awards and the staff of the Mackay Entertainment and Convention Centre (MECC) for making the event so memorable.

Cr Jones noted the in-kind assistance provided by Council and the Environmental Health Whitsunday Isaac and Mackay's dengue awareness campaign, which was launched in January and calls on residents to test their dengue knowledge by completing an online quiz with the chance to win one of five \$100 Porters Mitre 10 vouchers. Cr Jones noted that while the colouring of Council's fountain for various awareness days was very worthy, perhaps the money spent to change the water colour would be better offered directly to the relevant organisations.

Cr Bella supported Cr Jones' suggestion that money spent colouring the fountain water may be better spent directly with organisations, as it appeared that very few people knew what the different colours represented. Cr Bella noted the nearly 600 hectares sprayed, predominantly for mosquitoes, and noted that while dengue fever was often referred to, there are other forms of mosquito borne diseases which can cause long lasting effects. Cr Bella urged residents to apply mosquito repellent to avoid getting bitten.

Cr Green noted that the amount of information children are exposed to in today's technological age can sometimes overwhelm them, and was pleased to see that Artspace had recently hosted a pop-up venue in Victoria Street with free climate change related activities for children. Cr Green quoted feedback from an appreciative parent and thanked the officers who give daily of their talents to make the community more resilient.

Cr Bonaventura asked Councillors to consider if there is a better way to assist community groups with the money currently expended to colour the fountain. Cr Bonaventura asked the Director to pass on his thanks to staff who had been working behind the scenes to prepare the online sports expo and sign on which was launched in late January and would remain live on Council's website throughout February and includes information about clubs, videos and a Come and Try Day calendar. Cr Bonaventura urged members of the community to go online and look at the various sports offered.

Cr May offered her congratulations to the Manager and team at the MECC for the excellent Australia Day event held recently, congratulated all award winners and noted the wonderful entertainment provided by Bella Mackenzie and Graeme Connors.

Mayor Williamson, on behalf of Council, offered congratulations to the Emergency Management team for the extensive work they have done in the last month in relation to COVID and in preparation for the possibility of cyclones impacting our region.

**CARRIED**



# Community and Client Services

Monthly Review

January 2021



## Contents

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# 1. Highlights of the Month

Across the Community and Client Services directorate, highlights for the month of January 2021 include:

- The online Sports Expo event launched late January in preparation for February's promotion with nearly 100 sport and recreation exhibitors participating along with eight active zone demonstration videos. Also included in the online event is a calendar of 30+ Come and Try days that are available throughout the region for the month.
- While Artspace was closed for renovations, we hosted a pop-up venue in the city centre with activities for all ages & abilities. Called *Now is the Time: Kids on Tour*, this program was toured by Queensland Art Gallery and Gallery of Modern Art.
- The MECC Engagement Team welcomed 40 teachers and community members to the Lynette Denny Space on Tuesday 19 January to officially launch the 2021 School Entertainment Program. The lunch time event gave guests exclusive access to performances, workshops, and community engagement opportunities at the MECC in 2021.
- The annual Australia Day Awards Gala at the MECC on Australia Day eve was a resounding success, with around 380 people attending under a COVID Safe plan. More than 140 nominations were received across eight categories. Attendees were treated to a two-course Aussie dinner and entertainment by rising Mackay star Bella Mackenzie and local legend Graeme Connors.
- Council helped to fund 12 free community events across the region on Australia Day through our Australia Day grant program.
- Our Emergency Management Team completed 2 projects that have resulted in improved water level intelligence and situational awareness, with the installation of 6 flood cameras at key locations around the region now complete, along with the completion of the River Alert Flood Classification Level project.
- 97% of food businesses across our region now hold a 3 star, or greater, Eat Safe rating.

A handwritten signature in black ink, appearing to read "Angela Hays".

Angela Hays  
Director Community & Client Services.



Community and Client Services Monthly Review 1-31 January 2021

## 2. Workplace Health & Safety

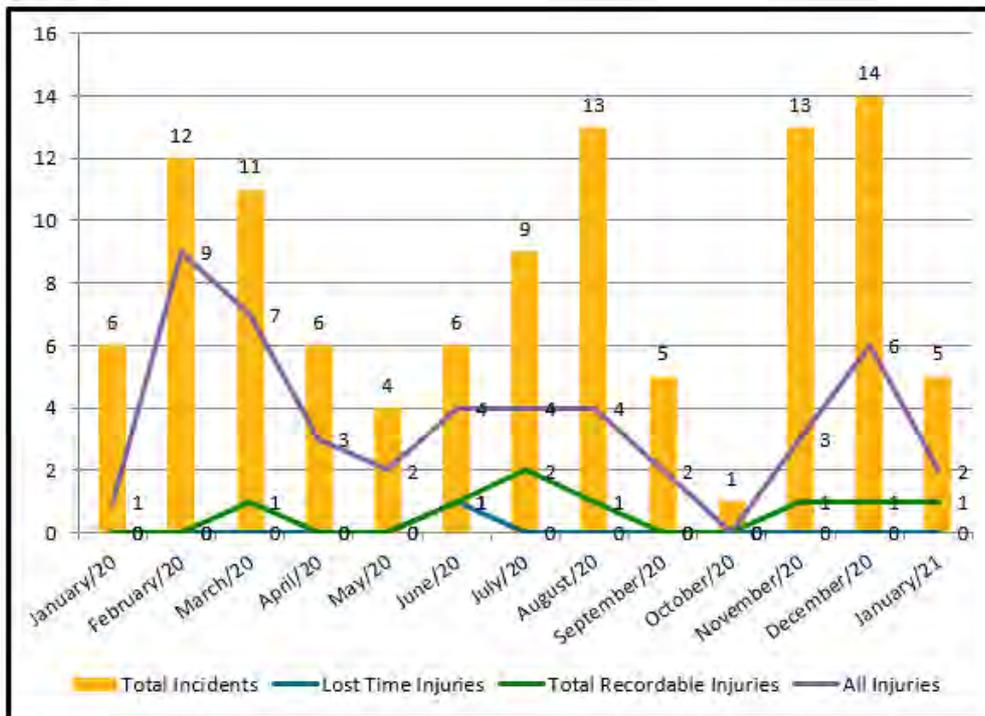
### Summary

In January 2021:

- Fifteen safety interactions were undertaken.
- One site safety inspection was undertaken.
- 100% of monthly action plans activities were carried out.
- Representatives attended a WHS Management Committee meetings.

Five incidents were reported in January, involving MRC employees and members of the public.

### Incidents and Injuries



The following injuries to MRC employees were reported during January:

- Minor lower back pain whilst getting up from chair.
- Knee sprain when foot became entangled in computer cables under desk resulting in a fall to the ground.

The following asset damage incident involving an MRC employee was reported during January:

- While stopped at a roundabout, a vehicle driven by a member of the public collided with the rear of MRC driven vehicle resulting in minor damage.

The following incidents involving members of the public were reported in January:

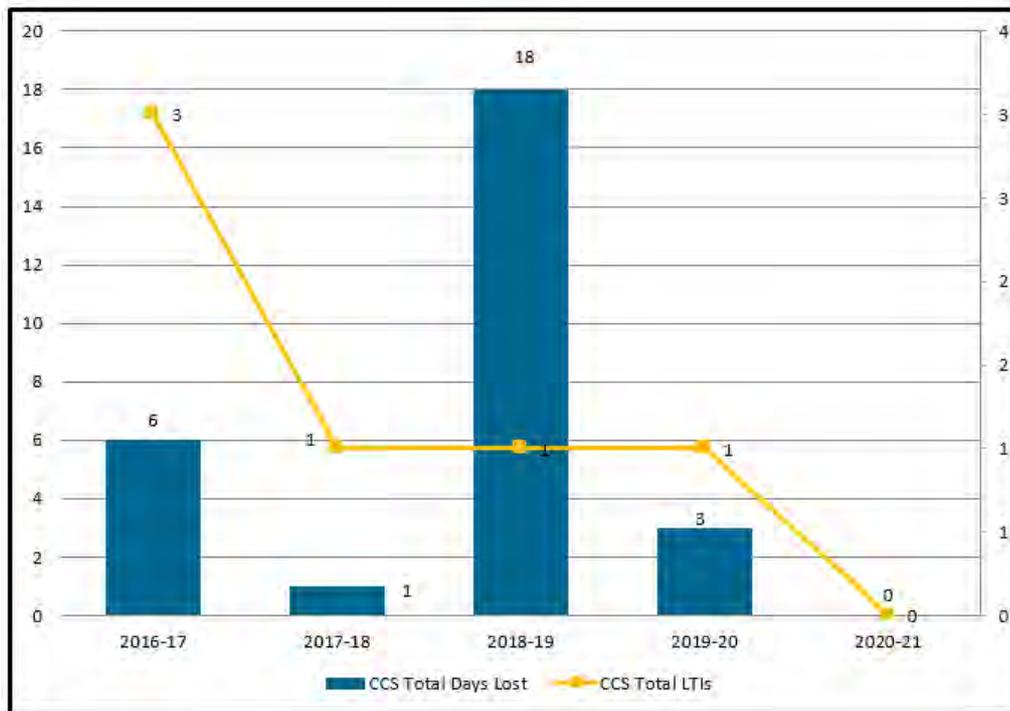
- A child slipped when stepping onto escalator and grazed their elbow.
- A computer tower fell out of its bracket, hitting a library customer on the leg. No injury was reported.

Each incident is investigated, and appropriate corrective measures implemented to reduce future risks.



Community and Client Services Monthly Review 1-31 January 2021

### Lost Time Injuries & Days Lost



Department	2016-17		2017-18		2018-19		2019-20		2020-21	
	LTI	Days Lost								
Corporate Communications										
Community Lifestyle							1	3		
MECC & Events	2	4			1	18				
Emergency Management										
Health & Regulatory Services	1	2	1	1						
<b>Community &amp; Client Services</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>18</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>

For the 2020-21 year, no lost time injuries have been recorded.

#### Glossary

Incident	Any unplanned event resulting in, or having a potential for injury or ill health.
Lost Time Injury (LTI)	Incidents that resulted in a fatality, permanent disability or time lost from work of one day / part of a day or more
Total Recordable Injuries (TRI)	Incidents that result in a Lost Time Injury (LTI), Suitable Duties Injury (SDI) and Medical Treatment Injury (MTI)

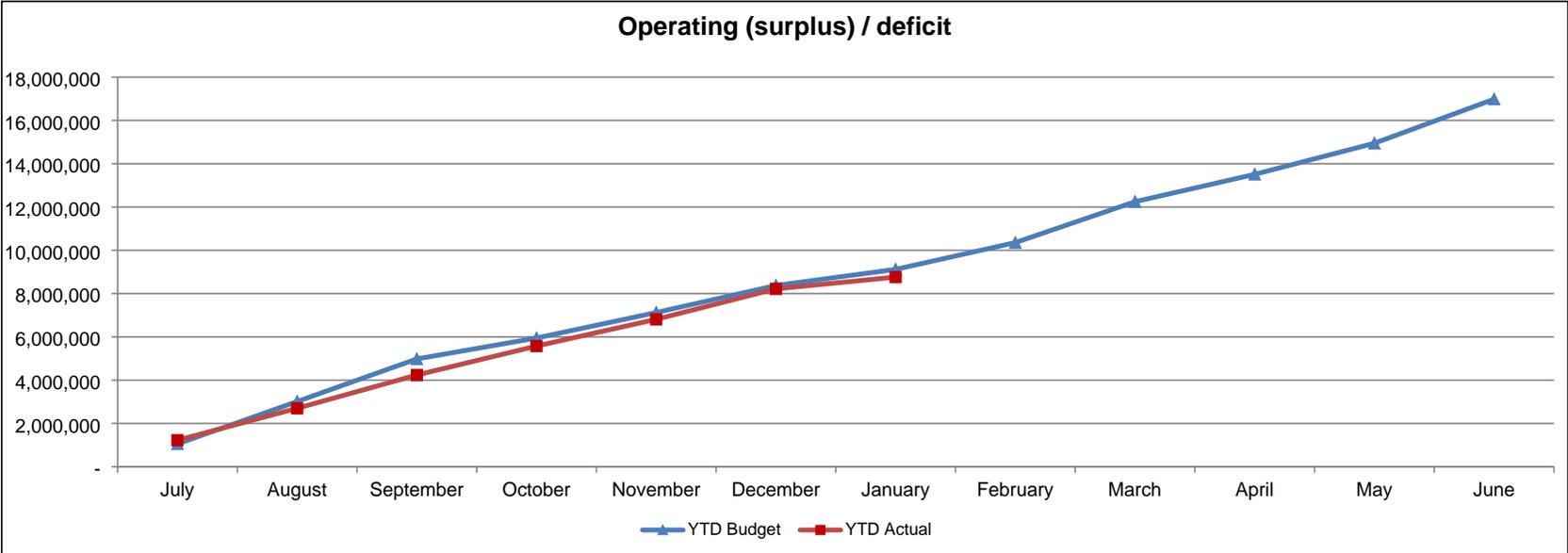


### 3. Financial Performance - January 2021

Financial Performance Report		Community & Client Services			% YTD Variance of YTD Budget	
Period Covered: 1 July 2020 to 31 January 2021						
		<b>Revised Budget</b>	<b>YTD Budget</b>	<b>Actual</b>	<b>YTD Variance</b>	<b>Comments</b>
4.01 - Community & Client Services Management	359,056	196,704	233,106	36,403	Variance due to timing of staff leave	
4.03 - Community Lifestyle	7,927,984	4,600,233	4,508,889	(91,344)	On track	
4.04 - MECC & Events	3,477,511	2,157,117	1,934,928	(222,189)	Income is still being monitored as COVID continues to evolve	
4.05 - Corporate Communication & Marketing	1,746,123	994,156	995,440	1,284	On track	
4.07 - Health & Regulatory Services	3,433,038	1,454,872	1,378,951	(75,921)	On track	
4.08 - Emergency Management	39,965	(284,219)	(290,093)	(5,874)	On track	
<b>Operating (surplus) / deficit</b>	<b>16,983,678</b>	<b>9,118,863</b>	<b>8,761,221</b>	<b>(357,642)</b>		



Community and Client Services Monthly Review 1-31 January 2021



## 4. Community Lifestyle

### 4.1 Community Programs

Number of Community Enquiries: Community Building - 186  
 Lifelong Learning - 16  
 Civic Participation - 11

Number of Emergency Relief Assistance Packages provided – 20  
 Sarina Neighbourhood Centre meeting rooms utilisation – 20  
 Occasions of JP Services provided to community – 8  
 Number of external bookings in Jubilee Community Centre for the month – 51  
 Total Jubilee Community Centre usage (internal/external) – 239

#### Community Development

Activity	Comments
<b>Co-location promotional initiative</b>	<p>The second instalment of the co-location series premiered on the Community Programs Facebook page in January, showcasing the hugely successful co-location of Mackay Women's Centre and the Domestic Violence Resource Service, now operating under the banner of Mackay Women's Services. The post, featuring former Executive Director, Dr Anne Butcher, reached over 4,000 Facebook users and received over 1,300 views. The next instalment in the series is in planning for February.</p> 
<b>Reconciliation Action Plan (RAP) working group</b>	<p>The first RAP working group meeting for 2021 was convened on Thursday, 21 January. The RAP working group provides feedback and guidance on the RAP actions and commitments. For culturally appropriate guidance and support the working group has representation from Aboriginal and Torres Strait Islander members, which now includes Yuwi Custodians.</p>
<b>Gold Moves</b>	<p>Arts Development Officers are planning to bring Gold Moves to Mackay region. Gold Moves aims to progress the field of dance for older people by presenting professional development and training opportunities to up-skill dance teachers and aged care providers to incorporate dance for aged community members. This cross Community Programs team collaboration is a regional partnership between Mackay and Isaac Regional Councils and is supported through a funding partnership with Arts Queensland. It is anticipated that the program will commence in March.</p>

<p><b>Australian South Sea Islander (ASSI) Programs</b></p>	<p>Community Action for a Multicultural Society (CAMS) Officer has instigated a new program aimed at increasing ASSI participation and knowledge sharing in the community, called Sewing Together. This program focusses on passing knowledge and stories to the younger generations whilst also passing on skills in sewing. The sessions are held at the Mackay Children and Family Centre in Andergrove, with the centre providing the space, sewing machines and tea and coffee in-kind.</p>  <p><i>Elder Mabel Quijano demonstrates the laying out of a pattern to Elders Nesta Thomas and Roxann Togo.</i></p>
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### Community Meetings / Events / Interagency Meetings.

65 meetings and events were held, highlights included

<p><b>Disability Service Provider Interagency Meeting</b></p>	<p>The first Disability Service Provider Interagency meeting of 2021 was convened on Wednesday, 20 January. 20 people attended, either in person or via Microsoft Teams, representing 19 different organisations. The meeting focused on service sharing and networking.</p>
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### Sport and Recreation

Activity	Comments
<p><b>Online Sports Expo and Sign-On Event</b></p>	<p>The online Sports Expo event launched late January in preparation for February's promotion with nearly 100 sport and recreation exhibitors participating along with eight active zone demonstration videos. Also included in the online event is a calendar of 30+ Come and Try days that are available throughout the region for the month. Community attendance at any one of these events puts the resident in the running to win a signed men's Big Bash 2008 squad cricket bat. To view the online event, please see: <a href="#">Online Sports Expo and Sign-On</a></p>
<p><b>St Peter's Western Swim Club - Brisbane</b></p>	<p>Sport and Recreation Officer (SRO) was instrumental in attracting the St Peter's Western Swim Club to Mackay to complete their pre-season 2.5-week training camp locally at the Mackay ARC. The team, consisting of 22 swimmers, 1 coach and 3 support staff, were unable to train in Thailand or Darwin due to the current COVID restrictions, so SRO facilitated their visit with several other organisations to ensure they had all they needed, from a training location, to a gym as well as leisure options to keep them occupied whilst not in the pool. During their stay, SRO also organised two public observation sessions for the community with 110 people visiting the Mackay ARC to gain training tips and techniques or watch Olympic and World Swimmers in action.</p>

### Museums

Museum	Comments
<b>Pioneer Valley Museum</b>	Dates open: Museum currently closed Number of days open: N/A Visitors: N/A Volunteer hours: N/A
<b>Sarina Museum</b>	Dates open: Museum currently closed Number of days open: N/A Visitors: N/A Volunteer hours: N/A
<b>Mackay Museum</b>	Dates open: Museum currently closed Number of days open: N/A Visitors: N/A Volunteer hours: N/A
<b>Greenmount Homestead</b>	Dates open: Museum currently closed Number of days open: N/A Visitors: N/A Volunteer hours: 6
<b>Ongoing Projects</b>	<ul style="list-style-type: none"> <li>• The Model T Ford, 1965 Wolseley sedan and the Sulky were cleaned and covered to protect from further deterioration.</li> <li>• Initial analysis of Museums community consultation survey data was undertaken to inform the Museum Development Plan report.</li> <li>• Ongoing research and planning with Queensland Museums Development Officer is occurring to inform the collection rationalisation process and methodology.</li> <li>• A risk analysis of the of the Greenmount ceiling cleaning procedure was undertaken to enable cleaning work to commence once the asbestos testing has occurred.</li> <li>• Social media statistics for all museums are increasing, with additional page likes and positive Facebook post engagements.</li> </ul>

### Junior Sporting and Arts and Culture Grant

No Junior Sporting Grants and 1 Arts and Culture Grant were processed this month. The grant was valued at \$325.00.

### In-kind Assistance requests

5 in-kind assistance requests were approved for the month of January, with a total value of \$2,391.40.

*The Civic Precinct Fountain was coloured blue for National Corrections Day*



## 4.2 Libraries

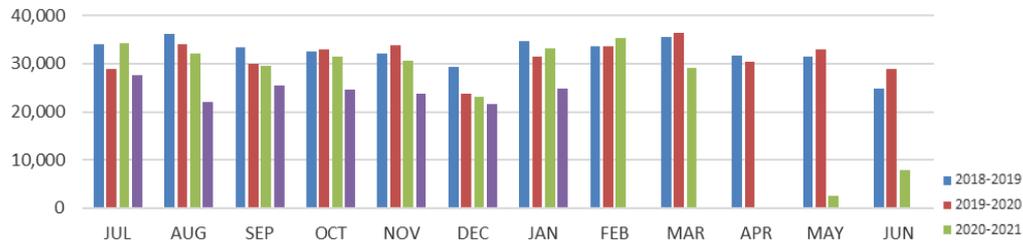
### Library Highlights

Activity	Comments
<b>Highlights</b>	<p><b>Shrewsbury Rock</b> The DLYA team contributed to an international request from the United Kingdom township of Shrewsbury, to participate in a project about all things across the world containing the name "Shrewsbury". A video was created with a location description, reading from <i>The Origin of Species / Charles Darwin</i> (as per request) along with images of the area and various library branches and staff.</p> <p>Shrewsbury Rock is in the Percy group of Islands to the south east of Sarina.</p>
<b>Young People's Services and First 5 Forever</b>	<p><b>First 5 Forever</b> # programs: 6 (1 Baby Bounce, 2 Toddler Time, 3 Story Time) # attendees: 119 Toddler Time has recommenced and has been well received - both sessions have been fully booked with lots of happy toddlers and parents.</p> <p><b>School holiday activities</b> # programs: 19 (10 STEAM, 3 Movie matinees, 4 Birdie/PowerUp 2 bedtime stories) # Programs # attendance: 134 Children at the STEAM sessions enjoyed the opportunity to explore technology in these interactive sessions.</p> <p><b># new program initiatives:</b> Birdie/Power Up sessions (4 sessions – partnership with QLD Health)</p> <p><b>Bedtime stories:</b> 2 sessions - 31 attendees Bedtime stories were well attended, and the craft activities were very popular – especially the dream catchers.</p> 
<b>Community Outreach</b>	<b>Face-to-Face Programs:</b>

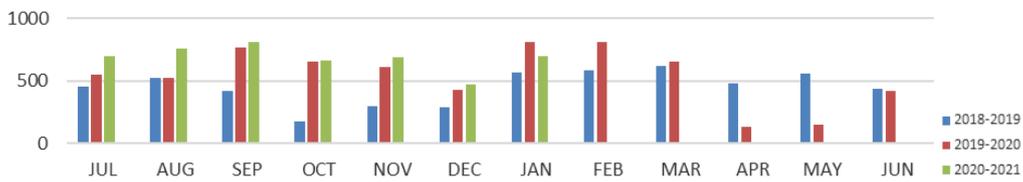
<b>Programs</b>	<p><b># programs:</b> 28 <b># attendees:</b> 1,323</p> <p><b>Program Highlight:</b> Participants of our <i>Learning to Bongo</i> program were treated to instruction from Troy Greatz. Troy, as Associate Principal Percussionist/Timpanist of the Queensland Philharmonic Orchestra, is delivering our <i>Learning to Bongo</i> and <i>Piano Classes</i> under our Tech Savvy Seniors grant. Troy has also performed with the Australian World Orchestra since its inception, as well as the London Philharmonic Orchestra, and the Sydney Symphony Orchestra.</p>	
<b>Digital Literacy &amp; Young Adult Programs</b>	<p><b>Face-to-Face Programs:</b> <b># programs:</b> 11 <b># attendees:</b> 68</p>	
<b>Virtual Programs</b>	<p><b>Virtual Programs (Young Peoples Services):</b> <b>Total Posts:</b> 11 <b>Total Reach:</b> 12,413 <b>Total Engagement:</b> 504</p> <p>Increased focus of incorporating photos of Libraries visitors and event participants in social media posts leading to increased appeal within the community.</p> <p><b>Virtual Programs (Community Outreach Team):</b> <b>Total Posts:</b> 16 <b>Total Reach:</b> 6,130 <b>Total Engagement:</b> 197</p> <p><b>Virtual Programs (Digital Literacy and Young Adults):</b> <b>Total Posts:</b> 19 <b>Total Reach:</b> 2380 <b>Total Engagement:</b> 57</p> <p>Podcast Episode #16 – Favourite History bits</p>	
<b>Heritage Collection</b>	<ul style="list-style-type: none"> <li>• 10 information requests were received from clients with staff conducting 8 hours of research. 2 of these requests were from overseas.</li> <li>• 5 Facebook posts showcasing historical images were popular and received community engagement</li> </ul>	

**Statistics**

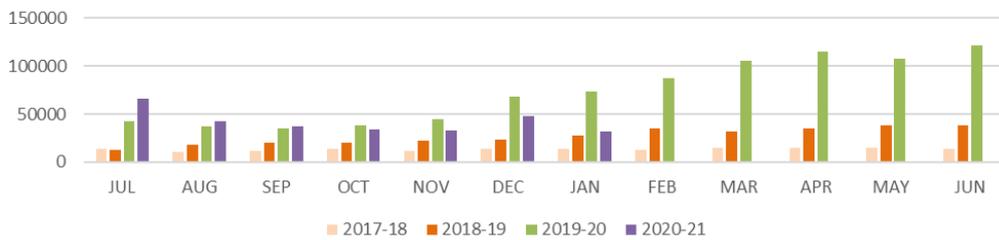
### Library Visitors



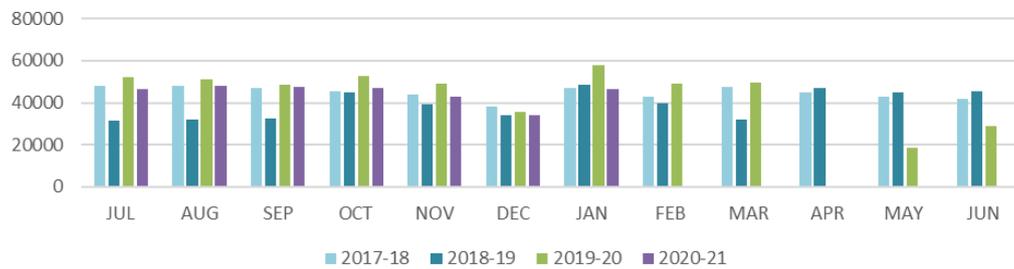
### New Library Members



### Digital Loans by Month 2017-2021



### Print Loans by Month 2017-2021



### Monthly KPI Update

Service / Activity	Annual KPI	YTD	Status	Comments
<i>Library Loans</i>	1,000,000	604,453	🟢	On target
<i>Database Hits</i>	75,000	48,089	🟢	On target
<i>Social Media Followers</i>	8,000	Instagram: 1,528 Facebook: 6,975	🟢	On target
<i>eNewsletter subscribers</i>	N/A	16,637	🟢	Registrations remain steady
<i>In Person Visits</i>	350,000	170,039	🟢	In-person visitations remain steady, however are down 24% for the same period last year. On track to meet current target.
<i>Web + Catalogue Visits</i>	300,000	275,291	🟢	On track to exceed target
<i>% of Scheduled Programs Delivered</i>	95% - 105%	96.4%	🟢	On track
<i>Number of new program initiatives</i>	5	17	🟢	New initiatives and partnerships are continuing to be developed.
<i>Outreach Events</i>	N/A	50 events 3,075 attendees	🟢	Outreach programs have recommenced upon request with good engagement
<i>New Virtual Programs * Outcomes</i>	N/A	246,030 reached 11,847 engaged 1,214 comments	🟢	Virtual programs continue to perform strongly
<i>Mackay Libraries App</i>	N/A	738 devices used 2,956 launches	🟢	232 new devices were used with the Mackay Libraries app during Nov/Dec. Almost 17,000 launches on device since July 2020.

## 4.3 Artspace Mackay

### Artspace Exhibitions

Activity	Comments
<b>Systematic</b>	<i>Systematic</i> , a blend of playful, vibrant and kinetic works remains on display in the FIELD Engineers Gallery until 14 February, following its opening by the Mayor on 11 December 2020.
<b>Lyn Laver Ahmat: Light on Landscape</b>	<p>Mackay artist and art educator Lyn Laver-Ahmat's exhibition <i>Light on Landscape</i> explores emotional connections to nature and place and remains on display in the Foundation Gallery until 14 February 2021 following its opening on 5 December 2020.</p> 
<b>Jabu Birriny [Land + Sea]</b>	Jabu (land) Birriny (sea) celebrating the unique environment of Yarrabah and its ongoing importance to culture and people concluded its display in the Foyer Gallery on 17 January 2021 after official opening by the Mayor on 23 October 2020. It was presented by Flying Arts and was co-curated by State Library of Queensland with Yarrabah Arts and Cultural Precinct.

### Collection

Activity	Comments
<b>MRC Art Collection</b>	The MRC Art Collection online project underwent the final testing phase this month. Artspace's curatorial team worked with Vernon system to achieve this. Final branding is now being undertaken by Vernon systems, with the online launch due end February.

**Public Programs**

Activity	Comments
<p><b>Island Fashion on Tour</b> <b>5-17 January</b></p>	<p>Artspace hosted <i>Island Fashion on Tour</i>, art activities for people of all ages and abilities during gallery open hours, 10am – 5pm Tuesday to Friday and 10am – 3pm Saturday and Sunday. Toured by Queensland Art Gallery and Gallery of Modern Art and inspired by Pacific Island culture and fashion. 238 people attended over 12-day period.</p> 
<p><b>Conversations with Art</b> <b>1 – 2.30pm, Friday 15 January</b></p>	<p>We held the first <i>Conversations with Art</i> for the year, looking and discussing works on display in the current exhibition, <i>Systematic</i>. Held on the 3rd Friday of each month, <i>Conversations with Art</i> is held in one or the three gallery spaces, or in the Artspace Workshop Room. It's a free and enjoyable discussion led by Artspace staff as we look at works in the gallery, as well as images of traditional and contemporary artworks from Gallery and Museum Collections from around the world. 3 visitors attended.</p>
<p><b>Now is the Time: Kids on Tour</b> <b>19-29 January</b></p>	<p>While Artspace was closed for renovations, we hosted a pop-up venue in the city centre with FREE climate change related activities for all ages &amp; abilities. <i>Now is the Time: Kids on Tour</i>, inspired by Children's Art Centre's exhibition <i>Now is the Time</i> by artist Raquel Ormella it was toured by Queensland Art Gallery and Gallery of Modern Art. 112 visitors attended the program in total.</p> 



### Monthly KPI Update

Service / Activity	Annual KPI	YTD	Status	Comments
<i>Visitors: Artspace</i>	28,000	9,815	🔴	Attendance numbers below average (2,200). Impacted by travel restrictions brought about by COVID-19 and two-week gallery closure (18 – 31 January) for scheduled maintenance.
<i>Web Visits</i>	14,000	7,798	🟢	On target
<i>Total Number of e-Newsletter Subscribers</i>	1,800	1,829	🟢	On target
<i>Facebook Subscribers</i>	6,600	6,714	🟢	Combined total for Artspace and Rock Paper scissors Facebook pages.
<i>Exhibitions</i>	12	8	🟢	On target
<i>Public Program Participants</i>	7,400	1,252	🔴	Maximum number of participants for public programs and activities still restricted due to COVID-19 social distancing requirements.
<i>Public programs (Inc. tours, BMA Kidspace, workshops, exhibition openings, markets, etc.)</i>	140	69	🟢	On target
<i>Volunteer hours</i>	2,500	1,721	🟢	Maintained consistent volunteer hours during gallery closure period by having Artspace volunteers assist with supervision of off-site pop-up studio school holiday activity.

## 5. Mackay Entertainment & Convention Centre and Events

KPI	Target	YTD	Status	Comments
Number of Performances fully cost recovered	50%	80%	🟢	On Track
Minimum number of catered functions (excluding performances)	120	80	🟢	On Track
Average attendance at events	Auditorium 260	270	🟢	On Track
	Foyer/space 100	32	🔴	Impacted by Covid-19
	Halls 300	154	🔴	Impacted by Covid-19
	One Hall only 100	50	🔴	Impacted by Covid-19
Number of non-utilised days	200	69	🟢	On Track
Number of Performances at the MECC	180	35	🔴	Impacted by Covid-19
Number of Conferences / Expos	14	1	🔴	Impacted by Covid-19
Number of Events with Attendance from outside Mackay Region LG area (Post Code Data)	30	24	🟢	On Track
#Events at BB Print Stadium	2	5	🟢	On Track
#in Attendance at BB Print Stadium	N/A	1,224	🟢	New KPI this year
Number of Student Attendances	1,000	999	🟢	On Track
Number of workshops > Youth	6	3	🟢	On Track
Number of engagement workshops/activities	6	4	🟢	On Track
Yearly occupancy of facility	65,000	20,256	🔴	Impacted by Covid-19
Customer Hire Satisfaction	80%	96%	🟢	On Track
Number of regional events assisted through either financial or in-kind assistance	6	4	🟢	On Track
Number of regional events ticketed	8	4	🟢	On Track



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Friends of the MECC Volunteer Hours	N/A	978		Tracking well
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## Overview

The MECC has been through a busy month throughout January during the annual shutdown period from 14 December 2020 – 17 January 2021. Major maintenance has been undertaken internally through MECC staff including overall venue maintenance and cleaning, technical equipment safety checks and some capital delivery projects.

The MECC delivered several successful events during January:

- Non-denominational Christian Convention Gathering
- Friends Training for 2021
- Mackay Launch for Educators > What's on at the MECC in 2021
- Catholic Teachers Professional Development Training Day
- Australia Day Awards Gala Event 2021
- Citizenship Ceremony > Australia Day
- Hastings Deering Apprentice Information Session

Feedback from Hastings Deering:

*"Thank you very much for assisting in the coordination of our event this morning. Everything was perfect and the team at the MECC were outstanding"*

- Janice Morrell | Hastings Deering (Australia) Limited

## Engagement

### MECC Educators Launch

The MECC Engagement Team welcomed 40 teachers and community members to the Lynette Denny Space on Tuesday 19 January to officially launch the 2021 School Entertainment Program.

The lunch time event gave guests exclusive access to performances, workshops, and community engagement opportunities at the MECC in 2021. Mayor Greg Williamson opened the event with an Acknowledgement of Country, followed by the recognition of a difficult past year for both the education and performing arts communities.





In sponsorship news, the final details for the contract between BHP and the Friends of the MECC was finalised in December.

BHP have agreed to sponsor the program again and are contributing \$11,000 towards the 2021 Pathways to Performance Program.

Dalrymple Bay Coal Terminal (DBCT) have agreed to sponsor the Kids' Theatre Season again in 2021. This company have contributed \$13,200 towards this season in 2021.

Due to sponsorship funds not being utilised in 2020 due to COVID-19, Glencore agreed to transfer their remaining money to the 2021 program totalling \$8,261.

### MECC Presents 2021 Season

The 2021 season is officially on sale and we are looking forward to the following MECC Presents shows in 2021:

Viral by Shock Therapy Productions	Wednesday 3 March 2021, 10.30am
Queensland Symphony Orchestra – Firebird – An Instrumental Spectacular (Free Livestreamed Event)	Saturday 20 March 2021, 7.30pm
Melbourne International Comedy Festival Roadshow	Saturday 1 May 2021, 7.30pm
Appleton Ladies' Potato Race	Thursday 17 June 2021, 7.30pm
Margaret Fulton the Musical	Saturday 3 July 2021, 7.30pm
Isaiah Spirit	Saturday 10 July 2021, 7.30pm
Opera Australia - Bizet's Carmen	Saturday 24 July 2021, 7.30pm
Bell Shakespeare - A Midsummer Night's Dream	Thursday 9 September 2021, 7.30pm
Shake & Stir Theatre Co - Animal Farm by George Orwell	Tuesday 2 November 2021, 7.30pm

### Festivals & Events

#### Mackay Festival of Arts

The Mackay Festival of Arts is moving into final programming and marketing stages, set for the launch and on sale in April 2021. Much of the 2020 program, cancelled due to COVID-19, has been able to be rescheduled to be delivered this year with additional performers and event details refreshed to ensure a bright and bold Festival calendar for the region in 2021.

Details of a large art installation across 5 locations in Mackay during the Festivals are being finalised with the Brisbane Festival team, with further details to be announced once contracts are in place.

Another major focus is the ability to deliver the major outdoor events such as DBCT Illuminate, G&S Engineering Wine and Food Day and the new event Savour Seaforth as COVID-Safe events. Management are working to finalise details and will work in conjunction with Queensland Health to ensure events are aligned with the current COVID-Safe requirements.



#### **Global Grooves**

The Global Grooves committee meetings will begin again in March with planning and programming already underway for the event to move back to Queens Park now that the works in the park have been completed.

#### **Festival Team**

The Festival Events Coordinator and Officer positions are currently vacant to be recruited shortly.

## 6. Corporate Communications and Marketing



### Australia Day awards recognise community heroes

Mackay Regional Council's annual Australia Day Awards Gala at the MECC was an uplifting community event. The dinner, held on Australia Day eve, was fitting recognition for unsung heroes in our community.

Under a COVID Safe Plan, about 380 people attended the dinner to recognise all nominees and winners. More than 140 nominations were received across eight categories.

They were treated to a two-course Aussie dinner and entertainment by rising Mackay star Bella Mackenzie and local legend Graeme Connors. This was the first time Graeme Connors had played at the awards as he's usually Tamworth in January.

The awards were sponsored by P. Comino and Sons and Tropical Exposure and winners were:

- Citizen of the Year – **Mabel Quakawoot**
- Young Citizen of the Year – **Emmett Withers**
- Lori Burgess Community Volunteer Award – **Russell McLennan**
- Environmental Achievement Award – **Daryl Barnes**
- Community Group Award – **Chances Café**
- Art and Culture Award – **Brenden Borellini**
- Senior Sports Award – **Melissa Milton**
- Junior Sports Award – **Jordan Bliss**



in



**New citizens welcomed at Australia Day ceremony**

Mayor Greg Williamson and councillors welcomed 77 new Aussies from 19 different countries at our Australia Day Citizenship Ceremony.

The ceremony was held in the MECC auditorium on Australia Day – the morning following the gala awards dinner.

Reverend John McKim led the opening prayer, elder Philip Kemp for led the welcome to country and Federal Member for Dawson George Christensen for presented the Minister's message.



**Free community events keep the celebrations going**

There was plenty of Aussie pride on show at 12 free community events throughout our region on Australia Day.

Council helped fund the events after calling for expressions of interest from community groups wanting assistance to hold free events in the Mackay region.

Events were held from Sarina, north to St Helens Beach and west to Kinchant Dam. Unlike a wet 2020, the weather was fantastic on Australia Day 2021.



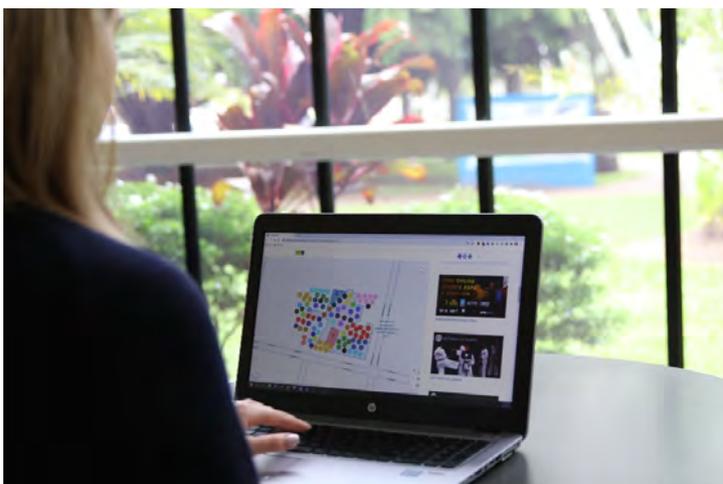
**Innovative Online Sports Expo event promoted ahead of launch**

Corporate Communications and Marketing helped promote the Online Sports Expo and Sign-on ahead of its launch on January 29.

The annual event, usually held at the MECC, is a virtual, online expo this year due to COVID-19.

It is live on council's website throughout February. As well as information on about 100 clubs, there are eight active zone videos and a come-and-try-day calendar.

Promotion included radio, TV and print ads, as well as digital and social media.





**Buzz around annual region's dengue awareness campaign**

Corporate Communications and Marketing helped launch a dengue awareness campaign in January.

The annual dengue campaign is part of an EHWIM (Environmental Health Whitsunday Isaac and Mackay) initiative.

As part of this year's campaign, the three regional councils are calling on residents to test their dengue knowledge by completing an online quiz. All those who enter the competition go into draw to win one of five \$100 Porters Mitre 10 vouchers.



**Ribbon cutting marks official opening of lookout upgrade**

Corporate Communications and Marketing organised a media event for a ribbon-cutting to officially open the upgraded North Mackay Rotary Lookout.

Member for Mackay Julieanne Gilbert and Mayor Greg Williamson did the honours, with some help from Aden and Tristan Hassan (pictured).

The \$1.42 million upgrade was jointly funded by the State Government's Building our Regions (BoR) program and council.

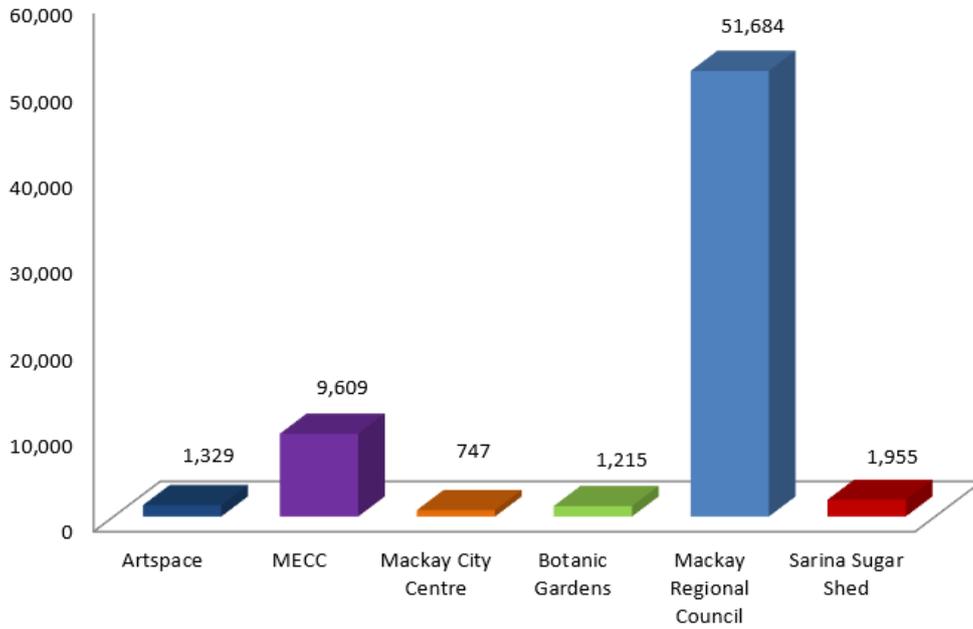
Guests at the opening also included representatives of contractor WHF Group, architects BOLD Architecture and the Rotary Club of Mackay North.

The Rotary club has had an association with the lookout at the top of Pollock Street since the early 1970s.

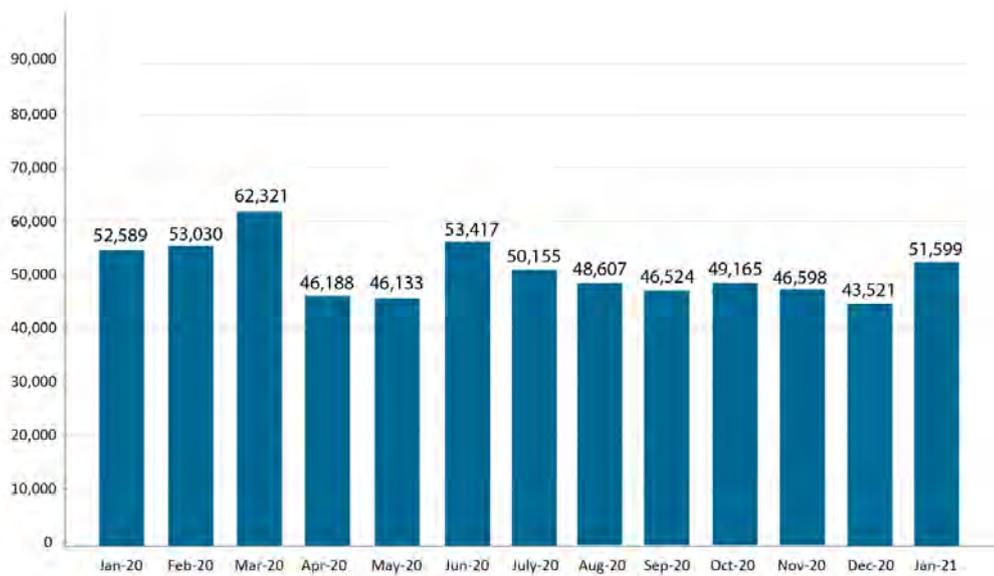
The upgraded lookout was also the focus of Corporate Communications' Council Connect campaign for January, with radio advertising and a social media video.



**All website visits for January 2021**

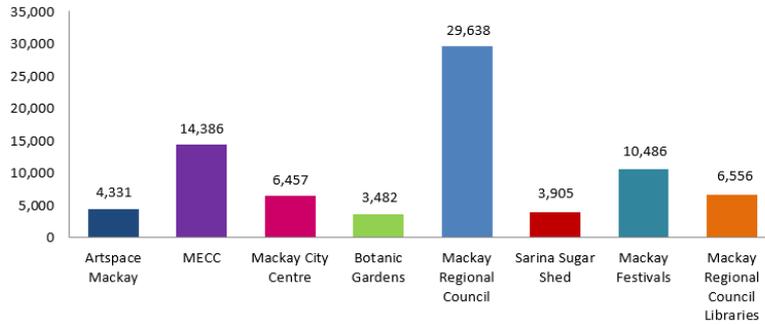


**Trend of MRC website (mackay.qld.gov.au) visits**

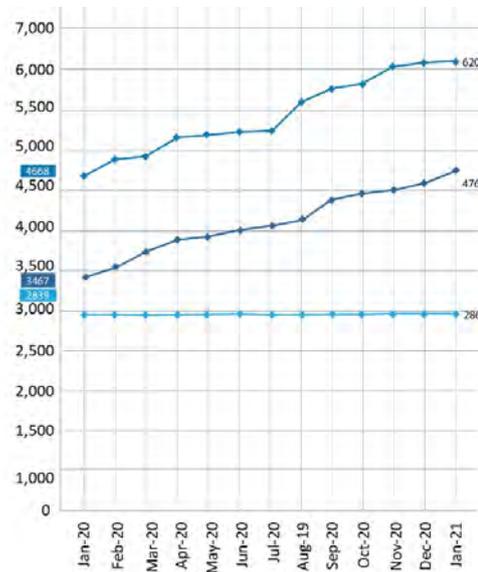




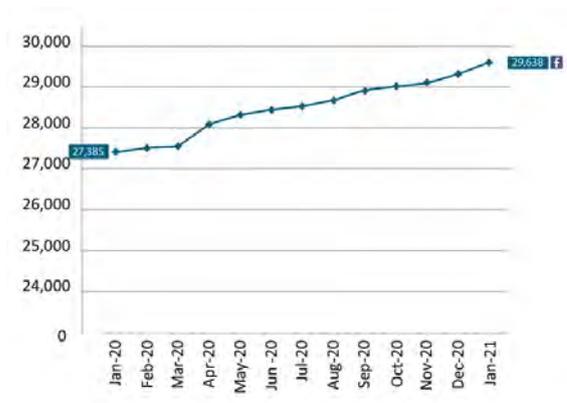
**Facebook facilities January 2021**



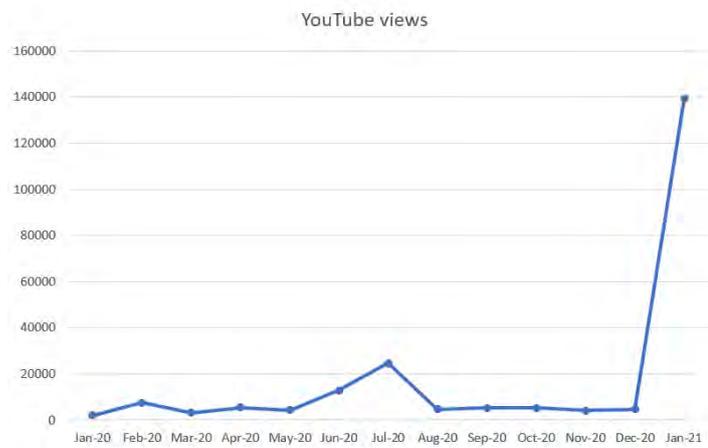
**MRC Social media for January 2021**



**MRC Facebook followers for January 2021**



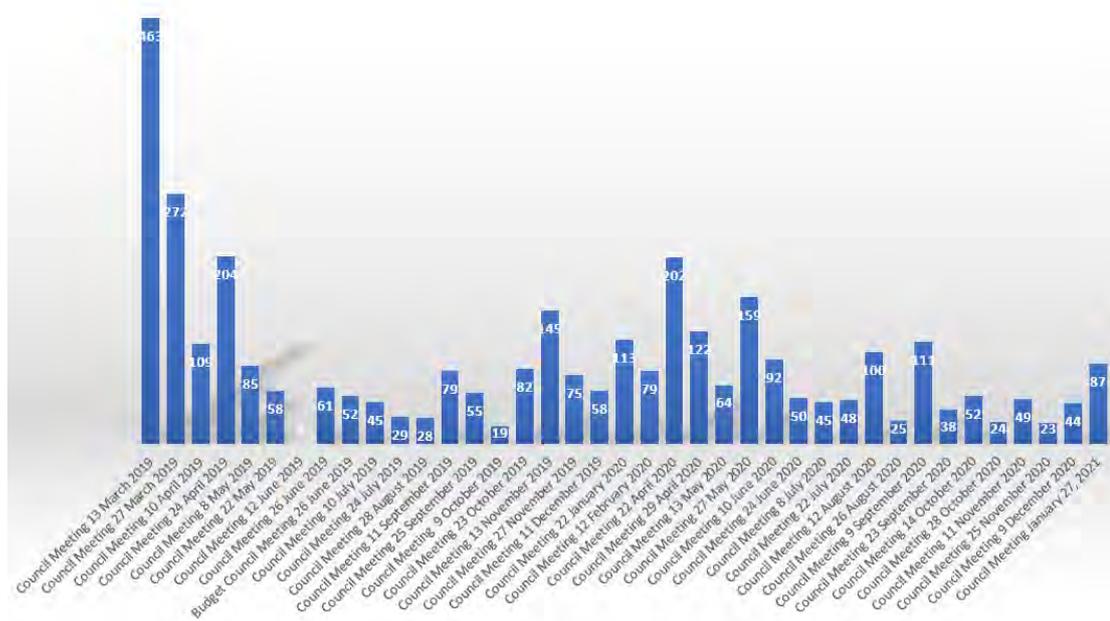
**MRC YouTube views for January 2021**



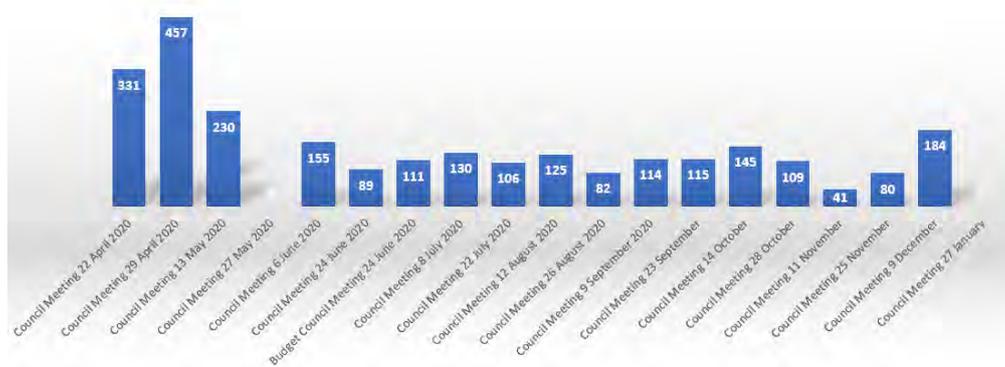


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**Council Meeting Live Stream YouTube**



**Facebook**



Meeting not livestreamed to Facebook on January 27 due to software not set up in the Council Chambers. Looking into options to stream future meetings to Facebook at same time as YouTube.

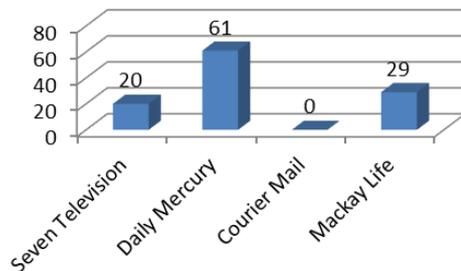
**eNewsletter subscribers**

- Artspace: 1829 (Last month: 1825)
- Botanic Gardens: 1162 (Last month: 1158)
- Council Connect: 3424 (Last month: 3427)
- Library: 16,437 (Last month: 16,462)
- Recreation Services: 1096 (Last month: 1093)
- MyMackay: 1187 (Last month 1183)

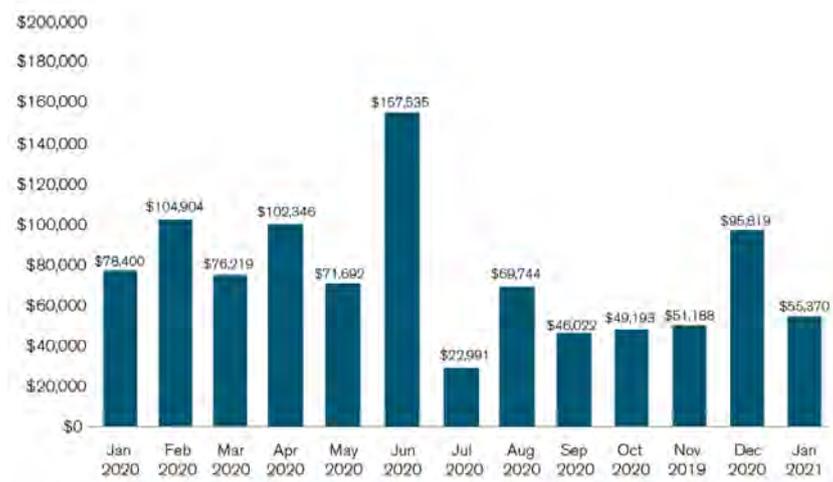


**Council featured in 110 news stories during January**

**Number of news clips/articles  
January 2021**



**Advertising spend across council**



**Community Engagement**

**North Mackay Rotary Lookout**

Construction of the North Mackay Rotary Lookout is complete. The Corporate Communications team publicised the project's completion, including an official opening.  
[connectingmackay.com.au/north-mackay-rotary-lookout](http://connectingmackay.com.au/north-mackay-rotary-lookout)

**Koumala Water Treatment Plant**

The tender for the design and construction of the new Koumala Water Treatment Plant has been awarded to Clean Teq Water Pty Ltd. Letters have been sent to the key stakeholders and residents living in the Koumala township to inform them about the project and the two-stage delivery. Stage one, the design, is expected to take three to four months to complete and stage two, the construction, is expected to start mid this year and be completed by the end of the year 2021, weather permitting. Meetings will be set up with the key stakeholders in the coming months to discuss the construction and traffic management program.  
[connectingmackay.com.au/koumala-water-treatment-plant](http://connectingmackay.com.au/koumala-water-treatment-plant)

**Mackay CBD Footpath upgrades**

Three footpaths in the Mackay City Centre are under reconstruction to improve connectivity and safety for pedestrians. Works are under way in front of 11 Nelson Street and Wellington Street, along the western side from Victoria to River streets. Work will start on Gordon Street in front of the Anglican Church in mid-February and is expected to be completed by late-March, weather permitting. Face-to-face meetings have occurred with the businesses impacted and letters have been sent to nearby residents/businesses. The works have also been publicised on Connecting Mackay and council's Facebook page.

[connectingmackay.com.au/mackay-city-centre-footpath-reconstruction](https://connectingmackay.com.au/mackay-city-centre-footpath-reconstruction)

**Animal Management Centre**

Contractor WHF Group has started work on council's new animal management centre. The project will be delivered in two stages. Stage one, construction of the new animal management centre, is expected to be completed by October 2021. Stage two, transforming the current facility into an enforcement dog and cattery building, is expected to start in November 2021 and be completed by May 2022, weather permitting. The key stakeholders were consulted about the works prior to construction and letters have been sent to nearby businesses. The project has also been publicised on Connecting Mackay and council's Facebook page.

[connectingmackay.com.au/animal-management-centre](https://connectingmackay.com.au/animal-management-centre)

**Yakapari-Seaforth Road Shared Pathway – Stage One**

The tender has been awarded to Haber Excavations and stage one, the 800m shared pathway from Seaforth Reservoir Road to Aviland Drive, is expected to start mid-February and be completed by early-May, 2021, weather permitting. A meeting was due to be held with Seaforth State School in early February to go over the construction program. The school has passed on the details to students and families via their school newsletter and letters have been sent to nearby residents. The project has also been publicised on Connecting Mackay and council's Facebook page.

[connectingmackay.com.au/yakapari-seaforth-road-shared-pathway-stage-one](https://connectingmackay.com.au/yakapari-seaforth-road-shared-pathway-stage-one)

**Nutrient Offset Trial**

Council called for expressions of interest from local cane farmers in the Tin Pot Creek Catchment to take part in the nutrient offset trial. Two farmers have agreed in principle to take part in the project. The trial has begun on one of the farms.

**Patch Street and Cyril McKie Court Pavement Rehabilitation**

Stage one, the water main works have been completed. Stage two, the pavement rehabilitation works are expected to start in early-February 2021 and be completed in June, weather permitting. Contractor Shadforth Civil has discussed traffic management plans with the businesses affected. Construction letters have also been sent to the affected businesses and the project has been publicised on Connecting Mackay and council's Facebook page.

[connectingmackay.com.au/patch-street-pavement-rehabilitation-project](https://connectingmackay.com.au/patch-street-pavement-rehabilitation-project)

**Sarina Northern Drainage Project**

This project is being carried out in three stages to improve drainage in the area.

Stage 1 – Brooks Road culvert works have been completed.

Stage 2 – Sarina Beach Road water main relocation. Environmental approvals under way. Once complete, engagement will occur with the main stakeholder Sarina Shopping Centre.

Stage 3 – Sarina Beach Road culvert works. A start date is yet to be set.

*Connecting Mackay page not to be published until stage 2 commences.*

**Fifth Lane Revitalisation Project**

The condition of the laneway has deteriorated. Water main works will be carried out, along with installing a new road pavement and electrical provisions for future community events. Face-to-face meetings have occurred with the businesses backing onto Fifth Lane to understand their water, power and bin collection requirements. The project manager is in discussions with Mackay Water to finalise the water interruption notice for the first stage of the works.

*Connecting Mackay page not to be published until construction phase*

**Brice Avenue Footpath**

The new footpath and boardwalk along Brice Avenue, Sarina, from Anzac Street to Breen Street, has been completed. The pathway consists of concrete pavement and raised boardwalk, providing a safer and drier route for students accessing the agricultural centre. Corporate Communications has publicised the project's completion.

[connectingmackay.com.au/brice-avenue-footpath-sarina](https://connectingmackay.com.au/brice-avenue-footpath-sarina)

**Nell Baker Park Upgrade**

The tender has been awarded to BH Building. Works are expected to start in mid-February and be completed by late-April 2021, weather permitting. The upgrades include the replacement of the play equipment with new modern equipment, along with a shade structure, picnic table, bubbler, and the half-basketball court will remain. Construction letters are waiting approval from the Australian Government and will be sent to nearby residents. Corflute notices will also be placed at the park and the project will be publicised on Connecting Mackay and council's Facebook page.

**Northern Beaches Community Hub**

Ten nominations have been received for the Northern Beaches Community Hub reference group. A media release and project update email will be sent to announce the group members when determined.

[connectingmackay.com.au/northern-beaches-community-hub](https://connectingmackay.com.au/northern-beaches-community-hub)

**Mirani Community Precinct**

This Mirani Community Precinct Connecting Mackay page has been developed and is currently waiting State Government approval prior to going live.

*Connecting Mackay page not yet live*

**Seaforth Esplanade - Stage 1 Recreation Hub**

The consultants conducted two community workshops on January 28 to gather feedback on the recreation hub concepts for stage one. A printed invitation was letterbox dropped by the Progress Association to 800 households and businesses. Property owners residing outside the area received the invite by mail. The flyer promoted a survey on Connecting Mackay. Feedback is open until February 21, 2021

[connectingmackay.com.au/seaforth-esplanade](https://connectingmackay.com.au/seaforth-esplanade)

**Pioneer Valley Mountain Bike Trails**

A flyer promoting the next Finch Hatton and Eungella community update sessions has been sent to Finch Hatton and Eungella communities. The sessions will occur on February 7 and will include a Q&A about the feedback collected from the Finch Hatton Local Area Planning Framework consultation. The Engagement Plan is currently being finalised.

[connectingmackay.com.au/mountain-bike-strategy](https://connectingmackay.com.au/mountain-bike-strategy)

**Finch Hatton township local area planning framework**

The Community Engagement report is being prepared. A total of 41 surveys were completed.

[connectingmackay.com.au/finch-hatton-local-area-planning-framework](https://connectingmackay.com.au/finch-hatton-local-area-planning-framework)



### 6 River St demolition

After a delay due to the need for specialised equipment, work is expected to be completed in March.  
*No Connecting Mackay page active for this project*

### Milton and Alfred Street traffic signals

A scramble crossing is being constructed from February 1 to improve pedestrian safety in front of the Mackay Showgrounds ticking stand. The project is expected to be completed by the beginning of April 2021. Residents have received a letterbox dropped flyer and impacted businesses were met with prior to Christmas.

[connectingmackay.com.au/admin/projects/milton-and-alfred-streets-traffic-signals](http://connectingmackay.com.au/admin/projects/milton-and-alfred-streets-traffic-signals)

### Schapers Road from Pioneer to Davey streets

The works, which involve a road closure from Pioneer Street to Royal Boulevard, began on January 18. The work will be delivered in four stages and a letter explaining the delivery of the project was mailed to residents prior to Christmas. Local traffic is only able to enter at the Davey Street end and this message has been posted on social media. The urban bus stop remains active, with buses being led through the worksite.

[connectingmackay.com.au/schapers-road-upgrade](http://connectingmackay.com.au/schapers-road-upgrade)

### Local laws amendment consultation

Public consultation for proposed amendment to our local laws opened on January 7 and will remain open until February 7. The Connecting Mackay page has attracted over 300 views.

[connectingmackay.com.au/amended-local-laws](http://connectingmackay.com.au/amended-local-laws)

*Please see below for a brief overview of larger Community Engagement projects.*

Project Name	Activity	Department	Plans and activities	Level of Engagement
6 River Street Demolition	Immediate	Capital works	Letters have been distributed.	Inform
Animal Management Centre	Ongoing	Capital Works	Construction is underway. All the key stakeholders were consulted and informed prior to the works starting.	Inform/consult
Anzac Ave WMR	Upcoming	Field Services	Construction starting in mid-February. Letter will be going out notifying residents early Feb	Inform
Ball Bay Road Reconstruction	Ongoing	Capital Works	Construction is underway and near completion.	Inform
Brice Avenue Footpath	Completed	Capital Works	Corporate Communications publicised the project's completion.	Inform/Consult
Bridge Road culverts repair at Milton St	Ongoing	Capital Works	Construction is underway.	Inform
Brownsey Court Park upgrade	Upcoming	Capital Works	Flyers and corflute signage developed.	Inform
Boundary Road shared path Bernborough to Super GP	Upcoming	Field Services	Installation of shared pathway along Boundary Road, will cross Bernborough Ave and tie in with existing footpath.	Inform



Project Name	Activity	Department	Plans and activities	Level of Engagement
			Notification letter will be going out early February.	
Bustard Creek Pinevale Road rail upgrade	Upcoming	Contract Services	Installation of guardrail to improve safety. Tender being prepared and set to go out early/mid Feb.	Inform
Canecutters Drive Park	Ongoing	Capital Works	Construction is under way.	Inform
City Heart Maintenance Slabs (Garden Beds)	Upcoming	Capital Works	Capital Works to provide details	Inform
Evans Avenue Shared Pathway	On-hold	Capital Works	Earmarked for the 2021/2022 financial year.	Inform/consult
Eungella Dam Road Stage 2 Shared path	Upcoming	Contract Services	Installation of shared path from Eungella School back to parking facility Tender closes in early Feb.	Inform
Finch Hatton Township Local Area Planning Framework	Ongoing	Development Services	Community Engagement report under way. Feedback to be presented at Pioneer Valley Mountain Bike Trails community update session.	Consult
Fifth Lane	Upcoming	Capital Works	Community Engagement is currently liaising with Mackay Water to finalise the water interruption notice.	Consult/Inform
Gorge Rd Concrete Pavements	Completed	Capital Works	Project is complete	Inform
Koumala Water Treatment Plant	Upcoming	Capital Works	Tender has been awarded and a project overview letter has been sent to the key stakeholders and the residents in the Koumala township.	Inform/Consult
Long Distance Bus facility, Victoria and Tennyson St	Upcoming	Contract Services	Installation of bus shelters on Victoria Street near Caltex Service Station. Currently out to tender.	Inform
Marzan Street and George Fordyce Drive Traffic Calming	Ongoing	Capital Works	Works are nearly complete. Waiting on the delivery of rumble strips.	Inform/Consult
MECC Roof	Ongoing	Capital Works	Construction is under way.	Inform
Milton and Alfred streets traffic lights	Upcoming	Capital Works	Letters delivered and Connecting Mackay page live.	Inform



Project Name	Activity	Department	Plans and activities	Level of Engagement
Milton and Alfred streets water main replacement	Completed	Capital Works	This project is complete.	Inform
Mirani Community Precinct	Ongoing	Development Services	Connecting Mackay page waiting for approval from State Government	Consult
MRITS Mackay Region Integrated Transport Strategy	Completed	Development Services	Feedback data provided to consultant.	Consult
Mackay City Centre Footpath Reconstruction	Ongoing	Capital Works	Works under way on Nelson and Wellington streets. Works to start on Gordon Street in early-February. Businesses have been consulted.	Inform
Mackay Region Museums	Ongoing	Community & Client Services	Community Engagement report to be prepared	Inform
Mt Basset Cemetery Upgrade	Upcoming	Field Services	Upgrade internal roadway opposite Strickland Rd, replace aged and damaged concrete, re-grade and flatted side of swales and reinstall avenue planting.	Inform
Nell Baker Park	Upcoming	Contract Services	Construction is expected to begin mid-February. A letter has been drafted for nearby residents and the project will be publicised on Connecting Mackay and council's Facebook page.	Inform
North Mackay Rotary Lookout	Completed	Capital Works	Officially opened on January 22, 2021.	Inform
Northern Beaches Community Hub	Ongoing	Development Services	Community reference group to be announced	Consult
Norris St, Milton St to James Street LATM and footpaths	Upcoming	Contract Services	Install footpath, rumble bars and line marking to intersection of Milton and Norris St. Two driveways will be installed with these works. Tender doc being prepared now to go out early Feb. Letters will be going out to residents to line up contractors to do their own driveway before works commence.	Inform
Patch Street and Cyril McKie Court pavement reconstruction	Ongoing	Capital Works	Stage one, the water main works have been completed. Stage two, the reconstruction of the road pavement is expected to start in early-February. The Contractor has discussed traffic management plans with the affected businesses.	Consult/Inform



Project Name	Activity	Department	Plans and activities	Level of Engagement
			Confirmation letters have been sent to the businesses. The project has been publicised on council's Connecting Mackay and Facebook pages.	
Pioneer River Northbank Shared Pathway Stage 1 - Boardwalk Design	Upcoming	Capital Works	Project is out to tender and communication material has been prepared.	Inform
Pioneer Valley Mountain Bike Trail	Ongoing	Capital Works	Developing Engagement Plan. Community update session on February 7.	Consult/Inform
Pioneer Fish Habitats	Upcoming	Capital Works	Increase fish population in close proximity to land-based infrastructure, improve fishing experience catering to all families, tourists and disabled persons. Preparing tender document to go out early/mid Feb	Inform
Platypus Beach land management plan	Completed	Development Services	Connecting Mackay data provided to project manager.	Consult
Playground program	Upcoming	Development Services	Obtaining community agreement on the future of playground facilities in Tropical Avenue Park, Inglewood Close Park and Sunset Park.	Consult
PTAIP BSIP Bus stop upgrades	Upcoming	Contract Services	Update eight bus shelters throughout the region. Currently out to tender.	Inform
Sarina Northern Drainage	Ongoing	Capital Works	Stage one completed. Waiting on environmental approvals for stage two.	Inform
Seaforth Esplanade Master Plan	Ongoing	Development Services	Stage 1 recreation hub workshops presented. Invite and project update email distributed. Online consultation is live.	Consult
Seaforth Yakapari Road shared pathway	Upcoming	Capital Works	Meeting held with Seaforth State School. Construction letters to go out to nearby residents and information passed onto school students.	Inform
Seagull Street boat ramp	On-hold	Capital works	The location is being investigated.	Inform/consult
Silver Creek Cappello Road Gargett guardrail upgrade	Upcoming	Contract Services	Installation of guardrail to improve safety. Tender being prepared now to go out early/mid Feb	Inform
Smith-Cross Road culvert upgrade	Ongoing	Capital Works	Construction under way.	Inform



Community and Client Services Monthly Review 1-31 January 2021

Project Name	Activity	Department	Plans and activities	Level of Engagement
Stay Safe, Stay Connected	Ongoing	Community & Client Services	Hanging at home digital book club to launch early February.	Inform
Sydney and Alfred St intersection upgrade	Upcoming	Capital Works	Waiting on design plans to be finalised.	Inform
Ware Ave and Arthur St	Upcoming	Field Services	Works are commencing next week. Upgrading the box culverts at Ware Ave and Arthur St Letter box drop has been done.	Inform
Woodlands District Park	Ongoing	Development Services	Master plan has been adopted.	Consult
Finch Hatton Controlled burn	Upcoming	Property Services	Property Services is looking into slasher equipment for this project.	Inform

## 7. Emergency Management

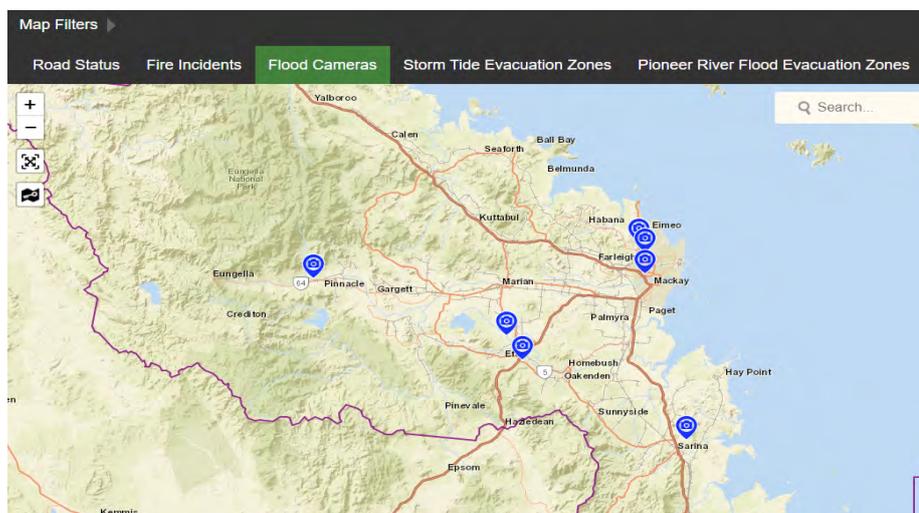
### Cyclone Centre Training

Training was conducted at the Northern Beaches Public Cyclone Shelter by Carla Adams, QFES. This was to provide participants with knowledge of Cyclone Shelter Management and understanding to work in a shelter. Training included the purpose of public cyclone shelters, the requirements of public cyclone shelters, accommodation capacity, layout and design. Roles and responsibilities of key positions within the shelter were discussed. Participants then were given a tour of the shelter and had the opportunity to experience the lock down requirements and technical aspects involved.



### Flood Camera Installation Project

The installation of 6 flood cameras at key locations around the region has now completed. The cameras provide a real time visual information on water levels at known river courses around the region. The cameras are now live on the Mackay Regional Council Emergency Dashboard and website.



### River Alert Flood Classification Project

The River Alert Flood Classification Level (FCL) has now been completed. This project required the surveying and allocation of minor, moderate and major levels to 22 regional Council-owned river alert stations that were not yet classified, and the review and renewal of the 12 alert stations already classified.

The FCL's were validated during the recent rain event. They provided water level intelligence to the Emergency Management Team and provided situational awareness of localities which were impacted.

### Person-Centred Emergency Preparedness (P-CEP)

In January we trained two more disability service providers in Person-Centred Emergency Preparedness and provided them with hundreds of P-CEP workbooks for their participants.

We were particularly excited to work with The University of Sydney to have a piece about our project published in *The Conversation*, a news website authored by academics and researchers. It speaks about the role councils can take in leading Disability Inclusive Disaster Risk Reduction. The article can be accessed at <https://theconversation.com/3-things-we-can-do-now-to-help-people-with-disability-prepare-for-disaster-151843>



This year, Mackay Regional Council partnered with our research team, including a Queenslanders with Disability Network Peer Leader. [www.mackayregion.qld.gov.au](http://www.mackayregion.qld.gov.au) Author provided

By adopting the Person-Centred Emergency Preparedness process, Mackay councillors and staff have embraced an inclusive way to build resilience.

Community-level emergency planning is now focused on working together with people with disability and the services that support them. This approach can only help address gaps in preparedness that put people at greater risk in emergencies.

Better systems for disability-inclusive disaster planning not only ensures people get support matched to their needs. It has the added bonus of freeing up the emergency services to focus on responding to the hazard. This keeps the whole community safe.

It increases disaster resilience for everyone.

*This article was co-authored by Helen Styles, Resilience and Recovery Officer, Emergency Management at Mackay Regional Council. It's part of a series The Conversation is running on the nexus between disaster, disadvantage and resilience. You can read the rest of the stories [here](#).*

### SES Operational Capability

The Mackay Regional SES Unit has the capability to provide operators in all core SES functions throughout the Mackay local government area.

Function	Members / teams available	Notes
Flood boat	15 teams	1 team = 2 members
Storm damage	115 members	Teams usually 2-4 members
Chainsaw	16 teams	1 team = 2 members
Working at heights Roof	24 teams	1 team = 4 members
Working at heights ground	27 teams	1 team = 4 members
Vertical rescue	10 members	Team size varies on task parameters. Operational performance target is 10 members per team
Land search	74 members	Team size varies on task parameters
Traffic control	38 members	Team size varies on task parameters, but usually 2-4 members
Incident management	37 members	Team size varies on task parameters



Mackay SES Unit out assisting the community with storm damage repairs Trapping and sand bagging.

### Mackay Regional SES Unit Hours

The following indicates hours put in by volunteers across various functions.

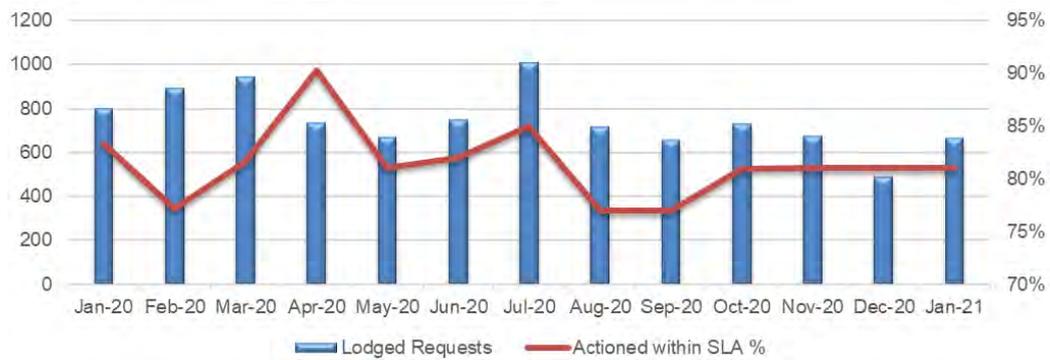
Group	Operational	Training	Maintenance	Admin	Community Engagement
Calen	152.45	27	53.6	75.75	50.45
Mackay	39	67.5	4.75	14.5	16
Mirani	42.3	103.45	39.45	68	0
Sarina	6	5	2	7	0
Armstrong Beach	2	4	1	0	0

## 8. Health & Regulatory Services

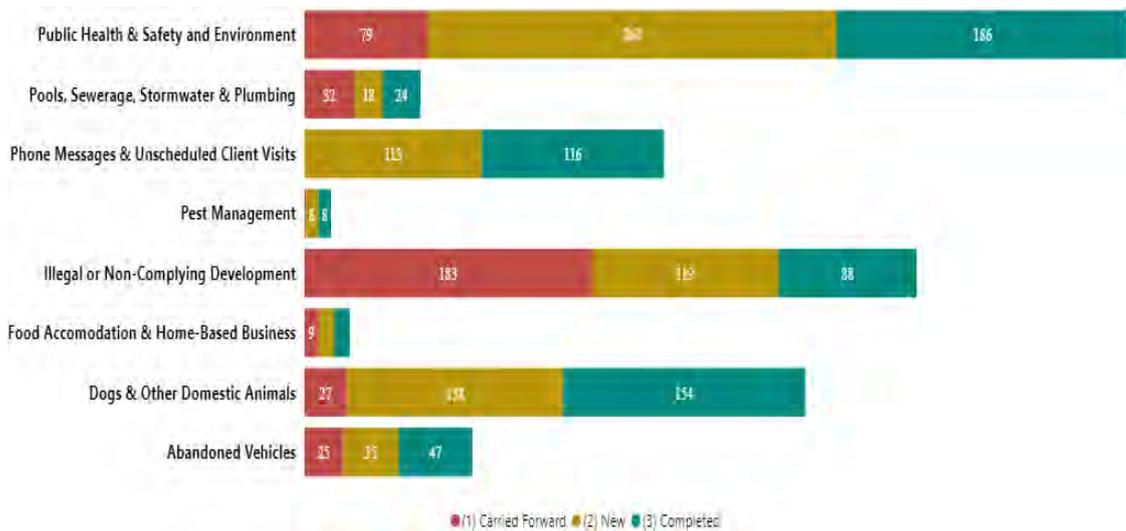
### Customer Requests

Throughout January 2021, 664 requests for service were received, compared with 489 requests for December 2020.

81% were completed in nominated timeframes for this month. Health and Regulatory Services aim to complete 85% of requests for service within nominated timeframes, however, depending on the circumstances of each individual matter and the speed at which compliance can be achieved using compliance processes, timeframes for completion can be influenced.



**Customer Request Status Tracking**



**Animal Registrations - Number of Dogs & Cats Registered**

Animal Type	Registrations January 2021
Cat	29
Dog	136

The numbers of new and renewed cat and dog registrations have remained consistent compared to previous years.

Animal Type	Renewed Registrations	New Registrations	Total
Cat	1,976	329	<b>2,304</b>



Dog	10,755	1,845	<b>12,600</b>
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**Proactive Patrols**

Proactive Patrols are conducted at times when dog owners are most likely to be walking with their pets.

During January 2021, 29 patrols were conducted across the region at locations including Mackay, Marian, Mirani, Pinnacle, Slade Point, Walkerston, Grasstree Beach, Sarina, Andergrove, Blacks Beach, Bucasia, North Mackay, South Mackay, Botanical Gardens, East Mackay, Gooseponds Area, West Mackay, Eimeo, Mount Pleasant, and Rural View

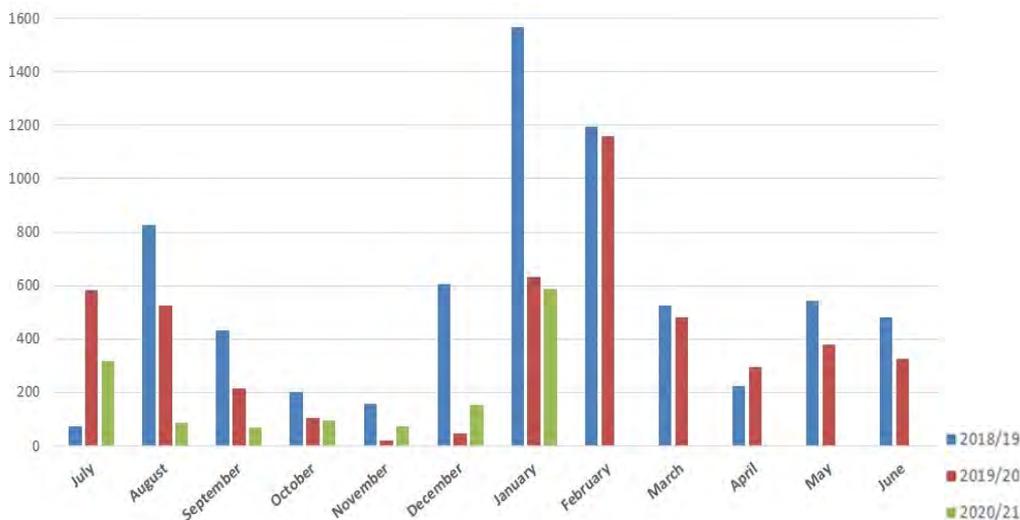
Across these patrols, 221 dogs were identified on leash, 20 people were cautioned and 14 provided education. 1 person was issued an infringement for their dog not being on a leash.

**Vector Control**

The table below represents the mosquito control work carried out by the Vector Control team in January 2021.

Sites Inspected	Sites Treated	Hectares Treated
153	108	589

**Hectares Treated**



**Licensing and Approvals Summary for January 2021**

Premises	Premises Inspected	% Compliant	% Non-compliant	New and Renewal Applications Approved
Swimming Pools	1	100%	-	1
Temp Entertainment Events	0	-	-	1
Vending	1	-	100%	0
<b>Total</b>	<b>2</b>			<b>2</b>



The table below shows that more than 93% of food businesses inspected during the month of January received an Eat Safe rating of 3 stars or greater.

Premises	Premises Inspected	5 Star	4 Star	3 Star	2 Star	0 Star	New and Renewal Applications Approved
Food Business	15	5	2	7	1	0	0

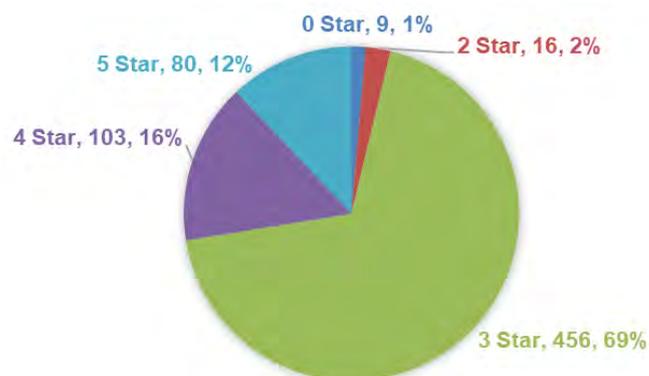
Basic summary of star rating meanings

 <b>5 Star</b>	<b>Excellent performer</b> – Excellent record keeping, procedures, cleanliness and sustainable food safety practices.
 <b>4 Star</b>	<b>Very good performer</b> – Very good cleanliness, food safety practices and some records and procedures.
 <b>3 Star</b>	<b>Good performer</b> – Good level of compliance and overall acceptable standard. Clean and meeting legislation.
 <b>2 Star</b>	<b>Poor performer</b> – Low level of compliance, more effort required. I.e. Very unclean premises, poor hygiene practices.
<b>NO STAR</b>	<b>Non-compliant performer</b> – A general failure to comply, with major effort required to rectify issues. Critical non-compliances. I.e. Very unclean premises, poor hygiene practices, incorrect temperatures and presence of pests and vermin.

*Note – Officers actively work with business operators to achieve compliance using appropriate regulatory tools.*

**Eat Safe Overall Ratings**

97% of all food businesses have a rating of 3 stars or greater.



Congratulations to the below businesses who obtained a 5-star rating in January 2021:

- Red Rooster Caneland Drive Thru
- Foodspace
- Chow In



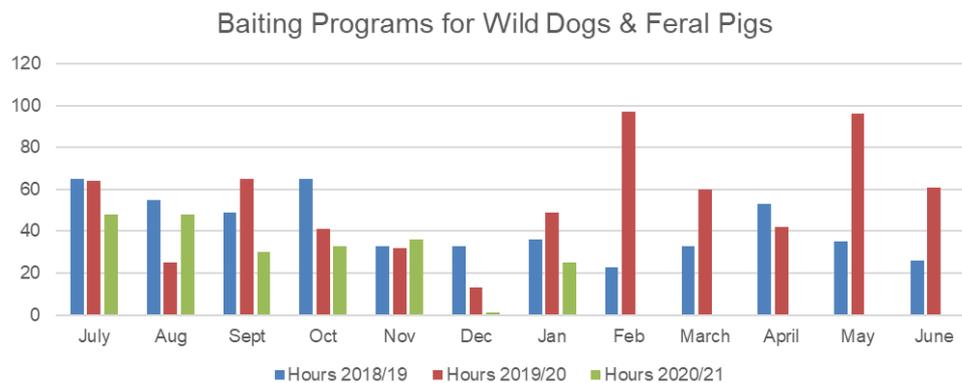
*Chow In receiving 5 Star rating*

**Education and Training Sessions**

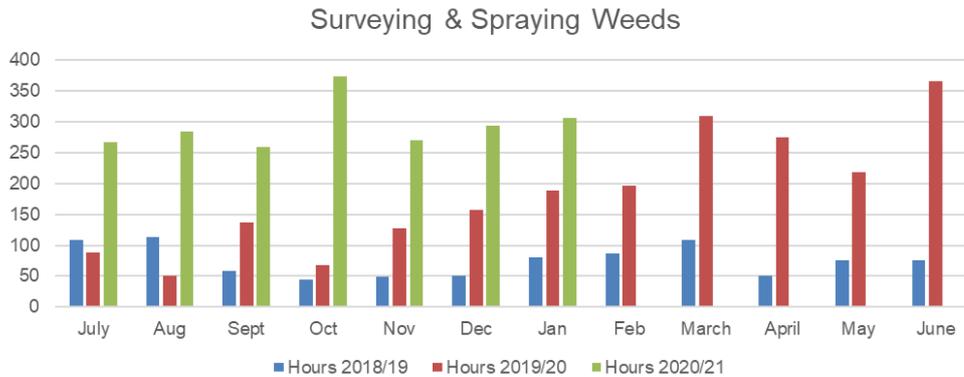
Food training sessions are conducted for non-profit organisations and for festival and events. Summary of sessions conducted:



**Pest Management**



The hours noted above include preparation activities and conducting baiting sessions. Baiting is not conducted in wet weather due to the ineffectiveness.



Surveying and spraying are conducted on roads. Surveying is also conducted on private property throughout the region.

**Emerging issues:** Nil

**Project Highlight:** Salvinia Eradication Program in School Lagoon

Pest Management Officers met with a school in October 2020 to discuss options for the removal of Salvinia from the school lagoon.

Barriers were installed to prevent spreading of the weed downstream and a spraying and removal program commenced. An inspection of the site on 13 January 2021 shows that the work completed has been a great success and there is no sign of the weed downstream.

Pest Management Officers will continue to work with the school at regular intervals to ensure the weed does not re-establish in the future.



*Salvinia infestation on lagoon October 2020*

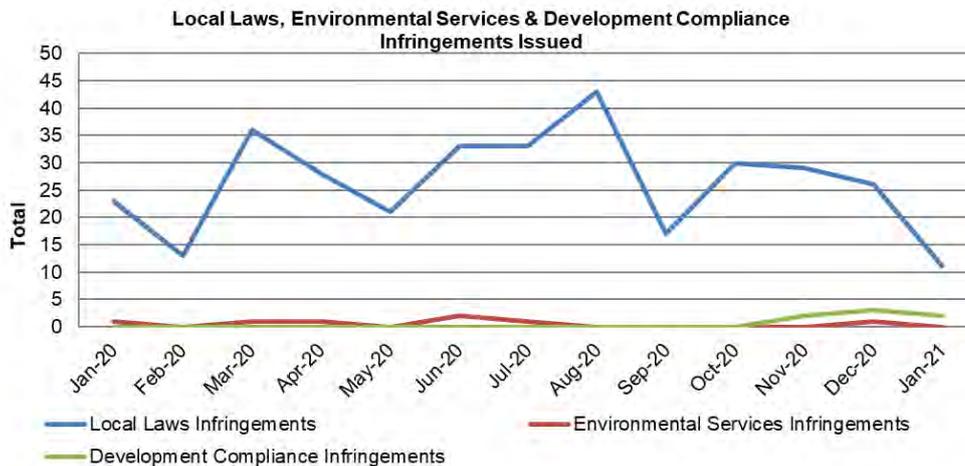


*Progress by 13 January 2021*



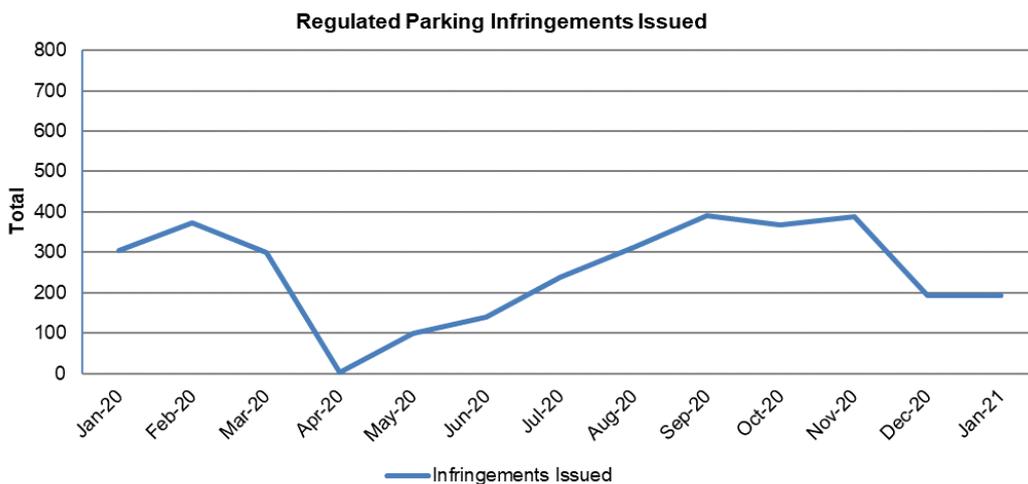
**Monthly Infringements Activity**

The graphs below provide a summary of infringement activity for Health & Regulatory Services over the past 12 months.



**Infringements Issued – January 2021**

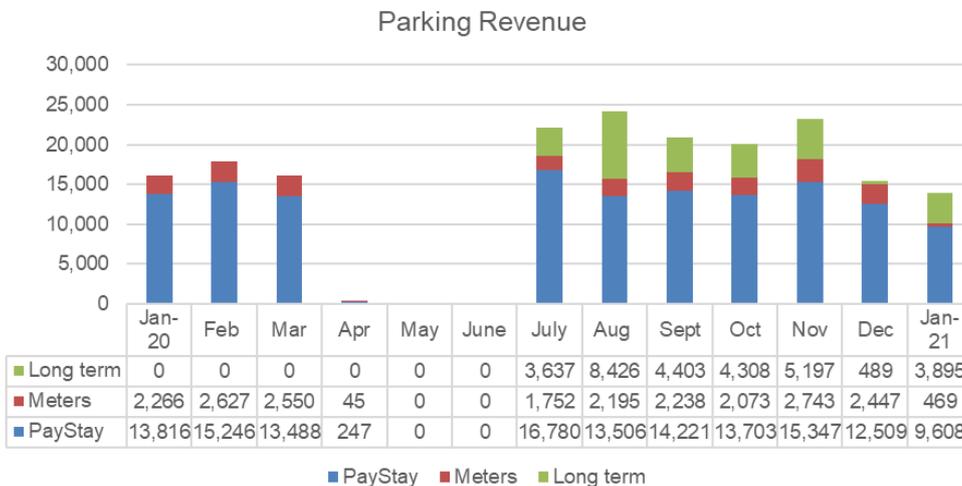
Local Laws Infringements	Environmental Services Infringements	Development Compliance Infringements
<ul style="list-style-type: none"> <li>Animal not registered within 14 days (4)</li> <li>Animal wandering at large (1)</li> <li>Fail to comply with compliance notice (4)</li> <li>Fail to comply with dangerous dog conditions (2)</li> </ul>	<ul style="list-style-type: none"> <li>Nil</li> </ul>	<ul style="list-style-type: none"> <li>Carry out assessable (Building Work) – Ind (1)</li> <li>Deposit prescribed water contaminant in waters – (1)</li> </ul>



Officers regulate 2,525 on street car parks, off street car parks, loading zones and car parks designated for disabled people, daily.



**Off Street Car Parking – PayStay**



Revenue from both Paystay and meters is significantly less than the previous January. Both parking meter machines were not operational for approximately 2 weeks whilst waiting on parts to be delivered and repaired.

## 11.4. DEVELOPMENT SERVICES

### **11.4.1. MACKAY REGION PLANNING SCHEME 2017 - PLANNING SCHEME POLICY AMENDMENT 3 - DECIDE TO ADOPT AMENDMENTS**

**Author** Manager Strategic Planning (Jaco Ackerman)  
**Responsible Officer** Director Development Services (Aletta Nugent)  
**File Reference** SPRP-042

**Attachments**

1. Ministers Guidelines and Rules Chapter 3 - Manging and amending PSPs [11.4.1.1 - 1 page]
2. Proposed amended Planning scheme policies for adoption [11.4.1.2 - 61 pages]
3. Planning scheme policies - track changes and post-consultation changes [11.4.1.3 - 72 pages]

#### **Purpose**

The purpose of this report is:

- (a) for Council to decide whether to adopt or not proceed with the proposed Planning scheme policy (PSP) amendment 3, in accordance with chapter 3, part 1, section 5.1 of the *Minister's Guidelines and Rules – version 1.1* (MGR); and
- (b)
- (c) if adopting the proposed amendment, for Council to publish a public notice and provide the required material to the Department of State Development, Infrastructure, Local Government and Planning in accordance with chapter 3, part 1, sections 5.2 and 5.3 of the MGR;

#### **Related Parties**

Parties involved in the consultation of the proposed PSP amendment 3 are:

- General community / property owners
- Local engineering consultants:
  - Premise
  - Becker Rosier Engineers
  - Tetra Consulting
- Local development industry groups:
  - Urban Development Institute of Australia (UDIA)

There were no properly made submissions received during the public consultation period.

#### **Corporate Plan Linkage**

Priority: Economy

Strategy: Facilitate development - Utilising the Planning Scheme to deliver an integrated approach to the facilitation of development and sustainable growth.

Facilitate catalytic land and infrastructure developments by attracting investment through joint ventures and partnerships with the private sector, and by working with State and Federal governments on joint initiatives.

#### **Background/Discussion**

Council was briefed on 28 October 2020 about the proposed Planning Scheme Policy (PSP) review and amendment process, including the timeline and reporting schedule for the proposed amendment. It was agreed that the initial steps of the MGR (MGR chapter 3, part 1, sections 2.1, 2.2, 3.1 & 3.2) be undertaken under delegated authority, being the steps to ‘decide to amend’, ‘prepare the amendment’ and ‘undertake public consultation’ on the proposed amendments.

On 2 November 2020 it was decided under delegated authority, to prepare the PSP amendment 3 in accordance with chapter 3, part 1, section 2.1 and 2.2 of the MGR. The intent of PSP amendment 3 is to update the following PSPs, as part of Round 2 of the PSP amendments:

- Planning scheme policy - cycle facilities and pathway design
- Planning scheme policy - pavement design
- Planning scheme policy - site regrading
- Planning scheme policy - structures / bridge design
- Planning scheme policy - subsurface drainage design

Public consultation was undertaken from 10 November 2020 until 10 December 2020 and included a public information session held on 18 November, which was attended by three local engineering consultants. No properly made submissions were received during the public consultation period.

Councillors were advised of the outcome of statutory public consultation via email on 25 January 2021.

On 1 February 2021, the following actions were undertaken under delegated authority:

- a response was prepared advising that no properly made submissions were received. The response was published on Council’s website, therefore satisfying chapter 3, part 1, sections 3.3 and 3.4 of the MGR.
- minor changes were made to the proposed amendment in accordance with Chapter 3, Part 1, Section 4.1. The changes made did not result in the proposed PSP amendment being significantly different to the version released for public consultation therefore chapter 3, part 3, sections 4.2, 4.3 and 4.4 are not applicable.

All proposed amendments to the PSPs are shown in track changes, and the minor changes made to the proposed amendment following public consultation are highlighted yellow, in Attachment 11.5.1.3 – Planning scheme policies – track changes and post-consultation changes. The post-consultation changes are summarised below:

Document	Changes proposed	Rationale
<b>Changes to amend a drafting error – MGR Chapter 3, Part 1, Step 4.1 (b)</b>		
Planning scheme policy – pavement design; Planning scheme policy – site regrading; and Planning scheme policy – structures / bridge design	Formatting, spelling and wording changes. Remove duplication.	Correct errors. Improve clarity.
Planning scheme policy – site regrading	Section 2.2 – Batter treatments <i>As a minimum unless adjoining land approvals have been granted all embankments and cuttings must be outside the road reserve. The <del>tee</del> top of any cut batter is to be 300mm inside the property boundary; the <del>top</del> toe of any fill batter is to be 300mm inside the property boundary.</i>	The requirement should be top of cut batters and toe of fill batters. Corrects an error.

<b>Changes to address new or changed planning circumstances or information – MGR Chapter 3, Part 1, Step 4.1 (c)</b>		
Planning scheme policy – site regrading	Section 2.2 – Batter treatments <i>Any batters higher than 1.0m shall require certification as to stability by an <u>RPEQ and batters higher than 2.0m shall require certification by an RPEQ</u> <del>Registered Professional Geotechnical Engineer (RPEQ).</del></i>	The provision for a Geotechnical RPEQ was relaxed to only be required where batters are higher than 2 metres. Batters between 1 and 2 meters high can be certified by an RPEQ without the specific Geotechnical qualification. New or changed planning circumstance.

The full MGR process for amending a PSP is outlined in Attachment 11.5.1.1. The remaining steps in the MGR process for amending a PSP are:

## 5 **Adoption**

- 5.1 *After completing the relevant actions under this part, the local government must decide to adopt or not proceed with the proposed PSP or PSP amendment.*
- 5.2 *Public notice about the decision must be given in accordance with the requirements in the Act and as prescribed in schedule 5.*
- 5.3 *The local government must, within 10 business days of giving public notice under this section, give the chief executive—*
  - a) *a copy of the public notice; and*
  - b) *if adopted, a certified copy of the PSP as adopted or amended, including—*
    - i. *an electronic copy of the amendment or instrument; and*
    - ii. *a copy of all electronic planning scheme spatial data files (mapping) relevant to the PSP.*

Council must decide to either adopt or not proceed with the proposed PSP amendment and, if proceeding to adopt the amendment, complete all subsequent steps of the PSP amendment process in accordance with the MGR.

If the proposed amendment is adopted, it is recommended that the PSP amendment 3 commences on 1 March 2021.

## **Consultation and Communication**

Public consultation was undertaken from 10 November 2020 until 10 December 2020.

A public information session was held on 18 November 2020 and this was attended by representatives from the following three local engineering consultancies: Premise, Becker Rosier Engineers, and Tetra Consulting.

No properly made submissions were received during this period and this was advised on Council's website on 14 December 2020.

If the proposed amendment is adopted, public notices advising of the adoption will be published as required by the MGR. Further, a MyMackay eNewsletter will be issued that advises of the amendment commencement date and provides links to further information about the amendment, including where to access the PSPs.

## **Resource Implications**

The process of making the planning scheme amendment will be managed by the Strategic Planning program.

Resources required to finalise this amendment will be funded from the current operational budget.

### **Risk Management Implications**

The proposed amendment will ensure that the PSPs are updated to reflect current policy and requirements. The risk of not proceeding with this amendment is that the PSPs will not be updated and outdated policies will continue to apply. Outdated policies reduce the effectiveness of the development assessment process and reduce Council's ability to condition development appropriately.

### **Conclusion**

It is recommended that the proposed PSP amendment 3 is adopted and becomes effective on 1 March 2021.

### **Officer's Recommendation**

THAT Council decide to adopt the following proposed Planning scheme policy amendment 3 detailed in Attachment 11.5.1.2 in accordance with the *Minister's Guidelines and Rules under the Planning Act 2016 – version 1.1*, chapter 3, part 1, section 5.1:

- Planning scheme policy - cycle facilities and pathway design
- Planning scheme policy - pavement design
- Planning scheme policy - site regrading
- Planning scheme policy - structures / bridge design
- Planning scheme policy - subsurface drainage design

AND THAT Council publish a notice in accordance with the requirements prescribed in the *Minister's Guidelines and Rules under the Planning Act 2016 – version 1.1*, chapter 3, part 1, section 5.2.

AND THAT Council give the chief executive of the Department of State Development, Infrastructure, Local Government and Planning a copy of the public notice and a certified copy of the planning scheme policies as amended in accordance with *Minister's Guidelines and Rules under the Planning Act 2016 - version 1.1*, chapter 3, part 1, section 5.3.

AND THAT the adopted Planning scheme policy amendment 3 commence on 1 March 2021.

Cr Jones sought clarification on the meaning of bound layers in pavement.

The Director of Development Services, Aletta Nugent, advised that bound layers in pavement referred to the use of any material which would strengthen and bind the pavement, for example cement lime.

### **Council Resolution ORD-2021-35**

**THAT Council decide to adopt the following proposed Planning scheme policy amendment 3 detailed in Attachment 11.5.1.2 in accordance with the *Minister's Guidelines and Rules under the Planning Act 2016 – version 1.1*, chapter 3, part 1, section 5.1:**

- **Planning scheme policy - cycle facilities and pathway design**
- **Planning scheme policy - pavement design**
- **Planning scheme policy - site regrading**
- **Planning scheme policy - structures / bridge design**
- **Planning scheme policy - subsurface drainage design**

**AND THAT Council publish a notice in accordance with the requirements prescribed in the *Minister's Guidelines and Rules under the Planning Act 2016 – version 1.1*, chapter 3, part 1, section 5.2.**

**AND THAT Council give the chief executive of the Department of State Development, Infrastructure, Local Government and Planning a copy of the public notice and a certified copy of the planning scheme policies as amended in accordance with *Minister's Guidelines and Rules under the Planning Act 2016 - version 1.1*, chapter 3, part 1, section 5.3.**

**AND THAT the adopted Planning scheme policy amendment 3 commence on 1 March 2021.**

**Moved Cr May**

**Seconded Cr Jones**

Cr May highlighted the extensive work which had been undertaken by staff to update Council's Planning Scheme policies, including the public information session and community consultation which had occurred. Cr May noted that throughout this process, no properly made submissions were received by Council.

Mayor Williamson offered his thanks to the Department for a job well done.

**CARRIED**

## Attachment A – MGR Chapter 3 – Making & amending PSPs

### Part 1 – Planning Scheme Policy (PSP)

#### 1 What this part prescribes

- 1.1 This part prescribes the process for making or amending a planning scheme policy (PSP) for section 22 of the Act.
- 1.2 However, if a proposed PSP amendment is an administrative or minor amendment, only sections 2 and 5 of this part apply to the amendment.

#### 2 Planning and preparation

- 2.1. The local government must decide to make or amend a PSP.
- 2.2. The local government must prepare the proposed PSP or PSP amendment.

#### 3. Public consultation

- 3.1 The local government must carry out public consultation on the proposed PSP or PSP amendment for a period of at least 20 days.
- 3.2 Public notice must be given in accordance with the Act and the requirements prescribed in Schedule 4.
- 3.3 The local government must consider every properly made submission about the proposed PSP or PSP amendment.
- 3.4 At the end of public consultation, the local government must prepare a consultation report about how the local government has dealt with properly made submissions, which is—
  - a) provided to each person who made a properly made submission;<sup>8</sup> and
  - b) available to view and download on the local government’s website; or
  - c) available to inspect and purchase in each of the local government’s offices.

#### 4. Changing a proposed PSP or PSP amendment

- 4.1 The local government may make changes to the proposed PSP or PSP amendment to—
  - a) address issues raised in submissions;
  - b) amend a drafting error; or
  - c) address new or changed planning circumstances or information.
- 4.2 If the local government makes changes to the proposed PSP or PSP amendment and the change results in the proposed PSP or PSP amendment being significantly different to the version released for public consultation, the local government must repeat the public consultation.
- 4.3 The local government may choose to limit the public consultation to only those aspects of the proposed PSP or PSP amendment that have changed.
- 4.4 Where consultation has been repeated, the local government must take the actions required under sections 3.3 and 3.4 for the repeated consultation.

#### 5 Adoption

- 5.1 After completing the relevant actions under this part, the local government must decide to adopt or not to proceed with the proposed PSP or PSP amendment.
- 5.2 Public notice about the decision must be given in accordance with the requirements in the Act and as prescribed in Schedule 5.
- 5.3 The local government must, within 10 days of giving public notice under this section, give the chief executive—
  - a) a copy of the public notice; and
  - b) if adopted, a certified copy of the PSP as adopted or amended, including—
    - i. an electronic copy of the amendment or instrument; and
    - ii. a copy of all electronic planning scheme spatial data files (mapping), relevant to the PSP.

<sup>8</sup> The consultation report may be given electronically or by providing a link to the location of the consultation report on the local government’s website.

PLANNING SCHEME POLICY

# CYCLE FACILITIES AND PATHWAY DESIGN



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – cycle facilities and pathway design

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### Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
1.1	Planning scheme policy amendment 3	This amendment updated references, standards, terminology and requirements to reflect modern practice.	Adopted 10 February 2021  Commenced 1 March 2021
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

## 1 Introduction

### 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

### 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in Part 1 or any other relevant part of the scheme.

### 1.3 Purpose

The purpose of this planning scheme policy is to:

1. Set out standards and design requirements to be used in the design of various types of cycle facilities, exclusively for cyclists and pathways, for use by all potential users including users with disabilities or limited mobility.
2. Ensure that the design and the provision of cycle facilities and pathways are safe and convenient and supports walking and cycling, as well as other wheeled recreational vehicles and mobility devices for a variety of trip purposes.

All relevant design principles contained in the Austroads Guides & Council's requirements referenced below must be integrated in the design of cycle facilities, pathways and any associated infrastructure. This planning scheme policy serves as a companion document to the Austroads Guides.

### 1.4 Referenced documents

- (a) Council guidelines and specifications:
  - (i) Planning scheme policy – geometric road design;
  - (ii) Mackay Regional Council – D20 Drawings and Documentation Guideline - [https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0005/13964/D20.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0005/13964/D20.pdf)
  - (iii) ADAC - How to use the As Constructed Documents (PDF 327.5 KB)
    - ADAC 4.1 - As Constructed and ADAC Survey Pick-up (PDF 3.3 MB)
    - ADAC 4.1 - Creation of XML using 12d Model (PDF 734.1 KB)
    - ADAC 4.1 - Guidelines for Creation and Submission of XML Files (PDF 3.8 MB)
    - ADAC 5.0.1 - As Constructed and ADAC Survey Pick-up (PDF 3.6 MB)
    - ADAC 5.0.1 - Creation of ADAC XML using 12d Model (PDF 623.4 KB)
    - ADAC 5.0.1 - Guidelines for Creation and Submission of XML Files (PDF 4.6 MB)
  - (iv) Construction standard C266 – Roadside Furniture
  - (v) Construction standard C254 – Segmental Pavers
  - (vi) Construction standard C261 – Pavement Markings
  - (vii) Construction standard C271 – Minor Concrete Works
  - (viii) Mackay Regional Council - List of Furniture and Materials
  - (ix) External Documents Register - [https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0003/253380/External\\_Document\\_Registry\\_for\\_Technical\\_Services\\_2019\\_002.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0003/253380/External_Document_Registry_for_Technical_Services_2019_002.pdf)
  - (x) Standard Drawings

- [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/footpaths](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/footpaths)
- (xi) [Road Hierarchy Functional Requirements and Standard Cross-sections](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/road_hierarchy_plans_and_cross-sections)
- (xii) Mackay Regional Council Cycleway Strategy  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/bike\\_plans](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/bike_plans)
- (b) DTMR Specifications  
MRTS03 Drainage, Retaining Structures and Protective Treatments  
MRTS04 General Earthworks  
MRTS06 Reinforced Soil Structures  
MRTS15 Noise Fences  
MRTS16 Landscape and Revegetation Works  
MRTS27 Geotextiles (Separation and Filtration)  
MRTS28 Contractor's Site Facilities and Camp  
MRTS51 Environmental Management  
MRTS52 Erosion and Sediment Control  
MRTS100 High Strength Geosynthetic Reinforcement in Road Embankments  
DTMR Standard Drawings
- (c) MRC Supplementary Specifications -  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/design_guidelines2)
- (d) Australian Standards:  
(i) AS1742.10 – Manual of uniform traffic control devices – pedestrian control and protection  
(ii) AS 2156.1 – Walking tracks, classification and signage  
(iii) AS2156.2 – Walking tracks infrastructure design  
(iv) AS2890.3 – Parking facilities – bicycle parking facilities  
(v) AS1428 – Design for access and mobility Set
- (e) Queensland and Australian Government:  
(i) State Planning Policy  
(ii) Queensland Cycling Strategy 2017-2027  
(iii) Queensland Cycling Action Plan 2017-2019  
(iv) Department of Transport and Main Roads - Cyclists Guidelines  
<https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Cycling-guidelines>  
(v) Department of Transport and Main Roads – Road Planning and Design Guidelines  
<https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Road-planning-and-design-manual-2nd-edition>  
(vi) Department of Transport and Main Roads – Manual of Uniform Traffic Control Devices - Part 9: Bicycle facilities  
(vii) Department of Transport and Main Roads – Manual of Uniform Traffic Control Devices - Part 10: Pedestrian control and protection  
(viii) Department of Transport and Main Roads – Bicycle network signage and wayfinding guidelines  
<https://www.tmr.qld.gov.au/Travel-and-transport/Cycling/Principal-Cycle-Network-Plans/Bicycle-network-signage-and-wayfinding-guidelines>  
(ix) Transport Operations (Road Use Management) Act 1995  
(x) Transport Operations (Road Use Management – Road Rules) Regulation 2009
- (f) Other  
Austroads – Guide to Road Design  
Part 1: Introduction to Road Design  
Part 2: Design Considerations  
Part 3: Geometric Design

Part 4: Intersections and Crossings  
 Part 4A: Unsignalised and Signalised Intersections  
 Part 4B: Roundabouts  
 Part 6: Roadside Design, Safety and Barriers  
 Part 6A: Pedestrian and Cyclist Paths  
 Part 6B: Roadside Environment  
 Part 8: Process and Documentation  
 Austroads – Guide to Traffic Management  
 Part 1: Introduction to the Guide to Traffic Management  
 Part 2: Traffic Theory Concepts  
 Part 3: Transport Study and Analysis Methods  
 Part 4: Network Management Strategies  
 Part 5: Link Management  
 Part 6: Intersections, Interchanges and Crossings Management  
 Part 7: Activity Centre Transport Management  
 Part 8: Local Street Management  
 Part 9: Transport Control Systems – Strategies and Operations  
 Part 10: Transport Control – Types of Devices  
 Part 11: Parking Management Techniques  
 Part 12: Integrated Transport Assessments for Developments  
 Part 13: Safe System Approach to Transport Management  
 Austroads: Cycling Aspects of Austroads Guides AP-G88-17  
 Austroads: Bicycle Safety at Roundabouts AP-R542-17  
 Austroads: Bicycle Wayfinding AP-R492-15

## 2 Content

### 2.1 Consultation

The Designer must consult with Council, the Developer's suitably qualified Landscape Architect (AILA) and any relevant authorities prior to and during the preparation of cycle facility or pathway design.

### 2.2 Design

A suitably qualified and experienced professional engineer (RPEQ) shall oversee all aspects of the cycle facility or pathway design. The design shall comply with all relevant requirements of:

- (a) this planning scheme policy;
- (b) all reference and source documents listed in section 1.4;
- (c) any development approval conditions relevant to the design; and
- (d) any specific relevant and reasonable request provided by Council in writing.

The RPEQ shall sign all plans associated with the project, certifying that the design complies with this section.

In designing any new cycle facility or pathway, the Designer shall take into account the existing and proposed network. Prior to presenting to Council the extent and nature of the proposed works, the Designer shall take into account relevant requirements contained in Planning scheme policy – geometric road design.

Where required in Council's Road Hierarchy Plan or Council's Bicycle Plan the Designer shall provide for the inclusion of the appropriate cycle facility or pathway. In making decisions about

the extent or location of either the cycle facility or pathway, the Designer shall also consider the location of the existing and proposed network.

It is Council's intention to provide long-term connectivity between existing cycle facilities and pathways. This will be included in Council's works and required by developments where required to conform to this aim.

Where access places or cul-de-sacs are to form part of a new road network, pedestrian and bicycle connectivity should be provided to the adjoining road network or public open spaces . The minimum width of land that provides pedestrian or bicycle linkage is 15 metres.

The Designer must be familiar with relevant geometric design requirements in terms of:

- (a) width
- (b) grade
- (c) stopping sight distance
- (d) change in grade
- (e) horizontal curvature
- (f) crossfall and drainage
- (g) superelevation
- (h) sight distance on horizontal curves
- (i) appropriate treatments at the road / path interface

The Designer shall incorporate all the requirements for disability access as appropriate for pathway design in accordance with any Council Policy on access and mobility.

## 2.3 Cycle facilities

Cycle facilities refer to facilities that are for the use of cyclists only. These facilities can be located either on-road or off-road.

For the purposes of this policy an on-road cycle facility is to cater for cyclists who may lawfully use the road or a road-related area in accordance with the road rules. Examples of these facilities include:

- Cycle lanes
- Shared traffic lanes
- Sealed shoulder
- Bicycle awareness zone
- Exclusive bicycle lanes
- Protected / separated bicycle lanes
- Contra-flow lanes
- Bicycle storage / head-start areas (at signalised intersections)

An off-road cycle facility is for the exclusive use of cyclists and must be signed for exclusive use. Off-road cycle facilities may be located within road-related areas such as the verge of the road or in other types of reserves such as parkland or freehold land. Examples of these facilities include exclusive cycle paths.

### Minimum design standards – cycle facilities

Cycle facilities can be provided either on-road or off-road. Council typically only provides dedicated on-road cycle facilities with shared-use paths being provided for cyclists off-road (see Table 2.4).

In relation to on-road cycle facilities, there are a range of potential facilities that can be designed within the road which are specified. Notwithstanding the Reference and Source Documents referred to in this Guideline the following minimum standards for more common on-road cycle facilities are shown in Table 2.3.

**Table 2.3 – Minimum design standards – typical on-road cycle facilities**

Road speed limit	Minimum width	Desirable width
40km/h or less	Consider installation of Bicycle advisory lanes or establishing cycle streets	Consider installation of Bicycle advisory lanes or establishing cycle streets
50km/h	1.2m	2.0m plus consideration for physical separation
60km/h	1.5m	2.0m plus consideration for physical separation
70km/h	1.8m	2.0m plus consideration for physical separation
80km/h or higher	2.0m plus consideration for physical separation	2.0m plus consideration for physical separation

Intersection and mid-block treatments should be considered as per *Guide to Road Design Part 6A: Paths for Walking and Cycling*.

## 2.4 Pathways

Pathways refers to footpaths and shared-use paths. Footpaths are intended to be used primarily by pedestrians including wheeled recreational vehicles, wheeled toys, mobility devices, personal mobility devices. Shared-use paths are intended to be used by pedestrians and cyclists. Pathways can be located in a road-related area such as the verge of the road or in other types of reserves such as parkland or freehold land.

All pathways in Queensland are able to be used by both pedestrians and cyclists unless signed for exclusive use by a specific user group, or subject to a separate Local Law.

### Minimum design standards – pathways

Notwithstanding the Reference and Source Documents referred to this Guideline the following minimum standards for pathways are shown in Table 2.4.

**Table 2.4 – Minimum design standards pathways**

	<b>Footpath</b>	<b>Shared Use Pathway</b>
Intended users	Pedestrians	Pedestrians Cyclists
Path Width	1.5m <sup>1</sup> 1.2m <sup>2</sup>	2.5m (preferred) <sup>3</sup> 2.5m <sup>4</sup> 2.0m (absolute minimum) <sup>3</sup>
Formation Width	2.0m	3.0m (absolute minimum) 3.5m (preferred) 4.0m <sup>4</sup>
Cross-fall minimum	1:50	1:50
Absolute maximum	1:40	1:40

The maximum longitudinal grade of any pathway shall comply with the relevant Australian Standard.

The Designer shall ensure that design details for all pathways comply with the requirements detailed in Council's relevant standard drawing.

Crossing locations at roads or other pathways will need to be considered in the design as per *Guide to Road Design Part 6A: Paths for Walking and Cycling*.

The wearing surface of all pathways/cycleways shall be as specified in the relevant standard drawings. Where the Designer wishes to propose an alternative treatment, they shall seek to obtain separate approval.

## 2.5 Provisions at structures

Designers shall consider the best way to provide for the uninterrupted movement of cyclists and pedestrians at proposed and existing structures wherever possible. Structures include bridges and underpasses over rivers, roads or railways. The reference and source documents provide information on:

- (a) acceptable widths and clearances
- (b) types of cycleways and pathways
- (c) handrails and barrier fences
- (d) bicycle bridges
- (e) approach ramps

<sup>1</sup> Full width concrete path to be provided in defined areas within the Mackay City Centre local plan area (refer to Council's standard drawing)

<sup>2</sup> With prior approval only and required to match existing paths widths

<sup>3</sup> For off-road shared paths within road reserves. Where the 2.5m wide shared pathway is to be located within a "new" road reserve and the Designer cannot satisfy adequate clearances for all users of the proposed pathway (as well as cater for the location and clearances from street trees, light poles and other similar obstructions to pathway users), the Designer shall increase the road reserve/verge width to satisfy all road user and design requirements. The absolute minimum width of 2m is only to be considered for construction in existing road reserves where it is not possible to widen the road verge.

<sup>4</sup> For shared paths within recreational park and drainage reserves.

## 2.6 Signage and pavement marking

The Designer shall provide appropriate signposting design for cycle facilities and pathways. Signs and pavement marking will provide for safe and convenient use. The signs and pavement marking will comply with the Queensland MUTCD and AS1742.

As part of all pathway networks and facility installation specific provisions for and assessment of needs should be undertaken to address Wayfinding and Disability access. This would include but not be limited to provision of relevant Tactile Ground Surface Indicators in accordance with AS 1748 and Council's requirements and establishment of relevant wayfinding signage in accordance with relevant TMR support documentation.

## 2.7 End of journey facilities

Consideration must be given to the design of adequate facilities at common destinations or nodes of cyclists and pedestrians to encourage usage. Such facilities could include:

- (a) seats
- (b) standby areas
- (c) bicycle storage
- (d) picnic facilities
- (e) hydration stations
- (f) bicycle repair stations

Bicycle storage installation design should meet appropriate criteria discussed in the Austroads Guide and be fabricated to meet AS 2890.3.

## 2.8 Documentation

The following listing outlines Council's minimum requirements for presentation of cycle facilities and pathway designs.

- (a) plans for all cycle facilities and pathways
- (b) the cycle facility or pathway plan sheet may be incorporated into the road plan where clarity permits
- (c) longitudinal Sections will be required for all off-road pathways where grades exceed 4%
- (d) cross Sections are to be provided and transition tables will be required where cross falls vary or superelevation is provided
- (e) a typical cross section will be detailed to indicate pavement materials and layer depths
- (f) confirmation by way of a site report, including photographs, confirming that the Designer has visited the site to assess site constraints to be addressed in the design process

The design shall be submitted for consideration by Council and include all correspondence, Deeds, assumptions, reference material and calculations.

All drawings and documentation to be submitted to Council for approval shall conform to the requirements of Council's Drawings and Documentation Guideline.

Failure to comply with Council's Drawings and Documentation Guidelines may result in the drawings and/or documentation being returned to the engineer without consideration by Council.

## **2.9 Special requirements**

### ***Accessibility***

All footpaths and shared paths shall include tactile indicators in accordance with AS 1428.4 design for Access and Mobility – Tactile Indicators.

All cycle facilities and pathways that lead to, or join, an existing or proposed public transport facility (such as a bus stop or taxi rank) shall comply with the Federal legislative requirements detailed in Disability Standards for Accessible Public Transport Guidelines 2004.

### ***Lighting***

All cycle facilities and pathways shall be lit to the lighting category determined from AS/NZS1158.3 "Pedestrian area (Category P) lighting- Performance and Design requirements". Minimum requirements shall be Category PP5 with the desirable level being Category PP3.

PLANNING SCHEME POLICY

# PAVEMENT DESIGN



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – pavement design

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### Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
1.1	Planning scheme policy amendment 3	This amendment updated references, standards, and requirements to reflect modern practice.	Adopted 10 February 2021  Commenced 1 March 2021
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

## 1 Introduction

### 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

### 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in assessment benchmarks in the following code/s or any other relevant part of the scheme:

- (a) Table 9.4.1.3.A – General development requirements code
- (b) Table 9.4.3.3.A – Reconfiguring a lot code

### 1.3 Purpose

The purpose of this planning scheme policy is to:

1. Set guidelines for the design of road pavement to meet the required design life, based on the subgrade strength, traffic loading and environmental factors, and including the selection of appropriate materials for subgrade, sub-base, base and wearing surface.
2. Ensure that road pavement designs select appropriate pavement and surfacing materials, types, layer thicknesses and configurations to ensure that the pavement performs adequately and requires minimal maintenance under the anticipated traffic loading for the design life adopted.
3. Set out procedures for the design of the following forms of surfaced road pavement construction:
  - (a) Flexible pavements consisting of unbound materials;
  - (b) Flexible pavements that contain one or more bound layers, including pavements;
  - (c) Containing asphalt layers other than thin asphalt wearing surfaces;
  - (d) Rigid pavements (i.e. concrete pavements).

The design of unsealed (gravel) pavements will only be allowed for low trafficked rural access roads in isolated areas where explicit prior approval has been given by Council. Dimensions for formations and pavement widths in these scenarios will be consistent with Council's road hierarchy requirements for Average Daily Traffic Volumes less than 150 vpd and in accordance with the IPWEAQ Lower Order Road Design Guidelines for lower volumes roads. Pavement designs for both categories of roads will be in accordance with the requirements of the IPWEAQ Lower Order Road Design Guidelines.

### 1.4 Referenced documents

- (a) Council guidelines and specifications:
  - (i) Planning scheme policy – geometric road design
  - (ii) Planning scheme policy – subsurface drainage design
  - (iii) Construction standard C242 – Flexible pavements

- (iv) Construction standard C244 – Sprayed bituminous surfacing
  - (v) Construction standard C245 – Asphaltic concrete
  - (vi) Construction standard C247 – Mass concrete sub base
  - (vii) Construction standard C248 – Plain or reinforced concrete base
  - (viii) Construction standard C249 – Steel fibre reinforced concrete base
  - (ix) Construction standard C254 – Segmental paving
  - (x) Construction standard C255 – Bituminous micro surfacing
  - (xi) D20 Drawings and Documentation Guideline - [https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0005/13964/D20.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0005/13964/D20.pdf)
- (b) DTMR Specifications
- [MRTS05 Unbound Pavements](#)
  - [MRTS07A Insitu Stabilised Subgrades using Quicklime or Hydrated Lime](#)
  - [MRTS07B Insitu Stabilised Pavements using Cement or Cementitious Blends](#)
  - [MRTS07C Insitu Stabilised Pavements using Foamed Bitumen](#)
  - [MRTS08 Plant-Mixed Heavily Bound \(Cemented\) Pavements](#)
  - [MRTS09 Plant-Mixed Pavement Layers Stabilised Using Foamed Bitumen](#)
  - [MRTS10 Plant-Mixed Lightly Bound Pavements](#)
  - [MRTS11 Sprayed Bituminous Surfacing \(Excluding Emulsion\)](#)
  - [MRTS12 Sprayed Bituminous Emulsion Surfacing](#)
  - [MRTS13 Bituminous Slurry Surfacing](#)
  - [MRTS17 Bitumen and Multigrade Bitumen](#)
  - [MRTS18 Polymer Modified Binder \(including Crumb Rubber\)](#)
  - [MRTS19 Cutter Oils](#)
  - [MRTS20 Cutback Bitumen](#)
  - [MRTS21 Bituminous Emulsion](#)
  - [MRTS22 Supply of Cover Aggregate](#)
  - [MRTS23 Supply and Delivery of Quicklime and Hydrated Lime for Road Stabilisation](#)
  - [MRTS30 Asphalt Pavements](#)
  - [MRTS32 High Modulus Asphalt \(EME2\)](#)
  - [MRTS35 Recycled Material Blends for Pavements](#)
  - [MRTS38 Pavement Drains](#)
  - [MRTS39 Lean Mix Concrete Sub-base for Pavements](#)
  - [MRTS40 Concrete Pavement Base](#)
  - [MRTS42 Supply of Wax Emulsion Curing Compound for Concrete](#)
  - [MRTS57 Geotextiles for Paving Applications](#)
  - [MRTS58 Subgrade Reinforcement using Pavement Geosynthetics](#)
  - [MRTS101 Aggregates for Asphalt](#)
  - [MRTS102 Reclaimed Asphalt Pavement Material](#)
  - [MRTS103 Fillers for Asphalt](#)
  - [MRTS104 Retarding Pavement Reflective Cracking using Asphalt Geosynthetics](#)
  - DTMR Standard Drawings
- (c) MRC Supplementary Specifications - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/design_guidelines2)
- (d) Queensland authorities:
- (i) State Planning Policy
- (e) Council documents
- (i) External Documents Register - [https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0003/253380/External\\_Document\\_Register\\_for\\_Technical\\_Services\\_2019\\_002.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0003/253380/External_Document_Register_for_Technical_Services_2019_002.pdf)
  - (ii) Drawings - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/roads](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/roads)
  - (iii) Planning Scheme Road hierarchy overlay - [https://www.mackay.qld.gov.au/road\\_hierarchy\\_overlay](https://www.mackay.qld.gov.au/road_hierarchy_overlay)

(iv) Road Hierarchy Documentation and Acceptable Cross-sections - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/road\\_hierarchy\\_plans\\_and\\_cross-sections](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/road_hierarchy_plans_and_cross-sections)

- (f) Other:
- (i) Australian Road Research Board (2005) *Sealed local roads manual*;
  - (ii) Australian Road Research Board (2005) *Unsealed local roads manual*;
  - (iii) Australian Road Research Board (2020) – Best Practice Guide – Materials
  - (iv) Australian Road Research Board (2020) – Best Practice Guide – Sealed Roads
  - (v) Australian Road Research Board (2020) – Best Practice Guide – Unsealed Roads
  - (vi) AustRoads – Guide to Pavement Technology
    - Part 1: Introduction to Pavement Technology
    - Part 2: Pavement Structural Design
    - Part 3: Pavement Surfacing
    - Part 4: Pavement Materials
      - Part 4A: Granular Base and Sub Base Materials
      - Part 4B: Asphalt
      - Part 4C: Materials for Concrete Road Pavements
      - Part 4D: Stabilised Materials
      - Part 4E: Recycled Materials
      - Part 4F: Bituminous Binders
      - Part 4G: Geotextiles and Geogrids
      - Part 4I: Earthworks Materials
      - Part 4J: Aggregate and Source Rock
      - Part 4K: Seals
      - Part 4L: Stabilising Binders
    - Part 5: Pavement Evaluation and Treatment Design ([PDF](#) | online being built)
    - Part 6: Unsealed Pavements
    - Part 7: Pavement Maintenance
    - Part 8: Pavement Construction
    - Part 10: Sub-Surface Drainage
  - (vii) Think Brick Australia – Clay Paving Manual;
  - (viii) Department of Transport and Main Roads, Pavement Rehabilitation Manual
  - (ix) Department of Transport and Main Roads, [Pavement Design Supplement](#)
  - (x) Department of Transport and Main Roads, Technical Notes - [Pavements, materials and geotechnical](#)
  - (xi) Department of Transport and Main Roads, Guideline - Structural design procedure of pavements on lime stabilised subgrades guideline
  - (xii) IPWEAQ – Lower Order Road Design Guidelines

## 2 Pavement design criteria – design variables

Regardless of the type of road pavements proposed, the design of the pavement shall involve consideration of the following six input variables:

- (a) design traffic;
- (b) the current and future hierarchy of the surrounding transport network and impacts of the proposed project on it;
- (c) subgrade evaluation;
- (d) environment;
- (e) pavement and surfacing materials; and
- (f) construction and maintenance considerations.

A suitably qualified and experienced professional engineer (RPEQ), using an acceptable approach outlined in this Guideline shall determine the road pavement thickness, material types and pavement configuration.

For pavement designs in general the Designer should ensure that the pavement design structure does not negate the ability for rehabilitation of the pavement at the end of its initial design life. A range of pavement options are to be considered and the most cost-effective option for the design life is to be selected. For example, unbound granular base and sub-base structures enable rehabilitation works to be undertaken on the pavement structure where stabilised base and sub-base often negate this option.

Should pavement designs be provided such that pavement structures are not conducive with rehabilitation of the pavement materials Council will require a “whole of life” cost analysis to prove the pavement selected is the most cost-effective option.

Together with consideration of the various alternative pavement designs for the project the Designer shall provide an economic analysis of the alternative designs in accordance with Section 10 of Austroads – Guide to Pavement Technology Part 2. The economic assessment shall consider “whole of life” cost analysis for the pavement with the selected option for construction being that which results in the lowest present worth of costs.

The service provided by contributed assets ultimately becomes the responsibility of the Council to continue to deliver. To support this delivery, Council may require that during the design phase, a life cycle approach be adopted that considers the ongoing management obligations of the asset.

- (1) The required levels of service for contributed assets should be met in the most cost-effective way, and therefore infrastructure should be provided in a manner which maximises resource efficiency and minimises whole of life cycle costs.
- (2) Early identification of costs enables effective decisions to be made in balancing performance, reliability, maintainability, maintenance support and other goals against life cycle costs. Decisions made early in an asset’s life cycle, for example during the design phase, have a much greater influence on reducing life cycle costs than those made post-handover.
- (3) The preparation of a life cycle management plan and funding options may be requested for those proposed contributed assets that are considered over and above the level of service represented by the standards contained in this planning scheme policy.
- (4) For these assets to be acceptable to Council, the lifecycle costing of the proposed asset needs to be evaluated to determine: -
  - (a) maintenance and operational requirements for the ongoing management of the asset; and
  - (b) the costs associated with the ongoing management of the asset.
- (5) The maintenance, operational and replacement costs of these assets are to be evaluated over the operating life of the asset or for a minimum of 30 years. Applicants should provide: -
  - (a) a detailed assessment of the relevant infrastructure network and how it operates;
  - (b) a detailed management system; and
  - (c) a forecast of ongoing maintenance costs associated with the operating life of the asset.
- (6) A life cycle management plan should consider all management options and strategies as part of the asset lifecycle from planning to disposal. The objective of this is to consider lowest life cycle cost (rather than short term savings) when making asset management decisions.

- (7) Strategies are to be defined for each stage. Recurrent costs, being operations and maintenance, and capital costs, such as renewal/rehabilitation/replacement, upgrade/augmentation, enhancement (new assets) and disposal.

### 3 Design traffic

#### 3.1 General

The design traffic shall be determined based on the following minimum pavement design life:

- (a) urban streets and roads – 25 years;
- (b) rural streets and roads – 25 years;
- (c) commercial and industrial streets and roads – 25 years;
- (d) rigid (concrete) – 40 years.

Design traffic shall be calculated in equivalent standard axles (ESA's) for the applicable design life of the pavement, taking into account present and predicted commercial traffic volumes, axle loadings and configurations, commercial traffic growth and street capacity.

In the instance of new developments and areas identified for future development or redevelopment, the design traffic shall take account of both the construction traffic associated with the subject developments, the operational traffic for the development and future developments within the likely traffic catchment for the street or road.

This shall include consideration for staged development (where construction traffic for subsequent stages use pavement constructed in preceding stages) to account for construction traffic, or reconstruct the previously constructed pavements prior to the acceptance of works of the last contributing stage of the development.

The pavement design report shall include all traffic data and/or assumptions made in the calculation of the design traffic. Where practicable, traffic data shall be based on actual traffic counts (less than 3 years old) undertaken by either Council or the Designer.

In determining the AADT/DESA's for any specific road in rural areas, the Designer shall take into account any seasonal use factors of the road – for example cane haulage.

Any traffic count used to determine the AADT shall be for a minimum of 72 hours and be taken to achieve an appropriate determination of the AADT, peak hour volumes and percentage use by commercial vehicles.

Council will provide all available relevant traffic data held, upon request. The Designer will be responsible for the cost of obtaining traffic data necessary for pavement design assessments.

In the absence of actual traffic data, the following traffic values (in ESA's) may be taken as a guide to the **minimum** design traffic, but shall be subject to variation depending on the circumstances for the particular traffic generating catchment for the street.

**Street type – Design ESA's**

Laneway	2 x 10 <sup>4</sup>
Access Place (Urban)	2 x 10 <sup>4</sup>
Access Street (Urban)	3.5 x 10 <sup>4</sup>
Access Place (Rural)	4 x 10 <sup>4</sup>
Access Street (Rural)	1 x 10 <sup>5</sup>
Industrial (Access & Collector)	5 x 10 <sup>5</sup> (To be determined by specific design data)
Minor Collector	1 x 10 <sup>6</sup>
Major Collector	2 x 10 <sup>6</sup> (To be determined by specific design data)
Sub Arterial(Traffic & Controlled Distributor)	2 x 10 <sup>6</sup> (To be determined by specific design data)
Arterial	1 x 10 <sup>7</sup> (To be determined by specific design data)

For roads of higher order than those listed above, design traffic determination shall be on a case by case basis for a design life of not less than 25 years.

In new development, or where traffic figures are not able to be accurately determined, the designer may use the following data to determine the design traffic loading in lieu of an approved alternative approach:

Construction traffic	20 ESA/equivalent allotment plus appropriate allowance for civil construction of any future stages
Traffic generation rates	10vpd/allotment (residential development)
Annual Traffic growth rates	0.5% (local residential street – post fully developed) 1.0% (minor collector residential street) 1.5% (major collector streets) 1.5% (arterial and sub-arterial roads)
Commercial Vehicles	3% (local residential streets) 7% (minor collector street) 8% (industrial access and collectors streets) 5% (major collector street)
ESA/HVAG	0.3 ESA/HVAG Local Streets 0.5 ESA/HVAG Collector Streets 0.9 ESA/HVAG Sub-arterial and Arterial Streets 0.7 ESA/HVAG All Rural Roads
N <sub>HVAG</sub>	Rural 2.8 Urban 2.5

### 3.2 Subgrade evaluation

Except where a mechanistic design approach is employed using Austroads – Guide to Pavement Technology Part 2: Pavement Structural Design, the measure of subgrade support shall be the soaked four day California Bearing Ratio (CBR). Where a mechanistic design approach using linear elastic theory is employed for flexible pavements, the measure of subgrade support shall be in terms of the elastic parameters (modulus, Poisson's ratio).

The following factors must be considered in determining the design strength/stiffness of the subgrade:

- (a) sequence of earthworks construction;
- (b) the compaction moisture content and field density specified for construction;
- (c) moisture changes during service life;
- (d) subgrade variability; and
- (e) the presence or otherwise of weak layers below the design subgrade level.

The subgrade design CBR adopted for the pavement design must consider the effect of moisture changes in the pavement and subgrade during the service life. Accordingly consideration must be given to the provision of subsurface drainage in the estimation of equilibrium in-situ CBRs, and hence in the design of the pavement structure.

Warrants for the provision of subsurface drainage are given in Planning scheme policy – subsurface drainage design. If subsurface drainage is not to be provided, then the Design CBR adopted must allow for a greater variability in subgrade moisture content during the service life of the pavement, and hence Design Moisture Content above the Optimum Moisture Content.

The calculation of the Design CBR shall be based on soaked conditions. All design assumptions and engineering judgments used to determine the Design CBR are to be included in the pavement design report.

- (a) Soaked conditions are to be adopted for the calculation of Design CBR and shall be based on a minimum of 3 x 4-day soaked CBR laboratory samples for each subgrade area compacted to 100 percent of standard maximum dry density
- (b) The maximum spacing of test sites for field inspection pits is to be:
  - (i) 100 metres for urban projects, minimum of two tests; and
  - (ii) 250 metres for rural projects, minimum of three tests;
- (c) Once each subgrade area has been classified according to its particular soil type and drainage assessed, the Design CBR for each subgrade area is computed by using the appropriate formulae as follows:
  - (i) Design CBR = Least of individual CBRs, for less than five results
  - (ii) Design CBR = 10<sup>th</sup> percentile of all individual CBRs, for five or more results  
=  $C - 1.3S$
  - (iii) Where C is the mean of all individual CBR tests, and  
S is the standard deviation of all values

Where the Design CBR, as determined above, is calculated to be less than 3, then the design engineer is to:

- (a) Design and detail, by an industry recognised method acceptable to Council, the improvement measures required to improve the insitu sub-grade to CBR 3; and
- (b) Design the pavement above the improved subgrade.

Where practicable, the design obtained by adopting the CBR from laboratory testing should be confirmed by testing existing road pavements near to the job site under equivalent conditions and displaying similar sub grades.

The pavement design report shall be prepared and certified by the Designer or a sub-consultant who is a suitably qualified and experienced RPEQ and include a summary of all laboratory and field test results and assumptions and / or calculations made in the assessment of subgrade support.

### 3.3 Environment

The environmental factors that significantly affect pavement performance are moisture and temperature. Both of these factors must be considered at the design stage of the pavement. Reference should be made to the following documents:

AustRoads – Guide to Pavement Technology Part 8: Pavement Construction  
AustRoads – Guide to Pavement Technology Part 10: Sub-Surface Drainage

The following factors relating to moisture environment must be considered in determining the design subgrade strength/stiffness and in the choice of pavement and surfacing materials:

- (a) rainfall / evaporation pattern;
- (b) permeability of wearing surface;
- (c) depth of water table and salinity problems;
- (d) relative permeability of pavement layers;
- (e) whether shoulders are sealed or not; and
- (f) pavement type (boxed or full width).

The effect of changes in moisture content on the strength/stiffness of the subgrade shall be taken into account by evaluating the design subgrade strength parameters (i.e. CBR or modulus) at the equilibrium moisture content likely to occur during the design life, i.e. the Design Moisture Content. The provision of subsurface drainage may, under certain circumstances, allow a lower Design Moisture Content, and hence generally higher Design CBR.

The effect of changes in temperature environment must be considered in the design of pavements with asphalt wearing surfaces, particularly if traffic loading occurs at night when temperatures are low, thus causing a potential reduction in the fatigue life of thin asphalt surfacing. The effect of changes in temperature environment should also be considered for bound or concrete layers.

The pavement design report shall include all considerations for environmental factors, and any assumptions made that would reduce or increase design subgrade strength, or affect the choice of pavement and surfacing materials.

### 3.4 Pavement and surfacing materials

The design will take into account the CBR of the Subgrade material when designing the pavement. In doing so the Designer shall consider what construction techniques and subsequent plant and equipment

are likely to be adopted. The adopted Subgrade CBR and traffic loading utilised to obtain the pavement design are to be included as a notation on the plans and within the specifications.

Nominal pavement designs are not to be used. The Design is to explore and document several options to minimise the use of virgin materials, for example, but not limited to:-

- Unbound pavements
- Modified/stabilised pavement layers
- Lime stabilisation of Subgrade
- Tensar grid
- Reuse of existing pavement materials
- Insitu stabilisation of existing pavement materials
- Foam Bitumen stabilisation
- Bitumen Treated Base (BTB)
- Utilising existing quarries / pit gravels

The Pavement Designer is to account for the availability of local quarries to supply approved pavement gravels to reduce supply/cartage costs.

The extent of the project that may require Subgrade treatment, and the type of treatment required, are to be considered by the Designer. The Designer shall document all relevant design assumptions for information of the roadwork contractor. An allowance for Subgrade treatment is to be made in the design estimate as a standard, or provisional, item in the case of Council designs.

Pavement materials can be classified into essentially four categories according to their fundamental behaviour under the effects of applied loadings:

- (a) unbound granular materials, including modified granular materials
- (b) bound (cemented) granular materials
- (c) asphaltic concrete
- (d) cement concrete

Surfacing materials can be classified into essentially three categories or types:

- (i) sprayed bituminous seals (chip seals)
- (ii) asphaltic concrete and bituminous micro surfacing (cold overlay)
- (iii) cement concrete

All material types shall satisfy the requirements of the relevant construction specification applying to the project.

The use of sprayed bituminous seal (chip seal) is **not an acceptable** wearing surface on any urban street, regardless of road hierarchy level classification, unless otherwise approved by Council.

## 4 Pavement thickness design

### 4.1 Pavement structure – general

Unless otherwise approved, all pavement materials shall be supplied from commercial quarries, or recycled materials which meet required specifications, where the material is to comply with the requirements of the Department of Main Roads Standard Specification MRTS05 *Unbound Pavements*.

Current test results may be required to be submitted to Council to support the quality of material that is proposed to be used.

Where pavement materials from new quarries or gravel pits are proposed for use, current test results for CBR, Atterberg limits and material grading (as a minimum) shall be provided for Council approval within fourteen (14) days of the design submission.

Notwithstanding subgrade testing and subsequent pavement thickness design, the thickness of sub base and base layers shall not be less than that set out in Tables 4.1.A and 4.1.B below.

**Table 4.1.A – Sub-base and base layer pavement thickness – flexible pavement**

Design (DESA's)	Traffic	Pavement Layer (mm)	
		Sub-base	Base
<1 x 10 <sup>5</sup> < 2x 10 <sup>5</sup>		125	125
>2 x 10 <sup>5</sup>		150	150

**Table 4.1.B – Sub-base and base layer pavement thickness – rigid pavement**

Design (DESA's)	Traffic	Pavement Layer (mm)	
		Sub-base	Base
All values		100	150

The sub base layer shall extend a minimum of 300mm behind the back of any kerbing and/or channel.

The base and surfacing shall extend to the face of any kerbing and/or channel. Where the top surface of the sub base layer is below the level of the underside of the kerbing and/or channel, the base layer shall also extend a minimum of 300mm behind the rear face of the kerbing and/or channel.

For un-kerbed roads, the sub base and base layers shall extend at least to the nominated width of shoulder and shall provide for free drainage of both layers.

The Designer or pavement design engineer shall make specific allowance for traffic load concentrations within carpark areas (e.g. entrances/exists). The minimum pavement thickness for carparks is to be 150mm.

The Designer or pavement design engineer shall make provision for pavement layer drainage on the assumption that during the service life of the pavement ingress of water will occur.

Pavement design systems either mechanistic or empirical can be utilised in accordance with recommendations contained in Austroads – Guide to Pavement Technology Part 2: Pavement Structural Design. Council's preferred system of design utilises computer software such as CIRCLY to determine pavement structures. In such instances all electronic files for the design output are to be provided to Council as evidence of the design.

In general terms all material properties including Poisson's ratios and vertical modulus used for the various pavement options shall be extracted from the following reference documents unless alternatives can be supported by independent test data:

- Austroads – Guide to Pavement Technology Part 2: Pavement Structural Design
- Department of Transport and Main Roads, [Pavement Design Supplement](#)
- Department of Transport and Main Roads Specifications (MRTS)
- Department of Transport and Main Roads, Guideline - Structural design procedure of pavements on lime stabilised subgrades guideline

Council provides the following CIRCLY6 and CIRCLY7 materials databases as the basis of the thickness designs.

[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements)

Should the Designer utilise alternative materials criteria Council would require submission of justification for these criteria to be used including test data.

Pavement designs shall match existing pavement widths, where works are required on, or to extend an existing street or road and the existing pavement width is greater than specified.

#### **4.2 Unbound granular flexible pavements (bituminous surface)**

The Designer shall refer to the relevant Reference document listed below, and adhere to the design approach detailed in the document, for the design of sealed flexible pavements:

- <10<sup>6</sup> EAS's AustRoads - Guide to Pavement Technology - Part 2: Pavement Structural Design Section 12.
- >10<sup>6</sup> EAS's AustRoads - Guide to Pavement Technology - Part 2: Pavement Structural Design Section 2 - 11.

The design of the pavements is based on the traffic volumes (measured in ESA's) over the design life of the pavement.

- Unbound granular flexible pavements designed in accordance with
- Austroads – Guide to Pavement Technology Part 2: Pavement Structural Design shall use the 95% confidence limit curves for urban projects and 90% confidence limits for rural projects.

Temporary turnarounds (eg. at development stage boundaries) are to be compacted and sealed gravel, minimum 150mm deep and contained within a road reserve or appropriate easement.

#### **4.3 Flexible pavements containing bound layers (bituminous surfaced)**

Cement stabilised base or sub-base courses are not preferred for new road construction

Flexible pavements containing one or more bound layers including cement stabilised layers or asphaltic concrete layers other than thin asphalt surfacing, shall be designed in accordance with:

- Austroads – Guide to Pavement Technology Part 2: Pavement Structural Design
- AustRoads – Pavement design for light traffic – a supplement to AustRoads pavement design.

#### **4.4 Rigid pavements**

Rigid (concrete) pavements shall be designed in accordance with Austroads – Guide to Pavement Technology Part 2: Pavement Structural Design.

## 5 Surfacing design

### 5.1 Choice of surface types

Except where the pavement is designed for concrete surfacing on urban access streets and places, the wearing surface shall be a bituminous wearing surface as indicated on the standard road hierarchy cross-sections as follows:

- (a) all street and roads (urban areas) – primerseal, plus asphalt; or
- (b) all streets and roads (rural areas):
  - (i) prime plus two coat chip seal; or
  - (ii) primer seal, plus asphalt; or
  - (iii) primer seal plus final seal and
  - (iv) primerseal plus asphalt on all heavy vehicle or agricultural equipment rotation locations at intersections or property access locations.

At all intersections and cul-de-sac turning circles on streets the design engineer shall take into account the vehicle braking and turning movements in the design and specification of the bituminous materials to be adopted.

Consideration must be given in the selection of surfacing grade and type to impacts of heavy vehicle generated shear stress on the design life of the surfacing type

Council may approve variations to these requirements in special circumstances. However, to obtain the variation approval, the Designer must present a written developed case outlining the benefits of the modification including consideration of capital and maintenance impacts to Council of the proposed change. Council reserves the right to refuse the request.

### 5.2 Sprayed bituminous seals (chip seals)

The design of sprayed bituminous (chip) seals, including primer seals, shall be in accordance with AustRoads – Guide to Pavement Technology Part 4K: Seals.

All aggregate used shall be precoated.

7mm primer seals shall be indicated on the Drawings below all asphalt surfacing. Where a 7mm primer seal is inappropriate, a 10mm primer seal shall be used in lieu.

Two-coat chip seals shall be double-double seals comprising a minimum of two coats binder and two coats of aggregate. The preferred seal types are:

- (a) 1<sup>st</sup> coat – 1mm; and
- (b) 2<sup>nd</sup> coat – 10mm.

Single coat chip seals shall only be approved if asphaltic concrete is to be applied as the finished surface at a nominated later date.

### 5.3 Bituminous micro surfacing (cold overlay)

Any bituminous micro surfacing, also referred to as 'cold overlay', shall be designed to provide a nominal compacted thickness of not less than 8mm.

## 5.4 Asphaltic concrete

In general terms the minimum layer thickness to be applied are as described on the road hierarchy type cross sections but are as follows:

- AC10M for up to 35mm
- AC14M greater than 35mm

In all road hierarchy's of major collectors and above Asphaltic surfacing shall utilise a PMB binder of a suitable grade to the specific situation, loading and shear stresses assessed. Similar assessments are to be considered for all intersections including those of low order streets and roads which should be assessed for impacts of traffic and particularly heavy vehicle shear stresses which may generate the need to utilise PMB binders.

On urban and rural roads the asphalt mix design shall be in accordance with AustRoads – Guide to Pavement Technology Part 4B: Asphalt & MRTS30 Asphalt Pavements.

The Designer shall provide a minimum asphaltic compacted layer thickness as shown on the appropriate Council Standard Cross-section Drawing and not less than 50mm on intersections involving a collector street, or higher road hierarchy classification streets/roads.

A 7mm primer seal shall be indicated on the Drawings below all asphalt surfacing. Where a 7mm primer seal is considered inappropriate, a 10mm primer seal shall be indicated in lieu.

## 6 Documentation – design criteria and calculations

All drawings and documentation to be submitted to Council shall conform to the requirements of Council's Drawings and documentation guidelines. A copy of these guidelines will be made available on request.

The drawings shall clearly indicate the structure, material types and layer thicknesses of the proposed pavement and wearing surface.

All considerations, assumptions, subgrade test results, reference material and calculations shall be submitted with the pavement and wearing surface course design.

Failure to comply with Council's Drawings and documentation guidelines may result in the drawing and/or documentation being returned to the Designer without consideration by Council.

Documentation submitted shall include the Pavement Design report and provision of all electronic files from relevant pavement design software utilised where applicable.

PLANNING SCHEME POLICY

# SITE REGRADING



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – site regrading

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### Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
1.1	Planning scheme policy amendment 3	This amendment updated references, standards, and requirements to reflect modern practice.	Adopted 10 February 2021  Commenced 1 March 2021
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

## 1 Introduction

### 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

### 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in assessment benchmarks in the following code/s or any other relevant part of the scheme:

- (a) Table 9.4.1.3.A – General development requirements code

### 1.3 Purpose

The purpose of this planning scheme policy is to:

1. Set out requirements for site regrading in Council works and land development and subdivision works to be approved by Council.
2. Assist the Designer in achieving:
  - (a) efficient and economical design;
  - (b) enhancement of the environmental character of the site whilst maintaining the natural features of the site;
  - (c) provision of safe conditions for construction commensurate with the proposed purpose of the works; and
  - (d) minimal impact on adjoining properties and other works.

The scope of this planning scheme policy assumes that the Designer is familiar with requirements cited in the various construction specifications, specifically those related to earthworks, clearing and grubbing, erosion and sedimentation.

Additionally, the Designer will need to make reference to Planning scheme policy – geometric road design, Planning scheme policy – healthy waters and Planning scheme policy – stormwater drainage design.

### 1.4 Referenced documents

- (a) Design specifications:
  - (i) Planning scheme policy – geometric road design;
  - (ii) Planning scheme policy – healthy waters;
  - (iii) Planning scheme policy – stormwater drainage design;
  - (iv) Planning scheme policy – landscape;
  - (v) Standard drawings – various;
  - (vi) Construction specification C211 – Control of erosion and sedimentation
  - (vii) Construction specification C212 – Clearing and grubbing
  - (viii) Construction specification C213 – Earthworks
  - (ix) Construction specification C273 – Landscaping
- (b) DTMR Specifications
  - MRTS03 Drainage, Retaining Structures and Protective Treatments
  - MRTS04 General Earthworks

MRTS06 Reinforced Soil Structures  
 MRTS15 Noise Fences  
 MRTS16 Landscape and Revegetation Works  
 MRTS27 Geotextiles (Separation and Filtration)  
 MRTS28 Contractor's Site Facilities and Camp  
 MRTS51 Environmental Management  
 MRTS52 Erosion and Sediment Control  
 MRTS100 High Strength Geosynthetic Reinforcement in Road Embankments  
 DTMR Standard Drawings

- (c) MRC Supplementary Specifications -  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/design_guidelines2)
- (d) Australian Standards:  
 (i) AS3798 – Guidelines on earthworks for commercial and residential developments  
 (ii) AS4970 – The protection of trees on development sites  
 (iii) AS4373 – Pruning of Amenity trees  
 (iv) AS4678 - Earth Retaining structures
- (e) Queensland authorities:  
 (i) State Planning Policy
- (f) Council documents  
 (i) External Documents Register -  
[https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0003/253380/External\\_Document\\_Registry\\_for\\_Technical\\_Services\\_2019\\_002.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0003/253380/External_Document_Registry_for_Technical_Services_2019_002.pdf)  
 (ii) Drawings -  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/drainage](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/drainage)

## 1.5 Site regrading concept

Areas of a site proposed for building or recreational purposes may not be suitable in their natural state for their intended function without improvement works to:

- (a) address flooding and drainage issues;
- (b) fill gullies or create emergency flow paths after underground stormwater piping has been installed;
- (c) allow improved runoff from flat ground; and
- (d) allow effective recreational use or give reasonable access.

Earthworks, with the exception of those considered acceptable development under section 5.8 of the MRPS 2017, are not permitted until a full assessment has been carried out by a suitably qualified Registered Professional Engineer of Queensland (RPEQ) to determine the effect of the work and the control measures required to mitigate disruptions to the following:

- a) local drainage patterns;  
 b) existing drainage systems;  
 c) effect on adjacent properties;  
 d) retaining wall requirements;  
 e) existing soil/land stability;  
 f) effect on existing vegetation; and  
 g) changes to existing groundwater levels and patterns.

Where natural surface levels are above the Defined Flood Event (DFE) or the Defined Storm Tide Event (DSTE) excavation to lower levels will not be permitted unless evidence can be provided that the excavated area remains free draining..

Filling of land below the DFE or DSTE will only be permitted where justification is provided to Council that:

- (a) the filling will not have a detrimental effect on other land;
- (b) the filling will not affect overland flow paths for stormwater; or
- (c) that the proposed filling is in the public interest to an extent that outweighs any detrimental effects on other lands.

The Designer shall review the natural surface contours and where necessary design finished surface levels that ensure the land levels comply with Council's specifications.

Where practical, areas should be regraded to minimise the necessity for interallotment drainage systems and allow overland water to flow naturally to roads or drainage reserves without excessive concentration.

Care shall be taken to provide depressions for overland flow from low points and over major drainage lines, to direct water runoff for storms up to the DFE to a positive outfall location.

The Designer shall ensure the proposed regrading works does not result in diversion and ponding of stormwater from the development onto adjoining land. Stormwater shall not be diverted from one adjoining land onto another.

The design of site regrading areas, in conjunction with the design of roadworks, shall be considered with the objective of balancing cut to fill volumes and achieving both an economical works and to minimise the haulage of imported fill or spoil to and from the works site.

The Designer shall consider the implications of site regrading in relation to the existing natural environment. Generally, site regrading shall be minimised in dense vegetation areas.

## 1.6 Special treatment of particular areas

In the event that an area is known to be affected by or inundated by local stormwater flows, the Designer shall investigate the existing conditions and detail how they relate to the proposed works. The Designer shall provide a preliminary report to Council detailing all data obtained in the investigation and recommend appropriate contour adjustments. The report shall be accompanied by sketch plans to clarify recommendations.

The Designer shall take into account all constraints either natural or otherwise that are to be identified as a burden on the site. The property may ultimately be affected by a "*restriction as to user*", which may be controlled by a legal instrument placed on title to the land advising prospective purchasers of any restrictions affecting the land.

The proposed finished surface or filled area shall be designed to accommodate sufficient cover over stormwater drainage lines and permitting surface stormwater flow to be guided to field inlet pits if depressions are retained in the finished surface contouring.

A geotechnical report is required to be submitted to Council and shall detail the following:

- (a) the site specific preparation and compaction requirements;

- (b) the suitability of the site for the proposed earthworks and any constraints that the earthworks would create for further development; and
- (c) the consequences of the proposed earthworks.

A description of the minimum acceptable quality of fill shall also be specified on project plans, supported by geotechnical recommendations.

The finished surface of any allotment or project site shall be designed to comply with Council's standard drawings and specifications.

Development in areas containing natural ground slopes of an excessively steep nature, i.e. greater than 15%, shall conform to the requirements of the State Planning Policy.

## 1.7 General standard of site preparation

Generally, clearing shall be kept to a minimum; however, the site is to be cleared of fallen timber, debris, stumps, large rocks and/or any trees which in the opinion of Council's arborist are approaching the end of their lifecycle or are diseased and dying and therefore pose a danger to the public or assets.

Trees and vegetation of significance shall be identified prior to design so that disturbance may be minimised through appropriate design.

All trees and vegetation to be retained should be protected in accordance with AS4970 – *The protection of trees on development sites* and relevant standard drawings.

The basic premise of site works should be that clearing is to be confined to the minimum area required to safely construct services, structures and the limits of approved extent of works areas. Additional clearing can be approved to ensure that the works are not interfered with by trees or other vegetation.

In areas with significant trees or vegetation, the extent of clearing shall generally be limited to:

- (a) clearing roadways to the limit of approved earthworks plus a sufficient lateral clearance to ensure that the trees or vegetation do not interfere with the works; and
- (b) allotment clearing to the minimum areas required to safely construct infrastructure services such as sewers, catchment drains and the limits of approved earthworks to allotments. Additional clearing can be approved to ensure that the trees or vegetation do not interfere with the works.

All tree pruning works shall be in accordance with AS4373 – *Pruning of amenity trees*.

All timber and other materials cleared from the site shall be removed and legally disposed of. All roots, loose timber, etc which may contribute to future drain blockage shall be removed.

No incineration of cleared vegetation is permitted.

In areas to be filled over the butts of trees, Council's preference is for an allowance to be made for clearing of all trees and replanting with advanced species, the number and type of which shall be approved by Council. All replanting is to be clear of probable future building location, and not to be commenced until filling has been completed and graded, with provision for watering and maintenance for duration of the Project. These specific requirements shall be shown on the drawings.

Trees on existing roads shall not be damaged or removed without the written approval of Council.

Trees located on land under the control of Council shall not be removed or damaged without written approval. Such requirements shall be shown on the project drawings.

Appropriate precautions should be implemented to protect selected trees identified to be preserved. Details of the protection measures and/or relocation scope shall be identified and shown on project drawings and presented to Council for approval.

In rural developments, the recommendations of the Queensland Fire and Rescue Authority (Rural Fire Service) are to be sought and considered by the Designer.

Where surplus or unsuitable material is to be disposed off site the Designer shall note the requirement on the project drawings for the Contractor to obtain an Operational Works permit from Council prior to disposal of material.

Where surplus or unsuitable material is proposed to be disposed of on open space or road reserves, the Designer shall submit details and seek separate approval prior to the lodgement of an Operational Works application.

Where the surplus material is generated from works from within existing declared road reserves, Council may nominate that the spoil be placed on Council controlled land within 5 km of the project site.

The extraction of material from within existing road reserves requires the approval of the State via the Department of Agriculture and Fisheries through a development application process administered by Council, who may levee a royalty to be paid by the Contractor.

## 2 Design detail

### 2.1 Fill embankments

The Designer shall take into account the requirements of AS 3798 "*Guidelines on Earthworks for Commercial and Residential Developments*" and the State Planning Policy in the design of any filling.

All materials proposed for use in fill embankments, regardless of location, shall be suitable for the purpose.

Fill comprising natural sands, industrial waste or by-products may only be used after the material type and location for its use is approved by Council and will be subject to specific requirements determined by prevailing conditions.

All fill areas shall be subject to a geotechnical assessment to ensure their stability.

Where the volume of imported fill material exceeds 2,500m<sup>3</sup> (loose), the Designer / Contractor shall provide details of the following information to Council and/or the Department of Transport and Main Roads dependent on the haul route chosen and seek separate approval for:

- (a) proposed source
- (b) volume of material required
- (c) proposed transport route – the route must take particular care to minimise any adverse impacts upon residents and businesses
- (d) proposed time of cartage – start and finish times and days per week.

In considering the most appropriate haul route, the Designer shall refer to Council for acceptable haul roads and details of any applicable load limits timing.

Council and/or the Department of Transport and Main Roads may require contributions toward the cost of any accelerated pavement degradation along the haul route via an Infrastructure Agreement and will additionally request a bond to cover the cost of any pavement repairs to the approved route.

Where embankments require maintenance by conventional machinery, then the maximum transverse slope shall be 1:5, with the absolute maximum being 1:4 over short sections.

The grading of allotments shall be in accordance with the requirements detailed in Council's standard drawings. Unless stated otherwise, the following principles are to apply:

- (a) allotments should preferably drain to the street, where practicable;
- (b) where significant allotment areas drain to the rear, or other adjoining allotment, then interallotment drainage shall be provided;
- (c) the following minimum allotment grades are to apply:
  - (i) residential – 1:200
  - (ii) commercial / industrial – 1:300

## 2.2 Batter treatments

The Designer shall ensure that no cut or fill batters extend into an existing or proposed road, open space or adjoining allotment, without specific prior approval.

As a minimum unless adjoining land approvals have been granted all embankments and cuttings must be outside the road reserve. The top of any cut batter is to be 300mm inside the property boundary; the toe of any fill batter is to be 300mm inside the property boundary.

Where Council approval to fill adjoining lands has been given, the Designer shall ensure that the filling complies with the following criteria:

- (a) provision of a 1m minimum wide strip of land inside the adjoining allotment, having a slope between 1:20 and 1:200; and
- (b) the batter slope shall be a maximum of 1:4. The Designer must provide written approval of the adjoining property owner to Council.
- (c) Where site specific bank stabilisation measures are proposed the following criteria shall apply:
  - (i) Cut – 1:2.5 maximum; 1:4 desirable and
  - (ii) Fill – 1:2.5 maximum; 1:4 desirable.

Any batters higher than 1.0m shall require certification as to stability by an RPEQ and batters higher than 2.0m shall require certification by an RPEQ Geotechnical Engineer.

## 2.3 Levels

The final level of any filling on an allotment shall be in accordance with the requirements of the Planning Scheme. The development level will make allowances for:

### Habitable Floor Level

The current required minimum habitable floor level is the higher of:

- 300 mm above the 100 year ARI flood level.
- 300 mm above the top of kerb.
- 300 mm above the crown of the road.
- 225 mm above ground level.
- A level which allows the connection of all sanitary fixtures to the designated

connection point by means of sanitary drainage which complies with AS3500.  
 RL 5.40 m AHD (formerly 5.95 m AHD) for Mackay and environs.  
 RL 5.30 m AHD (formerly 5.80 m AHD) for Ball Bay/ Halliday Bay/ Seaforth.  
 RL 5.00 m AHD (formerly 5.80 m AHD) for Midge Point.  
 RL 5.30 m AHD (formerly 6.10 m AHD) for Sarina Beaches.

Note: The minimum level is to be raised a further 0.60m when the site is located within 100m of the foreshore.

Hospitals, schools and emergency services buildings are to be constructed to higher levels (200 year ARI and 500 year ARI's) pending on the specific development type.

### Development Level

The minimum ground level shall be the higher of:

- RL 5.00 m AHD for Mackay and environs.
- RL 4.90 m AHD for Ball Bay/ Halliday Bay/ Seaforth.
- RL 4.60 m AHD for Midge Point.
- RL 4.90 m AHD for Sarina Beaches.

Note: The minimum level is to be raised a further 0.60m when the site is located within 100m of the foreshore.

## 2.4 Access

To enable appropriate vehicle access to each allotment, the Designer shall ensure that the footpath crossfall and batter grades comply with the following requirements:

- (a) the first 3m from kerb and channel to be 2%;
- (b) balance of verge – maximum 1:6 (17%), minimum 1:50 (2%);
- (c) within allotment:
  - (i) residential and rural residential – maximum 1:6 (16.6%) for at least the first 6m from the front boundary, 1:6 (16.6%) desirable and 1:5 (20%) absolute thereafter;
  - (ii) rural – desirable 1:6 (16.6%), absolute 1:5 (20%); and
  - (iii) industrial – desirable 1:10 (10%), absolute 1:6 (16.6%);
  - (iv) Maximum change in driveway grades – all areas desirable 8%; maximum 10%
- (d) accesses to 'hatchet' allotments are to be connected to the kerb and channel for the full length of the access 'handle' with 3m (minimum) wide paved driveway; and
- (e) any concrete inverts are to be built in accordance with Council's standard drawings.

The Designer shall ensure that an access is provided to all rural allotments. The access shall be built in accordance with Council's standard drawings.

Accesses to rural allotments that are at a slope greater than 1:10 (10%) shall be paved and sealed or concreted as indicated in Council's standard drawings.

Where accesses involve the construction of culvert crossings or causeways these shall be designed in accordance with relevant geometric road design standards and constructed in accordance with relevant TMR standards.

The Designer may be required to demonstrate to Council's satisfaction that practical access can be provided to all allotments and also to a building envelope within the allotment boundary.

## 2.5 Standard of fill for sites

Where fill is required, the Designer shall ensure that the materials specified are in accordance with the relevant standards.

Fill comprising natural sands, industrial waste or by-products may only be used after the material type and location for its use is approved by Council and will be subject to specific requirements determined by prevailing conditions. In general materials requirements shall comply with Section 14.2 of MRTS04.

It is essential that the Designer give prior advice to Council of any intended use of such materials. It should be noted that failure to obtain Council's approval may lead to a direction to remove any material considered by Council or other relevant authorities as unsuitable or in any way unfit for filling, with no additional cost to Council.

All work shall be in accordance with AS 3798. Fill is to be placed in layers not exceeding depths specified in Table 15.3(a) of MRTS04. All fills are to be compacted to standards as indicated in Table 5.1 of AS3798.

The area under paved areas, footpaths, batters and areas of fill shall be stripped of topsoil and any other organic materials.

Council will only accept fill as approved fill, if:

- a. The filling operation has been designed and supervised by a Practising Registered Professional Engineer (Queensland) in accordance with AS 3798-1996. Such a design is to take into account existing topography, soil and drainage conditions; and
- b. An "As Constructed" plan of fill showing property description, boundaries and surface levels prior to filling, finished surface levels after filling, and any other works as constructed or altered in the fill operation is supplied to Council; and
- c. Copies of compaction test results accompanied by an Engineer's Certificate certifying compliance with Council's requirements and compliance with AS 3798-1996 is supplied to Council.

Council as a minimum for Commercial development requires Controlled Fill – Class I certification to be provided in accordance with AS3798. For all other development it is recommended that Class I certification is preferred given that unconsolidated fill impacts subsequent foundation design and costs for any subsequent development works proposed.

## 2.6 Topsoiling and grassing

All areas where filling has been placed are to be top dressed with clean arable topsoil, fertilised and sown with suitable mix of grasses. This work shall be carried out in accordance with the relevant standards.

Topsoil shall be spread to a minimum depth of 75mm.

Topsoil is defined as surface soils that are high in organic matter and contaminated by residual grass seeds and grass roots.

The Drawings shall be annotated as follows: "*Where possible all topsoil shall be retained on the site and utilised effectively to encourage appropriate revegetation.*"

All areas are to be seeded / turfed, watered and fertilised to obtain a minimum of 90% grass coverage before being accepted "*On Maintenance*" by Council.

Designers are to ensure that the full width of the verge is to be seeded / turfed.

## 2.7 Retaining walls and rock protected slopes

A suitably qualified and experienced professional structural engineer (RPEQ) shall design all retaining walls and rock protected slopes. Appropriate certification for the design is required to be submitted with the project drawings.

Any building restrictions within the lot which occur because of the design or construction of the retaining wall is to be identified on the Drawings. This may also result in Council requiring a covenant being placed on the lot title or requiring a building envelope being placed on the allotment. The only exceptions are walls that have no surcharge loading and are less than 1m high.

Retaining walls are to be located on the allotment which contains the earthworks which gives rise to the need for the retaining wall. Where a retaining wall is required on the boundary between a lot and a road reserve if the earthworks are part of the works required for the creation of the lot, then the retaining wall must be located within the lot. That lot benefitting from the existence of the retaining wall must be where the retaining wall is located for future liability and maintenance responsibility.

All walls retaining road or open space fill are to be located within the road or open space reserve.

The Designer shall ensure that permanent fencing (of a type approved by Council) or alternatively retaining wall extensions having a minimum height of 1.2 m shall be provided on retaining walls located on future public land and shall form of the design inputs for the retaining wall structural design or alternatively shall be subject to a risk assessment which assesses residual risk following construction.

Design for the retaining structure shall be to AS 4678 or traditional (lumped) factor of safety (FOS) approach.

Table 5.7.4-A of AS 4678 specifies the minimum Factors of Safety (FOS) to be applied for each mode of failure - Sliding 2.0; Overturning 2.0; Bearing 2.5; Global 1.5.

Structure design life shall be in accordance with Table 3.1 of AS 4678. All retaining structures supporting public infrastructure shall be considered "major public works" and the appropriate design life applied.

All materials utilised shall consider the durability of the materials to meet the design life requirement of the structure and these material properties shall be certified by the RPEQ undertaking the structural certification of the retaining structure.

## 2.8 Effect on adjoining properties

Where it is proposed to divert or direct piped stormwater into adjoining properties, drainage easement rights are to be created over the adjoining lots in accordance with Planning scheme policy – stormwater drainage design.

## 3 Special requirements

### 3.1 Temporary diversion drains

Where temporary drains are required to divert surface flows away from the site regrading area, the location and silt/erosion control treatment shall ensure minimal soil disturbances and material loss offsite.

The Designer shall include any requirements identified in the relevant soil and water quality management policies for any additional requirements.

PLANNING SCHEME POLICY

# STRUCTURES / BRIDGE DESIGN



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – structures / bridge design

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### Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
1.1	Planning scheme policy amendment 3	This amendment updated references, standards, and requirements to reflect modern practice.	Adopted 10 February 2021  Commenced 1 March 2021
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

# 1 Introduction

## 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

## 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in Part 1 or any other relevant part of the scheme.

## 1.3 Purpose

The purpose of this planning scheme policy is to set out guidelines developed specifically for the design considerations to be adopted in the design of structural engineering elements. The Guideline is to also apply to appropriate structural elements designed on behalf of Council.

Such elements include:

- (a) road traffic bridges;
- (b) pedestrian bridges;
- (c) structures other than bridges, but associated with roads (eg. major culverts, retaining walls, major sign support structures);
- (d) small earth dams, detention basins;
- (e) coastal erosion protection structures;
- (f) boat ramps and other marine structures;
- (g) structures used for public safety (road safety barriers, pedestrian safety rails, street lighting); and
- (h) temporary works.

Such structures may be of concrete, timber, rock or steel constructions, but with emphasis placed on low maintenance, safety and whole of life cycle costs.

Major culverts are defined as:

- Metal culverts (steel and aluminium) with at least one barrel (cell) with span , height or diameter  $\geq 1.2\text{m}$ ; or
- All other culverts with:
  - Pipes with at least one barrel (cell) with diameter  $\geq 1.8\text{m}$ ; or
  - Rectangular/oval/arch culverts with at least one barrel (cell) with span  $> 1.8\text{m}$  and height  $> 1.5\text{m}$ ;
  - Stock and pedestrian underpasses.

The aim of design shall be the achievement of acceptable probabilities that the structure being designed will not become unfit for use during its design life, having regard to economic, physical, aesthetic, flooding or hydraulic capacities, safety in design, maintenance and repair constraints, constructability, future infrastructure planning, and other relevant constraints.

## 1.4 Referenced documents

- (a) Council guidelines and specifications:

- (i) Planning scheme policy – geometric road design
- (ii) Planning scheme policy - healthy waters
- (iii) Planning scheme policy – stormwater drainage design
- (iv) Planning scheme policy – subsurface drainage design
- (v) Mackay Regional Council - Guideline for Preparation of Flood and Stormwater Drainage Catchment Reports
- (vi) Mackay Regional Council – D20 Drawings and Documentation Guideline - [https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0005/13964/D20.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0005/13964/D20.pdf)
- (vii) Stormwater drainage studies and flood studies - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/waterway\\_and\\_coastal\\_hazard\\_planning/flood\\_studies](https://www.mackay.qld.gov.au/business/planning_and_development/waterway_and_coastal_hazard_planning/flood_studies)
- (viii) External Documents Register - [https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0003/253380/External\\_Document\\_Registry\\_for\\_Technical\\_Services\\_2019\\_002.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0003/253380/External_Document_Registry_for_Technical_Services_2019_002.pdf)
- (ix) Construction standard C220 – Stormwater drainage – general
- (x) Construction standard C221 – Pipe drainage
- (xi) Construction standard C222 – Precast box culverts
- (xii) Construction standard C223 – Drainage structures
- (xiii) Construction standard C224 – Open drains including kerb and gutter
- (xiv) Mackay Regional Council (MRC) Supplementary Specifications - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/design_guidelines2)
- (xv) ADAC - How to use the As Constructed Documents (PDF 327.5 KB)  
ADAC 4.1 - As Constructed and ADAC Survey Pick-up (PDF 3.3 MB)  
ADAC 4.1 - Creation of XML using 12d Model (PDF 734.1 KB)  
ADAC 4.1 - Guidelines for Creation and Submission of XML Files (PDF 3.8 MB)  
ADAC 5.0.1 - As Constructed and ADAC Survey Pick-up (PDF 3.6 MB)  
ADAC 5.0.1 - Creation of ADAC XML using 12d Model (PDF 623.4 KB)  
ADAC 5.0.1 - Guidelines for Creation and Submission of XML Files (PDF 4.6 MB)
- (xvi) Standard drawings - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/drainage](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/drainage)  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/footpaths](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/footpaths)  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/parks\\_and\\_gardens](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/parks_and_gardens)
- (b) Department of Transport and Main Roads (TMR) Specifications:
  - MRTS59 Manufacture of Fibre Reinforced Polymer Composite Girders
  - MRTS60 Installation of Fibre Reinforced Polymer (FRP) Composite Girders
  - MRTS61 Gantries and Support Structures for Road Signs, Tolling Systems and ITS Devices
  - MRTS62 Bridge Substructure
  - MRTS63 Cast-In-Place Piles
  - MRTS63A Piles for Ancillary Structures
  - MRTS64 Driven Tubular Steel Piles (with reinforced concrete pile shaft)
  - MRTS65 Precast Prestressed Concrete Piles
  - MRTS66 Driven Steel Piles
  - MRTS68 Dynamic Testing of Piles
  - MRTS70 Concrete
  - MRTS71 Reinforcing Steel
  - MRTS71A Stainless Steel Reinforcing
  - MRTS72 Manufacture of Precast Concrete Elements
  - MRTS73 Manufacture of Prestressed Concrete Members and Stressing Units
  - MRTS74 Supply and Erection of Prestressed Concrete Deck and Kerb Units
  - MRTS75 Supply and Erection of Prestressed Concrete Girders
  - MRTS76 Supply and Erection of Steel Girders
  - MRTS77 Bridge Deck
  - MRTS78 Fabrication of Structural Steelwork
  - MRTS78A Fabrication of Structural Stainless Steelwork

MRTS79 Fabrication of Aluminium Components  
 MRTS80 Supply and Erection of Bridge Barrier  
 MRTS81 Bridge Bearings  
 MRTS81A Stainless Steel Bridge Bearings  
 MRTS82 Bridge Deck Expansion Joints  
 MRTS82A Finger Type Bridge Deck Expansion Joints  
 MRTS83 Anti-Graffiti Protection  
 MRTS84 Deck Wearing Surface  
 MRTS84A Removal of Bridge Deck Wearing Surface  
 MRTS85 Repainting Steel Bridges  
 MRTS85A Repainting Existing Steel Bridges and New Steel Bridges Zinc Metal Systems  
 MRTS86 Widening, Strengthening and Rehabilitation of Bridges  
 MRTS87 Supply of Timber Bridge Materials and Components  
 MRTS88 Protective Coating for New Work  
 MRTS89 Post-tensioned Concrete  
 MRTS90 Modular Bridge Expansion Joints  
 MRTS97 Mounting Structures for Roadside Equipment  
 MRTS270 Precast Geopolymer Concrete Elements  
 MRTS300 Boat Ramps  
 MRTS301 Fabrication and Construction of Floating Walkways  
 MRTS302 Fabrication and Construction of Pontoons  
 MRTS305 Dredging

- (c) Australian Standards:
- (i) AS 5100 – Bridge Design (Set)
  - (ii) AS 4997 - Guidelines for the design of maritime structures
  - (iii) AS/NZS 2566.1 – Buried flexible pipelines, structural design
  - (iv) AS/NZS 3725 – Design for installation of buried concrete pipes
  - (v) AS/NZS 4058 – Precast concrete pipes (pressure and non-pressure)
  - (vi) AS/NZS 4139 – Fibre reinforced concrete pipes and fittings
  - (vii) AS/NZS 1597.1 & AS/NZS 1597.2 - Precast reinforced concrete box culverts
  - (viii) AS/NZS 2041 Buried corrugated metal structures - Design methods
  - (ix) AS/NZS 3845 – Road safety barrier systems
  - (x) AS1158 – The lighting of urban roads and other public thoroughfares
  - (xi) AS1170 – Structural Design Actions (Set)
  - (xii) AS3600 – Concrete structures
  - (xiii) AS4100 – Steel structures
  - (xiv) Other codes and guidelines as relevant
- (d) Queensland legislation:
- (i) *Local Government Act 2009*
  - (ii) *Planning Act 2016*
  - (iii) *Environmental Protection Act 1994*
  - (iv) *Water Act 2000*
  - (v) *Fisheries Act 1994*
  - (vi) *Coastal Protection and Management Act 1995*
  - (vii) *Aboriginal Cultural Heritage Act 2003*
  - (viii) *Professional Engineers Act 2002*
- (e) Queensland and Australian Government:
- (i) Commonwealth of Australia (Geoscience Australia). 2019. *The Australian Rainfall and Runoff, a guide to flood estimation (ARR)*
  - (ii) State of Queensland (Department of Infrastructure, Local Government and Planning). 2017. State Planning Policy, State interest – natural hazards, risk and resilience
  - (iii) State of Queensland (Department of Transport and Main Roads). 2019. Road Drainage Manual, 3rd Edition.
  - (iv) State of Queensland (Department of Infrastructure, Local Government and Planning). 2017. State Planning Policy

- (v) State of Queensland (Department of Agriculture, Fisheries and Forestry). 2013. Guide for the determination of waterways using the spatial data layer Queensland waterways for waterway barrier works.
  - (vi) State of Queensland (Department of Agriculture and Fisheries). 2018. Accepted development requirements for operational work that is constructing or raising waterway barrier works
  - (vii) State of Queensland (Department of Science, Information Technology, Innovation and the Arts). 2014. Queensland Acid Sulfate Soil Technical Manual
  - (viii) State of Queensland (Department of Natural Resources, Mines and Energy). 2018. Guidelines for the construction or modification of category 2 & 3 levees
  - (ix) State of Queensland (Department of Natural Resources, Mines and Energy). 2018. Guidelines for the construction or modification of category 1 levee
  - (x) State of Queensland (Department of Natural Resources and Mines). 2017. Guide for Flood Studies and Mapping in Queensland.
  - (xi) Queensland Government. 2007. Crime Prevention through Environmental Design, Guidelines for Queensland – Part A: Essential features for safer Places.
  - (xii) Queensland Government. 2007. Crime Prevention through Environmental Design, Guidelines for Queensland – Part B: Implementation Guide.
  - (xiii) Department of Transport & Main Roads - Bridge-design-and-assessment-criteria
  - (xiv) Department of Transport & Main Roads - Technical Notes – Bridges and other structures
  - (xv) Department of Environment and Heritage - Operational policy -Building and engineering standards for tidal works
  - (xvi) Department of Transport & Main Roads - Design Design Criteria for Boat ramps
  - (xvii) Department of Transport & Main Roads - Design Design Criteria for Floating Walkways & Pontoons
  - (xviii) State Development Assessment Provisions Version 2.3
  - (xiv) Guideline: State Development Assessment Provisions - State Code 8: Coastal development and tidal works
  - (xv) Operational policy - Coastal Protection and Management Act 1995 - Building and engineering standards for tidal works  
[https://www.qld.gov.au/\\_\\_data/assets/pdf\\_file/0014/107240/op-cd-building-engineering-standards-tidal-works.pdf](https://www.qld.gov.au/__data/assets/pdf_file/0014/107240/op-cd-building-engineering-standards-tidal-works.pdf)
- (f) Other:
- (i) Austroads - Guide to Bridge Technology:
    - Part 1: Introduction and Bridge Performance
    - Part 2: Materials
    - Part 3: Typical Superstructures, Substructures and Components
    - Part 4: Design Procurement and Concept Design
    - Part 5: Structural Drafting
    - Part 6: Bridge Construction
    - Part 7: Maintenance and Management of Existing Bridges
    - Part 8: Hydraulic Design of Waterway Structures
  - (ii) Concrete Pipe Association of Australia, *Concrete Pipe Guide, charts for the selection of concrete pipe to suit varying conditions*
  - (iii) Institute of Public Works Engineering Australasia, Queensland (IPWEAQ), 2017 *Queensland Urban Drainage Manual (QUDM)*
- (g) Mackay Regional Council Policy
- (i) Policy No. 23.062 – Building Over or Adjacent to Constructed Council Drainage Systems and Easements
  - (ii) Policy No 063 – Clearances to water and sewerage assets

## 1.5 Basis of design

The design shall be based on scientific theories, experimental data and experience, interpreted statistically as far as possible. The safety and service performance of a structure depends also on the quality control exercised in fabrication, supervision onsite, the control of unavoidable imperfections and

the qualifications, experience and skill of all personnel involved. Adequate attention shall therefore be given to these factors.

In addition, adequate management control and supervision by experienced engineers shall be required at all stages of design and construction to prevent the occurrence of non-conformances.

The minimum design load for all road traffic bridges shall be determined from AS5100, either using the S or M 1600 load, and based on the particular traffic loadings reasonably expected to be imposed on the structure. The use of lesser design loads (eg T44) shall require specific Council approval and will require consideration of the most foreseeable load during the life of the bridge (for 100 years). The Designer will need to consider the likely future use of the bridge by heavy loads – e.g. cranes used in building works, as to whether the structure may have to be designed using higher design loads e.g. HLP 400. Approval for a design load lower than S or M 1600 will not be provided for a single-lane bridge.

Maintenance is a key factor affecting the design life of a structure/bridge. The Designer shall note on the drawings the adopted design life of the structure/bridge, together with the relevant maintenance program to be adopted by the asset owner (generally Council) upon which the design life has been based. Parameter used in the design shall also be shown on the design drawings.

Specifications shall be notated on the Drawings with sufficient detail to ensure that the above described strategies are able to be effectively implemented at the construction stage.

Structures are to be designed and constructed to minimise the maintenance impacts of either cathodic exchanges and or environmental conditions on the durability of the structure. The structure shall make use of suitable inert materials and or coating systems to ensure its ability to maintain its Design life with minimal life cycle costs.

## **2 Design, construction and other criteria**

### **2.1 Road traffic and pedestrian bridges**

The Australian Standard AS5100 *Bridge Design* and Austroads - *Guide to Bridge Technology Part 8: Hydraulic Design of Waterway Structures* shall be used as the basis for all bridge designs. Where bridges are to be constructed from materials other than those covered specifically by this Standard, reference shall be made to other specific Standards and current technical literature for materials performance and durability requirements.

The Designer shall incorporate current industry best practices into the bridge design to ensure the bridge has low maintenance finishes. Adequate precautions shall be taken for protection of the materials used in the bridge design; for example, timber and steel require special consideration.

Heavy debris and bed loads may be characteristic of some streams so that large spans with slender piers are encouraged. If overtopping is permitted, pedestrian safety rails and road safety barriers are usually omitted. Flood depth indicators and appropriate signposting will be provided in such cases.

Parameters used in the design shall also be shown on the Drawings.

Unless otherwise advised, small bridges within the project shall be designed with afflux as determined by Council with certification stating that the bridge is capable of withstanding the inundation loadings for up to the 1% Annual Exceedance Probability (including climate change factor) storm event.

If in the opinion of the Designer, such certification is impractical, the structure shall be designed to convey the 1% Annual Exceedance Probability (including climate change factor) storm event without inundation.

Where structures are designed to be inundated, the effect of the backwater gradient on upstream property shall be identified on the drawings.

The Designer shall also identify the current and possible future implications created because of the backwater effect on upstream properties.

Bridges located in roadways which are to be dedicated as public roads shall be designed to convey the stormwater event identified in the drainage design specification. Where no inundation is permitted, appropriate afflux shall be adopted together with a 500mm freeboard to underside of the bridge deck.

Designers should enquire regarding current or likely provision for public utilities on bridges. These should be concealed for aesthetic reasons.

The clear width for a pedestrian bridge shall be 2 metres minimum and 3.0m for a shared pedestrian cyclist facility. Barrier kerb shall be provided on both sides with adequate provision for drainage of the bridge surface.

## 2.2 Provision for pedestrians on road bridges

The minimum provision for pedestrians only is a 2.0m footpath with kerb at the road edge and pedestrian safety rails at the external edge and 3.0m for a shared pedestrian cyclist facility together with compliant bicycle safe safety rails .

Council may require the provision of separate pedestrian footpaths in other situations should the anticipated traffic warrant it.

Disabled access shall be considered and incorporated into the design.

Lighting shall be provided on urban road and footbridges in accordance with the appropriate Australian Standard.

## 2.3 Structures other than bridges

The design shall comply with all relevant requirements of:

- (a) this planning scheme policy;
- (b) all reference and source documents listed in section 1.4;
- (c) any relevant Australian Standard;
- (d) any relevant requirements of the utility owner;
- (e) any development approval conditions relevant to the design; and
- (f) any specific relevant and reasonable request provided by Council in writing.

The standards and guidelines detailed below apply to the design and construction of jetties and piers, pontoons, decks and boat ramps within tidal and non-tidal waterways.

Standards and guidelines for prescribed tidal works installations shall be in concert with requirements of the relevant State government concurrence agency requirements including the State Development Assessment Provisions and other relevant requirements and guidelines.

These standards and guidelines incorporate a number of key design considerations to endeavour to ensure that waterfront structures:-

- (a) remain structurally sound throughout their design life;
- (b) do not interfere with the structural stability of the waterway;
- (c) do not restrict the maintenance, hydraulic and flood carrying capacity of the waterway;
- (d) do not interfere with public access or usage of the waterway; and
- (e) allow for navigation where necessary along the waterway. Responsibility of owners
- (f) The owner of the property associated with any approved waterfront structure is required to maintain the structure in a sound state of repair in accordance with the approved plans and the conditions of the approval.

#### **General requirements applicable to all structures**

The following general requirements apply to the design and construction of any waterfront structure:-

- (a) any lighting installed, other than lighting which is specifically to aid navigation, should not cause significant adverse amenity effects to nearby residents, properties or fauna;
- (b) the works should be designed and constructed so as to avoid significant adverse impacts on the availability of public access to the foreshore of the waterway;
- (c) the works should be designed and constructed so as to avoid adversely impacting on the safety of members of the public using the waterway or accessing the foreshore of the waterway;
- (d) the works should be designed and constructed to ensure they are structurally sound, having regard to relevant Australian Standards and having regard to the impacts of flooding and hydrodynamic changes;
- (e) the proposed waterfront structure is not to place any additional load on existing revetment walls (a wall erected against an earth bank or rock face to protect it against erosion, or a structural retaining wall at the waterfront edge) and is not to adversely affect the stability of the bed and banks of the waterway. Works constructed within private property behind an existing revetment wall (such as swimming pools, retaining walls, decks, etc.) are to be designed and constructed so that there will be no adverse impact on the structural stability of the revetment wall;
- (f) the design and construction of the works is to ensure that access will be available for future remedial, repair or maintenance works on revetment walls and foreshore areas;
- (g) materials which will have a long life in an aquatic environment should be used in the structures;
- (h) the works are to be located clear of any existing stormwater outlet;
- (i) the structure is to be designed and constructed so as to ensure the safety of users. Surfaces are not to be slippery or present trip hazards, and barriers or railings should be provided in appropriate locations; and
- (j) setbacks are to be (the shortest distance) measured horizontally from the outermost projection of the structure concerned to the vertical projection of the boundary of the allotment. The setback from a revetment wall is from the landside of the revetment wall.

#### **Jetties and piers**

Jetties and piers and their associated mooring systems are to be designed and constructed to sustain all relevant loadings including hydraulic pressure, berthing impact, wind, flood flows (including debris), live loads, and other loadings relevant to the structure as assessed by a RPEQ. However, the design loads are in no case to be less than those applicable to a jetty or pier which is prescribed tidal work (as detailed in the IDAS Code for development applications for prescribed tidal work).

Jetties and piers and their associated shore abutments are to be designed and constructed so as not to impact adversely on the structural stability of the waterway and to be structurally independent of the revetment wall. RPEQ certification is required that the works will not impose additional loads on existing revetment walls.

The deck level of the jetty or pier is not to be less than 300mm above the predicted peak water level in the waterway, for a 1% AEP event.

Low level landings below the predicted peak water level may be incorporated into the structure design but fender piles (a vertical structural member that protects part of a structure from impact, damage or abrasion) or other markers are to indicate their presence when under water.

The width of the deck of a jetty or pier is to be not less than 900mm and not more than 3.0 metres. Handrails are to be provided along both sides of the jetty stem.

Jetties and piers are to be designed not to interfere with navigation or the public usage of the waterway, taking into account any vessel moored to the jetty or pier.

Where piling for jetties or piers is required to be installed through any rock revetment or rock protection, the rocks are to be removed and a neat cut/penetration made to the geotextile fabric under the rocks prior to installation of driven or screw piling, and the geotextile fabric and rock protection reinstated around the piles. The geotextile fabric is to be fastened around the pile with a stainless steel strap.

Jetties and piers are not to have roofed structures.

### **Pontoons**

Pontoons are to be designed and constructed to sustain all relevant loadings including earth and hydraulic pressure, berthing impact, wind, flood flows (including debris), live loads, and other loadings relevant to the structure as assessed by a RPEQ. However, the design loads are in no case to be less than those applicable to a pontoon which is prescribed tidal work (as detailed in the IDAS Code for development applications for prescribed tidal work).

Abutments for access walkways are to be structurally independent of the revetment wall (so as not to impose any additional loading on the revetment wall).

Pontoons are to be designed such that they can accommodate the rise in water level associated with a 1% AEP flood event, and still safely moor the "design" vessel.

In waterways which will convey flood flows, the flotation unit of the pontoon is to be moored by piles.

Access walkways are to extend a minimum distance of 500mm onto the pontoon's flotation unit. Access walkways are to be constructed with a permanent non-slip surface and handrails along both sides and shall make full provision for the access requirements specified in AS1428 unless alternative assessments by a certified Access Auditor can justify alternative treatments..

Where piling for pontoons is required to be installed through any rock revetment or rock protection, the rocks are to be removed and a neat cut/penetration made to the geotextile fabric under the rock revetment prior to installation of driven or screw piling, and the geotextile fabric and rock protection reinstated around the piles. The geotextile fabric is to be fastened around the pile with a stainless steel strap.

Pontoons are not to have roofed structures.

### **Decks**

Decks are to be designed and constructed to sustain all relevant loadings as assessed by a RPEQ. However, the design loads shall in no case be less than those applicable to a deck which is prescribed tidal work (as detailed in the Building and engineering standards for tidal works [https://www.qld.gov.au/\\_data/assets/pdf\\_file/0014/107240/op-cd-building-engineering-standards-tidal-works.pdf](https://www.qld.gov.au/_data/assets/pdf_file/0014/107240/op-cd-building-engineering-standards-tidal-works.pdf) ). Decks must be able to withstand periodic total inundation.

The design and construction of the deck is to be such that it does not unreasonably restrict access for maintenance to the bank, foreshore, revetment wall, retaining wall or other infrastructure associated with the waterway.

Decks are not to extend more than 3.0m into the waterway, measured from the waterfront boundary of the lot connected to the deck.

Decks are not to extend any closer than 3.0m to the side boundary, or extended side boundary of the lot connected to the deck.

Access hatches of minimum size 200mm x 200mm are to be installed in a deck 300mm forward of the face of the revetment wall and located approximately every 4.0m and/or 2.0m from either side of the deck. These access hatches will be used for sand replenishment of the foreshore.

The finished deck surface is to be no higher than 500mm above the top of the revetment wall and is to have a minimum clearance of 50mm between the top of the revetment wall and any part of the deck.

All footings, piers, piles and the like associated with the deck are to be located no closer than 1 .5m from the landside of the revetment wall and not be connected to or supported by the revetment wall.

Where piling for decks is required to be installed through any rock revetment or rock protection, the rocks are to be removed and a neat cut/penetration made to the geotextile fabric under the rock revetment, prior to installation of driven or screw piling and the geotextile fabric and rock protection reinstated around the piles. The geotextile fabric is to be fastened around the pile with a stainless steel strap.

Decks are not to have roofed structures.

### **Boat Ramps**

Boat ramps are to be designed and constructed to sustain all relevant loadings as assessed by a RPEQ and in accordance with DTMR design requirements.

The top of each wall at the edge of the boat ramp is to be level with the surface of the land on which the boat ramp is located.

Side and edge walls of the ramp are to penetrate at least 600mm below natural surface level to prevent damage from scour.

The surface of the ramp across the foreshore of the waterway is to be no more than 200mm above the design surface of the foreshore.

Boat ramps are to have a minimum width of 4.0m for vehicular access.

Boat ramps should be designed and constructed with a gradient generally not steeper than 1 (V):8(H). Ramps with slopes as steep as 1:6 may be acceptable provided the surface is appropriate. Steeper slopes will require operation by a winch. Proposals to construct ramps steeper than 1:8 are to be supported by a detailed assessment study that demonstrates the sustainability of the proposal. To facilitate safe movement of vehicles and persons, the surface of a boat ramp is to be treated to prevent it from becoming slippery either by forming grooves 40mm wide and 20mm deep at a spacing of 150mm and at an angle of 70 degrees to the centre line of the boat ramp, or by an alternative surface treatment which will provide a similar non-slip surface.

Boat ramps are to be located a minimum of 1 .5m clear of the side boundary and extended side boundary of the property.

### **Revetment walls**

Revetment walls must be wholly built within the subject lot including all elements of the revetment wall such as footings.

Revetment walls are to be designed and constructed to ensure they are able to support all intended loads, but in any case should be designed to support a distributed live load of at least 3 kPa in addition to applicable soil loads, with factor of safety of no less than 1.5.

The level and design of the bottom edge of the revetment wall should be such that it is likely to prevent any adverse effects from erosion for at least 100 years.

The design and construction of the revetment wall should provide for adequate filter material behind the wall and sufficient drainage holes to relieve hydrostatic pressure.

Maintenance of revetment walls is the responsibility of the owner and a minimum of 1.0m wide setback area behind the wall must be provided to allow maintenance to be performed. Within this area no structure is to be built that would restrict maintenance activities. This area should preferably be grassed, gravelled or loose-paved to allow monitoring of problems as they develop. If other surfacing is installed then it is to be easily removable should any maintenance be necessary.

Any structure built within the setback area is not to impose further loading on the revetment wall, and RPEQ structural certification will be required that specifically states that the revetment wall will continue to remain structurally sound with the additional loading for its design life.

### **Foreshores**

The foreshore profile is to be constructed for long term stability with due consideration to flood flows, boat wash, wind induced waves and stormwater discharges.

Suitable access is to be provided to the waterway to enable maintenance activities to be undertaken. A typical access way would consist of a maintenance boat ramp constructed within a waterfront parkland area.

### **Weirs**

Structural design of weirs (a structure which separates a tidal waterway from a non-tidal waterway, e.g. man-made lake) is to take account the impact loading from debris and watercraft, as well as applicable hydrostatic and hydrodynamic loads. Certification is to be provided by a suitably qualified RPEQ. The required design life will be 100 years.

Downstream scour protection shall be designed using appropriate hydraulic modelling techniques. Rock used for scour protection must have characteristics and qualities which are appropriate for the application.

Maintenance and operations manuals are to be supplied by the developer upon handover along with as-constructed drawings.

## **2.4 Structures used for public safety**

The design shall comply with all relevant requirements of:

- (a) this planning scheme policy;
- (b) all reference and source documents listed in section 1.4;
- (c) any relevant Australian Standard;
- (d) any development approval conditions relevant to the design; and
- (e) any specific relevant and reasonable request provided by Council in writing.

Since the requirement of road safety barriers and pedestrian safety rails on bridges are different, the Designer shall consider whether separate traffic and pedestrian barriers can be detailed to satisfy the major functional requirements.

The Austroads Bridge Design Code and Department of Transport and Main Roads "*Road Planning and Design Manual*" are recommended references in this regard.

It is essential that all safety barriers and rails have been fully tested and accredited for the intended use under quality assurance provision. The Designer is to ensure that appropriate corrosion protection shall be considered in specifying the materials to be used.

Bridge crossings in urban and rural residential areas shall be provided with street lighting in accordance with AS 1158. Such requirements will be noted accordingly on the drawings.

## 2.5 Temporary works

The design shall comply with all relevant requirements of:

- (a) this planning scheme policy;
- (b) all reference and source documents listed in section D3.03;
- (c) any relevant Australian Standard;
- (d) any development approval conditions relevant to the design; and
- (e) any specific relevant and reasonable request provided by Council in writing.

A construction programme, indicating the sequence of events leading to the implementation and removal of the temporary structures shall be specified on the drawings.

## 2.6 Drawings and documentation

All drawings and documentation to be submitted to Council for approval shall conform to the requirements of Council's *Drawings and Documentation Guidelines*.

Failure to comply with Council's *Drawings and Documentation Guidelines* may result in the drawings and/or documentation being returned to the engineer without consideration by Council.

## 2.7 Design Project Team

The Designer of any bridge or bridge component, structure, span, safety or pedestrian barrier shall be a suitably qualified professional engineer who holds both appropriate certifications as an RPEQ certified engineer in the appropriate field as well as prequalification with the Department of Transport and Main Roads for bridge design. The level of prequalification must be commensurate to the expected value of the proposed structure. Evidence of this prequalification must be submitted to Council. All plans shall be signed and certified by an appropriately qualified professional engineer with RPEQ certification.

PLANNING SCHEME POLICY

# SUBSURFACE DRAINAGE DESIGN



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – subsurface drainage design

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## Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
1.1	Planning scheme policy amendment 3	This amendment updated references, standards, and requirements to reflect modern practice.	- DRAFT FOR CONSULTATION
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

## 1 Introduction

### 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

### 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in assessment benchmarks in the following code/s or any other relevant part of the scheme:

- (a) Table 9.4.1.3.A – General development requirements code

### 1.3 Purpose

The purpose of this planning scheme policy is to:

1. Set out the guidelines for the design of the subsurface drainage system for the road pavement and/or sub-grade.
2. Set procedures for the design of subsurface drainage, including:
  - (a) subsoil and foundation drains;
  - (b) sub-pavement drains; and
  - (c) sheet filter, drainage mats or filter blankets.

The objective in the design of the subsurface drainage system is to control moisture content fluctuations in the pavement and/or sub-grade to within the limits assumed in the pavement design. As per Council's subsoil standard drawing A3-867, subsoils are generally installed behind the kerb and at a minimum

depth of 300mm below subgrade. This alignment will act as a barrier against ground water from side intrusion and being installed 300mm below subgrade, water levels will be reduced, as the subsoil drains will assist in lowering the water table.

In the areas with a history of salinity problems, subsurface drainage may be prescribed to keep the groundwater table lower in the strata to avoid progressive deterioration of the healthy topsoil and upper layers due to salinity levels increased by rising and/or fluctuating groundwater tables.

#### 1.4 Referenced documents

- (a) Council guidelines and specifications:
  - (i) Construction standard C230 – Subsurface drainage – general
  - (ii) Construction standard C231 – Subsoil and foundation drains
  - (iii) Construction standard C232 – Pavement drains
  - (iv) Construction standard C233 – Drainage mats
- (b) DTMR Specifications
  - MRTS03 Drainage, Retaining Structures and Protective Treatments
  - MRTS04 General Earthworks
  - MRTS16 Landscape and Revegetation Works
  - MRTS27 Geotextiles (Separation and Filtration)
  - MRTS38 Pavement Drains
  - MRTS51 Environmental Management
  - MRTS52 Erosion and Sediment Control
  - MRTS70 Concrete
  - DTMR Standard Drawings (SD1116)
- (c) MRC Supplementary Specifications -
  - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/design_guidelines2)
- (d) Australian Standards:
  - (i) AS/NZS 1254 – Unplasticised PVC (uPVC) pipes and fittings for stormwater or surface water applications
  - (ii) AS2032 – Code of practice for installation of uPVC pipe systems
  - (iii) AS2439.1 – Perforated plastic drainage and effluent pipe and fittings – Perforated drainage pipe
  - (iv) AS/NZS1477 – Unplasticised PVC (UPVC) pipes and fittings for pressure applications
  - (v) AS/NZS2566.1 – Buried flexible pipelines, structural design
  - (vi) AS3725 – Loads on buried concrete pipes
  - (vii) AS4058 – Precast concrete pipes
  - (viii) AS4139 – Fibre reinforced concrete pipes and fittings
- (e) Other:
  - (i) Austroads - Guide to Pavement Technology Part 10: Subsurface Drainage
  - (ii) Austroads - Guide to Road Design Part 5A: Drainage- Road Surface, Networks, Basins and Subsurface
  - (iii) Gerke, R.J. for the Australian Road Research Board (1987) *Special report no. 35 – Subsurface drainage of road structures (ARRB-SR35)*
  - (iv) Mulholland R.J. for the Australian Road Research Board (1989) *Special Report No. 41 – A structural design guide for flexible residential street pavements (ARRB-SR41)*
  - (v) Department of Transport & Main Roads – Road Drainage Design Manual - Chapter 11: Road Surface and Subsurface Drainage Design
- (f) Council documents:

- (i) Various stormwater drainage studies, catchment management plans and waterway management plans
- (ii) External Documents Register - [https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0003/253380/External\\_Document\\_Registry\\_for\\_Technical\\_Services\\_2019\\_002.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0003/253380/External_Document_Registry_for_Technical_Services_2019_002.pdf)
- (iii) Drawings - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/drainage](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/drainage)  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/parks\\_and\\_gardens](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/parks_and_gardens)

## 1.5 Terminology

Subsoil drainage systems are designed to be installed within the ground in order to remove/control excess water. Subsoil drains are generally installed to control/drain ground water or seepage from the sub-grade and/or the sub-base. Subsoil drains are also installed where a significant change of material type is present i.e. cut cut/fill transitions, transitions between stabilised and flexible pavements.

In addition, all vegetated medians and roundabouts shall have subsoil drainage included and connected to a legal point of discharge in order to both drain the vegetated areas and protect the adjacent base, sub-base and subgrade areas. Details of requirements are shown in Std Dwg A4-176.

All playground softfall treatments (sand soft fall, rubber tiles or artificial turf) shall contain adequate subsurface drainage and be connected to the legal point of discharge to protect and maintain the quality of the softfall treatment. Details of requirements are shown in A3-9703 & A3-9704.

Foundation drains are intended for drainage of springs and wet areas within and adjacent to the foundations of the road formation.

Sub-pavement drains are intended for the drainage of the base and sub-base pavement layers in flexible pavements. They may also function to drain seepage or groundwater from the sub-grade.

Filter blankets are intended to ensure continuity of a sheet flow of water under embankment fills, to collect water from seepage areas, or for protection of vegetation or habitat downstream of the road reserve where an embankment would otherwise block the flow of water.

Sheet filters are constructed to intercept water that would otherwise enter pavements by capillary action or by other means. The sheet filters are utilised to intercept and control seepage and water springs in the floors of cuttings.

In dispersive, soluble or fine grained soils, the Designer is to evaluate whether geofabric wrapped subsoil drains are required and seek approval from Council for its installation.

## 2 Subsoil and sub-pavement drains

### 2.1 Warrants for use

Subsoil drains are designed to drain groundwater or seepage from the sub-grade and/or sub-base in cuttings and fill areas.

Sub-pavement drains are designed to drain water from base and sub-base pavement layers in flexible pavements, and to drain seepage or groundwater from the sub-grade.

The Designer shall consider the installation of subsoil drains or sub-pavement drains on both sides of the formation in the following locations:

- (a) all urban/street developments – regardless of abutting land zoning;
- (b) cut formations where the depth to finished sub-grade level is equal to or greater than 400 mm below the natural surface level;
- (c) locations of known hillside seepage, high water table, isolated springs or salt affected areas;
- (d) irrigated, flood-prone or other poorly drained areas;
- (e) highly moisture susceptible sub-grades, ie. commonly displaying high plasticity or low soaked CBRs (<7);
- (f) use of moisture susceptible pavement materials;
- (g) existing pavements with similar sub-grade conditions displaying distress due to excess subsurface moisture;
- (h) in trenches in which underground drainage has been installed;
- (i) at cut-to-fill transitions;
- (j) all landscaped and vegetated road median islands and roundabouts; and
- (k) all rural residential developments.

Where only one side of the formation is in cut, the other side in fill, it may be sufficient to provide subsoil or sub-pavement drains only along the edge of the formation in cut.

A geotechnical report supporting the elimination of any subsoil drain will need to be submitted if the designer proposes to consider this option.

The need for subsoil and sub-pavement drains may otherwise become apparent during the construction process, due to changes in site moisture conditions or to areas of unsuitable sub-grade being uncovered that were not identified in the geotechnical investigation.

The design drawings shall be suitably annotated to the potential need for subsoil or sub-pavement drains in addition to those shown on the drawings.

## 2.2 Layout, alignment and grade

Typical cross sections or subsoil and sub-pavement drains and the recommended backfill material are shown in Council's standard drawings.

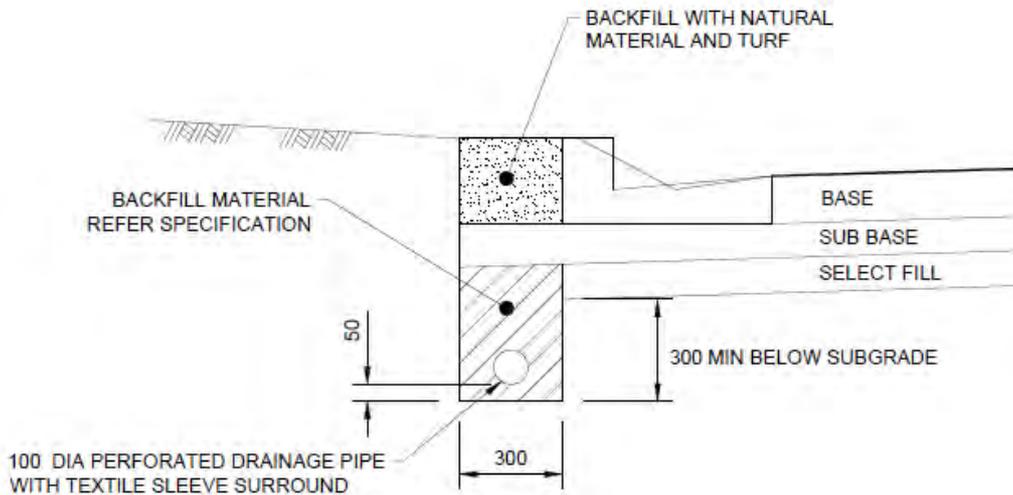
In kerbed roads, the two acceptable alternative options for subsoil drainage both allow for the line of the trench to be directly behind the kerb line. These options are shown in Council's Standard Drawing. Pavement layers must extend to at least the line of the rear of the trench. Where it is not possible to place subsoil drainage directly under or adjacent to the Kerb, the pavement Subbase can be extended at the same or higher slope up to the subsoil drain. In either case, the permeability of sub-base should be enough to allow flow from base to the filter material.

In un-kerbed roads, subsoil and sub-pavement drains shall be located within the shoulder preferably at the edge of the pavement layers and situated below the subgrade as detailed in Council's Standard Drawings.

The minimum desirable longitudinal design grade shall be 0.2%

Trench widths shall be a minimum of 300 mm, with a minimum depth of 300mm below subgrade and must ensure it is installed below the invert level of any service crossings unless otherwise agreed by Council due to mitigating circumstances.

Figure 1: Subsoil Drainage – Typical Cross Section



Outlets shall be spaced at maximum intervals of 150 metres into stormwater (gully) pits or outlet headwalls. Where practical, discharge shall be on the downhill side of the embankment or in the cut-fill area to reduce the risk of recharge to the subsurface water table. Unless otherwise authorised, where subsurface drains outlet through fill batters, unslotted plastic pipe of the same cross section area is to be installed and connected to a precast headwall as detailed in TMR SD1116.

A small precast concrete headwall shall be installed at the drain outlet with a pest proof cap and a marker post.

Clean out points are to be installed at the commencement of each run of drain, and at intervals not exceeding 60 metres. Cleanouts points shall generally be located:

- (a) In stormwater gully pit;
- (b) directly at the rear of the kerb; or
- (c) at the edge of the shoulder, as applicable.
- (d) aligned with property boundary locations to avoid conflict with other infrastructure.

Where the subsoil drains are installed adjacent to new kerb, the Designer shall note on the drawings a requirement for the contractor to indicate the location of the Clean out points adjacent to the new kerb.

In salinity affected areas, the Designer should consider providing a separate drainage system for subsurface drains for discharge to a basin where controlled release or desiccation treatment and removal can be facilitated as a maintenance operation. Saline subsurface drainage should not be routinely discharged directly into natural watercourses.

Reference to water quality targets for downstream watercourses is essential and the Designer shall provide advice on discharge operations and maintenance compatible with water quality targets and the requirements of the relevant land and water resource authority.

### 3 Foundation drains - warrants for use

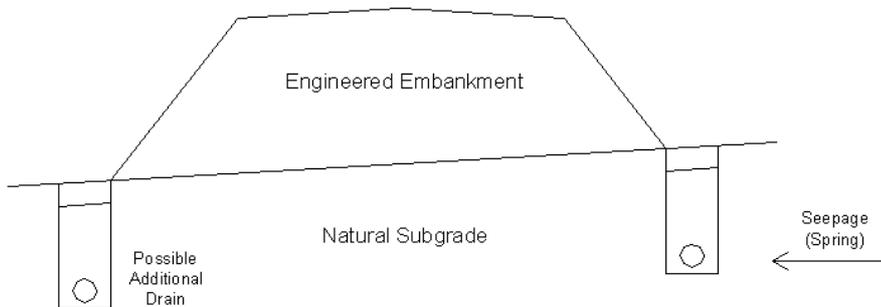
Foundation drains are designed to drain excessive ground water areas within the foundation of an embankment, the base of cutting or to intercept water from entering these areas.

The need to provide foundation drains may be apparent from the results of the geotechnical survey along the proposed road formation alignment, and in this case the location shall be shown on the drawings. However, more commonly, the need to provide foundation drains is determined during construction, and hence in this situation requirements and locations cannot be ascertained at the design stage.

Where the road formation traverses known swampy, flood-prone, salt affected areas or water charged strata, the Drawings shall be suitably annotated to the potential need for foundation drains at various locations, in addition to those shown on the drawings.

Typical cross-sections of foundation drains are shown below in Figure 2.

**Figure 2 – Foundation drains**



The minimum desirable design grade shall be 1.0%. For non-corrugated pipes an absolute minimum grade of 0.2% is acceptable.

Foundation drains shall be a minimum trench width of 300mm, with a variable trench depth to suit the application and ground conditions on site.

Outlets shall be spaced at maximum intervals of 150 metres.

Where practicable, subsoil drain clean out points are to be provided at the commencement of each run of foundation drain and at intervals not exceeding 60 metres. All playground softfall treatments (sand soft fall, rubber tiles or artificial turf) shall contain adequate subsurface drainage and be connected to the legal point of discharge to protect and maintain the quality of the softfall treatment. Details of requirements are shown in A3-9703 & A3-9704.

### 4 Drainage mats (blankets) – warrants for use

Filter blankets are designed where there is a need to ensure continuity of a sheet flow of water under embankment fills. It is intended to collect surface seepage from a wet area or/and protection of vegetation, habitats and downstream of the road reserve where an embankment would otherwise block the flow of water.

Filter blankets are installed after the site has been cleared, grubbed and ground surface treatment (GST) has been completed. prior to commencement of embankment fill, filter blankets are installed and

safely compacted to ensure it is not crushed during the construction of the embankment. Minimum depth of filter material under?

Sheet filters are designed where there is a need to intercept water that would otherwise enter pavements by capillary action or by other means. The sheet filters reutilised to intercept and control seepage water and springs in the floors of cuttings.

Sheet filters shall be installed after completion of the sub-grade construction and before construction of the pavement layers.

The need to design for the provision of this type of drainage feature should be apparent from the geotechnical survey results along the proposed road formation alignment.

## 5 Materials

### 5.1 Subsoil and sub-pavement drain pipe

Pipes designated for subsoil, foundation and sub-pavement drains shall be 100mm diameter slotted pipe. However, alternative design options may be considered by Council, subject to the provision of required design detail and justification.

Corrugated plastic pipe shall conform to the requirements of AS 2439.1. The appropriate class of pipe shall be selected on the basis of expected live loading at the surface. Joints, couplings, elbows, tees and caps shall also comply with AS 2439.1.

Slotted rigid uPVC pipe shall be of a type and class approved by Council.

All pipes shall be slotted, and fitted with a suitable geotextile filter tube, except for cleanouts and outlets through fill batters that shall be unslotted pipe.

### 5.2 Intra pavement drain pipe

Pipes designated for intra pavement drains with crushed rock sub-bases having layer thicknesses less than 150 mm or more than 200 mm shall be slotted thick walled UPVC pressure pipe complying with AS/NZS 1477. Alternative design options may be considered by Council subject to the provision of required design detail and justification.

Pipes designated for intra pavement drains with crushed rock sub-bases having layer thicknesses exceeding 200 mm shall be slotted pipe of a type and class approved by Council.

Pipes for use in Type B drainage mats shall be slotted thick walled uPVC pressure pipe complying with AS/NZS 1477.

### 5.3 Filter material

The type of filter material specified for backfilling the sub-surface drainage trenches (subsoil, foundation and sub-pavement drains) shall depend on the permeability of the pavement layers and/or sub-grade and the expected flow rate.

General filter material can either be;

- a) 20mm no fines Concrete
- b) Single size drainage aggregate of 20mm or 10mm particle size with a maximum of 5% passing the 0.150 mm test sieve.

The selected filter material should be sized such that the in-situ material does not clog the filter material, the filter material does not cause blockage of pipe and is sufficiently permeable. Reference to the appropriate reference specification is required.

The filter material to backfill subsurface drainage trenches within playground softfall treatment shall be certified softfall sand. Softfall sand must be min. 100mm over subsurface drain in accordance with relevant standard drawing.

## 5.4 Geotextile

To provide separation (i.e. prevent infiltration of fines) between the filter material in the trench and the sub-grade or pavement material, geotextile may be designated to encapsulate the filter material.

Geotextile shall also be designated for both sheet filters, drainage mats and filter blankets in accordance with the relevant standards. Geotextile material shall be wrapped tightly around the trench ensuring minimum overlap requirements are being implemented as per manufactures recommendations.

An acceptable solution exists for strip filter drains where they shall be a suitable proprietary product, comprising a plastic core of nominal thickness not less than 40 mm, encased by a non-woven geotextile which complies with the provisions of MRTS27. The strip filter drain shall permit the passage of high water flows along the drain and shall have a crush strength not less than 200 kPa.

Textile sleeves shall be either seamless knitted proprietary products or be formed from woven geotextiles. The geotextile material in formed sleeves shall comply with the provisions of MRTS27.

## 6 Documentation

### 6.1 Drawings and calculations

The proposed location of all subsurface drains shall be clearly indicated on the drawings, including the nominal depth and width of the trench, and the location with respect to the line of the kerb / gutter or edge of pavement.

The location of outlets and cleanouts shall be indicated on the drawings.

Assumptions and / or calculations made in the determination of the need or otherwise for subsurface drainage in special circumstances or as a variation to the requirements of this Guideline shall be submitted to Council with the drawings.

All drawings and documentation to be submitted to Council for approval shall conform to the requirements of Council's Drawings and documentation guidelines. A copy of these Guidelines will be made available upon request.

Drawings and Documentation submitted to Council shall be signed and certified by the Designer who is a suitably qualified professional engineer holding appropriate RPEQ certifications.

Failure to comply with Council's Drawings and documentation guideline may result in the drawings and/or documentation being returned to the designer without consideration by Council.

Design procedure of subsurface pavement drains shall be in accordance with AUSTRROADS Guide to Pavement Technology, Part 10: Subsurface Drainage.

PLANNING SCHEME POLICY

# CYCLE FACILITIES AND PATHWAY DESIGN



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – cycle facilities ~~way~~ and pathway design

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### Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
<a href="#">1.1</a>	<a href="#">Planning scheme policy amendment 3</a>	<a href="#">This amendment updated references, standards, terminology and requirements to reflect modern practice.</a>	<a href="#">- DRAFT FOR CONSULTATION</a>
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

# 1 Introduction

## 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

## 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in Part 1 or any other relevant part of the scheme.

## 1.3 Purpose

The purpose of this planning scheme policy is to:

1. Set out standards and design requirements to be used in the design of various types of cycle facilities, exclusively for cyclists ~~ways~~ and pathways, for use by all potential users including users with disabilities or limited mobility.
2. ~~Set~~ Ensure that the design and standards and document requirements related to the provision of cycle facilities ~~ways~~ and pathways are safe and convenient and that encourage supports walking and cycling, as well as other wheeled recreational vehicles and mobility devices for a variety of trip ~~pedestrian activities and cycling for transportation and recreational~~ purposes.

All relevant design principles contained in the ~~AustRoads~~ Austrroads Guides & Council's requirements referenced below must be integrated in the design of cycle facilities ~~ways~~, pathways and any associated infrastructure. This planning scheme policy serves as a companion document to the ~~AustRoads~~ Austrroads Guides, ~~extended to incorporate basic requirements for pathways.~~

~~Cycleways and pathways are to be safe and convenient and shall maintain a satisfactory level of service for all pathway users including users with disabilities and limited mobility~~

## 1.4 Referenced documents

- (a) ~~Council guidelines and specifications:~~
  - (i) ~~Planning scheme policy – geometric road design~~
  - (ii) ~~Road hierarchy overlay~~
  - (iii) ~~Council's bike plan~~
  - (iv) ~~Standard drawings – various~~
- (b) ~~Australian Standards:~~
  - (i) ~~AS1742.10 – Manual of uniform traffic control devices – pedestrian control and protection~~
  - (ii) ~~AS 2156.1 – Walking tracks, classification and signage~~
  - (iii) ~~AS2156.2 – Walking tracks infrastructure design~~
  - (iv) ~~AS2890.3 – Parking facilities – bicycle parking facilities~~
  - (v) ~~AS1428 – Design for access and mobility~~
- (c) ~~other:~~
  - (i) ~~Engineers Australia, Queensland division (1995) *Institute of Municipal Engineering Standards Australia*~~

- ~~(ii) Institute of Municipal Engineering Australia, Queensland division (1993) Queensland streets – design guidelines for subdivisional streetworks~~
- ~~(iii) Austroads (2008) Guide to traffic engineering practice (Part 13 Pedestrians and Part 14 Bicycles)~~
- ~~(iv) NAASRA (now AustRoads)(1988) Planning and designing for bicycles – technical report~~
- ~~(v) Australian Government (2004) Disability standards for accessible public transport guidelines~~
- ~~(vi) Queensland Department of Transport and Main Roads (2011) Queensland cycle strategy 2011 - 2021~~
- ~~(vii) Queensland Department of Transport and Main Roads (2005) Easy steps resource package~~
- ~~(viii) Queensland Transport Cycle Notes~~
- (a) Council guidelines and specifications:
  - (i) Planning scheme policy – geometric road design:
  - (ii) Mackay Regional Council – D20 Drawings and Documentation Guideline - [https://www.mackay.qld.gov.au/data/assets/pdf\\_file/0005/13964/D20.pdf](https://www.mackay.qld.gov.au/data/assets/pdf_file/0005/13964/D20.pdf)
  - (iii) ADAC - How to use the As Constructed Documents (PDF 327.5 KB)
    - ADAC 4.1 - As Constructed and ADAC Survey Pick-up (PDF 3.3 MB)
    - ADAC 4.1 - Creation of XML using 12d Model (PDF 734.1 KB)
    - ADAC 4.1 - Guidelines for Creation and Submission of XML Files (PDF 3.8 MB)
    - ADAC 5.0.1 - As Constructed and ADAC Survey Pick-up (PDF 3.6 MB)
    - ADAC 5.0.1 - Creation of ADAC XML using 12d Model (PDF 623.4 KB)
    - ADAC 5.0.1 - Guidelines for Creation and Submission of XML Files (PDF 4.6 MB)
  - (iv) Construction standard C266 – Roadside Furniture
  - (v) Construction standard C254 – Segmental Pavers
  - (vi) Construction standard C261 – Pavement Markings
  - (vii) Construction standard C271 – Minor Concrete Works
  - (viii) Mackay Regional Council - List of Furniture and Materials
  - (ix) External Documents Register - [https://www.mackay.qld.gov.au/data/assets/pdf\\_file/0003/253380/External\\_Document\\_Registry\\_for\\_Technical\\_Services\\_2019\\_002.pdf](https://www.mackay.qld.gov.au/data/assets/pdf_file/0003/253380/External_Document_Registry_for_Technical_Services_2019_002.pdf)
  - (x) Standard Drawings [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/footpaths](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/footpaths)
  - (xi) Road Hierarchy Functional Requirements and Standard Cross-sections [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/road\\_hierarchy\\_plans\\_and\\_cross-sections](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/road_hierarchy_plans_and_cross-sections)
  - (xii) Mackay Regional Council Cycleway Strategy [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/bike\\_plans](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/bike_plans)
- (b) DTMR Specifications
  - MRTS03 Drainage, Retaining Structures and Protective Treatments
  - MRTS04 General Earthworks
  - MRTS06 Reinforced Soil Structures
  - MRTS15 Noise Fences
  - MRTS16 Landscape and Revegetation Works
  - MRTS27 Geotextiles (Separation and Filtration)
  - MRTS28 Contractor's Site Facilities and Camp
  - MRTS51 Environmental Management
  - MRTS52 Erosion and Sediment Control
  - MRTS100 High Strength Geosynthetic Reinforcement in Road Embankments
  - DTMR Standard Drawings
- (c) MRC Supplementary Specifications - [https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/design_guidelines2)
- (d) Australian Standards:
  - (i) AS1742.10 – Manual of uniform traffic control devices – pedestrian control and protection

- (ii) [AS 2156.1 – Walking tracks, classification and signage](#)
- (iii) [AS2156.2 – Walking tracks infrastructure design](#)
- (iv) [AS2890.3 – Parking facilities – bicycle parking facilities](#)
- (v) [AS1428 – Design for access and mobility Set](#)

(e) Queensland and Australian Government:

- (i) [State Planning Policy](#)
- (ii) [Queensland Cycling Strategy 2017-2027](#)
- (iii) [Queensland Cycling Action Plan 2017-2019](#)
- (iv) [Department of Transport and Main Roads - Cyclists Guidelines](#)  
<https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Cycling-guidelines>
- (v) [Department of Transport and Main Roads – Road Planning and Design Guidelines](#)  
<https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Road-planning-and-design-manual-2nd-edition>
- (vi) [Department of Transport and Main Roads – Manual of Uniform Traffic Control Devices - Part 9: Bicycle facilities](#)
- (vii) [Department of Transport and Main Roads – Manual of Uniform Traffic Control Devices - Part 10: Pedestrian control and protection](#)
- (viii) [Department of Transport and Main Roads – Bicycle network signage and wayfinding guidelines](#)  
<https://www.tmr.qld.gov.au/Travel-and-transport/Cycling/Principal-Cycle-Network-Plans/Bicycle-network-signage-and-wayfinding-guidelines>
- (ix) [Transport Operations \(Road Use Management\) Act 1995](#)
- (x) [Transport Operations \(Road Use Management – Road Rules\) Regulation 2009](#)

(f) Other

Austroads – Guide to Road Design

- [Part 1: Introduction to Road Design](#)
- [Part 2: Design Considerations](#)
- [Part 3: Geometric Design](#)
- [Part 4: Intersections and Crossings](#)
- [Part 4A: Unsignalised and Signalised Intersections](#)
- [Part 4B: Roundabouts](#)
- [Part 6: Roadside Design, Safety and Barriers](#)
- [Part 6A: Pedestrian and Cyclist Paths](#)
- [Part 6B: Roadside Environment](#)
- [Part 8: Process and Documentation](#)

Austroads – Guide to Traffic Management

- [Part 1: Introduction to the Guide to Traffic Management](#)
- [Part 2: Traffic Theory Concepts](#)
- [Part 3: Transport Study and Analysis Methods](#)
- [Part 4: Network Management Strategies](#)
- [Part 5: Link Management](#)
- [Part 6: Intersections, Interchanges and Crossings Management](#)
- [Part 7: Activity Centre Transport Management](#)
- [Part 8: Local Street Management](#)
- [Part 9: Transport Control Systems – Strategies and Operations](#)
- [Part 10: Transport Control – Types of Devices](#)
- [Part 11: Parking Management Techniques](#)
- [Part 12: Integrated Transport Assessments for Developments](#)
- [Part 13: Safe System Approach to Transport Management](#)

[Austroads: Cycling Aspects of Austroads Guides AP-G88-17](#)

[Austroads: Bicycle Safety at Roundabouts AP-R542-17](#)

[Austroads: Bicycle Wayfinding AP-R492-15](#)

## 2 Content

### 2.1 Consultation

The Designer must consult with Council, the Developer's suitably qualified Landscape Architect (AILA) and any relevant authorities prior to and during the preparation of cycle facility way ~~and/or~~ pathway network design.

### 2.2 Design

A ~~suitable~~ suitably qualified and experienced professional engineer (RPEQ) shall oversee all aspects of the ~~footpath cycle facility and cycleway or pathway~~ design. The design shall comply with all relevant requirements of:

- (a) this planning scheme policy;
- (b) all reference and source documents listed in section 1.43;
- (c) any development approval conditions relevant to the design; and
- (d) any specific relevant and reasonable request provided by Council in writing.

The RPEQ shall sign all plans associated with the project, certifying that the design complies with this section.

In designing any new ~~paths~~ cycle facility or pathway, the Designer shall take into account the existing and proposed network. Prior to presenting to Council the extent and nature of the proposed works, the designer shall take into account relevant requirements s contained in Planning scheme policy – geometric road design.

Where required in Council's Road Hierarchy Plan or Council's Bicycle Plan the Designer shall provide for the inclusion of the appropriate cycle facility way or pathway. In making decisions about the extent or location of either the cycle facility way or ~~the pathway network~~, the Designer shall also consider the location of the existing and proposed network.

It is Council's intention to provide long-term connectivity between existing cycle facilities ways and pathways ~~and extend the linkage of both paths~~. This will be included in Council's works and required by developments where required to conform to this aim.

Where access places or cul-de-sacs are to form part of a new road network, ~~a pedestrian or and~~ bicycle ~~network, access links connectivity~~ should be provided ~~suitable connectivity to with the~~ adjoining road network access places or public open spaces s ~~systems to ensure such pedestrian and bicycle network are functionally efficient~~. The minimum width of land that provides pedestrian or bicycle linkage is 15 metres.

The Designer must be familiar with ~~cycleway relevant~~ relevant geometric design requirements in terms of:

- (a) width
- (b) grade
- (c) stopping sight distance
- (d) change in grade
- (e) horizontal curvature

- (f) crossfall and drainage
- (g) superelevation
- (h) sight distance on horizontal curves
- (i) appropriate treatments at the road / path interface

The Designer shall incorporate all the requirements for disability access as appropriate for pathway design in accordance with any Council Policy on access and mobility.

## 2.3 Cycle facilities ~~way and pathway types~~

Cycle facilities refer to facilities that are for the use of cyclists only. These facilities can be located either on-road or off-road.

For the purposes of this policy an on-road cycle facility is to cater for cyclists who may lawfully use the road or a road-related area in accordance with the road rules. Examples of these facilities include:

- [Cycle lanes](#)
- [Shared traffic lanes](#)
- [Sealed shoulder](#)
- [Bicycle awareness zone](#)
- [Exclusive bicycle lanes](#)
- [Protected / separated bicycle lanes](#)
- [Contra-flow lanes](#)
- [Bicycle storage / head-start areas \(at signalised intersections\)](#)

An off-road cycle facility is for the exclusive use of cyclists and must be signed for exclusive use. Off-road cycle facilities may be located within road-related areas such as the verge of the road or in other types of reserves such as parkland or freehold land. Examples of these facilities include exclusive cycle paths.

### Minimum design standards – cycle facilities

Cycle facilities can be provided either on-road or off-road. Council typically only provides dedicated on-road cycle facilities with shared-use paths being provided for cyclists off-road (see Table 2.4).

In relation to on-road cycle facilities, there are a range of potential facilities that can be designed within the road which are specified. Notwithstanding the Reference and Source Documents referred to in this Guideline the following minimum standards for more common on-road cycle facilities are shown in Table 2.3.

**Table 2.3 – Minimum design standards – typical on-road cycle facilities**

<u>Road speed limit</u>	<u>Minimum width</u>	<u>Desirable width</u>
40km/h or less	Consider installation of Bicycle advisory lanes or establishing cycle streets	Consider installation of Bicycle advisory lanes or establishing cycle streets
50km/h	1.2m	2.0m plus consideration for physical separation

60km/h	1.5m	2.0m plus consideration for physical separation
70km/h	1.8m	2.0m plus consideration for physical separation
80km/h or higher	2.0m plus consideration for physical separation	2.0m plus consideration for physical separation

Intersection and mid-block treatments should be considered as per *Guide to Road Design Part 6A: Paths for Walking and Cycling*.

## 2.4 Pathways

Pathways refers to footpaths and shared-use paths. Footpaths are intended to be used primarily by pedestrians including wheeled recreational vehicles, wheeled toys, mobility devices, personal mobility devices. Shared-use paths are intended to be used by pedestrians and cyclists. Pathways can be located in a road-related area such as the verge of the road or in other types of reserves such as parkland or freehold land.

All pathways in Queensland are able to be used by both pedestrians and cyclists unless signed for exclusive use by a specific user group, or subject to a separate Local Law.

~~ways can be provided on road and off road. Council's Bike Plan and Road Hierarchy detail descriptions, warrants, widths, pavement marking etc for the majority of these cycleways. Common alternative cycleway types include:~~

- ~~(a) on road:~~
- ~~(i) shared parking / bicycle lanes~~
  - ~~(ii) wide kerbside lanes~~
  - ~~(iii) shared traffic lanes~~
  - ~~(iv) exclusive bicycle lane~~
  - ~~(v) sealed shoulder~~
  - ~~(vi) bicycle awareness zone~~
- ~~(b) off road:~~
- ~~(i) shared use bicycle / pedestrian pathway~~
  - ~~(ii) separated pathway~~
  - ~~(ii) exclusive cycleway~~

~~The AustRoad Austroad Guide to Road Design : Part 6A provides advice on the suitability of pavement conditions, drainage pit grates etc for on road cycleways.~~

~~Common pathway types include:~~

- ~~(a) exclusive pedestrian pathways ("no bicycle" zones); and~~
- ~~(b) shared use bicycle / pedestrian pathways.~~

~~By definition, pedestrian pathways are "off road" in that pedestrian facilities routinely designed adjacent to roadways are termed footpaths and are designed to meet criteria outlined in Council's Road Hierarchy Plan and typically related to road cross section detailing.~~

~~Shared use pathways by comparison diverge from road alignment either within the road reserve or across land reserves. Pathways can be provided in conjunction with overland floodways or retention basins.~~

### Minimum design standards – pathways

Notwithstanding the Reference and Source Documents referred to this Guideline the following minimum standards for pathways are shown in Table 2.4.

**Table 2.4 – Minimum design standards pathways**

	<b>Cycleway</b>	<b>Footpath</b>	<b>Shared Use Pathway</b>
<u>Intended users</u>		<u>Pedestrians</u>	<u>Pedestrians</u> <u>Cyclists</u>
<u>Path Width</u>	<b>2.5m</b>	1.5m <sup>1</sup> 1.2m <sup>2</sup>	2.5m (preferred) <sup>3</sup> 2.5m <sup>4</sup> 2.0m (absolute minimum) <sup>3</sup>
<u>Formation Width</u>	<b>3.5m</b>	2.0m	3.0m (absolute minimum) 3.5m (preferred) 4.0m <sup>4</sup>
<u>Cross-fall minimum</u>	1:50	1:50	1:50
<u>Absolute maximum</u>	1:40	1:40	1:40

The maximum longitudinal grade of any pathway shall comply with the relevant Australian Standard.

The designer shall ensure that design details for all pathways comply with the requirements detailed in Council's relevant standard drawing.

Crossing locations at roads or other pathways will need to be considered in the design as per Guide to Road Design Part 6A: Paths for Walking and Cycling.

The wearing surface of all pathways/cycleways shall be as specified in the relevant standard drawings. Where the Designer wishes to propose an alternative treatment, they shall seek to obtain separate approval.

## **2.45 Provisions ~~for cycleways and pathways~~ at structures**

Designers shall consider the best way to provide for the uninterrupted movement of cyclists and pedestrians at proposed and existing structures wherever possible. Structures include bridges and underpasses over rivers, roads or railways. The reference and source documents provide information on:

- acceptable widths and clearances
- types of cycleways and pathways
- handrails and barrier fences
- bicycle bridges

<sup>1</sup> Full width concrete path to be provided in defined areas within the Mackay City Centre local plan area (refer to Council's standard drawing)

<sup>2</sup> With prior approval only and required to match existing paths widths

<sup>3</sup> For off-road shared paths within road reserves. Where the 2.5m wide shared pathway is to be located within a "new" road reserve and the Designer cannot satisfy adequate clearances for all users of the proposed pathway (as well as cater for the location and clearances from street trees, light poles and other similar obstructions to pathway users), the Designer shall increase the road reserve/verge width to satisfy all road user and design requirements. The absolute minimum width of 2m is only to be considered for construction in existing road reserves where it is not possible to widen the road verge.

<sup>4</sup> For shared paths within recreational park and drainage reserves.

- (e) approach ramps

## 2.56 Signage and pavement marking

The Designer shall provide appropriate signposting design for cycle ~~facilities ways~~ and pathways. Signs and pavement marking will provide for safe and convenient use ~~of the facility~~. The signs and pavement marking will comply with the Queensland MUTCD and AS1742.

As part of all pathway networks and facility installation specific provisions for and assessment of needs should be undertaken to address Wayfinding and Disability access. This would include but not be limited to provision if relevant Tactile Ground Surface Indicators in accordance with AS 1748 and Council's requirements and establishment of relevant wayfinding signage in accordance with relevant TMR support documentation.

## 2.67 End of journey facilities

Consideration must be given to the design of adequate facilities at common destinations or nodes of cyclists and pedestrians ~~so as to~~ encourage ~~cycleway and pathway~~ usage. Such facilities could include:

- (a) seats
- (b) standby areas
- (c) ~~secure bicycle parking~~ bicycle storage
- (d) picnic facilities
- (e) ~~drinking fountains~~ hydration stations
- (f) bicycle repair stations

Bicycle ~~parking-storage~~ installation design should meet appropriate criteria discussed in the ~~AustRoads~~ Austrroads Guide and be fabricated to meet AS 2890.3.

## 2.7 — Minimum design standards

~~Notwithstanding the Reference and Source Documents referred to this Guideline the following minimum standards as shown in Table 2.7 are to be complied with for off-road paths.~~

**Table 2.7 — Minimum design standards**

	Cycleway	Pathway	Shared Use Pathway
<b>Path Width</b>	2.5m	1.5m <sup>5</sup> 1.2m <sup>6</sup>	2.0m ( <u>absolute minimum</u> ) <sup>3</sup> 2.5m (preferred) <sup>7</sup> 2.5m <sup>8</sup>
<b>Formation Width</b>	3.5m	2.0m	3.0m ( <u>absolute minimum</u> ) 3.5m (preferred) 4.0m <sup>4</sup>
<b>Cross-fall minimum</b>	1:50	1:50	1:50
<b><u>Absolute</u>(Preferred) maximum</b>	1:40	1:40	1:40

~~The maximum longitudinal grade of any off-road cycleway shall comply with the relevant Australian Standard.~~

~~The designer shall ensure that design details for all cycleways and pathways comply with the requirements detailed in Council's relevant standard drawing.~~

~~The wearing surface of all cycleways and pathways shall be plain grey concrete. Where the Ddesigner wishes to propose an~~

~~alternative treatment, they shall seek to and obtain separate prior approval. Documentation~~

## 2.8 Documentation

The following listing outlines Council's minimum requirements for presentation of ~~cycleway~~ cycle facilities and ~~and/or~~ pathway designs.

- (a) plans for all ~~cycle facilities and~~ ways / pathways
- (b) the cycle facility or pathway ~~way~~ plan sheet may be incorporated into the road plan where clarity permits
- (c) longitudinal Sections will be required for all ~~off-road cycleways~~ off-road pathways where grades exceed 4%
- (d) cross Sections are to be provided and transition tables will be required where cross falls vary or superelevation is provided
- (e) a typical cross section will be detailed to indicate pavement materials and layer depths
- (f) confirmation by way of a site report, including photographs, confirming that the designer has visited the site to assess site constraints to be addressed in the design process

~~A typical cross section will be detailed to indicate pavement materials and layer depths~~

The design shall be submitted for consideration by Council and include all correspondence, Deeds, assumptions, reference material and calculations.

All drawings and documentation to be submitted to Council for approval shall conform to the requirements of Council's Drawings and Documentation Guideline.

Failure to comply with Council's Drawings and Documentation Guidelines may result in the drawings and/or documentation being returned to the engineer without consideration by Council.

~~All drawings and documentation to be submitted to Council for approval shall conform to the requirements of Council's Drawings and Documentation Guidelines. A copy of these Guidelines will be made available upon request.~~

~~Failure to comply with Council's Drawings and Documentation Guidelines may result in the drawings and/or documentation being returned to the designer without consideration by Council.~~

<sup>5</sup> ~~Full width concrete path to be provided in defined areas within the Mackay city centre local plan area (refer to Council's standard drawing)~~

<sup>6</sup> ~~With prior approval only and required to match existing paths widths~~

<sup>7</sup> ~~For off road shared paths within road reserves. Where the 2.5m wide shared pathway is to be located within a "new" road reserve and the Designer cannot satisfy adequate clearances for all users of the proposed pathway (as well as cater for the location and clearances from street trees, light poles and other similar obstructions to pathway users), the Designer shall increase the road reserve/verge width to satisfy all road user and design requirements. The absolute minimum width of 2m is only to be considered for construction in existing road reserves where it is not possible to widen the road verge.~~

<sup>8</sup> ~~For shared paths within park and drainage reserves.~~

## 2.9 Special requirements

### *Accessibility*

All ~~pedestrian~~ [footpaths](#) and shared paths shall include tactile indicators in accordance with AS 1428.4 design for Access and Mobility – Tactile Indicators.

All [cycle facilities](#) ~~cycleways~~ and pathways that lead to, or join, an existing or proposed public transport facility (such as a bus stop or taxi rank) shall comply with the Federal legislative requirements detailed in Disability Standards for Accessible Public Transport Guidelines 2004.

### *Lighting*

All cycle [facilities](#) ~~ways~~ and pathways shall be lit to the lighting category determined from AS/NZS1158.3 "Pedestrian area (Category P) lighting- [Performance and Design requirements](#)". Minimum requirements shall be Category [PP54](#) with the desirable level being Category [PP32](#).

~~Light fittings to be used shall be as specified in Council's Landscape Style Manual.~~

PLANNING SCHEME POLICY

# PAVEMENT DESIGN



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – pavement design

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### Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
<a href="#">1.1</a>	<a href="#">Planning scheme policy amendment 3</a>	<a href="#">This amendment updated references, standards, and requirements to reflect modern practice.</a>	<a href="#">- DRAFT FOR CONSULTATION</a>
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

# 1 Introduction

## 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

## 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in assessment benchmarks in the following code/s or any other relevant part of the scheme:

- (a) Table 9.4.1.3.A – General development requirements code
- (b) Table 9.4.3.3.A – Reconfiguring a lot code

## 1.3 Purpose

The purpose of this planning scheme policy is to:

1. Set guidelines for the design of road pavement to meet the required design life, based on the subgrade strength, traffic loading and environmental factors, and including the selection of appropriate materials for subgrade, sub-base, base and wearing surface.
2. Ensure that road pavement designs select appropriate pavement and surfacing materials, types, layer thicknesses and configurations to ensure that the pavement performs adequately and requires minimal maintenance under the anticipated traffic loading for the design life adopted.
3. Set out procedures for the design of the following forms of surfaced road pavement construction:
  - (a) Flexible pavements consisting of unbound materials;
  - (b) Flexible pavements that contain one or more bound layers, including pavements;
  - (c) Containing asphalt layers other than thin asphalt wearing surfaces;
  - (d) Rigid pavements (i.e. ~~cement~~ concrete pavements); ~~and~~
  - ~~(e) Concrete or clay segmental pavements.~~

The design of unsealed (gravel) pavements will only be ~~required~~ allowed for low trafficked rural access roads in isolated areas where ~~express~~ explicit prior approval has been given by Council. [Dimensions for formations and pavement widths in these scenarios will be consistent with Council's road hierarchy requirements for Average Daily Traffic Volumes less than 150 vpd and in accordance with the IPWEAQ Lower Order Road Design Guidelines for lower volumes roads. Pavement designs for both categories of roads will be in accordance with the requirements of the IPWEAQ Lower Order Road Design Guidelines.](#)

## 1.4 Referenced documents

- (a) Council guidelines and specifications:
- (i) ~~SC6.5 – Engineering Design Guidelines~~ [Planning scheme policy](#) – geometric road design (urban and rural)
  - (ii) ~~SC6.14 – Engineering Design Guidelines~~ [Planning scheme policy](#) – subsurface drainage design
  - (iii) Construction standard C242 – Flexible pavements
  - (iv) Construction standard C244 – Sprayed bituminous surfacing
  - (v) Construction standard C245 – Asphaltic concrete
  - (vi) Construction standard C247 – Mass concrete sub base
  - (vii) Construction standard C248 – Plain or reinforced concrete base
  - (viii) Construction standard C249 – Steel fibre reinforced concrete base
  - (ix) Construction standard C254 – Segmental paving
  - (x) Construction standard C255 – Bituminous micro surfacing
  - (xi) [D20 Drawings and Documentation Guideline - https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0005/13964/D20.pdf](#) ~~Mackay Regional Council, Standard drawings~~
  - (xii) ~~Eppell Olson and Partners (2003) Mackay four level road hierarchy~~
- (b) [DTMR Specifications](#)
- [MRTS05 Unbound Pavements](#)
  - [MRTS07A In situ Stabilised Subgrades using Quicklime or Hydrated Lime](#)
  - [MRTS07B In situ Stabilised Pavements using Cement or Cementitious Blends](#)
  - [MRTS07C In situ Stabilised Pavements using Foamed Bitumen](#)
  - [MRTS08 Plant-Mixed Heavily Bound \(Cemented\) Pavements](#)
  - [MRTS09 Plant-Mixed Pavement Layers Stabilised Using Foamed Bitumen](#)
  - [MRTS10 Plant-Mixed Lightly Bound Pavements](#)
  - [MRTS11 Sprayed Bituminous Surfacing \(Excluding Emulsion\)](#)
  - [MRTS12 Sprayed Bituminous Emulsion Surfacing](#)
  - [MRTS13 Bituminous Slurry Surfacing](#)
  - [MRTS17 Bitumen and Multigrade Bitumen](#)
  - [MRTS18 Polymer Modified Binder \(including Crumb Rubber\)](#)
  - [MRTS19 Cutter Oils](#)
  - [MRTS20 Cutback Bitumen](#)
  - [MRTS21 Bituminous Emulsion](#)
  - [MRTS22 Supply of Cover Aggregate](#)
  - [MRTS23 Supply and Delivery of Quicklime and Hydrated Lime for Road Stabilisation](#)
  - [MRTS30 Asphalt Pavements](#)
  - [MRTS32 High Modulus Asphalt \(EME2\)](#)
  - [MRTS35 Recycled Material Blends for Pavements](#)
  - [MRTS38 Pavement Drains](#)
  - [MRTS39 Lean Mix Concrete Sub-base for Pavements](#)
  - [MRTS40 Concrete Pavement Base](#)
  - [MRTS42 Supply of Wax Emulsion Curing Compound for Concrete](#)
  - [MRTS57 Geotextiles for Paving Applications](#)
  - [MRTS58 Subgrade Reinforcement using Pavement Geosynthetics](#)
  - [MRTS101 Aggregates for Asphalt](#)
  - [MRTS102 Reclaimed Asphalt Pavement Material](#)
  - [MRTS103 Fillers for Asphalt](#)
  - [MRTS104 Retarding Pavement Reflective Cracking using Asphalt Geosynthetics](#)
  - [DTMR Standard Drawings](#)
- (c) [MRC Supplementary Specifications - https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](#)
- (d) [Queensland authorities:](#)
- (i) [State Planning Policy](#)
- (e) [Council documents](#)

- (i) [External Documents Register -](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0003/253380/External_Document_Register_for_Technical_Services_2019_002.pdf)  
[https://www.mackay.qld.gov.au/\\_data/assets/pdf\\_file/0003/253380/External\\_Document\\_Register\\_for\\_Technical\\_Services\\_2019\\_002.pdf](https://www.mackay.qld.gov.au/_data/assets/pdf_file/0003/253380/External_Document_Register_for_Technical_Services_2019_002.pdf)
- (ii) [Drawings -](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/roads)  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/roads](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/roads)
- (iii) [Planning Scheme Road hierarchy overlay -](https://www.mackay.qld.gov.au/road_hierarchy_overlay)  
[https://www.mackay.qld.gov.au/road\\_hierarchy\\_overlay](https://www.mackay.qld.gov.au/road_hierarchy_overlay)
- (iv) [Road Hierarchy Documentation and Acceptable Cross-sections -](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/road_hierarchy_plans_and_cross-sections)  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/road\\_hierarchy\\_plans\\_and\\_cross-sections](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/road_hierarchy_plans_and_cross-sections)

## (f) Other:

- (i) [Australian Road Research Board \(2005~~1995~~\) Sealed local roads manual;](#)
- (ii) [Australian Road Research Board \(2005\) Unsealed local roads manual;](#)
- (iii) [Australian Road Research Board \(2020\) – Best Practice Guide – Materials](#)
- (iv) [Australian Road Research Board \(2020\) – Best Practice Guide – Sealed Roads](#)
- (v) [Australian Road Research Board \(2020\) – Best Practice Guide – Unsealed Roads](#)
- (vi) [AustRoads – Guide to Pavement Technology](#)  
  - [Part 1: Introduction to Pavement Technology](#)
  - [Part 2: Pavement Structural Design](#)
  - [Part 3: Pavement Surfacing](#)
  - [Part 4: Pavement Materials](#)
  - [Part 4A: Granular Base and Sub Base Materials](#)
  - [Part 4B: Asphalt](#)
  - [Part 4C: Materials for Concrete Road Pavements](#)
  - [Part 4D: Stabilised Materials](#)
  - [Part 4E: Recycled Materials](#)
  - [Part 4F: Bituminous Binders](#)
  - [Part 4G: Geotextiles and Geogrids](#)
  - [Part 4I: Earthworks Materials](#)
  - [Part 4J: Aggregate and Source Rock](#)
  - [Part 4K: Seals](#)
  - [Part 4L: Stabilising Binders](#)
  - [Part 5: Pavement Evaluation and Treatment Design \(PDF | online being built\)](#)
  - [Part 6: Unsealed Pavements](#)
  - [Part 7: Pavement Maintenance](#)
  - [Part 8: Pavement Construction](#)
  - [Part 10: Sub-Surface Drainage](#)
- (ii) ~~AustRoads, Pavement design – A Guide to the Structural Design of Road Pavements, AP-G17/04;~~
- (iii) ~~AustRoads, Technical report – Pavement design for light traffic – a Supplement to Aust Roads Pavement Design Guide AP-T36/06;~~
- (iv) ~~AustRoads (2002) Asphalt guide;~~
- (v) ~~AustRoads (2000) Provisional sprayed seal method;~~
- (vi) ~~Austrroads, Guide to control of moisture in roads;~~
- (vii) ~~Clay brick and paver institute Think Brick Australia – Clay Paving Manual (1989) Design manual 1 – Clay segmental pavements, a design and construction guide for sites subjected to vehicular and pedestrian traffic;~~
- (viii) ~~Concrete Masonry Association of Australia MA57 A guide to specifying Concrete Segment and Flag Pavements (1997) CMAA T44 – Concrete segmental pavements – guide to specifying;~~
- (ix) ~~Concrete Masonry Association of Australia (1997) CMAA T45 PA02 – Concrete Segmental Pavements – Design guide for residential access ways and roads;~~
- (x) ~~Concrete Masonry Association of Australia PA01 (1997) CMAA T46 – Concrete Segmental Pavements – Detailing Guide; and~~
- (viii)(xi) ~~Department of Transport and Main Roads, Pavement Rehabilitation Manual Standard specification MRS11.05 – Unbound pavements.~~

- [\(ixii\) Department of Transport and Main Roads, Pavement Design Supplement](#)
- [\(xiii\) Department of Transport and Main Roads, Technical Notes - Pavements, materials and geotechnical](#)
- [\(xiv\) Department of Transport and Main Roads, Guideline - Structural design procedure of pavements on lime stabilised subgrades guideline](#)
- [\(xiv\) IPWEAQ – Lower Order Road Design Guidelines](#)

## 2 Pavement design criteria – design variables

Regardless of the type of road pavements proposed, the design of the pavement shall involve consideration of the following ~~five-six~~ input variables:

- (a) design traffic;
- [\(b\) the current and future hierarchy of the surrounding transport network and impacts of the proposed project on it;](#)
- ~~(c)~~ subgrade evaluation;
- ~~(d)~~ environment;
- ~~(e)~~ pavement and surfacing materials; and
- ~~(f)~~ construction and maintenance considerations.

A suitably qualified and experienced professional engineer (RPEQ), using an acceptable approach outlined in this Guideline shall determine the road pavement thickness, ~~and~~ material types [and pavement configuration.](#)

[For pavement designs in general the Designer should ensure that the pavement design structure does not negate the ability for rehabilitation of the pavement at the end of its initial design life. A range of pavement options are to be considered and ~~that~~ the most cost-effective option for the design life is to be selected. For example, unbound granular base and sub-base structures enable rehabilitation works to be undertaken on the pavement structure where stabilised base and sub-base often negate this option.](#)

[Should pavement designs be provided such that pavement structures are not conducive with rehabilitation of the pavement materials Council will require a “whole of life” cost analysis to prove the pavement selected is the most cost-effective option.](#)

[Together with consideration of the various alternative pavement designs for the project the Designer shall provide an economic analysis of the alternative designs in accordance with Section 10 of Austroads – Guide to Pavement Technology Part 2. The economic assessment shall consider “whole of life” cost analysis for the pavement with the selected option for construction being that which results in the lowest present worth of costs.](#)

[The service provided by contributed assets ultimately becomes the responsibility of the Council to continue to deliver. To support this delivery, Council may require that during the design phase, a life cycle approach be adopted that considers the ongoing management obligations of the asset.](#)

[\(1\) The required levels of service for contributed assets should be met in the most cost-effective way, and therefore infrastructure should be provided in a manner which maximises resource efficiency and minimises whole of life cycle costs.](#)

~~(4)~~[\(2\) Early identification of costs enables effective decisions to be made in balancing performance, reliability, maintainability, maintenance support and other goals against life cycle](#)

costs. Decisions made early in an asset's life cycle, for example during the design phase, have a much greater influence on reducing life cycle costs than those made post-handover.

- (3) The preparation of a life cycle management plan and funding options may be requested for those proposed contributed assets that are considered over and above the level of service represented by the standards contained in this planning scheme policy.
- (4) For these assets to be acceptable to Council, the lifecycle costing of the proposed asset needs to be evaluated to determine: -
- (a) maintenance and operational requirements for the ongoing management of the asset;  
and
  - (b) the costs associated with the ongoing management of the asset.
- (5) The maintenance, operational and replacement costs of these assets are to be evaluated over the operating life of the asset or for a minimum of 30 years. Applicants should provide: -
- (a) a detailed assessment of the relevant infrastructure network and how it operates;
  - (b) a detailed management system; and
  - (c) a forecast of ongoing maintenance costs associated with the operating life of the asset.
- ~~(2)~~(6) A life cycle management plan should consider all management options and strategies as part of the asset lifecycle from planning to disposal. The objective of this is to consider lowest life cycle cost (rather than short term savings) when making asset management decisions.
- (7) Strategies are to be defined for each stage. Recurrent costs, being operations and maintenance, and capital costs, such as renewal/rehabilitation/replacement, upgrade/augmentation, enhancement (new assets) and disposal.

### 3 Design traffic

#### 3.1 General

The design traffic shall be determined based on the following minimum pavement design life:

- (a) urban streets and roads – 25 years;
- (b) rural streets and roads – ~~25~~ 30 years;
- (c) commercial and industrial streets and roads – 25 years;
- (d) rigid (concrete) – 40 years; ~~and~~
- ~~(e) segmental block – 30 years.~~

Design traffic shall be calculated in equivalent standard axles (ESA's) for the applicable design life of the pavement, taking into account present and predicted commercial traffic volumes, axle loadings and configurations, commercial traffic growth and street capacity.

In the instance of ~~For new subdivisions-developments~~ and areas identified for future development or redevelopment, the design traffic shall take account of both the construction traffic associated

with the subject developments, ~~and the in-service operational~~ traffic for the subdivisions development and ~~any~~ future developments within the likely traffic catchment for the street or road.

This shall include consideration for staged development (where construction traffic for subsequent stages using pavement constructed in preceding stages) to account for construction traffic, or reconstruct the previously constructed pavements prior to the acceptance of works of the last contributing stage of the development.

~~For interlocking concrete segmental pavements, the simplification of replacing ESA's with the number of commercial vehicles exceeding 3 tonne gross contained in CMAA T45 is acceptable up to a design traffic of  $1 \times 10^6$ . Beyond this, ESA's should be calculated.~~

The pavement design report shall include all traffic data and/or assumptions made in the calculation of the design traffic. Where practicable, traffic data shall be based on actual traffic counts (less than 3 years old) undertaken by either Council or the Designer~~engineer~~.

In determining the AADT/DESA's for any specific road in rural areas, the Designer~~engineer~~ shall take into account any seasonal use factors of the road – for example~~generally~~ cane haulage.

Any traffic count used to determine the AADT shall be for a minimum of 72 hours and be taken to achieve an appropriate determination of the AADT, peak hour volumes and percentage use by commercial vehicles.

Council will provide all available relevant traffic data held, upon request. The Designer will be responsible for the cost of obtaining traffic data necessary for pavement design assessments.~~not held by Council.~~

In the absence of actual traffic data, the following traffic values (in ESA's) may be taken as a guide to the **minimum** design traffic, but shall be subject to variation depending on the circumstances for the particular traffic generating catchment for the street.

#### **Street type – Design ESA's**

<u>Laneway</u>	$2 \times 10^4$
Access Place (Urban)	$2 \times 10^4$
Access Street (Urban)	$3.5 \times 10^4$
Access Place (Rural)	$4 \times 10^4$
Access Street (Rural)	$1 \times 10^5$
Industrial (Access & Collector)	$5 \times 10^5$ (To be determined by specific design data)
Minor Collector	$1 \times 10^6$
Major Collector	$2 \times 10^6$ (To be determined by specific design data)
Sub Arterial( <u>Traffic &amp; Controlled Distributor</u> )	$2 \times 10^6$ (To be determined by specific design data)
<u>Arterial</u>	$1 \times 10^7$ (To be determined by specific design data)

For roads of higher order than those listed above, design traffic determination shall be on a case by case basis for a design life of not less than 25 years.

In new ~~estates~~ development, or where traffic figures are not able to be accurately determined, the designer may use the following data to determine the design traffic loading in lieu of an approved alternative approach:

Construction traffic	20 ESA/equivalent allotment <u>plus appropriate allowance for civil construction of any future stages</u>
Traffic generation rates	10vpd/allotment (residential development)
Annual Traffic growth rates	0.5% (local residential street – post fully developed) <del>21.0%</del> (minor collector residential street) <del>1.53.0%</del> (major collector streets) <del>1.53.5%</del> (arterial and sub-arterial roads)
Commercial Vehicles	3% (local residential streets) 7% (minor collector street) 8% (industrial access and collectors streets) 5% (major collector street)
ESA/HVAG	0.3 ESA/HVAG Local Streets  0.5 ESA/HVAG Collector Streets <u>0.9 ESA/HVAG Sub-arterial and Arterial Streets</u> <u>0.7 ESA/HVAG All Rural Roads</u>
N <sub>HVAG</sub>	Rural 2.8 Urban 2.5

### 3.2 Subgrade evaluation

Except where a mechanistic design approach is employed using Austrroads – Guide to Pavement Technology Part 2: Pavement Structural Design ~~Aust Roads Pavement Design Manual~~, the measure of subgrade support shall be the soaked four day California Bearing Ratio (CBR). Where a mechanistic design approach using linear elastic theory is employed for flexible pavements, the measure of subgrade support shall be in terms of the elastic parameters (modulus, Poisson's ratio).

The following factors must be considered in determining the design strength/stiffness of the subgrade:

- sequence of earthworks construction;
- the compaction moisture content and field density specified for construction;
- moisture changes during service life;
- subgrade variability; and
- the presence or otherwise of weak layers below the design subgrade level.

The subgrade design CBR adopted for the pavement design must consider the effect of moisture changes in the pavement and subgrade during the service life. Accordingly consideration must be given to the provision of subsurface drainage in the estimation of equilibrium in-situ CBRs, and hence in the design of the pavement structure.

Warrants for the provision of subsurface drainage are given in [PSP Guideline D3 Planning scheme policy](#) – [Subsurface Drainage Design](#). If subsurface drainage is not to be provided, then the Design CBR adopted must allow for a greater variability in subgrade moisture content during the service life of the pavement, and hence Design Moisture Content above the Optimum Moisture Content.

The calculation of the Design CBR shall be based on soaked conditions. All design assumptions and engineering judgments used to determine the Design CBR are to be included in the pavement design report.

- (a) Soaked conditions are to be adopted for the calculation of Design CBR and shall be based on a minimum of 3 x ~~45~~-day soaked CBR laboratory samples for each subgrade area compacted to 100 percent of standard maximum dry density
- (b) The maximum spacing of test sites for field inspection pits is to be:
  - (i) 100 metres for urban projects, minimum of two tests; and
  - (ii) 250 metres for rural projects, minimum of three tests;
- (c) Once each subgrade area has been classified according to its particular soil type and drainage assessed, the Design CBR for each subgrade area is computed by using the appropriate formulae as follows:
  - (i) Design CBR = Least of individual CBRs, for less than five results
  - (ii) Design CBR = 10<sup>th</sup> percentile of all individual CBRs, for five or more results  
=  $C - 1.3S$
  - (iii) Where C is the mean of all individual CBR tests, and  
S is the standard deviation of all values

Where the Design CBR, as determined above, is calculated to be less than 3, then the design engineer is to:

- (a) Design and detail, by an industry recognised method acceptable to Council, the improvement measures required to improve the insitu sub-grade to CBR 3; and
- (b) Design the pavement above the improved subgrade.

~~Methods of improving the subgrade treatment, which are acceptable to Council, are available on an "Information Note" available on Council's Web page.~~

Where practicable, the design obtained by adopting the CBR from laboratory testing should be confirmed by testing existing road pavements near to the job site under equivalent conditions and displaying similar sub grades.

The pavement design report shall be prepared and certified by [the Designer or a sub-consultant who is](#) a suitably qualified and experienced [RPEQ professional engineer](#) and include a summary of all laboratory and field test results and assumptions and / or calculations made in the assessment of subgrade support.

### 3.3 Environment

The environmental factors that significantly affect pavement performance are moisture and temperature. Both of these factors must be considered at the design stage of the pavement. Reference should be made to [the following documents](#):

[AustRoads – Guide to Pavement Technology Part 8: Pavement Construction](#)

[AustRoads – Guide to Pavement Technology Part 10: Sub-Surface Drainage](#)

~~[Aust Roads Pavement Design manual, ARRB-SR41, and to Aust Roads \(formerly NAASRA\) – Guide to Control of Moisture in Roads.](#)~~

The following factors relating to moisture environment must be considered in determining the design subgrade strength/stiffness and in the choice of pavement and surfacing materials:

- (a) rainfall / evaporation pattern;
- (b) permeability of wearing surface;
- (c) depth of water table and salinity problems;
- (d) relative permeability of pavement layers;
- (e) whether shoulders are sealed or not; and
- (f) pavement type (boxed or full width).

The effect of changes in moisture content on the strength/stiffness of the subgrade shall be taken into account by evaluating the design subgrade strength parameters (i.e. CBR or modulus) at the equilibrium moisture content likely to occur during the design life, i.e. the Design Moisture Content. The provision of subsurface drainage may, under certain circumstances, allow a lower Design Moisture Content, and hence generally higher Design CBR.

The effect of changes in temperature environment must be considered in the design of pavements with asphalt wearing surfaces, particularly if traffic loading occurs at night when temperatures are low, thus causing a potential reduction in the fatigue life of thin asphalt surfacing. The effect of changes in temperature environment should also be considered for bound or concrete layers.

The pavement design report shall include all considerations for environmental factors, and any assumptions made that would reduce or increase design subgrade strength, or affect the choice of pavement and surfacing materials.

### 3.4 Pavement and surfacing materials

[The design will take into account the CBR of the Subgrade material when designing the pavement. In doing so the Designer shall consider what construction techniques and subsequent plant and equipment are likely to be adopted. The adopted Subgrade CBR and traffic loading utilised to obtain the pavement design are to be included as a notation on the plans and within the specifications.](#)

[Nominal pavement designs are not to be used. The Design is to explore and document several options to minimise the use of virgin materials, for example, but not limited to:-](#)

- [Unbound pavements](#)
- [Modified/stabilised pavement layers](#)
- [Lime stabilisation of Subgrade](#)
- [Tensar grid](#)
- [Reuse of existing pavement materials](#)
- [Insitu stabilisation of existing pavement materials](#)
- [Foam Bitumen stabilisation](#)
- [Bitumen Treated Base \(BTB\)](#)
- [Utilising existing quarries / pit gravels](#)

The Pavement Designer is to account for the availability of local quarries to supply approved pavement gravels to reduce supply/cartage costs.

The extent of the project that may require Subgrade treatment, and the type of treatment required, are to be considered by the Designer. The Designer shall document all relevant design assumptions for information of the roadwork contractor. An allowance for Subgrade treatment is to be made in the design estimate as a standard, or provisional, item in the case of Council designs.

Pavement materials can be classified into essentially four categories according to their fundamental behaviour under the effects of applied loadings:

- (a) unbound granular materials, including modified granular materials
- (b) bound (cemented) granular materials
- (c) asphaltic concrete
- (d) cement concrete

~~(e) — s~~ Surfacing materials can be classified into essentially ~~five~~ categories or types:

- (i) sprayed bituminous seals (chip seals)
- (ii) asphaltic concrete and bituminous micro surfacing (cold overlay)
- (iii) cement concrete
- ~~(iv) — concrete segmental pavers~~
- ~~(v) — clay segmental pavers~~

All material types shall satisfy the requirements of the relevant construction specification applying to the project.

~~Unbound granular materials, including modified granular materials, shall satisfy the requirements of Council's Construction standard C242 — Flexible pavements.~~

~~Bound (cemented) granular materials shall satisfy the requirements of Council's Construction standard C242 — Flexible pavements.~~

~~Asphaltic concrete shall satisfy the requirements of Council's Construction standard C245 — Asphaltic concrete.~~

~~Cement concrete shall satisfy the requirements of Council's Construction Specifications C247 — Mass concrete sub base, C248 — Plain or reinforced concrete base and C249 — Steel fibre reinforced concrete base.~~

~~Sprayed bituminous seals shall satisfy the requirements of Council's Construction standard C244 — Sprayed bituminous surfacing~~

~~Concrete and clay segmental pavers shall satisfy the requirements of Council's Construction standard C254 — Segmental paving.~~

~~Bituminous micro surfacing (cold overlay) shall satisfy the requirements of Council's Construction standard C255 — Bituminous micro surfacing~~

The use of sprayed bituminous seal (chip seal) is **not an acceptable** wearing surface on any urban street, regardless of road hierarchy level classification, unless otherwise approved by Council.

## 4 Pavement thickness design

### 4.1 Pavement structure – general

Unless otherwise approved, all pavement materials shall be supplied from commercial quarries, or recycled materials which meet required specifications, where the material is to comply with the requirements of the Department of Main Roads Standard Specification ~~MRTS14-05~~ *Unbound Pavements*.

Current test results may be required to be submitted to Council to support the quality of material that is proposed to be used.

Where pavement materials from new quarries or gravel pits are proposed for use, current test results for CBR, Atterberg limits and material grading (as a minimum) shall be provided for Council approval within fourteen (14) days of the design submission.

Notwithstanding subgrade testing and subsequent pavement thickness design, the thickness of sub base and base layers shall not be less than that set out in Tables 4.1.A and 4.1.B below.

**Table 4.1.A – Sub-base and base layer pavement thickness – flexible pavement**

Design Traffic (ESA's)	Pavement Layer (mm)	
	Sub-base	Base
<1 x 10 <sup>5</sup>	<del>125</del>	<del>125</del>
>1 x 10 <sup>5</sup> < 2x 10 <sup>5</sup>	125	125
>2 x 10 <sup>5</sup>	150	150

**Table 4.1.B – Sub-base and base layer pavement thickness – rigid pavement**

Design Traffic (ESA's)	Pavement Layer (mm)	
	Sub-base	Base
All values	100	150

The sub base layer shall extend a minimum of 300mm behind the back of any kerbing and/or channel.

The base and surfacing shall extend to the face of any kerbing and/or channel. Where the top surface of the sub base layer is below the level of the underside of the kerbing and/or channel, the base layer shall also extend a minimum of 300mm behind the rear face of the kerbing and/or channel.

For unkerbed roads, the sub base and base layers shall extend ~~to~~ at least to the nominated width of shoulder and shall provide for free drainage of both layers.

The Designer or pavement design engineer shall make specific allowance for traffic load concentrations within carpark areas (e.g. entrances/exists). The minimum pavement thickness for carparks is to be 150mm.

The Designer or pavement design engineer shall make provision for pavement layer drainage on the assumption that during the service life of the pavement ingress of water will occur.

~~The use of any computer software (such as Circlly) by the design engineer to determine the pavement structure will only be permitted where an alternative to a simple unbound or bound pavement is proposed.~~

Pavement design systems either mechanistic or empirical can be utilised in accordance with recommendations contained in Austroads – Guide to Pavement Technology Part 2: Pavement Structural Design. Council's preferred system of design utilises computer software such as

CIRCLY to determine pavement structures. In such instances all electronic files for the design output are to be provided to Council as evidence of the design.

In general terms all material properties including Poisson's ratios and vertical modulus used for the various pavement options shall be extracted from the following reference documents unless alternatives can be supported by independent test data:

- Austrroads – Guide to Pavement Technology Part 2: Pavement Structural Design
- Department of Transport and Main Roads, Pavement Design Supplement
- Department of Transport and Main Roads Specifications (MRTS)
- Department of Transport and Main Roads, Guideline - Structural design procedure of pavements on lime stabilised subgrades guideline

Council provides the following CIRCLY6 and CIRCLY7 materials databases as the basis of the thickness designs.

[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements)

Should the Designer utilise alternative materials criteria Council would require submission of justification for these criteria to be used including test data.

Pavement designs shall match existing pavement widths, where works are required on, or to extend an existing street or road and the existing pavement width is greater than specified.

#### **4.2 Unbound granular flexible pavements (bituminous surface)**

The ~~Designer~~ ~~engineer~~ shall refer to the relevant Reference document listed below, and adhere to the design approach detailed in the document, for the design of sealed flexible pavements:

- <10<sup>6</sup> EAS's AustRoads - Guide to Pavement Technology - Part 2: Pavement Structural Design Section 12.
- >10<sup>6</sup> EAS's AustRoads - Guide to Pavement Technology - Part 2: Pavement Structural Design Section 2 - 11.
- ~~(a) <10<sup>5</sup> ESA's: AustRoads, Technical report – Pavement design for light traffic – a supplement to AustRoads pavement design guide AP T36/06~~
- ~~(b) >1x10<sup>5</sup> ESA's: Aust Roads, Pavement design – A guide to the structural design of road pavements AP G17/04.~~

The design of the pavements is based on the traffic volumes (measured in ESA's) over the design life of the pavement.

- Unbound granular flexible pavements designed in accordance with
- ~~Austrroads – Guide to Pavement Technology Part 2: Pavement Structural Design~~
- ~~Aust Roads – Pavement design for light traffic – a supplement to AustRoads pavement design guide AP T36/06~~ shall use the 95% confidence limit curves for urban projects and 90% confidence limits for rural projects.

Temporary turnarounds (eg. at development stage boundaries) are to be compacted and sealed gravel, minimum 150mm deep and contained within a road reserve or appropriate easement.

#### **4.3 Flexible pavements containing bound layers (bituminous surfaced)**

Cement stabilised base or sub-base courses are not preferred for new road construction

Flexible pavements containing one or more bound layers including cement stabilised layers or asphaltic concrete layers other than thin asphalt surfacing, shall be designed in accordance with:

- ~~Austrads – Guide to Pavement Technology Part 2: Pavement Structural Design~~
- ~~Austrads – Pavement design for light traffic – a supplement to Austrads pavement design guide AP-T36/06.~~
- ~~As an alternative for design traffic up to 10<sup>5</sup>-ESA's, bound layers may be assumed equivalent to unbound layers of the same thickness, and the pavement designed in accordance with Austrads – Pavement design for light traffic – a supplement to Austrads pavement design guide AP-T36/06, using 95% confidence limit curves.~~

#### 4.4 Rigid pavements

Rigid (concrete) pavements, ~~with design traffic from 10<sup>3</sup> to 10<sup>6</sup>-HVAG~~ shall be designed in accordance with Austrads – Guide to Pavement Technology Part 2: Pavement Structural Design, ~~Austrads – Pavement design for light traffic – a supplement to Austrads pavement design guide AP-T36/06.~~

~~Rigid (concrete) pavements for design traffic above 10<sup>6</sup>-HVAG, the design shall be in accordance with Austrads – Pavement design, a guide to the structural design of road pavements, AP-G17/04.~~

#### 4.5 Concrete segmental pavements

~~Concrete segmental pavements with design traffic up to 10<sup>6</sup>-ESA's and width estimated commercial vehicles exceeding 3T gross shall be designed in accordance with Concrete masonry association of Australia (1997) CMAA-T45 – Concrete segmental pavements – design guide for residential access ways and roads.~~

~~For design traffic above 10<sup>6</sup>-ESA's and with estimated commercial vehicles exceeding 3T gross the design shall be in accordance with Austrads Pavement design, with the calculation of design traffic in terms of ESA's.~~

#### 4.6 Clay segmental pavements

~~Clay segmental pavements with design traffic up to 10<sup>6</sup>-ESA's shall be designed in accordance with Clay brick and paver institute (1989) Design manual 1 – Clay segmental pavements, a design and construction guide for sites subjected to vehicular and pedestrian traffic.~~

~~For design traffic above 10<sup>6</sup>-ESA's and up to 10<sup>7</sup>-ESA's the design shall involve consideration of both Design manual 1 and Austrads Pavement design, with the thicker and more conservative design of each of the two methods adopted.~~

~~For design traffic above 10<sup>7</sup>-ESA's, the pavement shall be designed in accordance with Austrads Pavement design.~~

## 5 Surfacing design

### 5.1 Choice of surface types

Except where the pavement is designed for concrete ~~or segmental pave~~ surfacing on urban access streets and places, the wearing surface shall be a bituminous wearing surface as indicated on the standard road hierarchy cross-sections as follows:

- (a) all street and roads (urban areas) – primerseal, plus asphalt; or
- (b) all streets and roads (rural areas):
  - (i) prime plus two coat chip seal; or
  - (ii) primer seal, plus asphalt; or
  - (iii) primer seal plus final seal and
  - (iv) primerseal plus asphalt on all heavy vehicle or agricultural equipment rotation locations at intersections or property access locations.

At all intersections and cul-de-sac turning circles on streets the design engineer shall take into account the vehicle braking and turning movements in the design and specification of the bituminous materials to be adopted.

Consideration must be given in the selection of surfacing grade and type to impacts of heavy vehicle generated shear stress on the design life of the surfacing type

Council may approve variations to these requirements in special circumstances. However, to obtain the variation approval, the ~~Designer~~ ~~Engineer~~ must present a written developed case outlining the benefits of the modification including consideration of capital and maintenance impacts advantages to Council of the proposed change. Council reserves the right to refuse the request.

### 5.2 Sprayed bituminous seals (chip seals)

The design of sprayed bituminous (chip) seals, including primer seals, shall be in accordance with AustRoads – Guide to Pavement Technology Part 4K: Seals ~~AustRoads (2000) Provisional sprayed seal method.~~

All aggregate used shall be precoated.

7mm primer seals shall be indicated on the Drawings below all asphalt surfacing. Where a 7mm primer seal is inappropriate, a 10mm primer seal shall be used in lieu.

Two-coat chip seals shall be double-double seals comprising a minimum of two coats binder and two ~~ests~~ coats of aggregate. The preferred seal types are:

- (a) 1<sup>st</sup> coat – ~~146~~mm; and
- (b) 2<sup>nd</sup> coat – 10mm.

Single coat chip seals shall only be approved if asphaltic concrete is to be applied as the finished surface at a nominated later date.

### 5.3 Bituminous micro surfacing (cold overlay)

Any bituminous micro surfacing, also referred to as 'cold overlay', shall be designed to provide a nominal compacted thickness of not less than 8mm.

## 5.4 Asphaltic concrete

In general terms the minimum layer thickness to be applied are as described on the road hierarchy type cross sections but are as follows:

- AC10M for up to 35mm
- AC14M greater than 35mm

In all road hierarchy's of major collectors and above Asphaltic surfacing shall utilise a PMB binder of a suitable grade to the specific situation, loading and shear stresses assessed. Similar assessments are to be considered for all intersections including those of low order streets and roads which should be assessed for impacts of traffic and particularly heavy vehicle shear stresses which may generate the need to utilise PMB binders.

On urban and rural roads ~~within design traffic up to  $1 \times 10^6$  ESA's (except within industrial areas),~~ the asphalt mix design shall be ~~either a 'high bitumen content' mix or Fine gap graded asphalt (FGGA) mix~~ in accordance with [AustRoads – Guide to Pavement Technology Part 4B: Asphalt & MRTS30 Asphalt Pavements](#). ~~(2002) Asphalt guide and Council's Construction standard C245 – Asphaltic concrete.~~

~~In industrial areas and on street and roads with design traffic greater than  $1 \times 10^6$  ESA's, the asphalt mix design shall be a dense graded mix designed by the engineer in accordance with AustRoads (2002) Asphalt guide and Council's Construction standard C245 – Asphaltic concrete.~~

~~Notwithstanding the requirements of sub-clause 2.19(1) or (2),~~ ~~t~~The ~~Designer~~engineer shall provide a minimum asphaltic compacted layer thickness as shown on the appropriate Council Standard Cross-section Drawing and not less than 50mm on intersections involving a collector street, or higher road hierarchy classification streets/roads.

A 7mm primer seal shall be indicated on the Drawings below all asphalt surfacing. Where a 7mm primer seal is considered inappropriate, a 10mm primer seal shall be indicated in lieu.

## 5.5 Segmental pavers

~~Concrete segmental pavers shall be 80mm thick, shape Type A, and designed to be paved in a herringbone pattern.~~

~~Clay segmental pavers shall be 65mm thick, Class 4, and designed to be paved in a herringbone pattern.~~

~~The edges of all paving shall be designed to be constrained by either kerbing and/or channel, or by concrete edge strips.~~

## 6 Documentation – design criteria and calculations

All drawings and documentation to be submitted to Council shall conform to the requirements of Council's Drawings and documentation guidelines. A copy of these guidelines will be made available on request.

The drawings shall clearly indicate the structure, material types and layer thicknesses of the proposed pavement and wearing surface.

All considerations, assumptions, subgrade test results, reference material and calculations shall be submitted with the pavement and wearing surface course design.

Failure to comply with Council's Drawings and documentation guidelines may result in the drawing and/or documentation being returned to the ~~Designer~~engineer without consideration by Council.

[Documentation submitted shall include the Pavement Design report and provision of all electronic files from relevant pavement design software utilised where applicable.](#)

PLANNING SCHEME POLICY

# SITE REGRADING



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – site regrading

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### Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
<a href="#">1.1</a>	<a href="#">Planning scheme policy amendment 3</a>	<a href="#">This amendment updated references, standards, and requirements to reflect modern practice.</a>	<a href="#">- DRAFT FOR CONSULTATION</a>
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

# 1 Introduction

## 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

## 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in assessment benchmarks in the following code/s or any other relevant part of the scheme:

- (a) Table 9.4.1.3.A – General development requirements code

## 1.3 Purpose

The purpose of this planning scheme policy is to:

1. Set out requirements for ~~the site regarding~~ ~~involved~~ in Council works and land development and subdivision ~~works~~ to be approved by Council.
2. Assist the Designer in achieving:
  - (a) efficient and economical design;
  - (b) enhancement of the environmental character of the site whilst maintaining the natural features of the site;
  - (c) provision of safe conditions for construction commensurate with the proposed purpose of the works; and
  - (d) ~~a~~ minimal impact on adjoining properties and other works.

The scope of this planning scheme policy assumes that the ~~D~~esigner is familiar with requirements cited in the various construction specifications, specifically those related to earthworks, clearing and grubbing, erosion and sedimentation.

Additionally, the designer will need to make reference to Planning scheme policy – geometric road design ~~(urban and rural)~~, Planning scheme policy – healthy waters and Planning scheme policy – stormwater drainage design.

## 1.4 Referenced documents

- (a) Design specifications:
  - (i) ~~(i) SC6.5 – Engineering design guidelines~~ [Planning scheme policy](#) – geometric road design ~~(urban and rural)~~;
  - (ii) ~~(ii) SC6.6 – Engineering design guidelines~~ [Planning scheme policy](#) – healthy waters;
  - ~~(iii) (iii) SC6.12 – Engineering design guidelines~~ [Planning scheme policy](#) – stormwater drainage design;
  - ~~(iii) (iv)~~ [Planning scheme policy – landscape](#);
  - ~~(iv) (v)~~ Standard drawings – various;
  - ~~(v) (vi)~~ Construction specification C211 – Control of erosion and sedimentation
  - ~~(v) (vii)~~ Construction specification C212 – Clearing and grubbing
  - ~~(vii) (viii)~~ Construction specification C213 – Earthworks
  - ~~(viii) (ix)~~ Construction specification C273 – Landscaping

- (b) DTMR Specifications  
MRTS03 Drainage, Retaining Structures and Protective Treatments  
MRTS04 General Earthworks  
MRTS06 Reinforced Soil Structures  
MRTS15 Noise Fences  
MRTS16 Landscape and Revegetation Works  
MRTS27 Geotextiles (Separation and Filtration)  
MRTS28 Contractor's Site Facilities and Camp  
MRTS51 Environmental Management  
MRTS52 Erosion and Sediment Control
- MRTS100 High Strength Geosynthetic Reinforcement in Road Embankments  
DTMR Standard Drawings
- (c) MRC Supplementary Specifications -  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/design_guidelines2)
- (db) Australian Standards:  
 (i) AS3798 – Guidelines on earthworks for commercial and residential developments  
 (ii) AS4970 – The protection of trees on development sites  
 (iii) AS4373 – Pruning of Amenity trees  
 (iv) AS4678 - Earth Retaining structures
- (ee) Queensland authorities:  
 (i) State Planning Policy
- (f) –Council documents  
 (i) -External Documents Register -  
[https://www.mackay.qld.gov.au/data/assets/pdf\\_file/0003/253380/External\\_Document\\_Registry\\_for\\_Technical\\_Services\\_2019\\_002.pdf](https://www.mackay.qld.gov.au/data/assets/pdf_file/0003/253380/External_Document_Registry_for_Technical_Services_2019_002.pdf)  
 (ii) Drawings -  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/drainage](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/standard_drawings/drainage)

## 1.5 Site regrading concept

Areas of a site proposed for building or recreational purposes may not be suitable in their natural state for their intended function without improvement works to:

- (a) ~~alleviate flooding of low lying ground~~ address flooding and drainage issues;
- (b) fill gullies or create emergency ~~flowpaths~~ flow paths after underground stormwater piping has been installed;
- (c) allow improved runoff from flat ground; and
- (d) allow effective recreational use or give reasonable access.

Earthworks, with the exception of those considered acceptable development under section 5.8 of the MRPS 2017, are not permitted until a full assessment has been carried out by a suitably qualified Registered Professional Engineer of Queensland (RPEQ) to determine the effect of the work and the control measures required to mitigate disruptions to the following:

- a) local drainage patterns;  
 b) existing drainage systems;  
 c) effect on adjacent properties;

- d) retaining wall requirements;
- e) existing soil/land stability;
- f) effect on existing vegetation; and
- ~~a)g)changes to existing groundwater levels and patterns.~~

Where natural surface levels are above the Defined Flood Event (DFE) 1% AEP including climate change 100yr ARI flood level (DFE) or the ~~designated~~ Defined Storm Tide surge Event level (DSTE) excavation to lower levels will not be permitted unless evidence can be provided that the excavated area remains free draining.

Filling of land below the DFE or DSTE 100yr ARI flood level or the design storm surge level will only be permitted where justification is provided to Council that:

- (a) the filling will not have a detrimental effect on other land; ~~or~~
- (b) the filling will not affect overland flow paths for stormwater; or
- ~~(c)~~ that the proposed filling is in the public interest to an extent that outweighs any detrimental effects on other lands.

The Designer shall review the natural surface contours and where necessary ~~shall~~ design finished surface levels that ensure the land levels is suitably prepared ~~complies with Council's specifications.~~

Where practical, areas should be regraded to minimise the necessity for interallotment drainage systems and allow overland water to flow naturally to roads or drainage reserves without excessive concentration.

~~The Designer shall consider the implications of site regrading in relation to the existing natural environment. Generally, site regrading shall be minimised in dense heavily treed vegetation areas.~~

Care shall be taken to provide depressions for overland flow from low points and over major drainage lines, to direct ~~stormwater runoff~~ runoff for storms up to the DFE to a positive outfall location, a 1% Annual Exceedance Probability (including climate change factor) flood event.

The Designer shall ensure ~~that design for the proposed regrading works~~ does not result in the diversion and ponding of stormwater from the development onto adjoining land; ~~or that stormwater~~ Stormwater shall is not be diverted from one adjoining land onto another.

The design of site regrading areas, in conjunction with the design of roadworks, shall be considered with the objective of balancing cut to fill volumes and achieving both an economical works and to minimise the haulage of imported fill or spoil to and from the works site.

The Designer shall consider the implications of site regrading in relation to the existing natural environment. Generally, site regrading shall be minimised in dense vegetation areas.

## 1.6 Special treatment of particular areas

In the event that an area is known to be affected by or inundated by local stormwater flows, the Designer shall investigate the existing conditions and detail how ~~as~~ they relate to the proposed works. The Designer shall provide a preliminary report to ~~and advise~~ Council ~~in a preliminary report detailing~~ on all data obtained in the investigation and recommend appropriate contour adjustments. The report shall be accompanied by sketch plans to clarify recommendations.

The Designer shall take into account all ~~C~~ constraints either natural or otherwise ~~that~~ are to be identified as a burden on the ~~developed~~ site. ~~It is recommended that the Designer take this into account when preparing the design.~~ The property may ultimately be affected by a “restriction as to user”, which may be controlled by a legal instrument placed on title to the land advising prospective purchasers of any restrictions affecting the land.

The proposed finished surface or filled area shall be designed ~~to accommodate sufficient cover over stormwater drainage lines to levels allowing an adequate minimum cover depth over the pipeline (if piped)~~ and permitting surface stormwater flow to be guided to field inlet pits if depressions are retained in the finished surface contouring.

A geotechnical report is required to be ~~submitted to Council and shall detail the following:~~ ~~provided with the site regrading plan specifying:~~

- (a) the site specific preparation and compaction requirements;
- (b) the suitability of the site for the proposed earthworks and any constraints that the earthworks would create for further development; and
- (c) the ~~resulting effects~~ ~~consequences~~ of the proposed earthworks.

A description of the minimum acceptable quality of ~~the~~ fill shall also be specified on ~~the~~ ~~project~~ plans, supported by geotechnical recommendations.

The finished surface of any allotment ~~or project site~~ shall be designed to comply with Council's standard drawings ~~and specifications~~.

Development in areas containing natural ground slopes of an excessively steep nature, i.e. greater than 15%, shall conform to the requirements of the State Planning Policy.

## 1.7 General standard of site preparation

Generally, clearing shall be kept to a minimum; however, the site is to be cleared of fallen timber, debris, stumps, large rocks and ~~or~~ any trees which in the opinion of Council's ~~arborist~~ are approaching the end of their ~~functional life cycle or are diseased and dying and therefore pose a danger to the public or assets.~~ ~~or are dangerous.~~

Trees and vegetation of significance shall be identified prior to design ~~so that~~ ~~in order that the amount of~~ disturbance may be minimised through appropriate design.

All trees and vegetation to be retained should be protected in accordance with AS4970 – The protection of trees on development sites and relevant standard drawings.:

The basic premise of site works should be that clearing is to be confined to the minimum area required to safely construct services, structures and the limits of approved extent of works areas. Additional clearing can be approved to ensure that the works are not interfered with by trees or other vegetation.

In areas with significant trees or vegetation, the extent of clearing shall generally be limited to:

- (a) clearing roadways to the limit of approved earthworks plus a sufficient lateral clearance to ensure that the trees or vegetation do not interfere with the works; and
- (b) allotment clearing to the minimum areas required to safely construct ~~infrastructure~~ services such as sewers, ~~and~~ catchment drains and the limits of approved earthworks to allotments. Additional clearing can be approved ~~plus a sufficient lateral clearance~~ to ensure that the trees or vegetation do not interfere with the works.

All tree pruning works shall be in accordance with AS4373 – Pruning of amenity trees.

All timber and other materials cleared from the site shall be removed and legally disposed of. All roots, loose timber, etc which may contribute to future drain blockage shall be removed.

No incineration of cleared vegetation is permitted.

In areas to be filled over the butts of trees, Council's preference is for an allowance ~~is~~ to be made for clearing of all trees and replanting with advanced species, the number and type of which shall be approved by Council.

All replanting is to be clear of probably ~~ey~~ future building location, and not to be commenced until filling has ~~ve~~ been completed and graded, with provision for watering and maintenance for duration of the Project contract. These specific requirements shall be shown on the drawings.

Trees on existing roads shall not be damaged or removed without the written approval of Council.

~~No t~~Trees ~~that are~~ located on land ~~to be dedicated~~ under the control of Council shall not be removed or damaged without written approval. Such requirements shall be shown on the project drawings.

Appropriate precautions should be implemented to protect Sselected trees ~~shall be identified to be preserved.~~ By approved means Ddetails of the protection measures and/or relocation scope shall be located identified and shown on project drawings and presented to Council for approval. ~~to prevent destruction normally caused by placement of conventional filling or other action within the tree drip zone. The details of the protection or relocation of selected trees shall be shown on the drawings.~~

In rural developments, the recommendations of the Queensland Fire and Rescue Authority (Rural Fire Service Division) are to be sought and considered by the Ddesigner.

Where surplus or unsuitable material is to be disposed ~~of outside the site~~ off site the Ddesigner shall note ~~on the drawings a~~ requirement on the project drawings for the that the Contractor shall to obtain an Operational Works permit from Council prior to ~~placing the material at the disposal site of material on the project drawings~~.

Where surplus or unsuitable material is proposed to be disposed of on ~~parkland~~ open space or road reserves, the Ddesigner shall submit details and seek separate approval prior to the lodgement of an Operational Works application.

Where the surplus material is generated from works from within existing declared road reserves, Council may nominate that the spoil be placed on Council controlled land within 5 km of the project site.

The extraction of material from within existing road reserves requires the approval of the State via the Department of Agriculture and Fisheries through a development application process administered by Council ~~DPI – Forestry~~, who may levee a royalty to be paid by the ~~e~~ Contractor.

## 2 Design detail

### 2.1 Fill embankments

The Ddesigner shall take into account the requirements of AS 3798 "Guidelines on Earthworks for Commercial and Residential Developments" and the State Planning Policy in the design of any filling.

All materials proposed for use in fill embankments, regardless of location, shall be suitable for the purpose.

Fill comprising natural sands, ~~or~~ industrial wastes or by-products may only be used after the material type and location for its use is approved by Council and will be subject to specific requirements determined by prevailing conditions.

All fill areas shall be subject to a geotechnical assessment to ensure their stability.

Where the volume of imported fill material ~~to be imported to the site~~ exceeds 2,500m<sup>3</sup> (loose), the Designer / Contractor shall ~~provide~~ submit details of the following information to Council and/or the Department of Transport and Main Roads dependent on the haul route chosen and seek separate approval for:

- (a) proposed source
- (b) volume of material required
- (c) proposed transport route – the route must take particular care to minimise any adverse impacts upon residents and businesses
- (d) proposed time of cartage – start and finish times and days per week.

In considering the most appropriate haul route, the Designer shall refer to Council for acceptable haul roads and details of any applicable load limits timing.

Council and/or the Department of Transport and Main Roads may require contributions toward the cost of any accelerated pavement degradation along the haul route via an Infrastructure Agreement and will additionally request a bond to cover the cost of any pavement repairs to the approved route.

Where embankments require maintenance by conventional machinery, then the maximum transverse slope shall be 1:5, with the absolute maximum being 1:4 over short sections.

The grading of allotments shall be in accordance with the requirements detailed in Council's standard drawings. ~~Generally, Unless stated otherwise,~~ the following principles are to apply:

- (a) allotments should preferably drain to the street, where practicable;
- (b) where significant allotment areas drain to the rear, or other adjoining allotment, then interallotment drainage shall be provided;
- (c) the following minimum allotment grades are to apply:
  - (i) residential – 1:200
  - (ii) commercial / industrial – 1:300

## 2.2 Batter treatments

The Designer shall ensure that no cut or fill batters extend into an existing or proposed road, ~~parkland~~ open space or adjoining allotment, without specific prior approval.

As a minimum unless adjoining land approvals have been granted all embankments and cuttings must be outside the road reserve. The ~~foot~~top of any cut batter is to be 300mm inside the property boundary; the ~~top~~toe of any fill batter is to be 300mm inside the property boundary.

Where Council approval to fill adjoining lands has been given, the Designer shall ensure that the filling complies with the following criteria:

- (a) provision of a 1m minimum wide strip of land inside the adjoining allotment, having a slope between 1:20 and 1:200; and

- (b) the batter slope shall be a maximum of 1:4.5. The Designer must provide the written approval of the adjoining property owner to Council.

(c) Where

~~Where Council approval to fill adjoining lands has been given, the Designer shall ensure that the filling complies with the following criteria~~ site specific bank stabilisation measures are proposed the following criteria shall apply:

- (i) Cut – 1:2.5 maximum; 1:4 desirable and  
(ii) Fill – 1:2.5 maximum; 1:4 desirable.

Any batters higher than 1.0m shall require certification as to stability by an RPEQ and batters higher than 2.0m shall require certification by an RPEQ ~~Registered Professional Geotechnical Engineer (RPEQ).~~

## 2.3 Levels

The final level of any filling on an allotment shall be in accordance with the requirements of the Planning Scheme. The development level will ~~make~~ allowances for:

### Habitable Floor Level

The current required minimum habitable floor level is the higher of:

300 mm above the 100 year ARI flood level.

300 mm above the top of kerb.

300 mm above the crown of the road.

225 mm above ground level.

A level which allows the connection of all sanitary fixtures to the designated connection point by means of sanitary drainage which complies with AS3500.

RL 5.40 m AHD (formerly 5.95 m AHD) for Mackay and environs.

RL 5.30 m AHD (formerly 5.80 m AHD) for Ball Bay/ Halliday Bay/ Seaforth.

RL 5.00 m AHD (formerly 5.80 m AHD) for Midge Point.

RL 5.30 m AHD (formerly 6.10 m AHD) for Sarina Beaches.

Note: The minimum level is to be raised a further 0.60m when the site is located within 100m of the foreshore.

Hospitals, schools and emergency services buildings are to be constructed to higher levels (200 year ARI and 500 year ARI's) pending on the specific development type.

~~(a) Storm Surge where the 'minimum level' shall be the 1% Annual Exceedance Probability (including climate change factor) storm surge plus an allowance factor for safety, stormwater drainage freeboard and minor wave run-up with this level being assessed as:~~

~~(i) Mackay Urban Area ("existing areas") RL 5.4 m AHD~~

~~(ii) Ball Bay/ Haliday Bay/ Seaforth RL 5.3 m AHD~~

~~(iii) Midge Point RL 5.0 m AHD~~

### Development Level

The minimum ground level shall be the higher of:

RL 5.00 m AHD for Mackay and environs.

RL 4.90 m AHD for Ball Bay/ Halliday Bay/ Seaforth.

RL 4.60 m AHD for Midge Point.

RL 4.90 m AHD for Sarina Beaches.

Note: The minimum level is to be raised a further 0.60m when the site is located within 100m of the foreshore.

~~The minimum finished ground level for such lots shall be at or above the DFE or not less than 400mm below the defined "Minimum Floor Level" for the location.~~

~~Note, the "Minimum Level" is raised by 600mm when the site is located within 100m of the foreshore.~~

~~(b) River, stream and local flooding where the Defined Flood Event is the 1% Annual Exceedance Probability flood event which shall cause the highest flood level at the allotment in question.~~

## 2.4 Access

To enable appropriate vehicle access to each allotment, the Designer shall ensure that the footpath crossfall and batter grades comply with the following requirements; ~~to enable appropriate vehicle access to each allotment to be achieved:~~

- (a) the first 3m from kerb and channel to be 2%;
- (b) balance of verge – maximum 1:6 (17%), minimum 1:50 (2%);
- (c) within allotment:
  - (i) residential and rural residential – maximum 1:6 (16.6%) for at least the first 6m from the front boundary, desirable 1:6 (16.6%) desirable and for a minimum distance of 6 metres from the front boundary), absolute 1:54 (205%) absolute thereafter; ~~for a minimum distance of 6 metres from the front boundary);~~
  - (ii) rural – desirable 1:6 (16.6%), absolute 1:5 (20%); and
  - (iii) industrial – desirable 1:10 (10%), absolute 1:46 (16.6%);
  - (iv) Maximum change in driveway grades – all areas desirable 8%; maximum 10%
- (d) accesses to 'hatchet' allotments are to be connected to the kerb and channel for the full length of the access 'handle' with 3m (minimum) wide paved driveway; and
- (e) any concrete inverts are to be built in accordance with Council's standard drawings.

~~Unless specifically excluded in the development approval, the Designer shall ensure that an access is provided to all rural allotments. The access shall be built in accordance with Council's standard drawings.~~

Accesses to rural allotments that are at a slope greater than 1:10 (10%) shall be paved and sealed or concreted as indicated in Council's standard drawings.

Where accesses involve the construction of culvert crossings or causeways these shall be designed in accordance with relevant geometric road design standards and constructed in accordance with relevant TMR standards.

The Designer may be required to demonstrate to Council's satisfaction that practical access can be provided to all allotments and also to a building envelope within the allotment boundary.

## 2.5 Standard of fill for sites

Where fill is required, the Designer shall ensure that the materials specified are in accordance with the relevant standards, following notations, and the items addressed in paragraphs 2 to 5 below, are

~~incorporated in the special requirements clauses in Council's Construction Specification C213 – Earthworks.~~

~~"Fill is to be sound clean material, of reasonable standard and free from large rock, stumps, organic matter and other debris."~~

~~"Placing of fill on the prepared areas shall not commence until the authority to do so has been obtained from the Superintendent".~~

Fill comprising natural sands, ~~or~~ industrial wastes or by-products may only be used after the material type and location for its use is approved by Council and will be subject to specific requirements determined by prevailing conditions. [In general materials requirements shall comply with Section 14.2 of MRTS04.](#)

It is essential that the ~~D~~designer give prior advice to Council of any intended use of such materials. It should be noted that failure to obtain Council's approval may lead to an ~~direction order to for removal~~ [of any material considered by Council or other relevant authorities as unsuitable or in any way unfit for filling, with no additional cost to Council.](#)

All work shall be in accordance with AS 3798. Fill is to be placed in layers not exceeding ~~depths specified in Table 15.3(a) of MRTS04, 150mm compacted thickness.~~ All fills are to be compacted to ~~standards as indicated in Table 5.1 of AS3798, 95% standard maximum dry density. Maximum particle size shall not be greater than 2/3 of the layer thickness.~~

The area under paved areas, footpaths, batters and areas of fill shall be stripped of topsoil and any other organic materials.

[Council will only accept fill as approved fill, if:](#)

[a. The filling operation has been designed and supervised by a Practising Registered Professional Engineer \(Queensland\) in accordance with AS 3798-1996. Such a design is to take into account existing topography, soil and drainage conditions; and](#)

[b. An "As Constructed" plan of fill showing property description, boundaries and surface levels prior to filling, finished surface levels after filling, and any other works as constructed or altered in the fill operation is supplied to Council; and](#)

[c. Copies of compaction test results accompanied by an Engineer's Certificate certifying compliance with Council's requirements and compliance with AS 3798-1996 is supplied to Council.](#)

[Council as a minimum for Commercial development requires Controlled Fill – Class I certification to be provided in accordance with AS3798. For all other development it is recommended that Class I certification is preferred given that unconsolidated fill impacts subsequent foundation design and costs for any subsequent development works proposed.](#)

## 2.6 Topsoiling and grassing

All areas where filling has been placed are to be [top](#) dressed with clean arable topsoil, fertilised and sown with suitable [mix of](#) grasses. This work shall be carried out in accordance with [the relevant standards.](#) ~~Council's Construction Specification C273 – Landscaping.~~

Topsoil shall be spread to a [minimum](#) depth of ~~75~~75mm.

Topsoil is defined as surface soils that are high in organic matter and contaminated by residual grass seeds and grass roots.

The Drawings shall be annotated as follows: "[Where possible](#) ~~a~~ all topsoil shall be retained on the site and utilised effectively to encourage appropriate revegetation."

All areas are to be seeded / turfed, watered and fertilised to obtain a minimum of 980% grass coverage ~~before within 6 months of the work~~ being accepted "Oen mMaintenance" by Council.

Designers are to ensure that the full width of the verge is to be seeded / turfed.

## 2.7 Retaining walls and rock protected slopes

A suitably qualified and experienced professional structural engineer (RPEQ) shall design all retaining walls and rock protected slopes ~~and also provide a~~ Appropriate certification ~~to for the design is required to be submitted with the project drawings.~~

Any building restrictions within the lot which occurs ~~as a result of~~ because of the design or construction of the retaining wall is to be identified on the Drawings. This may also result in Council requiring a covenant being placed on the lot title, or requiring a building envelope being placed on the ~~allotment.~~

The only exceptions are walls that have no surcharge loading and are less than 1m high.

Retaining walls are to be located ~~in general~~ on the allotment which contains the earthworks which gives rise to the need for the retaining wall. Where a retaining wall is required on the boundary between a lot and a road reserve if the earthworks are part of the works required for the creation of the lot, then the retaining wall must be located within the lot. That lot benefitting from the existence of the retaining wall must be where the retaining wall is located for future liability and maintenance responsibility.

All walls retaining road or ~~parkland open space~~ fill are to be located within the road or ~~parkland open space~~ reserve.

The designer shall ensure that permanent fencing (of a type approved by Council) or alternatively retaining wall extensions having a minimum height of 1.2 m shall be provided on retaining walls located on future public land and shall form of the design inputs for the retaining wall structural design or alternatively shall be subject to a risk assessment which assesses residual risk following construction.

Design for the retaining structure shall be to AS 4678 or traditional (lumped) factor of safety (FOS) approach.

Table 5.7.4-A of AS 4678 specifies the minimum Factors of Safety (FOS) to be applied for each mode of failure - Sliding 2.0; Overturning 2.0; Bearing 2.5; Global 1.5.

Structure design life shall be in accordance with Table 3.1 of AS 4678. All retaining structures supporting public infrastructure shall be considered "major public works" and the appropriate design life applied.

All materials utilised shall consider the durability of the materials to meet the design life requirement of the structure and these material properties shall be certified by the RPEQ undertaking the structural certification of the retaining structure.

## 2.8 Effect on adjoining properties

Where it is proposed to divert or direct piped stormwater into adjoining properties, drainage easement rights are to be created over the adjoining lots in accordance with ~~SC6.12 — Engineering design guidelines~~ Planning scheme policy – stormwater drainage design.

### 3 Special requirements

#### 3.1 Temporary diversion drains

Where temporary drains are required to divert surface flows away from the site regrading area, the location and silt/erosion control treatment shall ensure minimal soil disturbances and material loss off ~~the~~ site.

The ~~e~~Designer shall include any requirements identified in the relevant soil and water quality management policies for any additional requirements.

PLANNING SCHEME POLICY

# STRUCTURES / BRIDGE DESIGN



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – structures / bridge design

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### Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
<a href="#">1.1</a>	<a href="#">Planning scheme policy amendment 3</a>	<a href="#">This amendment updated references, standards, and requirements to reflect modern practice.</a>	<a href="#">- DRAFT FOR CONSULTATION</a>
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

# 1 Introduction

## 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

## 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in Part 1 or any other relevant part of the scheme.

## 1.3 Purpose

The purpose of this planning scheme policy is to set out guidelines developed specifically for the design considerations to be adopted in the design of structural engineering elements ~~for land subdivisions~~. The Guideline is to also apply to appropriate structural elements designed on behalf of Council.

Such elements include:

- (a) road traffic bridges;
- (b) pedestrian bridges;
- (c) structures other than bridges, but associated with roads (eg. major culverts, retaining walls, major sign support structures);
- ~~(d)~~ small earth dams, detention basins;
- ~~(e)~~ coastal erosion protection structures;
- ~~(d)~~~~(f)~~ boat ramps and other marine structures;
- ~~(e)~~~~(g)~~ structures used for public safety (road safety barriers, pedestrian safety rails, street lighting); and
- ~~(f)~~~~(h)~~ temporary works.

Such structures may be of concrete, timber, rock or steel constructions, but with emphasis placed on low maintenance, safety and whole of life cycle costs.

Major culverts are defined as:

- Metal culverts (steel and aluminium) with at least one barrel (cell) with span . height or diameter >= 1.2m; or
- All other culverts with:
  - o Pipes with at least one barrel (cell) with diameter >= 1.8m; or
  - o Rectangular/oval/arch culverts with at least one barrel (cell) with span > 1.8m and height > 1.5m;
  - o Stock and pedestrian underpasses.

The aim of design shall be the achievement of acceptable probabilities that the structure being designed will not become unfit for use during its design life, having regard to economic, physical, aesthetic, flooding or hydraulic capacities, safety in design, maintenance and repair constraints, constructability, future infrastructure planning, and other relevant constraints.

## 1.4 Referenced documents

(a) Council guidelines and specifications:

- (i) ~~SC6.5 – Engineering design guideline~~ [Planning scheme policy](#) – geometric road design (urban and rural)
  - (ii) ~~SC6.6 – Engineering design guideline~~ [Planning scheme policy - healthy waters](#) – healthy waters
  - (iii) ~~SC6.12 – Engineering design guideline~~ [Planning scheme policy](#) – stormwater drainage design
  - (iv) [Planning scheme policy – structures/ bridge design](#) [subsurface drainage design](#)
  - (v) [Mackay Regional Council - Guideline for Preparation of Flood and Stormwater Drainage Catchment Reports](#)
  - (vi) [Mackay Regional Council – D20 Drawings and Documentation Guideline - \[https://www.mackay.qld.gov.au/\\\_data/assets/pdf\\\_file/0005/13964/D20.pdf\]\(https://www.mackay.qld.gov.au/\_data/assets/pdf\_file/0005/13964/D20.pdf\)](#)
  - (vii) [Stormwater drainage studies and flood studies - \[https://www.mackay.qld.gov.au/business/planning\\\_and\\\_development/waterway\\\_and\\\_coastal\\\_hazard\\\_planning/flood\\\_studies\]\(https://www.mackay.qld.gov.au/business/planning\_and\_development/waterway\_and\_coastal\_hazard\_planning/flood\_studies\)](#)
  - (viii) [External Documents Register - \[https://www.mackay.qld.gov.au/\\\_data/assets/pdf\\\_file/0003/253380/External\\\_Document\\\_Registry\\\_for\\\_Technical\\\_Services\\\_2019\\\_002.pdf\]\(https://www.mackay.qld.gov.au/\_data/assets/pdf\_file/0003/253380/External\_Document\_Registry\_for\_Technical\_Services\_2019\_002.pdf\)](#)
  - (ix) [Construction standard C220 – Stormwater drainage – general](#)
  - (x) [Construction standard C221 – Pipe drainage](#)
  - (xi) [Construction standard C222 – Precast box culverts](#)
  - (xii) [Construction standard C223 – Drainage structures](#)
  - (xiii) [Construction standard C224 – Open drains including kerb and gutter](#)
  - (xiv) [Mackay Regional Council \(MRC\) Supplementary Specifications - \[https://www.mackay.qld.gov.au/business/planning\\\_and\\\_development/design\\\_and\\\_construction\\\_requirements/design\\\_guidelines2\]\(https://www.mackay.qld.gov.au/business/planning\_and\_development/design\_and\_construction\_requirements/design\_guidelines2\)](#)
  - (xv) [ADAC - How to use the As Constructed Documents \(PDF 327.5 KB\)](#)  
[ADAC 4.1 - As Constructed and ADAC Survey Pick-up \(PDF 3.3 MB\)](#)  
[ADAC 4.1 - Creation of XML using 12d Model \(PDF 734.1 KB\)](#)  
[ADAC 4.1 - Guidelines for Creation and Submission of XML Files \(PDF 3.8 MB\)](#)  
[ADAC 5.0.1 - As Constructed and ADAC Survey Pick-up \(PDF 3.6 MB\)](#)  
[ADAC 5.0.1 - Creation of ADAC XML using 12d Model \(PDF 623.4 KB\)](#)  
[ADAC 5.0.1 - Guidelines for Creation and Submission of XML Files \(PDF 4.6 MB\)](#)
  - (xvi) [Standard drawings - \[https://www.mackay.qld.gov.au/business/planning\\\_and\\\_development/design\\\_and\\\_construction\\\_requirements/standard\\\_drawings/drainage\]\(https://www.mackay.qld.gov.au/business/planning\_and\_development/design\_and\_construction\_requirements/standard\_drawings/drainage\)  
\[https://www.mackay.qld.gov.au/business/planning\\\_and\\\_development/design\\\_and\\\_construction\\\_requirements/standard\\\_drawings/footpaths\]\(https://www.mackay.qld.gov.au/business/planning\_and\_development/design\_and\_construction\_requirements/standard\_drawings/footpaths\)  
\[https://www.mackay.qld.gov.au/business/planning\\\_and\\\_development/design\\\_and\\\_construction\\\_requirements/standard\\\_drawings/parks\\\_and\\\_gardens\]\(https://www.mackay.qld.gov.au/business/planning\_and\_development/design\_and\_construction\_requirements/standard\_drawings/parks\_and\_gardens\)](#)
- (b) Department of Transport and Main Roads (TMR) Specifications:  
[MRTS59 Manufacture of Fibre Reinforced Polymer Composite Girders](#)  
[MRTS60 Installation of Fibre Reinforced Polymer \(FRP\) Composite Girders](#)  
[MRTS61 Gantries and Support Structures for Road Signs, Tolling Systems and ITS Devices](#)  
[MRTS62 Bridge Substructure](#)  
[MRTS63 Cast-In-Place Piles](#)  
[MRTS63A Piles for Ancillary Structures](#)  
[MRTS64 Driven Tubular Steel Piles \(with reinforced concrete pile shaft\)](#)  
[MRTS65 Precast Prestressed Concrete Piles](#)  
[MRTS66 Driven Steel Piles](#)  
[MRTS68 Dynamic Testing of Piles](#)  
[MRTS70 Concrete](#)  
[MRTS71 Reinforcing Steel](#)  
[MRTS71A Stainless Steel Reinforcing](#)  
[MRTS72 Manufacture of Precast Concrete Elements](#)  
[MRTS73 Manufacture of Prestressed Concrete Members and Stressing Units](#)  
[MRTS74 Supply and Erection of Prestressed Concrete Deck and Kerb Units](#)

[MRTS75 Supply and Erection of Prestressed Concrete Girders](#)  
[MRTS76 Supply and Erection of Steel Girders](#)  
[MRTS77 Bridge Deck](#)  
[MRTS78 Fabrication of Structural Steelwork](#)  
[MRTS78A Fabrication of Structural Stainless Steelwork](#)  
[MRTS79 Fabrication of Aluminium Components](#)  
[MRTS80 Supply and Erection of Bridge Barrier](#)  
[MRTS81 Bridge Bearings](#)  
[MRTS81A Stainless Steel Bridge Bearings](#)  
[MRTS82 Bridge Deck Expansion Joints](#)  
[MRTS82A Finger Type Bridge Deck Expansion Joints](#)  
[MRTS83 Anti-Graffiti Protection](#)  
[MRTS84 Deck Wearing Surface](#)  
[MRTS84A Removal of Bridge Deck Wearing Surface](#)  
[MRTS85 Repainting Steel Bridges](#)  
[MRTS85A Repainting Existing Steel Bridges and New Steel Bridges Zinc Metal Systems](#)  
[MRTS86 Widening, Strengthening and Rehabilitation of Bridges](#)  
[MRTS87 Supply of Timber Bridge Materials and Components](#)  
[MRTS88 Protective Coating for New Work](#)  
[MRTS89 Post-tensioned Concrete](#)  
[MRTS90 Modular Bridge Expansion Joints](#)  
[MRTS97 Mounting Structures for Roadside Equipment](#)  
[MRTS270 Precast Geopolymer Concrete Elements](#)  
[MRTS300 Boat Ramps](#)  
[MRTS301 Fabrication and Construction of Floating Walkways](#)  
[MRTS302 Fabrication and Construction of pontoons](#)  
[MRTS305 Dredging](#)

(c) Australian Standards:

- (i) AS 5100 – Bridge Design (Set)
- (ii) AS 4997 - Guidelines for the design of maritime structures
- (iii) AS/NZS 2566.1 – Buried flexible pipelines, structural design
- (iv) AS/NZS 3725 – Design for installation of buried concrete pipes
- (v) AS/NZS 4058 – Precast concrete pipes (pressure and non-pressure)
- (vi) AS/NZS 4139 – Fibre reinforced concrete pipes and fittings
- (vii) AS/NZS 1597.1 & AS/NZS 1597.2 - Precast reinforced concrete box culverts
- (vii) AS/NZS 2041 Buried corrugated metal structures - Design methods
- (viii) AS/NZS 3845 – Road safety barrier systems
- (ix) AS1158 – The lighting of urban roads and other public thoroughfares
- (x) AS1170 – Structural Design Actions (Set)
- (xi) AS3600 – Concrete structures
- (xii) AS4100 – Steel structures
- (xiii) Other codes and guidelines as relevant

(d) Queensland legislation:

- (i) Local Government Act 2009
- (ii) Planning Act 2016
- (iii) Environmental Protection Act 1994
- (iv) Water Act 2000
- (v) Fisheries Act 1994
- (vi) Coastal Protection and Management Act 1995
- (vii) Aboriginal Cultural Heritage Act 2003
- (viii) Professional Engineers Act 2002

(e) Queensland and Australian Government:

- (i) Commonwealth of Australia (Geoscience Australia). 2019. *The Australian Rainfall and Runoff, a guide to flood estimation (ARR)*

- (ii) [State of Queensland \(Department of Infrastructure, Local Government and Planning\). 2017. State Planning Policy, State interest – natural hazards, risk and resilience](#)
  - (iii) [State of Queensland \(Department of Transport and Main Roads\). 2019. Road Drainage Manual, 3rd Edition.](#)
  - (iv) [State of Queensland \(Department of Infrastructure, Local Government and Planning\). 2017. State Planning Policy](#)
  - (v) [State of Queensland \(Department of Agriculture, Fisheries and Forestry\). 2013. Guide for the determination of waterways using the spatial data layer Queensland waterways for waterway barrier works.](#)
  - (vi) [State of Queensland \(Department of Agriculture and Fisheries\). 2018. Accepted development requirements for operational work that is constructing or raising waterway barrier works](#)
  - (vii) [State of Queensland \(Department of Science, Information Technology, Innovation and the Arts\). 2014. Queensland Acid Sulfate Soil Technical Manual](#)
  - (viii) [State of Queensland \(Department of Natural Resources, Mines and Energy\). 2018. Guidelines for the construction or modification of category 2 & 3 levees](#)
  - (ix) [State of Queensland \(Department of Natural Resources, Mines and Energy\). 2018. Guidelines for the construction or modification of category 1 levee](#)
  - (x) [State of Queensland \(Department of Natural Resources and Mines\). 2017. Guide for Flood Studies and Mapping in Queensland.](#)
  - (xi) [Queensland Government. 2007. Crime Prevention through Environmental Design. Guidelines for Queensland – Part A: Essential features for safer Places.](#)
  - (xii) [Queensland Government. 2007. Crime Prevention through Environmental Design. Guidelines for Queensland – Part B: Implementation Guide.](#)
  - (xiii) [Department of Transport & Main Roads - Bridge-design-and-assessment-criteria](#)
  - (xiv) [Department of Transport & Main Roads - Technical Notes – Bridges and other structures](#)
  - (xv) [Department of Environment and Heritage - Operational policy -Building and engineering standards for tidal works](#)
  - (xvi) [Department of Transport & Main Roads - Design Design Criteria for Boat ramps](#)
  - (xvii) [Department of Transport & Main Roads - Design Design Criteria for Floating Walkways &Pontoons](#)
  - (xviii) [State Development Assessment Provisions Version 2.3](#)
  - (xiv) [Guideline: State Development Assessment Provisions - State Code 8: Coastal development and tidal works](#)
  - (xv) [Operational policy - Coastal Protection and Management Act 1995 - Building and engineering standards for tidal works](#)  
[https://www.qld.gov.au/\\_data/assets/pdf\\_file/0014/107240/op-cd-building-engineering-standards-tidal-works.pdf](https://www.qld.gov.au/_data/assets/pdf_file/0014/107240/op-cd-building-engineering-standards-tidal-works.pdf)
- (f) Other:
- (i) [Austroads - Guide to Bridge Technology:](#)
    - [Part 1: Introduction and Bridge Performance](#)
    - [Part 2: Materials](#)
    - [Part 3: Typical Superstructures, Substructures and Components](#)
    - [Part 4: Design Procurement and Concept Design](#)
    - [Part 5: Structural Drafting](#)
    - [Part 6: Bridge Construction](#)
    - [Part 7: Maintenance and Management of Existing Bridges](#)
    - [Part 8: Hydraulic Design of Waterway Structures](#)
  - (ii) [Concrete Pipe Association of Australia, Concrete Pipe Guide, charts for the selection of concrete pipe to suit varying conditions](#)
  - (iii) [Institute of Public Works Engineering Australasia, Queensland \(IPWEAQ\), 2017 Queensland Urban Drainage Manual \(QUDM\)](#)
- (g) [Mackay Regional Council Policy](#)
- (i) [Policy No. 23.062 – Building Over or Adjacent to Constructed Council Drainage Systems and Easements](#)
  - (ii) [Policy No 063 – Clearances to water and sewerage assets](#)
- (h) [Planning Scheme Policies](#)
- (i) [Planning scheme policy – healthy waters](#)

- ~~(ii) Planning scheme policy – Stormwater Drainage Design~~
- ~~(iii) Planning scheme policy – subsurface drainage design~~
- ~~(a) Council guidelines and specifications:~~
- ~~(b) Australian Standards:~~
  - ~~(i) AS1158 – The lighting of urban roads and other public thoroughfares (SAA Public Lighting Code)~~
  - ~~(ii) AS1170 – Minimum design loads on structures (SAA Loading Code)~~
  - ~~(iii) AS1684 – National time framing code~~
  - ~~(iv) AS3600 – Concrete structures~~
  - ~~(v) AS3700 – Masonry in buildings (SAA Masonry Code)~~
  - ~~(vi) AS4100 – Steel structures~~
  - ~~(vii) AS5100 – Bridge design~~
  - ~~(viii) AP23/94 – Waterway design – a guide to the hydraulic design of bridges~~
  - ~~(ix) AS/NZS3845 – Road safety barrier systems~~
  - ~~(x) Other codes and guidelines as relevant~~
- ~~(c) Other:~~
  - ~~(i) AustRoads, Bridge design code~~
  - ~~(ii) Institute of Engineers, Australian rainfall and runoff~~
  - ~~(iii) Department of Natural Resources, Queensland urban drainage manual~~
  - ~~(iv) Department of Main Roads and Transport, Road planning and design manual~~

## 1.5 Basis of design

The design shall be based on scientific theories, experimental data and experience, interpreted statistically as far as possible. The safety and service performance of a structure depends also on the quality control exercised in fabrication, supervision onsite, the control of unavoidable imperfections and the qualifications, experience and skill of all personnel involved. Adequate attention shall therefore be given to these factors.

In addition, adequate management control and supervision by experienced engineers shall be required at all stages of design and construction to prevent the occurrence of [non-conformances](#) ~~gross errors~~.

The minimum design load for all road traffic bridges shall be determined from AS5100, either using the S or M 1600 load, and based [on](#) the particular traffic loadings reasonably expected to be imposed on the structure. The use of lesser design loads (eg T44) shall require specific Council approval and will require consideration of the most foreseeable load during the life of the bridge (for 100 years). The [Designer](#) ~~engineer~~ will need to consider the likely future use of the bridge by heavy loads – e.g. cranes used in building works, as to whether the structure may have to be designed using higher design loads e.g. HLP 400. Approval for a design load lower than S or M 1600 will not be provided for a single-lane bridge.

Maintenance is a key factor affecting the design life of a structure/bridge. The Designer shall note on the drawings the adopted design life of the structure/bridge, together with the relevant maintenance program to be adopted by [the](#) asset owner (generally Council) upon which the design life has been based. Parameter used in the design shall also be shown on the design drawings.

Specifications shall be notated on the Drawings with sufficient detail to ensure that the above described strategies are able to be effectively implemented at the construction stage.

[Structures are to be designed and constructed to minimise the maintenance impacts of either cathodic exchanges and or environmental conditions on the durability of the structure. The structure shall make use of suitable inert materials and or coating systems to ensure it ability to maintain its Design life with minimal life cycle costs.](#)

## 2 Design, construction and other criteria

### 2.1 Road traffic and pedestrian bridges

~~Suitably qualified professional engineers who hold pre-registration with Department of Transport and Main Roads for design of bridges shall carry out bridge designs on behalf of Council or associated with any proposed development. The level of pre-registration must be commensurate to the monetary sum of the proposed structure.~~

~~The engineer shall submit evidence of their pre-registration to Council with the bridge design. The person must also be RPEQ certified.~~

~~The above pre-registration requirement does not preclude designs being submitted by other qualified professional engineers, (who are RPEQ registered) however Council reserves the right to call for evidence of the qualifications and experience of the nominated engineer; and may require referral of the design calculations to a nominated Consultant for checking.~~

~~If Council seeks to have the design calculations checked, the cost for doing so will be borne by the developers.~~

The Australian Standard AS5100 *Bridge Design* and [Austroads - Guide to Bridge Technology Part 8: Hydraulic Design of Waterway Structures AP-23/94 Waterway Design – A Guide to the Hydraulic design of Bridges](#) shall be used as the basis for all bridge designs. Where bridges are to be constructed from materials other than those covered specifically by this Standard, reference shall be made to other specific Standards and current technical literature for materials performance and durability requirements.

The ~~Designer~~engineer shall incorporate current industry best practices into the bridge design to ensure the bridge has low maintenance finishes. Adequate precautions shall be taken for protection of the materials used in the bridge design; for example, timber and steel require special consideration.

Heavy debris and bed loads may be characteristic of some streams so that large spans with slender piers are encouraged. If overtopping is permitted, pedestrian safety rails and road safety barriers are usually omitted. Flood depth indicators and appropriate signposting will be provided in such cases.

~~Preventative maintenance is a key issue affecting the design life of the structure. The Drawings shall specify the design life of the structure together with the relevant maintenance programs to be adopted upon which the design life is based.~~

Parameters used in the design shall also be shown on the Drawings.

Unless otherwise ~~advised~~ indicated on the development application or in writing by Council, small bridges within the ~~project~~development shall be designed with afflux as determined by Council with certification stating that the bridge is capable of withstanding the inundation loadings for up to the 1% Annual Exceedance Probability (including climate change factor) storm event.

If in the opinion of the ~~Designer~~engineer, such certification is impractical, the structure shall be designed to convey the 1% Annual Exceedance Probability (including climate change factor) storm event without inundation.

Where structures are designed to be inundated, the effect of the backwater gradient on upstream property shall be identified on the drawings.

The ~~Designer~~engineer shall also identify the current and possible future implications ~~issues~~ created because of the backwater effect on upstream properties.

Bridges located in roadways which are to be dedicated as public roads shall be designed to convey the stormwater event identified in the drainage design specification. Where no inundation is permitted, appropriate afflux shall be adopted together with a 500mm freeboard to underside of the bridge deck.

Designers should enquire regarding current or likely provision for public utilities on bridges. These should be concealed for aesthetic reasons.

The clear width for a pedestrian bridge shall be 2 metres minimum and 3.0m for a shared pedestrian cyclist facility. Barrier kerb shall be provided on both sides with adequate provision for drainage of the bridge surface.

## 2.2 Provision for pedestrians on road bridges

~~Provision for pedestrians on bridges is required in rural residential as well as urban areas.~~ The minimum provision for pedestrians only is a 2.0m footpath with kerb at the road edge and pedestrian safety rails at the external edge and 3.0m for a shared pedestrian cyclist facility together with compliant bicycle safe safety rails.

Council may require the provision of separate pedestrian footpaths in other situations should the anticipated traffic warrant it.

Disabled access shall be considered, and incorporated, into the design.

Lighting shall be provided on Urban road and footbridges ~~shall be lit~~ in accordance with the appropriate Australian Standard.

## 2.3 Structures other than bridges, ~~associated with roads~~

~~A suitably qualified and experienced professional engineer (RPEQ) shall undertake all aspects of the design of any public utility structures, major culverts, major sign support structures, retaining walls, and the like.~~

The design shall comply with all relevant requirements of:

- (a) this planning scheme policy;
- (b) all reference and source documents listed in section 1.4;
- (c) any relevant Australian Standard;
- (d) any relevant requirements of the utility owner;
- (e) any development approval conditions relevant to the design; and
- (f) any specific relevant and reasonable request provided by Council in writing.

The standards and guidelines detailed below apply to the design and construction of jetties and piers, pontoons, decks and boat ramps within tidal and non-tidal waterways.

Standards and guidelines for prescribed tidal works installations shall be in concert with requirements of the relevant State government concurrence agency requirements including the State Development Assessment Provisions and other relevant requirements and guidelines.

These standards and guidelines incorporate a number of key design considerations to endeavour to ensure that waterfront structures:-

- (a) remain structurally sound throughout their design life;
- (b) do not interfere with the structural stability of the waterway;
- (c) do not restrict the maintenance, hydraulic and flood carrying capacity of the waterway;
- (d) do not interfere with public access or usage of the waterway; and
- (e) allow for navigation where necessary along the waterway. Responsibility of owners
- (f) The owner of the property associated with any approved waterfront structure is required to maintain the structure in a sound state of repair in accordance with the approved plans and the conditions of the approval.

#### General requirements applicable to all structures

The following general requirements apply to the design and construction of any waterfront structure:-

- (a) any lighting installed, other than lighting which is specifically to aid navigation, should not cause significant adverse amenity effects to nearby residents, properties or fauna;
- (b) the works should be designed and constructed so as to avoid significant adverse impacts on the availability of public access to the foreshore of the waterway;
- (c) the works should be designed and constructed so as to avoid adversely impacting on the safety of members of the public using the waterway or accessing the foreshore of the waterway;
- (d) the works should be designed and constructed to ensure they are structurally sound, having regard to relevant Australian Standards and having regard to the impacts of flooding and hydrodynamic changes;
- (e) the proposed waterfront structure is not to place any additional load on existing revetment walls (a wall erected against an earth bank or rock face to protect it against erosion, or a structural retaining wall at the waterfront edge) and is not to adversely affect the stability of the bed and banks of the waterway. Works constructed within private property behind an existing revetment wall (such as swimming pools, retaining walls, decks, etc.) are to be designed and constructed so that there will be no adverse impact on the structural stability of the revetment wall;
- (f) the design and construction of the works is to ensure that access will be available for future remedial, repair or maintenance works on revetment walls and foreshore areas;
- (g) materials which will have a long life in an aquatic environment should be used in the structures;
- (h) the works are to be located clear of any existing stormwater outlet;
- (i) the structure is to be designed and constructed so as to ensure the safety of users. Surfaces are not to be slippery or present trip hazards, and barriers or railings should be provided in appropriate locations; and
- (j) setbacks are to be (the shortest distance) measured horizontally from the outermost projection of the structure concerned to the vertical projection of the boundary of the allotment. The setback from a revetment wall is from the landside of the revetment wall.

#### Jetties and piers

Jetties and piers and their associated mooring systems are to be designed and constructed to sustain all relevant loadings including hydraulic pressure, berthing impact, wind, flood flows (including debris), live loads, and other loadings relevant to the structure as assessed by a RPEQ. However, the design loads are in no case to be less than those applicable to a jetty or pier which is prescribed tidal work (as detailed in the IDAS Code for development applications for prescribed tidal work).

Jetties and piers and their associated shore abutments are to be designed and constructed so as not to impact adversely on the structural stability of the waterway and to be structurally independent of the revetment wall. RPEQ certification is required that the works will not impose additional loads on existing revetment walls.

The deck level of the jetty or pier is not to be less than 300mm above the predicted peak water level in the waterway, for a 1% AEP event.

Low level landings below the predicted peak water level may be incorporated into the structure design but fender piles (a vertical structural member that protects part of a structure from impact, damage or abrasion) or other markers are to indicate their presence when under water.

The width of the deck of a jetty or pier is to be not less than 900mm and not more than 3.0 metres. Handrails are to be provided along both sides of the jetty stem.

Jetties and piers are to be designed not to interfere with navigation or the public usage of the waterway, taking into account any vessel moored to the jetty or pier.

Where piling for jetties or piers is required to be installed through any rock revetment or rock protection, the rocks are to be removed and a neat cut/penetration made to the geotextile fabric under the rocks prior to installation of driven or screw piling, and the geotextile fabric and rock protection reinstated around the piles. The geotextile fabric is to be fastened around the pile with a stainless steel strap.

Jetties and piers are not to have roofed structures.

### **Pontoons**

Pontoons are to be designed and constructed to sustain all relevant loadings including earth and hydraulic pressure, berthing impact, wind, flood flows (including debris), live loads, and other loadings relevant to the structure as assessed by a RPEQ. However, the design loads are in no case to be less than those applicable to a pontoon which is prescribed tidal work (as detailed in the IDAS Code for development applications for prescribed tidal work).

Abutments for access walkways are to be structurally independent of the revetment wall (so as not to impose any additional loading on the revetment wall).

Pontoons are to be designed such that they can accommodate the rise in water level associated with a 1% AEP flood event, and still safely moor the "design" vessel.

In waterways which will convey flood flows, the flotation unit of the pontoon is to be moored by piles.

Access walkways are to extend a minimum distance of 500mm onto the pontoon's flotation unit. Access walkways are to be constructed with a permanent non-slip surface and handrails along both sides and shall make full provision for the access requirements specified in AS1428 unless alternative assessments by a certified Access Auditor can justify alternative treatments..

Where piling for pontoons is required to be installed through any rock revetment or rock protection, the rocks are to be removed and a neat cut/penetration made to the geotextile fabric under the rock revetment prior to installation of driven or screw piling, and the geotextile fabric and rock protection reinstated around the piles. The geotextile fabric is to be fastened around the pile with a stainless steel strap.

Pontoons are not to have roofed structures.

### **Decks**

Decks are to be designed and constructed to sustain all relevant loadings as assessed by a RPEQ. However, the design loads shall in no case be less than those applicable to a deck which is prescribed tidal work (as detailed in the Building and engineering standards for tidal works [https://www.qld.gov.au/\\_data/assets/pdf\\_file/0014/107240/op-cd-building-engineering-standards-tidal-works.pdf](https://www.qld.gov.au/_data/assets/pdf_file/0014/107240/op-cd-building-engineering-standards-tidal-works.pdf) ). Decks must be able to withstand periodic total inundation.

The design and construction of the deck is to be such that it does not unreasonably restrict access for maintenance to the bank, foreshore, revetment wall, retaining wall or other infrastructure associated with the waterway.

Decks are not to extend more than 3.0m into the waterway, measured from the waterfront boundary of the lot connected to the deck.

Decks are not to extend any closer than 3.0m to the side boundary, or extended side boundary of the lot connected to the deck.

Access hatches of minimum size 200mm x 200mm are to be installed in a deck 300mm forward of the face of the revetment wall and located approximately every 4.0m and/or 2.0m from either side of the deck. These access hatches will be used for sand replenishment of the foreshore.

The finished deck surface is to be no higher than 500mm above the top of the revetment wall and is to have a minimum clearance of 50mm between the top of the revetment wall and any part of the deck.

All footings, piers, piles and the like associated with the deck are to be located no closer than 1.5m from the landside of the revetment wall and not be connected to or supported by the revetment wall.

Where piling for decks is required to be installed through any rock revetment or rock protection, the rocks are to be removed and a neat cut/penetration made to the geotextile fabric under the rock revetment, prior to installation of driven or screw piling and the geotextile fabric and rock protection reinstated around the piles. The geotextile fabric is to be fastened around the pile with a stainless steel strap.

Decks are not to have roofed structures.

### **Boat Ramps**

Boat ramps are to be designed and constructed to sustain all relevant loadings as assessed by a RPEQ and in accordance with DTMR design requirements.

The top of each wall at the edge of the boat ramp is to be level with the surface of the land on which the boat ramp is located.

Side and edge walls of the ramp are to penetrate at least 600mm below natural surface level to prevent damage from scour.

The surface of the ramp across the foreshore of the waterway is to be no more than 200mm above the design surface of the foreshore.

Boat ramps are to have a minimum width of 4.0m for vehicular access.

Boat ramps should be designed and constructed with a gradient generally not steeper than 1 (V):8(H). Ramps with slopes as steep as 1:6 may be acceptable provided the surface is appropriate. Steeper slopes will require operation by a winch. Proposals to construct ramps steeper than 1:8 are to be supported by a detailed assessment study that demonstrates the sustainability of the proposal. To facilitate safe movement of vehicles and persons, the surface of a boat ramp is to be treated to prevent it from becoming slippery either by forming grooves 40mm wide and 20mm deep at a spacing of 150mm and at an angle of 70 degrees to the centre line of the boat ramp, or by an alternative surface treatment which will provide a similar non-slip surface.

Boat ramps are to be located a minimum of 1.5m clear of the side boundary and extended side boundary of the property.

### **Revetment walls**

Revetment walls must be wholly built within the subject lot including all elements of the revetment wall such as footings.

Revetment walls are to be designed and constructed to ensure they are able to support all intended loads, but in any case should be designed to support a distributed live load of at least 3 kPa in addition to applicable soil loads, with factor of safety of no less than 1.5.

The level and design of the bottom edge of the revetment wall should be such that it is likely to prevent any adverse effects from erosion for at least 100 years.

The design and construction of the revetment wall should provide for adequate filter material behind the wall and sufficient drainage holes to relieve hydrostatic pressure.

Maintenance of revetment walls is the responsibility of the owner and a minimum of 1.0m wide setback area behind the wall must be provided to allow maintenance to be performed. Within this area no structure is to be built that would restrict maintenance activities. This area should preferably be grassed, gravelled or loose-paved to allow monitoring of problems as they develop. If other surfacing is installed then it is to be easily removable should any maintenance be necessary.

Any structure built within the setback area is not to impose further loading on the revetment wall, and RPEQ structural certification will be required that specifically states that the revetment wall will continue to remain structurally sound with the additional loading for its design life.

#### **Foreshores**

The foreshore profile is to be constructed for long term stability with due consideration to flood flows, boat wash, wind induced waves and stormwater discharges.

Suitable access is to be provided to the waterway to enable maintenance activities to be undertaken. A typical access way would consist of a maintenance boat ramp constructed within a waterfront parkland area.

#### **Weirs**

Structural design of weirs (a structure which separates a tidal waterway from a non-tidal waterway, e.g. man-made lake) is to take account the impact loading from debris and watercraft, as well as applicable hydrostatic and hydrodynamic loads. Certification is to be provided by a suitably qualified RPEQ. The required design life will be 100 years.

Downstream scour protection shall be designed using appropriate hydraulic modelling techniques. Rock used for scour protection must have characteristics and qualities which are appropriate for the application.

Maintenance and operations manuals are to be supplied by the developer upon handover along with as-constructed drawings.

## **2.4 Structures used for public safety**

~~A suitably qualified and experienced professional engineer (RPEQ) shall undertake all aspects of the design of any structure to be used for public safety.~~

The design shall comply with all relevant requirements of:

- (a) this planning scheme policy;
- (b) all reference and source documents listed in section 1.4;
- (c) any relevant Australian Standard;
- (d) any development approval conditions relevant to the design; and
- (e) any specific relevant and reasonable request provided by Council in writing.

~~The RPEQ shall sign all plans associated with the project, certifying that the design complies with this section.~~

Since the requirement of road safety barriers and pedestrian safety rails on bridges are different, the ~~Designer~~ ~~design engineer~~ shall consider whether separate traffic and pedestrian barriers can be detailed to satisfy the major functional requirements.

The ~~AUSTROADS~~ ~~Austrroads~~ Bridge Design Code and Department of Transport and Main Roads “*Road Planning and Design Manual*” are recommended references in this regard.

It is essential that all safety barriers and rails have been fully tested and accredited for the intended use under quality assurance provision. The ~~Designer~~ ~~engineer~~ is to ensure that appropriate corrosion protection shall be considered in specifying the materials to be used.

Bridge crossings in urban and rural residential areas shall be provided with street lighting in accordance with AS 1158. Such requirements will be noted accordingly on the drawings.

## 2.5 Temporary works

~~A suitably qualified and experienced professional engineer (RPEQ) shall undertake all aspects of the design of any temporary works required.~~

The design shall comply with all relevant requirements of:

- (a) this planning scheme policy;
- (b) all reference and source documents listed in section D3.03;
- (c) any relevant Australian Standard;
- (d) any development approval conditions relevant to the design; and
- (e) any specific relevant and reasonable request provided by Council in writing.

~~The RPEQ shall sign all plans associated with the project, certifying that the design complies with this section.~~

A construction programme, indicating the sequence of events leading to the implementation and removal of the temporary structures shall be specified on the drawings.

## 2.6 Drawings and documentation

All drawings and documentation to be submitted to Council for approval shall conform to the requirements of Council’s *Drawings and Documentation Guidelines*. ~~A copy of these Guidelines will be made available on request.~~

Failure to comply with Council’s *Drawings and Documentation Guidelines* may result in the drawings and/or documentation being returned to the engineer without consideration by Council.

## 2.7 Design Project Team ~~Special requirements~~

The Designer of any bridge or bridge component, structure, span, safety or pedestrian barrier shall be a suitably qualified professional engineer who holds both appropriate certifications as an RPEQ certified engineer in the appropriate field as well as prequalification with the Department of Transport

and Main Roads for bridge design. The level of prequalification must be commensurate to the expected value of the proposed structure. Evidence of this prequalification must be submitted to Council. All plans shall be signed and certified by an appropriately qualified professional engineer with RPEQ certification.

PLANNING SCHEME POLICY

# SUBSURFACE DRAINAGE DESIGN



**Mackay Region**  
PLANNING SCHEME



## Planning scheme policy – subsurface drainage design

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## Amendment history

This planning scheme policy commenced on 24 July 2017 as part of the Mackay Region Planning Scheme 2017. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Date adopted and commenced
<a href="#">1.1</a>	<a href="#">Planning scheme policy amendment 3</a>	<a href="#">This amendment updated references, standards, and requirements to reflect modern practice.</a>	<a href="#">- DRAFT FOR CONSULTATION</a>
1.0	Planning scheme administrative amendment 6, and  Planning scheme policy administrative amendment 1	This amendment removed the planning scheme policies from Schedule 6 of the Mackay Region Planning Scheme 2017 and placed them in individual PDFs on Council's website.  This amendment introduced standardised formatting, introductory sections and explanatory information regarding intent and legislative relationship for this planning scheme policy. It also updated numbering and cross references.	Adopted 11 December 2019  Commenced 3 February 2020

## 1 Introduction

### 1.1 Application

This planning scheme policy supports the Mackay Region Planning Scheme 2017 by providing information on: how to achieve compliance with assessment benchmarks; supporting information/studies required; and/or actions required under the development assessment process. This planning scheme policy has been made by Mackay Regional Council in accordance with Chapter 2, Part 3, Division 2 of the *Planning Act 2016*.

### 1.2 Relationship with planning scheme

Mackay Region Planning Scheme 2017 refers to this planning scheme policy in assessment benchmarks in the following code/s or any other relevant part of the scheme:

- (a) Table 9.4.1.3.A – General development requirements code

### 1.3 Purpose

The purpose of this planning scheme policy is to:

1. Set out the guidelines for the design of the subsurface drainage system for the road pavement and/or sub-grade.
2. Set procedures for the design of subsurface drainage, including:
  - (a) subsoil and ~~f~~Foundation ~~d~~Drains;
  - (b) sub-pavement drains; and
  - (c) ~~sheet filter, drainage mats or filter blankets~~drainage mats, including type A and type B mats.

~~Reference guidelines for the application and design of subsurface drainage include ARRB Special Reports 35 and 41, and the AustRoads publication – Guide to the Control of Moisture inroads. The full titles of these references are given below.~~

The objective in the design of the subsurface drainage system is to control moisture content fluctuations in the pavement and/or sub-grade to within the limits assumed in the pavement design. [As per Council's subsoil standard drawing A3-867, subsoils are generally installed behind the kerb and at a minimum depth of 300mm below subgrade. This alignment will act as a barrier against ground water from side intrusion and being installed 300mm below subgrade, water levels will be reduced, as the subsoil drains will assist in lowering the water table.](#)

In the areas with a history of salinity problems, subsurface drainage may be prescribed to keep the groundwater table lower in the strata to avoid progressive deterioration of the healthy ~~ef~~-topsoil and upper layers due to salinity levels increased by rising and/or fluctuating groundwater tables.

## 1.4 Referenced documents

- (a) Council guidelines and specifications:
- (i) Construction standard C230 – Subsurface drainage – general
  - (ii) Construction standard C231 – Subsoil and foundation drains
  - (iii) Construction standard C232 – Pavement drains
  - (iv) Construction standard C233 – Drainage mats
  - ~~(v) Standard drawings – various~~
- (b) [DTMR Specifications](#)
- [MRTS03 Drainage, Retaining Structures and Protective Treatments](#)
  - [MRTS04 General Earthworks](#)
  - [MRTS16 Landscape and Revegetation Works](#)
  - [MRTS27 Geotextiles \(Separation and Filtration\)](#)
  - [MRTS38 Pavement Drains](#)
  - [MRTS51 Environmental Management](#)
  - [MRTS52 Erosion and Sediment Control](#)
  - [MRTS70 Concrete](#)
  - [DTMR Standard Drawings \(SD1116\)](#)
- (c) [MRC Supplementary Specifications -](#)  
[https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/design\\_guidelines2](https://www.mackay.qld.gov.au/business/planning_and_development/design_and_construction_requirements/design_guidelines2)
- (~~db~~) Australian Standards:
- (i) [AS/NZS 1254 – Unplasticised PVC \(uPVC\) pipes and fittings for stormwater or surface water applications](#)
  - (ii) [AS2032 – Code of practice for installation of uPVC pipe systems](#)
  - (iii) [AS2439.1 – Perforated plastic drainage and effluent pipe and fittings – Perforated drainage pipe](#)
  - (iv) [AS/NZS1477 – Unplasticised PVC \(UPVC\) pipes and fittings for pressure applications](#)
  - (v) [AS/NZS2566.1 – Buried flexible pipelines, structural design](#)
  - (vi) [AS3725 – Loads on buried concrete pipes](#)
  - (vii) [AS4058 – Precast concrete pipes](#)
  - (viii) [AS4139 – Fibre reinforced concrete pipes and fittings](#)
  - ~~i) AS 2439.1 – Perforated drainage pipe and associated fittings~~
  - ~~ii) AS/NZS1477 – Unplasticised PVC (UPVC) pipes and fittings for pressure applications~~
- (~~ee~~) Other:
- (i) [Austroads - Guide to Pavement Technology Part 10: Subsurface Drainage](#) [AustRoads \(1983\) Guide to the control of moisture in roads](#)
  - (ii) [Austroads - Guide to Road Design Part 5A: Drainage- Road Surface, Networks, Basins and Subsurface](#)

- (ii) Gerke, R.J. for the Australian Road Research Board (1987) *Special report no. 35 – Subsurface drainage of road structures (ARRB-SR35)*
- (iv) Mulholland R.J. for the Australian Road Research Board (1989) *Special Report No. 41 – A structural design guide for flexible residential street pavements (ARRB-SR41)*
- (v) [Department of Transport & Main Roads – Road Drainage Design Manual - Chapter 11: Road Surface and Subsurface Drainage Design](#)

(f) [Council documents:](#)

- (i) [Various stormwater drainage studies, catchment management plans and waterway management plans](#)
- (ii) [External Documents Register -   
https://www.mackay.qld.gov.au/data/assets/pdf\\_file/0003/253380/External\\_Document\\_Registry\\_for\\_Technical\\_Services\\_2019\\_002.pdf](#)
- (iii) [Drawings -   
https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/drainage   
https://www.mackay.qld.gov.au/business/planning\\_and\\_development/design\\_and\\_construction\\_requirements/standard\\_drawings/parks\\_and\\_gardens](#)

## 1.5 Terminology

Subsoil drainage systems are designed to be installed within the ground in order to remove/control excess water. Subsoil drains are generally installed to ~~s are intended for the control/~~drainage of ground water or seepage from the sub-grade and/or the sub-base. ~~Subsoil drains are also installed where a significant change of material type is present i.e. -in cuttings and fill areas-~~ cut/fill transitions, transitions between stabilised and flexible pavements.

[In addition, all vegetated medians and roundabouts shall have subsoil drainage included and connected to a legal point of discharge in order to both drain the vegetated areas and protect the adjacent base, sub-base and subgrade areas. Details of requirements are shown in Std Dwg A4-176.](#)

[All playground softfall treatments \(sand soft fall, rubber tiles or artificial turf\) shall contain adequate subsurface drainage and be connected to the legal point of discharge to protect and maintain the quality of the softfall treatment. Details of requirements are shown in A3-9703 & A3-9704.](#)

Foundation drains are intended for ~~the~~ drainage of ~~seepage~~, springs and wet areas within and adjacent to the foundations of the road formation.

Sub-pavement drains are intended for the drainage of the base and sub-base pavement layers in flexible pavements. They may also function to drain seepage or groundwater from the sub-grade.

~~Filter blankets~~~~Type A drainage mats~~ are intended to ensure continuity of a sheet flow of water under ~~embankment~~ fills, to collect ~~water seepage~~ from ~~a wet~~ seepage areas, or for protection of vegetation or habitat downstream of the road reserve where ~~an embankment fill~~ would otherwise ~~cut~~ block the flow of water.

~~Sheet filters~~~~Type B drainage mats~~ are constructed to intercept water that would otherwise enter pavements by capillary action or by other means. ~~The sheet filters are utilised to -or fills and to-~~ intercept and control seepage ~~water~~ and ~~water~~ springs in the floors of cuttings.

[In dispersive, soluble or fine grained soils, the Designer is to evaluate whether geofabric wrapped subsoil drains are required and seek approval from Council for its installation.](#)

## 2 Subsoil and sub-pavement drains

### 2.1 Warrants for use

Subsoil drains are designed to drain groundwater or seepage from the sub-grade and/or sub-base in cuttings and fill areas.

Sub-pavement drains are designed to drain water from base and sub-base pavement layers in flexible pavements, and to drain seepage or groundwater from the sub-grade.

The Designer shall ~~ensure~~ consider the installation of that subsoil drains or sub-pavement drains ~~are to be provided~~ on both sides of the formation in the following locations:

- (a) all urban/street developments – regardless of abutting land zoning;
- (b) cut formations where the depth to finished sub-grade level is equal to or greater than 400 mm below the natural surface level;
- (c) locations of known hillside seepage, high water table, isolated springs or salt affected areas;
- (d) irrigated, flood-prone or other poorly drained areas;
- (e) highly moisture susceptible sub-grades, ie. commonly displaying high plasticity or low soaked CBRs (<7);
- (f) use of moisture susceptible pavement materials;
- (g) existing pavements with similar sub-grade conditions displaying distress due to excess subsurface moisture;
- (h) in trenches in which underground drainage has been installed;
- (i) at cut-to-fill transitions;
- (j) all landscaped and vegetated road median islands and roundabouts; and
- (k) all rural residential developments.

Where only one side of the formation is in cut, the other side in fill, it may be sufficient to provide subsoil or sub-pavement drains only along the edge of the formation in cut.

A geotechnical report supporting the elimination of any subsoil drain will need to be submitted if the designer proposes to consider this option.

The need for subsoil and sub-pavement drains may otherwise become apparent during the construction process, due to changes in site moisture conditions or to areas of ~~poorer~~ unsuitable sub-grade being uncovered that were not identified in the geotechnical investigation.

The design drawings shall be suitably annotated to the potential need for subsoil or sub-pavement drains in addition to those shown on the drawings.

### 2.2 Layout, alignment and grade

Typical cross sections of subsoil and sub-pavement drains [and the recommended backfill material](#) are shown in Council's standard drawings.

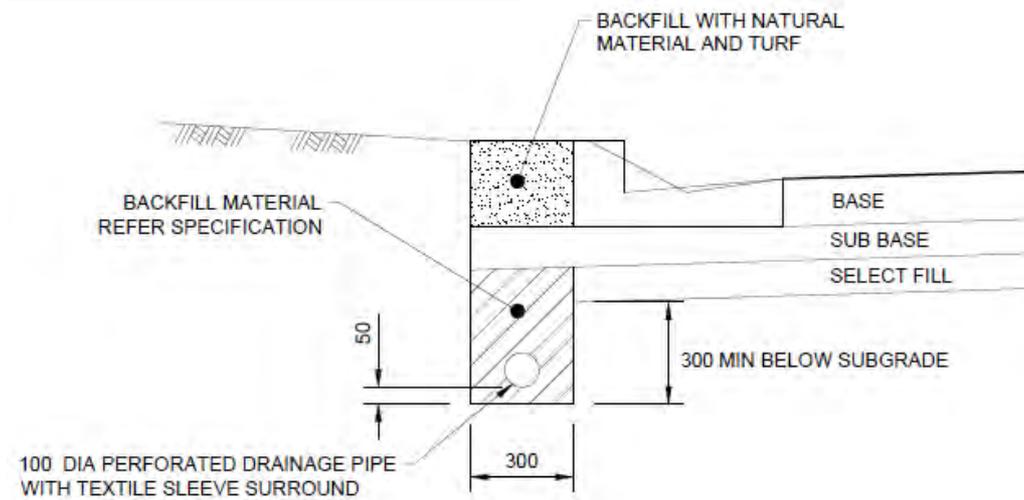
In kerbed roads, the two acceptable alternative options for subsoil drainage both allow for the line of the trench to be directly behind the kerb line. These options are shown in Council's Standard Drawing. Pavement layers must extend to at least the line of the rear of the trench. [Where it is not possible to place subsoil drainage directly under or adjacent to the Kerb, the pavement Subbase can be extended at the same or higher slope up to the subsoil drain. In either case, the permeability of sub-base should be enough to allow flow from base to the filter material.](#)

In un-kerbed roads, subsoil and sub-pavement drains shall be located within the shoulder preferably at the edge of the pavement layers [and situated below the subgrade as detailed in Council's Standard Drawings.](#)

The minimum desirable longitudinal design grade shall be [0.25% 1.0%.](#) ~~For non-corrugated pipes, an absolute minimum grade of 0.5% is acceptable.~~

Trench widths shall be a minimum of 300 mm, with a minimum depth [of 300mm](#) below ~~finished~~ subgrade ~~level of 600 mm in earth and 450 mm in rock~~, and [must ensure it is installed](#) below the invert level of any service crossings [unless otherwise agreed by Council due to mitigating circumstances.](#)

Figure 1: Subsoil Drainage – Typical Cross Section



Outlets shall be spaced at –maximum intervals of 150 metres into [stormwater \(gully\) pits](#) or outlet headwalls. Where practical, discharge shall be on the downhill side of the embankment or in the cut-fill area ~~so as~~ to reduce the risk of recharge to the subsurface water table. Unless otherwise authorised, where subsurface drains outlet through fill batters, unslotted plastic pipe of the same ~~diameter-cross section area is to be installed~~ [as the main run shall be specified, and connected to a precast headwall as detailed in TMR SD1116.](#)

A small precast concrete headwall shall be installed at the drain outlet with a [pest proof cap and a marker post](#) ~~to assist maintenance and protect the end of the pipe.~~

[Clean out Flush](#) points are to be ~~provided~~ [installed](#) at the commencement of each run of drain, and at intervals not exceeding 60 metres. Cleanouts [points](#) shall generally be located:

- (a) ~~within the kerb & channel transition section (when located at~~ [In](#) stormwater [gully](#) pit);

- (b) directly at the rear of the kerb; or
- (c) at the edge of the shoulder, as applicable.

(d) aligned with property boundary locations to avoid conflict with other infrastructure.

Where the subsoil drains ~~are installed~~ ~~is laid~~ adjacent to new kerb, the Designer shall note on the drawings a requirement for the contractor to indicate the location of the Clean out flush points adjacent to the ~~freshly poured~~ new kerb.

In salinity affected areas, the Designer should consider providing a separate drainage system for subsurface drains ~~to~~for discharge to a basin where controlled release or desiccation treatment and removal can be facilitated as a maintenance operation. Saline subsurface drainage should not be routinely discharged directly into natural watercourses.

Reference to water quality targets for downstream watercourses is essential and the Designer shall provide advice on discharge operations and maintenance compatible with water quality targets and the requirements of the relevant land and water resource authority.

### 3 Foundation drains - warrants for use

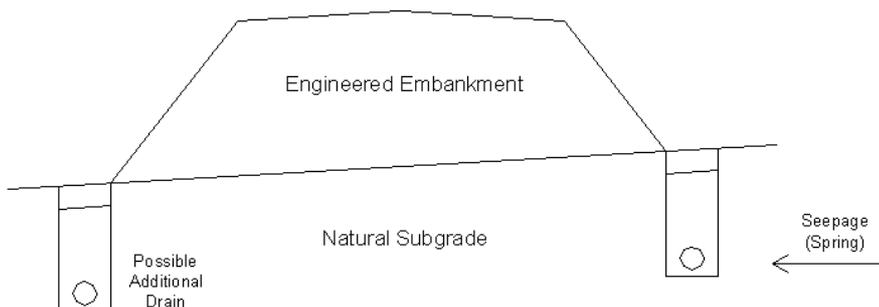
Foundation drains are designed to drain excessive ground water areas within the foundation of an embankment, ~~or~~ the base of cutting, or to intercept water from entering these areas.

The need to provide foundation drains may be apparent from the results of the geotechnical survey along the proposed road formation alignment, and in this case the location shall be shown on the drawings. However, more commonly, the need to provide foundation drains is determined during construction, and hence in this situation requirements and locations cannot be ascertained at the design stage.

Where the road formation traverses known swampy, flood-prone, salt affected areas or ~~watercharged~~ water charged strata, the Drawings shall be suitably annotated to the potential need for foundation drains at various locations, in addition to those shown on the drawings.

Typical cross-sections of foundation drains are shown below in Figure 3.2.

**Figure 3.2 – Foundation drains**



The minimum desirable design grade shall be 1.0%. For non-corrugated pipes an absolute minimum grade of 0.25% is acceptable.

Foundation drains shall be a minimum trench width of 300mm, with a variable trench depth to suit the application and ground conditions on site.

Outlets shall be spaced at maximum intervals of 150 metres.

Where practicable, ~~cleanouts~~ subsoil drain clean out points ~~flush out points~~ are to be provided at the commencement of each run of foundation drain and at intervals not exceeding 60~~80~~ metres. ~~Where not practicable to provide intermediate cleanouts, outlets shall be spaced at maximum intervals of 100 metres.~~

All playground softfall treatments (sand soft fall, rubber tiles or artificial turf) shall contain adequate subsurface drainage and be connected to the legal point of discharge to protect and maintain the quality of the softfall treatment. Details of requirements are shown in A3-9703 & A3-9704.

## 4 Drainage mats (blankets) – warrants for use

Filter blankets ~~Type A drainage mats~~ are designed where there is a need to ensure continuity of a sheet flow of water under embankment fills. It is intended to collect surface seepage from a wet ~~seepage~~ area or and ~~for~~ protection of vegetation, of habitats and downstream of the road reserve where an embankment ~~fill~~ would otherwise ~~cut~~block the flow of water.

Filter blankets ~~Type A drainage mats~~ are ~~constructed~~ installed after the site has been cleared, grubbed and ground surface treatment (GST) has been completed. ~~and grubbed prior to and before~~ commencement of embankment fill, filter blankets are installed and safely compacted to ensure it is not crushed during the construction of the embankment. ~~construction.~~ Minimum depth of filter material under?

Sheet filters ~~Type B drainage mats~~ are designed where there is a need to intercept water that would otherwise enter pavements by capillary action or by other means. The sheet filters reutilised on fills and to intercept and control seepage water and springs in the floors of cuttings.

Sheet filters ~~Type B drainage mats~~ shall be ~~installed~~ constructed after completion of the sub-grade construction and before construction of the pavement layers.

The need to design for the provision of this type of drainage feature ~~drainage mats~~ should be apparent from the ~~result of the~~ geotechnical survey results along the proposed road formation alignment.

## 5 Materials

### 5.1 Subsoil and sub-pavement drain pipe

Pipes designated for subsoil, foundation and sub-pavement drains shall be 100mm diameter slotted pipe. However, alternative design options may be considered by Council, subject to the provision of required design detail and justification.

Corrugated plastic pipe shall conform to the requirements of AS 2439.1. The appropriate class of pipe shall be selected on the basis of expected live loading at the surface. Joints, couplings, elbows, tees and caps shall also comply with AS 2439.1.

Slotted rigid uPVC pipe shall be of a type and class approved by Council.

All pipes shall be slotted, and fitted with a suitable geotextile filter tube, except for cleanouts and outlets through fill batters that shall be unslotted pipe.

### 5.2 Intra pavement drain pipe

Pipes designated for intra pavement drains with crushed rock sub-bases having layer thicknesses ~~neither~~ less than 150 mm ~~nor~~ more than 200 mm shall be slotted thick walled UPVC pressure pipe complying with AS/NZS 1477. Alternative design options may be considered by Council subject to the provision of required design detail and justification.

Pipes designated for intra pavement drains with crushed rock sub-bases having layer thicknesses exceeding 200 mm shall be slotted pipe of a type and class approved by Council.

Pipes for use in Type B drainage mats shall be slotted thick walled uPVC pressure pipe complying with AS/NZS 1477.

### 5.3 Filter material

~~The types of filter material covered by this Guideline include:~~

- ~~(a) Type A filter material for use in subsoil, foundation and sub-pavement (Trench) drains and for Type B drainage mats;~~
- ~~(b) Type B filter material for use in subsoil, foundation and sub-pavement (trench) drains;~~
- ~~(c) Type C filter material comprising crushed rock for use in Type A drainage mats; and~~
- ~~(d) Type D filter material comprising uncrushed river gravel for use in Type A drainage mats.~~

~~Material requirements and gradings for each type of filter material are included in Construction standard C230 – Subsurface drainage – general.~~

The type of filter material specified ~~to~~for backfilling the sub-surface drainage trenches (subsoil, foundation and sub-pavement drains) shall depend on the permeability of the pavement layers and/or sub-grade and the expected flow rate.

General filter material can either be:

- a) 20mm no fines Concrete
- b) Single size drainage aggregate of 20mm or 10mm particle size with a maximum of 5% passing the 0.150 mm test sieve.

The selected filter material should be sized such that the in-situ material does not clog the filter material, the filter material does not cause blockage of pipe and is sufficiently permeable. Reference to the appropriate reference specification is required.

The filter material to backfill subsurface drainage trenches within playground softfall treatment shall be certified softfall sand. Softfall sand must be min. 100mm over subsurface drain in accordance with relevant standard drawing.

~~Generally, Type A filter material is used for the drainage of highly permeable sub-grade or pavement layers such as crushed rock or coarse sands, while Type B filter material is used for the drainage of sub-grade and pavement layers of lower permeability such as clays, silts or dense graded gravels.~~

~~Further guidance to the selection of appropriate filter material is contained in ARRB Special Report 35.~~

### 5.4 Geotextile

To provide separation (i.e. prevent infiltration of fines) between the filter material in the trench and the sub-grade or pavement material, geotextile may be designated to encapsulate the filter material. ~~The~~

~~geotextile shall comply with the requirements included in Construction standard C230—Subsurface drainage—general.~~

Geotextile shall also be designated for both [sheet filters, drainage mats and filter blankets in accordance with the relevant standards](#). ~~Type A and Type B Drainage Mats~~. [Geotextile material shall be wrapped tightly around the trench ensuring minimum overlap requirements are being implemented as per manufactures recommendations.](#)

[An acceptable solution exists for strip filter drains where they shall be a suitable proprietary product, comprising a plastic core of nominal thickness not less than 40 mm, encased by a non-woven geotextile which complies with the provisions of MRTS27. The strip filter drain shall permit the passage of high water flows along the drain and shall have a crush strength not less than 200 kPa.](#)

[Textile sleeves shall be either seamless knitted proprietary products or be formed from woven geotextiles. The geotextile material in formed sleeves shall comply with the provisions of MRTS27.](#)

## 6 Documentation

### 6.1 Drawings and calculations

The proposed location of all subsurface drains shall be clearly indicated on the drawings, including the nominal depth and width of the trench, and the location with respect to the line of the kerb / gutter or edge of pavement.

The location of outlets and cleanouts shall be indicated on the drawings.

Assumptions and / or calculations made in the determination of the need or otherwise for subsurface drainage in special circumstances or as a variation to the requirements of this Guideline shall be submitted to Council with the drawings.

All drawings and documentation to be submitted to Council for approval shall conform to the requirements of Council's Drawings and documentation guidelines. A copy of these Guidelines will be made available upon request.

[Drawings and Documentation submitted to Council shall be signed and certified by the Designer who is a suitably qualified professional engineer holding appropriate RPEQ certifications.](#)

Failure to comply with Council's Drawings and documentation guideline may result in the drawings and/or documentation being returned to the designer without consideration by Council.

[Design procedure of subsurface pavement drains shall be in accordance with AUSTRROADS Guide to Pavement Technology, Part 10: Subsurface Drainage.](#)

**11.4.2. FACILITATING DEVELOPMENT IN THE MACKAY REGION POLICY – RV FRIENDLY PARKING AT THE TEAHOUSE – 231 CAPE HILLSBOROUGH ROAD, BALL BAY**

**Author** Principal Economic Development Officer (Nadine Connolly)  
**Responsible Officer** Director Development Services (Aletta Nugent)  
**File Reference** Facilitating Development in the Mackay Region Policy Applications

**Attachments** 1. Site Plan - RV Friendly Parking at The Teahouse [11.4.2.1 - 1 page]

**Purpose**

To assess an application under the Facilitating Development in the Mackay Region Policy.

**Related Parties**

Dwayne Shea and Michele Howard (Owners/Applicant)

**Corporate Plan Linkage**

Priority: Economy

*Strategy: Facilitate development* - Utilising the Planning Scheme to deliver an integrated approach to the facilitation of development and sustainable growth.

Facilitate catalytic land and infrastructure developments by attracting investment through joint ventures and partnerships with the private sector, and by working with State and Federal governments on joint initiatives.

**Background/Discussion**

The proposed development is for the establishment of “RV Friendly Parking @ The Teahouse”, a self-contained recreational vehicle (RV) ground located at The Old Station Teahouse, 231 Cape Hillsborough Road, Ball Bay (Lot 4 on RP728871). The applicant intends to provide ten sites suitable for RVs for a maximum of three consecutive night stays.

231 Cape Hillsborough Road (the site) is located in the Rural zone. Nature based tourism in the form of a self-contained RV ground involving not more than 10 self-contained RVs is accepted development subject to requirements in the Rural zone. The site is located in a mapped bushfire hazard area and potentially subject to flooding, and therefore the accepted development requirements for the development cannot be met. This means that a development application is required for the development.

The applicant is in the process of preparing to submit a development application for the proposed development. Given that an infrastructure charges notice would be issued as part of any development permit, on 12 November 2020 the applicant submitted an Expression of Interest (EOI) for concessions under the Facilitating Development in the Mackay Region Policy. The EOI was approved and the subsequent stage 2 application was received by Council on 13 November 2020.

**Incentive Requests**

The applicant has requested concessions under Schedule 4 of the Policy (Tourism Development). Assessment has been undertaken using version 6 of the Policy which was in effect at the time of lodgement. The following concessions have been requested:

- 100% concession on infrastructure charges: \$50,737.50 (estimate based on \$15,113.30 per 3 tent/caravan sites, and \$5,397.60 for each tent/caravan site thereafter).

In accordance with Schedule 4 of the Policy, infrastructure charges may be reduced up to 100% based on the net charge amount identified on the Infrastructure Charges Notice, to a maximum concession value of \$1,000,000. The Policy is discretionary and seeks to support projects that will deliver the greatest economic benefits to the region.

### General Eligibility Criteria

The Policy seeks to attract investment in qualifying developments to stimulate growth, diversify and add value to the economy of the Mackay region.

Based on information provided by the applicant, the proposal generally satisfies the requirements under the General Eligibility Criteria in Schedule 4 of the Policy.

Criteria	Eligibility
<b>Timing of development</b>	<p>A small amount of site works has been undertaken by the applicant.</p> <p>Commencement of use proposed July 2021.</p> <p>While it is not the Policy's intent to support concessions for development that has commenced construction, it is proposed that the application can still be supported based on the following grounds:</p> <ul style="list-style-type: none"> <li>• The applicant has been in ongoing discussions with Council officers regarding the proposed development and for a period was of the belief the development did not require a development permit.</li> <li>• The development complies with all other eligibility criteria.</li> <li>• The consideration of this application is undertaken in good faith, at the discretion of Council, and does not set a precedent given its unique circumstances.</li> </ul>
<b>Non-Government Development</b>	Yes
<b>Infrastructure capacity</b>	<p>Based on the information provided by the applicant, the proposed development can be serviced without requiring trunk infrastructure upgrades.</p> <p>The applicant has advised the development is not connected to the sewage nor town water systems.</p>

### Location Specific Eligibility Criteria – Stage 2

Based on information provided by the applicant, the proposal satisfies the requirements under the Location Specific Eligibility Criteria in Schedule 4 of the Policy:

Criteria	Eligibility
<b>Economic Investment</b>	<ul style="list-style-type: none"> <li>• Estimated construction cost of development: \$4,195 (road construction, irrigation and signage). This does not include the value of the land.</li> <li>• Based on Council's economic modelling, a direct injection of \$4,195 (construction costs) will result in a total flow-on economic output of \$9,262 economic impact during construction.</li> </ul>
<b>Employment Generation</b>	<ul style="list-style-type: none"> <li>• Council's economic modelling indicates the project will generate no direct or indirect jobs during construction.</li> </ul>

	<ul style="list-style-type: none"> <li>The applicant advises the proposed development will assist the long-term viability of the business and secure the positions of the 8 employees currently employed by the business.</li> <li>The applicant has committed to utilising local contractors and suppliers during construction and for ongoing needs.</li> </ul>
<b>Applicable Area</b>	<p>The site is located on Rural zoned land outside of the Priority Infrastructure Area.</p> <p>Schedule 4 promotes tourism development in rural areas.</p> <p>A detailed assessment will be undertaken upon submission of the development application at which stage the suitability of the site will be assessed.</p>
<b>Applicable Land Uses</b>	<p>The development application, when submitted, will be for a material change of use for nature-based tourism (self-contained RV ground), which is consistent with the land uses identified in Schedule 4.</p>

### Business and Regional Benefits

The drive market is recognised as a growing industry that can deliver positive economic benefits to the Mackay Region. The granting of a 100% infrastructure charge concessions for this application will facilitate the delivery of the project which will have short and longer-term benefits relating to the growth of the Mackay region as a tourism destination.

The proposed development will increase the availability of RV accommodation in the Hibiscus Coast area on the northern approach to Mackay. It is accessible by Ring Road traffic travelling in both directions.

The applicant has advised the development will result in the following benefits:

- Provides an additional revenue stream for The Old Station Tea House, which has become critical during COVID19, aiding in the long-term viability of the business.
- Assists in maintaining the positions of the eight employees currently employed by the business.
- Addresses a gap in the existing tourism infrastructure in the region.
- Generates additional visitor nights by capturing a greater share of the domestic drive market.
- Provides flow-on benefits to other businesses in the area, increasing expenditure in the Mackay Region.
- Supports nearby recreational activities including fishing at Hibiscus Coast beaches, hiking and the wallabies experience at Cape Hillsborough.
- Provides a place for persons traveling with pets, which is a growing segment of the market.

Based on the information provided by the applicant, the development has potential to enhance the Region's local tourism offering and capture a growing segment of the tourism market. The proposed benefits to the regional economy are consistent with those identified in Schedule 4 of the Policy.

### Consultation and Communication

The Economic Development, Health and Regulatory Services and Development Assessment Programs have provided initial advice to the applicant.

The applicant's development application will be considered through the statutory assessment provisions provided by the *Planning Act 2016*. As part of this assessment process, the Development Assessment Program will consult with the other relevant sections of Council and State Government agencies as required.

The Director of Development Services has considered this application and provided approval for the EOI to progress to a Stage 2 application.

### Resource Implications

Concessions requested by the applicant, and in accordance with the Policy, are shown below.

- Concession on estimated infrastructure charges:

Estimated Net Infrastructure Charge (IC)	Offset	Credit	IC minus Offset and Credit	Concession (%)	Concession (\$)	Charges Payable
\$50,737.50	\$0	\$0	\$50,737.50	100%	\$50,737.50	\$0

\*Note, the above charges have been estimated and are based on the Adopted Charges Resolution December 2020 – ie. \$15,113.30 per 3 tent/caravan sites and \$5,397.60 for each additional tent/caravan site.

Infrastructure charge concessions will only apply to the net charge amount calculated following the subtraction of any offsets and credits. The application of this methodology ensures that the granting of concessions does not introduce any additional infrastructure costs to Council.

### Risk Management Implications

There is a risk that granting significant concessions can leave Council exposed to similar claims in the future and that a potential infrastructure funding gap could present. These risks are sufficiently mitigated through the following measures:

- Approved concessions are dependant on the applicant receiving development approval for the proposed development.
- A condition has been included as part of the officer’s recommendation stating that the approved concessions are dependent on Council not incurring any additional infrastructure costs (including ‘bring forward costs’) to service the development.
- Strict timeframes are placed on claiming approved concessions. If the use has not commenced within the recommended timeframe, the concessions will no longer be applicable and 100% of the applicable infrastructure charges will be payable.
- Council can review the application of the Policy at any time. The consideration of this application, regardless of its construction status, is undertaken in good faith and is at the discretion of Council. The development does not set a precedent for other developments that have commenced construction.

### Conclusion

The drive/RV market is recognised as a growing industry that can deliver positive economic benefits to the Mackay Region. This development represents an investment in the region’s tourism sector and will have positive flow-on effects to the regional economy. The development’s location at the northern entrance provides a valuable opportunity to capture an increased sector of the drive market before they bypass Mackay. The requested concessions support the viability of the proposed development.

The project supports the desired outcomes of Schedule 4 of the Policy (Tourism Development), delivering both community and economic benefits for the region’s tourism industry. It is considered that tourism developments such as “RV Friendly Parking @ The Teahouse” will generate significant long-term economic benefits by supporting the diversification of the region’s economy and enhancing the region’s reputation as a tourism destination.

### Officer’s Recommendation

THAT the following Specific Incentives are approved under the Facilitating Development in the Mackay Region Policy for “RV Friendly Parking @ The Teahouse” located at 231 Cape Hillsborough Road, Ball Bay (Lot 4 on RP728871):

- a) Infrastructure Charges concessions of 100% (capped at \$1,000,000) applied to the net charge amount calculated following the subtraction of any offsets/credits identified on the resulting Infrastructure Charges Notice.

AND THAT the approval of concessions is dependent on:

- a) Lodgement and subsequent approval by Council of a properly made development application;
- b) No additional infrastructure costs incurred by Council (including establishment and bring forward costs);
- c) The development to be completed and the use commenced by 10 February 2023; and
- d) The developer utilising local contractors and suppliers.

**Council Resolution ORD-2021-36**

**THAT the following Specific Incentives are approved under the Facilitating Development in the Mackay Region Policy for “RV Friendly Parking @ The Teahouse” located at 231 Cape Hillsborough Road, Ball Bay (Lot 4 on RP728871):**

- a) **Infrastructure Charges concessions of 100% (capped at \$1,000,000) applied to the net charge amount calculated following the subtraction of any offsets/credits identified on the resulting Infrastructure Charges Notice.**

AND THAT the approval of concessions is dependent on:

- a) **Lodgement and subsequent approval by Council of a properly made development application;**
- b) **No additional infrastructure costs incurred by Council (including establishment and bring forward costs);**
- c) **The development to be completed and the use commenced by 10 February 2023; and**
- d) **The developer utilising local contractors and suppliers.**

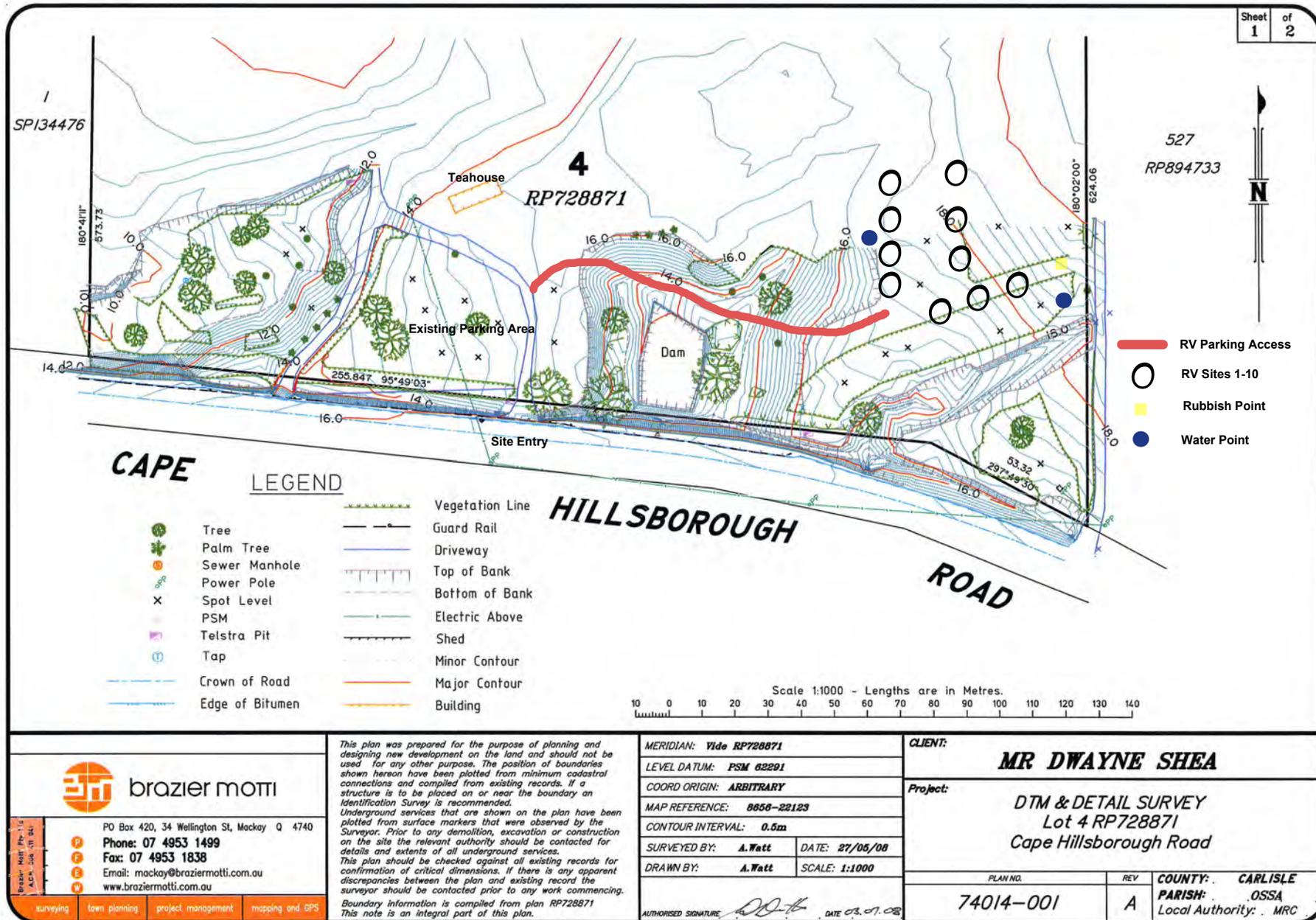
**Moved Cr Mann**

**Seconded Cr Green**

Cr Mann noted that the applicant is located in a rural zone and seeks to address nature-based tourism in the form of self-contained RV parking. Cr Mann noted that the applicant met the requirements of the policy, the drive market is recognised as a growth market and this application will address a gap in existing infrastructure in the Region, generate additional visitor nights, maintain current employment, support nearby recreational activities like fishing, hiking and provide accommodation for people with pets.

Cr Green noted that the Facilitating Development of the Mackay Region policy targets tourism development and this is a great example of Council assisting a small business to reach its potential.

**CARRIED**



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This plan was prepared for the purpose of planning and designing new development on the land and should not be used for any other purpose. The position of boundaries shown hereon have been plotted from minimum cadastral connections and compiled from existing records. If a structure is to be placed on or near the boundary an Identification Survey is recommended.  
 Underground services that are shown on the plan have been plotted from surface markers that were observed by the Surveyor. Prior to any demolition, excavation or construction on the site the relevant authority should be contacted for details and extents of all underground services.  
 This plan should be checked against all existing records for confirmation of critical dimensions. If there is any apparent discrepancies between the plan and existing record the surveyor should be contacted prior to any work commencing.  
 Boundary information is compiled from plan RP728871  
 This note is an integral part of this plan.

MERIDIAN: <b>Vide RP728871</b>	
LEVEL DATUM: <b>PSM 62291</b>	
COORD ORIGIN: <b>ARBITRARY</b>	
MAP REFERENCE: <b>8656-22123</b>	
CONTOUR INTERVAL: <b>0.5m</b>	
SURVEYED BY: <b>A. Watt</b>	DATE: <b>27/05/08</b>
DRAWN BY: <b>A. Watt</b>	SCALE: <b>1:1000</b>
AUTHORISED SIGNATURE: <i>[Signature]</i> DATE: <b>03.07.08</b>	

CLIENT:	<b>MR DWAYNE SHEA</b>	
Project:	<b>DTM &amp; DETAIL SURVEY Lot 4 RP728871 Cape Hillsborough Road</b>	
PLAN NO.	REV	COUNTY: <b>CARLISLE</b>
<b>74014-001</b>	<b>A</b>	<b>PARISH: OSSA</b>
		Local Authority: <b>MRC</b>

## **11.5. ORGANISATIONAL SERVICES**

### **11.5.1. GRANTS POLICY, DELEGATIONS AND REGIONAL ARTS DEVELOPMENT FUND ADVISORY COMMITTEE**

**Author** Manager Governance & Safety (Joe Pappalardo)  
**Responsible Officer** Director Organisational Services (Kylie Lamb)  
**File Reference** 031 Grants Policy and RADF Meeting

**Attachments**

1. 031 - Grants Policy [**11.5.1.1** - 14 pages]
2. Community Grants Delegatons - February 2020 [**11.5.1.2** - 1 page]
3. RADF Advisory Committee Terms of Reference [**11.5.1.3** - 3 pages]

#### **Purpose**

To present the amended Grants Policy, associated delegations, and updated Regional Arts Development Fund (RADF) Advisory Committee Terms of Reference for consideration and adoption.

#### **Related Parties**

There are no identified related parties.

#### **Corporate Plan Linkage**

Priority: Organisational Performance

*Strategy: Governance and performance* - Ensure that council complies with all of its statutory obligations, minimises its exposure to litigation, manages its risk, undertakes targeted internal audits, and meets community expectations of transparency and performance reporting.

#### **Background/Discussion**

Section 194 of the *Local Government Regulation 2012* ('the Regulation') states that Council may give grants to a community organisation if it is satisfied that the grant will be used in the public's interest and is in accordance with Council's Grants Policy. Further, section 195 of the Regulation also states that a Local Government must prepare and adopt a Grants policy.

The Grants policy has been recently been reviewed with the 'COVID-19 Recovery Assistance Grants' being removed from the grant categories and the delegations referred to in the guidelines updated to meet current operational functions (specifically allowing the delegation of decision making rather than a requirement to table for approval at a Council meeting).

As the policy delegations have been amended the relevant legislative delegation (LGR80) has been amended accordingly, as has the RADF Advisory Committee Terms of Reference.

#### **Consultation and Communication**

As part of the review process, consultation has been undertaken with relevant stakeholders including the Chair of the RADF Advisory Committee.

#### **Resource Implications**

The implementation of the policies will not require additional resources beyond those currently budgeted.

### **Risk Management Implications**

There were no risk management implications identified regarding the proposed policies.

In fact, changing such policy and delegations addresses a risk factor whereby Councillors are members of and work with local community groups (not under Council appointment). Such community involvement is expected as part of a Councillor as an individual being linked to the community, however can provide conflict of interest situations at a Council meeting in particular.

Any Councillor with a conflict will still need to address the conflict if involved as part of any process, including at committee meetings.

### **Conclusion**

It is recommended that Council adopt the following:

1. 031 – Grants Policy;
2. Legislative Delegation LGR80;
3. Amended Regional Arts Development Fund (RADF) Terms of Reference

### **Officer's Recommendation**

THAT Council adopts the:

1. 031 – Grants Policy;
2. Legislative Delegation LGR80;
3. Amended Regional Arts Development Fund (RADF) Terms of Reference

### **Council Resolution ORD-2021-37**

**THAT Council adopts the:**

1. **031 – Grants Policy;**
2. **Legislative Delegation LGR80;**
3. **Amended Regional Arts Development Fund (RADF) Terms of Reference**

**Moved Cr Mann**

**Seconded Cr Hassan**

**CARRIED**

	<b>COUNCIL POLICY</b>	
	<b>GRANTS POLICY</b>	
	POLICY NO	031
	DEPARTMENT	COMMUNITY & CLIENT SERVICES
	PROGRAM	COMMUNITY LIFESTYLE
ENDORSED BY COUNCIL		

### 1.0 Scope

This policy is designed to meet the statutory requirement and to outline Council's commitment to supporting communities in the region by providing financial and/or in-kind assistance to activities that build community capacity, encourage participation and make a positive and ongoing contribution to the region.

### 2.0 Purpose

This policy aims to support the distribution of funds in an equitable, transparent and sustainable manner.

The Council will provide grants only when the Council is satisfied that:

- The grant is appropriate having regard to other priorities and available resources;
- The receiving community organisation, entity or community members meet the eligibility criteria set out in this policy and in the supporting guidelines for the specific funding program;
- The grant will be used for a purpose that is in the public interest; and
- The grant will meet a community and/or social need in the local community.

### 3.0 Reference

- *Associations Incorporation Act 1981 and Associations Incorporation Regulation 1999.*
- *Local Government Act 2009*
- *Local Government Regulations 2012*
- *Public Sector Ethics Act 1994*
- *Crime and Corruption Act 2001*

### 4.0 Definitions

To assist in interpretation the following definitions shall apply:

**Acquittal** the process by which a recipient demonstrates in writing to the funding body that it has expended the funds in accordance with the terms and conditions of the funding agreement on completion of the activity or project.

**Auspecting** is an agreement from one organisation to apply for funding on behalf of a second organisation. The Auspecting organisation agrees to act legally and financially on the applicant's behalf.

**Conflict of Interest** is a conflict between:

- a) an officer's or Councillor's personal interests (including person interests arising from their relationships or club memberships for example); and
- (b) the public interest that might lead to a decision that is contrary to the public interest.

**Council** shall mean the Mayor and Councillors of Mackay Regional Council.

**Grant** refers to funds provided to a recipient through a formal program for a specified purpose, directed at achieving goals and objectives consistent with council policy, where a recipient is selected on merit against a set of criteria.

**Incorporated Organisation** shall mean an organisation whose status is registered with the Office of Fair Trading and operates within the scope of the Associations Incorporation Act 1981 and Associations Incorporation Regulation 1999.

**MRC** shall mean Mackay Regional Council.

**Not-for-profit organisations** shall mean an organisation that is not operating for the profit or gain of its members.

**Recurrent nature** shall mean an agreement to provide a financial or in-kind assistance on more than one occasion over a specified time period to achieve a specific outcome.

**Regional** shall mean an area defined by electoral boundaries of Mackay Regional Council.

## 5.0 Background

This policy is to guide the administration of Council's grant programs so that grants:

- Assist Council to achieve its strategic goals and identified key initiatives; and
- Align with the intent of the *Local Government Act 2009* and the *Local Government Regulation 2012*, which state that grants will be used for a purpose that is in the public interest.

This Policy is to be read in conjunction with any supporting guidelines for specific funding programs. This Policy does not apply to sponsorship, donations, advertising, naming rights and/or service level agreements.

## 6.0 Policy Statement

This Policy provides the framework for the provision of financial assistance to not-for-profit organisations and individuals.

### 6.1 Grant Categories

- Community Grants
- Regional Arts Development Fund
- Arts and Culture Grants
- Junior Sporting Grants
- Christmas Grants
- Australia Day Grants
- Graffiti Grants
- Mackay City Centre and Mackay Pride Façade Improvement Scheme
- Activate My Place

Attached is a summary of each funding program including purpose, eligibility, selection criteria and accountability requirements. Full grant details are outlined in the separate funding guidelines.

### 6.2 Grant program key processes

Each separate Council funding program (as listed in section 6.1) will adhere to the following key processes:

1. Guidelines and criteria;
2. Application form;
3. Assessment process;
4. Accountability requirements.

The minimum requirements for each process are listed below:

#### 1. Guidelines and Criteria

- Descriptions of grant
- Eligibility requirements, including any specific exclusions
- Selection criteria
- Conditions of funding
- Insurance obligations

#### 2. Application form

- Applicant details
- Selection criteria
- Budget breakdown
- Signed verification

#### 3. Assessment process

- Clearly defined assessment process
- Applications assessed against criteria
- Funding recommendations approved by Management and/or Council endorsement as further defined in policy attachment.

#### 4. Accountability requirements

Applicants successful in receiving a Council grant will be required to:

- Provide a copy of their current Certificate of Currency or that of their auspicing organisation (where grants are provided to an individual);
- Notify in writing changes to agreed project/funding terms;
- Prepare a report on project outcomes and/or provide receipts of grant expenditure (as per the specific grant guidelines);
- Return unexpended funds to Council or obtain approval for variation to agreed funding.

For grants over the amount of \$10,000 the following additional accountability requirements will apply:

- A copy of the organisations Incorporated Association Certificate;
- Names and contact details of current Executive or Management Committee;
- Copy of recent bank statement in the name of the organisation.

#### 6.3 Conflict of Interest

To ensure an accountable and transparent assessment process is maintained, Councillors, Council Officers and members of the public assessing grant applications are required to declare any perceived or potential conflict of interests prior to the assessment process commencing. This may include but is not limited to personal connections with any applicant or personal involvement with any organisation. Anyone having a conflict of interest should not debate, be involved in any discussions, or vote on any matter relating to the specific application.

#### 6.4 Grievance process

All applicants must be informed of the outcome of their application in writing and offered the opportunity to discuss the application process.

Applicants can request, in writing, a review of the decision if not satisfied with the selection process. The applicant will be notified of the outcome in writing.

#### 6.5 Unacquitted grants

In the circumstance that an organisation or individual has not complied with acquittal timeframes and requirements in accordance with a grant Agreement, the following actions will be considered:

- Council will issue an Outcome Report to be completed and returned by the sponsorship recipient no more than four (4) weeks after the conclusion of the project.
- If the sponsorship remains unacquitted the sponsorship recipient will be made ineligible to apply for future council sponsorship for a period of at least three years.
- At the discretion of the Chief Executive Officer, actions may be taken to recover unacquitted funds.

## 7.0 Review

### *Grants Program:*

The Council grants program will be reviewed, at a minimum, annually to include a breakdown across the grant programs of successful applicants and grant amounts provided. This information will be directed to the Director of Community & Client Services in the first instance, and to the Executive Leadership Team at their discretion.

### *Review of Policy:*

This policy will be reviewed when any of the following occur:

1. The related documents are amended or replaced.
2. Other circumstances as determined from time to time by a resolution of Council.

Notwithstanding the above, this policy is to be reviewed at intervals of no more than three (3) years.

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#### Version Control:

Version	Reason / Trigger	Change	Endorsed / Reviewed	Date
1	New Policy		Council	12.09.18
2	Review of Policy	Amendments to Policy	Council	13.11.19
3	Review of Policy	Amendments to Policy	Council	24.06.20
4	Review of Policy	Amendments to Policy	Council	

NAME OF GRANT PROGRAM: <b>COMMUNITY GRANT</b>
<p><b>Purpose:</b></p> <p>The community grants program provides assistance to local community groups/organisations who make positive contributions to the quality of life in the local government area. Applications can be submitted under four categories:</p> <ul style="list-style-type: none"> <li>• Community Grant</li> <li>• Small Equipment Grant</li> <li>• Minor Infrastructure</li> <li>• Minor Assets Grant</li> </ul>
<p><b>Eligibility:</b></p> <ul style="list-style-type: none"> <li>• Located within and servicing the Mackay Regional Council community.</li> <li>• Be an incorporated association with not-for-profit status or auspiced by an eligible organisation.</li> <li>• Be free of debt with Mackay Regional Council.</li> <li>• Have acquitted any previous Mackay Regional Council grant satisfactorily.</li> <li>• Have a valid public liability certificate.</li> <li>• Submit a detailed budget as per the budget page of the application.</li> <li>• Submit the organisations (or sponsoring organisations) most current financial statement or latest treasurer's report.</li> </ul> <p><b>The following requests will not be considered eligible:</b></p> <ul style="list-style-type: none"> <li>• Ongoing salaries/wages for staff.</li> <li>• Recurrent costs associated with day-to-day operations of the organisation.</li> <li>• Retrospective funding.</li> <li>• Items/programs that are the core business of a Government Department.</li> <li>• Business/commercial ventures.</li> <li>• Clubs that have a Gaming Machine License (this restriction does not apply if the application is for a minor asset or minor infrastructure grant).</li> <li>• Projects that do not benefit the Mackay Regional Council community.</li> </ul>
<p><b>Selection Criteria:</b></p> <p>Each application will be assessed against the following criteria:</p> <ol style="list-style-type: none"> <li>1. The project provides a direct or indirect benefit, including social and economic, for residents in the community (75%)</li> <li>2. The application demonstrates that attempts have been made to raise funds from other sources (5%)</li> <li>3. The applicant organisation is contributing a minimum of 20% of the financial cost (cash or in-kind) of the project/program/event (excluding small equipment grants) (10%)</li> <li>4. Local business or contractors are being used for the project/program/event. (10%)</li> </ol>
<p><b>Approval:</b></p> <p>Community Grants to be decided by way of assessment committee which shall comprise of:</p> <ul style="list-style-type: none"> <li>• Nominated Councillors</li> <li>• Director Community and Client Services, or nominated delegate;</li> <li>• Manager Financial Services</li> </ul> <p>Assessment recommendations will be approved by a Delegated Officer under current level of financial delegation.</p> <p>A summary of approved grants will be presented to Council as part of the relevant Department's Monthly Report.</p>
<p><b>Timelines:</b></p> <p>A minimum of two rounds will be called each financial year with application closing dates announced following adoption of council's budget. Check Council's website for closing dates.</p>
<p><b>Accountability:</b></p> <p>Successful applicants must provide a financial acquittal of funds including receipts relating to grant expenditure within 4 weeks of the completion of their event or project.</p>

<b>NAME OF GRANT PROGRAM:</b> <b>REGIONAL ARTS DEVELOPMENT FUND</b>
<p><b>Purpose:</b></p> <p>A grant delivered in partnership between Queensland Government through Arts Queensland and local government.</p> <p>Promotes the role and value of arts, culture and heritage as key drivers of diverse and inclusive communities and strong regions. RADF invests in local arts and cultural priorities, as determined by local communities across Queensland.</p>
<p><b>Eligibility:</b></p> <ul style="list-style-type: none"> <li>• Individual professional artists, emerging professional artists, arts workers, cultural workers or project coordinators who: <ul style="list-style-type: none"> <li>○ Are based in the Mackay Regional Council area, or if based outside the Council area are able to demonstrate how the project will directly benefit arts and culture in the Council area;</li> <li>○ Are permanent residents or Australian citizens;</li> <li>○ Have an Australian Business Number (ABN) or who will be auspiced by an incorporated organisation or individual with an ABN.</li> </ul> </li> <li>• Incorporated arts and cultural organisations based in the Council area, or those based outside the Council area that are able to demonstrate how the project will directly benefit arts and culture in the Council area.</li> <li>• Unincorporated organisations, auspiced by an incorporated body, that are based in the Council area, or those based outside the Council area that are able to demonstrate how the project will directly benefit arts and culture in the Council area.</li> <li>• Have a valid public liability certificate.</li> </ul>
<p><b>Selection Criteria:</b></p> <ul style="list-style-type: none"> <li>• Quality – contributes high quality arts and cultural initiatives for the local community.</li> <li>• Reach – provides access to and engagement in arts and culture for diverse communities, practitioners, participants and audiences.</li> <li>• Impact – demonstrates cultural, artistic, social and economic benefit either to the individual or to the broader community.</li> <li>• Viability – evidence of good planning and partnership capacity.</li> </ul>
<p><b>Timelines:</b></p> <p>Three rounds a year offered usually in October, February and May, final dates are approved at the time of confirmation of funding from Arts Queensland.</p>
<p><b>Approval:</b></p> <p>Regional Arts Development grants to be decided by way of assessment committee which shall comprise of:</p> <ul style="list-style-type: none"> <li>• Minimum of 2 Councillors</li> <li>• Up to 10 community representatives</li> </ul> <p>Assessment recommendations will be approved by a Delegated Officer under current level of financial delegation.</p> <p>A summary of approved grants will be presented to Council as part of the relevant Department's Monthly Report.</p>
<p><b>Accountability:</b></p> <p>Successful applicants must complete a Project Outcome Report within 8 weeks of the completion of their project.</p> <p>Grants of \$10,000 or more must seek feedback either from partners, participants or community.</p>

<p><b>NAME OF GRANT PROGRAM:</b>  <b>ARTS AND CULTURE GRANT</b></p>
<p><b>Purpose:</b>  Encourages the further development of groups and individuals in their chosen field of arts. This grant provides support for individuals who have been invited to participate in exhibitions/events of a state or national significance.</p>
<p><b>Eligibility:</b></p> <ul style="list-style-type: none"> <li>• Reside within the Mackay Regional Council area.</li> <li>• Have been invited to represent the State or Nation in their chosen art field.</li> <li>• Must provide a CV with their application.</li> </ul>
<p><b>Selection Criteria:</b>  If an applicant meets all eligibility requirements, they are deemed a successful applicant.</p>
<p><b>Timelines:</b>  Open all year. Applications must be received at least 1 month prior to event.</p>
<p><b>Approval:</b>  Arts and Culture Grants will be assessed and approved by a Delegated Officer under current level of financial delegation.</p>
<p><b>Accountability:</b></p> <ul style="list-style-type: none"> <li>• Some form of document that evidences participation in the event e.g. Photo, attendance certificate etc.</li> <li>• Receipts of use of grant monies towards event costs.</li> <li>• To be supplied within 4 weeks of the completion of the event.</li> </ul>

<p><b>NAME OF GRANT PROGRAM:</b></p> <p><b>JUNIOR SPORTS GRANT</b></p>
<p><b>Purpose:</b></p> <p>To provide financial assistance toward the costs of team levies, registration, uniforms, travel and other costs associated with junior sports persons participating in National or International competitions outside the boundaries of Mackay, Whitsunday and Isaac.</p>
<p><b>Eligibility:</b></p> <p>The applicant must have been selected as a:</p> <ul style="list-style-type: none"> <li>• Queensland or equivalent representative participating in a national event. Or</li> <li>• Australian representative participating in an international event.</li> <li>• Be a resident of the Mackay Regional Council area.</li> <li>• Be an amateur sports person.</li> <li>• Be no older than 21 years of age at the conclusion of the event.</li> <li>• The event is recognised as a National or International event by the relevant sporting body.</li> <li>• Sporting events must be outside of the Local Government boundaries of Mackay, Whitsunday and Isaac.</li> </ul>
<p><b>Selection Criteria:</b></p> <p>If an applicant meets all eligibility requirements, they are deemed a successful applicant.</p>
<p><b>Timeline:</b></p> <p>Open all year. Applications must be received at least 30 days prior to the event.</p>
<p><b>Approval:</b></p> <p>Junior Sports Grants will be assessed and approved by a Delegated Officer under current level of financial delegation.</p>
<p><b>Accountability:</b></p> <ul style="list-style-type: none"> <li>• Some form of document that evidences participation in the event e.g. Photo, attendance certificate etc.</li> <li>• Receipts of use of grant monies towards event costs.</li> <li>• To be supplied within 4 weeks of the completion of the event.</li> </ul>

NAME OF GRANTS PROGRAM: <b>GRAFFITI REMOVAL GRANT</b>
<p><b>Purpose:</b> Open to businesses/and or organisations as a means of supporting the removal of graffiti from non-Council owned facilities, so as not to create a visual or general impact on the community.</p>
<p><b>Eligibility:</b></p> <ul style="list-style-type: none"> <li>• The graffiti must be deemed by Council to have a community impact.</li> <li>• Quotes to the satisfaction of Council should be obtained for the cost of removal of the applicable graffiti.</li> <li>• Council's commitment to each facility for each graffiti event is to a maximum of \$500 (plus GST) and to a maximum of \$2000 per financial year for multiple applications.</li> </ul>
<p><b>Selection Criteria:</b> Council reserves the absolute right and discretion whether to grant the applicable funding to a facility and/or graffiti event.</p>
<p><b>Timeline:</b> Open all year.</p>
<p><b>Approval:</b> Graffiti Removal Grants will be assessed and approved by a Delegated Officer under current level of financial delegation.</p>
<p><b>Accountability:</b></p> <ul style="list-style-type: none"> <li>• Graffiti must be removed within 14 days of approval of funding (unless a longer period is specifically approved).</li> <li>• Images of removal to be provided within 2 weeks of completion.</li> </ul>

<b>NAME OF GRANT PROGRAM:</b> <b>AUSTRALIA DAY GRANTS</b>
<b>Purpose:</b> To provide non-profit groups and organisations with monetary support to hold community activities/events in celebration of Australia Day.
<b>Eligibility:</b> <ul style="list-style-type: none"> <li>• Located within and servicing the Mackay Regional Council community.</li> <li>• Be an incorporated association with not-for-profit status or auspiced by an eligible organisation.</li> <li>• Event to take place on Australia Day.</li> <li>• Have sufficient risk control measures in place to provide a safe event.</li> <li>• Be open to all members of the public.</li> <li>• Be free to attend.</li> <li>• Recognise Mackay Regional Council's support for the event on the day and in all promotional material.</li> <li>• Have a valid public liability certificate.</li> </ul>
<b>Selection Criteria:</b> <ul style="list-style-type: none"> <li>• Does the event meet the expected level of community engagement/participation?</li> <li>• Does the event have a 'flavour' of Australia Day?</li> <li>• Does the event have any partners or in-kind support from other organisations?</li> <li>• Will the event provide benefit to the broader community?</li> </ul>
<b>Timeline:</b> Opens and closes in the November.
<b>Approval:</b> Australia Day Grants will be assessed and approved by a Delegated Officer under current level of financial delegation.
<b>Accountability:</b> <ul style="list-style-type: none"> <li>• Provide complete event details to Council (confirmed times, location, activities etc.)</li> <li>• Complete an Australia Day Grant Outcome Form within 4 weeks of the event completion</li> </ul>

NAME OF GRANT PROGRAM: <b>CHRISTMAS GRANT</b>
<p><b>Purpose:</b> To provide non-profit groups and organisations with monetary support to hold community activities/events in celebration of Christmas.</p>
<p><b>Eligibility:</b></p> <ul style="list-style-type: none"> <li>• Located within and servicing the Mackay Regional Council community.</li> <li>• Be an incorporated association with not-for-profit status or auspiced by an eligible organisation.</li> <li>• Have sufficient risk control measures in place to provide a safe event</li> <li>• Be open to all members of the public.</li> <li>• Be free to attend.</li> <li>• Recognise Mackay Regional Council's support for the event on the day and in all promotional material.</li> <li>• Have a valid public liability certificate.</li> </ul>
<p><b>Selection Criteria:</b></p> <ul style="list-style-type: none"> <li>• Does the event meet the expected level of community engagement/participation?</li> <li>• Does the event have any partners or in-kind support from other organisations?</li> <li>• Will the event provide benefit to the broader community?</li> </ul>
<p><b>Timeline:</b> Opens and closes in October.</p>
<p><b>Approval:</b> Christmas Grants will be assessed and approved by a Delegated Officer under current level of financial delegation.</p>
<p><b>Accountability:</b></p> <ul style="list-style-type: none"> <li>• Provide complete event details to Council (confirmed times, location, activities etc.)</li> <li>• Complete a Christmas Grant Outcome Form within 4 weeks of the event completion</li> </ul>

<b>NAME OF GRANT PROGRAM:</b> <b>MACKAY CITY CENTRE AND MACKAY PRIDE FAÇADE IMPROVEMENT SCHEMES</b>
<p><b>Purpose:</b> The Mackay City Centre and Mackay Pride Façade Improvement Schemes support the revitalisation of building facades across the region in partnership with private property owners.</p>
<p><b>Eligibility:</b></p> <ul style="list-style-type: none"> <li>• Improvements proposed must be to the facade of the building that are visible from the street;</li> <li>• The applicant must provide their matched contribution in cash and not in-kind;</li> <li>• The applicant must show how the project will benefit the building's presentation;</li> <li>• Applicants must file an improvement plan detailing the planned improvements;</li> <li>• Applicants must submit before photos of the proposed building with completed application;</li> <li>• Applicants must submit two formal quotes from licensed contractors for same works;</li> <li>• Heritage listed buildings will require planning approval through Council; and All work being carried out must have the required permits and approvals through Council.</li> <li>• Key active frontages mean that the premise has street orientated development, meaning buildings are built up to the front property boundary to form a traditional 'main street' character.</li> </ul>
<p><b>Selection Criteria:</b></p> <ul style="list-style-type: none"> <li>• Applicants must be the building owner or have proof of the building owner's consent to conduct work to the building's façade;</li> <li>• The applicant has shown how the project will benefit the building's presentation.</li> <li>• Applicant has submitted before photos of the building.</li> <li>• Applicants have submitted two formal quotes for each type of work being completed on the building (e.g. painting, signage) (quotes must be from a licensed contractor).</li> </ul>
<p><b>Timeline:</b> Open all year. Applicants can apply at any time, with an outcome to their application to be received within 2 weeks.</p>
<p><b>Approval:</b> Façade Improvement grants will be assessed and approved by a Delegated Officer under current level of financial delegation.</p>
<p><b>Accountability:</b></p> <ul style="list-style-type: none"> <li>• Successful applicants will enter into a funding agreement with Council.</li> <li>• Funding will be released to the successful applicant once the improvement works have been completed, a tax invoice from the applicant is provided with the licenced contractors' invoice attached showing payment for works and photographs showing the before and after of the façade improvement are received.</li> </ul>

<b>NAME OF GRANT PROGRAM:</b> <b>ACTIVATE MY PLACE</b>
<b>Purpose:</b> The Activate My Place grant program is offering grants to individuals or organisations to deliver programs, projects and/or events that enhance the amenity, activity and appearance of a place.
<b>Eligibility:</b> <ul style="list-style-type: none"> <li>• Located within and servicing the Mackay Regional Council community.</li> <li>• Be an incorporated association with not-for-profit status or auspiced by an eligible organisation.</li> <li>• Be a registered business, entrepreneur or sole trader.</li> <li>• Be free of debt with Mackay Regional Council.</li> <li>• Have acquitted any previous Mackay Regional Council grant satisfactorily.</li> <li>• Have a valid public liability certificate.</li> <li>• Submit a detailed budget.</li> </ul>
<b>Selection Criteria:</b> <ul style="list-style-type: none"> <li>• The project is proposed in a publicly accessible location in the Mackay Region Local Government Area.</li> <li>• Ability to demonstrate social, economic and cultural benefits which deliver place activation and/or increased amenity or safety.</li> <li>• Ability to demonstrate how the proposal encourages more people to visit, invest, live, work, play and spend time in a place.</li> <li>• Demonstrated engagement with communities and business stakeholders.</li> <li>• Demonstrated ability to deliver the project to a high standard within six months of date of approval.</li> <li>• Ability to obtain all development approvals, permits and licenses.</li> <li>• Applications that provide co-contribution (in-kind and/or financial) are viewed favourably.</li> </ul>
<b>Timeline:</b> Application opening and closing dates to be determined by Manager Economic Development.
<b>Approval:</b> Activate My Place Grants to be decided by way of assessment committee which shall comprise of: <ul style="list-style-type: none"> <li>• Nominated Councillors</li> <li>• Director Development Services, or nominated delegate;</li> <li>• Manager Financial Services</li> </ul> <p>Assessment recommendations will be approved by a Delegated Officer under current level of financial delegation.</p> <p>A summary of approved grants will be presented to Council as part of the relevant Department's Monthly Report.</p>
<b>Accountability:</b> <ul style="list-style-type: none"> <li>• An outcome report is required to be completed no more than 4 weeks after the conclusion of the project.</li> </ul>

# REGISTER OF DELEGATIONS



Register of Delegations from Council to CEO							
<b>Definitions:</b>							
<b>All Directors</b>	Shall mean - Director Community & Client Services, Director Development Services, Director Engineering & Commercial Infrastructure, Director Organisational Services, Director Capital Works						
<b>Senior Leadership Team</b>	Shall Mean - All Directors, Program Managers (excluding Senior Senior Legal Counsel)						
<b>Program Managers</b>	Shall Mean - Executive Officer, Chief Operating Officer Water & Waste Services, Manager Corporate Communications & Marketing, Manager Community Lifestyle, Manager MECC & Events, Manager Health & Regulatory, Emergency Management Coordinator, Manager Development Engineering, Manager Development Assessment, Manager Parks, Environment & Sustainability, Manager Strategic Planning, Mackay City and Waterfront Project Manager, Manager Economic Development & Tourism, Manager Transport & Drainage Infrastructure Planning, Manager Civil Operations, Manager Waste Services, Manager Water Network, Manager Water and Sewerage Infrastructure Planning, Manager Water Treatment, Manager Asset Management, Manager Financial Services, Chief Information Officer, Manager People & Culture, Manager Procurement & Plant, Manager Property Services, Manager Governance & Safety, Manager Shared Services, Manager Design Services, Manager Field Services, Manager Major Projects, Manager Contract Services, Manager Portfolio Management Office (Excluding Senior Senior Legal Counsel)						
<b>Disclaimer:</b>	All appropriate powers under this Act have been delegated to the CEO unless otherwise limited as set out below. These delegated powers shall include any future amendments to the above Legislation unless otherwise specially delegated below.						
Register of CEO to Council Officers.							
No	APPROVAL DATE ORD-####-###	DESCRIPTION OF POWER DELEGATED	SECTION WITHIN LEGISLATION	LEGISLATION	SPECIAL DELEGATION CONDITIONS	DELEGATION TO THE CEO	SUB DELEGATION FROM CEO TO COUNCIL OFFICERS (APPROVED BY CEO - #####)
LGR80		Power to give a grant to a community organisation in the public interest and consistent with the local government's community grants policy.	<a href="#">Section 194</a>	<a href="#">Local Government Regulation 2012</a>	As per Council's Grants Policy and in accordance with any advisory committee recommendation.	Yes	<b>Community Grants</b> - Director Community & Client Services <b>Regional Arts Development Fund</b> - Director Community & Client Services <b>Arts &amp; Culture Grant</b> - Director Community & Client Services and Manager Community Lifestyle <b>Junior Sports Grant</b> - Director Community & Client Services and Manager Community Lifestyle <b>Graffiti Removal Grant</b> - Director Community & Client Services and Manager Community Lifestyle <b>Inkind Assistance</b> - Director Community & Client Services and Manager Community Lifestyles <b>Australia Day Grants</b> - Director Community & Client Services and Manager Corporate Communications & Marketing <b>Christmas Grant - Director Community &amp; Client Services and Manager Community Lifestyle</b> <b>Mackay City Centre &amp; Mackay Pride Façade Improvement Schemes</b> - Director Development Services and Manager Economic Development & Tourism



## Terms of Reference

### Mackay Regional Council – Regional Arts Development Fund (RADF) Advisory Committee

#### 1. Scope

The scope of the RADF committee is to:

- Assess RADF applications against the RADF Guidelines, (which link to Council's Corporate Plan and Arts and Cultural Policy), and recommend applicants for funding;
- Provide feedback to the RADF Liaison Officer to assist in the improvement of future applications;
- Provide advice to Council on ways of promoting the Fund to individuals and community groups;
- Assist to build positive public awareness of council's cultural services and support local artists into professional practice by being proactive 'ambassadors' for the Regional Arts Development Fund and participating as allocated mentors for RADF recipients.

#### 2. Aim

- To review applications three times a year - October, February and May.
- To make funding recommendations to Council, or Councils delegated decision maker, based on assessment criteria and allowable budget.
- The general time frame for complete process from RADF Round Closing date to approval process is six to eight weeks.

#### 3. RADF Program Priorities and Application Assessment Process

Mackay Regional Council must submit a proposal to Arts Queensland each year to secure funds for the program. Each submission will include current identified local priorities determined by an ongoing variety of community consultations.

These priorities will be promoted to potential applicants each year on receipt of approval of submission from Arts Queensland. The priorities will also be included in the local RADF Guidelines for each particular year.

Applications that acknowledge the current priorities will be assessed favourably but not guaranteed support each round. The committee is responsible for ensuring a breadth of activities that provide diverse outcomes to our community are supported.

#### 4. Membership

- A minimum of two Councillors (RADF Chair and RADF Deputy Chair)

Reviewed: Approved 10 February 2021

- The Arts Development Officer/s (RADF Liaison Officer) (Non-voting Member).
- Up to ten community members representing the diverse range of arts related sectors, cultural backgrounds and geography of the Council area.

Members are encouraged to serve for a maximum term of 3 years, with an option to step down after one year. Committee members who have served for a continuous three-year term are required to 'rest' for a period of 12 months before being eligible for re-nomination.

Calls for nominations to committee positions are held annually, with RADF committee members requested to advise of their continuance/resignation at the end of each funded RADF Program year. This rotational system aims to ensure a balanced cohort of experienced members while offering new community representatives an opportunity to step into the role.

Nominations for Committee Membership are completed online via Smarty Grants, and are reviewed by a panel consisting of at least four of the following:

- RADF Chair and/or the RADF Deputy Chair
- Arts Development Officer (RADF Liaison Officer)
- Community Programs Team Leader
- Manager Community Lifestyle
- Director Community and Client services.

#### **5. Quorum**

The quorum for meetings of the committee is a simple majority of voting members, including at least one (1) Councillor.

#### **6. Agenda**

An agenda will be distributed 7 days prior to a meeting.

#### **7. Minutes**

Minutes of RADF assessment meetings shall be recorded by a member of the Community Programs team and distributed to all committee members after the recommendations have been approved by Council or Council's delegated decision maker.

Per section 254G of the *Local Government Regulation 2012*, in lieu of tabling minutes at an Ordinary Council meeting, outcomes and recommendations from the meetings will be provided to Council by either –

- a) Inclusion of a summary outcomes within the applicable Departmental monthly report provided to Council's Ordinary meetings; or
- b) Distribution of meeting minutes directly to Mayor and Councillors

Reviewed: Approved 10 February 2021

**8. Frequency of Meetings**

Assessment meetings are held three times per year on a Monday evening.

Reviewed: Approved 10 February 2021

**12. RECEIPT OF PETITIONS**

Nil

**13. TENDERS**

Nil

**14. CONSIDERATION OF NOTIFIED MOTIONS**

Nil

**15. PUBLIC PARTICIPATION**

Nil

**16. LATE BUSINESS**

Cr Bella advised that he had recently come across a gentleman who had seen a family of ducks which, while crossing the road, had fallen into a drain. Cr Bella advised that the gentleman lifted the ducks out of the drain and later relocated them to the Lagoon. Cr Bella noted that this is the time of year when water birds are hatching their broods and urged motorists to be careful, slow down and perhaps even stop with their hazard lights on, to allow these birds to cross roads.

**17. CONFIDENTIAL REPORTS**

THAT the meeting be closed to the public in accordance with the *Local Government Act 2009 (Section 275 (1) of the Local Government Regulation 2012)* to discuss matters relating to:-

<b>Confidential Item</b>	<b>Reason for Meeting Closure</b>
<ul style="list-style-type: none"><li>17.1 Pioneer Gooseponds Levee Tenure Resumption Report</li></ul>	(d) rating concessions

**Moved Cr Mann**

**Seconded Cr Jones**

**CARRIED**

10:41 am - The meeting be closed to the public.

**THAT the meeting be reopened to the public.**

**Moved Cr Bonaventura**

**Seconded Cr Mann**

**CARRIED**

10:45 am - The meeting was reopened to the public.

**17.1. PIONEER GOOSEPONDS LEVEE TENURE RESUMPTION REPORT**

**Confidential**

*Confidential Report to be forwarded separately.*

This report is **CONFIDENTIAL** in accordance with the Section 254J (3) (d) of the *Local Government Regulation 2012* which permits the meeting to be closed to the public to discuss a matter relating to **rating concessions**.

**Council Resolution ORD-2021-38**

**THAT Council approve the issue of a Notice of Intention to Resume over the following allotments covering the extents of the currently constructed levee system impacting the Subject Lands:**

1. L12/RP748855 – 7 Daniel Street, North Mackay for an area of 828m<sup>2</sup>
2. L14/RP713287 – 3 Daniel Street, North Mackay for an area of 276m<sup>2</sup>
3. L19/RP748850 – 6 Burgess Street, North Mackay for an area of 413m<sup>2</sup>
4. L20/RP748849 – 8 Burgess Street, North Mackay for an area of 467m<sup>2</sup>

**AND that following the completion of the objection period, a further report be provided to Council recommending further actions in relation to this matter.**

**Moved Cr Mann**

**Seconded Cr Bella**

**CARRIED**

**18. MEETING CLOSURE**

Meeting closed at 10:46 am.

**19. FOR INFORMATION ONLY**

Nil

Confirmed on Wednesday 24 February 2021.

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MAYOR