



INFRASTRUCTURE COMMITTEE MEETING

AGENDA

6 DECEMBER 2022

Your attendance is required at an Infrastructure Committee meeting of Council to be held in the Council Chambers, 232 Bolsover Street, Rockhampton on 6 December 2022 commencing at 9:00am for transaction of the enclosed business.

A handwritten signature in black ink, appearing to be "C. R.", is positioned above the printed name of the Chief Executive Officer.

CHIEF EXECUTIVE OFFICER
2 December 2022

Next Meeting Date: 07.02.23

Please note:

In accordance with the *Local Government Regulation 2012*, please be advised that all discussion held during the meeting is recorded for the purpose of verifying the minutes. This will include any discussion involving a Councillor, staff member or a member of the public.

TABLE OF CONTENTS

ITEM	SUBJECT	PAGE NO
1	OPENING.....	1
2	PRESENT	1
3	APOLOGIES AND LEAVE OF ABSENCE	1
4	CONFIRMATION OF MINUTES.....	1
5	DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA	1
6	BUSINESS OUTSTANDING	2
	NIL	2
7	PUBLIC FORUMS/DEPUTATIONS	2
	NIL	2
8	PRESENTATION OF PETITIONS.....	2
	NIL	2
9	COUNCILLOR/DELEGATE REPORTS	2
	NIL	2
10	OFFICERS' REPORTS	3
10.1	FITZROY BARRAGE NORTHERN BANK FISH PASSAGE	3
10.2	CLOSED LANDFILL MANAGEMENT	6
10.3	WASTE EDUCATION PLAN 2023.....	37
10.4	PROJECT DELIVERY CAPITAL PROJECT REPORT - NOVEMBER 2022	45
10.5	ASSET MANAGEMENT PLAN - UNSEALED ROADS.....	52
11	NOTICES OF MOTION	102
	NIL	102
12	QUESTIONS ON NOTICE	102
	NIL	102
13	URGENT BUSINESS/QUESTIONS	102
14	CLOSURE OF MEETING.....	103

1 OPENING

- 1.1 Acknowledgement of Country

2 PRESENT

Members Present:

The Mayor, Councillor A P Williams (Chairperson)
Deputy Mayor, Councillor N K Fisher
Councillor S Latcham
Councillor C E Smith
Councillor C R Rutherford
Councillor M D Wickerson
Councillor D Kirkland
Councillor G D Mathers

In Attendance:

Mr E Pardon – Chief Executive Officer
Mr P Kofod – General Manager Regional Services (Executive Officer)

3 APOLOGIES AND LEAVE OF ABSENCE

4 CONFIRMATION OF MINUTES

Minutes of the Infrastructure Committee held 1 November 2022

5 DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA

6 BUSINESS OUTSTANDING

Nil

7 PUBLIC FORUMS/DEPUTATIONS

Nil

8 PRESENTATION OF PETITIONS

Nil

9 COUNCILLOR/DELEGATE REPORTS

Nil

10 OFFICERS' REPORTS

10.1 FITZROY BARRAGE NORTHERN BANK FISH PASSAGE

File No: 5338

Attachments:

1. Term Sheets - Confidential
2. Draft Offset Delivery Plan - Confidential

Authorising Officer: Peter Kofod - General Manager Regional Services

Author: Martin Crow – Manager Infrastructure Planning
Evan Davison - Acting Manager Fitzroy River Water

SUMMARY

Rockhampton Regional Council has been approached by Sunwater to collaborate on the construction of a fish passage on the northern banks of the Fitzroy Barrage.

OFFICER'S RECOMMENDATION

THAT Council:

- a) Support the establishment of a fish passage on the northern side of the Fitzroy Barrage;
- b) Authorise the Chief Executive Officer to enter into agreements and the Offset Delivery Plan necessary to establish, operate and maintain the fish passage on terms generally consistent with the Terms Sheets forming part of this report; and
- c) Authorise the Chief Executive Officer to provide authorisation to Sunwater to submit amendments to the Fitzroy Barrage Water Supply Scheme Resource Operations License once agreement on the necessary amendments is reached between Council and Sunwater.

COMMENTARY

Council Officers from Fitzroy River Water, Infrastructure Planning, Legal and Governance and Property and Insurance form part of a Project Working Group that have been meeting regularly with representatives of Sunwater to develop the proposal to establish a fish passage on the northern bank of the Fitzroy Barrage.

In order to meet the needs of Council, Sunwater and the Department of Agriculture and Fisheries, four separate but interrelated documents were determined to be required. These include:

Agreements

Development Agreement - intended to set out the terms and conditions relating to design, construction and ownership, operation and ongoing maintenance of the fish passage.

Easement in Gross for Water Supply - intended to provide adequate tenure to Sunwater as owner of the fish passage and to set out the terms and conditions relating to operation and ongoing maintenance of the fish passage.

Services Agreement - intended to set out the commercial terms and conditions relating to operation and ongoing maintenance of the fish passage

Offset Delivery Plan – developed by Sunwater for submission to the Department of Agriculture and Fisheries for approval to meet the requirements of their Development Approval for Rookwood Weir but requires Council's endorsement as the landholder on which the Offset Delivery Plan will be delivered.

If supported by Council, the intention is for these term sheets to be converted to formal documents and the Offset Delivery Plan finalised. The formal documents and Offset Delivery plan will be further checked and corrected as necessary by the Project Working Group and once consistent with the agreed terms sheets, will be presented to the Chief Executive Officer for execution. The negotiated terms sheets for each of these documents and the current draft of the Offset Delivery Plan have been included as confidential attachments to this report.

The Council Officers involved in the Project Working Group are now comfortable that the proposed terms address the baseline issues previously identified and other issues that have arisen during the development of the project and present minimal risk to Council.

Fitzroy Barrage Water Supply Scheme Resource Operations License

The Fitzroy Barrage Water Supply Scheme Resource Operations License (ROL) provides the authorization to Council to interfere with the flow of water in the Fitzroy River and use the watercourse to distribute water. The ROL includes a description of the infrastructure details for the Fitzroy Barrage Water Supply Scheme including the existing fish passages on the southern side of the barrage. An amendment to the ROL is required in order to establish a fish passage on the northern side of the barrage.

The required amendments are relatively minor but the opportunity is being taken to clarify the meaning and improve the wording of certain clauses within the ROL and incorporate any other amendments necessary as a result of the Rookwood Weir development. One particular clarification being sought is to ensure that water passing through the existing and new fish passages form part of Council's environmental flow obligations. This ensures that the additional fish passage on the northern side of the river does not release additional flows over and above Council's current level of environmental flow obligations and impact water security.

Under the negotiated agreements, Sunwater is responsible for developing the necessary amendments to the ROL and Council for submitting them to the Department of Regional Development, Manufacturing and Water. Sunwater are proposing to submit these on Council's behalf and therefore require Council's permission to make this submission. Once Council Officers are comfortable with the proposed amendments to the ROL, it is intended that the Chief Executive Officer will provide a letter to Sunwater authorizing them to submit the amendment to the ROL.

BACKGROUND

As part of the approvals process for the Rookwood Weir there is a requirement that fish habitat lost from the construction of the weir and the flooding of the upstream impoundment is compensated through a Fishway offset delivery plan.

Sunwater approached Council in November 2021 to gauge Council's level of interest in establishing a fish ladder on the northern bank of the Fitzroy Barrage. A working group was established to explore the proposal and this working group has been meeting regularly since that time.

Despite the existence of two fish ladders on the southern bank of the Barrage, the Barrage is still seen as a barrier to fish migration and there would be ecological benefits in establishing a further fish ladder on the northern bank.

Baseline issues identified by Council Officers that were required to be addressed in the Offset Delivery Plan included the following:

- a) The fish ladder is not to impact on Council's water security.
- b) The fish ladder is not to impact the structural integrity of the Barrage.
- c) The fish ladder is not to impede the operations or maintenance of the Barrage.
- d) The fish ladder is to be future proofed to allow for a possible raising of the Barrage.

- e) Site security is to form part of the design process to prevent unauthorised access to the fish ladder.

To date the discussions between Sunwater and Council have been quite collaborative and has resulted in general agreement of terms between the parties to be captured in the necessary documentation to formalise the agreements.

PREVIOUS DECISIONS

In April 2022 Council resolved that Council:

1. Support the ongoing discussions between Council and Sunwater in relation to the proposal to establish a fish ladder on the northern bank of the Fitzroy Barrage; and
2. Support the issuing of a letter of intent to Sunwater indicating the collaborative discussions held to date with Council and Council's support for continued discussions around the proposal to establish a fish ladder on the northern bank of the Fitzroy Barrage.

BUDGET IMPLICATIONS

There are no immediate budget implications arising from this report. Capital and maintenance costs associated with the installation and maintenance of the Fish Ladder remain the responsibility of Sunwater. Operational costs including inspection, cleaning, Scada and fencing although undertaken by Council will remain the responsibility of Sunwater through a commercial arrangement.

LEGAL IMPLICATIONS

This project will require the execution of a number of agreements between Sunwater and Council. Officers from Council's Legal and Governance Section are involved in the Project Working Group to protect Council's interests.

CONCLUSION

Council Officers from Fitzroy River Water, Infrastructure Planning, Legal and Governance and Property and Insurance form part of Project Working Group that have been meeting regularly with representatives of Sunwater to develop the proposal to establish a fish passage on the northern bank of the Fitzroy Barrage.

The Council Officers involved in the Project Working Group are now comfortable that the proposed terms of agreement address the baseline issues previously identified and other issues that have arisen during the development of the project and present minimal risk to Council.

10.2 CLOSED LANDFILL MANAGEMENT

File No: 6210; 6713; 7283
Attachments: 1. Closed Landfill Presentation CQG [↓](#)
Authorising Officer: Peter Kofod - General Manager Regional Services
Author: Michael O'Keeffe - Manager Rockhampton Regional Waste and Recycling

SUMMARY

The purpose of this report is to inform Council on Closed Landfill Management for Rockhampton Regional Council.

OFFICER'S RECOMMENDATION

THAT the Closed Landfill Management report be received.

COMMENTARY

Rockhampton Regional Waste and Recycling (RRWR) manage historic landfills across the Rockhampton Regional Council (Council) region on behalf of Council.

Environmental legislation and guidelines became more prescriptive in the mid 1990s making it clearer for Councils to make decisions regarding the siting and management of landfills and the planning for their closure. Council have a Duty of Care under the Environmental Protection Act 1994, Work Health and Safety Act 2011 and the Public Health Act 2005, to appropriately manage our historic closed landfills.

Significant work has been undertaken over the past 20 to 25 years to understand Council's historic closed landfills and the likely risks and management practices. Importantly this has been done while also balancing Council's obligations and the level of cost incurred.

Council has some 30 plus known historic closed landfills across the region, including five closed landfills still currently on Council's Environmental Authority as operating landfills.

The attachment presentation provides an overview of activities and events associated with the closed landfills over the past 20 to 25 years, the understanding of the current status of the sites and Council's ongoing requirements to manage these historic closed landfills.

CQG's Patrice Brown has been on the journey with Council, investigating the closed landfills commencing in 1996 in various roles, predominantly as founder and principal scientist with CQG since 2003.

CONCLUSION

The ongoing management of Council's historic closed landfills is important for Council to manage its regulatory requirements and Duty of Care.

CLOSED LANDFILL MANAGEMENT

Closed Landfill Presentation CQG

Meeting Date: 6 December 2022

Attachment No: 1



Consulting

Closed Landfill Update – December 2022

Rockhampton Regional Council

Closed Landfills across Australia

Typically filled creeks, wetlands etc, converted into sporting fields, playgrounds – surprises often unearthed



Rockhampton LGA

Over 30 plus known closed landfills documented (to varying levels of detail). Likely others not recorded.

Urban

- Kershaw, Rugby Park, Victoria Park, Ski Gardens etc

Rural

- Bajool, Gogango, Pink Lily etc

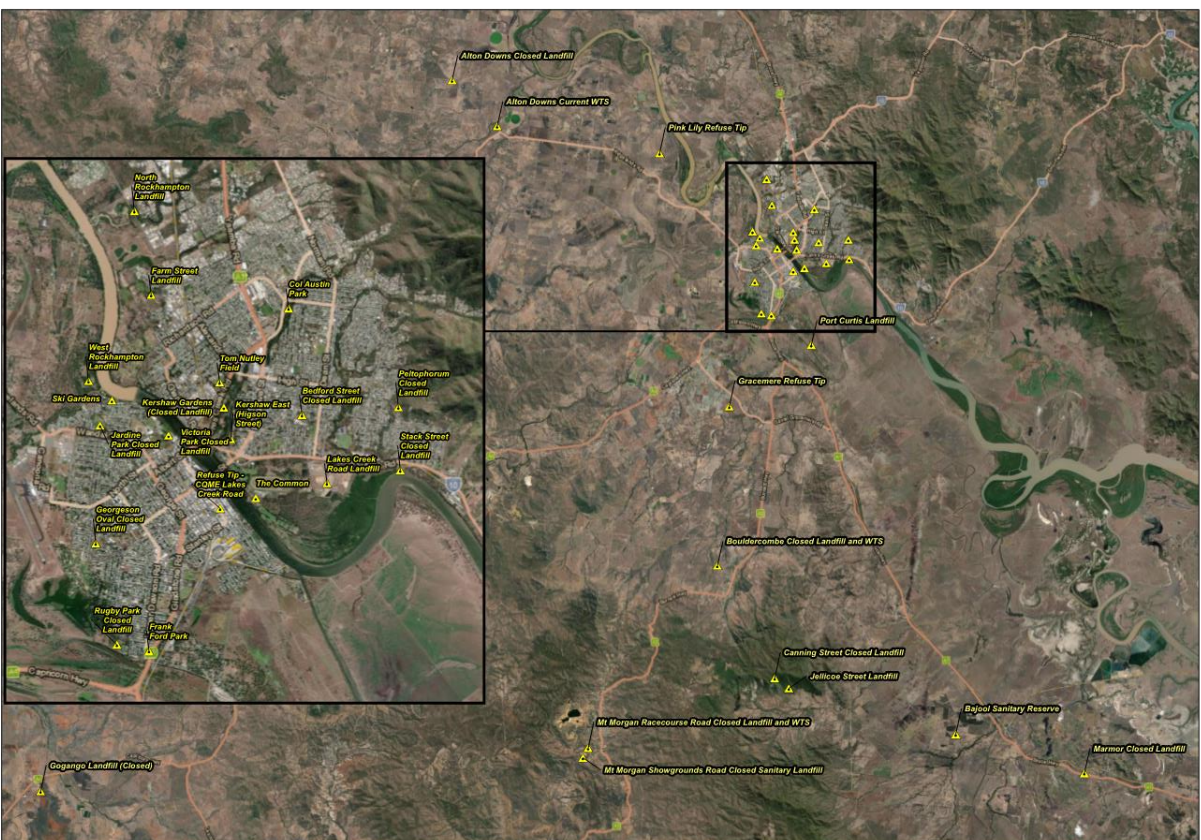
Environmental Authority (EA, licence) EPPR00626313

- Alton Downs, Bouldercombe, Gracemere, Marmor, Mt Morgan Racecourse Rd

kml link for all closed landfills



RRC Closed Landfill Sites.kmz



Risks (include)



- Visual amenity
- Public health and safety (from potential cuts, trips / falls, landfill gas and contaminated materials)
- Soil, surface water and groundwater (from contamination)

TC Marcia 2015

(Kershaw Gardens 200 shallow rooted trees)





Consulting

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Journey So Far

Planning | Environmental | Engineering

7

Queensland Legislation

- Laws and guidelines came into effect in the mid 1990s that made it clearer for Councils to make decisions for siting, managing and closing landfills
- Qld – typically remain on Environmental Authority (EA) for 30 years post closure and remain on Environmental Management Register (EMR) as “notifiable activity”
- Duty of Care – *Environmental Protection Act, 1994, Public Health Act 2005 and Work Health and Safety Act 2011*

RRC (RCC) Timeline 1996 to 2015

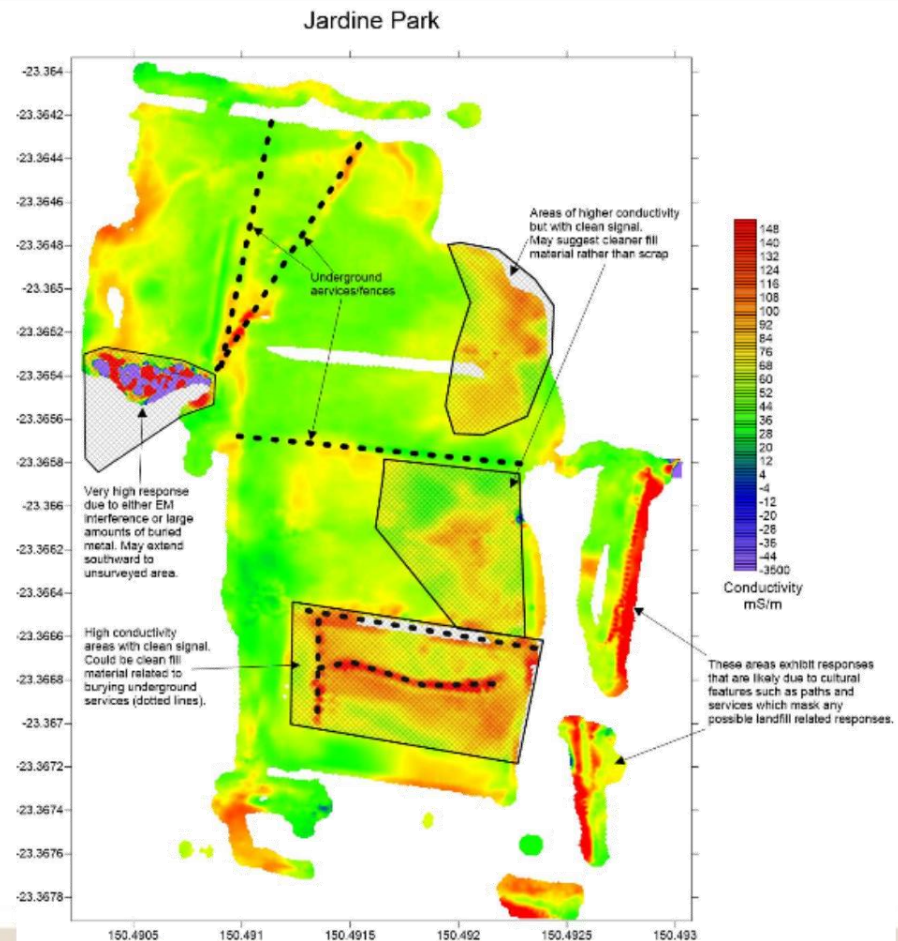
- 1996 Landfill Remediation Assessment Program (LRAP)
- 1998 RCC funding application for LRAP
- 1999 & 2001 Closed landfill audit
- 2001 Rugby Park discharge Yeppen investigation
- 2001 Initial EM31 survey landfill extents
- 2003/2005 LRAP investigation (Kershaw, Moores, Rugby)
- 2003 RRC Closed Landfill Risk Register set up
- 2005 LRAP Recommendations delivered to Council
- 2006 Environmental monitoring (some sites)
- 2013 Rugby Park & Yeppen Investigations
- 2014 Routine monitoring program, Closure Plans developed
- 2015 TC Marcia – Rugby Park, Kershaw Gardens Sampling
- 2015 Additional Groundwater Bores – Closed landfills

LRAP Summary 2005

- Groundwater Monitoring Program established for each site ✓
- Confirm capping & horizontal extents
 - Kershaw Gardens (portions confirmed)
 - Rugby Park ✓
 - Moores Creek ✓
- Site Post Closure Management and Inspections ✓

All the above have been updated in recent years

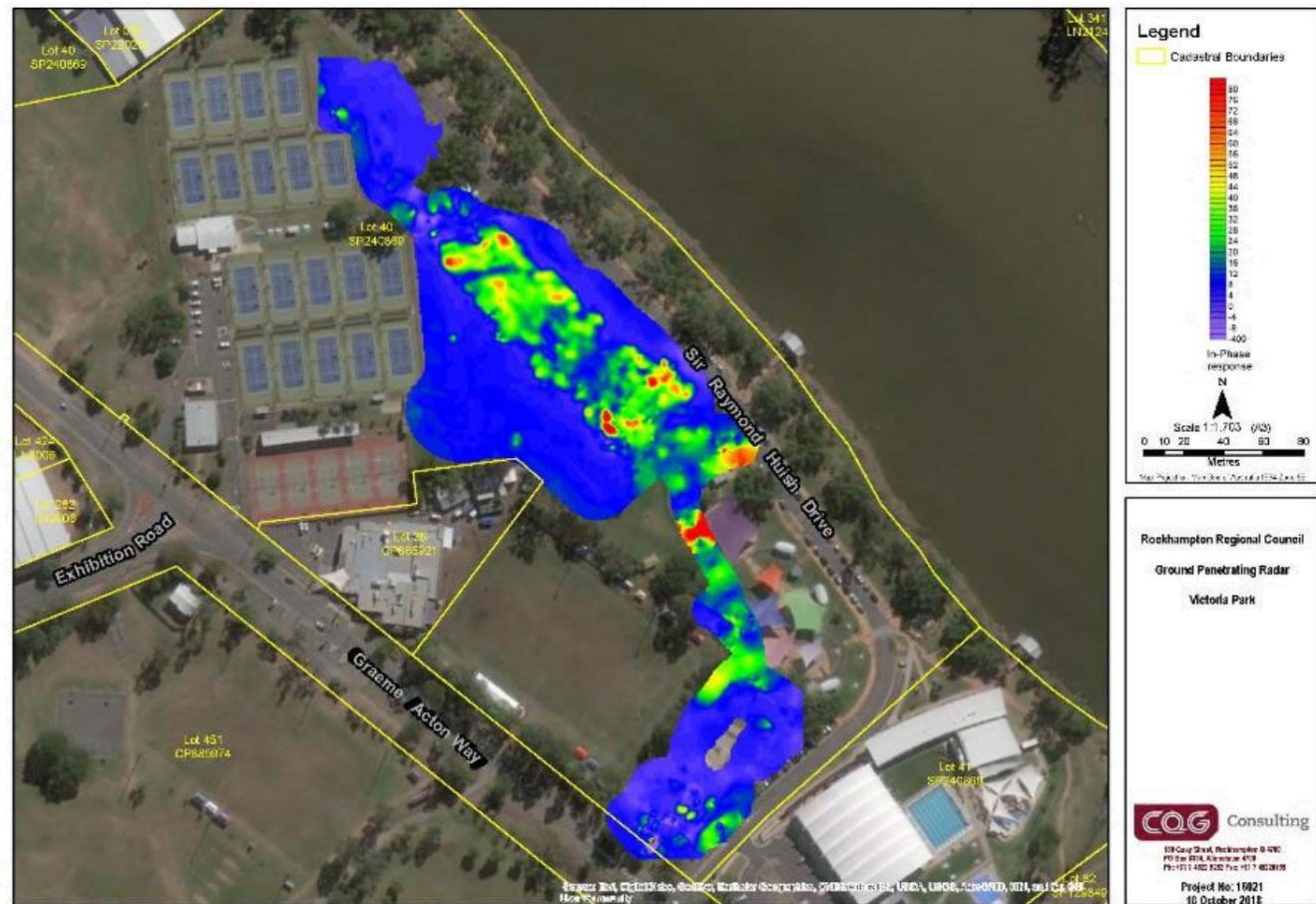
Example of EM31
Survey to define
possible
horizontal extents
of buried landfill
material





Consulting

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Plann

RRC Timeline 2015 to Date

- 2016 Closed Landfill Site Management Plan Kershaw
- 2016/2018 EM31 Landfill Boundaries Surveyed (Priority)
- 2017 Closure Plans updated
- 2019/2020 Test pitting – Closed landfills
- 2019 Dial before you dig & mapping now include closed landfills to reduce risks
- 2020 Aftercare management plans sites on EA
- 2020 Mt Morgan Showgrounds Rd removed from EA (DES)
- 2021 Gracemere Landfill closed
- 2021/2022 Capping activities Alton Downs, Bouldercombe, Gracemere, Marmor, Mt Morgan Racecourse Rd
- 2022 Post closure inspections/maintenance in place

Alton Downs

(Lot 100 Plan CP886609)



- Test pitting March 2020
- Soil capping April 2020 isolated area

- Site ceased operation in 2005
- Removal of activity from EA ~2035



Bouldercombe

(Lot 70 Plan LN2826)



- Site ceased operation in 2000
- Removal of activity from EA ~2030
- Investigation April 2021
- Soil capping 2021

Gracemere

(Lot 100 Plan SP320067)

- Capping underway (2022)
- Works to be undertaken once adjoining land is filled to appropriate height to allow final capping to be completed



Marmor

(Lot 54 Plan DS416)

- Site ceased operation in late 1990s
Removal of activity from EA ~2030s
- Test pitting March 2020
- Soil capping May /June 2022



Mount Morgan Showgrounds



- Used for night soil only
- Ceased operations in 1970s

- Test pitting March 2020
- Application submitted to DES & removed from EA



Mount Morgan Racecourse Rd

(Lot 100 Plan RN835073)

- Ceased operations 2003, expected off EA ~2033
- Test pitting March 2020
- Soil capping February 2022





Consulting

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Current Status

Responsibilities

- RRWR Proactive Management closed landfills since late 90s
 - find sites and extents of sites
 - identify risks
 - action plans
- Since 2015 post Kershaw Gardens exposure
 - risk based management decisions
 - focus sites on Environmental Authority (EA)

Risk Register Framework

Site Name	Risk Rating	Current Management	Lot/ Plan	History	Sensitive Receptors

- High
- Medium
- Low

Established in 2003. Updated as new information becomes available. Layers of data, mapping and records.

Ongoing Requirements

Future actions closed landfills in the EA

- A. Apply to downgrade from ERA 60(2a) to 60(4) –
Maintaining a Decommissioned Landfill in 2023
 - Alton Downs
 - Bouldercombe
 - Marmor
 - Mount Morgan (Racecourse Road)
- B. Complete capping, prepare Aftercare Management Plan, conduct ongoing environmental monitoring post closure, assess stabilisation of data prior to consideration of (A)
- C. When sites meet their 30 years post closure & monitoring & inspection data supports no impacts, seek to apply to remove from EA (depending on legislation)

Duty of care

- Budget for & implement aftercare management plans & site management plans
- Consider reports of old Council waste dumps/landfills/asbestos tips in the LGA
- Notify tenants and purchasers of sites known to be closed landfills
- Adopt new technology where relevant to reduce risks at closed landfills and ensure staff and Councillors are regularly briefed on compliance matters relating to closed landfills

Duty of care

- Continue to review Post Closure Plans and undertake inspections
- Continue with environmental monitoring, review and adjust monitoring requirements, where necessary
- Continue with Dial Before you Dig Progress (Council GeoCortex System, included a layer for closed landfills, with all relevant information available)

Limitations

This presentation has been prepared for the use of the client, Rockhampton Regional Council, for the purpose of this commission only.

CQG takes no responsibility and disclaims all liability for any loss or damage that any party may suffer because of using or relying on any such information or recommendations contained in this presentation.

To the maximum extent permitted by law CQG expressly disclaims responsibility for or liability arising from:

Any error in, or omission in connection with assumptions, or reliance on the presentation, by a third party or use of the report other than for the purpose stated.

The presentation relates only to the project described herein and must be reviewed by a competent expert before being used for any other purpose. CQG accepts no responsibility for other use of the data and this document is not a legal document.

This presentation does not provide a complete assessment of the environmental status of the Site but is limited to the scope defined herein.

It is the reader's responsibility to verify the correct interpretation and intention of the recommendations presented herein. CQG assumes no responsibility for misunderstandings or improper interpretations that result in unsatisfactory or unsafe work products. It is the reader's further responsibility to acquire copies of any supplementary reports, addenda or responses to public agency reviews that may supersede recommendations in this presentation.

This presentation does not comprise a Detailed Site Investigation, hydrogeological report, validation report, remediation action plan, environmental or waste audit, sampling of stygofauna or any ecological surveys. No geotechnical information was reviewed in the preparation of this presentation.

Note specifically that "capping" as referred to in these slides is not referring to geotechnical tested capping, but rather a depth of soil of 0.5 metres or more above the waste mass. Where the expected removal from the environmental authority (EA) is mentioned in the slides this is in reference to the legislation at the time of writing of this document and the assumption that the sites at that time meet all the necessary and applicable environmental legislative requirements.

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10.3 WASTE EDUCATION PLAN 2023

File No: 121
Attachments: 1. RRC Waste Education Plan 2023 [↓](#)
Authorising Officer: Peter Kofod - General Manager Regional Services
Author: Michael O'Keeffe - Manager Rockhampton Regional Waste and Recycling

SUMMARY

The Waste Education Plan 2023 provides a detailed outline of Rockhampton Regional Council's waste education priorities and operational plans for the calendar year 2023.

The waste education plan informs the annual work plan of the Rockhampton Regional Waste & Recycling Education Officer, with support from a range of other stakeholders in the delivery of key messaging and engagement activities across our community.

OFFICER'S RECOMMENDATION

THAT Council is aware of and support Council's waste education priorities for 2023 and how they are to be delivered in the community.

COMMENTARY

Rockhampton Regional Council's Waste Strategy 2020-2030 makes the following strategic commitments:

- Development of an annual waste education plan;
- Establishment of a long-term community engagement plan; and
- Delivery of a regional education campaign in partnership with other CQ councils

As such, this plan sets out a clear agenda for waste education activities in the community in direct support of these broader strategic commitments.

CONCLUSION

This plan is an important component of Council's community facing engagement activities, and it is important that Councillors have clear sight of the activities to be undertaken and how they fit with wider strategic objectives.

WASTE EDUCATION PLAN 2023

RRC Waste Education Plan 2023

Meeting Date: 6 December 2022

Attachment No: 1

Waste Education PLAN

2023



Empowering the community to embrace
the principles of a circular economy.



1 Scope & Purpose

This plan outlines RRWR's education activities for the calendar year 2023.

The purpose of this plan is to establish:

- an action plan
- that appropriate resources are available
- a reference document to keep key stakeholders informed

2 Waste Strategy alignment

The RRC Waste Strategy 2020-30 makes several specific commitments on waste education:

Action 1.1: Establish and implement a long-term community engagement plan. Taking a long-term view of the key messaging required to embed the principles of a circular economy, we will liaise, partner and seek feedback from a wide range of stakeholders across sectors of the community to ensure we are delivering relevant outcomes.

Action 1.2.1: Develop and deliver an annual waste education plan: an annual plan will be formulated to set the scope and objectives of the program. Each annual plan will be designed to support the priorities of this strategy at that particular point in the strategic cycle, outlining key messaging, target audiences, delivery method and expected outcomes.

Action 1.2.2: Deliver a regional education campaign in partnership with the other CQ Councils. Where neighbouring councils have the same messaging e.g. commingled recycling campaigns, there are benefits of pooling resources to procure media and marketing coverage that has a much bigger community reach.

3 Educational priorities

1. **Recycling Hero School Program** - Maintain actively enrolled schools, complete recruitment of those on cusp/ in negotiation and engage those expressing interest (aim for up to 5 new schools this calendar year). School status summary provided on final page.

Develop tender for the recruitment of a panel of external education facilitators.
Undertake survey (online & face-to-face) of each schools' family community, to establish a measure of broader impact by the school's program.

2. **Community Engagement & Events** – Coordinate and host interactive opportunities and develop resources for targeted public education, aligning with nationally supported themes from recognised organisations.

- **Teacher Professional Development Workshops** x 2 (February and October)

Presenting to education professionals working in our region the range of facilities and resources that various Council teams can offer i.e. RRWR, Local Laws, ES, FRW, EH, Vector, Major Venues, Zoo, Disaster Management, Heritage Village, Library, RMOA. Fundamentally giving an insight to what resident's rates pay for.

- **Clean Up Australia Day** (Schools on Friday 3 March, Community on Sunday 5 March)

RRWR manages this annual event on behalf of Council. A wide range of proactive local groups and individuals participate passionately and rely on our provided support of; site coordination, clean-up resources (gear, collection, vouchers) and volunteer recognition (BBQ vouchers, certificates, guest speaker). RRWR waste facilities and their community recycling collection areas are showcased by this event.

- **International Compost Awareness Week** (30-6 May)

This week highlights how to compost plus complementary good home food management practices; shopping, storage, and cooking with leftovers – diverting food waste from landfill. Championed by ambassador Costa Georgiadis from Gardening Australia. The licenced Love Food Hate Waste campaign will in future align with this event and the community roll-out of a kerbside FOGO service.

- **National Recycling Week** (6-12 Nov)

This week highlights how to recycle right and is themed each year to further educate on what happens outside of the kerbside bin system and our impact on the environment. Reuse shops are also showcased.

- **Pop-up info stalls** (March – Nov)

The informal setting of a pop-up information stall is a means to gather firsthand information on home waste management practices to inform, deliver and measure our campaigns, programs and events. Also providing an opportunity for residents to seek answers to their RRWR service delivery issues and queries. Residents can attend for as long as they need within the timeslot for a face-to-face conversation supported with a small display/ demonstration and be provided with merchandise to assist in establishing new sustainable waste management behaviours.

The long-term objective of this engagement strategy is to establish street champions who will participate in educational activities who then pass their learning and experiences on to their network of friends and family.

Occurring bimonthly, from 4-6pm, beginning March 2023. The location of the pop-up will rotate throughout the suburbs enabling targeted education related to Bin Health Check or Collections contamination data. Residents of the immediate neighbourhood to the location will be invited one week prior by mailbox flyers, targeted social media post and roadside signs.

3. Kerbside Recycling Campaign – Assist with tailored content creation, education delivery and measurement of behaviour change. The campaign targets lost recyclables in general waste and a reduction in contamination of recycling.

The media campaign will be supported by:

- Content from the licenced “Recycle Right” campaign developed by NE Waste in NSW
- New content being developed by the Education and Behaviour Change Initiative (EBCI) of DES

- RRWR pop-up info stalls
- RRWR Bin Health Checks
- RRWR Collections' contamination reduction procedure: bin sticker, escalating letters with educational collateral, educational home visit and removal of recycling bin on refusal to comply.

RRWR will continue to work with DES as a member of the EBCI Working Group in the development of a new fit for region campaign.

4. **Gracemere Waste Transfer Station redevelopment** – Consult on design, signage, comms, and collateral to ensure a user-friendly customer experience which is consistent with all other waste facilities, community recycling centres and reuse shops.

5. **RRWR Education Centre reconfiguration project** – Compile project scope and consultant research report to develop a project plan.

The centre will retain its meeting functionality however will become an asset for public engagement and education, adding repeat visit value and content for a variety of learning levels and styles. Giving further life to the Recycling Hero School Program and other campaigns.

6. **FOGO Champions** – Assist with comms (via Zero Waste e-newsletter) and contamination offenders of those households who opted to retain the FOGO kerbside service after the trial end date.

7. **Reviva Ibis Reuse Shop/ Upcycle Village** – Liaise with RRA and Multicultural Australia to align RRWRs engagement & education activities, providing opportunities for community involvement/ awareness and thus landfill diversion. Consult on the Upcycle Village sites' further refurbishment plans. In partnership with Multicultural Australia, the furniture restore trainee project continues in its second round.

4 RRWR Educational content advice

The Waste Education Officer will continue to provide ongoing content support to ensure there is accurate and consistent educational messaging in our public facing communications. The primary focus will be to provide expert content advice in respect of print collateral, waste management process and procedures, media releases, website content, signage, truck livery etc.

5 Measuring success

The outcome measures for this plan are those as outlined in the Waste Strategy:

- Diversion from landfill
- Kerbside commingled service contamination rates
- Kerbside recovery rate

However, it is also recognised that this is not an exclusive or direct relationship, so additional lead indicators will be used to monitor the direct progress of the commitments made in this plan. These are shown in the Action Plan table below.

Recycling Hero School Program – Status Summary

The schools program is a long term commitment to implement an ongoing, multi-year program, aiming to maintain an agreed number of participating schools at any given time.

The program delivers a combination of support in respect of:

- in-school lessons on developing waste reduction and recycling strategies
- guided bus tour of Lakes Creek Road Waste Management Facility
- tailored design of on-site waste processing systems and infrastructure
- pre and post waste auditing and evaluation to measure performance and recommend improvements

The program is designed to directly support years four to ten of the Australian Curriculum.

As at November 2022, there are:

- 13 schools actively enrolled in the program:
 1. St Mary's Catholic Primary School
 2. Park Avenue State School
 3. Rockhampton Grammar School (primary campus only)
 4. St Joseph's Catholic Primary School (Park Avenue)
 5. St Peters Catholic Primary School (Allentown)
 6. Rockhampton Flexible Learning Centre (Allentown)
 7. St Joseph's Catholic Primary School (Wandal)
 8. Frenchville State School
 9. Emmaus Catholic Highschool
 10. Bajool State School
 11. Ridgeland State School
 12. Depot Hill State School
 13. CQUniversity
- 2 schools who declined engagement in 2022 after receiving full program delivery previous years:
 14. Stanwell State School
 15. Berserker Street State School
- 1 school on cusp of full enrolment:
 16. The Cathedral College
- 2 schools in negotiation of program:
 17. The Hall State School
 18. Heights College
- 5 schools expressing interest in program:
 19. Rockhampton Girls Grammar School
 20. Kingsley College
 21. Parkhurst State School
 22. St Pauls Catholic Primary School (Gracemere)
 23. Warraburra State School (Gracemere)

Waste Education Action Plan 2023			Q1			Q2			Q3			Q4		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TASK TITLE	LEAD PERSON	Measure	2023											
Recycling Hero School Program														
Program delivery	Kelly	# active schools, contamination %, waste reduction tonnages												
Kerbside Recycling Campaign														
Annual community representative kerbside bin audit	Charlie	current % contamination of recycling bins												
Campaign delivery	Skye	# media channels/ website views/ surveys												
Bin Health Checks	Kelly	contamination % change												
Collections contamination reduction procedure	Charlie	# reports, # repeat offenders												
Gracemere WTS redevelopment														
Planning	Mitch	signs & "Recycling Street" completed												
Engagement & Events														
Clean Up Australia Day	Kelly	# participants, # vouchers used												
PD Teacher Events (x2)	Lisa Jocusmen	# attendees												
Pop-up info stalls	Kelly	# attendees/ inquiries												
International Compost Awareness Week	Kelly	# attendees/ inquiries/ website views												
National Recycling Week	Kelly	# attendees/ inquiries/ website views												

10.4 PROJECT DELIVERY CAPITAL PROJECT REPORT - NOVEMBER 2022**File No:** 7028**Attachments:** 1. Project Delivery Capital Project Report
November 2022 [↓](#)**Authorising Officer:** Peter Kofod - General Manager Regional Services**Author:** Andrew Collins - Manager Project Delivery

SUMMARY*Monthly status report on all projects currently managed by the Project Delivery unit.***OFFICER'S RECOMMENDATION**

THAT the Project Delivery Monthly Report for November 2022 be received.

The Project Delivery section submits a monthly project report outlining the status of capital projects managed by the Unit.

The following projects are reported on for the month of November 2022.

- Mount Morgan Water Supply Pipeline Project
- Hail Damage Insurance Claim
- Alliance Maintenance Facility
- Botanic Gardens & Zoo Redevelopment
- Glenmore Water Treatment Plant Upgrade
- Gracemere & South Rockhampton STP Strategy
- Glenmore Water Treatment Plant Solar Farm
- Mount Morgan Pool
- North Rockhampton Sewage Treatment Plant Upgrade
- Rockhampton Airport Parking
- Arthur Street SPS

PROJECT DELIVERY CAPITAL PROJECT REPORT - NOVEMBER 2022

Project Delivery Capital Project Report November 2022

Meeting Date: 6 December 2022

Attachment No: 1

Regional Services – Project Delivery

Monthly Dashboard Update

Reporting Period: November 2022



Scope			
<p>Deliver the annual capital works program, achieving a capital program within 95% of the budget.</p> <p>Ensure the delivery of infrastructure projects meet objectives set out in the 2022/23 Operational Plan.</p> <p>BUDGET \$95,527,958.</p>			
Traffic Light Reporting			
Item	Last Month	This Month	Comments
Scope	A	A	No current scope issues
Budget	G	G	No current budget issues.
Schedule	R	R	Delivery of Council funded works on AMF has been rescheduled to suit delivery method. Botanic Playground. Delays in Dingo Structure from OS



Status Overview
Key Milestones & Deliverables This Month (November)
<ul style="list-style-type: none"> Mt Morgan Water Security Tender package called Community information session Alliance Maintenance Facility Project in final completion stages Mt Morgan Pool Community Information Session Tenders called Glenmore WTP Solar Contract awarded Botanic Gardens & Zoo Redevelopment Visitor Hub, tenders closed and assessed Airport Paid Parking Replacement Works completed Arthur St SPS Tenders called

Three Month Horizon			
December	January	February	
<ul style="list-style-type: none"> Alliance Maintenance Facility Site Power / carpark North Rockhampton Sewage Treatment Plant Concrete structures and under slab drainage to continue. Glenmore Water Treatment Plant Dosing shed structure completion Botanic Gardens & Zoo Redevelopment Playground installation to commence. Arthur St SPS Award contract 	<ul style="list-style-type: none"> North Rockhampton Sewage Treatment Plant Construction of concrete structures to continue. Mt Morgan Water Security Tender adjudication Mt Morgan Pool Pool construction procurement Botanic Gardens & Zoo Redevelopment Re-Tender Visitor Hub, Playground installation 	<ul style="list-style-type: none"> Mt Morgan Pool D&C award Mt Morgan Water Security Project site works commence North Rockhampton Sewage Treatment Plant Concrete structures to continue. Arthur St SPS Commence Construction 	

Regional Services – Project Delivery

Monthly Dashboard Update

Reporting Period: November 2022



Project Name	Current Status	Monthly Update			
		Scope	Budget	Schedule	
Mt Morgan Water Pipeline Project	Construction	G	G	G	<p>Following are the major activities recently undertaken on the project:</p> <ul style="list-style-type: none"> Tenders have closed for the Supply & Delivery of Pipes, Fittings & Valves for Mt Morgan Supply Trunk Mains. Assessment and adjudication complete; post tender negotiations are in progress. Tender package 15274 Design and Construction of Three Water Pump Stations for the Mount Morgan Water Supply Project has been released to market on the 21 October 2022, site inspection completed. Tender closes 25 January 2023 Design development is now in its final stages. MT Morgan community information session was delivered on the 9 November 2022.
Hail Damage Insurance Claim	Construction	G	G	G	<ul style="list-style-type: none"> Works to Dooley Street Depot is 100% Completed. North Rockhampton Library is 100% Completed. Boathouse Café hail damaged Solar Panels is 100% Completed. Elfin House Childcare centre is 100% completed. 152 Lakes Creek Road landfill is 100% completed. Kershaw Gardens Precinct roof structures are 100% complete, minor defects to be rectified. Victoria Park Shade structures is 100% completed. North Rockhampton Sewage Treatment Plant is scheduled to be completed by 20 December 2022.
Alliance Maintenance Facility	Construction	G	G	A	<ul style="list-style-type: none"> The main civil contractor for the bulk of the funded works BMD has demobilised. Work is currently being undertaken on the car park by Ahrens, kerb 80% complete, base nearing completion for Asphalt in early December. Work on the Hangar continues with Hangar door cladding now completed, epoxy flooring in annex area completed and two bays left in Hangar area. <p>Milestone 1 fund of \$3.75M has been received.</p> <p>Milestone 2 fund of \$7.5M has been received.</p> <p>Milestone 3 fund of \$11.25M has been received.</p>

Regional Services – Project Delivery

Monthly Dashboard Update

Reporting Period: November 2022



Project Name	Current Status	Monthly Update			
		Scope	Budget	Schedule	
Botanic Gardens & Zoo Redevelopment	Design	A	G	R	<ul style="list-style-type: none"> Package 2 Visitor Hub Construction: Construction tender was advertised on the 16th of September, with a tender briefing on 28th September and closed on 4th of November. One offer has been received, which is well outside budget. Tender package only for the Visitor hub to be compiled and put back out to market Package 3 Playground: Project Program has had a major change due to shipping delays of Custom Dingo equipment; The Dingo equipment is now scheduled for delivery on 23rd January 2023. Civil design works is completed which include sandstone retaining walls and pathways to adjust level differences. Civil works started on the 10th October 2022 with removal of existing play equipment and commencement of the cut and fill area, works 90% completed. Urban play to commence on site early December. Package 4 Enclosure Refurb: The Eagle enclosure contract was awarded on the 2nd of November, currently working through design phase of the Project.
Glenmore Water Treatment Plant Upgrade	Design & Construction	G	G	G	<ul style="list-style-type: none"> Completed soft demolition of Control Room External finishing of dosing shed completed Electrical Fitout of new dosing shed Cable tray installation through chemical store area to new dosing shed
Gracemere & South Rockhampton STP Strategy	Strategic Assessment	G	G	G	<p>Current work relates to developing and implementation of stages to be able to realise the strategic plan. A consultant has been engaged to develop the design strategy for both Gracemere and South Rocky STP's.</p> <ol style="list-style-type: none"> New Caustic soda dosing system at SRSTP (Final designs completed) package being prepared for contractor to price. New Wet well for Sludge Pump Station (Planning works undertaken) Design and Installation of Penstocks in bioreactors (Variation Order Issued to Haslin's works to commence in 28 November) Condition assessments & replacement of diffusers (Waiting penstock install) Condition assessments & upgrade of sludge digesters (investigation work underway) Upgrade of Sludge Lagoons both at SR & G STPS (Gracemere works complete / NRSTP underway 40% / SRSTP underway 80%) Missing effluent pipeline at GSTP (FRW works underway) Sewer diversion; Gracemere to South R'ton STP (Geotech complete at GSTP, pipeline prelim design completed. PS design to commence.)

Regional Services – Project Delivery
Monthly Dashboard Update
Reporting Period: November 2022



Project Name	Current Status	Monthly Update			
		Scope	Budget	Schedule	
					9. New SRSTP – (planning stage) 10. Variation order issued to Haslin for new aerator install at GSTP Variation order issued to Haslin for new aerator install at GSTP
Glenmore Water Treatment Solar Farm	Design & Construction	G	G	G	<ul style="list-style-type: none"> Tracking system equipment has been secured and delivered to site. Tender has closed, been adjudicated and awarded to GEM solar. Work to commence in the new year.
Mount Morgan Pool	Preliminary Evaluation	G	G	G	<ul style="list-style-type: none"> Community information session completed on the 9 November, survey information used to inform tender. Tender Released 26 Nov 2022 to Close on 18 Jan 2023
North Rockhampton Sewage Treatment Plant Upgrade	Construction	G	G	G	Following are the major activities recently undertaken on the project: <ul style="list-style-type: none"> Piling works complete and rig demobilised off site; Construction of the concrete structures has continued on the inlet structure, with approximately 70% of the structure now complete; The floor slab of the oxidation ditch and reactor has now been completed; Further sections of the oxidation ditch and reactor concrete walls have been FRP. Structure approximately 60% completed; Blinking layer has been laid in the sludge pocket on the clarifier; 750mm pipe from Oxidation ditch to Clarifier installed; RAS pipe from Clarifier installed; Ring beam being installed to clarifier base; 35% design workshop held for stage 2B, assessment of blower room and electrical design; Design for HV building platform, SID identified modification of access ways completed and submitted for pricing and Negotiations underway with Yurika in relation to the supply and installation of HV equipment.
Rockhampton Airport Parking	Design & Construction	G	G	G	Equipment installs complete Modifications to cameras undertaken to improve the Number Plate Capture reliability
Rockhampton Airport Screen and Security Upgrade	Design & Construction	G	G	G	Scope increased to include design of solar system for terminal and application to ergon for connection approval for Airport and tenant's solar applications. Details for all tenant solar applications have been received and submitted to Ergon for assessment/approval



Regional Services – Project Delivery
Monthly Dashboard Update
Reporting Period: November 2022

Project Name	Current Status	Monthly Update			
		Scope	Budget	Schedule	
Arthur Street Pump Station	Construction	G	G	G	Issue for construction drawings completed, tender package compiled, and tenders called closing 30 November 2022.

10.5 ASSET MANAGEMENT PLAN - UNSEALED ROADS

File No: 5960
Attachments: 1. **Asset Management Plan - Unsealed Roads**[↓](#)
Authorising Officer: Martin Crow - Manager Infrastructure Planning
Peter Kofod - General Manager Regional Services
Author: Andrew Whitby - Coordinator Assets and GIS

SUMMARY

This report presents a new Asset Management Plan for Unsealed Roads to the Infrastructure Committee for adoption.

OFFICER'S RECOMMENDATION

THAT Council adopt the Asset Management Plan for Unsealed Roads.

COMMENTARY

A new Asset Management Plan (AMP) has been developed for all unsealed roads that are owned by Council. This document will replace the unsealed roads component of the current Roads AMP that was adopted in 2014.

This AMP includes 1,078 km of unsealed roads across 6 different road classes:

- Class 150 roads – 2 km
- Class 125 roads – 37 km
- Class 100 roads – 109 km
- Class 75 roads – 431 km
- Class 30 roads – 393 km
- Class 10 roads – 106 km

The above infrastructure assets have a replacement value estimated at \$215,236,545.

The new AMP includes the following:

Levels of Service

The AMP considers both Customer Levels of Service (quality, function and capacity) and Technical Levels of Service (acquisition, operation, maintenance and renewals) when assessing current performance and determining future needs.

Future Demand

The AMP identifies the drivers affecting demand and considers the impact these may have on future service delivery.

Asset Lifecycle Management

The AMP considers the asset lifecycle demands (renewals, acquisitions, disposals, operations and maintenance) to deliver the agreed service levels, and the availability of funding through the Long-Term Financial Forecast (LTFF) and other external sources.

Risks Management

The AMP documents the treatment plans for critical risks associated with the delivery of services.

Financial Summary

The AMP summaries the medium-term financial requirements for the asset sub-class and considers the key indicators for sustainable service delivery.

BACKGROUND

Council principally exists to provide services that meet the needs of the community. Asset management planning is a comprehensive process; the purpose of which is to ensure the delivery of services from Council owned infrastructure are financially sustainable.

PREVIOUS DECISIONS

Council adopted the current Roads AMP in 2014.

The Unsealed Roads AMP was discussed with Councillors at a Briefing Session on 22 November 2022.

BUDGET IMPLICATIONS

The overall quantum of capital demand identified in the AMP exceeds the funding available in the LTFF over the 10-year planning period. Likewise, the annual maintenance demand identified in the AMP exceeds the funding available in the 2022/23 operating budget. These funding shortfalls are manageable in the short-term (1-3 years), however current service levels will begin to gradually decline.

LEGISLATIVE CONTEXT

A local government must prepare and adopt a long-term asset management plan under the Local Government Act (Local Government Regulation 2012).

LEGAL IMPLICATIONS

There are no legal implications.

STAFFING IMPLICATIONS

There are no staffing implications.

RISK ASSESSMENT

The AMP documents the treatment plans for critical risks associated with the delivery of services. The costs associated with these risk treatments are included in the asset lifecycle management plan.

The need for good quality AMPs is identified in Council's Operational Risk Register.

CORPORATE/OPERATIONAL PLAN

The AMP supports of the following Corporate Plan goals:

- We are fiscally responsible
- We plan for growth with the future needs of the community, business and industry in mind
- Our Region is resilient and prepared to manage climate-related risks and opportunities
- We are motivated to provide excellent service and have a strong organisational culture
- Our Region has infrastructure that meets current and future needs

CONCLUSION

The new Unsealed Roads AMP is a comprehensive document. It identifies the service levels, future demand, lifecycle demand (renewals, acquisitions, disposals, operations and maintenance) and critical risks associated with the asset sub-class.

ASSET MANAGEMENT PLAN - UNSEALED ROADS

Asset Management Plan - Unsealed Roads

Meeting Date: 6 December 2022

Attachment No: 1



ASSET MANAGEMENT PLAN

Rockhampton Regional Council
Unsealed Roads

Document Control		Asset Management Plan		
Version	Description	Plan Type	Author	Reviewed By
1	Draft	Asset Sub-Class	Brett Cagney	Andrew Whitby Martin Crow Cornelius Claassen Steven Hughes
2	Final Review	Asset Sub-Class	Brett Cagney	Andrew Whitby
3	Updated with adopted budget and LTFF changes	Asset Sub-Class	Brett Cagney	Martin Crow John Gwydir Marnie Taylor Andrew Whitby
4	Updated with further modelling and commentary	Asset Sub-Class	Brett Cagney	John Gwydir Andrew Whitby

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Contents

1.0	EXECUTIVE SUMMARY	5
1.1	The Purpose of the Plan.....	5
1.2	Asset Description.....	5
1.3	Levels of Service.....	5
1.4	Future Demand.....	6
1.5	Lifecycle Management Plan.....	6
1.6	Financial Summary.....	6
1.7	Asset Management Planning Practices.....	7
1.8	Monitoring and Improvement Program	8
2.0	Introduction	9
2.1	Background.....	9
2.2	Goals and Objectives of Asset Ownership	10
3.0	LEVELS OF SERVICE	12
3.1	Community Expectations.....	12
3.2	Strategic and Corporate Goals	12
3.3	Legislative Requirements.....	13
3.4	Customer Levels of Service.....	13
3.5	Technical Levels of Service.....	15
4.0	FUTURE DEMAND	17
4.1	Demand Drivers.....	17
4.2	Demand Forecasts	17
4.3	Demand Impact and Demand Management Plan	17
4.4	Asset Programs to meet Demand.....	18
4.5	Climate Change and Adaption	18
5.0	LIFECYCLE MANAGEMENT PLAN	20
5.1	Background Data	20
5.2	Renewals.....	22
5.3	Summary of renewal demand	22
5.4	Acquisitions.....	23
5.5	Summary of acquisition demand.....	24
5.6	Disposal Plan.....	24
5.7	Operations and Maintenance Plan	25
5.8	Summary of forecast operations and maintenance costs	26

5.9	Summary of lifecycle demand	27
6.0	RISK MANAGEMENT PLANNING	28
6.1	Critical Assets	28
6.2	Risk Assessment	28
6.3	Infrastructure Resilience Approach	30
6.4	Service and Risk Trade-Offs	30
6.4.1	Service trade-off	30
6.4.2	Risk trade-off	30
7.0	FINANCIAL SUMMARY	31
7.1	Financial Sustainability and Projections	31
7.2	Funding Strategy	32
7.3	Valuation Forecasts	32
7.4	Key Assumptions Made in Financial Forecasts	33
7.5	Forecast Reliability and Confidence	33
8.0	PLAN IMPROVEMENT AND MONITORING	35
8.1	Status of Asset Management Practices	35
8.2	Improvement Plan	35
8.3	Monitoring and Review Procedures	35
8.4	Performance Measures	36
9.0	REFERENCES	37
10.0	APPENDICES	38
Appendix A	Capital Demand	38
Appendix B	Renewal Demand	39
Appendix C	Acquisition Demand	40
Appendix D	Operations Demand	41
Appendix E	Maintenance Demand	42
Appendix F	Disposal Activity	43
Appendix G	Demand and Funding Summary by Lifecycle Activity	44
Appendix H	Capital and Maintenance Works	46

1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

The Rockhampton Regional Council (Council) principally exists to provide services that meet the needs of the community. Asset management planning is a comprehensive process; the purpose of which is to ensure the delivery of services from Council owned infrastructure that is financially sustainable.

This Asset Management Plan (AMP) details information about Council's unsealed road assets with actions required to provide an agreed level of service in the most cost-effective manner while also outlining associated risks with this approach. The AMP defines the services to be provided, how the services are provided and what funds are required to provide over the 10 year planning period. The AMP will link to a Long Term Financial Forecast (LTFF) which typically considers a 10 year planning period.

1.2 Asset Description

This AMP covers all unsealed roads that are owned by Council. Unsealed roads form part of the Road Infrastructure Asset Class:

Asset Class	Sub-Class
Road Infrastructure	Sealed Roads
	Unsealed Roads
	Access Roads and Car Parks
	Footpaths
	Traffic Management Devices and Street Furniture

The infrastructure assets covered by this AMP include 1,078 km of unsealed roads across 6 different road classes:

- Class 150 roads – 2 km
- Class 125 roads – 37 km
- Class 100 roads – 109 km
- Class 75 roads – 431 km
- Class 30 roads – 393 km
- Class 10 roads – 106 km

The above infrastructure assets have an estimated replacement value of \$215,236,545 as at 30/06/2022.

1.3 Levels of Service

The funding available for unsealed roads is **insufficient** to continue providing existing services at **current levels** for the planning period. With a 15% reduction in funding for resheeting and an 18% reduction in funding for grading, it is expected that up to 16km less resheeting and 95km less grading will occur per year. Current service levels will be impacted through a gradual reduction in gravel coverage, and a gradual increase in road roughness.

The funding shortfalls will be partially offset by continued investment in the rural road sealing program over the 10-year period, which will address high-use, high-risk unsealed roads.

1.4 Future Demand

The factors influencing future demand and the impacts they have on service delivery are created by:

- Changing traffic volumes and loads
- Changing weather patterns (climate change)
- Standards and regulatory requirements; and
- Community expectations

These demands will be approached using a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand. Demand management practices may also include a combination of non-asset solutions, insuring against risks and managing failures:

- Review design standards and optimise treatments for whole of life costs
- Implement resilience focus for all works
- Identify opportunities to improve road drainage and flood immunity
- Test treatments and options for minimising the use of water during construction

1.5 Lifecycle Management Plan

What do we need?

The forecast lifecycle demand to provide the services covered by this AMP includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AMP may be prepared for a range of time periods, it typically informs a LTFF period of 10 years. Therefore, a summary output from the AMP is the 10 year forecast lifecycle demand, which for Unsealed Roads is estimated as \$73,671,650 or \$7,367,165 on average per year.

1.6 Financial Summary

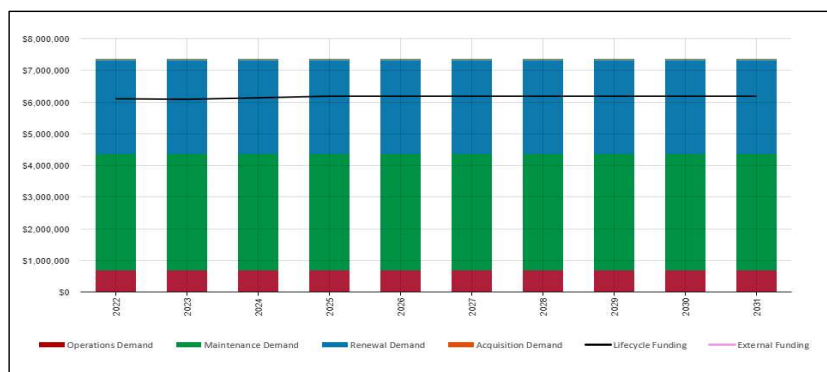
What funding do we have?

The forecast lifecycle funding (LTFF + External Funding + Operations & Maintenance) for the 10 year period is \$61,620,000 or \$6,162,000 on average per year. This is 84% of the cost to sustain the current level of service at the lowest lifecycle cost.

The infrastructure reality is that only what is funded can be provided. Informed decision making depends on the AMP emphasising the consequences of funding on the service levels provided and risks.

The forecast lifecycle funding for Unsealed Roads indicates a shortfall compared to the lifecycle demand required to provide services in the AMP. This is shown in the figure and table below. Figure and table values are shown in current day dollars.

Lifecycle Demand and Lifecycle Funding



Lifecycle Demand and Lifecycle Funding

Financial Year	Lifecycle Demand	Lifecycle Funding				Surplus / Shortfall	Cumulative Surplus/ Shortfall
		Council Funding		External Funding	TOTAL		
		Capital	Operational (O&M)				
22/23	\$7,337,165	\$2,420,000	\$3,685,000	\$0	\$6,105,000	-\$1,232,165	-\$1,232,165
23/24	\$7,337,165	\$2,400,000	\$3,685,000	\$0	\$6,085,000	-\$1,252,165	-\$2,484,330
24/25	\$7,337,165	\$2,450,000	\$3,685,000	\$0	\$6,135,000	-\$1,202,165	-\$3,686,495
25/26	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$4,838,660
26/27	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$5,990,825
27/28	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$7,142,990
28/29	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$8,295,155
29/30	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$9,447,320
30/31	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$10,599,485
31/32	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$11,751,650
TOTAL	\$73,371,650	\$24,770,000	\$36,850,000	\$0	\$61,620,000	-\$11,751,650	

What we will do

We plan to provide the following services over the 10 year planning period:

- Operation, maintenance, and renewal of unsealed roads to meet the existing service levels

Managing the Risks

Our present funding levels are generally **insufficient** to continue to manage risks in the medium term. We will continue to manage our risks associated with this asset class by:

- Monitoring and adjusting service levels where required to meet budgets
- Conducting timely maintenance actions
- Prioritising renewals and maintenance to address risk and maintain efficiency of works delivery

1.7 Asset Management Planning Practices

Key assumptions made in this AMP are:

- Renewal costs are based on the most recent works programming rates
- The current operations and maintenance budgets have been used and only increased in the forecast relative to the acquisition of new assets
- In determining the useful life stored in the asset register, assumptions were used in the Unsealed Roads Model to simplify the process

Our systems to manage assets include:

- Finance 1 is Council's financial system
- R1 is Council's asset system
- Esri ArcGIS is Council's GIS system

Assets requiring renewal/replacement are identified from either the asset register or an alternative method. These methods are part of the Lifecycle Model.

- The timing of capital renewals is applied using the asset register expiry date,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems (such as Pavement Management Systems) and may be supplemented with, or based on, expert knowledge.

The Asset Register Method was used to forecast the renewal life cycle costs for this AMP. This AMP is based on a reliable level of confidence in the information.

1.8 Monitoring and Improvement Program

The next steps resulting from this AMP to improve asset management practices are:

- Continue developing an efficient Pavement Management System (PMS)
- Continue collecting data required by each section of the PMS
- Developing a procedure related to the safety of our roads subjected to heavy vehicle loadings
- Improve the quality of the existing data related to the acquisition year and useful lives of unsealed road pavements
- Review the AMP regularly to incorporate new risks and opportunities
- Arrange discussions and prepare documents, to assure the consistency of understanding of terminologies amongst different Council's departments
- Continue updating the staff knowledge in different sections of asset management
- Continue having effective communications within a department and amongst different disciplines
- Monitor the effectiveness of AMP regularly
- Continue utilising the state of the art technologies, materials, and engineering services to complete the operation, maintenance, and capital activities
- Provide sufficient and timely information related to the completed works to be used in AMP
- Consider the above items in the next council revaluation of Unsealed Roads and improve the reliability and accuracy of the current replacement costs, remaining lives, depreciated replacement costs, etc.

2.0 Introduction

2.1 Background

This AMP communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the long term planning period.

This AMP is to be read in conjunction with the following:

- Corporate Plan
- Operational Plan
- Long Term Financial Forecast (LTFF)
- Risk Management Framework
- Advance Rockhampton Region - Rockhampton Regional Council Economic Action Plan
- Asset Management Policy
- Asset Custodianship Policy
- Asset Management Responsibilities Policy
- Capital Works Program
- Local Government Infrastructure Plan (LGIP)

This AMP covers all unsealed road assets that are owned by Council. Unsealed roads form part of the Road Infrastructure Asset Class:

Asset Class	Sub-Class
Road Infrastructure	Sealed Roads
	Unsealed Roads
	Access Roads and Car Parks
	Footpaths
	Traffic Management Devices and Street Furniture

The infrastructure assets covered by this AMP include 1,078 km of unsealed roads across 6 different road classes:

- Class 150 roads – 2 km
- Class 125 roads – 37 km
- Class 100 roads – 109 km
- Class 75 roads – 431 km
- Class 30 roads – 393 km
- Class 10 roads – 106 km

These assets are an integral part of the transport network servicing our Local Government Area. For a detailed summary of the assets covered in this AMP refer to Table in Section 5.

The infrastructure assets included in this plan have an estimated total replacement value of \$215,236,545 as at 30/06/2022.

Key stakeholders in the preparation and implementation of this AMP are shown in Table 2.1.

Table 2.1: Key Stakeholders in the AMP

Key Stakeholder	Role in Asset Management Plan
Elected Council	<ul style="list-style-type: none"> Represent the needs of community. Provide the strategic direction and priorities for Council Ensure services are sustainable
Chief Executive Officer	Implement the policies and strategic direction provided by Council.
General Manager of Regional Services	Setting direction and facilitating approval of policies on asset management, ensuring integration with corporate planning.
Chief Financial Officer	Financial management and reporting. Annual review of Council's long term financial forecast.
Manager Infrastructure Planning and Coordinator Assets & GIS	<p>Corporate asset management governance functions including:</p> <ul style="list-style-type: none"> Asset Management Framework, Policy, and Strategy Administration and development of Council's corporate asset management and geographic information systems. <p>Asset management functions related to Unsealed Roads including:</p> <ul style="list-style-type: none"> Coordination of condition assessment activities related to the revaluation of unsealed roads. Asset Management Plan development. Financial asset modelling.
Manager Infrastructure Planning and Coordinator Infrastructure Planning	Identification of new and upgrade projects.
Asset Custodians	Responsible for assets and services including financial, planning, operation, risk management and works execution.

2.2 Goals and Objectives of Asset Ownership

Our goal in managing infrastructure assets is to provide a defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing, and appropriately controlling risks, and
- Linking to a Long-Term Financial Forecast which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,

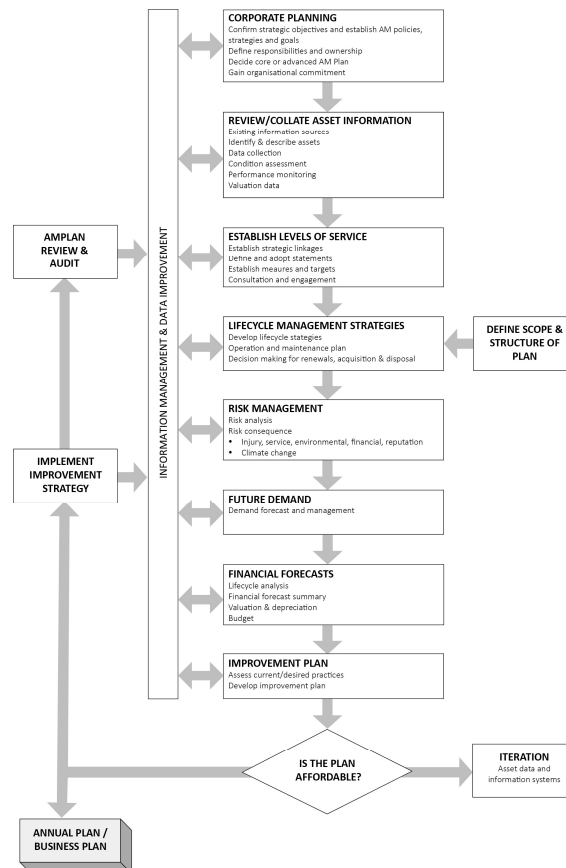
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 ¹
- ISO 55000²

A road map for preparing an Asset Management Plan is shown below.

Road Map for preparing an Asset Management Plan
Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



¹ Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2 | 13

² ISO 55000 Overview, principles and terminology

3.0 LEVELS OF SERVICE

3.1 Community Expectations

The primary means of identifying community expectations is through the Corporate Plan. The Local Government Act 2009 requires Council to develop a 5 year corporate plan that incorporates community engagement. Table 3.1 outlines the communities expectations relevant to Unsealed Roads. These expectations are recorded as goals in the Corporate Plan.

Table 3.1: Customer Expectations

Theme	Goals (Community Expectations)
Our Council	<ul style="list-style-type: none"> We are fiscally responsible We are motivated to provide excellent service and have a strong organisational culture
Our Economy	<ul style="list-style-type: none"> We plan for growth with the future needs of the community, business, and industry in mind
Our Environment	<ul style="list-style-type: none"> Our region is resilient and prepared to manage climate-related risks and opportunities
Our Infrastructure	<ul style="list-style-type: none"> Our region has infrastructure that meet current and future needs.

3.2 Strategic and Corporate Goals

This AMP is prepared under the direction of the Council's vision and corporate objectives.

Our vision is:

***One Great Region
Live. Visit. Invest***

The Corporate Plan identifies the corporate objectives related to the goals listed in Table 3.1. Table 3.2 demonstrates that this AMP supports these corporate objectives.

Table 3.2: Corporate Objectives and how these are addressed in this AMP

Goals	Corporate Objectives	How objective is supported in AMP
We are fiscally responsible	Our budgets are financially sustainable and provide value and accountability to the community	Section 7.1 - Financial Sustainability and Projections
We are motivated to provide excellent service and have a strong organisational culture	We have a workplace culture that is safe, engaged, responsive, professional and accountable	Sections 3.4 and 3.5 - Customer and Technical Services Levels Section 8.2 - Improvement Plan
We plan for growth with the future needs of the community, business and industry in mind	Our strategic planning supports the Region's growing population and enables economic development	Section 4.3 - Demand Impact and Demand Management Plan Section 5.4 - Acquisitions
Our region is resilient and prepared to manage climate-related risks and opportunities	We have a greater understanding of climate risks and their impacts on the Region, which prepares us for challenges and opportunities in the future	Section 6 – Risk Management Planning Section 4.3 - Demand Impact and Demand Management Plan
Our region has infrastructure that meet current and future needs.	Our Council assets are well maintained Our future projects are planned and prioritised	Section 5 – Lifecycle Management Plan

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the unsealed roads service are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	Requirement
<i>Local Government Act 2009 and Local Government Regulations 2010</i>	Sets out role, purpose, responsibilities and powers of local governments including the preparation of the Corporate Plan, LTTP supported by infrastructure and asset management plans for sustainable service delivery
<i>Heavy Vehicle National Law Act 2012</i>	Administers one set of laws (the HVNL) for heavy vehicles over 4.5 tonnes gross vehicle mass. It manages the impact of heavy vehicles on the environment, road infrastructure and public amenity
<i>Transport Operations (Road Use Management – Road Rules) Regulation 1999</i>	Establishes road rules in Queensland that are substantially uniform with road rules elsewhere in Australia
<i>Transport Planning and Co-ordination Act 1994</i>	Sets agenda for overall transport effectiveness and efficiency through strategic planning and management of transport resources
<i>Transport Operations (Road Use Management) Act 1995</i>	The overall objective of this Act is to provide for the effective and efficient management of road use in the State
<i>Transport Infrastructure Act 1994</i>	Provides a structure, which sets and enables effective integrated planning and efficient management of the Council's transport and drainage
<i>Environmental Protection Act 1994</i>	Its objective is to protect Queensland's environment while allowing ecologically sustainable development
<i>Australian Standards</i>	Australian standards related to design and construction of structures which provides technical knowledge for the structural condition evaluation

3.4 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Quality How good is the service ... what is the condition or quality of the service?

Function Is it suitable for its intended purpose is it the right service? Is it safe?

Capacity/Use Is the service over or under used ... do we need more or less of these assets?

In Table 3.4 under each of the service measures types (Quality, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective. In Table 3.4 the main factor considered is the condition of the road network for users.

Table 3.4: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Quality	Condition of the roads for users	Number of complaints per month	6 month avg. – 16/month	Increasing from current average over time as network service levels decline
		% Gravel Coverage (by length)	<u>Road Class & Gravel Coverage (Last survey)</u> 150 – 98% 125 – 92% 100 – 82% 75 – 75% 30 – 60% 10 – 40% Previous resheeting budgets have maintained gravel coverage levels since the 2018 service level review.	<u>Road Class & Gravel Coverage</u> 150 – 98% 125 – 92% 100 – 82% 75 – 65% 30 – 50% 10 – 30% The recent 2022/23 budget and revised LTFF have reduced funding for resheeting by \$500K/yr. This is expected to have an impact on gravel coverage over time with less resheeting being undertaken. Refer to Section 5.3 for more details.
	Confidence levels		High	High
Function	Is the asset appropriate for intended use (smooth, safe access to and from properties)	Road Roughness – International Roughness Index (IRI)	<u>Road Class & IRI (Last survey)</u> 150 – 6.9 125 – 6.4 100 – 6.8 75 – 7.2 30 – 7.1 10 – 7.9 Previous maintenance budgets have maintained roughness levels since the 2018 service level review. The intervention level for inclusion in a future grading program has previously been an IRI > 7 for all road classes.	<u>Road Class & IRI</u> 150 – up to 7 125 – up to 7 100 – up to 7 75 – up to 8.2 30 – up to 8.2 10 – up to 8.2 The recent 2022/23 budget has reduced funding for grading activities by \$615K/yr. This will require an adjustment of intervention levels in order to match reduced grading capacity. Refer to Section 5.7 for more details. Road roughness is one of the main variables considered when developing grading programs.
	Confidence levels		High	High
Capacity / Use	Do the assets have sufficient capacity (traffic, design/geometric, hydraulic, strategic)?	% of network with sufficient capacity	95% Data from program of unsealed roads identified for future replacement with sealed roads. These roads form part of the Sealed Roads AMP and were identified in accordance with Council's Rural Road Network Policy.	99% Continued road sealing expenditure at the current rates will allow the majority of identified roads to be replaced with sealed roads within the 10yr planning period
	Confidence levels		High	High

Confidence Levels**High** - Professional Judgement supported by extensive data**Medium** - Professional judgement supported by data sampling**Low** - Professional Judgement with no data evidence

3.5 Technical Levels of Service

Technical Levels of Service – To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- **Acquisition** – the activities to provide a higher level of service (e.g. widening a road, pavement strengthening, extension of the unsealed network).
- **Operation** – the regular activities to provide services (e.g. gravel pit management, water source management, traffic counts and road inspections, etc).
- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. gravel patching, unsealed road grading),
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. gravel resheeting and pavement reconstruction),

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.³

Table 3.5 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this AMP.

Table 3.5: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance**
TECHNICAL LEVELS OF SERVICE				
Acquisition	Construct new unsealed roads to meet current and future demands	Properties with habitable dwellings are serviced by a constructed unsealed road to the point adjacent the nearest property boundary	95% of properties serviced by a constructed unsealed road	95% of properties serviced by a constructed unsealed road
		Budget	<i>As required</i>	<i>As required</i>
Operation	Roads meet community's expectations for quality and safety	Network condition surveys	Condition assessment – full network survey every 5 years	Condition assessment – full network survey every 5 years
		Regular programmed safety and defect surveys	Survey of network Once per year	Survey of network Once per year
		Adhoc safety and defect surveys	As initiated (Customer requests & operations staff travel)	As initiated (Customer requests & operations staff travel)
		Resources to coordinate operations	1 Roads Inspector + Operations Support Staff	1 Roads Inspector + Operations Support Staff
		Budget	<i>\$6,850,000 for 10 years</i>	<i>\$6,850,000 for 10 years</i>

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance**
Maintenance	Roads are safe and smooth	Roads are graded in accordance with defined intervention levels	Higher order roads exceeding IRI 7 and lower order roads exceeding IRI 8 are included in a future maintenance grading program. As recommended in Section 5.7	All roads exceeding IRI 7 are included in a future maintenance grading program (as per 2018 service level review)
	Roads are functional	Drainage, signage, and vegetation and maintained in accordance with RRC Road Management Plan	95% compliance with response times detailed in RMP	95% compliance with response times detailed in RMP
		Budget	<i>\$30,000,000 for 10 years</i>	<i>\$36,750,000 for 10 years</i>
Renewal	Roads are renewed adequately to maintain gravel coverage	Length of resheeting (km) per year	~82 km/year	~98 km/year
		Budget	<i>\$24,770,000 for 10 years</i>	<i>\$29,771,650 for 10 years</i>
Disposal	Roads are maintained in accordance with Council policies	Constructed roads removed from asset register when no longer servicing any habitable dwellings	0km of constructed roads servicing no habitable dwellings	0km of constructed roads servicing no habitable dwellings
		Budget	<i>\$0 per year</i>	<i>\$0 per year</i>

Note: * Current Performance for Maintenance and Renewal activities is based on Planned Funding.
 ** Recommend Performance is based on Funding Demand.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged that changing circumstances in technology and customer expectation will impact service levels over time, for example:

- As new vehicles with larger permitted loadings are introduced to our road networks, the current level of service needs to increase to meet the demand
- The adoption of autonomous driving technologies will introduce higher serviceability standards for our road network, including our unsealed roads
- Community expectations for the provision and operation of Council's Unsealed Roads can change over time

4.0 FUTURE DEMAND

4.1 Demand Drivers

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

4.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this Asset Management Plan.

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Changing traffic volumes and loads	Traffic volumes and loads handled by current pavement depths and grading frequencies	Heavier traffic volumes and loads (Static loads, and dynamic loads due to changes in speed and, axle configuration)	Requirement for thicker pavements and/or more frequent resheets and grading activities Replacing unsealed road with a sealed road	<ul style="list-style-type: none"> Monitor traffic volumes and analyse trends with traffic counters Increase condition monitoring surveys Review design standards and optimise treatments for whole of life costs
Changing weather patterns (climate change)	Extreme events are infrequent and disaster funds available for restoration of damaged assets	More extreme events, more often (flooding and drought), more damaged assets	More frequent extreme events and potential for asset restoration costs to be borne by Council	<ul style="list-style-type: none"> Implement resilience focus for all works Identify opportunities to improve road drainage and flood immunity
Community's expectations	Council's performance in providing access is satisfactory now.	Community may become less satisfied in general with the service provided, especially at the time of extreme events.	Complaints may increase especially about the serviceability after a flood or weather event	<ul style="list-style-type: none"> Discuss the risks with the community, and explain the funding needed to enhance the current level of service. Implementing this AMP and keep updated regularly.

4.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 5.4.

Acquiring new assets will commit Council to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial forecast (Refer to Section 5).

4.5 Climate Change and Adaption

The impacts of climate change can have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process, climate change can be considered as both a future demand and a risk.

How climate change will impact on assets can vary significantly depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.

As a minimum we should consider both how to manage our existing assets given the potential climate change impacts, and then also how to create resilience to climate change in any new works or acquisitions.

Opportunities identified to date for management of climate change impacts on existing assets are shown in Table 4.5.1.

Table 4.5.1 Managing the Impact of Climate Change on Assets

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Increase in average rainfall and global mean sea level	Increase in frequency and severity of flooding	Higher vulnerability of pavement damage during rain events Lower flood immunity	Ensure drainage structures are adequately sized and regularly cleaned Incorporate stabilised pavements where suitable in low lying areas
Mean surface air temperature increase and extended periods of drought	Water sources (dams & creeks) dry more often	Difficulty supplying water for resheeting and grading activities in remote locations	Review and revise construction and maintenance practices to minimise water usage and maximise time between treatments.
	Drier, more frequent dusty roads	More customer complaints	Investigate dust suppressant additives
Ref: https://www.climatechangeinaustralia.gov.au/en/changing-climate/climate-trends/australian-trends/			

Additionally, the way in which we construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience will have benefits:

- Assets will withstand the impacts of climate change
- Services can be sustained
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this Asset Management Plan.

Table 4.5.2 summarises some asset climate change resilience opportunities.

Table 4.5.2 Building Asset Resilience to Climate Change

New Asset Description	Climate Change impact These assets?	Build Resilience in New Works
Unsealed road pavements	Higher vulnerability of pavement damage during rain events	<ul style="list-style-type: none">• Ensure road drainage design standards make allowance for climate change scenarios• Stabilisation (cement/lime/bitumen) of unsealed pavements in low lying areas and adjacent to waterways and natural flow paths

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the Rockhampton Regional Council plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

5.1 Background Data

5.1.1. Physical parameters

The infrastructure assets covered by this AMP include 1108.4 km of constructed unsealed roads, supporting the region across a vast geographic area of 6,560km². Council has three types of unsealed roads within its network:

1. Constructed Roads – formed or formed and gravelled roads, maintained by Council; the assets included in this AMP
2. Private Roads – identified property roads or tracks within the road reserve, not maintained by Council
3. Unconstructed Roads – general road reserve where future roads could be constructed

All constructed roads in the network are built and renewed with the same pavement gravel depth (100mm). The road pavements are therefore categorised by the traffic volumes on the road (in vehicles per day), which ultimately drives the gravel loss and degradation of the road and hence determines the asset useful life and maintenance requirements.

The assets covered by this AMP are shown in Table 5.1.1.

Table 5.1.1: Assets covered by this Plan

Component	Road Class	Vehicles per day	Length (km)	Replacement Value
Pavement	Class 150	>125 (~150 avg.)	2	\$ 92,605
	Class 125	>100 ≤125	37	\$ 1,248,628
	Class 100	>75 ≤100	109	\$ 3,512,956
	Class 75	>30 ≤75	431	\$ 13,071,354
	Class 30	>10 ≤30	393	\$ 10,037,525
	Class 10	≤10	106	\$ 2,434,866
Formation	All		1078	\$ 84,838,611
TOTAL				\$ 215,236,545

5.1.2. Asset hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions.

The asset hierarchy is shown in Table 5.1.2.

Table 5.1.2: Asset Hierarchy and Components

Road Class	Definition
150	>125 – 150 vpd
125	>100 – 125 vpd
100	>75 – 100 vpd
75	>30 – 75 vpd
30	>10 – 30 vpd
10	Up to 10 vpd

5.1.3. Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.1.3.

Table 5.1.3: Known Service Performance Deficiencies

Location	Service Deficiency
Various locations across network	Poor sight distances
	Insufficient road width
	Insufficient radius and/or superelevation at bends

5.1.4. Asset Condition

Condition is assessed using a whole-of-network survey every 5 years, coinciding with asset revaluations. It is based on an assessment of the pavement condition index (PCI) per road segment and is measured using a 1 – 5 grading system³ as detailed in Table 5.1.4.

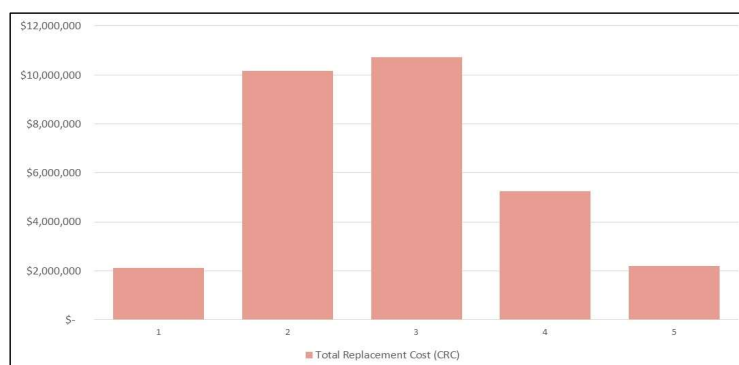
It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level for particular asset classes, however, for reporting in the AMP results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.1.4: Condition Grading System

Condition Grading	PCI	Description of Condition
1	80-100%	Very Good
2	60-80%	Good
3	40-60%	Fair
4	20-40%	Poor
5	0-20%	Very Poor

The condition profile of our assets is shown in Figure 5.1.4.

Figure 5.1.4: Asset Condition Profile



All figure values are shown in current day dollars.

³ IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

The condition data is taken from the last whole-of-network condition survey. The condition distribution generally approximates a normal distribution which would be expected for this type of asset class with many short-life assets (~1500 road segments). The majority of assets sit within Condition ratings 2 and 3, reflecting the network is generally in satisfactory condition. Assets identified as Condition 5 (PCI 0-20%) are generally very low order roads (Class 10 or Class 30).

5.2 Renewals

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (current replacement cost) and renewal timing (expiry year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The standard useful life of pavement assets used to develop projected asset renewal forecasts are shown in Table 5.2. Asset useful lives were last reviewed as part of the road revaluation in 2019.⁴

Table 5.2: Useful Lives of Pavement Assets

Asset (Sub)Category	Useful life (years)
Class 150	9
Class 125	9
Class 100	12
Class 75	12
Class 30	15
Class 10	20

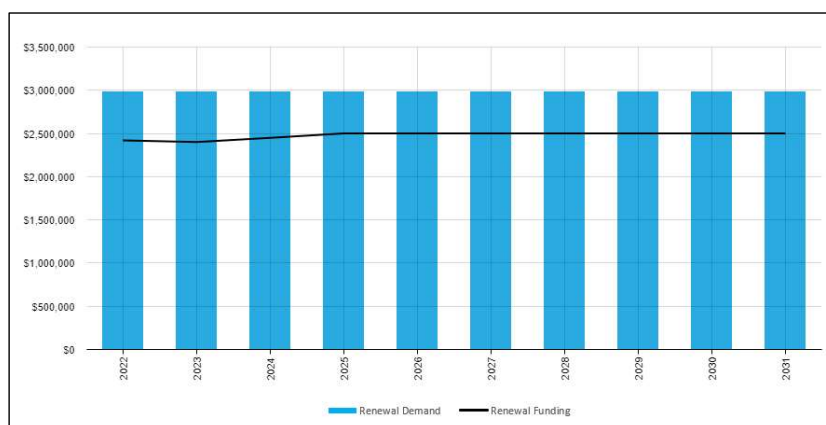
The estimates for renewals in this AMP were based on asset register data which was updated following the last whole-of-network condition survey of the network. Renewal demand identified for the next 10 years in resheeting has been annualised to reflect the nature of the capital works delivery. For more information on how resheeting programs are developed for an annual program, please refer to Appendix H.

5.3 Summary of renewal demand

Renewal demand is the renewal works required over the planning period of the AMP. It has been determined after comprehensive investigations and planning discussions among Council units. The renewal demand is shown relative to the renewal funding (LTFF + External Funding) in Figure 5.3. A detailed summary of the renewal demand is included in Appendix A.

⁴ RRC Condition Survey and Valuation Methodology November 2019

Figure 5.3: Renewal Demand



All values are shown in current day dollars.

Over the 10-year planning period there is a shortfall in renewal funding compared to renewal demand. This is due to a 15% (\$500K) reduction in resheet funding in the 2022/2023 budget and updated LTFF, which equates to approximately 16km less resheeting per year. Table 5.3 summarises the predicted reduction in gravel coverage based on two possible strategies for managing the funding shortfall.

Table 5.3: Future resheeting strategies and long-term impact on gravel coverage

Road Class	Network Length km	Current Gravel Coverage*	Strategy 1: Maintain higher classes		Strategy 2: Reduce all classes equally	
			Future Gravel Coverage	Difference	Future Gravel Coverage	Difference
150	2	97.9%	97.9%	0%	89.3%	-8.6%
125	37	92.3%	92.3%	0%	83.8%	-8.6%
100	109	81.8%	81.8%	0%	73.3%	-8.6%
75	431	75.4%	65.3%	-10.1%	66.9%	-8.6%
30	393	60.4%	50.3%	-10.1%	51.9%	-8.6%
10	106	40.1%	29.9%	-10.1%	31.5%	-8.6%
	1078					

* Based on network survey and 2021/22 budget

It is recommended that Strategy 1 be employed to minimize impact to community and that further service level monitoring occur to improve Council's deterioration modelling.

The decline in renewal funding will be partially offset by continued investment in the rural road sealing program over the 10-year period. All sealing of unsealed roads will be included in the Sealed Roads AMP.

5.4 Acquisitions

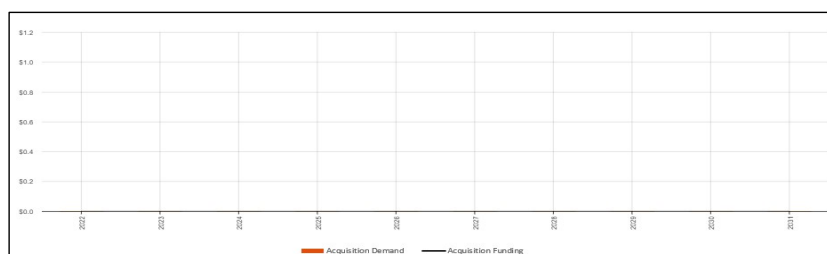
Acquisitions are new assets or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, social or environmental needs. Assets may also be contributed to Council through the development approval process or by other levels of government.

5.5 Summary of acquisition demand

Acquisition demand is the asset acquisitions required over the planning period of the AMP. The acquisition demand is shown relative to the acquisition funding (LTFF + External Funding) in Figure 5.5. The forecast acquisition demand is shown in Appendix C.

There are no unsealed road acquisitions identified for Council's network in the 10 year AMP period. Note that there are unsealed roads identified for replacement with sealed roads, and these assets form part of the acquisition demand detailed in the Sealed Roads AMP.

Figure 5.5: Acquisition Demand



All values are shown in current day dollars.

5.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 5.6. Any costs or revenue gained from asset disposals is included in the long-term financial plan.

Table 5.6: Assets Identified for Disposal

Asset ID	Asset Description	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
Numerous	Unsealed roads that have reached capacity and are identified for replacement with sealed roads	No longer unsealed roads	TBC – Dependent on scope of work and available budgets	N/A Existing road assets to be utilised	N/A Very minor qty in relation to the network

5.7 Operations and Maintenance Plan

Operations

Operations include regular activities to provide services. Examples of typical operational activities include network operations management and AM activities such as inspections or condition assessments.

Based on historical data, it has been assumed that operational costs of \$685,000 per year will be required for the existing asset base. These assumptions will be further refined in later revisions of this document. Operational funding levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Further information on the operational costs is detailed in Appendix D.

Maintenance

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include grading, drainage maintenance, signage, and vegetation control.

Assessment and priority of maintenance is undertaken by staff using experience and judgement. The service hierarchy adopted for maintenance grading during the 2018 service level review is shown in Table 5.7.1.

Table 5.7.1: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
All road classes	International Roughness Index (IRI) <= 7 Roads exceeding this service level objective (i.e. an IRI > 7) have met intervention level and are included in a future maintenance grading program

Based on historical data, it has been assumed that maintenance costs of \$3.675M per year will be required for the existing asset base. For more information on how grading programs are developed, please refer to Appendix H.

The trend in maintenance budgets are shown in Table 5.7.2.

Table 5.7.2: Maintenance Budget Trends

Year	Maintenance Budget \$
2020/21	\$3,650,000
2021/22	\$3,675,000
2022/23	\$3,000,000

The maintenance budget for 2022/23 has been reduced significantly compared to recent budgets and is not considered adequate to meet current service levels. There has been an 18% reduction (\$615K) in funding for grading in the 2022/23 operational budget, which is equivalent to 95 km less grading of the network per year. The service level impact will be a gradual increase in road roughness across the unsealed network. Table 5.7.3 summarises the predicted increase in road roughness, which impacts safe driving speed, based on two possible strategies for managing the funding shortfall.

Table 5.7.3: Future grading strategies and long-term impact on road roughness

Road Class	Network Length km	Current Intervention IRI	Strategy 1: Maintain higher classes			Strategy 2: Reduce all classes equally		
			Future Intervention IRI	Difference	Safe Driving Speed	Future Intervention IRI	Difference	Safe Driving Speed
150	2	7	7	-	75-80	7.7	0.7	70-75
125	37	7	7	-	75-80	7.7	0.7	70-75
100	109	7	7	-	75-80	7.7	0.7	70-75
75	431	7	8.2	1.2	65-70	7.7	0.7	70-75
30	393	7	8.2	1.2	65-70	7.7	0.7	70-75
10	106	7	8.2	1.2	65-70	7.7	0.7	70-75
	1078							

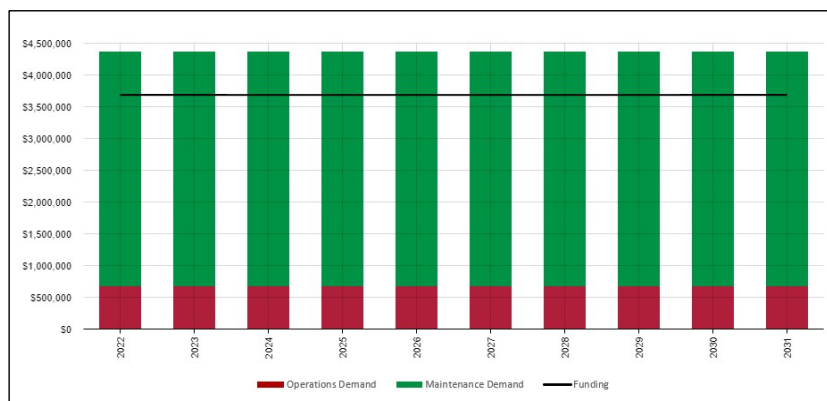
* Based on network survey and 2021/22 budget

It is recommended that Strategy 1 be employed to minimize impact to community and that further service level monitoring occur to improve Council's deterioration modelling.

Further information on the maintenance costs is detailed in Appendix E.

5.8 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed the forecast operation and maintenance costs are expected to decrease. Figure 5.8 shows the forecast operations and maintenance costs relative to the estimated operations and maintenance funding.

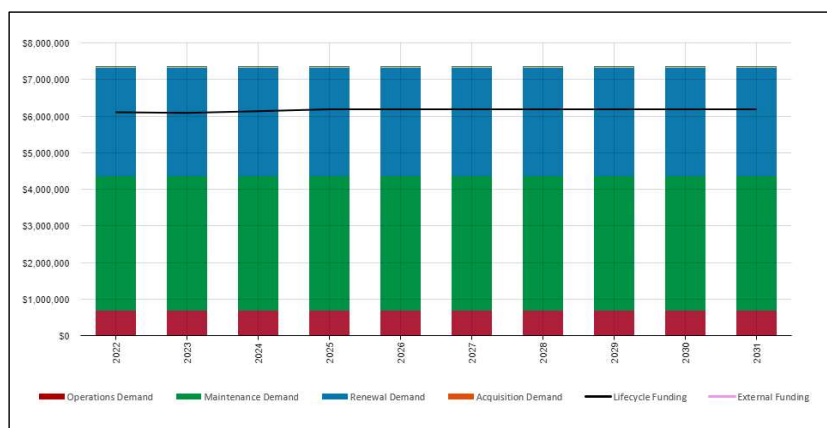
Figure 5.8: Operations and Maintenance Summary

All figure values are shown in current day dollars.

5.9 Summary of lifecycle demand

The lifecycle demand for this AMP is shown in Figure 5.9. This includes demand for operation, maintenance, renewal, acquisition and disposal. This demand is shown in comparison to the lifecycle funding (LTFF + Operations & Maintenance + External Funding).

The bars in the graphs represent the demand to minimise the life cycle costs associated with the service provision. The gap between the lifecycle demand and the lifecycle funding is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 5.9: Lifecycle Summary

All figure values are shown in current day dollars.

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’⁵.

An assessment of risks⁶ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1.

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
All Class 125 & Class 150 roads	Loss of gravel coverage and/or insufficient pavement depth or width	Limited wet weather access and subgrade failures. Road safety affected. Council’s unsealed road network is generally a “branch” network, meaning many unsealed road users will travel across higher order unsealed roads to get to and from their properties located on lower order roads. This means any asset failures on higher order road classes will generally affect many users, hence their criticality.

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets. A comprehensive assessment of criticality for all unsealed roads will be undertaken and included in later revisions of this AMP.

6.2 Risk Assessment

The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

⁵ ISO 31000:2009, p 2

⁶ Rockhampton Regional Council Enterprise Risk Management Policy

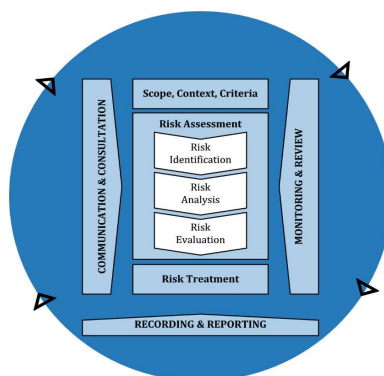


Fig 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks. An assessment of risks⁷ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the custodians of the assets in Council.

Table 6.2: Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Insufficient budgets for unsealed roads to be maintained at current service levels	Service levels decline Increased number of maintenance requests	H	Revise budgets and LTFF to match identified demand	L	\$500K/yr capital \$615K/yr operational
Sections of unsealed roads do not meet current design standards	Frequent vehicle accidents	H	Upgrade high risk roads to reach 95% of network having design compliance within 10 years	L	Address issues when capital works undertaken on road
Drainage deficiencies	Access restrictions during wet weather events	H	Improve flood immunity in lowest immunity areas to minimum of Q2	L	Address issues when capital works undertaken on road

Note * The residual risk is the risk remaining after the selected risk treatment plan is implemented.

In the above table the risk/s evaluated high/very high are due to the significant consequence of failure.

⁷ Rockhampton Regional Council Enterprise Risk Management Framework

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk assessment and crisis leadership. We do not currently measure our resilience in service delivery. This will be included in future iterations of the AMP.

6.4 Service and Risk Trade-Offs

The decisions made in adopting this AMP are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- Slow travel speeds and ongoing road safety deficiencies
- Delays and inaction on roads requiring resheeting or grading activities
- Frequent road closures after significant rain events

6.4.2 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- No network safety improvements or likely reduction in the frequency of road accidents
- Continued pavement damage and repair costs after significant rain events

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AMP. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Sustainability and Projections

Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The indicators are the:

- asset renewal funding ratio (renewal funding for the next 10 years / renewal demand for next 10 years)
- asset sustainability ratio (avg. annual renewal funding for next 10 years / annual depreciation)
- lifecycle funding ratio (lifecycle funding for the next 10 years / lifecycle demand for next 10 years)

Asset Renewal Funding Ratio – 10 year financial planning period

Asset Renewal Funding Ratio⁸ 83% (\$24,770,000 renewal funding / \$29,771,650 renewal demand)

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 83% of the funds required for the renewal of all identified assets in this plan. In practical terms, this means that rather than resheeting an average of 98km of road per year as targeted in previous budgets, only an average of 82km per year will be achievable with the current LTFF. This is expected to have flow-on effects with regards to maintenance demands and service levels.

The forecast renewal demand along with the forecast renewal funding, and the cumulative surplus/shortfall, is illustrated in Appendix B.

Asset Sustainability Ratio – 10 year financial planning period

Asset Sustainability Ratio 99% (\$2,477,000 avg. renewal funding / \$2,498,511 annual depreciation)

The Asset Sustainability Ratio is a Queensland Treasury Corporation (QTC) statutory reporting ratio. It should be noted that the annual depreciation in the asset register is based on the 2019 revaluation, whereas the renewal budget is based on an assessment of recent resheeting projects with a higher average unit rate for resheeting (i.e. \$5.59/m² vs \$6.00/m²). As such, the Asset Sustainability Ratio would be expected to be lower if the depreciation rate was based on a more recent revaluation with likely higher unit rates (Asset Sustainability Ratio estimated to be ~92% in this case).

The sustainability ratio of greater than 90% meets the QTC target benchmark for this measure and indicates that Council can generally continue to provide its unsealed roads network over the medium term. Having a ratio less than 100% does however limit Council's capacity to absorb changes in demand (such as increased demand after prolonged weather events where resheeting demands may be higher).

Lifecycle Funding Ratio – 10 year financial planning period

Lifecycle Funding Ratio 84% (\$61,620,000 lifecycle funding / \$73,671,650 lifecycle demand)

Providing services in a financially sustainable manner requires a balance between the lifecycle demand required to deliver the agreed service levels, and the anticipated lifecycle funding (LTFF + External Funding + Operations & Maintenance). Table 7.1 shows the lifecycle demand versus the lifecycle funding for the 10 year planning period.

⁸ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Table 7.1: Lifecycle Demand vs Lifecycle Funding

Financial Year	Lifecycle Demand	Lifecycle Funding				Surplus / Shortfall	Cumulative Surplus/ Shortfall
		Council Funding		External Funding	TOTAL		
		Capital	Operational (O&M)				
22/23	\$7,337,165	\$2,420,000	\$3,685,000	\$0	\$6,105,000	-\$1,232,165	-\$1,232,165
23/24	\$7,337,165	\$2,400,000	\$3,685,000	\$0	\$6,085,000	-\$1,252,165	-\$2,484,330
24/25	\$7,337,165	\$2,450,000	\$3,685,000	\$0	\$6,135,000	-\$1,202,165	-\$3,686,495
25/26	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$4,838,660
26/27	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$5,990,825
27/28	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$7,142,990
28/29	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$8,295,155
29/30	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$9,447,320
30/31	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$10,599,485
31/32	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$11,751,650
TOTAL	\$73,371,650	\$24,770,000	\$36,850,000	\$0	\$61,620,000	-\$11,751,650	

The shortfall between the lifecycle demand and the lifecycle funding indicates network decline over time - current service levels will not be maintained. Ongoing monitoring and assessment will be required to better understand the impacts on the network over time.

The lifecycle demand is further discussed in Appendix G.

7.2 Funding Strategy

The proposed funding for assets is outlined in Council's budgets and Long Term Financial Forecast.

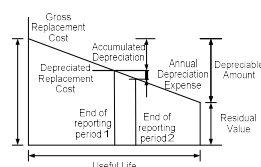
The financial strategy of the entity determines how funding will be provided, whereas the AMP communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

Asset valuations

The best available estimate of the value of assets included in this AMP are shown below. The assets are valued at the current replacement cost to serve its equivalent purpose at the time of replacement:

Current (Gross) Replacement Cost	\$215,236,545
Depreciable Amount	\$215,236,545
Depreciated Replacement Cost ⁹	\$197,074,897
Annual Depreciation	\$ 2,498,511



Valuation Forecast

Asset values are forecast to increase as additional assets are added.

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

⁹ Also reported as Written Down Value, Carrying or Net Book Value.

7.4 Key Assumptions Made in Financial Forecasts

In compiling this AMP, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AMP and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AMP are:

- In estimating the useful life and remaining life, assumptions are used to simplify the process. The risk associated with that is the poor prediction of the optimum time for maintenance or renewal intervention. Adopting more advanced methods for prediction of the life and deterioration rates will reduce this risk.
- The condition assessments in this document are based on visual assessment techniques performed remotely, supplemented with pavement sampling. By performing more in-depth condition assessments for particular cases the reliability of the outcomes increases, and consequently helps to make more informed decisions.

7.5 Forecast Reliability and Confidence

The forecast demand, forecast funding, and valuation projections in this AMP are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale¹⁰ in accordance with Table 7.5.1.

Table 7.5.1: Data Confidence Grading System

Confidence Grade	Description
A. Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate $\pm 2\%$
B. Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$
C. Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated $\pm 25\%$
D. Very Uncertain	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy $\pm 40\%$
E. Unknown	None or very little data held.

The estimated confidence level for and reliability of data used in this AMP is shown in Table 7.5.2.

Table 7.5.2: Data Confidence Assessment for Data used in AMP

Data	Confidence Assessment	Comment
Demand drivers	C	Professional Judgement
Growth projections	C	Professional Judgement
Acquisition forecast	B	Included in long term financial plan
Operation forecast	B	Included in long term financial plan, developed using Unsealed Roads Model and verified against historical data

¹⁰ IPWEA, 2015, IIMM, Table 2.4.6, p 2 | 71.

Maintenance forecast	B	Included in long term financial plan, developed using Unsealed Roads Model and verified against historical data
Renewal forecast - Asset values	C	From Roads Revaluation which included first principles derivation and review against recent actuals
- Asset useful lives	B	From Condition Survey and Unsealed Roads Model - based on historical records, field sampling and industry researched gravel loss models.
- Condition modelling	B	From Condition Survey and Unsealed Roads Model
Disposal forecast	B	Included in long term financial plan (no disposals forecast)

The estimated confidence level for and reliability of data used in this AMP is considered to be reliable e.g. Grade B.

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices¹¹

Accounting and financial data sources

This AMP utilises accounting and financial data. The source of the data is the Finance section of Council. Finance 1 is the accounting and financial software used by Rockhampton Regional Council.

Asset management data sources

This AMP also utilises asset management data. The source of the data is inspection reports, financial data from Finance 1 and spreadsheets, relevant legislations, policies, standards, technical documents, etc. The asset condition and useful life data stored in R1 was sourced from Council's Unsealed Roads Model (excel spreadsheet). The templates available on the IPWEA website and the NAMS+ modelling tools were also used to produce this document.

8.2 Improvement Plan

It is important that an entity recognise areas of their Asset Management Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this Asset Management Plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Develop and document a better understanding of demand drivers and growth projects for the unsealed roads network	Asset Team in consultation with the Strategic Planning Team	Asset Team	1 year
2	Useful Lives for the asset groups require validation and further calibration through ongoing sampling and analysis	Asset and Rural Operations Teams	Asset and Rural Operations Team	Prior to next revaluation
3	Review customer level of service measures through community consultation and redo survey to update data on customer satisfaction levels	Asset Custodian and Community Engagement Team	Asset Custodian and Community Engagement Team	1 year
4	Continue to develop the integration between Council's strategic plans, asset plans and long term financial plans	Asset Management Steering Committee	Staff resources as required	Ongoing
5	Ensure future needs as reflected in this AMP are considered in the development of the Long Term Financial Plan	Asset and Finance Teams in consultation with Rural Operations	Asset and Finance Teams	Ongoing

8.3 Monitoring and Review Procedures

This AMP will inform the LTFF and will be considered during the annual budget planning process. A review of this AMP will be triggered when there is a material change to service levels, asset values, forecast demand, assets risks or allocated funding.

¹¹ ISO 55000 Refers to this as the Asset Management System

8.4 Performance Measures

The effectiveness of this AMP can be measured in the following ways:

- The degree to which the required forecast demand identified in this AMP are incorporated into the long-term financial forecast,
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures take into account the 'global' works program trends provided by the AMP,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 1.0).

9.0 REFERENCES

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- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- Rockhampton Regional Council Corporate Plan 2022 – 2027
- Rockhampton Regional Council Operational Plan 2021-2022
- Advance Rockhampton Region - Rockhampton Regional Council Economic Action Plan (2016-2020)
- Rockhampton Region Towards 2050 Strategic Framework
- Rockhampton Regional Council Asset Management Policy
- Rockhampton Regional Council Capital Works Program
- Local Government Infrastructure Plan
- Rockhampton Regional Council Satisfaction and Importance Survey Report (November 2016)
- Rockhampton Regional Council Budget 2021-2022
- Rockhampton Regional Council Enterprise Risk Management Policy, Reviewed in April 2018
- Rockhampton Regional Council Enterprise Risk Management Procedure, Reviewed in April 2018
- Rockhampton Regional Council Enterprise Risk Management Framework, Reviewed in January 2018
- Rockhampton Regional Council Flood Management Strategy
- Rockhampton Regional Council Bushfire Management Strategy
- Rockhampton Regional Council Asset Management Plan 2022 (Unsealed Roads)
- DTMR, 2016, Structure Inspection Manual, Department of Transport and Main Roads, Queensland
- Climate Change in Australia Projections for Australia's NRM Regions/Australian climate trends, (last update February 2018), <https://www.climatechangeinaustralia.gov.au/en/changing-climate/climate-trends/australian-trends/>

10.0 APPENDICES

Appendix A Capital Demand

A.1 – Assumptions and Source

Capital Demand includes all renewals and acquisitions identified in the AMP over the 10 year planning period. It is the total value of all infrastructure capital works to be undertaken, regardless of the funding source. It has been developed in consultation with the various asset custodians and Infrastructure Planning. It is based on an assessment of the current and future levels of service for the asset class, including the condition of existing network.

A.2 – Capital Demand Summary

The projects included in the Capital Demand are shown in Table A2.

Table A2 – Capital Demand Summary

Project Ref	Asset ID	Structure / Project Name	Financial Year	Renewal Demand	Acquisition Demand	Capital Demand
H.1	MISC	Resheeting Program	21/22	\$2,977,165		\$2,977,165
			22/23	\$2,977,165		\$2,977,165
			23/24	\$2,977,165		\$2,977,165
			24/25	\$2,977,165		\$2,977,165
			25/26	\$2,977,165		\$2,977,165
			26/27	\$2,977,165		\$2,977,165
			27/28	\$2,977,165		\$2,977,165
			28/29	\$2,977,165		\$2,977,165
			29/30	\$2,977,165		\$2,977,165
			30/31	\$2,977,165		\$2,977,165
			TOTALS	\$29,771,650	\$0	\$29,771,650

Appendix B Renewal Demand

B.1 – Assumptions and Source

Renewal Demand represents the renewal component of any capital project. Adequate and timely renewal of existing assets ensures levels of service are maintained and operational/maintenance costs are minimised.

Resheeting Program

Table B1 shows the renewal demand for the next 10 years based on the current works programming resheet rate (\$30,000/km) and the asset register expiry dates:

Table B1 – 10 Year Renewal Demand

Financial Year	Renewal Demand
22/23	\$535,431
23/24	\$3,375,734
24/25	\$2,380,216
25/26	\$2,833,184
26/27	\$9,647,476
27/28	\$1,670,257
28/29	\$2,444,562
29/30	\$3,915,825
30/31	\$1,462,998
31/32	\$1,505,965
TOTAL	\$29,771,650
Average	\$2,977,165

Gravel resheeting is resourced and undertaken as an annual network expenditure, with works programming being undertaken based on the network condition and levels of service. Therefore the renewal demand in any year of the AMP is best represented by the average annual renewal demand over the 10 year planning period.

B.2 – Renewal Funding Comparison

Table B2 shows a summary of the renewal demand in Table A2 compared to the renewal funding.

Table B2 - Renewal Funding Comparison

Financial Year	Renewal Demand	Renewal Funding	Surplus / Shortfall	Cumulative Surplus/Shortfall
22/23	\$2,977,165	\$2,420,000	-\$557,165	-\$557,165
23/24	\$2,977,165	\$2,400,000	-\$577,165	-\$1,134,330
24/25	\$2,977,165	\$2,450,000	-\$527,165	-\$1,661,495
25/26	\$2,977,165	\$2,500,000	-\$477,165	-\$2,138,660
26/27	\$2,977,165	\$2,500,000	-\$477,165	-\$2,615,825
27/28	\$2,977,165	\$2,500,000	-\$477,165	-\$3,092,990
28/29	\$2,977,165	\$2,500,000	-\$477,165	-\$3,570,155
29/30	\$2,977,165	\$2,500,000	-\$477,165	-\$4,047,320
30/31	\$2,977,165	\$2,500,000	-\$477,165	-\$4,524,485
31/32	\$2,977,165	\$2,500,000	-\$477,165	-\$5,001,650
TOTAL	\$29,771,650	\$24,770,000	-\$5,001,650	

Appendix C Acquisition Demand**C.1 – Assumptions and Source**

Acquisition Demand represents the acquisition component (i.e. upgrade, new & contributed) of any project. When Council upgrades existing assets or builds new assets, it needs to plan for the associated acquisition, operation, maintenance, renewal, and potentially disposal costs. When Council receives a contributed asset it does NOT need to plan for the initial acquisition cost. However, it will need to plan for the operation, maintenance, renewal and potentially disposal costs in the future.

C.2 – Acquisition Funding Comparison

Table C2 shows a summary of the Acquisition Demand in Table A2 compared to the acquisition funding. It also highlights the external funding that is required over the 10 year period.

Table C2 - Acquisition Funding Comparison

Financial Year	Acquisition Demand	Acquisition Funding			Surplus / Shortfall	Cumulative Surplus/Shortfall
		Council Funding	External Funding	TOTAL		
21/22						
22/23						
23/24						
24/25						
25/26						
26/27						
27/28						
28/29						
29/30						
30/31						
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0

There are no acquisitions identified for the unsealed road network over the 10 year AMP period.

Appendix D Operations Demand**D.1 – Forecast Assumptions and Source**

Operations Demand in this AMP is an estimate of the operational activities (inspections, monitoring, admin support, etc.) associated with management of the unsealed road network. The demand shown in Table D2 is the average demand over the 10 year period in today's dollars, and was developed based on the 21/22 approved budget.

D.2 – Operations Demand Summary

Table D2 shows the total Operations Demand, including additional Operations Demand related to acquisition of additional or upgraded structures.

Table D2 - Operations Demand Summary

Financial Year	Operations Demand (Existing Assets)	Additional Operations Demand (From Acquisitions)	Total Operations Demand
21/22	\$685,000	-	\$685,000
22/23	\$685,000	-	\$685,000
23/24	\$685,000	-	\$685,000
24/25	\$685,000	-	\$685,000
25/26	\$685,000	-	\$685,000
26/27	\$685,000	-	\$685,000
27/28	\$685,000	-	\$685,000
28/29	\$685,000	-	\$685,000
29/30	\$685,000	-	\$685,000
30/31	\$685,000	-	\$685,000
TOTAL	\$685,000	\$0	\$685,000

Appendix E Maintenance Demand

E.1 – Assumptions and Source

Maintenance Demand is an estimate of the operational funding required for maintenance activities on the unsealed road network. It was developed using historical expenditure for relevant activities captured in Council's finance system.

E.2 – Maintenance Demand Summary

Table E2 shows the average maintenance demand for the next ten years considered in the AMP. The Additional Maintenance Demand is added maintenance cost related to the acquisition of additional or upgraded structures.

Table E2 - Maintenance Demand Summary

Year	Maintenance Demand	Additional Maintenance Demand (From Acquisitions)	Total Maintenance Demand
21/22	\$3,675,000	-	\$3,675,000
22/23	\$3,675,000	-	\$3,675,000
23/24	\$3,675,000	-	\$3,675,000
24/25	\$3,675,000	-	\$3,675,000
25/26	\$3,675,000	-	\$3,675,000
26/27	\$3,675,000	-	\$3,675,000
27/28	\$3,675,000	-	\$3,675,000
28/29	\$3,675,000	-	\$3,675,000
29/30	\$3,675,000	-	\$3,675,000
30/31	\$3,675,000	-	\$3,675,000
TOTAL	\$36,750,000	\$0	\$36,750,000

Appendix F Disposal Activity**F.1 – Assumptions and Source**

The disposal costs for assets being replaced have been considered in their replacement cost (such as unsealed roads being replaced with sealed roads). As there are no assets being disposed only, the disposal forecast and funding are considered zero.

Table F1 – Disposal Activity Summary

Financial Year	Asset ID	Structure Name	Disposal Forecast	Disposal Funding
21/22			\$0	\$0
22/23			\$0	\$0
23/24			\$0	\$0
24/25			\$0	\$0
25/26			\$0	\$0
26/27			\$0	\$0
27/28			\$0	\$0
28/29			\$0	\$0
29/30			\$0	\$0
30/31			\$0	\$0
TOTAL			\$0	\$0

Appendix G Demand and Funding Summary by Lifecycle Activity**G.1 – Demand Summary**

Table G1 shows the demand summary by lifecycle activity over the 10 year period.

Table G1 – Demand Summary by Lifecycle Activity

Financial Year	Renewal Demand	Acquisition Demand *	Disposal Demand	Operations Demand	Maintenance Demand	Lifecycle Demand
22/23	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
23/24	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
24/25	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
25/26	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
26/27	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
27/28	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
28/29	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
29/30	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
30/31	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
31/32	\$2,977,165			\$685,000	\$3,675,000	\$7,337,165
TOTAL	\$29,771,650	\$0	\$0	\$6,850,000	\$36,750,000	\$73,371,650

G.2 – Funding Summary

Table G2 shows the funding summary by lifecycle activity over the 10 year period.

Table G2 – Funding Summary by Lifecycle Activity

Financial Year	Renewal Funding	Acquisition Funding		Disposal Funding	Operations Funding	Maintenance Funding	Lifecycle Funding
		Council Funded	External Funding				
22/23	\$2,420,000				\$685,000	\$3,000,000	\$6,105,000
23/24	\$2,400,000				\$685,000	\$3,000,000	\$6,085,000
24/25	\$2,450,000				\$685,000	\$3,000,000	\$6,135,000
25/26	\$2,500,000				\$685,000	\$3,000,000	\$6,185,000
26/27	\$2,500,000				\$685,000	\$3,000,000	\$6,185,000
27/28	\$2,500,000				\$685,000	\$3,000,000	\$6,185,000
28/29	\$2,500,000				\$685,000	\$3,000,000	\$6,185,000
29/30	\$2,500,000				\$685,000	\$3,000,000	\$6,185,000
30/31	\$2,500,000				\$685,000	\$3,000,000	\$6,185,000
31/32	\$2,500,000				\$685,000	\$3,000,000	\$6,185,000
TOTAL	\$24,770,000	\$0	\$0	\$0	\$6,850,000	\$30,000,000	\$61,620,000

G.3 – Overall Comparison

Table G3 shows the overall comparison between lifecycle demand and lifecycle funding over the 10 year period.

Table G3 – Lifecycle Demand vs Lifecycle Funding

Financial Year	Lifecycle Demand	Lifecycle Funding				Surplus / Shortfall	Cumulative Surplus/ Shortfall
		Council Funding		External Funding	TOTAL		
		Capital	Operational (O&M)				
22/23	\$7,337,165	\$2,420,000	\$3,685,000	\$0	\$6,105,000	-\$1,232,165	-\$1,232,165
23/24	\$7,337,165	\$2,400,000	\$3,685,000	\$0	\$6,085,000	-\$1,252,165	-\$2,484,330
24/25	\$7,337,165	\$2,450,000	\$3,685,000	\$0	\$6,135,000	-\$1,202,165	-\$3,686,495
25/26	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$4,838,660
26/27	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$5,990,825
27/28	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$7,142,990
28/29	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$8,295,155
29/30	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$9,447,320
30/31	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$10,599,485
31/32	\$7,337,165	\$2,500,000	\$3,685,000	\$0	\$6,185,000	-\$1,152,165	-\$11,751,650
TOTAL	\$73,371,650	\$24,770,000	\$36,850,000	\$0	\$61,620,000	-\$11,751,650	

This table shows that the total value of the lifecycle funding (LTFF + External Funding + Operations & Maintenance) is insufficient to meet the lifecycle demand (renewals, acquisitions, disposals, operations & maintenance) identified in this AMP. This will negatively affect service levels over time and will require further monitoring.

Appendix H Capital and Maintenance Works**Activities**

Renewal and maintenance of the unsealed road network is primarily focused on two activities:

1. Resheeting
2. Grading

Resheeting is capital works to replenish the pavement asset and maintain wet weather access. It involves the importation, placement, shaping and compaction of gravel material to reconstruct a pavement of 100mm total thickness.

Grading is maintenance works to maintain the shape and running surface of the pavement and involves collecting, reshaping and recompacting of insitu pavement material. There are three types of grading depending on the level of pavement disturbance and reworking undertaken:

- Light Formation Grading (~3% of grading budget)
- Medium Formation Grading (~25% of grading budget)
- Heavy Formation Grading (~72% of grading budget)

Network Monitoring

Council has numerous network condition monitoring initiatives:

- Scheduled surveys of the entire network once a year by the Roads Inspector
- Scheduled surveys of specific regions prior to grader crews being in the area
- Ad-hoc surveys resulting from customer requests
- Ongoing surveillance by supervisors and management during normal duties

Roads with all or substantial extents surveyed with an IRI roughness of greater than 7 are added for inclusion in a future works program.

Resourcing

Council has seven grader crews that maintain the unsealed network, delivering resheeting and grading activities across the region. Each crew has the capacity perform either activity depending on what works have been programmed for the road. One grader crew currently works mostly full time on construction projects. While crews will move geographically around a region to deliver the works program, the same crew will generally work on the same roads each rotation so that local knowledge and community relationships are developed over time.

Budget

The current budgets for resheeting and grading are based on a 2018 service level review. Increased budgets were adopted at this time to ensure that the service levels measured in the field would be maintained. These service levels were higher than previous budgets had allowed and had been raised through external funding sources (flood damage funding).

Works Programming

Works are identified in a 3 to 4 month look ahead, with Councillors provided a confirmed 3 week program of upcoming works.

There is a general rolling program of work regions where the crews will travel to commence a package of works. Given the extent of the network, crews will generally not travel large distances across the network for

isolated projects as it is not an efficient use of resources to do so. All roads within an upcoming region are surveyed prior to crews being onsite and consideration is made to the current (and likely future) condition of the roads when programming works, as it may be some period of time before crews are back in the area.

The cost of programmed works is estimated based on the chainage extents and activity, assigned a unique job number and included in a budget and productivity tracking worksheet. Average cost per kilometre is used to compare actuals against estimated costs and to guide future budget programs.

11 NOTICES OF MOTION

Nil

12 QUESTIONS ON NOTICE

Nil

13 URGENT BUSINESS/QUESTIONS

Urgent Business is a provision in the Agenda for members to raise questions or matters of a genuinely urgent or emergent nature, that are not a change to Council Policy and can not be delayed until the next scheduled Council or Committee Meeting.

14 CLOSURE OF MEETING